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FILED

FEB 16 2023

ANGIE SPARKS, Clerk of District Court
By  Deputy Clerk

Attorneys for Plaintiffs

MONTANA FIRST JUDICIAL DISTRICT COURT
LEWIS AND CLARK COUNTY

RIKKI HELD, et al., Plaintiffs, v. STATE OF MONTANA, et al., Defendants.	Cause No. CDV-2020-307 Hon. Kathy Seeley DECLARATION OF ROGER SULLIVAN IN SUPPORT OF PLAINTIFFS' OPPOSITION TO DEFENDANTS' MOTION FOR SUMMARY JUDGMENT
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Pursuant to MCA § 1-6-105, Roger Sullivan, hereby declares as follows:

1. I am an attorney admitted in the State of Montana and am an attorney of record for Plaintiffs herein. I have personal knowledge of the facts stated herein, except as to those stated on information and belief, and if called to testify, I would and could testify competently thereto.
2. Attached hereto as **Exhibit 1** is a true and correct copy of the October 25, 2022 condensed transcript of the deposition of Dr. Steven Running.
3. Attached hereto as **Exhibit 2** is a true and correct copy of the November 29, 2022 condensed transcript of the deposition of Dr. Cathy L. Whitlock.
4. Attached hereto as **Exhibit 3** is a true and correct copy of the November 8, 2022 condensed transcript of the deposition of Dr. Jack Stanford.
5. Attached hereto as **Exhibit 4** is a true and correct copy of the October 27, 2022 condensed transcript of the deposition of Dr. Daniel B. Fagre.
6. Attached hereto as **Exhibit 5** is a true and correct copy of the October 19, 2022 condensed transcript of the deposition of Anne Hedges.
7. Attached hereto as **Exhibit 6** is a true and correct copy of the December 12, 2022 condensed transcript of the deposition of Peter Erickson.
8. Attached hereto as **Exhibit 7** is a true and correct copy of the October 26, 2022 condensed transcript of the deposition of Dr. Richard Barrett.
9. Attached hereto as **Exhibit 8** is a true and correct copy of the December 13, 2022 condensed transcript of the deposition of Dr. Mark Jacobson.
10. Attached hereto as **Exhibit 9** is a true and correct copy of the October 11, 2022 condensed transcript of the deposition of Dr. Lori Byron.

11. Attached hereto as **Exhibit 10** is a true and correct copy of the October 11, 2022 condensed transcript of the deposition of Dr. Robert Byron.
12. Attached hereto as **Exhibit 11** is a true and correct copy of the December 6, 2022 condensed transcript of the deposition of Dr. Lise Van Susteren.
13. Attached hereto as **Exhibit 12** is a true and correct copy of the October 28, 2022 condensed transcript of the deposition of Michael Durglo, Jr.
14. Attached hereto as **Exhibit 13** is a true and correct copy of the January 4, 2023 condensed transcript of the deposition of Mark Haggerty.
15. Attached hereto as **Exhibit 14** is a true and correct copy of the January 11, 2023 condensed transcript of the deposition of Kevin Trenberth.
16. Attached hereto as **Exhibit 15** is a true and correct copy of the December 1, 2022 condensed transcript of the deposition of Dr. Terry Anderson.
17. Attached hereto as **Exhibit 16** is a true and correct copy of the June 17, 2022 condensed transcript of the 30(b)(6) deposition of Will Rosquist.
18. Attached hereto as **Exhibit 17** is a true and correct copy of the October 27, 2022 condensed transcript of the 30(b)(6) deposition of Shawn Thomas.
19. Attached hereto as **Exhibit 18** is a true and correct copy of the December 8, 2022 condensed transcript of the 30(b)(6) deposition of Chris Dorrington.
20. Attached hereto as **Exhibit 19** is a true and correct copy of the December 15, 2022 condensed transcript of the 30(b)(6) deposition of David Klemp.
21. Attached hereto as **Exhibit 20** is a true and correct copy of the December 14, 2022 condensed transcript of the 30(b)(6) deposition of Sonja Nowakowski.

22. Attached hereto as **Exhibit 21** is a true and correct copy of an excerpt of the December 29, 2022 condensed transcript of the deposition of Lander Busse.

23. The following table provides examples of the multitude of factual disputes that demonstrate that Defendants' motion for summary judgment should not be granted. *See* M. R. Civ. P. 56(e)(2).

No.	Plaintiffs' Material Facts and Supporting Evidence	Defendants' Dispute Plaintiffs' Evidence
INJURY FACTS		
1) Wildfire Smoke and Other Injuries to Plaintiffs' Physical Health and Well-Being		
1.	Wildfire smoke "truly inhibits my ability to breathe, I often cough and feel my lungs becoming tight, making me feel like my lungs are closing up. . . . I feel like I am going to suffocate . . . Every summer since 2016 the smoke has made me suffer from multiple asthma attacks." Olivia Dec. ¶ 11.	Def. Answer ¶ 59 (Defendants lack information, and therefore deny allegations).
2.	Spring allergies cause Olivia's eyes to swell shut, day-to-day life is very painful. Olivia Dec. ¶ 13.	Def. Answer ¶ 60 (Defendants lack information, and therefore deny allegations).
3.	Wildfire smoke "caused my eyes to burn, made me unusually tired, and gave me headaches and chest pain" and makes it hard to work on my ranch. Rikki Dec. ¶ 15.	Def. Answer ¶ 19 (Defendants lack information, and therefore deny allegations).
4.	Jeffrey, who has a pulmonary sequestration, experiences "nosebleeds, sore throats, headaches, tiredness, coughing, trouble breathing, and eye irritation" from wildfire smoke in Montana. Nathaniel "is also vulnerable to wildfire smoke." Laura King Dec. ¶¶ 3-5.	Def. Answer ¶¶ 62-63 (Defendants lack information, and therefore deny allegations).
5.	Ruby's asthma made worse by wildfire smoke. Shane Doyle Dec. ¶ 11.	Def. Answer ¶ 73 (Defendants lack information, and therefore deny allegations).
6.	Georgianna's allergies triggered by pollen and wildfire smoke. Georgianna Dec. ¶ 7.	Def. Answer ¶ 40 (Defendants lack information, and therefore deny allegations).

	Climate change makes Lander's seasonal allergies more extreme. Lander Dec. ¶ 11.	Def. Answer ¶ 24 (Defendants lack information, and therefore deny allegations).
7.	"The increasing wildfires affect my health, safety, and quality of life in multiple ways. . . . I cannot go outside to play because the air quality is so bad, and it is hard to breathe. The smoke makes me cough and irritates my eyes." Badge Dec. ¶ 4.	Def. Answer ¶ 24 (Defendants lack information, and therefore deny allegations).
8.	"Frequent wildfires and smoke harm my physical health, because breathing in smoke can make me experience shortness of breath, headaches, sore throats, and eye and nose irritation." Eva Dec. ¶ 5.	Def. Answer ¶ 47 (Defendants lack information, and therefore deny allegations).
9.	"Extreme heat, and smoke from increased wildfires, have made it difficult for me to pursue many of my favorite pastimes, especially playing soccer." Kian Dec. ¶ 12.	Def. Answer ¶ 36 (Defendants lack information, and therefore deny allegations).
10.	"The wildfires and smoke have affected my life indoors, too. . . . It seeps into everything, even in my house. It is almost like you can touch the smoke in the air. It irritates my throat, which gets really itchy. I start coughing. It is a constant reminder of the climate crisis and how harmful it is for my health, safety, and well-being." Grace Dec. ¶ 9.	Def. Answer ¶ 44 (Defendants lack information, and therefore deny allegations).
11.	"All the Plaintiffs in this case are children (21 years of age or younger) and therefore, in our expert opinion and consistent with the medical literature, are uniquely and disproportionately harmed by the impacts of climate change and associated air pollution in Montana." Byron Expert Report at 4.	Describing a general upwards trend in life expectancy in Montana. Anderson Expert Report at 7-8.
12.	"In Montana, the experiences of each of the Plaintiffs dreading and/or experiencing repeated wildfires, exposure to prolonged periods of time with poor air quality due to wildfire smoke, extreme heat, and extreme weather events are all stressful situations, trigger fear and anxiety, and activate the stress response system, similar to the ways [adverse	"Blaming this unfortunate situation of psychological stress on a changing climate is incorrect, and the use of this situation to achieve political goals is arguably acting to reinforce the childrens' psychological injuries." Curry Expert Report at 16.

	childhood experiences] do. Accordingly, exposure to these climate events puts the health of Plaintiffs at risk, both in the short-term and long-term.” Byron Expert Report at 12.	
13.	<p>“Since the 1980s, the wildfire season has gotten longer, the area burned has increased, and the impacts are more severe.” Running & Whitlock Expert Report at 28.</p> <p>Plaintiffs have been harmed by wildfires and smoke. Running & Whitlock Expert Report at 30.</p>	<p>“Devastating forest fires are not a new phenomenon in and around Montana. Forest fires have always been a part of nature, and they can certainly create conditions that are inhospitable in the short term for all life including humans.” Curry Expert Report at 8.</p> <p>Stating opinion that Montana’s wildfires were worse in the 19th century than they are today. Curry Dep. 161:12-20.</p>
	2) Plaintiffs Psychological Injuries	
14.	“I am haunted daily by the knowledge of how climate change has changed and will continue to alter my world, my Montana. I feel consistent despair . . . I experience continuous climate anxiety and I am in a constant state of deep sadness over the climate crisis.” Olivia Dec. ¶ 5.	Def. Answer ¶ 61 (Defendants lack information, and therefore deny allegations).
15.	“[E]xperiencing the harms of climate change firsthand fills me with stress, anxiety, and a sense of loss as to how life should be living on a ranch in Montana. . . . It has been a huge violation of trust to come of age with the realization that my state government is actively destroying my birthright instead of protecting it.” Rikki Dec. ¶¶ 31-32.	Def. Answer ¶ 20 (Defendants lack information, and therefore deny allegations).
16.	Wildfires and smoke cause Mica to feel “anxiety, increased stress, and depression” Mica Dec. ¶ 17.	Def. Answer ¶ 54 (Defendants lack information, and therefore deny allegations).
17.	“I have a lot of anxiety in knowing that my health, as well as places in Montana I love are being directly impacted by the wildfires. The smoke has made me anxious and disheartened about the future.” Georgianna Dec. ¶ 8.	Def. Answer ¶ 42 (Defendants lack information, and therefore deny allegations).
18.	“As a young person, I am scared for my future. . . . Seeing the effects of climate change firsthand has taken a toll on my mental health”Georgianna Dec. ¶ 13.	Def. Answer ¶ 42 (Defendants lack information, and therefore deny allegations).

19.	“I am anxious about the future that I am inheriting . . . I feel that my state government is betraying me.” Badge Dec. ¶¶ 9-10.	Def. Answer ¶ 25 (Defendants lack information, and therefore deny allegations).
20.	“The effects of climate change constantly makes me stressed and anxious about my future and future generations.” Eva Dec. ¶ 19.	Def. Answer ¶ 51 (Defendants lack information, and therefore deny allegations).
21.	“I’m constantly stressed about the loss of the natural spaces near my home in Montana, and I feel an overpowering obligation to do everything I can to prevent climate change, which causes me anxiety and also depression. Knowing what I do about climate change and seeing how Montana’s government continues to promote fossil fuels is especially devastating.” Grace Dec. ¶ 13.	Def. Answer ¶ 45 (Defendants lack information, and therefore deny allegations). Def. MSJ Br. at 4, n.4.
22.	“I feel betrayed by Defendants’ efforts to fight my case, to deny basic science, and to prioritize fossil fuel interests over what’s best for Montana’s youth, like me.” Grace Dec. ¶ 15.	Def. Answer ¶ 45 (Defendants lack information, and therefore deny allegations). Def. MSJ Br. at 4, n.4.
23.	“As described herein, and in the individual Plaintiff assessments contained in Attachment 3 , it is my expert opinion, that these youth Plaintiffs are experiencing both acute and chronic impacts to their mental well-being from climate disruption. . . . In promoting fossil fuel based energy policies, the state of Montana is directly at fault for harming Plaintiffs’ mental health.” Van Susteren Expert Report at 22.	“The apocalyptic and misleading rhetoric surrounding climate change is arguably the driving impetus of the adverse psychological health effects.” Curry Expert Report at 13. “I get how children can be made afraid and they don’t have the framework or the mental capacity for filtering this stuff and putting it in perspective so I think a lot of [youth climate anxiety] has been exacerbated by what the kids are fed.” Curry Dep. 277:24-278:2.
24.	“The deliberate nature of this harm is of a singularly destructive character, known as institutional betrayal, in that government, including the State and Montana, the Governor of Montana, and the agency Defendants, betrays its fundamental role to the children of Montana – to keep them safe.” Van Susteren Expert Report at 3.	“Apart from ill-advised parenting, children and young adults are being used as tools in a national and international political campaign. Blaming this unfortunate situation of psychological stress on a changing climate is incorrect, and the use of this situation to achieve political goals is arguably acting to reinforce the childrens’ psychological injuries.” Curry Expert Report at 16.

	<p>“I have seen children suffer physically and emotionally at the hands of adults; I know abuse when I see it. I see it. The government-supported and perpetuated climate crisis is an intolerable assault on our children and is justifiably equivalent to child abuse. For its scale and permanency, it is unmatched in the annals of history. It is causing and will continue to cause profound psychological damage to children, and to these Plaintiffs.” Van Susteren Expert Report at 22.</p>	<p>Youth climate anxiety “has been exacerbated by what [information] the kids are fed.” Curry Dep. 278:2.</p>
	<p>3) Plaintiffs Homes Threatened by Wildfires or Flooding</p>	
25.	<p>Wildfires threaten Taleah’s home and forced her to prepare to evacuate. Taleah Dec. ¶ 5.</p>	<p>Def. Answer ¶ 77 (Defendants lack information, and therefore deny allegations).</p>
26.	<p>Lander had to prepare to evacuate due to wildfires. Lander Dec. ¶ 10.</p>	<p>Def. Answer ¶ 24 (Defendants lack information, and therefore deny allegations).</p>
27.	<p>Mica had to prepare to evacuate his house due to a nearby wildfire. Mica Dec. ¶ 12.</p>	<p>Def. Answer ¶ 54 (Defendants lack information, and therefore deny allegations).</p>
28.	<p>“If climate change had not caused rapid snowmelt and major run-off events and flooding, we could still be living in our previous home.” Flooding continues to harm Eva even after she moved. Eva. Dec. ¶¶ 10-15.</p>	<p>Def. Answer ¶ 49 (Defendants lack information, and therefore deny allegations).</p>
	<p>4) Economic Injuries to Plaintiffs</p>	
29.	<p>“The recent increase in wildfires, drought, storms, and floods has harmed my family’s cattle and motel businesses, and by extension, it has harmed my family’s livelihood and ability to help me start out into adulthood. . . . [O]ur livelihood is so connected to having a clean environment in Montana.” Rikki Dec. ¶¶ 7, 8, 21, 24-25.</p>	<p>Def. Answer ¶ 19 (Defendants lack information, and therefore deny allegations).</p>
30.	<p>“I was unable to work because my job was closed due to smoke, so I missed days of work and was not paid.” Olivia Dec. ¶ 12.</p>	<p>Def. Answer ¶ 59 (Defendants lack information, and therefore deny allegations).</p>
	<p>5) Recreational and Aesthetic Injuries to Plaintiffs</p>	

31.	Fishing limited due to unusually warm river water and low water levels. "I understand that if climate change isn't addressed, Glacier National Park may not have any glaciers left in it within my lifetime, which would make me very sad and decrease my enjoyment of the park." Mica Dec. ¶¶ 13, 16.	Def. Answer ¶ 56 (Defendants lack information, and therefore deny allegations).
32.	Harder to hike, bike, and camp due to increased wildfires and smoke. Claire Dec. ¶¶ 4-6.	Def. Answer ¶¶ 66-67 (Defendants lack information, and therefore deny allegations).
33.	"[M]y family and I have been forced to cancel float trips on the river because there is not enough water due to climate disruption, thus impacting important familial activities." Georgianna Dec. ¶ 9.	Def. Answer ¶ 41 (Defendants lack information, and therefore deny allegations).
34.	Reduced recreational opportunities for winter ice skating and hiking. Taleah Dec. ¶¶ 4, 7-9.	Def. Answer ¶¶ 77-78 (Defendants lack information, and therefore deny allegations). Def. MSJ Br. at 4, n.2.
35.	"The Hungarian partridge are affected by dry conditions, which ultimately result in more scarce food and drier areas to habitat and reproduce. Climate change will continue to make it harder for me to go hunting in Montana." Badge Dec. ¶ 5.	Def. Answer ¶¶ 22-23 (Defendants lack information, and therefore deny allegations). Def. MSJ Br. at 4, nn.1, 2.
36.	"[I]t continues to be increasingly difficult to fish. The fish are dying off because the temperature of the water gets too hot. Increasingly, the rivers I often fish on, including the Flathead River and the Blackfoot River, have been shut down because of low water levels in the summer. . . . The increased forest fires also inhibit my ability to hunt because we cannot hunt where the forest has burned." Lander Dec. ¶¶ 5-7.	Def. Answer ¶¶ 22-23 (Defendants lack information, and therefore deny allegations). Def. MSJ Br. at 4, nn.1, 2.
37.	Diminished recreational opportunities in Glacier National Park. Lander Dec. ¶¶ 12-13.	Def. Answer ¶¶ 159-160 (Defendants lack information, and therefore deny allegations).
38.	Wildfires ruin trip to Glacier National Park and interrupt plans with family and friends. Eva Dec. ¶¶ 6-9.	Def. Answer ¶ 48 (Defendants lack information, and therefore deny allegations).

39.	<p>“Climate change has resulted in warmer water temperatures and diminished flows on the rivers where I fish, impairing my ability to engage in this personally meaningful activity. . . . I have also had to cancel fishing trips because smoke from wildfires have made it unsafe to be outside.” Kian Dec. ¶ 10.</p>	<p>Def. Answer ¶ 34 (Defendants lack information, and therefore deny allegations).</p> <p>Def. MSJ Br. at 4, nn.1, 2.</p>
40.	<p>Diminished recreational opportunities in Glacier National Park. Impacts on ability to play soccer. Kian Dec. ¶¶ 11-12.</p>	<p>Def. Answer ¶¶ 35, 159-160 (Defendants lack information, and therefore deny allegations).</p>
41.	<p>Wildfires harm “my ability to safely recreate outdoors, which was a vital part of my life in Montana.” Grace Dec. ¶ 8.</p>	<p>Def. Answer ¶ 44 (Defendants lack information, and therefore deny allegations).</p>
42.	<p>“Current ice retreat of Glacier Park’s glaciers is in response to modern, human-caused, warming of the region . . . and has nothing to do with past ice ages.” Fagre Expert Report at 7.</p> <p>“The recent retreat of Glacier Park’s glaciers is incontrovertibly due to human-greenhouse gas emissions (mainly CO₂).” Fagre Expert Report at 11.</p> <p>Loss of glaciers harms Plaintiffs. Fagre Expert Report at 14.</p>	<p>“Much of the glacier loss occurred prior to 1966, when fossil-fueled warming was minimal. The percentage rate of glacier loss during this early period exceeded the percentage rate of loss observed in the 21st century.” Curry Expert Report at 7.</p>
43.	<p>“Montana’s snowpack has declined since the 1930s in the mountains west and east of the Continental Divide. This decline is most pronounced since 1980. . . . The decline in snowpack is directly attributed to elevated temperatures due to increased greenhouse gas emissions.” The decline in snowpack is harmful for Plaintiffs. Running & Whitlock Expert Report at 15-16.</p>	<p>Anthropogenic climate change is not responsible for Montana’s declining snow trend and noting the annual variations “reflects the variable nature of climate on both seasonal and decadal scales” Curry Expert Report at 6.</p> <p>“The declining [snowpack] trend that was cited maybe in the main report from a main complaint from 1970’s to 2015 . . . there has been a recovery since then, um, with a record-breaking snow fall in 2020, and then there was a snow drought in the 1930’s, so there’s a lot of multidecadal variability and variability with El Nino and La Nina events.” Curry Dep. 162:15-21.</p>

44.	<p>“Montana is projected to continue to warm in all geographic locations, seasons, and under all currently projected greenhouse gas emission scenarios through the 21st century. . . . The number of days in a year when daily temperature exceeds 90°F and the number of frost-free days are expected to increase across the state” Running & Whitlock Expert Report at 20-21.</p>	<p>“All of the components of natural variability point to cooling during the period 2020 to 2050. Individually these terms are not expected to be large. However when summed, their magnitude approaches, or could even exceed, the magnitude of the emissions-driven warming for the next three decades. The bottom line is that we do not know how the climate of the remainder of the 21st century will evolve.” Curry Expert Report at 12.</p> <p>“[T]here’s nothing exceptional about what we’re seeing [in Montana] even with regard to the extreme heat. The records were set in those early decades of the 20th Century.” Curry Dep. 94:24-95:2.</p>
	<p>6) Significant Injuries to Plaintiffs’ Tribal Culture and Traditions</p>	
45.	<p>“[T]here are fewer opportunities for me to hear the Coyote and Creation stories from Elders” which can only be told when there is snow on the ground. Sariel Dec. ¶ 7.</p>	<p>Def. Answer ¶ 29 (Defendants lack information, and therefore deny allegations).</p> <p>Def. MSJ Br. at 5, n.4.</p>
46.	<p>“I worry that finding berries and roots will be continually more difficult with climate change and we will not be able to continue this cultural practice and lose a source of food and medicine.” Sariel Dec. ¶ 9.</p>	<p>Def. Answer ¶ 31 (Defendants lack information, and therefore deny allegations).</p>
47.	<p>“I fear deeply the losing of my culture and traditions as a result of climate change. . . . My people and culture are deeply intertwined with the environment, and climate change comes as yet another threat that prevents us from passing our culture and traditions on to today’s youth, like me, and future generations.” Sariel Dec. ¶ 10.</p>	<p>Def. Answer ¶¶ 27-29, 32 (Defendants lack information, and therefore deny allegations).</p> <p>Def. MSJ Br. at 5, n.4.</p>
48.	<p>There are fewer opportunities for Lilian and Ruby to pick wild berries, “which is an important cultural activity their family has participated in for generations.” Shane Doyle Dec. ¶¶ 8, 15.</p>	<p>Def. Answer ¶ 72 (Defendants lack information, and therefore deny allegations).</p>

49.	“[I]ncreased forest fires in the area threatens our community’s ability to continue to make tipis in the traditional way, which would be a grave loss.” Shane Doyle Dec. ¶ 12.	Def. Answer ¶ 74 (Defendants lack information, and therefore deny allegations).
	7) Injuries to Plaintiffs’ Property	
50.	Flooding has come up to Rikki’s house, eroding riverbank, destroying fences, cattle have died. Rikki Dec. ¶¶ 8, 19-20.	Def. Answer ¶¶ 15, 17, 19 (Defendants lack information, and therefore deny allegations).
51.	Pine beetles killing trees on family’s property. Badge Dec. ¶ 6.	Def. Answer ¶ 25 (Defendants lack information, and therefore deny allegations).
52.	“Many of the trees on our property have died, both from beetle infestations brought on by milder winters, and extreme wind and weather events. Birch trees and conifers of all age classes are dying . . . When I look around our property, I see dead trees in all directions.” Kian Dec. ¶¶ 6, 8.	Def. Answer ¶ 33 (Defendants lack information, and therefore deny allegations).
	CAUSATION FACTS	
53.	<p>Montana’s total GHG emissions “is a nationally and globally significant quantity of CO₂ emissions, particularly given the already-elevated levels of human-caused GHGs in the atmosphere.” Erickson Expert Report at 17.</p> <p>“Montana’s fossil fuel extraction is not just significant by U.S. standards, but it is also <i>globally</i> significant, and is larger than that of many countries. For example, Montana’s current annual coal extraction is far higher than in major economies such as Brazil, Japan, Mexico, Spain, or the United Kingdom.” Erickson Expert Report at 6.</p>	<p>“Montana’s GHG contribution to the global total is trivial.” Anderson Expert Report at 6.</p> <p>“When you’re talking about, like, one one-thousandths of a degree that would be avoided by not burning fossil fuels in Montana, I would call that minuscule.” Curry Dep. 140:8-11.</p>
54.	“[T]he health and well-being of the Plaintiffs, both now and in the future, is being put at risk by Montana’s fossil fuel energy system.” Byron Expert Report at 15.	<p>Describing a general upwards trend in life expectancy in Montana. Anderson Expert Report at 7-8.</p> <p>“The apocalyptic and misleading rhetoric surrounding climate change is arguably the driving impetus of the adverse</p>

		psychological health effects.” Curry Expert Report at 13.
55.	“At a time when Montana is already experiencing significant harms due to anthropogenic climate change, the state should be moving away from climate-damaging fossil fuel energy resources, not promoting fossil fuels as []energy resources if it wants to protect the aquatic ecosystems of the state and the natural and cultural ecosystem services they provide.” Stanford Expert Report at 10.	“Finally, recreational opportunities go far beyond snow in the mountains and water in fishing streams, both of which have been sufficient to attract increasing numbers of skiers, snowmobilers, and fishers. Public hunting and fishing access has been a priority for the DFWP and most wildlife populations, especially elk, are at all-time highs.” Anderson Expert Report at 14.
56.	“In promoting fossil fuel based energy policies, the State of Montana is directly at fault for harming Plaintiffs’ mental health.” Van Susteren Expert Report at 22.	“The apocalyptic and misleading rhetoric surrounding climate change is arguably the driving impetus of the adverse psychological health effects.” Curry Expert Report at 13. “Blaming this unfortunate situation of psychological stress on a changing climate is incorrect, and the use of this situation to achieve political goals is arguably acting to reinforce the childrens’ psychological injuries.” Curry Expert Report at 16.
57.	Compl. ¶ 118 (listing examples of aggregate acts Defendant take that cause climate change). “The following examples are illustrative of how Defendants continue to permit and approve fossil fuels projects, including power plants, oil and gas pipelines, coal mines, and others, that cause dangerous levels of GHG emissions” Hedges Expert Report at 24-28 (listing examples of aggregate acts Defendant take that cause climate change).	Def. Answer ¶ 118 (admitting Defendants have implemented many of these actions, but denying such actions result in dangerous levels of GHG emissions that injure the Plaintiffs, creating a factual dispute). Thomas 30(b)(6) Dep. 56:20-57:9 (agreeing that DNRC issues licenses for production and extraction of oil and gas in Montana, and permits for drilling in Montana, but denying that these activities result in dangerous levels of GHG emissions and contribute to the climate crisis).
58.	“Every ton of fossil fuel that Montana extracts or consumes makes it harder to return to 350 ppm of CO ₂ in the atmosphere. When you are already in a dangerous hole, you stop digging.” Running & Whitlock Rebuttal Expert Report at 9.	Dorrington 30(b)(6) Dep. 57:1-3, 65:2-19, 77:6-9 (denying that DEQ’s actions result in dangerous levels of GHG emissions).

59.	Defendants’ “long-standing and ongoing practice of approving all permits for fossil fuel projects . . . is a substantial factor in perpetuating Montana’s fossil fuel energy system, which produces harmful GHGs and contributes to the climate crisis.” Hedges Expert Report at 29.	“In short, Montana’s energy or environmental policies have virtually no effect on global or local climate change because Montana’s GHG contribution to the global total is trivial.” Anderson Expert Report at 6. “Emissions from fossil fuels generated in Montana provide a miniscule contribution to global greenhouse gas emissions and do not influence directly Montana’s weather and climate.” Curry Expert Report at 1.
60.	“Montana has substantial quantities of the fossil fuels coal, oil, and gas, and Montana state government has authorized them to be extracted in significant and increasing quantities” Erickson Expert Report at 5.	Denying that Montana’s strip and underground coal mining operations are causing dangerous amounts of greenhouse gas emissions. Dorrington 30(b)(6) Dep. 64:23-65:19.
61.	“Montana authoriz[es] the use of its land and infrastructure (which it permits the construction of and regulates operation of), acting as a thoroughfare for fossil fuels” Erickson Expert Report at 13.	“[T]he agency has literally no encouragement of the transportation of fossil fuels. . . . We have no encouragement of transportation.” Dorrington 30(b)(6) Dep. 75:7-14.
62.	Describing Defendants’ “clear pattern and practice of granting permits for new fossil fuel projects and renewing permits to allow already built fossil fuel projects to continue to operate in Montana” Hedges Expert Report at 24-28.	Denying that Montana DEQ has encouraged fossil fuel extraction. Dorrington 30(b)(6) Dep. 74:21-75:4.
63.	“Because of the dangers of increasing GHG emissions, it does not make scientific sense to continue to promote fossil fuels as an energy resource in Montana, which we are informed is the very purpose of the provisions of Montana’s State Energy Policy Moreover, it is of utmost importance for Defendants to carefully consider how specific projects will either mitigate or exacerbate climate change before approving them, but the provisions of the Montana Environmental Policy Act (MEPA) that the Plaintiffs challenge prevents that from happening.” Running & Whitlock Expert Report at 4.	“Montana’s statutes under question in this case—2011 amendments to MEPA and the State Energy Policy—may or may not result in net increases in GHG emissions. It is clear, however, that these two statutes cannot possibly be contributing significantly to climate change because Montana’s aggregate emissions were only 0.07529 percent to global GHG emissions in 2020.” Anderson Expert Report at 17. “I’m more worried about an asteroid impact. I’m more worried about a whole lot of other things other than the CO ₂ increasing.” Curry Dep. 147:14-16.
REDRESSABILITY FACTS		

64.	<p>“Defendants direct and issue energy policy, plans, and permits, and conduct[] a variety of energy planning activities that influence the direction of Montana’s energy system toward, or away from, fossil fuels and the resulting CO₂ emissions.” Erickson Expert Report at 18.</p>	<p>“Nowhere in the statute does it direct the DEQ has the authority to – to enforce or enact any of these broad-reaching goal statements.” Nowakowski 30(b)(6) Dep. 37:17-19.</p>
65.	<p>“[T]he total CO₂ emissions associated with Montana’s fossil-fuel-based economy are on the order of 166 million tons CO₂ annually,” which is “a substantial quantity of emissions, contributing to increasingly severe risks from climate change, and which is equivalent to the recent annual CO₂ emissions associated with the countries of Argentina, the Netherlands, or Pakistan.” Erickson Expert Report at 19-20.</p>	<p>“Montana’s emissions account for only 0.07529 percent of global GHG emissions” Anderson Expert Report at 4.</p> <p>“The amount of emissions, direct emissions that are burned in Montana is .09 percent, which is .0009 times .9 degrees, you other get .0008 degrees centigrade, which would be the amount of warming that’s prevented by eliminating Montana’s fossil fuels. When you’re talking about, like, one one-thousandths of a degree that would be avoided by not burning fossil fuels in Montana, I would call that minuscule.” Curry Dep. 140:3-11.</p>
66.	<p>“I’m suggesting here that Montana’s emissions in absolute are substantial.” Erickson Dep. 38:6-7.</p>	<p>It is “undisputed that Montana’s contribution to climate change is <i>de minimis</i>.” Def. MSJ Br. at 8.</p> <p>Montana’s emissions are insignificant globally. Anderson Expert Report at 4.</p>
67.	<p>“And, you know, there are many dimensions to effectiveness of a remedy. And, you know, part of Montana’s responsibility for emissions is, you know, all the specific numbers that I put in here. Those numbers are substantial on their own, and Montana would be doing its part, or could – has the opportunity to do its part in the solution. That part is substantial and extends beyond the borders in ways I’ve described here. But, you know, Montana not doing its part has consequences, too.” Erickson Dep. 39:3-12.</p>	<p>It is “undisputed that Montana’s contribution to climate change is <i>de minimis</i>.” Def. MSJ Br. at 8.</p> <p>Montana’s emissions are insignificant globally. Anderson Expert Report at 4.</p> <p>Taking action to reduce Montana’s CO₂ emissions would be irrational. Anderson Dep. 190:1-7.</p>
68.	<p>Converting Montana’s energy system to 100% renewable energy would prevent premature mortalities, illnesses, reduce</p>	<p>A U.S. energy infrastructure system powered by renewable energy would</p>



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	health costs, and reduce energy costs. Jacobson Expert Report at 3.	cause a lot of harm to a lot of people. Curry Dep. 125:10.
69.	“[W]e know the causes of global warming are fossil fuels, and we know that every molecule of CO ₂ that is put into the atmosphere contributes to global warming. And so every time that Montana produces in terms of greenhouse gas emissions is contributing to global warming, and that’s what we’re trying to have stopped.” Whitlock Dep. 15:11-18.	It is “undisputed that Montana’s contribution to climate change is <i>de minimis</i> .” Def. MSJ Br. at 8. Montana’s emissions are insignificant globally. Anderson Expert Report at 4. “[I]f Montana were to curtail fossil fuel production, it would not affect climate change.” Anderson Dep. 168:9-11.
70.	“My report . . . doesn’t discount the importance of Montana’s contribution to greenhouse gases.” Stanford Dep. 20:16-18.	It is “undisputed that Montana’s contribution to climate change is <i>de minimis</i> .” Def. MSJ Br. at 8. Montana’s emissions are insignificant globally. Anderson Expert Report at 4.
71.	“Considerable empirical research shows that indeed, reducing production in one region is not met with equivalent increases from another, and so net fossil fuel consumption and, in turn, CO ₂ emissions, does decrease” if Montana were to move away from fossil fuels. Erickson Expert Report at 19.	“Montana’s GHG emissions would just be replaced by other sources.” Def. MSJ Br. at 8. It does not make sense for any state to undertake policies to reduce CO ₂ emissions. Anderson Dep. 190:24-191:3.
72.	“[T]he State’s prompt measures to address the underlying cause of the [Plaintiffs’] climate injuries, Montana’s fossil fuels energy system and GHG emissions, are critical and can help alleviate the severity of Plaintiffs’ ongoing and future health injuries.” Byron Expert Report at 11.	“Elimination of the two laws challenged by the Plaintiffs would have essentially no impact on the climate of Montana . . .” Curry Expert Report at 29. “When you’re talking about, like, one one-thousandths of a degree that would be avoided by not burning fossil fuels in Montana, I would call that minuscule.” Curry Dep. 140:3-11.
73.	State conduct which “call[s] for the increasing use and production of fossil fuels, [is] contrary to the clear scientific understanding and human need to address climate change in order to protect Montana’s aquatic ecosystems, which Plaintiffs rely on for their well-being and	“Section 4 of this Report demonstrates that emissions from fossil fuels generated in Montana provide a minuscule contribution to global greenhouse gas emissions and do not influence directly Montana’s weather and climate.” Curry Expert Report at 29.



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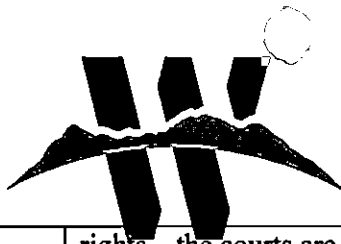
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	survival” Stanford Expert Report at 15.	Defending the West www.westernlaw.org
74.	<p>“[A] remedy to ease the psychological injury that Plaintiffs’ own government is clear and available: a court order recognizing that Montana’s energy policy betrays government’s role to protect its youngest and most vulnerable citizens and is therefore unconstitutional.” Van Susteren Expert Report at 1.</p>	<p>“Ultimately, declaratory judgment in Plaintiffs’ favor has no realistic chance of alleviating Plaintiffs’ claimed injuries in any meaningful sense.” Def. MSJ Br. at 9.</p> <p>Def. Answer ¶ 180 (Defendants lack information, and therefore deny that declaratory and/or injunctive relief can redress Plaintiffs’ psychological injuries).</p>
75.	<p>“As I said, every ton of CO₂ that is emitted to the atmosphere is the problem and is causing these conditions in Montana. So if Montana were to cease emission of fossil fuels, we would – we would change that. It would not happen overnight. It would happen slowly, but it would happen.” Whitlock Dep. 17:15-20.</p>	<p>“Elimination of the two laws challenged by the Plaintiffs would have essentially no impact on the climate of Montana, even if their elimination in fact acted to reduce Montana’s emissions.” Curry Expert Report at 29.</p> <p>Curtailing Montana’s fossil fuel emissions will not improve Montana’s environment. Anderson Dep. 168:15-169:1.</p>
76.	<p>“If the Court agrees with us in this case, it will not only help stop climate change by reducing emissions in Montana, it will make me feel more secure and hopeful that I can have a healthy future in the state that I love. There is not a lot that can help ease my anxiety about climate change, but having a judge recognize what my government is doing is wrong, would give me some relief.” Eva Dec. ¶ 19.</p>	<p>“Ultimately, declaratory judgment in Plaintiffs’ favor has no realistic chance of alleviating Plaintiffs’ claimed injuries in any meaningful sense.” Def. MSJ Br. at 9.</p> <p>Def. Answer ¶ 180 (Defendants lack information, and therefore deny that declaratory and/or injunctive relief can redress Plaintiffs’ psychological injuries).</p>
77.	<p>“If the judge rules in our favor, it will help put the state on the right track and make me feel like there is still hope we can address the climate crisis in time.” Lander Dec. ¶ 14.</p>	<p>“Ultimately, declaratory judgment in Plaintiffs’ favor has no realistic chance of alleviating Plaintiffs’ claimed injuries in any meaningful sense.” Def. MSJ Br. at 9.</p> <p>Def. Answer ¶ 180 (Defendants lack information, and therefore deny that declaratory and/or injunctive relief can redress Plaintiffs’ psychological injuries).</p>
78.	<p>“The court system is my only real hope for protecting myself, the home I love, and the people I care about. Montana’s schools taught me that when things go off the rails—when the legislative and executive branches ignore people’s</p>	<p>“Ultimately, declaratory judgment in Plaintiffs’ favor has no realistic chance of alleviating Plaintiffs’ claimed injuries in any meaningful sense.” Def. MSJ Br. at 9.</p>



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	<p>rights—the courts are there as a backstop to rein in the worst government behavior and stop it from trampling people’s rights. I will also worry: are courts today still willing to be that backstop? If not, what hope does my generation have of peacefully protecting our rights?” Rikki Dec. ¶ 34.</p>	<p>Def. Answer ¶ 180 (Defendants lack information, and therefore deny that declaratory and/or injunctive relief can redress Plaintiffs’ psychological injuries).</p>
79.	<p>“Only a court order in this case can and ensure that the state of Montana does not continue to violate my constitutional rights.” Sariel Dec. ¶ 5.</p>	<p>“Ultimately, declaratory judgment in Plaintiffs’ favor has no realistic chance of alleviating Plaintiffs’ claimed injuries in any meaningful sense.” Def. MSJ Br. at 9.</p> <p>Def. Answer ¶ 180 (Defendants lack information, and therefore deny that declaratory and/or injunctive relief can redress Plaintiffs’ psychological injuries).</p>
80.	<p>“I feel like the leaders in the state of Montana don’t care about the ways in which I am impacted by climate change. But I’m grateful for this opportunity to have a judge sit and listen to the ways in which I am harmed by climate change. I believe that if we win this case, it will help protect my future, and the future of my tribe, from the devastating impacts of climate change.” Sariel Dec. ¶ 10.</p>	<p>“Ultimately, declaratory judgment in Plaintiffs’ favor has no realistic chance of alleviating Plaintiffs’ claimed injuries in any meaningful sense.” Def. MSJ Br. at 9.</p> <p>Def. Answer ¶ 180 (Defendants lack information, and therefore deny that declaratory and/or injunctive relief can redress Plaintiffs’ psychological injuries).</p>
81.	<p>“If we win this lawsuit, it will give me some hope for a better future, and that is important.” Georgianna Dec. ¶ 13.</p>	<p>“Ultimately, declaratory judgment in Plaintiffs’ favor has no realistic chance of alleviating Plaintiffs’ claimed injuries in any meaningful sense.” Def. MSJ Br. at 9.</p> <p>Def. Answer ¶ 180 (Defendants lack information, and therefore deny that declaratory and/or injunctive relief can redress Plaintiffs’ psychological injuries).</p>
82.	<p>“I feel that my state government is betraying me. However, I believe that if we win this lawsuit, it will be a turning point in our state and it would give me hope that a brighter future is possible. It would mean that my constitutional rights matter. I am counting on the court to protect my rights because clearly my state government cannot be trusted to do so.” Badge Dec. ¶ 10.</p>	<p>“Ultimately, declaratory judgment in Plaintiffs’ favor has no realistic chance of alleviating Plaintiffs’ claimed injuries in any meaningful sense.” Def. MSJ Br. at 9.</p> <p>Def. Answer ¶ 180 (Defendants lack information, and therefore deny that declaratory and/or injunctive relief can redress Plaintiffs’ psychological injuries).</p>

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83.	<p>“I believe that if we win this lawsuit, it will send the message to the state government that what they are doing is unconstitutional and requires that they have to reduce the use of fossil fuels in Montana to protect my future from the worsening dangers of climate change.” Kian Dec. ¶ 5.</p>	<p>“Ultimately, declaratory judgment in Plaintiffs’ favor has no realistic chance of alleviating Plaintiffs’ claimed injuries in any meaningful sense.” Def. MSJ Br. at 9.</p> <p>Def. Answer ¶ 180 (Defendants lack information, and therefore deny that declaratory and/or injunctive relief can redress Plaintiffs’ psychological injuries).</p>
84.	<p>“A successful outcome in this case would help restore my confidence in Montana’s government and give me hope for the future.” Grace Dec. ¶ 15.</p>	<p>“Ultimately, declaratory judgment in Plaintiffs’ favor has no realistic chance of alleviating Plaintiffs’ claimed injuries in any meaningful sense.” Def. MSJ Br. at 9.</p> <p>Def. Answer ¶ 180 (Defendants lack information, and therefore deny that declaratory and/or injunctive relief can redress Plaintiffs’ psychological injuries).</p>
85.	<p>“In my opinion, the only thing that will fundamentally alter the state’s historic and ongoing energy policy of prioritizing the development and use of fossil fuels is a court order declaring that policy unconstitutional. Absent such a court order, I have no doubt that Defendants will continue their long-standing state energy policy of approving every permit for fossil fuel exploration, extraction, burning, and transport in Montana.” Hedges Dec. ¶ 28.</p>	<p>DEQ does not encourage fossil fuel extraction, transportation, or combustion. Dorrington 30(b)(6) Dep. 74:9-75:21.</p> <p>“Ultimately, declaratory judgment in Plaintiffs’ favor has no realistic chance of alleviating Plaintiffs’ claimed injuries in any meaningful sense.” Def. MSJ Br. at 9.</p>
CONSTITUTIONAL CLAIMS		
MONTANA ENERGY POLICY AND AGGREGATE ACTS VIOLATE THE CONSTITUTION		
86.	<p>“[T]here has been a long-standing practice by the State of Montana to promote fossil fuels as the predominant energy source in the state.” Hedges Expert Report at 29.</p>	<p>DEQ does not encourage fossil fuel extraction, transportation, or combustion. Dorrington 30(b)(6) Dep. 74:9-75:21.</p> <p>Def. Answer ¶ 119 (denying allegations that the aggregate acts described in ¶ 118 of Plaintiffs’ Complaint continue to be executed by Defendants and that that such actions are causing and contributing to the ongoing deprivation of Youth Plaintiffs’ fundamental constitutional rights).</p>



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87.	<p>“[T]he total CO₂ emissions associated with Montana’s fossil-fuel-based economy are on the order of 166 million metric tons annually, a substantial quantity of emissions, contributing to increasingly severe risks from climate change” Erickson Expert Report at 19-20.</p>	<p>Montana’s GHG emissions are minimal. Defending the West www.westernlaw.org Anderson Expert Report at 5-6.</p> <p>Montana’s GHG emissions are so small, on a global scale, as to be “in the noise of our ability to accurately calculate global emissions.” Curry Dep. 140:21-22.</p>
88.	<p>“Montana’s environment and its natural resources have already experienced significant harm and degradation [A]ny law that calls for increasing development and utilization of fossil fuels in Montana . . . can be expected to increase degradation of Montana’s environment and cause further harm to Plaintiffs” Running & Whitlock Expert Report at 39.</p>	<p>“The slow increase in average temperature for Montana has not translated into an increase in weather/climate extremes. Ancestors of the Youth Plaintiffs living in the 19th and early 20th century encountered weather and climate extremes that are as bad as, or worse than, those that have been encountered by the Youth Plaintiffs.” Curry Expert Report at 3.</p> <p>“The Plaintiffs’ concerns about extreme weather and climate conditions reflect natural weather and climate variability, rather than fossil-fuel driven climate change. The extreme conditions encountered by the youth Plaintiffs are not exceptional in context of historical conditions back to 1900.” Curry Expert Report at 8.</p>
89.	<p>“[N]o new permits for coal, oil, or natural gas extraction should be allowed. . . . [N]o more construction of new coal, nuclear, natural gas, oil, or biomass fired power plants should occur” Jacobson Expert Report at 13.</p>	<p>“[W]e will need more fossil fuels in the near term to maintain energy security and reliability A practical and humane transition does not focus on eliminating electricity from fossil fuels” Curry Expert Report at 25-26.</p> <p>Def. Answer ¶¶ 206-207 (Defendants lack information, and therefore deny allegations that it is economically beneficial and technically feasible to transition Montana off fossil fuels by 2050).</p> <p>“I think this rush to renewables is misguided.” Curry Dep. 129:25-130:1.</p>
90.	<p>“The bottom line is that, it is technically and economically feasible to transition Montana off of fossil fuels by 2050 and</p>	<p>There are technical and economic barriers to transition Montana off fossil fuels and</p>



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	<p>supply its energy needs with 100% WWS. The primary barrier is the lack of government direction to move energy government policies and actions that continue to favor a fossil-fuel based energy system.” Jacobson Expert Report at 22.</p>	<p>more fossil fuel development is necessary. Denying the West Curry Expert Report at 16-27.</p> <p>Def. Answer ¶¶ 206-207 (Defendants lack information, and therefore deny allegations that it is economically beneficial and technically feasible to transition Montana off fossil fuels by 2050).</p> <p>“I think this rush to renewables is misguided.” Curry Dep. 129:25-130:1.</p>	<p>www.westernlaw.org</p>
<p>91.</p>	<p>“At MEIC we understood that the purpose of the State Energy Policy was to direct and guide future energy decisions for the state of Montana.” Hedges Expert Report at 7.</p> <p>“Since 2011, the state of Montana and Defendant agencies have followed the directives in the 2011 State Energy Policy amendments to increase the utilization, exploration, and development of Montana’s coal, oil, and gas resources” Hedges Expert Report at 24.</p> <p>“These 2011 amendments are a substantial factor in perpetuating Montana’s fossil fuel energy system, which produces harmful GHGs and contributes to the climate crisis.” Hedges Expert Report at 29.</p>	<p>State Energy Policy and permitting under Titles 75 and 82, MCA are not related. Dorrington 30(b)(6) Dep. 58:14-20.</p> <p>DEQ has no duty to comply with Section 90-4-1001, MCA because the statute does not contain the words “DEQ shall.” Nowakowski 30(b)(6) Dep. 37:14-38:11.</p>	
<p>92.</p>	<p>“Regardless of what ultimately happens with HB 170 I believe what Mr. Freeman, Governor Gianforte’s Natural Resources Policy Advisor, said: Montana will still have a state energy policy, which is confirmed by the testimony of, Mr. Freeman, referenced above, and by State agencies long-standing and systemic promotion of fossil fuel activities that I have experienced during my many years at MEIC” Hedges Dec. ¶ 24.</p>	<p>Denying that Montana DEQ has encouraged fossil fuel extraction. Dorrington 30(b)(6) Dep. 74:21-75:4.</p>	
<p>93.</p>	<p>“Even if the law does not explicitly require the promotion of fossil fuels, that is the clear consequence of how</p>	<p>Denying that Montana DEQ has encouraged fossil fuel extraction. Dorrington 30(b)(6) Dep. 74:21-75:4.</p>	



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	Defendants have implemented, and continue to implement their authority with respect to authorizing and permitting the extraction of fossil fuels shows no sign of abating.” Hedges Dec. ¶ 25.	Defending the West www.westernlaw.org
94.	“Defendants have a long-standing track record of working closely with the fossil fuel industry to support fossil fuel extraction, transport, and burning.” Hedges Expert Report at 29.	DEQ does not work with coal mining companies to implement state energy policy. Dorrington 30(b)(6) Dep. 68:22-69:15.
THE MEPA CLIMATE CHANGE EXCEPTION IS UNCONSTITUTIONAL		
95.	“Simply stated, a <i>scientifically accurate assessment of impacts to Montana</i> from proposed actions in Montana, such as coal mining, oil and gas drilling, and the transport and combustion of fossil fuels, <i>must include consideration of impacts that are regional, national, or global in nature</i> because of the inherent interconnectedness of the atmospheric system with which Montana’s atmosphere and terrestrial and aquatic ecosystems are integral and connected to.” Running & Whitlock Expert Report at 8 (emphasis added).	“Elimination of the two laws challenged by the Plaintiffs would have essentially no impact on the climate of Montana, even if their elimination in fact acted to reduce Montana’s emissions.” Curry Expert Report at 29.
96.	“Moreover, it is of utmost importance for Defendants to carefully consider how specific projects will either mitigate or exacerbate climate change before approving them” Running & Whitlock Expert Report at 4.	“Under MEPA, DEQ’s analysis may not include a review of actual or potential impacts beyond Montana’s borders. It may not include actual or potential impacts that are regional, national, or global in nature such as impacts that may result from climate change. Section 75-1-201(2)(a), MCA.” Hedges Dec. ¶ 30 (citing DEQ Final EIS Appendices for Rosebud Mine Area B AM5, May 2022).
97.	Numerous permits for fossil fuel projects have been approved without considering the GHG emissions from the project or how the project would contribute to climate change. Hedges Expert Report at 24-28. “[T]he 2011 amendments to MEPA and the State Energy Policy were a clear directive from the legislature to state	DEQ analyzes climate impacts within the borders of the state. Dorrington 30(b)(6) Dep. 66:1-2.



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	agencies that fossil fuels were to remain a central and dominant part of Montana’s energy sector and that no fossil fuel projects in the state would be considered because of their impact on climate change, which could no longer be considered.” Hedges Expert Report at 29.	Defending the West www.westernlaw.org
98.	“Because of [river and lake] interconnectivity to ecosystems both within and beyond Montana’s borders, the prohibition on Defendants from considering regional impacts of climate change, contained in the Climate Change Exception to MEPA, is indefensible from a scientific perspective.” Stanford Expert Report at 15.	“Under MEPA, DEQ’s analysis may not include a review of actual or potential impacts beyond Montana’s borders. It may not include actual or potential impacts that are regional, national, or global in nature such as impacts that may result from climate change. Section 75-1-201(2)(a), MCA.” Hedges Dec. ¶ 30 (citing DEQ Final EIS Appendices for Rosebud Mine Area B AM5, May 2022).
99.	“Based on my long experience in reviewing and commenting on MEPA analyses prepared by Defendant agencies, when Defendant agencies prepare a joint environmental impact statement with federal agencies, the federal agencies are the only entities that analyze and consider climate impacts. In fact, Defendant agencies have made clear in separate records of decision from the federal agencies that they have no authority to analyze or consider climate impacts.” Hedges Dec. ¶ 29.	DEQ analyzes climate impacts within the borders of the state. Dorrington 30(b)(6) Dep. 66:1-2.
100.	“[A]s a result of the Climate Change Exception to MEPA, Montana agencies are no longer considering how fossil fuel projects contribute to climate change. This represents a regression in Montana climate policy, as prior to the Climate Change Exception to MEPA being adopted in 2011, state agencies <i>were</i> evaluating the GHG emissions and climate impacts from proposed fossil fuel projects” Hedges Expert Report at 24.	DEQ analyzes climate impacts within the borders of the state. Dorrington 30(b)(6) Dep. 66:1-2.
101.	“[A] law such as the MEPA provision Plaintiffs challenge here, makes no sense from a scientific perspective because any environmental review that ignores climate	DEQ analyzes climate impacts within the borders of the state. Dorrington 30(b)(6) Dep. 66:1-2.



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	change would be of little utility given the pervasiveness of climate impacts both within Montana’s borders and beyond.”	Defending the West	www.westernlaw.org
	EQUAL PROTECTION AND DIGNITY CLAIMS		
102.	<p>“All the Plaintiffs in this case are children (21 years of age or younger) and therefore, in our expert opinion and consistent with the medical literature, are uniquely and disproportionately harmed by the impacts of climate change and associated air pollution in Montana.” Byron Expert Report at 4.</p>	Describing a general upwards trend in life expectancy in Montana and other benefits related to climate change. Anderson Expert Report at 7-12.	
103.	<p>“[W]e determine that climate change and the air pollution associated with it are negatively affecting children in Montana, including these 16 youth Plaintiffs, with a strong likelihood that those impacts will worsen in the absence of aggressive actions to mitigate climate change.” Byron Expert Report at 2.</p> <p>“The combined physical and mental health harms from anthropogenic climate change are harming the overall health and well-being of children and decreasing their potential to live full and healthy lives.” Byron Expert Report at 14.</p>	Describing a general upwards trend in life expectancy in Montana and other benefits related to climate change. Anderson Expert Report at 7-12.	
104.	<p>“Children are not simply small adults. Their bodies and brains are still growing and developing, making them particularly vulnerable to ‘climate distress’ – both from the impacts of climate change today and from the threats of future harms.” Van Susteren Expert Report at 14.</p> <p>“Many children are more attuned and sensitive to the changes in the natural world than their parents – in part because they spend more time outside, exploring, learning, and playing.” Van Susteren Expert Report at 15.</p>	Describing a general upwards trend in life expectancy in Montana and other benefits related to climate change. Anderson Expert Report at 7-12.	
105.	<p>“A recent study documented that under current GHG emission rates, children born in 2020 are expected to be exposed to more than a <i>seven-fold increase in</i></p>	“Ancestors of the Youth Plaintiffs living in the 19 th and early 20 th century encountered weather and climate extremes that are as bad as, or worse than, those	



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	<p><i>extreme climate events</i>, such as heat waves, wildfires, storms, compared to people born in 1960.” Van Susteren Sariel Dec. ¶ 7.</p>	<p>that have been encountered by the Youth Plaintiffs.” Curry Expert Report at 3.</p>
106.	<p>“As climate change increases temperatures, there is less snow in the winter months, which means there are fewer opportunities for me to hear the Coyote and Creation stories from Elders.” Sariel Dec. ¶ 7.</p>	<p>Def. MSJ Br. at 5, n.4.</p>
107.	<p>“I fear deeply the losing of my culture and traditions as a result of climate change. . . . My people and culture are deeply intertwined with the environment, and climate change comes as yet another threat that prevents us from passing our culture and traditions on to today’s youth, like me, and future generations.” Sariel Dec. ¶ 10.</p>	<p>Def. Answer ¶¶ 27-29, 32 (Defendants lack information, and therefore deny allegations).</p> <p>Def. Answer ¶¶ 229-230 (denying allegations).</p>
108.	<p>“[I]ncreased forest fires in the area threatens our community’s ability to continue to make tipis in the traditional way, which would be a grave loss.” Shane Doyle Dec. ¶ 12.</p> <p>There are fewer opportunities for Lilian and Ruby to pick wild berries, “which is an important cultural activity their family has participated in for generations.” Shane Doyle Dec. ¶¶ 8, 15.</p>	<p>Def. Answer ¶ 74 (Defendants lack information, and therefore deny allegations).</p> <p>Def. Answer ¶¶ 229-230 (denying allegations).</p>
<p>CONSTITUTIONAL RIGHT TO SAFETY, HEALTH AND HAPPINESS AND PUBLIC TRUST CLAIMS</p>		
109.	<p>Declarant incorporates by reference Plaintiffs’ Material Facts and Supporting Evidence 1-108 above.</p> <p>“Defendants’ conduct dangerously deprives the Youth Plaintiffs of their rights under Article II, Section 3 to seek safety, health, and happiness because it exposes these vulnerable children to physical injury and disease; serious psychological, social, and spiritual harm and trauma; interferes with their capacity for growth and development” Compl. ¶ 222.</p>	<p>Def. Answer ¶¶ 221-224 (denying allegations).</p> <p>Climate change has done more good than harm this century and has improved human welfare. Anderson Expert Report at 10.</p> <p>Anderson Expert Report at 8-12 (describing societal benefits of climate change).</p> <p>Denying that climate change harms the mental health of youth and arguing that</p>

	<p>Byron Expert Report at 3-4, 13-14 (describing how youth are disproportionately vulnerable to climate impacts, including extreme heat, extreme weather events, and air pollution).</p> <p>Van Susteren Expert Report at 14-18 (describing how youth are especially vulnerable to the mental health impacts of climate change).</p>	<p>Plaintiffs' concerns are exaggerated. Curry Expert Report at 3-8, 13-16.</p>
110.	<p>"Defendants have unconstitutionally caused, and continue to cause, the substantial impairment to, and waste of, Public Trust Resources, including the atmosphere, waters of Montana, fish and wildlife, and other Public Trust Resources. The dangerous levels of greenhouse gas emissions that Defendants have authorized to be emitted into the atmosphere have a scientifically demonstrable effect on the Youth Plaintiffs' ability to use, access, enjoy and navigate the state's waters and other Public Trust Resources." Compl. ¶ 248</p> <p>Stanford Expert Report at 10-15 (describing impairment to Montana's freshwater ecosystems and fisheries as a result of anthropogenic climate change).</p>	<p>Def. Answer ¶¶ 248-251 (denying allegations).</p> <p>Natural variability, not anthropogenic climate change, is responsible for any changes in Montana's climate. Curry Expert Report at 3-8.</p>

Pursuant to MCA § 1-6-105, I declare under penalty of perjury that the foregoing is true and correct.

Executed this 15th day of February, 2023 in Kalispell, Montana.


 Roger Sullivan

CERTIFICATE OF SERVICE

I certify that a true and correct copy of the foregoing was delivered by email to the following on February 16, 2023:

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EXHIBIT 1

*Rikki Held, et al. v
State of Montana, et al.*

*Steven William Running
October 25, 2022*

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Min-U-Script® with Word Index

1 MONTANA FIRST JUDICIAL DISTRICT COURT
 2 LEWIS AND CLARK COUNTY
 3 RIKKI HELD, ET AL.,
 4 Plaintiffs,
 5 vs. Cause No. CDV-2020-307
 6 STATE OF MONTANA, ET AL.,
 7 Defendants.

10 DEPOSITION UPON ORAL EXAMINATION OF
 11 STEVEN WILLIAM RUNNING

13 BE IT REMEMBERED, that the deposition upon
 14 oral examination of Steven William Running,
 15 appearing at the instance of the Defendants State
 16 of Montana, et al., was taken at 211 North Higgins
 17 Avenue, Suite 303, Missoula, Montana, on Tuesday,
 18 October 25, 2022, beginning at the hour of
 19 9:11 a.m., pursuant to the Montana Rules of Civil
 20 Procedure, before Mary R. Sullivan, Registered
 21 Merit Reporter, Certified Realtime Reporter, and
 22 Notary Public.

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 2
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1 **STIPULATIONS**

2

3 It was stipulated by and between

4 counsel for the respective parties that the

5 deposition be taken by Mary R. Sullivan, Freelance

6 Court Reporter and Notary Public for the State of

7 Montana, residing in Missoula, Montana.

8

9 It was further stipulated and agreed by

10 and between counsel for the respective parties

11 that the deposition be taken in accordance with

12 the Montana Rules of Civil Procedure.

13

14 It was further stipulated and agreed by

15 and between counsel for the respective parties and

16 the deponent that the reading and signing of the

17 deposition would be expressly reserved.

18

19

20

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22

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1 **fixed kind of definition of it or does it just vary**

2 **with the person?**

3 A. Well, first off, it doesn't come with any

4 salary, it doesn't even come with an office unless

5 you separately negotiate it.

6 **Q. Okay.**

7 A. So in some sense it's -- it's just a

8 title that allows you, for example, library

9 privileges, you know, from the old days,

10 and -- and I'm trying to think of what else. You

11 don't even have to be emeritus to get the free

12 football and basketball tickets, you just have to

13 be a retiree.

14 **Q. Oh, that's good to know.**

15 A. And so emeritus is -- is voted by your

16 department, and so it's a bit of an official

17 honor, but there's not a whole lot of tangible

18 benefit with it, let's say.

19 **Q. Okay. And I'm looking at your resume,**

20 **your CV, which we'll include as an exhibit, but**

21 **it's -- it says you have been on emeritus status**

22 **since 2017. Is that --**

23 A. Correct.

24 **Q. -- sound about right?**

25 **Before we go much further, I wanted to ask**

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1 **TUESDAY, OCTOBER 25, 2022**

2 Thereupon,

3 **STEVEN WILLIAM RUNNING,**

4 a witness of lawful age, having been sworn to tell

5 the truth, the whole truth, and nothing but the

6 truth, testified as follows:

7 **EXAMINATION**

8 **BY MR. STERMITZ:**

9 **Q. Could you please tell us your name for the**

10 **record?**

11 A. Steven William Running.

12 **Q. What's your current address, Dr. Running?**

13 A. 1419 Khanabad Drive.

14 **Q. In Missoula?**

15 A. Missoula. 59802.

16 **Q. You're at -- on emeritus status at the**

17 **University of Montana. Is that right?**

18 A. Correct.

19 **Q. Do you do any teaching, then, anymore?**

20 **Are you --**

21 A. I don't teach any full courses. I give a

22 guest lecture -- Last night I gave one. So when

23 I -- So I give occasional guest lectures, yes.

24 **Q. So what -- what does that status mean,**

25 **really? I mean, emeritus, is it -- is there any**

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1 **you, I know you had at least several instances**

2 **where you've worked in litigation before.**

3 **Have you had your deposition taken before?**

4 A. Yes.

5 **Q. Once? More than once? How many times?**

6 A. I think only once.

7 **Q. Do you remember what that was in**

8 **connection with?**

9 A. That was in Eugene, Oregon in connection

10 with an -- Our Children's Trust lawsuit.

11 **Q. The Juliana case?**

12 A. Yeah.

13 **Q. So since you've been through the process,**

14 **I'm not gonna go through the rules of engagement, I**

15 **think you probably know what they are, and just --**

16 A. Yeah.

17 **Q. -- one thing, make sure that you tell me**

18 **if you don't understand my question.**

19 A. Right.

20 **Q. And I'll do my best to rephrase it.**

21 A. Right.

22 **Q. You -- You did a report for this case. Is**

23 **that right?**

24 A. Correct.

25 ///

1 **EXHIBIT:**
 2 (Deposition Exhibit 22 marked for
 3 identification.)
 4 **BY MR. STERMITZ:**
 5 **Q. And we've marked it as Exhibit 22, and --**
 6 **A. Mm-hmm.**
 7 **Q. -- do you have it there in front of you?**
 8 **A. Yes.**
 9 **Q. We'll refer to it some, and so we'll go**
 10 **ahead and attach this as an exhibit.**
 11 **Let's go ahead and -- on Attachment 4 to**
 12 **the report, you've got a list of -- or -- of**
 13 **previous testimony that's about three-quarters of**
 14 **the way towards the back.**
 15 **A. Okay.**
 16 **Q. Did you find it?**
 17 **A. Yes.**
 18 **Q. The first thing that's listed there is**
 19 **expert testimony in -- in rulemaking before the**
 20 **Colorado Oil and Gas Conservation Commission in**
 21 **2020.**
 22 **Can you just briefly describe what the**
 23 **nature of your engagement was there?**
 24 **A. I don't remember that testimony at all.**
 25 **The other three I -- I clearly do.**

1 **MR. GREGORY:** It's -- The district court
 2 number is 6:15.
 3 **MR. STERMITZ:** Okay.
 4 **MR. GREGORY:** And then the other two case
 5 numbers are Ninth Circuit -- separate Ninth
 6 Circuit file -- case numbers.
 7 **MR. STERMITZ:** It went up to the Ninth
 8 Circuit twice.
 9 **MR. GREGORY:** Yeah.
 10 **MR. STERMITZ:** Okay. Okay. That makes
 11 sense.
 12 **BY MR. STERMITZ:**
 13 **Q. And I think we've been provided a copy of**
 14 **a report that you did in that case, and -- and so**
 15 **I'm not gonna go through that. I just want to ask**
 16 **this general question, if you can answer it,**
 17 **whether the information and nature of your**
 18 **engagement in Juliana was similar to what you've**
 19 **been asked to do in this case.**
 20 **A. Yes, it is.**
 21 **Q. Then the next one that's listed is State**
 22 **of Washington vs. Taylor in Spokane County in 2017?**
 23 **A. Mm-hmm.**
 24 **Q. Do you remember what that was about?**
 25 **A. Yes. That was -- Well, that was the**

1 **Q. Okay.**
 2 **A. 2020, that's not that long ago.**
 3 **Q. You were in Colorado quite a bit earlier I**
 4 **see from your resume, but --**
 5 **A. I did my Ph.D. at Colorado State, but**
 6 **I -- I don't recall that.**
 7 **Q. Okay.**
 8 **A. Which is odd, 'cause that's only two**
 9 **years ago.**
 10 **Q. That's fine.**
 11 **Then the next one that's listed is 2018.**
 12 **These are in reverse order --**
 13 **A. Yeah.**
 14 **Q. -- chronologically. Expert in Juliana vs.**
 15 **United States.**
 16 **And there are two cases listed there, but**
 17 **I -- I take it -- tell me if this is wrong,**
 18 **that -- were there two separate cases that -- there**
 19 **or -- or was this one that ended up having**
 20 **different iterations, let's put it that way.**
 21 **A. Joint -- Case number 6 --**
 22 **Q. If -- If you know.**
 23 **MR. GREGORY:** Can -- Can I explain, Mark?
 24 **I'm happy. It's --**
 25 **MR. STERMITZ:** Yeah.

1 valve turner case as they call it where --
 2 **Q. Valve turner, did you say?**
 3 **A. Yeah. -- where the defendant had -- was**
 4 **closing natural gas pipeline valves, and -- as**
 5 **a -- as a climate protest, and so I was -- I was**
 6 **called for expert testimony just on the climate**
 7 **science background.**
 8 **Q. Was this a criminal prosecution, then,**
 9 **against this individual?**
 10 **A. I -- I think it was a trespass, which**
 11 **would that be criminal or --**
 12 **Q. Could be. Either way.**
 13 **A. -- civil. I'm not so good at --**
 14 **Q. Okay.**
 15 **A. -- legal things.**
 16 **Q. And -- And why was climate change relevant**
 17 **there?**
 18 **A. This individual was -- course, natural**
 19 **gas is a fossil fuel, and this individual**
 20 **was -- was trying to do a -- a nonviolent protest,**
 21 **you know, a harmless nobody's gonna to get hurt,**
 22 **but I'm gonna close this gas pipe down as -- as a**
 23 **public protest.**
 24 **Q. And you -- was your testimony designed to**
 25 **show what was not being emitted as a result of**

1 these valves being shut off or?
 2 A. No. My testimony was really just the
 3 background of the whole global warming issue as a
 4 justification for his action.
 5 Q. I see. Okay. Thank you.
 6 Then the last thing on this list is 2015
 7 showing expert testimony in the City of Missoula
 8 vs. Mountain Water.
 9 Who retained you there?
 10 A. City of Missoula.
 11 Q. And what was the nature of your testimony?
 12 A. I was -- I testified that in the warming
 13 climate that we're under, that water availability
 14 was going to become more critical, more valuable,
 15 and -- and that's it, yeah, that's -- that's what
 16 they wanted to understand was --
 17 Q. Did you actually testify at the trial?
 18 A. Yeah.
 19 Q. And did you work with Tasha Jones, then,
 20 or if you can remember who -- which attorney.
 21 A. I don't remember exactly. That sounds
 22 familiar, but --
 23 Q. Okay.
 24 A. -- I had just one -- one morning a very
 25 brief, you know, statement, and that was my whole

1 their underlying references as well as the report,
 2 and then if you needed anything else, please tell
 3 us.
 4 MR. STERMITZ: Okay. Maybe that was
 5 before my time here. So I -- I guess I just
 6 don't -- I'm not aware of any arrangements that
 7 were made. I don't want to go any further with
 8 it, but I also don't want to, you know, concede
 9 anything on the record, so let me just put a --
 10 MR. GREGORY: Sure.
 11 MR. STERMITZ: -- pin in that for now.
 12 MR. GREGORY: And, I'm sorry, Mark, I
 13 have some references. If there's anything that
 14 comes up and you need it, if I have it, I'm happy
 15 to --
 16 MR. STERMITZ: And I do too, so --
 17 MR. GREGORY: Okay.
 18 MR. STERMITZ: -- we'll probably be all
 19 right.
 20 MR. GREGORY: Okay.
 21 BY MR. STERMITZ:
 22 Q. I noticed somewhere -- I can't remember
 23 where I saw this, Dr. Running, that you're
 24 receiving no compensation for your work here. Is
 25 that right?

1 involvement. That trial did go a long time, but I
 2 was just very briefly -- testified in the very
 3 beginning.
 4 Q. Is this a -- Is there any other work that
 5 involved litigation that's not on this list, or is
 6 this a complete list?
 7 A. I think this list is accurate of -- of
 8 the suits that have -- have reached, you know, a
 9 point of formality. I'm -- I'm contacted by many
 10 groups on -- on this, but these are the only ones
 11 that have really got formalized, you might say.
 12 Q. Would these be the only ones, then, where
 13 you, for example, would have done a report that
 14 would be out in the public arena?
 15 A. Right.
 16 Q. Okay. Did you bring any materials with
 17 you today?
 18 A. No.
 19 Q. Did you -- Were you aware -- Did you
 20 receive a subpoena to attend this deposition? Do
 21 you recall getting that, or did you get that?
 22 A. I don't think so.
 23 MR. GREGORY: Excuse me, Mark. What
 24 we -- The position we took is we gave you copies
 25 at the time of our document production of all

1 A. Correct.
 2 Q. Have you -- Were any of the other -- in
 3 these other cases that we just talked about, were
 4 those gratis or did you get compensated in those?
 5 A. The only other -- The only of these that
 6 I was compensated was the City of Missoula water
 7 case.
 8 Q. Okay. You've obviously had a long and
 9 distinguished career. Can you recall, roughly,
 10 when you first started focusing on climate change
 11 or global warming as kind of a specialty, so to
 12 speak?
 13 A. When I -- When I first started working
 14 with NASA in 1981, well, the global warming still
 15 wasn't -- it was -- wasn't the focus, it was still
 16 just earth system science. So I would have to say
 17 about 1990 when the Earth Observing System was
 18 authorized by Congress, and I was part of the
 19 science team, and by then global warming was
 20 becoming in the public knowledge.
 21 Q. At that point how was it that you became
 22 part of the science team? Had you already been
 23 working enough in the field that your name was out
 24 there or -- that seems like a -- it's early -- a
 25 pretty early date.

1 A. Yeah. It -- I was part of planning the
2 NASA Earth Observing System beginning in 1981, and
3 so by the 1990s I was, I guess, a pretty well
4 known -- I was on the A-team, you might say.

5 **Q. Can you describe what that Earth Observing
6 System consisted of --**

7 A. Oh, yeah. Well --

8 **Q. -- in simple terms?**

9 A. -- consists of, in present tense, 'cause
10 they're still up there, and the taxpayers of the
11 country should be proud of us. There's three
12 major platforms. They're known as the Terra,
13 Aqua, and Aura satellites. They each have five or
14 six main sensors on them that all go continuously.
15 The sensor I work with is on the Terra and Aqua
16 platforms. It's called MODIS for Moderate
17 Resolution Imaging Spectroradiometer.

18 **Q. M-O --**

19 A. MODIS is --

20 **Q. M-O --**

21 A. -- is short --

22 **Q. M-O --**

23 A. -- D-I-S --

24 **Q. -- D-I-S? Okay.**

25 A. -- is what it's known as in the science

1 world.

2 **Q. Okay.**

3 A. And so I've been on that science team in
4 1990, and it's still going, and I still get
5 funding to the University of Montana for
6 continuation.

7 **Q. That was going to be my next question.**

8 **The -- The -- Your involvement with this you were
9 able to do from here at the university. Is that
10 right?**

11 A. Yep.

12 **Q. And so did you get grant funding for that?**

13 A. Oh, yeah, yeah. For -- For about
14 20 years I was the biggest grant getter at the
15 University of Montana, or all through the 1990s
16 till around 2010, there are just wave after wave
17 of NASA grants.

18 **Q. Did you have graduate students working on
19 this consistently?**

20 A. Graduate students and post docs both.

21 **Q. Okay.**

22 A. And actually a couple of research
23 assistant professors.

24 **Q. And this -- these platforms, when -- when
25 did -- did they first go into service in 1990? Is**

1 **that right?**

2 A. No, we first started designing and
3 building them. The first one launched
4 December 18th, 1999, a date I remember, 'cause
5 it's my wedding anniversary. The second platform
6 was launched in 2001, Aqua. And the third
7 platform, Aura, was launched in, I think, 2002 or
8 '03. I didn't have as much to do with that. And
9 all three of these platforms are still up and
10 operating.

11 **Q. So you say in various places in your
12 report that the effects of greenhouse gases on the
13 atmosphere have been known for a long time.**

14 A. Right.

15 **Q. I guess we could start, then, is this
16 right, at least with the -- NASA's work,
17 they're -- that led to putting these things up in
18 space --**

19 A. Correct.

20 **Q. -- which would have been -- When was the
21 first time that or, you know, they started thinking
22 about doing something like this? Back in the early
23 '80s?**

24 A. 1981 --

25 **Q. Okay.**

1 A. -- was when we first started
2 conceptualizing how to measure the entire earth
3 system.

4 **Q. Okay.**

5 A. Yeah.

6 **Q. And do these platforms, either
7 individually or in the aggregate, focus on specific
8 geographic areas or are they taking measurements
9 just globally as -- as a whole?**

10 A. Most of them are taking continuous, full
11 global coverage.

12 **Q. Okay.**

13 A. There's a few that are targeted, but the
14 vast majority of the sensors are measuring the
15 entire land surface at whatever interval the
16 orbital track and the optics of the sensor will --
17 will produce.

18 **Q. Does it matter, for our purposes of what
19 you're trying to learn through this data, whether
20 there's, say, a particular geographic area that is
21 more responsible for greenhouse gas emissions than
22 any other? In other words, does it all just go
23 into the global mix and -- and get viewed and
24 analyzed from that perspective?**

25 A. I think I understand your question, and

1 the raw data stream is global, and that raw data
2 stream is beamed down to processing centers on
3 earth, and the full global dataset is processed in
4 a -- in a consistent fashion.

5 At that point, then, different teams look
6 more in more targeted ways in different locations,
7 but the -- the -- the raw data stream is -- is
8 global and continuous, and, of course, it's very
9 important scientifically that it's repeated in a
10 very high precision way so -- so we can detect
11 changes.

12 **Q. And I've seen, I think, in your report and**
13 **elsewhere that -- and tell me if -- if I'm saying**
14 **this right -- that, say, a ton of -- of greenhouse**
15 **gas into the atmosphere in one place is the same as**
16 **anywhere -- it's a global issue.**

17 A. Correct.

18 **Q. Is that right?**

19 A. Yeah. As we call it, the atmosphere is
20 well mixed in very short timeframe.

21 **Q. Do -- Do we -- Do you have data on how**
22 **much of that mix Montana contributes to? Or, yeah,**
23 **contributes?**

24 A. I'm sure that's been computed many times.
25 I think in the complaint they had even done that

1 calculation, and so I know people have done that
2 in the past for every different state, for every
3 different country.

4 **Q. Do you have any kind of recollection of**
5 **what those figures look like on a -- say a**
6 **percentage of the whole or some other way we**
7 **could -- we could measure that?**

8 A. I'm sure -- I'm sure it would be easily
9 found, but it's something I don't keep track of
10 because my part of the -- of the science is the
11 full global -- global dataset.

12 **Q. Do -- Do you have people that you've**
13 **worked with or could you tell me who, if anyone,**
14 **might be more up to date on Montana's specific**
15 **contribution to the global greenhouse gas problem?**

16 A. I think there may be other expert
17 witnesses for this case that work only in Montana
18 and so are focused only in Montana, but since I
19 work globally, I don't focus my work only on
20 Montana.

21 **Q. Okay. And -- And you would agree, I take**
22 **it, just from reading your report, that the effects**
23 **of climate change are experienced in different ways**
24 **in different parts of the globe. Is that right?**

25 A. Mm-hmm. Yes.

1 **Q. Do we know how Montana -- I assume we know**
2 **how Montana's being impacted now. Right?**

3 A. Correct.

4 **Q. Is that a fairly well established body of**
5 **information or -- or is it something that is in**
6 **flux?**

7 A. Well, the -- the impacts are certainly in
8 flux. The most recent comprehensive summary has
9 been our Montana climate assessment of 2017, which
10 is referenced in my expert testimony, and most of
11 those figures of -- in the testimony for Montana
12 come from that Montana Climate Assessment.

13 **Q. Okay. I've read in your report**
14 **that -- the -- the following: Global annual**
15 **temperature increased at an average rate of .07**
16 **degrees centigrade per decade since 1880 and over**
17 **twice that rate since 1981.**

18 **Let me stop there. How is -- How is that**
19 **measured globally? Is that through these NASA**
20 **platforms or does the data come from some other**
21 **sources?**

22 A. Most of those references, certainly since
23 1880, come from the ground weather station network
24 that -- that -- we have the World Meteorological
25 Organization in Switzerland a long time ago found

1 the -- the most valuable summary of daily weather
2 was the daily maximum and minimum temperature and
3 daily rainfall, and so every weather station,
4 pretty much around the world, has collected and
5 reported those basic measures every day from the
6 time the station started, and so that's why we can
7 go back to 1880 for some of -- well, certainly for
8 places like Europe that -- and -- and -- and
9 eastern -- well, we even had them here by then. I
10 think some of our stations had started here.

11 So when you see any temperature trend
12 that goes back that far, you know it's not the
13 satellites because our satellites really didn't
14 start before about 1980. So those long historical
15 records are all from surface weather observations.

16 **Q. Do you have a -- an opinion or a feel for**
17 **how Montana's being affected by the climate change**
18 **in particular on this, like, spectrum of good to**
19 **bad, so to speak?**

20 A. There's a couple of principles that have
21 become clear. One -- One is that near the
22 equator, so the lower latitudes are changing more
23 slowly in temperature, the higher latitudes are
24 changing faster.

25 The other basic principle that is very

1 relevant to Montana is when you're at a latitude
2 where you have seasonal snow pack and snow is
3 bright and highly reflective, and so when -- when
4 snow's on the ground, the energy budget is totally
5 different than the very next day when the snow's
6 melted and it's brown dirt again.

7 So the whole northern latitudes where you
8 have seasonal snow cover, it's clear to us, are
9 seeing amplified changes because this timing
10 of -- of seasonal snow pack is changing, and that
11 just flips the energy budget on its head just on a
12 day-to-day basis when there's snow and then when
13 it melts, and we'll see that pretty soon here in
14 Missoula.

15 **Q. And that applies all -- all around the
16 globe --**

17 **A. Sure, yeah, that's basic physics.**

18 **Q. -- the northern latitudes. When you refer
19 to northern latitudes, you're talking about
20 globally, right?**

21 **A. Right.**

22 **Q. At some point in your report -- Well,
23 let's see, I think it's on -- in the executive
24 summary on page 4 if you need to look at it. Let's
25 go ahead and do that.**

1 **A. Okay.**

2 **MR. GREGORY:** I'm sorry, Mark, did you
3 say page 4?

4 **MR. STERMITZ:** Page 4.

5 **MR. GREGORY:** Thank you.

6 **MR. STERMITZ:** I just go to the executive
7 summary in here 'cause that's kind of like the
8 CliffNote version. I --

9 **MR. GREGORY:** Okay.

10 **MR. STERMITZ:** -- That's the way I've
11 gotten through school.

12 **BY MR. STERMITZ:**

13 **Q. Let's see, where is this? Well, I don't
14 know exactly in the -- in here where this is. I
15 don't think this is a radical proposition, so I'll
16 just ask you.**

17 **A. Okay.**

18 **Q. There's a statement in here that says "The
19 State of Montana, has known of the dangers posed by
20 fossil fuels and climate change for decades but
21 continues to promote fossil fuels as the state's
22 primary energy source."**

23 **Does that sound like an accurate quote?**

24 **Well, I -- I see it now. It's the end of the
25 second full paragraph, last sentence.**

1 **A. Mm-hmm.**

2 **Q. When did the state of Montana begin to
3 know of these dangers, in your opinion?**

4 **A. Probably the -- the first time that I am
5 pretty certain that leaders in Montana would have
6 understood this was the testimony that
7 James Hansen gave in front of Congress in 1988 to
8 a committee chaired by Al Gore, and that's famous
9 in the global warming world because that was
10 widely -- widely followed and quoted in the press
11 at the time. And Jim Hansen stated that -- that
12 the trend of global temperatures was now clearly
13 being influenced by -- by the global warming
14 physics.**

15 **And the -- the basic theory, of course,
16 has been known since the 1800s, but -- and
17 the -- the first measurements of increasing CO2 in
18 the atmosphere were done by Charles David Keeling
19 from Scripps starting in 1957, but you could
20 reasonably think that state officials weren't
21 following the science literature year by year, but
22 certainly by 1988 this was all in the national
23 news from Jim Hansen's testimony.**

24 **Q. Was -- Who was Jim Hansen?**

25 **A. He was the head of the Goddard Institute**

1 of Space Studies at NASA. GISS, as we call it.

2 **Q. Oh. So he -- when you say "the state of
3 Montana knew," it was not because this person was
4 affiliated with Montana, it was because it was in
5 the national --**

6 **A. Right.**

7 **Q. -- dialogue?**

8 **A. Right. Now, I -- I can say more
9 target -- in a more targeted way that the
10 governor's office in 2007 commissioned a report,
11 of which I was part of, that explicitly asked
12 about responses Montana should take to climate
13 change, and so that's the most tangible guaranteed
14 illustration that the state of Montana was -- knew
15 and understood about global warming at that point.**

16 **Q. Was that Governor Bullock or --**

17 **A. No, it was --**

18 **Q. Schweitzer?**

19 **A. -- Schweitzer, I think.**

20 **Q. Okay. The next -- That sentence goes on
21 to say that the state of Montana "continues to
22 promote fossil fuels as the state's primary energy
23 source."**

24 **In what way does the state do that?**

25 **A. You know, that really isn't part of my**

1 expertise to know what state policies on energy
2 production are. I think there's other expert
3 witnesses that could state that more clearly.
4 **Q. Well, there's -- at various**
5 **places -- would -- would your co-author here,**
6 **Ms. Whitlock, be one to talk about that more than**
7 **you?**
8 A. Probably not. I think in both
9 Dr. Whitlock and I, I mean, that material here
10 comes from the original complaint, and neither of
11 us are state energy policy experts.
12 **Q. So the statement that the state continues**
13 **to promote fossil fuels as the state's primary**
14 **energy source, I'm -- and there are various**
15 **statements like that --**
16 A. Right.
17 **Q. -- in the report -- are those not part of**
18 **the opinion or are those an assumption made with**
19 **your opinion? How would you characterize that?**
20 A. Those are assumptions that we derive from
21 the original complaint.
22 **Q. Okay.**
23 A. And in the material, I think some of the
24 statistics are in the original complaint.
25 **Q. So is it fair for me to assume that**

1 **anything in the report that goes to the state's**
2 **energy policies, such as they are, is -- is**
3 **information that you and -- and Dr. Whitlock**
4 **obtained from other sources and -- and incorporated**
5 **as an assumption in your report?**
6 A. Yes, I think that's correct.
7 **Q. Okay. There's -- In a similar vein**
8 **there's various places in your report where it**
9 **states, that, quote, "We are informed about this"**
10 **or "We are informed about that." It's that kind**
11 **of --**
12 A. Right.
13 **Q. -- where we see that language.**
14 A. Yeah.
15 **Q. That primarily came from the complaint --**
16 A. Right.
17 **Q. -- did you say?**
18 **Do you have an understanding, would you**
19 **say, of what the state's energy policy,**
20 **quote/unquote, is in Montana?**
21 A. I think I have an understanding.
22 I've -- I've read some summaries of it. I haven't
23 read legal language.
24 **Q. Okay. We -- We might get back to that**
25 **here in a minute.**

1 **So an obvious question, based just on what**
2 **we've talked about so far, is what would changes in**
3 **Montana to its energy policy or to actually**
4 **greenhouse gas emissions have on climate change on**
5 **a global basis? Do you have an opinion about that?**
6 A. Yeah. Sure.
7 **Q. What -- What is it?**
8 A. I think -- I think my opinion is in -- in
9 two veins, and I -- I think first is that in
10 a -- any collective problem in society, everyone
11 has to do their part as part of the solution no
12 matter what that is, even if it's stopping COVID
13 or stopping global warming.
14 The second -- The second opinion I have
15 is that the United States and the state of Montana
16 and then we as individuals have to lead by
17 example. If we expect China and India and all the
18 other major greenhouse gas emitting countries, if
19 we expect them to change their policies and -- and
20 energy use, we have to lead by example.
21 **Q. These two approaches or angles that you**
22 **just mentioned sound more like social opinions than**
23 **scientific opinions. Isn't -- Aren't they?**
24 **MR. GREGORY: Objection. Vague and**
25 **ambiguous.**

1 A. I don't know if I would agree with
2 labeling them as social. Certainly these opinions
3 are based on us looking at all the scientific
4 material that we've looked at through our career,
5 and also studying the whole world, which I've
6 spent 40 years doing, and all 8 billion people of
7 us, and so I fully understand that each
8 individual's contribution is quite small.
9 I also understand that without global
10 consistency and cooperation we're doomed, and I
11 think the recent COVID disaster illustrated that.
12 When there's not a coordinated international
13 response, you end up with quite a mess, and I
14 think global warming is -- is even a more
15 continuing and dangerous situation for humanity,
16 and so I think I wouldn't want to label it as only
17 a social issue.
18 **BY MR. STERMITZ:**
19 **Q. There -- There are political aspects to**
20 **these --**
21 A. Yeah.
22 **Q. -- things. Right?**
23 A. Absolutely.
24 **Q. And when we talk about the state of**
25 **Montana's responsibility, let me break that down a**

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1 little bit. The state of -- as to the state of
 2 Montana.
 3 You -- You would agree, I assume, that at
 4 least in terms of the governance of the state of
 5 Montana you've got varying levels and varying
 6 powers --
 7 A. Mm-hmm.
 8 Q. -- and varies attitudes. Correct?
 9 A. Mm-hmm.
 10 Q. Yes?
 11 A. Yes. Sorry.
 12 Q. So when your reports identify actions or
 13 inactions on the part of the state of Montana,
 14 quote/unquote, to what portion of that amalgam are
 15 you referring?
 16 A. I'm certainly not drilling down to any
 17 specific state agency making any specific policy
 18 change or -- or -- or policy adjustment. I -- I'm
 19 -- I'm referring more generally to our governing
 20 bodies at the state level acrossed all manner of
 21 policies needs to recognize the science that I'm
 22 presenting, recognizing -- recognize the absolute
 23 seriousness where the world will end up in a
 24 hundred years if humanity doesn't change course,
 25 and wanting them to recognize that part of this

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1 humanitarian train wreck that could end up is
 2 caused by policies the state of Montana is
 3 continuing.
 4 Q. What in your -- What would you say in your
 5 own words is the purpose of this lawsuit? I -- I
 6 would use the word "goal" maybe. Maybe "goal's" a
 7 better word.
 8 A. I think the purpose is to really change
 9 the state's energy policy objectives.
 10 Q. And do you have any feel for specifically
 11 how that might happen in this case
 12 through -- through orders in this case? I'm not
 13 asking for any legal, you know --
 14 A. Yeah.
 15 Q. -- I know you're just -- your
 16 understanding.
 17 A. Coming at this as a global scientist, not
 18 as a policy or political person, I don't -- I
 19 don't focus and -- and don't really probably
 20 understand the exact point of policy and procedure
 21 in -- in state laws and regulations where this is
 22 needed. I -- I'm back more at the global level
 23 saying the first thing all of humanity needs to do
 24 is quit burning coal, period, everywhere,
 25 and -- and -- because that is the highest carbon

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1 emission per unit of energy production, the least
 2 efficient of all the fossil fuel energies.
 3 And then following that, be working
 4 towards eliminating burning oil and gas. But
 5 certainly coal -- stopping burning coal and
 6 stopping selling coal to other countries to burn
 7 it is by far the highest priority. And I've seen
 8 this for 20 years. And -- And -- And also I would
 9 say that exact same sentence anywhere else in the
 10 world if somebody asked me, and they have.
 11 Q. If the court had the power to order the
 12 cessation of burning coal, selling coal, and any
 13 other greenhouse gas emission in Montana vehicles,
 14 cows, you name it, so that Montana had zero
 15 greenhouse gas emissions, what would -- what would
 16 the impact of that be on global climate change or
 17 greenhouse -- or global warming?
 18 A. Are you asking --
 19 Q. And I mean that from a scientific
 20 standpoint.
 21 A. Yeah. I think if Montana individually
 22 did that first, it would make national headlines.
 23 Q. I'm sure that's true.
 24 A. That's right. And -- And certainly
 25 because we have a lot of coal resources, stopping

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1 selling those coal resources, along with stopping
 2 the part that we burn would be a small but
 3 measurable reduction in greenhouse gas emissions.
 4 And so from a scientific point of view I
 5 -- I think, again, it would be a small but
 6 measurable decrease in greenhouse gas emissions.
 7 It would be a large and very widely stated policy
 8 change that the rest of the world would notice.
 9 Q. And -- And the hypothetical that I put out
 10 there would be a radical societal change. I mean,
 11 we -- and -- and not even humanly possible at this
 12 point. Right? I mean, that's --
 13 A. For all greenhouse gas?
 14 Q. All greenhouse gas emissions.
 15 A. For all greenhouse gas emissions, it's
 16 probably not possible at this point, particularly
 17 as we look into the agricultural sector.
 18 Q. Do you know -- I -- I take it from your
 19 answer that you haven't done the math to measure
 20 that small but measurable reduction, have you?
 21 A. Yeah. I -- I work at the global scale,
 22 and so those kind of state level calculations
 23 probably somebody's done, but not me.
 24 Q. Do you have anyone that you can -- that
 25 comes to mind that might be more likely to have

1 done that or who could do that if it hasn't been
2 done?

3 A. I'll bet the Montana Environmental
4 Information Center is probably where I
5 would -- where I would call first.

6 Q. Okay. And I think somebody's going to
7 take Anne Hedge's deposition, so maybe we'll --

8 A. Yes.

9 Q. -- find out. Okay.

10 A. They specialize in the state level
11 calculations.

12 Q. The -- The report talks about Montana's
13 energy policy, and it also talks about the Montana
14 Environmental Protection -- or Policy Act, excuse
15 me, MEPA. Are you familiar with how MEPA works in
16 Montana?

17 A. All -- I'm familiar --

18 Q. Can I stop you? As, of course, I mean as
19 regards, you know, what the climate change and what
20 we're talking about here.

21 A. I think so.

22 Q. Okay. And do you believe there's a
23 problem with it?

24 A. As -- As I understand what that states is
25 that any Montana policy around energy can only

1 include material from inside the state. And so
2 you -- you exclude all national and global level
3 scientific information and policy information is
4 the way I understand it so it -- it forces them to
5 look only at internal state material information.

6 Q. Do you know whether from a -- I'm trying
7 to avoid asking for a legal conclusion, so let me
8 put it this way: As far as your knowledge is
9 concerned, does Montana have the ability to
10 regulate the conduct outside its borders?

11 A. I don't think it has the authority to
12 regulate outside -- Well, I don't think it has the
13 ability to regulate outside its borders. I think
14 it can have influence, but I don't think -- I
15 think its regulatory authority stops at the
16 border.

17 Q. I know we haven't been going at it very
18 long, but I need to use the bathroom. Can we take
19 a break for about ten minutes?

20 A. Okay. Good idea.

21 (Recess taken from 10:02 a.m. to
22 10:24 a.m.)

23 EXHIBIT:

24 (Deposition Exhibit 23 marked for
25 identification.)

1 BY MR. STERMITZ:

2 Q. Dr. Running, have you met any of the
3 plaintiffs in -- in the case -- in this case?

4 A. No.

5 Q. Are you familiar with their individual
6 circumstances other than what you've read in the
7 complaint?

8 A. All my understanding of the plaintiffs
9 and their background comes from the complaint.

10 Q. Do you know, then, whether if, again,
11 going back to the hypothetical that Montana could
12 somehow prohibit the emission of any greenhouse
13 gasses how that would impact any of the plaintiffs
14 individually differently from one another or from
15 the rest of the public? Do you have any feel for
16 that?

17 A. Not specifically, and -- and, of course,
18 there's such a time domain in all of these
19 questions.

20 Q. Right.

21 A. That is -- is so unknowable that makes it
22 just hard -- hard to answer in a very specific
23 way.

24 Q. And -- And I can -- I don't think this
25 will -- I'm going to guess it's not going to change

1 the answer any, but rather than make it the
2 hypothetical elimination of all greenhouse gasses,
3 let's -- let's say the court were to declare
4 Montana's energy policy unconstitutional, which I
5 think is one of the goals of the lawsuit, do -- do
6 you know how that would impact any of the
7 plaintiffs individually, a ruling like that?

8 A. I don't -- I do not know specifically
9 with regards to any of the individuals.

10 Q. Let me see here. One of the
11 statements -- again, this is on -- if you need to
12 refer to it, it's on page 4, the executive summary
13 of your report, let's just go there.

14 A. Okay.

15 Q. In the middle of the third paragraph on
16 page 4, there's a sentence that starts "These
17 impacts pose an unusually serious risk."

18 A. Okay.

19 Q. Do you see that sentence?

20 A. Yeah. Yep.

21 Q. The sentence goes on to read that "an
22 unusually serious risk to the health and well-being
23 of these youth Plaintiffs and future generations
24 and are causing substantial degradation and
25 depletion of Montana's environment and natural

1 resources."

2 **First of all I want to ask about the**
3 **phrase "unusually serious risk to the health and**
4 **well-being."**

5 **Unusually as compared to what? This is my**
6 **question.**

7 A. I think unusual compared to the current
8 conditions, and certainly to the past climate
9 conditions.

10 Q. So --

11 A. So we're talking about a risk to their
12 future well-being, and embedded in that is
13 understanding of where the climate trajectory is
14 going.

15 Q. So by "unusually serious," that's in
16 reference to the exacerbation or
17 increased -- increased negative consequences?

18 A. Correct.

19 Q. Okay. And as the sentence says, this risk
20 you see as not being just to these plaintiffs but
21 to future generations. Is that right?

22 A. Correct.

23 Q. And not just, I guess, their -- their
24 generations, but every -- everyone. Right?

25 A. (Nods head.)

1 Q. Yes?

2 A. Correct. Whoops. You can tell you're
3 working with an amateur.

4 Q. The paragraph goes on to say [As Read]:
5 "Because of the dangers of increasing greenhouse
6 gas emissions, it does not make scientific sense to
7 continue to promote fossil fuels as energy resource
8 in Montana, which we are informed is the very
9 purpose of the provisions of the Montana State
10 Energy Policy, which Plaintiffs challenge as
11 unconstitutional in this case."

12 I take it that -- Well, that -- that
13 sentence combines a scientific statement with the
14 remainder, which sounds like an assumption based on
15 information you were provided. Is that an accurate
16 characterization, do you think? Again, it combines
17 your scientific opinion with other information that
18 you assume could be correct.

19 A. I would interpret that sentence that same
20 way. It -- It begins with a scientific statement,
21 and then ends with a policy statement all in the
22 same sentence.

23 Q. Okay. And then the next sentence states
24 [As Read]: "Moreover, it is of utmost importance
25 for Defendants to carefully consider how specific

1 projects will either mitigate or exacerbate climate
2 change before approving them, but the provisions of
3 the Montana Environmental Policy Act that the
4 plaintiffs challenge prevents that from happening."

5 That sounds like a policy statement to me.
6 Is that fair? Or would you just characterize it as
7 you did the previous sentence?

8 A. I think the foundation of that sentence
9 is -- is the clear scientific rationale or lack
10 of. That talking about climate thinking you can
11 wall off Montana from the rest of the climate
12 system is scientifically just crazy, and yet that
13 is what the -- the MEPA, that's what it does, and
14 that's -- the weather forecast you watch every
15 night on TV is talking about air that's coming
16 from outside Montana and is going to influence you
17 tomorrow.

18 Q. And by the same token, then, actions taken
19 in Montana are -- go beyond Montana's borders.

20 A. Certainly.

21 Q. In -- But in a small but measurable way,
22 quote/unquote, I think, is the way we -- you would
23 characterize that. Is that fair?

24 A. Yes.

25 Q. And not to repeat myself, but just to be

1 clear, that measure, we need to find the person who
2 has done it or will do it for us, whatever the
3 measurement is. Right? I mean you -- you haven't
4 done it.

5 A. If you're referring to the specific
6 emissions from inside the state of Montana
7 alone --

8 Q. That's -- Yes.

9 A. -- then, yes, that's something I think
10 someone else like MAIC --

11 Q. Okay.

12 A. -- does.

13 Q. All right. I've got in front of you
14 Exhibit No. 23 and which I'll represent to you is
15 just a copy of Montana law, and if you go back to I
16 think -- I think it's specifically referenced in
17 that paragraph we were just looking at.

18 Yes. The language there in what we were
19 just looking at references Montana Code Annotated
20 Section 90-4-1001, (1) -- subparagraph (1),
21 subparagraph (c) through subparagraph (g).

22 And that's -- we have that and the rest of
23 90-4-1001 in front of you. And have you looked at
24 this before that you can recall, the law?

25 A. No, not the complete text. I've only

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1 seen excerpts of certain of these points.
 2 **Q. Okay. And this is entitled "State Energy**
 3 **Policy Goal Statements."**
 4 **Do you see that?**
 5 **A. Yes.**
 6 **Q. And I'll represent to you, if you don't**
 7 **already know from reviewing the complaint, that**
 8 **this -- that as we just saw here, (c) through (g),**
 9 **subsection (c) through (g), is what the lawsuit**
 10 **seeks to have declared unconstitutional.**
 11 **So -- But I want to look at the rest of**
 12 **Montana state policy -- energy policy with you.**
 13 **Subparagraph (a) says it is the policy of**
 14 **the state of Montana to "promote energy efficiency,**
 15 **conservation, production, and consumption of a**
 16 **reliable and efficient mix of energy sources that**
 17 **represent the least social, environmental, and**
 18 **economic costs and the greatest long-term benefits**
 19 **to Montana citizens."**
 20 **Do you see anything in that language that**
 21 **bothers you from a climate change standpoint?**
 22 **A. Yes.**
 23 **Q. What is that?**
 24 **A. Well, particularly "increase utilization**
 25 **of Montana's vast coal reserves."**

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1 **Q. Oh, I'm sorry, I wasn't -- I wasn't clear.**
 2 **I don't mean to interrupt, but I'm just asking**
 3 **about the sentence I just read so far --**
 4 **A. Oh.**
 5 **Q. -- subsection (a).**
 6 **A. Okay. Number (a).**
 7 **Q. And -- And if you --**
 8 **A. Yeah.**
 9 **Q. -- want, we can go ahead, again, it's**
 10 **subsection (c) through (g) that have been**
 11 **identified in this lawsuit as being problematic.**
 12 **A. Right.**
 13 **Q. And (c) talks about "projects using**
 14 **advanced technologies that can convert coal into**
 15 **electricity." (D), you just referenced vast coal**
 16 **reserves. "(E) increase local coal and gas**
 17 **exploration."**
 18 **A. Right.**
 19 **Q. "(F) expand exploration and technological**
 20 **innovation." I'm gonna ask you about that. And**
 21 **"(g) expand Montana's refining industry." Those**
 22 **are the subsections that are the subject of this**
 23 **case, according to the complaint.**
 24 **But I'm wanting to ask if you, looking at**
 25 **this, would agree that the state energy policy,**

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1 **according to the -- what you see in front of you**
 2 **here -- includes not just (c) through (g) but all**
 3 **these other subsections as well.**
 4 **MR. GREGORY: Objection. Question calls**
 5 **for a legal conclusion.**
 6 **A. Yes. I'm not seeing these other points,**
 7 **but it does have statements on -- on other aspects**
 8 **of Montana energy.**
 9 **BY MR. STERMITZ:**
 10 **Q. And -- And just looking at it, I mean,**
 11 **take the time you need to, Dr. Running, to look it**
 12 **over, would you agree that there are statements in**
 13 **there that would be helpful from your perspective**
 14 **in dealing with climate change or at least that**
 15 **don't exacerbate the problem?**
 16 **A. Some of these points I would support,**
 17 **that's correct. I think the problem starts with**
 18 **that section (a) that -- in stating a reliable and**
 19 **efficient mix of energy sources kind of implies**
 20 **that they're all equal, and the whole purpose of**
 21 **our complaint is that they're not all equal, and**
 22 **so I think some of -- of these later points,**
 23 **generational -- low-cost electricity from wind**
 24 **generation is down there. I'm -- I would support**
 25 **that just fine, but then increasing utilization of**

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1 coal reserves is not fine, so -- so...
 2 **Q. So just from what you've seen here,**
 3 **there -- the state energy policy in total is a**
 4 **mixed bag.**
 5 **A. Correct.**
 6 **Q. Does that sound fair?**
 7 **A. I think that's fair.**
 8 **Q. From your standpoint.**
 9 **And do you understand that this language**
 10 **that we've been looking at is the law of the state**
 11 **of Montana, first of all?**
 12 **A. Mm-hmm.**
 13 **Q. Yes? Appears to be to you?**
 14 **A. Appears to be.**
 15 **Q. And that laws are passed by the state**
 16 **legislature. Right?**
 17 **A. Correct.**
 18 **Q. I mean, the governor doesn't pass laws.**
 19 **A. Right.**
 20 **Q. So just from your citizens --**
 21 **understanding as a citizen, would you agree that,**
 22 **in theory, what the legislature passes represents**
 23 **the will of the people who elected the legislators.**
 24 **Does that sound like a fair statement? I mean, we**
 25 **can quibble about whether it actually happens in**

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1 practice, but, in theory, we elect legislators and
 2 they pass laws. Right?
 3 A. As long as we stay at a theoretical
 4 level.
 5 Q. Okay. So that if the people were of a
 6 mind, motivated to change the state's energy
 7 policy, they would have to go through the
 8 legislature to do that. I mean, you've got a
 9 lawsuit here that's kind of short-circuiting that,
 10 but, in theory, voters can decide whether this
 11 state energy policy is something that they approve
 12 or not through their elected representatives.
 13 Does that sound like a fair statement?
 14 MR. GREGORY: Objection. Calls for a
 15 legal conclusion.
 16 MR. STERMITZ: I think it's basic civics,
 17 but I understand the objection.
 18 A. I think there's -- I would -- One way for
 19 the citizenry to effect change of this or any
 20 policy would be to elect new legislators, in
 21 theory, but I think another way is the judicial
 22 system. We do have three branches of government,
 23 and so this -- this has to withstand scrutiny in
 24 the judicial world to -- to determine if it's
 25 constitutional. And when -- when I go right back

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1 there to the -- to point (a), promote energy
 2 efficiency that represent the least environmental
 3 cost -- I'm choosing my words, of course -- but
 4 there it is, the least environmental cost, and
 5 then go down to say increasing utilization of coal
 6 reserves, right there, done, those are mutually
 7 exclusive objectives. You can't do one or -- You
 8 have to do one or the other. You can't do both.
 9 So I guess in the legal world they might say this
 10 is internally inconsistent.
 11 BY MR. STERMITZ:
 12 Q. Okay. Looking at these laws and the
 13 history of the regulation of greenhouse gasses
 14 suggests to me that -- and you can agree or
 15 disagree with this, I'm asking your opinion -- that
 16 whatever has been decided in Montana -- let's just
 17 say in Montana -- represents a pretty complicated
 18 social problem; and let me put it another way.
 19 There's a -- There's the regulation of human
 20 behavior obviously bound up in these laws. Right?
 21 A. Certainly.
 22 Q. And, I mean, using the extreme
 23 hypothetical, if we were to tell everybody tomorrow
 24 they can't use their car anymore 'cause it's
 25 causing global warming, that would not fly. Right?

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1 Do you agree with me on that one? Or no
 2 more cows.
 3 A. I would ride my bike.
 4 Q. Okay. And --
 5 A. But -- Yeah, certainly that would cause
 6 massive social disruption if that was done
 7 instantly, done tomorrow.
 8 Q. And those -- those social norms and
 9 behaviors are, would you agree, the very essence of
 10 what drives our political debate over this topic in
 11 Montana and elsewhere, for that matter, in the
 12 United States, at least.
 13 A. I would not entirely agree.
 14 Q. Okay. What would you say?
 15 A. I think there is a lot of public support
 16 for dramatically decreasing fossil fuel emissions
 17 that is not represented in what our legislature
 18 does or our executive office does, and I talk to
 19 these people every week.
 20 Q. "These people" being the members of the
 21 public or --
 22 A. Yes.
 23 Q. -- the politicians?
 24 A. Yes. Members of the public.
 25 Q. Course in Missoula you're -- you're --

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1 A. I speak all over the state.
 2 Q. Okay.
 3 A. I've been doing this for 25 years.
 4 Q. Right. Yeah. I was being somewhat
 5 facetious there.
 6 And the people that you talk to in your
 7 travels, do they have feelings or interests in this
 8 topic that are basically the same as the plaintiffs
 9 do here?
 10 MR. GREGORY: Excuse me.
 11 BY MR. STERMITZ:
 12 Q. As far as you know?
 13 MR. GREGORY: You mean the plaintiffs as
 14 expressed in the complaint?
 15 MR. STERMITZ: Yes. Right.
 16 A. Probably most of the public that I
 17 interact with, that would be true. I think some
 18 of -- people I talk to have sometimes a bit more
 19 narrow -- narrow goals, but -- based on their own
 20 circumstance and often their own livelihoods, but
 21 I think the majority of public sees the same
 22 issues and has the same objectives that our
 23 plaintiffs do.
 24 BY MR. STERMITZ:
 25 Q. Do you have any -- Are you working on any

1 **current research or paper that's maybe in draft or**
2 **anything on this topic now?**

3 A. I just finished proofs for a new paper in
4 the journal -- the American Geophysical Union's
5 earth interactions on the role of drought in plant
6 production. Now, that is at a global scale, not
7 at a -- not at a state level scale.

8 **Q. And the -- what's the deliverable on**
9 **that -- on that research? Is there -- Is there a**
10 **-- a white paper, or what will it be?**

11 A. It will be an open -- open access
12 publication in that -- on that journal's website I
13 think by the end of this week.

14 **Q. Okay. You were involved with the**
15 **international panel on climate change, right?**

16 A. Intergovernmental panel --

17 **Q. Intergovernmental panel --**

18 A. -- on climate change.

19 **Q. Okay. Sorry. And -- Right?**

20 A. Right.

21 **Q. As you corrected me.**

22 **Are you affiliated -- Do you do any work**
23 **with them anymore?**

24 A. No.

25 **Q. Is -- Is that entity still an ongoing**

1 the measurements for every aspect of the earth's
2 system. You know, sea level rise and glacial
3 retreat. And in my -- my part, the biospheric
4 production and -- and all these -- all these topic
5 areas we established back 20, 30 years ago,
6 measurement regimes and protocols that are now
7 continuing. So from my report in 2007 to the
8 sixth assessment in 2020, there really weren't any
9 new variables come out of the blue, they were all
10 well-identified metrics that are continuing.

11 The way the IPCC reports are evolving is
12 as the climate science becomes more, what should
13 I -- I almost want to say automated, but in
14 a -- procedurally more standardized and -- and
15 it's just adding more annual data to -- to an
16 ongoing analysis, the -- the emphasis of the IPCC
17 reports first shifted to measuring impacts
18 more -- more explicitly. So, for example, in our
19 part of the world looking at the acceleration of
20 wildfires, looking at the acceleration of
21 landscape brutification in the -- the Western
22 U.S., and so looking beyond purely the climate to
23 the impact on the -- on the system, the ecosystem,
24 and first the ecosystems, and now they're even
25 stepping beyond that in the working group three to

1 **operation?**

2 A. Oh, yes, yes, and -- and the policy of
3 authorship, every country that's part of the
4 United Nations is authorized to send scientific
5 authors to each of the reports. I -- I was on the
6 fourth report in 2007, there was a fifth report in
7 2014, there's a sixth report in the last year or
8 two. With a science community as large as the
9 United States, they make a point of cycling
10 authors so the same authors don't write every time
11 to give a broader perspective of the science and
12 to not allow any -- any one number of individuals
13 to, in effect, drive the train.

14 And so it's very -- it's very common that
15 you serve just for one of those -- one of those
16 authorship periods and then cycle off, and they
17 recruit new authors. And it's a lot of work and
18 you don't get paid for it, so people can't do that
19 forever for free.

20 **Q. Has -- Just on a big picture scale, are**
21 **you aware whether there's been any significant**
22 **change in the findings of the IPCC since your**
23 **report in 2007?**

24 A. Yes, the -- the basic climate science,
25 working group one as the domain really continues

1 be focusing more on mitigation options, and it's
2 something most people don't understand.

3 The IPCC by charter cannot recommend any
4 policy option by -- by our charter, and we were
5 drilled this -- into this when we started our
6 writing. Our job is to evaluate in as apolitical
7 way as possible the options humanity has. In this
8 case, reducing greenhouse gas emissions, here are
9 the options, here are the benefits and liabilities
10 of each option, but we don't ever -- and I'm
11 saying "we," the authors of which these are new
12 authors, not me personally, but we do not
13 prescribe or recommend any of the policies. We
14 hand over the whole analysis to the policymakers
15 and the United Nations.

16 **Q. Is that a -- a good analog for your work**
17 **in this case? In other words, you -- you**
18 **won't -- if you're called to testify, you wouldn't**
19 **be making any policy recommendations, would you, or**
20 **do you know at this point?**

21 **MR. GREGORY:** Objection. Vague and
22 ambiguous.

23 A. I would -- I would make scientifically
24 based statements like the world has to quit
25 burning coal, period, everywhere --

1 BY MR. STERMITZ:

2 Q. Mm-hmm.

3 A. -- yesterday if -- if it was possible.
4 Now, if you interpret that as a policy statement,
5 then -- then that's your opinion, but I state that
6 in every public talk I give, and I've been saying
7 it for decades, and I have endless scientific
8 information backing why that is so, and so that
9 would be an example of a statement I will make.
10 And whether that's defined as policy or not is, I
11 guess, somebody else's judgment.

12 Q. Okay. And -- And would you extend that to
13 the -- if we don't do that, the impact, in
14 particular, on the individual plaintiffs in this
15 lawsuit? I mean, apart from whatever the impacts
16 are to everybody else in the world, would
17 you -- would you differentiate them in any way?

18 MR. GREGORY: Objection. The question
19 calls for speculation.

20 A. Yeah, not particularly. I -- They're --
21 They're citizens like all the rest of us, and I --
22 certainly for -- for my testimony as -- as a
23 climate scientist, I -- I am really stating more
24 on behalf of all of -- all of the citizens of
25 Montana.

1 I think I'm finished, but I need, like,
2 five minutes to --

3 MR. GREGORY: Take your time.

4 MR. STERMITZ: -- to go over my notes
5 here, so let's take a short break.

6 (Recess taken from 11:00 a.m. to
7 11:09 a.m.)

8 BY MR. STERMITZ:

9 Q. Okay. Back on the record.

10 Dr. Running, as Attachment 6 to your
11 report, it's "Projected Climate Impacts For Montana
12 Counties Plaintiffs Are From."

13 Would you take a look at that, please?

14 A. Yeah.

15 Q. Are you there?

16 A. Yep.

17 Q. So does -- Montana apparently tracks this
18 data by -- by county or was -- was -- is -- was
19 this other --like, weather data that -- that you
20 and Dr. Whitlock assembled to make -- make
21 this -- make this statement here about the
22 counties? I -- I guess my -- Let me rephrase that.

23 Are counties tracking, like, climate
24 change data or -- or is this just, like I say,
25 weather data that you assembled and then -- and

1 BY MR. STERMITZ:

2 Q. The report was co-authored with
3 Dr. Whitlock. Did you -- How did you divide your
4 labors here in -- in preparing this report?

5 A. I did a first draft of which so -- so
6 much of the Montana climate information was coming
7 from the Montana climate assessment of 2017 that
8 she led that it then became, you know, I was
9 quoting her. And so -- so when she decided
10 to -- to come on the case as another expert
11 witness, she was able to do a much more complete
12 and accurate job of representing what was in the
13 climate assessment from the first draft I -- I'd
14 had --

15 Q. Mm-hmm.

16 A. -- and so we ended up -- I've known her
17 for decades -- and we ended up in the end, really,
18 going paragraph by paragraph making sure both of
19 us agreed with -- with the statements, and I can't
20 even remember which paragraph I wrote and which
21 she wrote anymore.

22 Q. Okay. Have you been asked to do any other
23 work, any follow-up work on this report at --

24 A. No.

25 Q. -- now or in the future?

1 then transformed it into a broader question about
2 climate change?

3 A. Okay. Recognize these are projected
4 climate impacts for 30 to 50 years from now.

5 Q. Okay.

6 A. So into the future.

7 Q. Okay.

8 A. Okay. So these are all based on the big
9 global climate models that the big modeling teams
10 around the world, there's about a dozen of the
11 A-list climate models, these all do these huge,
12 big climate modeling runs for each IPCC report,
13 and, course, they're global in scale. They start
14 a hundred years before the present and go
15 approximately a hundred years into the future.
16 Then different groups extract their local region,
17 and so I would have to look at details of exactly
18 who did this, but they extracted the -- the
19 climate simulations for the Northern Rockies, and
20 then diced it into these counties. Now these
21 global runs do not resolve counties of -- at all.

22 Q. Okay.

23 A. And so these are general simulations for
24 the Pacific Northwest as a whole that they've
25 simply attached to these regional counties, and so

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1 these are all based on these -- these big computer
 2 model runs.
 3 **Q. So would the model runs have then, like**
 4 **you say, covered the Pacific Northwest? Would**
 5 **there be a run for the Pacific Northwest?**
 6 A. No, the run is for the whole world.
 7 **Q. I see.**
 8 A. And then different groups around the
 9 world. Once the big modeling teams -- and these
 10 are international teams. So we have three or four
 11 in the United States, there's a big one in
 12 Britain, big one in Australia, you know, you get
 13 the picture, all the big nations have a modeling
 14 team. They all do the same simulation for the
 15 entire world so that they can compare their
 16 different model results and gain confidence in
 17 model results, because this is predicting the
 18 future. So by definition nobody knows what the
 19 reality will be.
 20 **Q. So --**
 21 A. And so then -- then a local -- or I
 22 should say regional groups, and they're often
 23 federal government, like NASA or
 24 NOAA -- particularly NOAA groups -- will then take
 25 from the global dataset, they'll then take the

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1 regional output and then assign it and -- and
 2 downscale -- downscaling is what they call it.
 3 They add some things like topography to -- to make
 4 minor adjustments to the results and then display
 5 them this way, but this is not at all based on the
 6 sort of ground weather stations that we talked
 7 about for the historical dataset. Anything --
 8 When you see dates 2050 to 2074, that tells me
 9 automatically this is a GCM output.
 10 **Q. So is this an -- an extrapolation from**
 11 **that or is it a -- just a matter of drilling down**
 12 **into the model run that they did to pull this**
 13 **information out?**
 14 A. That's a better description. They're
 15 drilling down into -- from the big global dataset
 16 just to their local region of interest, and so
 17 they're not adding any really new information
 18 other than local topography and -- and not much
 19 more than that.
 20 **Q. Okay. And do you know who did this, then,**
 21 **this Attachment 6? Did this come from the two**
 22 **thousand -- 2017 assessment, do you think?**
 23 A. I used to know. I know when I read it I
 24 was happy and impressed that they -- how they did
 25 it, and I can't recall whether this was a final

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1 part of the 2017 Montana climate assessment or
 2 not.
 3 **Q. Okay.**
 4 A. I can't recall.
 5 **Q. It may say in your report somewhere?**
 6 A. Yeah.
 7 **Q. I -- I honestly can't say one way or**
 8 **another. Okay. That's all -- That's all I have**
 9 **for now. Thank you. Thank you, Dr. Running.**
 10 A. Sure.
 11 **EXAMINATION**
 12 **BY MR. GREGORY:**
 13 **Q. I have a few questions.**
 14 **Dr. Running, early on you were asked**
 15 **whether the climate impacts in Montana are based on**
 16 **a well-established body of information or whether**
 17 **the impacts are in flux. Can you please clarify**
 18 **your opinion as to whether the impacts in Montana**
 19 **that you document in your report are based on**
 20 **well-established science?**
 21 A. Yes, absolutely. The -- The climate
 22 trends that we're representing are based on direct
 23 measurements in the field, hydrograph data for
 24 streams, snow pack data, obviously the temperature
 25 and weather records, and these are all published

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1 in the standard scientific literature.
 2 **Q. And can you also clarify whether there's**
 3 **any impact, in your opinion -- whether there's any**
 4 **doubt, in your opinion, that these impacts in**
 5 **Montana are happening?**
 6 A. No, there's -- there's no doubt. These
 7 are coming directly from these on-ground and
 8 satellite measurements, and so we're simply
 9 distilling and analyzing the direct measurements.
 10 **MR. GREGORY:** Thank you. That's all I
 11 have.
 12 **MR. STERMITZ:** Nothing further.
 13 (Deposition concluded at 11:17 a.m.
 14 Deponent excused; signature reserved.)
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DEPONENT'S CERTIFICATE

1 I, STEVEN WILLIAM RUNNING, the deponent in
2 the foregoing deposition, DO HEREBY CERTIFY, that
3 I have read the foregoing pages of typewritten
4 material and that the same is, with any changes
5 thereon made in ink on the corrections sheet, and
6 signed by me, a full, true, and correct transcript
7 of my oral deposition given at the time and place
8 hereinbefore mentioned.

11 STEVEN WILLIAM RUNNING, Deponent

12 Subscribed and sworn to before me this
13 day of , 2022.

14 PRINT NAME:
15 Notary Public, State of
16 Residing at:
17 My commission expires:

18 MRS - Rikki Held, et al. vs. State of Montana, et
19 al.

C E R T I F I C A T E

1 STATE OF MONTANA)
2) : ss
3 COUNTY OF MISSOULA)
4 I, Mary R. Sullivan, RMR, CRR, and Notary
5 Public for the State of Montana, residing in
6 Missoula, do hereby certify:

7 That I was duly authorized to and did
8 swear in the witness and report the deposition of
9 STEVEN WILLIAM RUNNING in the above-entitled
10 cause; that the foregoing pages of this deposition
11 constitute a true and accurate transcription of my
12 stenotype notes of the testimony of said witness,
13 all done to the best of my skill and ability; that
14 the reading and signing of the deposition by the
15 witness have been expressly reserved.

16 I further certify that I am not an
17 attorney nor counsel of any of the parties, nor a
18 relative or employee of any attorney or counsel
19 connected with the action, nor financially
20 interested in the action.

21 IN WITNESS WHEREOF, I have hereunto set
22 my hand and affixed my notarial seal on November
23 6, 2022.

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EXHIBIT 2

*Rikki Held, et al. v
State of Montana, et al.*

*Dr. Cathy Whitlock
November 29, 2022*

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MONTANA FIRST JUDICIAL DISTRICT COURT
LEWIS AND CLARK COUNTY

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RIKKI HELD, et al.,
Plaintiffs,
v. Cause Number
CDV-2020-307
STATE OF MONTANA, et al.,
Defendants.

DEPOSITION UPON ORAL EXAMINATION OF
DR. CATHY WHITLOCK

BE IT REMEMBERED, that the deposition upon oral examination of DR. CATHY WHITLOCK, appearing at the instance of Defendants, was taken at the offices of Fisher Court Reporting, 442 E. Mendenhall, Bozeman, Montana, on Tuesday, November 29th, 2022, beginning at the hour of 9:00 a.m., pursuant to the Montana Rules of Civil Procedure, before Deborah L. Fabritz, Court Reporter - Notary Public.

APPEARANCES

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ALSO PRESENT:

Ms. Selena Z. Sauer, Esq. (via Zoom) of
Crowley Fleck (Kalispell office)

WHEREUPON, the following proceedings were had and testimony taken, to-wit:

DR. CATHY WHITLOCK,
called as a witness, having been first duly sworn, was examined and testified as follows:

EXAMINATION

BY MR. STERMITZ:

Q. Could you tell us your name, please, for the record.

A. Cathy Whitlock.

Q. And you are more formally referred to as Dr. Whitlock. Is that correct, Cathy?

A. Yes.

Q. If I call you either by Cathy or by Dr. Whitlock, are you okay with that?

A. That's fine. Yes.

Q. Thank you. We've -- have you ever had your deposition taken before?

A. No.

Q. So this is the first of such wonderful experiences, I guess. There are a lot of things that attorneys say sometimes with witnesses who haven't had this experience before, but I'm going to shorten it up just by -- with a couple of things.

1 If you don't understand one of my
 2 questions, please say so immediately, and I will do
 3 my best to rephrase it in a way that makes more sense
 4 to you. Can we agree on that, first of all?
 5 A. Yes.
 6 Q. And then I think it's easier with Zoom
 7 than it is live, but one thing that crops up is
 8 people, as they do normally in conversation, kind of
 9 talking at the same time, we have to do our best to
 10 avoid that because the court reporter can only take
 11 down one person at a time. How about that? Does
 12 that sound understandable to you?
 13 A. Yes, it is.
 14 Q. And I guess the last thing is because also
 15 there's a transcript being made of this, it's
 16 important to verbalize responses yes or no rather
 17 than some of the things that we use in everyday
 18 conversations like uh-huh or huh-uh, things like
 19 that. Okay?
 20 A. Yes.
 21 Q. We have -- I think in front of you now,
 22 you have a copy of what was previously marked as
 23 Exhibit 22 in this case. Do you have that there?
 24 A. Yes.
 25 Q. And it's -- I'll tell you now I think it's

1 BY MR. STERMITZ:
 2 Q. 1-1 is Dr. Running's CV and then 2-1 is
 3 yours.
 4 A. I found it. Yes.
 5 Q. Okay. Thank you.
 6 Before I get to that, a couple other
 7 questions. You indicated this is your first
 8 deposition. Have you ever testified in court as an
 9 expert?
 10 A. No.
 11 Q. Have you ever been retained as an expert
 12 in connection with a lawsuit but not testified
 13 besides this one, besides this case?
 14 A. No.
 15 Q. So this case, am I fair in saying it's
 16 your first venture into being retained as an expert
 17 witness with the possibility of testifying at trial?
 18 A. Yes.
 19 Q. Okay. Let me say one more thing about
 20 this -- the deposition, then. You understand that we
 21 use these for trial in taking care that your
 22 testimony there is consistent with what you tell us
 23 here today. So if you were to say something
 24 different at trial, we would probably refer to your
 25 deposition today as being an inconsistent statement

1 got a lot of exhibits I won't be going into. But
 2 just to make sure we're on the same page here, the
 3 cover is expert report of Steven Running, PhD, and
 4 Cathy Whitlock, PhD. And then it references this
 5 lawsuit. Is that what it shows there to you?
 6 A. Yes.
 7 Q. And do you recognize this as the report
 8 that you coauthored?
 9 A. Yes.
 10 Q. Okay. Have you reviewed it recently?
 11 A. Yes.
 12 Q. How recently?
 13 A. Yesterday I looked at it again.
 14 Q. Okay. Let's start if we could with your
 15 CV, which is attachment 2-1. Are you there?
 16 A. I'm looking. Just a minute.
 17 Q. Okay.
 18 A. I'm sorry. I -- is it -- it comes right
 19 after the report?
 20 Q. I think so. Well, there's exhibit --
 21 there's attachment 1, which looks like it's
 22 Dr. Running's -- let me see here.
 23 A. Okay.
 24 MS. HORNBEIN: It's on page 49. I don't
 25 know if pages --

1 of some kind. So that's -- I want to be fair and
 2 make sure you understand that that's one of the main
 3 purposes to take this deposition. Do you understand
 4 that?
 5 A. Yes, I do.
 6 Q. Okay. Did you do -- let's see. You first
 7 came to Montana State, it looks like, in 2011; is
 8 that right?
 9 A. No. I came in 2004.
 10 Q. Okay. Well, I might be misreading that.
 11 Oh, I see. It was just 2011 that you became involved
 12 or you founded -- cofounded the Montana Institute on
 13 Ecosystems. Is that right?
 14 A. That's correct.
 15 Q. But since 2004, it looks like your focus
 16 has been basically what we're talking about in this
 17 report with the impact of greenhouse gases on
 18 ecosystems. Is that true?
 19 A. Yes. I look at how climate change has
 20 affected ecosystems through time.
 21 Q. And has that sort of been your main focus
 22 ever since you came to Montana State University?
 23 A. Yes.
 24 Q. In 2011 there is this reference in your CV
 25 to the Montana Institute on Ecosystems. What -- what

1 was the purpose of that entity when it was founded?

2 A. The Montana Institute on Ecosystems is a
3 regents-approved center. And it has -- it has a home
4 at both University of Montana and Montana State
5 University. And the purpose is to bring together
6 environmental researchers or environmental community
7 at the universities to provide information that's
8 useful to the state and beyond.

9 Q. Is it -- is it limited to issues revolving
10 around global warming or climate change?

11 A. No.

12 Q. What other sorts of things is it concerned
13 with?

14 A. We look at all aspects of environmental
15 change and how they're affecting communities in
16 Montana. It's driven by the research interests of
17 the faculty.

18 Q. Other than the impact of greenhouse gases
19 or global warming, what would be an example of
20 another aspect of environmental change or cause, I
21 guess maybe I should say, that your center deals
22 with?

23 A. Climate change is a pervasive thing for
24 most people's research, but there are people that are
25 looking at invasive species, people that are looking

1 indicates you were a codirector of the Montana
2 Institute on Ecosystems, what other individuals were
3 involved in founding that center?

4 A. I founded the institute with Dr. Rick
5 Hauer at the University of Montana, H-A-U-E-R. So we
6 were codirectors. And then I stepped down as
7 director and other -- and then Dr. Bruce Maxwell took
8 over at Montana State University, and Dr. Maury
9 Valett took over at U of M when Dr. Rick Hauer
10 retired.

11 Q. Okay. Thank you.

12 The report here that you have in front of
13 you, Exhibit 22 -- Deposition Exhibit 22, indicates
14 that it was jointly authored with Dr. Steve Running.
15 How did you divide the labor on this report?

16 A. We divided the labor in that I primarily
17 wrote about the impacts of climate change in Montana
18 because I'm the -- was the lead author of the Montana
19 Climate Assessment. So I was very familiar with
20 that.

21 Dr. Running wrote some of the other pieces
22 about the larger scale impacts of climate change. We
23 shared the document and reviewed it and agreed on and
24 approved what was written -- what we had both
25 written.

1 at fire, people that are looking at streams and
2 stream flow dynamics, people who are looking at past
3 ecosystem development, impacts of volcanism on
4 ecosystems. Climate change, I would say, is part of
5 much of that research.

6 Q. Okay. At U of M is Dr. Running the
7 individual who participates with the Montana
8 Institute on Ecosystems, or are there other people?

9 A. There are other people at the University
10 of Montana involved in the Institute on Ecosystems.
11 Dr. Running is retired.

12 Q. I knew that. I didn't mean that as a
13 trick question. I just didn't know who other people
14 there might be. Do you know anyone off the top of
15 your head from U of M?

16 A. The past director was Professor Maury
17 Valett.

18 Q. What was the last name, please, again?

19 A. Valett, V-A-L-L-E-T [sic], I think.

20 Q. Okay.

21 A. There might be two Ts.

22 Q. Okay. And he's still -- do you know -- is
23 he a professor at the University of Montana still?

24 A. He still is, yes.

25 Q. Okay. Besides yourself -- because your CV

1 Q. Okay. Did you or Dr. Running or both of
2 you together have a -- send a draft to plaintiffs'
3 counsel for review before it was finalized?

4 A. Yes.

5 Q. Did any of your scientific conclusions
6 change as a result of that review?

7 A. No.

8 Q. Have you had the opportunity -- or have
9 you talked to Dr. Running after we took his
10 deposition in this case?

11 A. Yes, I did.

12 Q. Did you talk to him about his deposition?
13 I guess that's my more specific question.

14 A. Yes, I did. Yes.

15 Q. And did he tell you that I was a real jerk
16 or what was the nature of your discussion?

17 A. He said you were very polite.

18 Q. Oh. I guess I'll have to try something
19 else this time around.

20 A. Work on that.

21 Q. You understand I -- probably then from
22 talking with Dr. Running, I'm just going to assume,
23 maybe incorrectly, that our focus a lot was on
24 Montana but more specifically on Montana's
25 contribution to global problem of climate change.

Page 13

1 Right?

2 MS. OLSON: Objection. Ambiguous or calls

3 for speculation.

4 BY MR. STERMITZ:

5 Q. Do you understand what I was asking,

6 Dr. Whitlock? I'll rephrase it if not.

7 A. Could you rephrase it. I'm sorry.

8 Q. Sure. Did you understand from talking to

9 Dr. Running that we focused in his deposition quite a

10 bit on the -- Montana's contribution to global

11 climate change?

12 A. No. He didn't tell me that was the focus.

13 Q. Okay. Well, and I guess that might be

14 somewhat subjective, so we'll just talk about it.

15 If you look at the executive summary of

16 your report, which is on -- I think on page 4 --

17 starts on page 4. And on page 5 I will describe that

18 as kind of a description of the circumstances in

19 Montana with regard to climate change and as it says

20 on the top of page 5, the ways that climate change is

21 affecting Montana. Do you see where we are there?

22 A. Yes, I do.

23 Q. Okay. And so I'm just going to tell you

24 right now the main focus of my questions is going to

25 be on what will happen to climate change globally if

Page 14

1 we do what you and Dr. Running are suggesting in this

2 report. And to be more specific, I will ask you,

3 have you or Dr. Running calculated what the impact

4 would be on global climate change or global warming

5 if, for example, the court were to declare Montana's

6 energy policies unconstitutional?

7 A. No. We haven't calculated that.

8 Q. You do understand that that's one of the

9 goals of this lawsuit -- right -- to declare

10 Montana's energy policy unconstitutional?

11 A. Yes.

12 Q. Another major contention, I believe, is

13 that the Montana Environmental Policy Act limitations

14 on evaluating climate change you describe in your

15 report as being problematic for global warming.

16 Correct?

17 A. Yes.

18 Q. And I guess I would ask you the same

19 question then about that. If the court were to

20 invalidate the provisions of MEPA that are referenced

21 in your report, you haven't figured out or -- you

22 haven't figured out what the impact would be to

23 global warming if that occurred?

24 A. We --

25 Q. Is that correct?

Page 15

1 A. We know what the impacts would be. We

2 haven't calculated a precise number.

3 Q. Okay. And would you use that same kind of

4 description in regard to the result if the court

5 declared Montana's energy policy unconstitutional?

6 A. Yes.

7 Q. What then would be the impact of either of

8 those or both of those things occurring, declaring

9 the energy policy or the MEPA provision

10 unconstitutional?

11 A. Well, we know the causes of global warming

12 and the role of the burning of fossil fuels, and we

13 know that every molecule of CO2 that is put into the

14 atmosphere contributes to global warming. And so

15 every time that Montana produces in terms of

16 greenhouse gas emissions is contributing to global

17 warming, and that's what we're trying to have

18 stopped.

19 Q. Okay. Do you know more specifically what

20 the impact would be on any of the individual

21 plaintiffs in this lawsuit if the court made such a

22 ruling?

23 A. We can see the impacts of climate change

24 in Montana, and we can see the impacts that it's

25 having on the youth plaintiffs. And so we -- we can

Page 16

1 see what the impacts would be if fossil fuel

2 emissions were to stop.

3 Q. So for example -- well, let me ask you.

4 What would be an example of an impact of global

5 warming on any of the individual plaintiffs?

6 Probably you can pick one if you would like.

7 MS. OLSON: Objection. Vague.

8 BY MR. STERMITZ:

9 Q. Okay. Let me rephrase that. As it now

10 stands without any action by the court, are you

11 familiar with an impact of global warming on any one

12 of the individual plaintiffs?

13 A. May I answer that question in a more

14 general way, speaking about the plaintiffs in

15 general?

16 Q. That's fine. We can start there, yes.

17 A. Okay. Well, they're already experiencing

18 warmer temperatures in their lifetimes. It's gotten

19 two to three degrees Fahrenheit warmer, and that

20 warming is going to continue. They have seen

21 increased wildfires across the west and large fires

22 in Montana. The smoke that we receive in Montana is

23 threatening their health.

24 We have seen the stream temperatures rise

25 which impacts their abilities to recreate on

1 Montana's waterways. We have seen their use of water
 2 being compromised for purposes -- for ceremonial
 3 purposes. We have also seen the loss of snow pack in
 4 Montana. It's been very dramatic, and that's
 5 impacted the availability of water for the plaintiffs
 6 who are ranchers -- are living on ranches, and also
 7 for their ability to recreate and pursue their
 8 athletic training with respect to snow, skiing, and
 9 that sort of thing. So we have seen impacts from
 10 climate change affecting them.

11 **Q. And is it your testimony that if the court
 12 invalidated Montana's energy policy or the MEPA
 13 provision on climate change, that these things you
 14 have listed would no longer occur?**

15 A. As I said, every ton of CO2 that is
 16 emitted to the atmosphere is the problem and is
 17 causing these conditions in Montana. So if Montana
 18 were to cease emission of fossil fuels, we would --
 19 we would change that. It would not happen overnight.
 20 It would happen slowly, but it would happen.

21 **Q. So I mean, let's take, for example, just
 22 the first thing I think you started with, which is
 23 warming temperature -- two to three degrees
 24 temperature warming in Montana. If -- I can maybe
 25 make it even simpler.**

1 **loss of snow pack for example. Do you believe that
 2 if Montana emitted no further greenhouse gas
 3 emissions, that the snow pack depths would be -- in
 4 Montana would be affected in a way that would be
 5 measurable?**

6 A. I don't know.

7 **Q. Okay. Do you know, Dr. Whitlock, how the
 8 impacts of global warming on the plaintiffs differ
 9 from other residents of Montana or other citizens of
 10 the world?**

11 A. Could you -- could you rephrase that.

12 **Q. Sure. Sure. Do you -- let me try it this
 13 way. Do you believe that -- let me ask it this way.
 14 Do you understand that somehow the plaintiffs in this
 15 lawsuit are experiencing effects of global warming
 16 that are unique as compared to the rest of the
 17 citizens of the world?**

18 A. Let me answer that this way. Young people
 19 are particularly vulnerable to the effects of climate
 20 change.

21 **Q. And why do you say that?**

22 A. There's -- as -- as -- there's health
 23 impacts from smoke that young people are particularly
 24 vulnerable to, for example.

25 **Q. Do you address that point in your report**

1 **If somehow the court were to rule that
 2 Montana no longer could emit one iota of greenhouse
 3 gas, what would the impact be on these warming
 4 temperatures in Montana?**

5 A. As I -- as I said before, every ton of CO2
 6 contributes to global warming, and if Montana and the
 7 country and we're hoping the entire world stops the
 8 emission of greenhouse gases, it will stop the
 9 warming that we're seeing.

10 **Q. Well, I -- I can't ask questions -- well,
 11 I mean, this lawsuit doesn't ask any other court but
 12 a Montana judge in Helena for a ruling. So I'm
 13 intentionally limiting my questions to what the judge
 14 could do and even hypothetically a little bit beyond
 15 that when I say let's assume -- and as an expert
 16 you're entitled to make assumptions. Let's assume
 17 the result of this case is no greenhouse gas
 18 emissions from Montana whatsoever.**

19 **Can you tell me to a reasonable degree of
 20 scientific certainty how that would change any of
 21 these factors that you listed that are experienced by
 22 the plaintiffs?**

23 A. I -- we in the report and now I can't give
 24 you a precise number.

25 **Q. Do you -- do you believe -- let's look at**

1 **anywhere that you recall; that is, that young people
 2 are more prone to be impacted by climate change?**

3 A. I believe we state that fact, but I would
 4 have to look at the report more closely.

5 **Q. Okay. Has -- have you done research --
 6 any research on that point; that is, the experience
 7 of young people as opposed to other people in regard
 8 to climate change?**

9 A. No. I was a -- one of the authors of the
 10 climate change and human health in Montana, and
 11 that's where my information has come from.

12 **Q. Which -- now, which report specifically
 13 was that, Dr. Whitlock? Was it -- when did it come
 14 out? First of all, let me ask you that.**

15 A. It came out in 2021. The first author is
 16 Adams. It's Adams, et al. It's a special report of
 17 the Montana Climate Assessment.

18 **Q. Okay. All right. If you would go to
 19 attachment 3 -- it's page 3-6 in the report.**

20 A. Yes.

21 **Q. And it lists -- this is a list of
 22 references or reports that you cited. Was your
 23 statement just now about a report that included
 24 information on the impact especially on young people,
 25 this first one under 2021, Adams, Byron, Maxwell,**

1 Higgins, et cetera? Is that the right report?
 2 A. Yes.
 3 Q. Okay. So I think what you said was that
 4 -- let me make sure I get it right. You said that
 5 there were -- that young people were particularly
 6 susceptible to -- was it smoke, issues with smoke, or
 7 did I mishear you? What was it again if you could
 8 repeat it, please.
 9 A. Young people are considered one of the
 10 vulnerable populations when it comes to climate
 11 change in terms of concerns for their health.
 12 Q. Okay. And what specifically is the
 13 concern?
 14 A. Well, in Montana I think inhalation of
 15 smoke particles affects them, but let me say this is
 16 not my area of expertise.
 17 Q. Okay. Okay. And do you know from either
 18 -- from this 2021 report, whether it indicated that
 19 there was a difference between young people in
 20 Montana and young people anywhere else in the world
 21 as far as their susceptibility to problems from
 22 climate change?
 23 MS. OLSON: And, Mark, just for clarity of
 24 the record, you're referring to the Adams 2021
 25 reference?

1 page, in the middle of that last paragraph, it says
 2 -- there's a sentence that says "Because of the
 3 dangers of increasing greenhouse gas emissions, it
 4 does not make scientific sense to continue to promote
 5 fossil fuels as an energy resource in Montana, which
 6 we are informed is the very purpose of the provisions
 7 of Montana's State Energy Policy, which plaintiffs
 8 challenge as unconstitutional in this case."
 9 And then there's a code citation there.
 10 I'm going to assume -- tell me if my
 11 assumption is incorrect -- that the plaintiffs -- the
 12 plaintiffs' attorneys helped write that sentence. It
 13 looks like lawyers had a hand in that. Am I right
 14 about that?
 15 A. Yes.
 16 Q. And did you review the, quote, Montana
 17 State Energy Policy in writing this report?
 18 A. My information comes from the complaint.
 19 Q. Okay. So you reviewed the complaint. Is
 20 that right?
 21 A. Yes.
 22 Q. Okay. We have an exhibit there which was
 23 -- is it 23, the statute?
 24 A. Yes.
 25 Q. Am I right about that, anyone?

1 MR. STERMITZ: Yes.
 2 MS. OLSON: On attachment 3-6?
 3 MR. STERMITZ: Correct. The climate
 4 change and human health in Montana. I'm sorry I
 5 don't have it in front of me.
 6 THE WITNESS: I'm sorry, Mr. Stermitz.
 7 Could you repeat the question?
 8 BY MR. STERMITZ:
 9 Q. Yeah. The question was whether that
 10 report, that 2021 report, drew a distinction between
 11 the susceptibility or vulnerability of young people
 12 to the impacts of climate change on young people in
 13 Montana compared to anywhere else in the world.
 14 A. No.
 15 Q. Okay. No, meaning you don't know whether
 16 it did, or no, meaning it didn't do it?
 17 A. No, it did not do it.
 18 Q. Okay. Thank you. Off the record.
 19 (Whereupon, a break was then
 20 taken.)
 21 BY MR. STERMITZ:
 22 Q. In your report -- I think this is still in
 23 the executive summary. We'll get back to that. You
 24 talk about Montana's energy policy. And on page 4 of
 25 the executive summary, down towards the bottom of the

1 MS. OLSON: Yes. It's Exhibit 23, the MCA
 2 2021 State Energy Policy Goals statement.
 3 MR. STERMITZ: Thank you.
 4 BY MR. STERMITZ:
 5 Q. Thank you. And do you have that in front
 6 of you, Dr. Whitlock?
 7 A. Yes, I do.
 8 Q. Okay. The report that we just read has a
 9 citation there of this statute, 90-4-1001 subsection
 10 (1), subsection (c) through (g). So if you look at
 11 this exhibit, you see, do you not, that we're talking
 12 about a subsection or several subsections of the
 13 State Energy Policy Goal Statements? Correct?
 14 A. Yes.
 15 Q. And you would agree that from looking at
 16 this that there are quite a few other policy goal
 17 statements in that statute. Right?
 18 MS. OLSON: Objection. Calls for a legal
 19 conclusion.
 20 BY MR. STERMITZ:
 21 Q. Well, can you answer the question?
 22 A. Yes.
 23 Q. You can see those in front of you in
 24 Exhibit 23. Correct?
 25 A. Yes.

1 Q. Do you have a memory at all of looking at
 2 any of these other sections that -- besides (c)
 3 through (g) when you wrote your report?
 4 A. As I said, I referred to the complaint.
 5 Q. Okay. Do you know whether the complaint
 6 referenced any of these other sections?
 7 A. I don't recall. I don't think any
 8 sections were referenced in specifics, but I don't --
 9 I don't recall.
 10 Q. Okay. I'm just looking here. I think we
 11 have the complaint as an exhibit, but I don't
 12 remember the number. Maybe it's number 1.
 13 Okay. You say you have all the exhibits
 14 there? I think I would like to get the complaint. I
 15 think it's Exhibit 1 or -- I don't know. It's an
 16 early exhibit.
 17 Okay. Dr. Whitlock, we've put in front of
 18 you, among other things, the complaint that was filed
 19 in this case as Exhibit 1. Do you see that there?
 20 A. Yes.
 21 Q. Okay. Turn to page 35, if you would,
 22 please, of the complaint, paragraph 110.
 23 A. Yes.
 24 Q. If you want to take a quick look at that
 25 and see if that looks like the sections of the energy

1 statements besides the one that were listed in the
 2 complaint and that are referenced in the report.
 3 Correct?
 4 A. Yes.
 5 Q. And -- but you didn't -- you haven't seen
 6 any of these other subsections until now. Is that a
 7 fair statement?
 8 A. Yes.
 9 Q. And just looking at those other
 10 subsections, if you would, from your standpoint as a
 11 scientist, let's look at subsection (a), the first
 12 one there. It states -- it's a State Energy Policy
 13 Goal statement. It's a policy in the state of
 14 Montana -- excuse me -- to "promote energy
 15 efficiency, conservation, production, and consumption
 16 of a reliable and efficient mix of energy sources
 17 that represent the least social, environmental, and
 18 economic costs and the greatest long-term benefits to
 19 Montana citizens." That's subsection (a).
 20 Do you see that?
 21 A. Yes, I do.
 22 Q. Do you feel from -- you know, with your
 23 experience and your area of expertise, if that is a
 24 negative thing or a positive thing, or how would you
 25 characterize that statement?

1 policy that you saw in writing this complaint -- or
 2 writing this report. Excuse me.
 3 MS. OLSON: I'll object. It, again, calls
 4 for a legal conclusion and the documents speak for
 5 themselves.
 6 MR. STERMITZ: Well, to clarify, I'm just
 7 asking Dr. Whitlock whether she recalls seeing this
 8 when she wrote her report.
 9 MS. OLSON: Are you referring to page 35
 10 of the complaint?
 11 MR. STERMITZ: Yes. Page 35. Excuse me.
 12 THE WITNESS: Yes. Could you repeat the
 13 question so I know --
 14 BY MR. STERMITZ:
 15 Q. Yeah. I'm just wondering if this looks
 16 like where you saw the reference to the state energy
 17 policy that is on page 4 of your report.
 18 A. Yes.
 19 Q. If the sections match up. Okay. Now back
 20 -- if you would compare that then back to Exhibit 23,
 21 which was the statute that we were looking at
 22 earlier. You can just set the complaint aside if you
 23 want. That's all I'll going to do with it really.
 24 Can you see on Exhibit 23 that there are
 25 other subsections of the State Energy Policy Goal

1 MS. OLSON: Objection. Ambiguous.
 2 THE WITNESS: I think that it is -- it is
 3 not solving the problem. Reliable and efficient mix
 4 of energy sources is the problem.
 5 BY MR. STERMITZ:
 6 Q. Why is that a problem from your
 7 standpoint?
 8 A. Because it includes the use of fossil
 9 fuels as well as renewable energy sources.
 10 Q. So from your standpoint you would like to
 11 see a policy that eliminates any reference to or the
 12 use of any fossil fuel -- any fossil fuel in Montana.
 13 Is that fair?
 14 A. Yes.
 15 Q. Do you know whether any other state in the
 16 United States has such a situation; that is, a policy
 17 that eliminates the use of any fossil fuel?
 18 A. States are working on this issue, and the
 19 goal is to eliminate the use of fossil fuels as
 20 quickly as possible.
 21 Q. And do you know of any states in
 22 particular where that's the case?
 23 A. It's not my expertise.
 24 Q. You're just aware of that from your
 25 general -- from your --

1 A. As general knowledge.
 2 Q. -- work. Now, do you understand that this
 3 Exhibit 23 is a state law of Montana?
 4 A. Yes.
 5 Q. And do you understand that these laws are
 6 -- laws like this are passed by the Montana
 7 legislature?
 8 A. Yes.
 9 Q. And that the legislature is comprised of
 10 representatives that are elected by the people of
 11 Montana?
 12 A. Yes.
 13 Q. And would you agree with me that the
 14 process by which the legislature is elected is a
 15 political one?
 16 A. Could you rephrase that. A political one,
 17 I'm not sure what you mean.
 18 Q. The process that we use -- the elections
 19 that we use to select the members of the legislature
 20 that pass these laws, that process is a political
 21 process. Correct?
 22 A. Yes.
 23 Q. So you would agree, would you not, that
 24 these as well the other provisions of the state
 25 energy policy are the result of our political system

1 things there, including "integration of wind and
 2 other forms of renewable energy."
 3 You don't have an opinion as to whether
 4 sections like that are being disregarded in favor of
 5 sections that deal with or promote fossil fuels?
 6 A. I don't know.
 7 Q. Do you know what the trend has been, let's
 8 say, over the last decade in terms of Montana's
 9 output of greenhouse gases -- greenhouse gas
 10 emissions?
 11 A. Only what I have read in the complaint.
 12 Q. Okay. Other than -- other than that, you
 13 don't, as you sit here, have any recollection of
 14 seeing anything on that trend?
 15 A. No.
 16 Q. On page 7 of your report, if you could go
 17 there, please. Are you there?
 18 A. Yes.
 19 Q. Okay. The second from the bottom
 20 paragraph starts out: "Thus, defendants' denial that
 21 rising CO2 levels is due to human activities,
 22 primarily the burning of fossil fuels, is
 23 inexplicable." And then it states defendants' answer
 24 paragraph 7. Did you -- did you write that sentence?
 25 A. No.

1 in Montana?
 2 MS. OLSON: Objection. Calls for a legal
 3 conclusion.
 4 THE WITNESS: I know that -- that we have
 5 three branches of government, and these laws are
 6 passed by the legislature.
 7 BY MR. STERMITZ:
 8 Q. And the legislature is an elected body.
 9 Right?
 10 A. Yes.
 11 Q. Do you know whether in carrying out the
 12 state energy policy, that the state agencies are --
 13 are they -- are they giving greater emphasis to some
 14 portions of this policy than others?
 15 MS. OLSON: Objection. Calls for
 16 speculation.
 17 BY MR. STERMITZ:
 18 Q. If you don't know, then you can just say
 19 that, but I'm asking whether you know that.
 20 A. I don't know that.
 21 Q. So if you don't know, then you would not
 22 be able to say, I assume -- tell me if this is wrong
 23 -- that, for example -- well, just picking one out,
 24 there's subsection (p) which says "use new and
 25 innovative technologies", and it lists a bunch of

1 Q. Do you know -- did Dr. Running write that
 2 sentence?
 3 A. I'm not sure.
 4 Q. The citation is to defendants' answer
 5 paragraph 7. Did you review defendants' answer that
 6 was filed in this case?
 7 A. No.
 8 Q. Well, just looking at that statement --
 9 A. Excuse me. Is that part of the complaint,
 10 paragraph 7?
 11 Q. No. It's a different document.
 12 A. Okay.
 13 Q. I don't think we have that as an exhibit.
 14 A. Okay. Thank you.
 15 Q. Sure. It's referencing a pleading that
 16 was filed by the State of Montana in defense of this
 17 case.
 18 If -- so -- but would you agree with the
 19 statement aside from whether it was filed as a legal
 20 pleading here, that it would be inexplicable for
 21 defendants to deny that rising CO2 levels is due to
 22 human activities?
 23 A. Could you rephrase that? I want to be
 24 sure I answer it --
 25 Q. Well, I guess what I'm just asking is

1 whether you agree with that sentence. Just
2 disregarding where it came from, would you agree that
3 it's inexplicable for defendants to deny that rising
4 CO2 levels are due to human activities?

5 A. Yes. I agree with the statement.

6 Q. You agree with the statement. So then if
7 defendants didn't deny -- you know, this is just a
8 hypothetical, I guess, at this point. But if
9 defendants did not deny the rising CO2 levels are due
10 to human activities, in other words, putting it
11 another way, if they agreed that it was due at least
12 in part to human activities, that would be a more
13 reasonable position, in your opinion?

14 MS. OLSON: Objection. Vague.

15 THE WITNESS: I'm having a hard time. So
16 you're -- could you repeat it? It's taken --

17 BY MR. STERMITZ:

18 Q. Yeah. Do you agree -- I'm sorry. I
19 didn't mean to interrupt you. I was just trying to
20 move on.

21 A. Go ahead. Please rephrase.

22 Q. You stated that you find it inexplicable
23 that defendants would deny that CO2 levels are due to
24 human activities. Right?

25 A. Yes.

1 reviewed journals all agree that the burning of
2 fossil fuels is responsible for the rising
3 temperatures that we're seeing.

4 BY MR. STERMITZ:

5 Q. Okay. Now my question is, would you
6 assign a similar percentage or similar degree of
7 reasonableness to the effects of invalidating
8 Montana's energy policy?

9 MS. OLSON: Objection. I think you
10 misstated her testimony on reasonableness.

11 BY MR. STERMITZ:

12 Q. Well, I hope not, but do you understand
13 the question?

14 A. I don't understand the question. Would I
15 -- sorry. Could you rephrase.

16 Q. Well, I'll back up again. In your report,
17 you know, your opinions there are made to a
18 reasonable degree of scientific certainty. Correct?

19 A. Yes.

20 Q. I mean, that's the overall level of -- of
21 certainty that you apply in your area of expertise.
22 Right?

23 A. Yes.

24 Q. Do you have a scientific opinion, then, to
25 a reasonable degree of scientific certainty, about a

1 Q. So the corollary I'm asking, if defense
2 were not to deny that, that would be a more
3 reasonable position in your opinion.

4 A. Yes.

5 Q. Is that correct?

6 A. Yes.

7 Q. And if the State focused its efforts here
8 on contesting that Montana's energy policy is
9 unconstitutional but didn't deny that there's
10 anthropogenic causes of greenhouse gas emissions or
11 global warming, would that be reasonable in your
12 opinion?

13 MS. OLSON: Objection. Calls for a legal
14 conclusion.

15 THE WITNESS: I'm sorry. Would you --

16 BY MR. STERMITZ:

17 Q. Not following?

18 A. Yeah.

19 Q. Well, let me back up a little bit. In
20 your opinion could reasonable scientists disagree
21 that rising CO2 levels are due to human activity?

22 MS. OLSON: Objection. Ambiguous.

23 THE WITNESS: I think reasonable
24 scientists would not agree to that statement. 97
25 percent of the climate scientists publishing in peer

1 court decision to invalidate Montana's energy policy?

2 MS. OLSON: Objection. Vague.

3 THE WITNESS: Could you -- could you
4 rephrase?

5 BY MR. STERMITZ:

6 Q. Well, okay. Are you, in your report
7 anywhere, rendering an opinion -- a scientific
8 opinion as to the constitutionality or legality of
9 Montana's energy policy?

10 A. No.

11 Q. Are you rendering an opinion to a
12 reasonable degree of scientific certainty on the
13 impact on plaintiffs of invalidating Montana's energy
14 policy?

15 A. We are describing the impacts that climate
16 change will have on the plaintiffs. We are not
17 describing the constitutionality of the policy.

18 Q. Okay.

19 A. If I understand your question.

20 Q. Have you -- have you met any of the
21 individual plaintiffs at all?

22 A. Yes.

23 Q. Have you met all of them or just some?

24 A. Just one.

25 Q. Who was that, please?

1 A. Georgianna Fisher, I met in 2019.
 2 Q. Does she live in the Bozeman area or
 3 something?
 4 A. Yes.
 5 Q. Okay. So you met her before -- or did you
 6 meet her before this lawsuit came about?
 7 A. Yes.
 8 Q. Is this professionally or socially or how
 9 did you happen to meet?
 10 A. She -- she was a student at Montana State
 11 University.
 12 Q. Okay. Was she in your program or I'm not
 13 even sure what your program was, but --
 14 A. Yeah.
 15 Q. Was she your student?
 16 A. She worked as a student assistant for a
 17 faculty member in my department.
 18 Q. Okay. Which faculty member was that?
 19 A. Dr. Dave McWethy.
 20 Q. Is he there still?
 21 A. Yes.
 22 Q. I would like to refer you to page 8 of
 23 your report, please. And in the middle of the page,
 24 there's a discussion about, quote, the Climate Change
 25 Exception to MEPA. Do you see that discussion there,

1 MS. OLSON: Mark, can we just have one
 2 minute?
 3 MR. STERMITZ: Sure thing.
 4 MS. OLSON: Thank you. We'll go off the
 5 record. Thanks, Deb.
 6 (Whereupon, a break was then
 7 taken.)
 8 MS. OLSON: Okay. Mark, we are back.
 9 MR. STERMITZ: Okay.
 10 MS. OLSON: Back on the record. We don't
 11 have any follow-up questions, so we're done as well,
 12 Mark.
 13 MR. STERMITZ: Okay. All right.
 14 (Whereupon, the deposition
 15 concluded at 10:30 a.m.)
 16 SIGNATURE RESERVED.
 17 * * * * *
 18
 19
 20
 21
 22
 23
 24
 25

1 several paragraphs at least?
 2 A. Yes.
 3 Q. And was this information and these
 4 paragraphs, like those three middle paragraphs that
 5 include the citation to MEPA, did that come -- was
 6 your review limited to the complaint there as well to
 7 the legal --
 8 A. Yes.
 9 Q. Okay. Sorry. I'm just mumbling to myself
 10 here now. In that middle paragraph there, the
 11 paragraph that has the code citation, then it says
 12 "We are further informed that this provision has been
 13 interpreted." Do you see that paragraph?
 14 A. Yes.
 15 Q. I assume when you say you're further
 16 informed, you were informed by plaintiffs' counsel.
 17 Is that correct?
 18 A. Informed by the complaint.
 19 Q. Okay. Other than what you read in the
 20 complaint, do you have any personal experience with
 21 the application of MEPA to any project in Montana?
 22 A. No.
 23 MR. STERMITZ: I think that's all I have.
 24 Well, I know that's all I have. I have no further
 25 questions.

1 DEPONENT'S CERTIFICATE
 2
 3 I, CATHY WHITLOCK, the deponent in the
 4 foregoing deposition, DO HEREBY CERTIFY, that I have
 5 read the foregoing - 39 - pages of typewritten
 6 material and that the same is, with any changes
 7 thereon made in ink on the corrections sheet, and
 8 signed by me a full, true and correct transcript of
 9 my oral deposition given at the time and place
 10 hereinbefore mentioned.
 11
 12
 13
 14 _____
 15 CATHY WHITLOCK
 16
 17 Subscribed and sworn to before me this
 18 day of _____, 2022.
 19
 20
 21 _____
 22 PRINT NAME: _____
 23 Notary Public, State of Montana
 24 Residing at: _____
 25 My commission expires: _____
 DF - HELD, ET AL. vs. STATE OF MONTANA, ET AL.

1 C E R T I F I C A T E

2 STATE OF MONTANA)
3 COUNTY OF GALLATIN) : ss

4
5 I, Deborah L. Fabritz, Registered Professional
6 Reporter and Notary Public for the State of Montana,
7 residing in Bozeman, do hereby certify:

8 That I was duly authorized to and did swear in
9 the witness and report the deposition of CATHY
10 WHITLOCK, in the above-entitled cause; that the
11 foregoing pages of this deposition constitute a true
12 and accurate transcription of my stenotype notes of
13 the testimony of said witness, all done to the best
14 of my skill and ability; that the reading and signing
15 of the deposition by the witness have been expressly
16 RESERVED.

17
18 I further certify that I am not an attorney nor
19 counsel of any of the parties, nor relative or
20 employee of any attorney or counsel connected with
21 the action, nor financially interested in the action.

22
23 IN WITNESS WHEREOF, I have hereunto set my hand
24 and affixed my notarial seal on this 11th day of
25 December, 2022.

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EXHIBIT 3

MONTANA FIRST JUDICIAL DISTRICT COURT

LEWIS AND CLARK COUNTY

RIKKI HELD, ET AL.,)

Plaintiffs,)

vs.)

Cause CDV-2020-307

STATE OF MONTANA, ET AL.,)

Defendants.)

ZOOM VIDEO CONFERENCE DEPOSITION UPON ORAL EXAMINATION

OF

DR. JACK A. STANFORD

ATTENDANCE OF ALL PARTICIPANTS VIA

ZOOM VIDEO CONFERENCE

8:00 a.m.

November 8, 2022

REPORTED BY: Lauren G. Harty, RPR, CCR #2674

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1 EXAMINATION

2 ATTORNEY	PAGE
3 BY MR. STERMITZ:	5

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5 EXHIBIT INDEX

6 EX#	DESCRIPTION	PAGE
7 47	CV of Jack A. Stanford.	5
8 48	5/18/2022 "EXPERT REPORT OF JACK A. STANFORD."	5

9

10 BY MR. STERMITZ:	5
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1 DR. JACK A. STANFORD, witness herein, having been

2 duly sworn by the Certified

3 Court Reporter, testified

4 upon oath as follows:

5 (Marked Deposition Exhibits 47-48.)

6 EXAMINATION

7 BY MR. STERMITZ:

8 Q. Morning, sir. My name is Mark Stermitz.

9 I'm one of the attorneys for the State of Montana --

10 THE WITNESS: Hold --

11 Q. (By Mr. Stermitz) -- and --

12 THE WITNESS: -- on just a minute. Let --

13 hold up. Let me get the dog out of the way.

14 MR. STERMITZ: Oh. Okay.

15 Well, I'm glad he is doing that at least.

16 I've had depositions where the dog's gone on the whole

17 deposition.

18 THE WITNESS: Sorry about that. The dog --

19 MR. STERMITZ: No problem.

20 THE WITNESS: -- doesn't have to be on the

21 record.

22 MR. STERMITZ: Okay.

23 Q. (By Mr. Stermitz) Okay. Dr. Stanford,

24 you -- you reside now in Twisp, Washington,

25 permanently?

2 (Pages 2 to 5)

1 A. That's correct.
 2 Q. When did you move there from Montana?
 3 A. Yeah. I retired from University of Montana
 4 in 2016 and we had purchased this place before that,
 5 so I've been in residence full-time since about 2017.
 6 Q. Do you have any affiliation currently with
 7 the University of Montana?
 8 A. I do. I'm Professor Emeritus of Ecology at
 9 that facility, and I still conduct cooperative
 10 research with people that are full-time there.
 11 Q. Do you mean at Yellow Bay or at the
 12 university generally or both?
 13 A. I mean most specifically at the biological
 14 station in Flathead Lake and occasionally with people
 15 who are more based on campus in Missoula.
 16 Q. Okay.
 17 Do you have any current research projects
 18 that relate to climate change or global warming?
 19 Other than this case.
 20 A. Not directly, no.
 21 Q. Have you had your deposition taken before?
 22 A. Yes.
 23 Q. Do you have an estimate of how many times
 24 that's occurred?
 25 A. I can only think of one time recently. I

1 Senate -- this is in the Attachment 1, page 53 -- and
 2 one was regarding virgin river flows. Before I ask
 3 you any questions about those it sounds like there may
 4 have been other times when you were retained as an
 5 expert besides those two ones I just mentioned?
 6 A. Yes. The only time recently was for this
 7 First Nation case up in B.C.
 8 Q. Okay.
 9 When was that work done for the U.S. Senate
 10 that you mentioned in your -- in your CV?
 11 A. Yeah. That had to do with reauthorization
 12 of the Clean Water Act. A senator from Montana asked
 13 for my expert testimony on that. And also I think, if
 14 I remember right, renewal on the -- renewal on the
 15 Endangered Species Act, again at the invite of a U.S.
 16 senator.
 17 Q. And how -- do you have any idea how many
 18 years ago that was?
 19 A. Yeah. That was a long time ago. I'm going
 20 to say 25 or 30.
 21 Q. Okay.
 22 A. Depends on -- to get a better understanding
 23 of it on the -- on the dates, those legi --
 24 legislative actions were approved.
 25 Q. All right.

1 did some work many years ago where some depositions
 2 were taken but can barely remember the details.
 3 Q. Was that in Montana somewhere?
 4 A. It had to do with testifying in -- in
 5 Washington on a number of federal acts that were in
 6 play, the Dangerous Species Act and the Clean Water
 7 Act specifically. My most recent depositions were in
 8 dealing with a First Nation case up in British
 9 Columbia.
 10 Q. I see.
 11 Was your testimony generally about water
 12 quality in that matter?
 13 A. Water quality and quantity.
 14 Q. And would you say that water quality and
 15 water quantity were the primary focus of the work that
 16 you did for the University of Montana for -- for many
 17 years?
 18 A. Oh. My research at the university was best
 19 classified as ecological. In other words, I covered
 20 the gamut from water to atmosphere to organisms; in
 21 particular, river-eating organisms. I had researched
 22 all around the Pacific Rim rivers. Worked a lot with
 23 salmon, for example.
 24 Q. I see a couple of notations in your report
 25 about being an expert witness. One was for the U.S.

1 And this -- this other one, "Expert witness
 2 in successful adjudication of virgin river flows as
 3 Permanent federal reserve water rights for Glacier,
 4 Yellowstone and Zion National Parks," when did that
 5 work take place, Dr. Stanford?
 6 A. Is it indicated in my CV? I'm not sure.
 7 But --
 8 Q. No.
 9 A. -- that --
 10 Q. That's --
 11 A. -- was --
 12 Q. -- why -- that's why I asked.
 13 A. It's not. I have to check to be absolutely
 14 certain, but I -- I would give it 15 years ago,
 15 whenever those cases were adjudicated, yeah. I forgot
 16 I was involved with that team.
 17 Q. What -- what does the term virgin river
 18 flows mean? You've got that, as I just indicated,
 19 adjudication of virgin river flows. I don't know that
 20 I've heard that --
 21 A. Average --
 22 Q. -- phrase before.
 23 A. Average flow has been quantified.
 24 Q. Say that again, please? I'm sorry. I
 25 didn't catch it.

Page 10

1 A. It means that the river flow on the average
 2 has been quantified as thus and so, and virgin flow
 3 varies from a base flow to a peak flow depending --
 4 Q. Okay.
 5 A. -- on -- depending on season in most Rocky
 6 Mountain rivers.
 7 Q. Turning to this particular case, have you
 8 reviewed the reports of any other experts that are
 9 involved in this case?
 10 A. No.
 11 Q. What, if anything, did you do today to
 12 prepare for your deposition?
 13 A. Reread my report. And that was about it.
 14 Q. Did you speak to plaintiffs' attorneys at
 15 all?
 16 A. I did not, except to say, "Hello."
 17 Q. Okay. Good enough.
 18 What is your understanding, just broadly
 19 speaking now, of the nature of your engagement for
 20 this particular case? What are you being asked to
 21 testify about?
 22 A. Yeah. I was asked to prepare an expert
 23 report on hydrologic conditions in Montana and
 24 ramifications of potential climate change, and all of
 25 that's contained in my report.

Page 11

1 Q. Have you met any of the plaintiffs in this
 2 case?
 3 A. No.
 4 Q. Have you talked to them -- well, I guess
 5 I -- maybe that's included in your answer, but have
 6 you talked to them on the phone or indirect, anything
 7 like that? Any contact with them directly at all of
 8 any kind?
 9 Did you understand --
 10 A. Sorry --
 11 Q. -- my --
 12 A. -- Mark. Sorry, Mark. My com -- my
 13 internet froze. You'll have to repeat that question.
 14 Q. Oh.
 15 I know you said you haven't met the
 16 plaintiffs. Have you talked to them on the phone or
 17 had any, you know, like contact electronically or
 18 virtually with them?
 19 A. That --
 20 Q. I'm sorry. You kind of broke up again, at
 21 least --
 22 A. I have not talked with anyone about the
 23 case.
 24 Q. Okay.
 25 Your report indicates that you reviewed the

Page 12

1 complaint that was filed in this case; is that right?
 2 A. Well, I was -- I -- I was given a
 3 description of the complaint, and the reference to
 4 it's included in my report there on page 10.
 5 Q. So you -- you didn't read the complaint
 6 itself?
 7 A. No. I only read what they -- they, the
 8 lawyers, gave me, which is, again, repeated on page 10
 9 of my report. Or near page 10.
 10 Q. Yeah.
 11 Do you have a letter or an email from
 12 plaintiffs' counsel that includes the information you
 13 just mentioned somewhere?
 14 A. Yes. I got -- I got an email with that
 15 statement that's repeated in my report from legal
 16 counsel, yeah.
 17 Q. Turning -- can you go ahead and refer to
 18 page 10 of your report, please.
 19 A. What's your question?
 20 Q. Which of the statements that are there on
 21 page 10 came from plaintiffs' counsel?
 22 A. It's the statement that begins with, "I have
 23 been informed..." --
 24 Q. Okay.
 25 A. -- and then the next paragraph again, "I

Page 13

1 have been informed..."
 2 Q. All right.
 3 MR. STERMITZ: Roger, do you know if we've
 4 been produced a copy of that communication from
 5 plaintiffs' counsel to Dr. Stanford?
 6 MR. SULLIVAN: I don't know if you -- if you
 7 have, but I would say that it's -- it's -- as
 8 Dr. Stanford indicated, what was communicated has been
 9 repeated in the report, so, you know, it's been
 10 incorporated in there. And I'm not sure -- I'd have
 11 to go back and look through the -- through the
 12 production, Mark, because I don't have it up in front
 13 of me right now.
 14 MR. STERMITZ: Okay. We'll check on that.
 15 MR. SULLIVAN: The -- as in the other expert
 16 reports, the -- the -- the expert here, Dr. Stanford,
 17 was -- was asked to rely on, you know, the
 18 representation in terms of the statutes that are being
 19 challenged and the -- the plaintiffs in the case,
 20 which are derived from the complaint that is extant in
 21 the case.
 22 Q. (By Mr. Stermitz) I take it -- yeah -- from
 23 what we're talking about here, Dr. Stanford, in
 24 that -- that second paragraph that refers on page 10
 25 to Montana's State Energy Policy you -- do I

Page 14

1 understand that you probably didn't read the statute
 2 that's referenced there yourself?
 3 A. No.
 4 Q. Do you have an understanding -- if so, what
 5 is it? -- of what the court is being asked to do in
 6 this case?
 7 A. Oh. I'm not an expert on the legal
 8 ramifications. I was asked as a concerned scientist
 9 to write a report about the potential effects of
 10 climate change on aquatic resources in Montana and
 11 beyond, and that's the limits of my input.
 12 Q. You -- you do have various statements in
 13 your report that refer to the plaintiffs and impacts
 14 on them. Do you have an opinion about how, if at all,
 15 those impacts are different than impacts from other
 16 citizens in the state of Montana or other people in
 17 the rest of the world?
 18 A. Hmm. No. I -- I think I could say in my
 19 expert opinion that climate change is a concern to
 20 everyone, but you have to -- you have to give some
 21 concern to those people that are very young because of
 22 the predictions that we're making about how their
 23 environment will look some years from now.
 24 Q. Young people in Montana and in the rest of
 25 the world as well?

Page 15

1 A. Montana specifically in the context of this
 2 activity but certainly people globally.
 3 Q. Is it your understanding from the
 4 information that you were given that the court in this
 5 case is being asked to rule on the extent to which
 6 climate change is the result of human activity?
 7 A. I don't know that specifically, but I assume
 8 that it would be relevant.
 9 Q. Have you done -- or have you reviewed any --
 10 excuse me. That's compound. I'll just stick with the
 11 first part. Have you -- have you done any
 12 calculations at all on Montana's contribution to
 13 greenhouse gas emissions?
 14 A. No. I haven't participated in calculation
 15 of specific sources of greenhouse gases. I do re --
 16 excuse me. I do rely on the International Panel's
 17 estimates like everyone else, yeah.
 18 Q. Sure.
 19 In your report on page 10 where we were just
 20 looking you say that, quoting, "At a time when Montana
 21 has already experienced significant harms due to
 22 anthropogenic climate change, the state should be
 23 moving away from climate-damaging fossil fuel energy
 24 resources, not promoting fossil fuels as an energy
 25 resources if it wants to protect the aquatic

Page 16

1 ecosystems of the state..., " et cetera.
 2 What information have you reviewed in --
 3 that indicates that Montana is promoting fossil fuel
 4 energy resources?
 5 A. Well, none specifically, but I am aware that
 6 there's dramatic resources -- copious resources in
 7 terms of coal and oil and other fossil fuels that are
 8 available in Montana, and certainly the State's
 9 cognizant of that.
 10 Q. Do you know what the trend has been in
 11 Montana specifically for greenhouse gas emissions
 12 in -- originating in Montana in the last let's say ten
 13 years or over any period of time?
 14 A. No, I don't. I didn't dig into that. It's
 15 available, but I didn't dig into it.
 16 Q. Let me ask you -- I think we've touched on
 17 this, but just to make it clear, you would agree with
 18 the statement I assume greenhouse gas impacts are a
 19 worldwide phenomenon because greenhouse gases disperse
 20 themselves throughout the atmosphere?
 21 A. Where does that come from?
 22 Q. I think it came from -- or -- this is
 23 paraphrasing a little bit, but it came out of
 24 Dr. Running's report.
 25 A. Yeah. I'll leave that -- those statements

Page 17

1 to him.
 2 Q. So you have no reason to disagree with that.
 3 A. I don't.
 4 Q. And just kind of a corollary to that, would
 5 you agree that talking about greenhouse gas emissions
 6 in Montana is from a global standpoint the same as
 7 talking about greenhouse gas emissions in Russia?
 8 A. I don't know.
 9 Q. Okay.
 10 I meant to cover this a little bit later,
 11 but we're kind of touching on it now. You -- in a
 12 couple of different places in your report, and we can
 13 go to it specifically if we need to, you talk about
 14 evaluating the impacts -- the regional impacts of
 15 greenhouse gas emissions from Montana, and I -- I
 16 think that's specifically with reference to the
 17 Montana Environmental Policy Act. Do you recall
 18 statements to that effect?
 19 MR. SULLIVAN: I -- I would object on the
 20 basis of ambiguity, a form objection, Mark, and would
 21 suggest you direct Dr. Stanford's attention to
 22 where -- where we're at in his report.
 23 MR. STERMITZ: Sure.
 24 Q. (By Mr. Stermitz) Well, let's just start
 25 with page 10, Dr. Stanford. Those paragraphs that

Page 18

1 start, "I have been informed...", the first one talks
 2 about the climate change exception to MEPA? Do you
 3 see that?
 4 A. Yes.
 5 Q. And toward the end of that paragraph you
 6 say, "Moreover, because of the interconnections of
 7 Montana's aquatic ecosystems both within Montana and
 8 beyond its borders, in order for any environmental
 9 reviews that consider impacts to aquatic ecosystems
 10 (including fisheries) to be complete and accurate,
 11 they must consider impacts that are regional in
 12 nature."
 13 And my question -- so my question is, have
 14 you reviewed any examples of where greenhouse gas
 15 emissions in Montana are evaluated solely within
 16 Montana, the effects of that solely within Montana?
 17 A. No, not beyond the modeling work that I
 18 referred to in my report that my group did that based
 19 the warming trend or the greenhouse gas trend on the
 20 AR4 scenario from the IPCC, the International Panel on
 21 Climate Change. That was the -- that was the input to
 22 the model. And the outputs dealt with river flows,
 23 and my report goes on at great length about the
 24 importance of a range of variation in river flows and
 25 being of the -- aquatic resources of the state.

Page 19

1 Q. I guess I'm just trying to understand what
 2 you mean by regional in nature and -- and let me get
 3 at it from this way. When you say that are you
 4 talking about the impact of global greenhouse gas
 5 emissions on the Montana region?
 6 A. Yeah. I think it's fair to say that because
 7 my premise was based on the AR4 scenario from the IPCC
 8 and they're the experts. So that -- as I understand,
 9 that output is global, and the way in which we used it
 10 was in the context of our region, meaning the Rocky
 11 Mountains.
 12 Q. And to be clear then, when you say regional
 13 in nature you're not saying that -- that -- you're not
 14 talking about an evaluation of the greenhouse gas
 15 emissions solely from the state of Montana.
 16 A. Not specifically from Montana but Montana
 17 certainly inclusive in the analysis.
 18 Q. Along with the rest of the world, right?
 19 A. No, but -- but, remember, my outputs were --
 20 dealt with Montana rivers and the trends in their --
 21 in their -- the range of variation in those rivers in
 22 terms of flow and how it's going to be changed by
 23 increasing temperatures.
 24 Q. But, again, if -- if I'm understanding you
 25 correctly, you're talking about the impacts on Montana

Page 20

1 of global greenhouse gas emissions, right?
 2 A. Yes, but that doesn't escape the need to
 3 recognize that Montana's participatory in that.
 4 Q. And do you have information on Montana's
 5 contribution, percentage contribution or otherwise, of
 6 measuring it to the global emission of greenhouse
 7 gases?
 8 A. No. I -- I have to leave that to the IPCC
 9 and Running and other experts because my expertise
 10 deals with the ecology of the rivers and streams and
 11 lakes of the state and region.
 12 Q. So is it fair to say that there's nothing in
 13 the opinions or your report that we could identify
 14 that attributes any impacts to Montana from
 15 Montana's -- solely from Montana's emissions?
 16 A. No. My -- my report wasn't parsed in that
 17 way, but it doesn't discount the importance of
 18 Montana's contribution to greenhouse gases. And it's
 19 just that I wasn't asked to investigate that and I
 20 didn't do it.
 21 Q. Right.
 22 And -- and have you seen any report in this
 23 case that has done that?
 24 A. No.
 25 Q. If hypothetically one of the agencies of the

Page 21

1 State of Montana permitted a new fossil fuel energy
 2 facility -- natural gas, coal, whatever -- in, say --
 3 this is a hypothetical, so bear with me -- the middle
 4 of Montana, Lewiston, do you know what the effect of
 5 that -- I mean, there's a lot of variables there, but
 6 do you know whether the effect of that could be
 7 evaluated on freshwater systems in Montana?
 8 A. If the experts in the emissions --
 9 MR. SULLIVAN: I would -- excuse me. I
 10 would interject an objection to the form of the
 11 question as inherently compound and ambiguous.
 12 You may answer, Dr. Stan -- Stanford.
 13 A. Well, I don't fully understand it either,
 14 but the -- the point that I would make as an expert on
 15 water resources in Montana is that that action would
 16 be going in the wrong direction for reducing or
 17 contributing to the -- the reduction of greenhouse
 18 gases in the atmosphere, which my work shows directly
 19 is influencing stream flows in Montana and in
 20 particular in the Rocky Mountains and the runoff
 21 from -- from the Rocky Mountains, and that has direct
 22 impacts on citizens of Montana and beyond.
 23 Q. (By Mr. Stermitz) And you've said it in your
 24 report that your opinion is that Montana should move
 25 completely away from anything that contributes to the

Page 22

1 emission of greenhouse gases, any fossil fuel energy
 2 production; is that correct?
 3 MR. SULLIVAN: Object to the form of the
 4 question. The report speaks for itself and I believe
 5 it misstates the text of the report itself.
 6 You may answer, Dr. Stanford.
 7 A. I agree with that.
 8 And now I've forgotten the point of the
 9 question.
 10 Q. (By Mr. Stermitz) I'll ask it again maybe in
 11 a slightly different way.
 12 Is it your opinion, your professional
 13 opinion that Montana should move toward the complete
 14 elimination of greenhouse gases in Montana?
 15 A. Well, I want to stick to the statement I
 16 made in the report, so let's refer to it specifically.
 17 And I think I said that Montana should participate
 18 along with every other country in doing everything it
 19 can to reduce the emissions.
 20 Q. And if Montana did that, assuming their --
 21 if Montana did that, do you -- Montana alone did what
 22 you're asking, started to move away from fossil fuel
 23 energy production, how would that impact the
 24 plaintiffs in this case?
 25 MR. SULLIVAN: Object to the form; exceeds

Page 23

1 the bounds of the expert report.
 2 You may answer, Dr. Stanford, if you can.
 3 A. Well, Montana would be leading by example,
 4 and that's a good thing is all I can say.
 5 Q. (By Mr. Stermitz) Is that your expert
 6 opinion?
 7 A. Yes, because in my report I said the
 8 greenhouse -- green -- greenhouse gases are
 9 accumulating in the atmosphere and that's resulting in
 10 warming temperatures in Montana, and that's resulting
 11 in less stream flow, and that has direct economic and
 12 ecological effects on the people of Montana, including
 13 the plaintiffs.
 14 Q. But, again, you haven't been asked and you
 15 don't plan on entering an opinion about parsing
 16 Montana's individual contribution to the local
 17 problem, right?
 18 A. No. No. I wasn't asked to do that.
 19 Q. As you sit here today do you have any more
 20 work planned as -- on -- for this case?
 21 A. No.
 22 Q. I'm sorry. Did you get my question?
 23 A. No, not -- no, not beyond any rebuttals that
 24 might be needed or whatever.
 25 Q. Nothing specific at this time; is that

Page 24

1 right?
 2 A. That's right.
 3 Q. So do you have -- no longer have a residence
 4 in Montana; you just -- are you a permanent resident
 5 of the state of Washington these days?
 6 A. I -- you know, we own land in B.C. and we
 7 own land in Montana and we own land here in
 8 Washington. Hard to say where home is. I mean, after
 9 move -- living for 45 years in Flathead Lake it's
 10 really hard to leave Montana, if you know what I mean.
 11 Q. I do.
 12 A. It's a great place. But there are other
 13 great places too.
 14 So sorry to give you a long answer, but
 15 that's the way I feel. And we own a considerable
 16 amount of land -- of land in the Mission Valley, and
 17 we're there a lot --
 18 Q. Okay.
 19 A. -- in -- in Montana.
 20 MR. STERMITZ: I think that's about all I
 21 have. Let me look here at my notes.
 22 I have nothing further.
 23 MR. SULLIVAN: Mark, would it be possible
 24 for me to take just a few-minute break and consult
 25 with my co-counsel and see --

Page 25

1 MR. STERMITZ: Of course.
 2 MR. SULLIVAN: -- if I -- I -- I think we're
 3 done, but I'd like to do that. So it'll be just a
 4 little complicated because of our triangulating here,
 5 but if you can give me --
 6 MR. STERMITZ: Yeah.
 7 MR. SULLIVAN: -- five minutes, we'll be
 8 back in five minutes. And we'll ask Lauren to keep us
 9 rolling, you know, in terms of the Zoom, but I'll just
 10 touch base and mute and take off my video and chat for
 11 a minute and be back on as -- as quickly as we can.
 12 MR. STERMITZ: Okay.
 13 THE WITNESS: Do you want --
 14 MR. SULLIVAN: Yeah. Dr. Stanford, if you
 15 could just do your -- your mute and your video, and
 16 then I'll just confer that -- to see if I have any
 17 questions or not. That would be great.
 18 (Recess.)
 19 MR. SULLIVAN: We have no questions at this
 20 time.
 21 MR. STERMITZ: Okay. That's all I have.
 22 (Deposition recessed at 8:36 a.m.)
 23 (Signature reserved.)
 24
 25

SIGNATURE

I declare under penalty of perjury under the laws of the State of Washington that I have read my within deposition, and the same is true and accurate, save and except for changes and/or corrections, if any, as indicated by me on the CHANGE SHEET flyleaf page hereof.

Signed in _____, Washington, this _____ day of _____, 2022.

DR. JACK A. STANFORD
Taken: November 8, 2022

Re: Held v. State of Montana
Cause No.: CDV-2020-307
Lauren G. Harty, RPR, CCR #2674

SEATTLE DEPOSITION REPORTERS, LLC
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CHANGE SHEET

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Table with 3 columns: PAGE, LINE, CORRECTION AND REASON. Rows 10-21 are blank.

DR. JACK A. STANFORD
Taken: November 8, 2022

CERTIFICATE

STATE OF WASHINGTON)
) ss.

COUNTY OF KING)

I, the undersigned Washington Certified Court Reporter, hereby certify that the foregoing deposition upon oral examination of DR. JACK A. STANFORD was taken before me on November 8, 2022, and transcribed under my direction;

That the witness was duly sworn by me pursuant to RCW 5.28.010 to testify truthfully; that the transcript of the deposition is a full, true, and correct transcript to the best of my ability; that I am neither attorney for nor a relative or employee of any of the parties to the action or any attorney or counsel employed by the parties hereto, nor am I financially interested in its outcome;

I further certify that in accordance with CR 30(e), the witness was given the opportunity to examine, read, and sign the deposition within 30 days upon its completion and submission, unless waiver of signature was indicated in the record.

IN WITNESS WHEREOF, I have hereunto set my hand this 11th day of November, 2022.

LAUREN G. HARTY, CCR #2674



EXHIBIT 4

*Rikki Held, et al. v
State of Montana, et al.*

*Dr. Daniel Fagre
October 27, 2022*

*Charles Fisher Court Reporting
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Bozeman, MT 59715
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Min-U-Script® with Word Index

MONTANA FIRST JUDICIAL DISTRICT COURT
LEWIS AND CLARK COUNTY

RIKKI HELD, ET AL.,
Plaintiffs,
vs. Cause No. CDV 2020-307
STATE OF MONTANA, ET AL.,
Defendants.

VIDEOCONFERENCE DEPOSITION UPON
ORAL EXAMINATION OF
DR. DANIEL FAGRE

BE IT REMEMBERED, that the
deposition upon oral examination of DR. DANIEL
FAGRE, present at Fisher in Kalispell, Montana,
appearing at the instance of Defendants, was taken
at the offices of Charles Fisher Court Reporting,
14 3rd Street E, Kalispell, Montana, on Thursday,
October 27, 2022, beginning at the hour of
9:14 a.m., pursuant to the Montana Rules of Civil
Procedure, before Kasey L. Fisher, Registered
Professional Reporter - Notary Public.

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I N D E X

EXAMINATION OF DR. DANIEL FAGRE BY: PAGE:
Mr. Mark L. Stermitz, Esq.....5

E X H I B I T S

DEPOSITION EXHIBITS: PAGE:
Exhibit 25 Expert Report of Daniel B.
Fagre, Ph.D.....5

1 (Whereupon, Exhibit No. 25 was
 2 marked for purposes of
 3 identification.)
 4 WHEREUPON, the following proceedings were
 5 had and testimony taken, to-wit:
 6 * * * * *
 7 DR. DANIEL FAGRE,
 8 called as a witness herein, having been first duly
 9 sworn, was examined and testified as follows:
 10 EXAMINATION
 11 BY MR. STERMITZ:
 12 Q. Good morning, sir.
 13 A. How are you doing?
 14 Q. Good. Mark Stermitz is my name, I
 15 represent the State of Montana.
 16 Could you tell us your name for the
 17 record, please?
 18 A. Yes, Daniel B. Fagre.
 19 Q. And where do you reside?
 20 A. West Glacier.
 21 Q. Have you had your deposition ever taken
 22 before?
 23 A. No, I've not.
 24 Q. Okay. Just a couple of things.
 25

1 Just a minute ago you were asked the
 2 question, and you gave a normal answer that most
 3 human beings would.
 4 A. Uh-huh.
 5 Q. But that's going to be a problem. We
 6 have to say "yes" or "no" or some word. We can't
 7 say "uh-huh" or "huh-uh," stuff like that.
 8 A. Okay.
 9 Q. It doesn't translate well.
 10 And then please let me know right away if
 11 my question isn't clear to you because, you know,
 12 this is my one opportunity to talk to you, and I
 13 want to make sure we're good.
 14 A. Uh-huh.
 15 Q. "Yes"?
 16 A. Yes.
 17 Q. Okay. We'll -- you'll get in the groove,
 18 don't worry.
 19 A. Yes. Yes, I will.
 20 Q. And then maybe final note is, I'll do my
 21 best, and it doesn't always work, but we have to
 22 talk one at a time because that's all she can take
 23 down. All right?
 24 A. Yes.
 25 Q. You're engaged as an expert by the

1 plaintiffs in this case, correct?
 2 A. Yes.
 3 Q. Have you worked before as an expert in
 4 any kind of litigation?
 5 A. No.
 6 Q. This is your one and only venture into
 7 the lawsuit world, as an expert?
 8 A. Yes, it is.
 9 Q. Okay. And what do you understand the
 10 nature of your engagement to be?
 11 What was your deliverable or assignment?
 12 A. My assignment was to summarize the
 13 research that we've done on glacial retreat in
 14 Glacier National Park, and that is part of my
 15 expertise.
 16 Q. And you're retired now, I understand; am
 17 I right about that?
 18 A. Yes.
 19 Q. How long have you been retired?
 20 A. Two years and almost three months.
 21 Q. And before that, you worked for the
 22 National Park Service?
 23 A. No. When I retired, I worked for the
 24 United States Geological Survey. I was stationed
 25 at Glacier National Park.

1 Q. I see. How many years was that?
 2 A. I arrived there in August '91, so I was
 3 there -- I'm still there, but 30, 32 years.
 4 Q. And that was always with USGS?
 5 A. No. I started off as a Glacier National
 6 Park research scientist. In 1993, all the
 7 research scientists were transferred from the
 8 National Park Service to the National Biological
 9 Service, under then-secretary of the interior,
 10 Bruce Babbitt.
 11 And then in 1996, since that didn't work
 12 out too well, all of the research scientists were
 13 then transferred to the US Geological Survey.
 14 So I went from -- across three federal
 15 agencies in basically a span of three years.
 16 Q. I know your CV is attached to an exhibit
 17 to your report, and I'm not going to go through
 18 the whole thing. We've got it here.
 19 Is it fair to say that you spent the
 20 majority of your professional career with --
 21 working at Glacier Park?
 22 A. Yes.
 23 Q. And did you always have a focus on the
 24 glaciers and that sort of thing?
 25 A. Yes. In the context of my job

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1 description, yes.
 2 **Q. So when you were brought on there, it was**
 3 **with the purpose to do research on the glaciers**
 4 **themselves?**
 5 A. No, it was more broadly to attempt to
 6 find out how climate change is influencing a
 7 mountain ecosystem, and Glacier National Park was
 8 the target ecosystem that we were looking at. And
 9 glaciers are integral to the mountain ecosystem,
 10 so they also became a subject of study.
 11 **Q. You have in your report an appendix, or a**
 12 **couple of them, and one lists -- according to your**
 13 **report, Attachment 2 is the -- I'll find the exact**
 14 **words you use here.**
 15 **On page 3 of your report, you say you've**
 16 **reviewed a number of documents, data and**
 17 **studies -- this is two-thirds of the way down --**
 18 **and -- in developing your opinions, and a specific**
 19 **index of which may be found as Attachment 2.**
 20 **So I take it that Attachment 2 to your**
 21 **report is, as you say, the documents -- a list of**
 22 **the documents and data that you -- to which you**
 23 **referred.**
 24 **Am I right about that?**
 25 A. Yes, Attachment 2 is basically the

Page 10

1 publications that are cited in the expert report.
 2 **Q. Oh, okay. So are there other documents**
 3 **that you reviewed that are not listed in**
 4 **Attachment 2, in connection with this -- your**
 5 **opinions?**
 6 A. Not specifically for this report. I keep
 7 up on the scientific literature. There are dozens
 8 of reports and publications coming out
 9 continuously. But for this report, those are the
 10 ones I referenced.
 11 **Q. Did you review the Complaint that was**
 12 **filed that started this lawsuit?**
 13 A. Yes, I reviewed that.
 14 **Q. Okay. And it's not listed here, I don't**
 15 **believe. I could be wrong. Correct me if I'm**
 16 **wrong, please.**
 17 **Are there other documents like that,**
 18 **let's say documents related to this lawsuit**
 19 **specifically, that you reviewed but that aren't**
 20 **listed in Attachment 2?**
 21 A. Not to my recollection, no.
 22 **MR. SULLIVAN:** But I'd like to just --
 23 I'm going to object to the form of the last
 24 question because it -- it -- it's ambiguous and,
 25 to some extent, misstates the record.

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1 Because in that same paragraph that he
 2 references Attachment 2, he also indicates that he
 3 reviewed documents, including plaintiffs'
 4 Complaint, in the middle of that same paragraph.
 5 **MR. STERMITZ:** Right. Okay. I
 6 understand your objection.
 7 **BY MR. STERMITZ:**
 8 **Q. All I'm trying to find out is, because**
 9 **it's not listed in the exhibits, what -- or they**
 10 **aren't, what other documents you might have seen.**
 11 **I mean, you must have had written**
 12 **communications with plaintiffs' counsel, e-mails**
 13 **and so forth, didn't you?**
 14 A. Well, I wrote the report and asked for
 15 clarification and feedback because I'd never done
 16 an expert report --
 17 **Q. Uh-huh.**
 18 A. -- or had a deposition before.
 19 So I did want to make sure that I was
 20 hitting the mark in my report.
 21 **Q. Okay. So you did a draft report and**
 22 **counsel helped you prepare the final; is that**
 23 **fair?**
 24 A. Yes. They made comments where I failed
 25 to mention something that they thought was

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1 important; that's correct.
 2 **Q. Okay. Am I correct in understanding that**
 3 **basically your contribution is to describe, as you**
 4 **said, the effects of global warming or climate**
 5 **change on the ecosystem at Glacier specifically,**
 6 **correct?**
 7 A. That was my job assignment, yes.
 8 **Q. And did you, as part of that, have any**
 9 **role or opinion about how this lawsuit may affect**
 10 **that?**
 11 A. Affect what?
 12 **Q. Affect your -- the science on -- or**
 13 **affect the region there at Glacier Park on the**
 14 **ground.**
 15 **MR. SULLIVAN:** I'm going to object to the
 16 form of the question as ambiguous.
 17 **MR. STERMITZ:** Okay.
 18 **BY MR. STERMITZ:**
 19 **Q. Well, let me break it down a little bit.**
 20 **You understand, first of all, that you're**
 21 **giving an opinion in a lawsuit?**
 22 A. Uh-huh.
 23 **Q. Correct? "Yes"?**
 24 A. Yes.
 25 **Q. And your opinion, you've described what**

1 it entails, again, the effects of climate change
2 on the Glacier Park region, right?

3 A. Yes.

4 Q. And is there any element of that that
5 relates to what the court is being asked to do in
6 this case, as far as you know?

7 A. No. I -- all my research was done and I
8 retired before this lawsuit came into, at least,
9 my life. I don't know when it was filed.

10 So none of my research or opinions were
11 developed with this lawsuit in mind.

12 Q. Okay. Have you met any of the plaintiffs
13 in the lawsuit?

14 A. No, I've not.

15 Q. I said "met," so I obviously meant in
16 person, but have you talked to them otherwise on
17 the phone or anything?

18 A. No, I've not.

19 Q. Other than reading the Complaint, are you
20 aware of their circumstances at all?

21 A. No, I'm not.

22 Q. Your conclusions are listed in your
23 report. You have a couple of places on page 3,
24 you summarize, and then on page 15, I think you've
25 got a short statement -- sorry. I thought I

1 specifically for Glacier Park, right?

2 A. No.

3 Q. Okay. And is it fair to say that, as far
4 as you know now, you've finished your opinion and
5 you don't have any pending assignments, other
6 assignments?

7 A. No pending assignments.

8 Q. So as far as you know now, if you were
9 called to testify, it would be to the effect
10 that's described in your report?

11 A. Yes.

12 Q. And nothing more?

13 A. Yes.

14 Q. Or less?

15 A. Yes.

16 Q. Okay. And the opinions that you've
17 expressed in here, those are -- to a reasonable
18 degree of scientific certainty --

19 A. Yes.

20 Q. -- is the standard that you followed,
21 right?

22 A. Yes, it is.

23 Q. I'll just -- you know, we took
24 Dr. Running's deposition and talked a lot about
25 climate change, and I'm not going to duplicate

1 turned that off.

2 (Whereupon, an off-the-record
3 discussion then took place.)

4 BY MR. STERMITZ:

5 Q. Can you -- although I know you weren't
6 asked, as you've just said, to render any opinions
7 about the lawsuit, per se, can you give me your
8 understanding of what the lawsuit is about?

9 A. Yeah. Based on reading the Complaint,
10 the children, or the plaintiffs, are suing the
11 State over energy policy, essentially.

12 Q. Did you do any review of what the State's
13 energy policy or policies are?

14 A. No, I did not.

15 Q. So it would be a fair statement, tell me
16 if you're wrong, to say that, whatever happens in
17 the litigation, you're not involved in assessing
18 the impact of that to either the plaintiffs or to
19 Glacier Park; is that right?

20 MR. SULLIVAN: I would object to the form
21 of the question as confusing.

22 BY MR. STERMITZ:

23 Q. You're not being asked to render any
24 opinions about how the court can affect climate
25 change -- and I'll just break it down --

1 that effort because it wouldn't serve anyone's
2 best interest.

3 So I'm just going to kind of cut to the
4 chase here and ask you a couple of questions to
5 see if we're on the same page.

6 Climate change, global warming, is a
7 global problem; is that right?

8 A. Yes.

9 Q. So what we do in Montana is as --
10 whatever it is, it has the same -- to the extent
11 it impacts global warming, it has the same affect
12 as something done on the other side of the globe,
13 it's the same thing done on the other side of the
14 globe; is that right?

15 MR. SULLIVAN: I'm going to object to the
16 form of the question on the -- on the basis of
17 ambiguity in terms of what's referred to as, do
18 what we do.

19 MR. STERMITZ: Okay.

20 MR. SULLIVAN: I don't understand that.

21 MR. STERMITZ: I gotcha.

22 BY MR. STERMITZ:

23 Q. So a ton of greenhouse gas emitted in
24 Montana is the same, as far as your assessment of
25 global warming, as a ton of greenhouse gases

1 emitted in China; is that correct?
 2 A. The -- can I say yes with a caveat?
 3 Q. Sure.
 4 A. Yes, with a caveat. The physics of that
 5 are correct; however, there are things like
 6 atmospheric mixing and ocean absorption and other
 7 things, so it is not precisely true.
 8 But, fundamentally, greenhouse gases
 9 emitted eventually wind up being globally mixed.
 10 Q. And let me ask it this way.
 11 If we have, for example, a power plant in
 12 Montana that emits greenhouse gases, would it have
 13 any greater effect on the ecology at Glacier Park
 14 than one that's emitting the same thing in Europe?
 15 MR. SULLIVAN: And before Dr. Fagre
 16 answers, I'm going to object on the basis that
 17 this line of questioning is beyond the scope of
 18 Dr. Fagre's expert report and his stated opinions.
 19 BY MR. STERMITZ:
 20 Q. Do you have an understanding -- do you
 21 understand my question, first of all?
 22 A. Yes.
 23 Q. Are you -- do you feel you can answer it?
 24 A. No. I can think of reasons why I can't.
 25 Q. I mean, is it based on your expertise?

1 fuels will only result in more warming of the
 2 climate system and" -- "more rapid melting of
 3 Montana's glaciers."
 4 What did you intend to include when you
 5 say, "Montana's ongoing actions to increase
 6 utilization and development of fossil fuels"?
 7 A. I took that from the Complaint, what its
 8 focus was. And that statement was there to show
 9 that my testimony was relevant to what was
 10 required or asked by the plaintiffs to have in the
 11 expert report. It was an attempt to be relevant.
 12 Q. Okay. Do you have any independent
 13 knowledge about whether Montana is increasing the
 14 utilization and development of fossil fuels?
 15 A. Not explicitly, no.
 16 Q. And, I guess, fair to say then that
 17 not -- not -- that would have been included in --
 18 as part of your opinions here?
 19 MR. SULLIVAN: Yeah.
 20 THE WITNESS: Could you repeat --
 21 MR. SULLIVAN: Yeah, I would object to
 22 the form.
 23 BY MR. STERMITZ:
 24 Q. So the question is whether you -- and
 25 maybe this is a little different than what I asked

1 A. It is -- it is outside my area of
 2 expertise, yes.
 3 Q. Okay. So your opinions, whatever they
 4 are in your report, are -- they are not designed
 5 to inform the court about any specific actions in
 6 Montana in terms of how they might relate to the
 7 ecology at Glacier Park?
 8 MR. SULLIVAN: And I'm going to object
 9 because it calls for a legal conclusion.
 10 With that objection noted, you can answer
 11 to the extent you can.
 12 THE WITNESS: So no, with a caveat. No.
 13 Our research is designed to look at the impacts of
 14 climate change, period.
 15 We have no policy, energy outcomes or
 16 anything in mind. We are simply recording and
 17 documenting what is happening.
 18 BY MR. STERMITZ:
 19 Q. I think my outline is too long. Are --
 20 let me try this, Dr. Fagre.
 21 Page 16, your conclusion, the last
 22 paragraph -- this is the last paragraph of the
 23 report actually.
 24 You say, "Montana's ongoing actions to
 25 increase the utilization and development of fossil

1 before.
 2 But you have an appreciation for what
 3 actions there are in Montana that "increase the
 4 utilization and development of fossil fuels,"
 5 quote, and you said "not explicitly."
 6 A. Yes.
 7 Q. Am I correctly stating your testimony?
 8 A. Yes. I have no numbers or figures for
 9 percent increases in energy uses.
 10 Q. Okay.
 11 A. That's outside my expertise.
 12 Q. Okay. And then that sentence goes on to
 13 say that that increased utilization and
 14 development will only result in "more rapid
 15 melting of Montana's glaciers."
 16 Based on our discussion here this
 17 morning, I take it that you mean that Montana's
 18 activities as going into the mix of global
 19 activities that affect the glaciers, right?
 20 A. That's correct. I should have said
 21 "yes." Yes, that's correct.
 22 Q. Yeah, that's fine.
 23 And so, as I think we're -- we know from
 24 talking here, you -- you weren't asked and
 25 don't -- have not reported on -- specifically on

1 these activities regarding fossil fuels in Montana
2 alone and what the impact of that might be at
3 Glacier Park specifically?

4 A. I was not asked to do that.

5 Q. And I'm going to make a broad statement,
6 and just tell me if you disagree with it.

7 Overall, as a layperson, I kind of take
8 the -- your report to say that the glaciers in
9 Glacier Park have been receding for quite a while,
10 but the pace has increased in more recent years.

11 Is that a fair statement?

12 A. Yes.

13 Q. And I've -- I saw the photos in your
14 report that -- of, you know, the older photos of
15 glaciers compared to today, and I think those were
16 from the turn of the last century roughly,
17 correct?

18 A. Some of them were, yes.

19 Q. Has the decrease in the size of the
20 glaciers been ongoing since that time, since the
21 turn of the last century, or before that time, or
22 how would you fix when that became a trend, let's
23 say?

24 A. Okay. So the timeline is that at the end
25 of the Little Ice Age, approximately 850, and the

1 maintain at Glacier Park, versus Greenland, I
2 think, or that kind of a situation.

3 A. Uh-huh.

4 Q. And if I understand correctly, glaciers
5 in Glacier Park are dependent on snow pack and
6 retent cool-enough weather that they don't melt
7 every winter basically; is that fair?

8 A. Yes, that's correct.

9 Q. Roughly.

10 And then as opposed to, like, I don't
11 know, Antarctica or something, where the glaciers
12 are -- kind of feed themselves, in theory, with
13 keeping temperatures colder, and that -- they --
14 it's kind of a circular situation with those kinds
15 of glaciers; is that a correct statement?

16 A. Can I revise it a little?

17 Q. Yes, absolutely.

18 A. Yeah. So all ice on the planet that has
19 accumulated is a balance between incoming snow and
20 then how much melts during the warmer season.

21 So it's -- our case, you know, it's a
22 winter -- precip is snow, and summer temperatures
23 for small alpine glaciers like we have.

24 The differences in terms of climate
25 change impacts is that the small alpine glaciers

1 approximate start of industrial use of fuels at a
2 larger pace, the -- the glaciers were fairly
3 impressive, covered a lot of the park. There were
4 146 of them.

5 And the gradual warming that occurred
6 from there until about 1910 eliminated only the
7 tiniest ones. The large ones stayed healthy and
8 robust.

9 Moving forward, the pace at which the
10 retreat occurred, particularly since 1966, has
11 increased. And since 1966, the average loss has
12 been about 39 percent by area for the ice. And so
13 we are having more ice melting now than in the
14 earlier part of that time frame.

15 Q. Is there anything that you can point to
16 in 1966 or around that time frame that would be --
17 that you would say is contributing to that, or is
18 that just what the data shows?

19 A. It is what the data shows. 1966 was used
20 because that was the very first map using modern
21 technology or means for the park as a whole so
22 that we could have a picture of all the glaciers
23 at one time; that is the reason '66 was used.

24 Q. Okay. You talk in your report about the
25 type of glaciers, how they're formed and how they

1 are small, and so they are much more vulnerable to
2 smaller temperature increases. They don't have
3 the means, which I think you're pointing to, of
4 modifying the local or regional climate to extend
5 their existence.

6 Antarctica is so big and Greenland is so
7 big that they actually do cool the atmosphere
8 locally, which helps them retain their ice mass.

9 This delays melting, but when the heat
10 balance of the planet as a whole goes up, it's
11 just a matter of time.

12 The mountain glaciers have contributed
13 the most to sea level rise, for instance, just
14 because they are the first and most vulnerable
15 glaciers to feel the impacts of climate change.

16 Q. Other than Glacier Park, where in the --
17 where in the lower 48 states do we have glaciers
18 like that?

19 A. We have glaciers in almost every western
20 state, but some of them are quite tiny.

21 There's only one in Nevada in the
22 Wheeler Peak basin. There's small remnants in the
23 Sierras.

24 The bulk of the ice in the lower 48
25 states is in the Cascades, and they have hundreds

1 of very robust glaciers, and they have also
 2 started melting. But in one of the graphics in
 3 here, it shows that glacier during the same time
 4 frame had 66 percent loss and the Cascades had
 5 much less.

6 **Q. And how does that compare to the loss**
 7 **of -- I guess it would be -- well, glaciers in**
 8 **Antarctica or the polar regions and those kinds of**
 9 **glaciers, are they receding at the same pace as**
 10 **Glacier Park?**

11 A. No, they are quite different systems as
 12 ice sheets than small alpine glaciers.

13 It's not as extreme as apples to oranges,
 14 but they are situationally quite different. But
 15 they are showing signs of some retreat.

16 As stated earlier, it is harder to
 17 measure other than with satellites and so forth,
 18 and so the signs are there, but it's so vast, it
 19 takes a long time to react. It's a question of
 20 lag times.

21 Small glaciers have very short lag times,
 22 measured in years or decades. Some, like
 23 Antarctica, are probably on the centennial scale.

24 **Q. Do you know from your research when, for**
 25 **lack of a better word, the peak time would have**

1 **Q. Who is that?**

2 A. Cathy Whitlock.

3 **Q. Oh, okay.**

4 A. She's an expert on that.

5 **Q. And so there was a time, it seems, if I**
 6 **understand right, even when there was human**
 7 **occupation of the area, when there were no**
 8 **glaciers at Glacier Park?**

9 A. Yes. To the best of our knowledge, we
 10 don't -- there is a gap in time for which we don't
 11 have good enough data to make that statement.

12 But we can make the statement that 7,000
 13 years ago glaciers began forming when it started
 14 cooling, and they -- that represents their
 15 response to climate.

16 **Q. And when do we -- is there a convention**
 17 **or general agreement about a date for the start of**
 18 **anthropogenic impacts to the climate?**

19 A. For our area and western North America,
 20 the mid-century mark, around 1850, is used, but it
 21 is not a precise date.

22 It's one of those cases where you only
 23 knew it was happening in hindsight. So it was
 24 very, very gradual. If you were there in 1850,
 25 you wouldn't have known it.

1 **been for glaciers, for larger -- you know, for the**
 2 **size of the glaciers in Glacier Park?**

3 **Are we talking about the Ice Age or what?**

4 A. So if we talk post Ice Age, the peak for
 5 the glaciers in Glacier Park was around 1850, at
 6 the end of a cool period commonly known as the
 7 Little Ice Age.

8 They formed around 7,000 years ago, and
 9 they gained mass during that cold period. And
 10 then when that ended, they began to lose mass as
 11 temperatures returned to the long-term average.

12 And so since that time, other than very
 13 minor increases during a snowy period in the '60s,
 14 there has been a constant decline in the ice
 15 volume in the area that they cover.

16 **Q. And what was the ecology, I guess, like**
 17 **at Glacier Park before these glaciers were formed**
 18 **7,000 years ago?**

19 **What did it look like up there?**

20 A. So prior to 7,000 years ago, we had a
 21 warm period, and places like Marias Pass actually
 22 had ponderosa trees and grasslands. And this is
 23 based on palynology studies.

24 And one of your other expert witnesses
 25 can talk to you ad infinitum on that.

1 But with retrospective studies, we can
 2 say that that was the period when glaciers first
 3 began to show some retreat.

4 **Q. How do you determine that?**

5 **What's the evidence that allows you to**
 6 **make those conclusions?**

7 A. So when a glacier is growing and it's
 8 extending out, it takes a lot of debris from the
 9 mountains and forms moraines.

10 Moraines are basically giant gravel
 11 piles, although they're usually plastered with
 12 clay and they're hard to walk on. They can be
 13 very steep. And we've had some moraines as high
 14 as 180 feet in the park, so this is evidence for a
 15 robust glacial advance.

16 When the retreat comes, there's various
 17 ways -- you can use things like the tree-trim
 18 line, you can do dendrochronological studies,
 19 where you say, well, this tree was knocked down at
 20 this point, this tree did not get knocked down by
 21 the glacier, and so you -- using the tree rings
 22 between those two, as just as an example, you can
 23 find out when the glacier stopped advancing.

24 **Q. Basically it leaves a mark that you can**
 25 **measure?**

1 A. Yes, it's a well-developed area of
 2 science.
 3 Q. Okay. And I can skip all those.
 4 MR. STERMITZ: That's all I have. That's
 5 the shortest deposition I think I've ever had.
 6 MR. SULLIVAN: Can we take a short break?
 7 (Whereupon, a break was then taken.)
 8 MR. SULLIVAN: I have no questions.
 9 MR. STERMITZ: No further questions.
 10 (Whereupon, the deposition
 11 concluded at 9:53 a.m.)
 12 Signature Reserved
 13 * * * * *

1
 2 C E R T I F I C A T E
 3
 4 STATE OF MONTANA)
 5 COUNTY OF GALLATIN) : ss
 6 I, Kasey L. Fisher, Registered
 7 Professional Reporter and Notary Public for the
 8 State of Montana, residing in Bozeman, do hereby
 9 certify:
 10 That I was duly authorized to and did
 11 swear in the witness and report the deposition of
 12 DR. DANIEL FAGRE in the above-entitled cause; that
 13 the foregoing pages of this deposition constitute
 14 a true and accurate transcription of my stenotype
 15 notes of the testimony of said witness, all done
 16 to the best of my skill and ability; that the
 17 reading and signing of the deposition by the
 18 witness have been expressly reserved.
 19 I further certify that I am not an
 20 attorney nor counsel of any of the parties, nor a
 21 relative or employee of any attorney or counsel
 22 connected with the action, nor financially
 23 interested in the action.
 24 IN WITNESS WHEREOF, I have hereunto set
 25 my hand and affixed my notarial seal on this the
 1st day of November 2022.

1 DEPONENT'S CERTIFICATE
 2
 3 I, DR. DANIEL FAGRE, the deponent in the
 4 foregoing deposition, DO HEREBY CERTIFY, that I
 5 have read the foregoing - 29 - pages of
 6 typewritten material and that the same is, with
 7 any changes thereon made in ink on the corrections
 8 sheet, and signed by me a full, true and correct
 9 transcript of my oral deposition given at the time
 10 and place hereinbefore mentioned.
 11
 12 _____
 13 DR. DANIEL FAGRE
 14
 15
 16 Subscribed and sworn to before me this _____
 17 day of _____, 2022.
 18
 19
 20 PRINT NAME: _____
 21 Notary Public, State of Montana
 22 Residing at: _____
 23 My commission expires: _____
 24 KF - Rikki Held, et al. vs. The State of Montana,
 25 et al.

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EXHIBIT 5

*Rikki Held, et al. v
State of Montana, et al.*

*Anne Hedges
October 19, 2022*

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Min-U-Script® with Word Index

MONTANA FIRST JUDICIAL DISTRICT COURT
LEWIS AND CLARK COUNTY

RIKKI HELD, ET AL.,
Plaintiffs,
vs. Cause No. CDV 2020-307
STATE OF MONTANA, ET AL.,
Defendants.

VIDEOCONFERENCE DEPOSITION UPON
ORAL EXAMINATION OF
ANNE HEDGES

BE IT REMEMBERED, that the
deposition upon oral examination of ANNE HEDGES,
present at Fisher in Helena, Montana, appearing at
the instance of Defendants, was taken at the
offices of Charles Fisher Court Reporting,
800 Last Chance Gulch, Suite 101, Helena, Montana,
on Wednesday, October 19, 2022, beginning at the
hour of 9:00 a.m., pursuant to the Montana Rules
of Civil Procedure, before Kasey L. Fisher,
Registered Professional Reporter - Notary Public.

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I N D E X

EXAMINATION OF MS. ANNE HEDGES BY: PAGE:
Mr. Timothy Longfield, Esq.....5

E X H I B I T S

DEPOSITION EXHIBITS: PAGE:
Exhibit 12 EXHIBIT 4 Expert Report of Anne
Hedges.....7

1 WHEREUPON, the following proceedings were
2 had and testimony taken, to-wit:

3 * * * * *

4 ANNE HEDGES,
5 called as a witness herein, having been first duly
6 sworn, was examined and testified as follows:

7 EXAMINATION

8 BY MR. LONGFIELD:

9 Q. Well, good morning --

10 A. Good morning.

11 Q. -- Ms. Hedges, or Anne.

12 Is it okay if I call you Anne throughout
13 this deposition?

14 A. Absolutely.

15 Q. My name is Tim Longfield. I am one of
16 the attorneys for the State in this matter.

17 And before we start, I just want to go
18 over a few guidelines for this morning's
19 deposition, if that's all right.

20 So the goal of this deposition is for me
21 to ask you questions and to learn more about your
22 expert opinions and your role in this case.

23 I'm not going to be asking you about any
24 conversations that you had with your attorneys.

25 If you don't understand a question that I

1 Highwood Generating Station.

2 The next was, I believe, the
3 administrative order and consent regarding the
4 coal ash ponds at Colstrip.

5 And then two regarding the Rosebud mine,
6 and one regarding the Signal Peak mine.

7 Q. What was the most recent of those that
8 you just mentioned?

9 A. I believe it was the Rosebud mine area.

10 Q. Have you testified as an expert witness
11 in any case before?

12 A. I have not.

13 MR. LONGFIELD: At this time, Anne, I'd
14 like to introduce your expert report into the
15 record, and I believe it will be marked as
16 Exhibit 12.

17 (Whereupon, Exhibit No. 12 was
18 marked for purposes of
19 identification.)

20 BY MR. LONGFIELD:

21 Q. Anne, I'll give this to you.

22 Anne, is what I've just handed you a true
23 and accurate copy of the expert report you have
24 submitted in this case?

25 A. It appears so.

1 ask, please just let me know and I'll do my best
2 to rephrase it or make it more clear.

3 And, again, if you need a break, please
4 just ask; the answer will always be yes.

5 As a general rule, I'll try to take a
6 break every hour for around five to ten minutes.

7 Does that all sound good to you?

8 A. Sounds good.

9 Q. So first question is an easy one.

10 Can you please state and spell your name
11 for the record?

12 A. Anne Hedges; A-n-n-e, H-e-d-g-e-s.

13 Q. Thank you. What is your residential
14 address?

15 A. 1620 Ohio Avenue, Helena, Montana.

16 Q. And are you under the influence of any
17 substances that could influence your ability to
18 provide true and accurate testimony today?

19 A. No.

20 Q. Have you ever participated in a
21 deposition before?

22 A. Yes.

23 Q. Which cases?

24 A. A number of cases.

25 One -- the first one was regarding the

1 Q. Feel free to take a second and look it
2 over to make sure.

3 A. (Witness complied.)
4 Yes.

5 Q. Thank you. We'll talk about that report
6 in just a minute.

7 But before that, I want to ask you a
8 little bit about your preparation for today.

9 A. Uh-huh.

10 Q. What did you do to prepare for this
11 deposition?

12 A. I read my expert report. I re-reviewed
13 all of the attachments, the footnotes, supporting
14 documents, and I had a number of conversations
15 with my attorneys.

16 Q. Okay. Did you confer with anyone other
17 than your attorneys in preparation for this
18 deposition?

19 A. No.

20 Q. Did plaintiffs or your attorneys supply
21 you with any facts or data in advance of writing
22 your report?

23 A. In advance of writing my report, yes.

24 Q. What did they provide you with?

25 A. We had conversations regarding what my

1 experience was before we fully determined whether
2 I'd be appropriate for this, and then we traded
3 information regarding what would go into my expert
4 report.

5 So there were a number of things like the
6 1968 proceedings, to which I was not aware.

7 **Q. So can you tell me what you mean by the**
8 **1968 proceedings? I think you know -- or I think**
9 **I know, but...**

10 A. The 1968 proceedings were -- if you'll
11 give me a minute I will...

12 **Q. Of course.**

13 A. I believe it's -- you printed this out
14 differently. It appears different, so just give
15 me minute.

16 It was a proceeding organized by the
17 State of Montana, the Montana Department of
18 Health, called "A Montana Strategy for a Livable
19 Environment: Conference Proceedings,"
20 September 15th, 1969.

21 **Q. And this is something that you reference**
22 **in your report, right?**

23 A. Correct.

24 **Q. You were not aware about this event until**
25 **plaintiffs provided you with information about it?**

1 A. That's correct.

2 **Q. Okay. What other information contained**
3 **in your report were you not aware of until**
4 **plaintiffs provided you with information about it?**

5 A. I was not aware of the letter from
6 Forrest Anderson to -- you know, internal
7 correspondence within the state agencies.

8 I certainly was aware of the
9 constitutional convention and many issues
10 occurring during that period of time.

11 However, some of the internal
12 correspondence from governors to their staff I was
13 unaware of.

14 **Q. Okay. What other information did**
15 **plaintiffs provide you with in advance of writing**
16 **your report?**

17 A. Gosh, they provided me with some of the
18 Montana Environmental Quality Council early
19 proceedings.

20 **Q. And were you aware of those proceedings**
21 **before plaintiffs provided you with information**
22 **about them?**

23 A. I had heard about them, yes.

24 I mean, ultimately, I can say they
25 provided me with all of these documents, but many

1 of them I already had in my office or had reviewed
2 or participated in.

3 So I think we've probably exhausted what
4 I didn't have prior to that. But they did provide
5 all of these to me in a consolidated form.

6 **Q. And when you say "all of these"**
7 **documents, to what documents are you referring?**

8 A. All of the documents that are in
9 Attachment 1.

10 **Q. Okay. So all of those were documents**
11 **that plaintiffs provided to you before you wrote**
12 **your report?**

13 A. No, not before.

14 **MR. SULLIVAN:** Well, I would object to
15 the form because it was asked and answered but...

16 **BY MR. LONGFIELD:**

17 **Q. Thank you.**

18 **You may answer.**

19 A. Not before we wrote the report. It was
20 during the process of developing the report.

21 **Q. Okay. Okay. At what point in the**
22 **process did they provide you with these documents?**

23 A. That is a really good question. I'd say
24 throughout the process, so it was -- it varied.

25 Some of them were presented to me towards

1 the end of the process. Some of them I didn't
2 need because I didn't need them at all because I
3 already knew them. So it was varied; it was
4 throughout the process.

5 **Q. Okay. So not just at one point?**

6 A. No.

7 **Q. Yeah.**

8 A. No, it was -- some of them were trickled
9 in.

10 **Q. Did plaintiffs provide you with any**
11 **assumptions upon which they wanted you to base the**
12 **opinions contained in your expert report?**

13 A. No.

14 **Q. Were you the sole author of your report?**

15 A. No. I worked with the attorneys to
16 develop the report, but the report is all of my
17 opinion.

18 **Q. Okay. Tell me about that process.**

19 **To what extent did you write what is**
20 **contained within the report before you?**

21 A. I had conversations, numerous
22 conversations, with the attorneys prior to their
23 doing the first draft.

24 And then we did drafts back and forth. I
25 would edit, I would delete, I would add. So it

1 was a process.
 2 **Q. And you said "prior to their doing the**
 3 **first draft"?**
 4 **Did I hear that correctly?**
 5 A. Yes, they did the first draft.
 6 **Q. Who is "they"?**
 7 A. I'm sorry. My attorneys.
 8 So Nate Bellinger, Roger Sullivan,
 9 Melissa Hornbein.
 10 **Q. Provided you with the first draft of the**
 11 **report?**
 12 A. Yes. After many conversations with them,
 13 yes.
 14 **Q. Okay. To what extent does that first**
 15 **draft overlap with the report sitting in front of**
 16 **you today?**
 17 A. Similar, but not exactly the same. I
 18 mean, this is an iterative process to develop
 19 something like this.
 20 **Q. Did you disagree with any of the opinions**
 21 **contained in the first draft of that report?**
 22 A. Oh, gosh, I don't recall.
 23 **Q. Do you recall to what extent the opinions**
 24 **in the first draft of that report differed from**
 25 **the opinions in this, the final draft that sits in**

1 **front of you today?**
 2 A. Um, I -- I don't recall. However, I
 3 believe they were very similar because of our
 4 numerous conversations prior to the first draft
 5 being provided to me.
 6 **Q. Okay. In forming your opinions in this**
 7 **report, did you rely on the opinions of anyone or**
 8 **anything not cited or contained within the report?**
 9 A. My history in this arena, I worked for
 10 MEIC for nearly 30 years, and my lived experience,
 11 my conversations with delegates of the
 12 constitution, for example, I'm not sure how you
 13 divorce yourself from history that you have lived
 14 in the development of something like this.
 15 **Q. Okay. What delegates from the**
 16 **constitutional convention have you spoken with?**
 17 A. I've spoken with Arlyne Reichert, with
 18 Mae Nan Ellingson, with -- I'm blanking on his
 19 name -- Dahood.
 20 **Q. Uh-huh.**
 21 A. If you gave me a list of delegates, I
 22 could tell you the ones I've talked to. But over
 23 30 years, I've talked to a lot of delegates.
 24 **Q. Are you personal friends with any of the**
 25 **delegates that you just mentioned, with**

1 **Arlyne Reichert, with Mae Nan Ellingson,**
 2 **Wade Dahood?**
 3 A. I wouldn't say we're personal friends,
 4 no.
 5 **Q. But you did speak with them in**
 6 **preparation for drafting this report?**
 7 A. No. Over time.
 8 **Q. Over time. Okay.**
 9 **Are all the studies and research that you**
 10 **used as a basis for your expert opinions contained**
 11 **within the report?**
 12 A. Yes. I mean, I think that that's a
 13 difficult question.
 14 **Q. Why is it difficult?**
 15 A. This expert report is -- it contains all
 16 the information that it needs to contain to
 17 support the opinions that I have -- I have
 18 concluded; however, all of it is colored by my
 19 long history in environmental policy in Montana.
 20 **Q. Okay. I guess, are there any studies or**
 21 **research that colored your opinions, that you can**
 22 **think of today, that are not cited in your report?**
 23 A. I would say every IPCC report that has
 24 come out since 1990. And I don't believe my
 25 reports -- maybe it does -- cites the final

1 documents and all the appendices of the
 2 Governor Schweitzer effort and the Bullock effort.
 3 **Q. And when you say Governor Schweitzer**
 4 **effort and Governor Bullock effort, can you**
 5 **describe more specifically what you mean?**
 6 A. Yeah. They had -- as my report points
 7 out, both governors appointed an advisory
 8 committee to develop a plan to address the climate
 9 crisis.
 10 **Q. Okay. Have you ever been the subject of**
 11 **an ethical complaint in your professional career?**
 12 A. No.
 13 **Q. And what is your current job?**
 14 A. I am the co-director and the director of
 15 policy and legislative affairs for the Montana
 16 Environmental Information Center.
 17 **Q. And throughout this deposition, is it all**
 18 **right if we refer to the Montana Environmental**
 19 **Information Center as MEIC?**
 20 A. Please do.
 21 **Q. For both of our sanity.**
 22 A. Yes.
 23 **Q. Thank you.**
 24 **What does your work as co-director at**
 25 **MEIC entail?**

1 A. Managing the program staff. Working with
2 the -- the director, the executive director, to
3 fulfill our budget; to oversee all of our
4 legislative lobbying activities; oversee our
5 litigation; oversee our -- the direction that the
6 organization takes regarding policy at the
7 administrative level.

8 You know, it's -- it is working with all
9 three branches of government to try to effectuate
10 change on behalf of the environment.

11 **Q. For how long have you been in that role?**

12 A. Since May of 1993 -- well, I'm sorry. In
13 the role of -- that I'm in right now --

14 **Q. Of co-director.**

15 A. -- co-director, since -- the years run
16 together, but I believe it was January 1st of
17 2020.

18 **Q. Okay. Okay. Does part of your -- is one
19 of your responsibilities as co-director of MEIC to
20 obtain funding for MEIC?**

21 A. No. I'm -- that is not in my job
22 description, no.

23 **Q. Do you oversee anyone whose job that is?**

24 A. No.

25 **Q. Okay. So no part of your role involves**

1 We're a very small organization, so we
2 all pitch in whenever we need to.

3 **Q. Why did you decide to become a lobbyist?**

4 A. Because I learned that this was a
5 profession that existed that I could effectuate
6 change.

7 **Q. When did you learn that?**

8 A. 1984.

9 **Q. And tell me about that.**

10 A. I received a fundraising letter from an
11 organization similar to MEIC, in California, and I
12 had no idea that type of organization existed.

13 I wrote them a letter. I asked if I
14 could volunteer for them. They let me volunteer,
15 and I ended up working for them for four years.

16 **Q. What organization is that?**

17 A. Called the Planning and Conservation
18 League.

19 **Q. Okay. Do you remember when you first
20 became concerned about environmental issues?**

21 A. In my -- well, in high school.

22 **Q. What first led you to become concerned
23 about these issues?**

24 A. Concern for humans, concern for wild
25 places, concern for beautiful places.

1 **securing funding for the organization?**

2 A. No. That is the job of the executive
3 director.

4 **Q. Do you oversee the executive director?**

5 A. No. We're co-directors. She takes care
6 of that side of the equation. I take care of the
7 policy side.

8 **Q. Understood. Understood.**

9 **What does your work as director of policy
10 and legislative affairs entail?**

11 A. That's what I just described.

12 **Q. Okay. So co-director and director of
13 policy and legislative affairs is all one title;
14 is that correct?**

15 A. Yes, yes.

16 **Q. Okay. Okay. When did you first begin
17 working for MEIC?**

18 A. May 1993.

19 **Q. What was your role at that time?**

20 A. Issue specialist.

21 **Q. What does that mean?**

22 A. Great question. It was -- I was intended
23 to work on air pollution issues, land use issues,
24 general environmental policy issues, particularly
25 MEPA, always, to lobby in Montana legislature.

1 **Q. And just out of curiosity, where did you
2 grow up?**

3 A. I grew up in Sacramento.

4 **Q. Sacramento. So you have a master's of
5 law degree, correct?**

6 A. Correct.

7 **Q. Can you please tell me about the course
8 of study that you engaged in to earn your master's
9 of law degree?**

10 A. Sure. In the master's program at Vermont
11 Law School, you take a full year of classes going
12 through the summer.

13 I took water law, tort law, air pollution
14 law, land use law. I'd have to go back and look
15 at my transcripts.

16 But basically I took all the interesting
17 classes at law school and -- yeah, and graduated.

18 **Q. Okay. Do you have a juris doctorate
19 degree?**

20 A. I do not.

21 **Q. Why didn't you want to go to law school?**

22 A. I don't want to be a lawyer.

23 **Q. Why not?**

24 A. Enough said. This is not where I want to
25 be. I want to work -- I always wanted to work in

1 the policy arena.
 2 **Q. In the policy arena, okay.**
 3 **Would you say that you have any legal**
 4 **training?**
 5 A. Yes.
 6 **Q. Can you describe to me the legal training**
 7 **that you have?**
 8 A. I think my time in law school is
 9 certainly legal training. And then MEIC engages
 10 in litigation on a regular basis, and I oversee
 11 our litigation.
 12 **Q. Okay. You're not licensed to practice**
 13 **law in any state?**
 14 A. I am not.
 15 **Q. Can you describe to me what the means for**
 16 **you to oversee litigation for MEIC?**
 17 A. We have to review cases. We have to
 18 review the administrative record that we have
 19 before us.
 20 We hire attorneys. We review the
 21 attorneys' work; we help the attorneys draft; we
 22 edit their work; we help them determine what the
 23 right strategy is for moving forward.
 24 I mean, decide what to do when you win,
 25 decide what to do when you lose.

1 **Q. Do you think you know enough at this**
 2 **point that, were you licensed, you probably could**
 3 **be litigating these cases on your own?**
 4 A. No. I would not want to. I wouldn't
 5 even contemplate doing that.
 6 **Q. Okay. Are you a scientist?**
 7 A. I have a Bachelor of Science from
 8 University of California Davis.
 9 **Q. And in what area of study?**
 10 A. Environmental policy analysis and
 11 planning.
 12 **Q. Is that a scientific field?**
 13 A. Yeah, at Davis it is.
 14 **Q. Did you take any physics classes as part**
 15 **of that?**
 16 A. I did.
 17 **Q. What physics classes?**
 18 A. Physics. I don't even recall the name of
 19 it, but it's physics.
 20 **Q. How many physics classes did you take?**
 21 A. One, thank God.
 22 **Q. Yeah. And do you remember in what year**
 23 **in your course of graduate study you took that**
 24 **physics class?**
 25 A. No. So probably 1985, 1986; someplace in

1 there.
 2 **Q. Do you remember whether that was part of**
 3 **your major?**
 4 A. Yes.
 5 **Q. It was part of your major?**
 6 A. It was.
 7 **Q. Okay. Did you attach your CV to your**
 8 **expert report?**
 9 A. No, I did not, I don't believe.
 10 **Q. Why not?**
 11 A. Because I don't really have a CV. I've
 12 been working at one place for 30-some years. I
 13 don't publish articles. I'm not looking for a new
 14 job. I am not ambitious in the way of I want to
 15 find something else to do, so I've never authored.
 16 **Q. Sure. Sure. And maybe to hone in on one**
 17 **of those points, have you ever published any**
 18 **peer-reviewed article in an academic or scientific**
 19 **journal?**
 20 A. I have not.
 21 **Q. Have you ever published any written work?**
 22 A. Published in a peer-reviewed scientific
 23 journal, no.
 24 **Q. What about just any written work at all?**
 25 **Have you published any written work?**

1 A. Could you clarify what you mean by
 2 "published"?
 3 **Q. Sure. Maybe we can do some examples.**
 4 **Have you written any op-eds in newspapers**
 5 **in Montana?**
 6 A. Yes.
 7 **Q. Have you written any articles in**
 8 **magazines?**
 9 A. I am not -- I don't recall.
 10 **Q. Okay. Have you written any chapters in**
 11 **books?**
 12 A. No. I write for our organization. I
 13 represent our organization, so I write our
 14 newsletter and I write our fact sheets and our --
 15 you know, whatever documents we want to provide.
 16 We are an education center, so we like to
 17 provide the public with information. We distill
 18 information that the public can understand, and I
 19 do that on a regular basis.
 20 **Q. Okay. Can you tell me what documents**
 21 **you've written that have been released to the**
 22 **public?**
 23 A. Everything I write is released to the
 24 public. As far as in our newsletter -- I
 25 shouldn't say everything, of course, because some

1 of it is legal.

2 But the -- you know, anything our
3 organization produces is -- you know, that I have
4 written would fall under that category, as far as
5 I'm concerned.

6 **Q. Tell me about what you've written during
7 this calendar year, so the year 2022, that has
8 been released to the public.**

9 A. I have written about the Public Service
10 Commission and various dockets before the Public
11 Service Commission.

12 I have written about coal mining at the
13 various mines in the state and what's going on in
14 the administrative or the legal arena.

15 I have written about the Colstrip power
16 plant.

17 I have written about methane emissions.

18 I have to go back and look through
19 newsletters.

20 But I usually write between three and six
21 articles per issue of our newsletter.

22 **Q. Okay. So of all those documents that you
23 just referenced, were those all articles for
24 MEIC's newsletter?**

25 A. Yes.

1 **Q. And can you please tell me specifically
2 and as thoroughly as possible what opinions you
3 have reached in your expert report?**

4 A. I believe my expert report should speak
5 for itself, but I think your best summary of my
6 opinions can be found on the final page -- pages,
7 page 29, Summary and Conclusions.

8 **Q. Okay. And can you describe to me what
9 those opinions are?**

10 A. That "Montana has known since the 1960s
11 that burning fossil fuels causes climate change, a
12 fact that has been reaffirmed and confirmed by the
13 State of Montana multiple times in the decades
14 since.

15 "Nevertheless, defendants denied such
16 basic facts about science and climate change in
17 their answer to plaintiff's complaint in this
18 case."

19 "The legislature's job is to set state
20 policy consistent with the constitution, which the
21 executive branch is expected to follow and
22 implement. Agencies are expected to follow the
23 directives of the legislature, and when they do
24 not, the legislature acts with real consequences.
25 For example, the legislature can cut funding to

1 agencies."

2 "The State of Montana, by and through the
3 office of the governor and state agencies, has
4 been a substantial factor in controlling the
5 composition of Montana's energy system since at
6 least 1993, in large part through its energy
7 policies and its permitting."

8 And "there has been a long-standing pact
9 practice by the State of Montana to promote fossil
10 fuels as the predominant energy source in the
11 state. This is evidenced by defendant's
12 long-standing and ongoing practice of approving
13 all permits for fossil fuel projects and is
14 reflected in the current state energy policy,
15 which plaintiffs challenge and which is a
16 substantial factor in perpetuating Montana's
17 fossil fuel energy system which produces harmful
18 greenhouse gases and contributes to the climate
19 crisis."

20 "During the 2000s, there was a threat to
21 the long-term dominance of Montana's fossil fuel
22 energy system as climate change and greenhouse gas
23 emissions were becoming a growing concern in
24 Montana. Consequently, a swift backlash followed,
25 which led to the" 19- -- sorry -- "the 2011

1 amendments to MEPA and the state energy policy."

2 "The 2011 amendments to MEPA and the
3 state energy policy were a clear directive from
4 the legislature to state agencies that fossil
5 fuels were to remain a central and dominant part
6 of Montana's energy sector and that no fossil fuel
7 project should be delayed or blocked because of
8 their impact on climate change, which could"
9 not -- "which could no longer be considered.

10 These 2011 amendments are a substantial factor in
11 perpetuating Montana's fossil fuel energy system,
12 which produces harmful greenhouse gases and
13 contributes to the climate crisis."

14 "Defendants have a long-standing track
15 record of working closely with the fossil fuel
16 industry to support fossil fuel extraction,
17 transport and burning. As far as I know,
18 defendant agencies have never denied a permit
19 sought by a fossil fuel company."

20 "Defendants' long-standing policy of
21 favoring fossil fuels shows no signs of abating
22 and will remain a substantial factor in
23 perpetuating Montana's fossil fuel energy system,
24 which produces harmful greenhouse gases and
25 contributes to the climate crisis, and which will

1 persist absent judicial intervention."
 2 **Q. Thank you.**
 3 **Is the list of opinions you just read a**
 4 **complete and exhaustive summary of the opinions**
 5 **contained within your expert report?**
 6 **A. I believe so, yes.**
 7 **Q. Does the list of opinions that you just**
 8 **read identically mirror the opinions that were**
 9 **given to you in the first draft of the report**
 10 **prepared by your attorneys?**
 11 **A. I don't believe so, no.**
 12 **Q. Which opinions differ from that draft?**
 13 **A. I don't recall.**
 14 **Q. Are all of those opinions your opinions?**
 15 **A. Yes.**
 16 **Q. What makes you certain that that's the**
 17 **case, given that some of the opinions in the first**
 18 **draft of the report provided to you by your**
 19 **attorneys match the opinions that you just read?**
 20 **A. Because we had conversations, and I don't**
 21 **sign my name to something that I don't believe in.**
 22 **Q. Okay. Thank you.**
 23 **And can you turn to page 3 of your**
 24 **report?**
 25 **Thank you.**

1 **So I'm looking at the middle of page 3,**
 2 **under the heading, Bases and Methodology.**
 3 **A. Uh-huh.**
 4 **Q. And I want to ask you about the statement**
 5 **that, quote, "My opinions are stated to a**
 6 **reasonable degree of certainty and the contents of**
 7 **this report are based on my training, personal**
 8 **knowledge and experiences working on policy and**
 9 **legislative issues in Montana, with a focus on**
 10 **climate change, fossil fuels, clean air, clean**
 11 **water and energy, as well as my extensive and**
 12 **ongoing review of relevant documents, including**
 13 **but not limited to," end quote.**
 14 **And I want to go through the**
 15 **subparagraphs listed below.**
 16 **A. Okay.**
 17 **Q. Okay. So I'll start with subparagraph A.**
 18 **Subparagraph A says that you reviewed,**
 19 **quote, "Publicly available records from federal**
 20 **and state agencies, including records from the**
 21 **Montana Department of Environmental Quality and**
 22 **the Montana Department of Natural Resources and**
 23 **Conservation," end quote.**
 24 **My question is: How did you decide which**
 25 **publicly available records from these agencies you**

1 **were going to review in drafting your expert**
 2 **report?**
 3 **A. Let me read that. I have been reviewing**
 4 **publicly available records from federal and state**
 5 **agencies for nearly 30 years.**
 6 **How do I decide which ones to review?**
 7 **Based upon the threat, that we perceive**
 8 **as an organization, they pose to our environmental**
 9 **life support system.**
 10 **Q. Is that the method that you used for**
 11 **selecting documents that you review prior to**
 12 **drafting this report?**
 13 **A. Yes.**
 14 **Q. Thank you.**
 15 **Let's do subparagraph B, which says you**
 16 **reviewed, quote, "Environmental assessments and**
 17 **environmental impact statements prepared by**
 18 **defendant agencies," end quote.**
 19 **How did you decide what environmental**
 20 **assessments and what environmental impact**
 21 **statements to review in preparation for drafting**
 22 **this report?**
 23 **A. In preparation for drafting this**
 24 **report -- this is broader than that, so this is**
 25 **not just in preparation. I reviewed all these in**

1 **developing my opinion.**
 2 **But part of this is I have been reviewing**
 3 **environmental assessments and environmental impact**
 4 **statements for 20-some years, and so all of those**
 5 **have added to my expertise, my level of knowledge.**
 6 **And the ones I review are those that we**
 7 **believe are going to cause harm to environmental**
 8 **life support system in Montana.**
 9 **Q. When you say the ones that we review, do**
 10 **you mean review before drafting your report, or do**
 11 **you mean review in your role at MEIC?**
 12 **A. That I have reviewed over decades.**
 13 **Q. Okay. Did you specifically refresh your**
 14 **memory on any of these environmental assessments**
 15 **or environmental impact statements before you**
 16 **drafted this report, for the purpose of drafting**
 17 **this report?**
 18 **A. For the purpose of drafting this report?**
 19 **No, not per se, no.**
 20 **I mean, I review environmental**
 21 **assessments and environmental impact statements**
 22 **all the time, so I don't need to refresh my**
 23 **memory.**
 24 **They're -- many of them are very, very**
 25 **fresh or I am very familiar with them.**

1 **Q. Which ones are those?**

2 A. Those are ones regarding mines, for
3 example, that we are currently in litigation over.
4 Those are probably -- you know, ones having to do
5 with gravel mining.

6 Not all of them have to do with what
7 we're talking about here today, but I review
8 environmental impact statements and EISs when
9 they're released by state and federal agencies
10 when they particularly could have an impact on the
11 climate crisis.

12 **Q. Would you agree with me that
13 environmental impact statements contain a lot of
14 specific data?**

15 A. Sometimes.

16 **Q. Do you remember the specific data from
17 the environmental impact statements that you've
18 reviewed over the course of, you know, your
19 decades-long career?**

20 A. I definitely recall the gist of some of
21 the bigger ones, definitely.

22 **Q. Okay. Let's do subparagraph C.
23 So subparagraph C says, quote --
24 strike -- excuse me.**

25 You reviewed, quote, "Montana's

1 **Q. Is it fair to say that when you drafted
2 this report, and when you prepared to draft this
3 report, you didn't specifically review any
4 environmental rules, statutes or permits issued by
5 state agencies for the purpose of drafting the
6 report?**

7 A. I have been reviewing those rules
8 forever, is what it feels like.

9 And so it says my analyses and opinions
10 are based on 29 years of experience in Montana.
11 So it is over the course of that 29 years of
12 experience in which I have reviewed rules, you
13 know, throughout that history, that has caused me
14 to have knowledge of those rules and be able to
15 recall them and to rely on them.

16 **Q. It says that you are conducting a, quote,
17 "extensive and ongoing review of relevant
18 documents," end quote.**

19 A. Uh-huh.

20 **Q. So to what extent is that review ongoing?
21 What does that mean?**

22 A. I am always reading rules and what
23 agencies are required to do. I am engaged in, you
24 know, rule-making proceedings at the agency, so it
25 is a constant.

1 **environmental rules, statutes and permits issued
2 by defendant agencies for specific projects," end
3 quote.**

4 **What environmental rules, statutes and
5 permits issued by defendant agencies did you
6 review in advance of drafting this report?**

7 A. I review DEQ rules on a regular basis,
8 air quality rules, mining rules.

9 This isn't the federal, but I also review
10 federal rules.

11 Water quality rules.

12 That is what we do. We look at agency
13 rules and apply them to specific situations. So
14 we are both involved in the -- when agencies
15 develop new rules or when agencies apply those
16 rules to existing situations, like permitting of a
17 facility.

18 **Q. So what you just said about "we review,"
19 "we" -- you know --**

20 A. Uh-huh.

21 **Q. -- look to these, are you talking about
22 your role at MEIC or are you talking about your
23 work in preparing and drafting this expert report?**

24 A. I -- my role at MEIC, which is what has
25 caused me to be an expert in this arena.

1 There is no part of my job in which I am
2 not responsible for knowing what the rules of the
3 State of Montana are in the various arenas in
4 which we work.

5 **Q. Subparagraph D says you reviewed, quote,
6 "The legislative history of MEPA and Montana's
7 state energy policy, and amendments thereto," end
8 quote.**

9 **When was the last time you reviewed the
10 legislative history of MEPA?**

11 A. Probably around 2011, when we -- there
12 were a series of proposals in the legislature to
13 change MEPA starting in the late '90s, but they
14 got very serious in 2011.

15 And so reviewing the history of MEPA at
16 that time was required so we could understand what
17 was being lost.

18 **Q. Have you looked at the legislative
19 history of the 2011 MEPA amendments since 2011?**

20 A. Yeah. I've looked at them for
21 preparation for this deposition.

22 **Q. Okay. So between 2011 and your
23 preparation for this deposition, did you look at
24 the legislative history of MEPA at all?**

25 A. I don't recall. I don't recall. Yes, of

1 course, I have. Yeah, I have, because we've had
2 to fight these MEPA fights in court, and we've had
3 to look at how the law changed and what the -- you
4 know, what the law used to say and what the law
5 said afterwards.

6 So, yes, I have, over that period of
7 time.

8 **Q. Okay. And when your report says that you**
9 **have reviewed the legislative history of MEPA, can**
10 **you explain to me what it means for you to review**
11 **legislative history?**

12 A. Reviewing legislative history generally
13 means looking at the law, and because I am a
14 verbal communicator talking to people who are
15 involved, people like George Darrow, who drafted
16 MEPA originally, and having those conversations
17 with him about what the purpose of MEPA was.

18 **Q. Okay. Anything else?**

19 A. It's reviewing documents from the
20 historical society over time to see what -- and
21 now we can find all of it online. It's going
22 through the legislative history at -- for when
23 bills change, to figure out why, to listen to
24 hearings, to read the notes, the minutes, which
25 they don't keep anymore, but they used to.

1 **Q. When was the last time you looked at the**
2 **legislative history of the state energy policy?**

3 A. Well, I reviewed it for the preparation
4 of this deposition, but it was probably, you know,
5 back when they were -- in 2009 when they were
6 first proposing to make changes, and going
7 through, you know, the whole EQC process to
8 determine what those changes would look like, and
9 then in 2011, arguing against those -- the changes
10 that they proposed.

11 That's -- you know, that is when we
12 learned the legislative history of the energy
13 policy in the state.

14 **Q. So between 2011 and the time at which you**
15 **prepared for this deposition, did you review the**
16 **legislative history of the state energy policy at**
17 **any time?**

18 A. Probably not.

19 **Q. Okay. We'll do subparagraph E. It says**
20 **that you reviewed, quote, "Historical documents,**
21 **including Montana's constitutional convention**
22 **history and documents about Montana's climate and**
23 **energy planning and the impacts of fossil fuels,"**
24 **end quote.**

25 A. Uh-huh.

1 **Q. Can you describe to me what historical**
2 **documents you reviewed and based your opinions on**
3 **in this report?**

4 A. The documents contained in my report that
5 are in Exhibit 1.

6 **Q. Uh-huh.**

7 A. Yeah, those for sure.

8 **Q. And, I'm sorry, can I just clarify that?**

9 **Of the documents cited in, you know,**
10 **Exhibit 1, which ones are historical documents?**
11 **I'm just trying to understand what you're**
12 **referring to there.**

13 A. Oh, well, the historical documents, for
14 the purposes of this deposition, are the
15 constitutional convention documents that are
16 outlined in Exhibit 1; the proceedings of the
17 "Montana Strategy for Livable Environment"
18 Conference Proceedings"; the letter from
19 Governor Forrest Anderson regarding his concern
20 about the environmental life support system and
21 the need to do something about environmental
22 protection; the letter of director Gary Wicks to
23 the Federal Power Commission regarding its
24 proposal; and the letter from Governor Tom Judge
25 to John Anderson regarding his concern about coal

1 impacts in the state of Montana; the Environmental
2 Quality Council's environmental policy study from
3 1975. And I think that's -- I mean, that's the
4 longer-term history.

5 **Q. Okay. How did you decide what historical**
6 **documents to review in preparing for this report**
7 **and forming your opinions contained in this**
8 **report?**

9 A. I discussed it with my attorneys.

10 **Q. Did they tell you what historical**
11 **documents to review?**

12 A. They provided me with some historical
13 documents that I wasn't aware of.

14 **Q. Did you look at any historical documents**
15 **other than the ones your attorneys provided you**
16 **with?**

17 A. For the purposes of this, no. I mean,
18 those are the ones that I focused on because those
19 are the ones that seem to have the most -- the
20 most -- the most -- that were the most useful.

21 **Q. What do you mean by "useful"?**

22 A. In helping to provide context for where
23 Montana was during the '70s, late '60s and the
24 '70s, with trying to get a handle on its crisis,
25 the environmental crisis that it was facing.

1 You know, I was very aware of the air
2 quality issues in Missoula. I was very aware of
3 the Columbia Falls aluminium plants, air pollution
4 and fluoride problems. Certainly everyone was
5 aware of what happened in Butte.

6 So while -- I knew that context, I knew
7 Tom Judge's son who worked for MEIC for many, many
8 years. And so I knew a lot of that context
9 already.

10 So they provided me with some of the
11 documents that reinforced what I already knew.

12 **Q. Is it fair to say that you didn't rely on
13 any historical documents, other than the ones your
14 attorneys provided to you, in forming your
15 opinions in this expert report?**

16 A. Could you rephrase that, or could you
17 phrase that again or say that again?

18 **Q. Sure.**

19 **Did you base your opinions in this report
20 on any historical documents, other than the ones
21 that your attorneys provided to you?**

22 A. Yes. That's the context by which I am --
23 you know, this is environmental history in
24 Montana, and so I have reviewed documents from
25 that era, things like permit applications and

1 debates over the Colstrip plant and debates over
2 the formation of the laws in both Montana and the
3 country.

4 You know, I knew quite a bit about the
5 Major Facility Siting Act and the process that
6 went into developing the Major Facility Siting Act
7 and Tom Judge's deep commitment to that law that
8 got it over time.

9 So the context by which these documents
10 existed, I was already very, very familiar with.

11 **Q. Okay. When you say "these documents,"
12 what documents are you referring to?**

13 A. The ones that are in my report.

14 **Q. Okay. The ones that are in your report
15 were all provided to you by your attorneys,
16 correct?**

17 A. Correct.

18 **Q. Okay. Let's go to subparagraph --**

19 A. Except for the constitutional convention.
20 That -- that's -- was not -- that was something we
21 already had in our office and that I had already
22 looked at.

23 **Q. You had already looked at it when?**

24 A. Oh, gosh, over the years. MEIC has been
25 suing under the constitution since -- well, we won

1 in 1999, so prior to that.

2 **Q. Was it your idea to look at the
3 transcripts of the constitutional convention in
4 preparing for and drafting this report?**

5 A. I don't recall. I can't imagine drafting
6 a report like this without referring to the
7 constitutional convention; it's critical.

8 So whose idea it was, I don't recall.
9 But of course it would be included.

10 **Q. Okay. But you don't recall whether it
11 was your idea to look at the constitutional
12 convention before drafting this report?**

13 A. I can't imagine that if it was their idea
14 it wasn't also my idea, so I think it was a
15 universal agreement that of course the
16 constitutional convention would play a part in
17 this report.

18 **Q. Okay. We'll do subparagraph F. It says
19 you reviewed, quote, "Scientific studies on fossil
20 fuel exploration, development, extraction and
21 infrastructure and the amount of GHG emissions
22 that resulted therefrom," end quote.**

23 A. Uh-huh.

24 **Q. What scientific studies did you review
25 and base your opinions on in this report?**

1 A. It's a history of reviewing scientific
2 studies. MEIC works at the nexus of law, politics
3 and science, and so we review scientific studies
4 constantly.

5 We look at peer-reviewed journal
6 articles, things that talk about fossil fuels and
7 what the fossil fuel impacts to our climate are
8 and how we must reduce them if we want to achieve
9 a livable environment moving forward and into the
10 future.

11 What scientific studies? Far too many to
12 even list. I mean, that's what we do.

13 So, you know, IPCC reports, for example,
14 are just one of those things, and all the various
15 IPCC reports, all their working groups, I review
16 those.

17 We look at journal articles from the
18 journal of science -- or the science -- it's the
19 journal of science -- I think it's just called
20 Science though -- nature.

21 You know, there are so many journal
22 articles that inform how we should go about
23 solving the climate crisis.

24 Specifics, that's -- you know, that is
25 just a part of my job.

1 The -- you know, the Montana climate
2 assessment that Cathy Whitlock and Dr. Running
3 did, that certainly was a really important
4 component of analyzing how we should proceed, how
5 we should go forward.

6 We do a lot of research, looking at the
7 Energy Information Administration, constantly
8 looking at energy information on the
9 administration's website.

10 At the Montana -- or not the -- sorry,
11 the MSHA, the Mining Safety and Health
12 Administration website, super important, tons of
13 data there.

14 EPA and the data it puts on its website
15 that is available regarding greenhouse gases,
16 regarding the cause of various types of greenhouse
17 gases being placed in the atmosphere, the impacts
18 that result.

19 And then of course there's a whole body
20 of literature on what to do to minimize those
21 impacts.

22 So all -- you know, there's so many
23 journal articles, so many articles generally about
24 the climate crisis and how you solve it that I
25 have reviewed. I'm not even sure where to start.

1 **Q. Let's try a list. Which of those journal**
2 **articles did you review in preparation for**
3 **drafting this report?**

4 A. Did I review in preparation for drafting
5 this report? I didn't review any -- for the
6 purpose of drafting this report --

7 **Q. Uh-huh.**

8 A. -- I didn't review any journal articles.
9 I already had reviewed them. I knew them. They
10 were already a part of the body of work that I
11 engage in.

12 **Q. Okay. Do you see in the first sentence**
13 **under Bases and Methodology, it says, quote, "I**
14 **reviewed documents, data and studies in developing**
15 **my opinions," end quote?**

16 A. Yes.

17 **Q. What studies did you review in developing**
18 **your opinions?**

19 A. What studies? The IPCC reports, the
20 Montana Climate Action Plan, the Montana
21 Renewables -- renewables action plan or
22 development plan, it's MRDAP, the -- like the
23 Steve Running's studies over time. He's done a
24 lot of studies on the science of climate change
25 and particularly in Montana.

1 I reviewed scientific literature on
2 impacts of climate change on agriculture in
3 Montana specifically.

4 I mean, I just don't recall all of the
5 things I've gone through. But all of these are
6 things that I reviewed, they're studies that I
7 reviewed over time that went into developing my
8 opinions.

9 **Q. And so when you're providing me with**
10 **these lists of studies or documents or articles,**
11 **is it fair to say that these are things that**
12 **you've reviewed over the course of your career**
13 **that form the sort of the base of knowledge that**
14 **you relied on in drafting and forming your**
15 **opinions in this report, or did you specifically**
16 **review the articles and studies you've been**
17 **referring to as a basis for forming your opinions**
18 **in this report?**

19 **MR. SULLIVAN:** I'm going to object to the
20 form of the question. It's vague, ambiguous and
21 confusing.

22 **BY MR. LONGFIELD:**

23 **Q. You may answer, if you understand.**

24 A. I don't.

25 **Q. Yeah. What I'm trying to ask you is --**

1 you say in the first sentence under Bases and
2 Methodology that you reviewed documents, data and
3 studies in developing your opinions.

4 A. Uh-huh.

5 **Q. I'm trying to ask you if you reviewed any**
6 **documents, data and studies specifically for the**
7 **purposes of your -- of developing the opinions**
8 **that you are putting forth as expert testimony in**
9 **this case, or whether you're relying on a general**
10 **base of knowledge that you formed over the course**
11 **of your career?**

12 **MR. SULLIVAN:** Objection. Form. Asked
13 and answered.

14 **BY MR. LONGFIELD:**

15 **Q. Go ahead and answer, if you understand.**

16 A. I -- I'm not entirely certain. I mean,
17 in developing my opinions?

18 My opinions were developed over the
19 course of my career. I have provided you with
20 those documents that were useful for developing my
21 expert report in this case, but both of them
22 created this document. I mean, both my expertise
23 over the course of time and all of the knowledge
24 that I've gained in my course of work, as well as
25 the documents that are outlined here, which some

1 are -- you know, there's a lot of overlap there --
2 were used in developing my opinions.

3 **Q. Okay. So it's fair to say though, then,**
4 **that there are documents, studies, data that are**
5 **not cited in your report that formed the basis for**
6 **some of the opinions contained in the report,**
7 **correct?**

8 **MR. SULLIVAN:** Objection. Form. Asked
9 and answered.

10 **THE WITNESS:** Yes. I -- as an expert, I
11 have a long career of learning about these things
12 and using that information as I move forward. You
13 can't divorce yourself from what you already know.

14 **BY MR. LONGFIELD:**

15 **Q. Uh-huh, okay. Let's do G. So you said**
16 **that you reviewed, quote, "Scientific studies on**
17 **the environmental and human health impacts of**
18 **climate change and fossil fuel development," end**
19 **quote.**

20 A. Uh-huh.

21 **Q. What studies are you referring to in**
22 **subparagraph G?**

23 A. Generally their health-based studies.
24 They have to do with things like the impacts of
25 fossil fuels on the climate, on health,

1 particulate, mercury, but also how climate is
2 impacting, you know, the availability of clean air
3 or clean water, climate change absolutely having
4 an impact on health.

5 And I think about most recently
6 perhaps -- maybe not most recently, but
7 recently -- learning about the impacts of methane
8 emissions on indoor air pollution. Certainly a
9 serious concern because it both produces methane,
10 which is a potent greenhouse gas, but it also
11 happens to harm people's lungs, particularly
12 children.

13 **Q. Okay. What were the names of the authors**
14 **of these studies that you reviewed?**

15 A. I don't recall.

16 **Q. Where were these studies published?**

17 A. I found them online, so both journal
18 articles and then other entities, like the Union
19 of Concerned Scientists, those types of
20 organizations who have produced documents over
21 time, Environmental Defense Fund.

22 There's so many, I just don't recall
23 specifically what those -- who those authors were.
24 But there are numerous studies out there regarding
25 climate change and health, particularly methane

1 and indoor health.

2 **Q. Did you review only peer-reviewed**
3 **studies?**

4 A. No.

5 **Q. Okay. How do you select what studies to**
6 **review and base your opinions on?**

7 A. Years of being a discerning reader. You
8 develop that over time, learning what's credible
9 and what is not, and what is credible is something
10 that is backed up by peer-reviewed science.

11 **Q. But you just told me you reviewed non**
12 **peer-reviewed articles, right?**

13 A. Yes. And most of those rely on
14 peer-reviewed data to develop those articles.
15 They're not just, you know, op-eds by authors.

16 They -- they have footnotes. They are
17 based upon scientific data.

18 **Q. Uh-huh. What other indicia suggests that**
19 **a study or an article that you're reviewing to**
20 **base an opinion on is credible to you?**

21 A. The author, the source and --

22 **Q. Can I pause you there? I'm sorry.**

23 **What about the author suggests to you**
24 **credibility versus a lack of credibility?**

25 A. Their -- their educational background and

1 their work in a field.

2 **Q. Okay.**

3 A. And the duration in their work in a field
4 oftentimes.

5 **Q. Okay.**

6 A. You know, the credibility of an
7 organization that I know puts out solid work that
8 is backed up by data; that's a type of thing that
9 I look for.

10 **Q. Okay. I think I cut you off. Were you**
11 **about to say the source as well?**

12 A. I don't recall.

13 **Q. Okay. Let's do H. It says that you**
14 **reviewed, quote, "The expert report of**
15 **Steven Running and Cathy Whitlock and the expert**
16 **report of Peter Erickson," end quote.**

17 **Why did you only review these reports?**

18 A. Because these were the reports that most
19 overlap with the type of information that's
20 included in my expert report.

21 **Q. How did you know that, if you didn't**
22 **review the other reports?**

23 A. Talking to the attorneys.

24 **Q. Did the attorneys tell you to review**
25 **these reports?**

1 A. They recommended I do.
 2 Q. Did they recommend that you review any
 3 other expert reports?
 4 A. There was one other they recommended I
 5 review, and I didn't get to it.
 6 Q. And just to be clear, we're talking about
 7 the expert reports of Steven Running,
 8 Cathy Whitlock and Peter Erickson, filed in this
 9 case, right?
 10 A. Correct.
 11 Q. Okay. And then subparagraph I says you
 12 reviewed, quote, "Some of the pleadings filed with
 13 the Court in this matter," end quote.
 14 What pleadings have you reviewed?
 15 A. The Complaint and the answers from the
 16 defendant.
 17 Q. Okay. Nothing else?
 18 A. No.
 19 Q. When did you last review the Complaint?
 20 A. Last week.
 21 Q. How about the answer?
 22 A. Last week.
 23 Q. Are any of your opinions in your report
 24 based on allegations in the Complaint?
 25 A. No.

1 Q. Okay. And do you mind taking a look at
 2 the top of page 4 of your report?
 3 A. Uh-huh.
 4 Q. And I'm looking at the very first
 5 sentence that says, quote, "The opinions expressed
 6 in this report are based on the data and facts
 7 available to me at the time of submission, as well
 8 as on my own professional experience and
 9 expertise," end quote.
 10 What do you mean by "available" to you at
 11 the time of submission?
 12 A. Those things that I had in my possession.
 13 Q. And by "possession," do you mean -- what
 14 do you mean by "possession"?
 15 A. On my computer.
 16 Q. Okay. So did you attempt to gather any
 17 additional data or facts other than the ones that
 18 you already had on your computer at the time of
 19 the submission of this report?
 20 A. I don't think I understand your question.
 21 Q. Did you attempt to -- did you do any
 22 research in an attempt to gather data and facts
 23 that were not already within your possession when
 24 you were drafting this report?
 25 A. Yes. I worked with the attorneys to

1 gather that information.
 2 Q. Okay. Tell me about that process. How
 3 did you gather that information?
 4 A. Well, the attorneys had gone to the
 5 historical society and looked -- you know, looked
 6 back, worked with the individuals at the
 7 historical society to go back in time and look
 8 through documents, to pull them together.
 9 And so we talked about them and agreed
 10 that they would be useful.
 11 Q. Okay. Okay. And does your expert report
 12 include any opinions about the scientific validity
 13 or accuracy of any of the conclusions that were
 14 reached in the documents, studies, records or
 15 anything else referenced in your report?
 16 MR. SULLIVAN: I'm going to object to the
 17 form of the question. I think it's confusing.
 18 THE WITNESS: I agree.
 19 BY MR. LONGFIELD:
 20 Q. Sure.
 21 Would you agree with me that your expert
 22 report references many studies and documents that
 23 contain scientific conclusions about climate
 24 change?
 25 A. Yes.

1 Q. Do the opinions in your report -- strike
 2 that.
 3 Does the scope of your report cover any
 4 opinions about the accuracy or validity of the
 5 conclusions reached in those documents and studies
 6 that you referenced in your report?
 7 A. That was a really long sentence. Can you
 8 please say that again?
 9 Q. Sure.
 10 In your expert report, do you provide any
 11 opinions about the scientific accuracy or validity
 12 of the conclusions reached in the documents that
 13 you reference in your report?
 14 A. I don't think so.
 15 Q. Okay.
 16 MR. SULLIVAN: And I would also object.
 17 Form. The document speaks for itself.
 18 BY MR. LONGFIELD:
 19 Q. And all I'm trying to ask is whether you
 20 are summarizing the contents of these documents
 21 throughout your report or whether you're opining
 22 about the validity of the conclusions reached in
 23 the documents, studies, plans referenced
 24 throughout your report?
 25 A. I think it's both, if I understand your

1 question, which I'm not sure I do.
 2 **Q. Which part don't you understand about**
 3 **that question?**
 4 A. It was a two-part question. It was long
 5 and two parts, and I didn't understand the
 6 difference. I did not understand the distinction
 7 you were trying to draw.
 8 **Q. Maybe we can break it down a little bit.**
 9 A. Okay.
 10 **Q. So throughout your report you refer to**
 11 **many documents that reach scientific conclusions,**
 12 **correct?**
 13 A. Correct, yes.
 14 **Q. And when I say "documents," I mean**
 15 **studies, plans, any document you refer to in your**
 16 **report.**
 17 A. Uh-huh.
 18 **Q. Okay. You also arrive at many opinions**
 19 **in your expert report, correct?**
 20 A. Uh-huh, uh-huh.
 21 **Q. Do any of your opinions -- are any --**
 22 **excuse me -- strike.**
 23 **Are any of your opinions about the**
 24 **validity of the conclusions that are reached in**
 25 **the documents that you refer to in your report?**

1 **Are you saying anything about whether the**
 2 **conclusions are valid, invalid, or are you just**
 3 **summarizing the conclusions that those documents**
 4 **have reached?**
 5 **MR. SULLIVAN:** I'm going to interject an
 6 objection again on the basis of form. It's an
 7 ambiguous question. And it's a compound question.
 8 Tim, can I ask you a clarification,
 9 because it seems to me we might be able to cut
 10 through it?
 11 **MR. LONGFIELD:** Sure.
 12 **MR. SULLIVAN:** The problem I have with
 13 the ambiguity is that when you refer to these
 14 documents, there's a number of documents -- let's
 15 see, the -- as an example, the IPCC documents.
 16 **MR. LONGFIELD:** Yes.
 17 **MR. SULLIVAN:** And those have a series
 18 of -- they have compilation of data and also
 19 opinions that are stated.
 20 **MR. LONGFIELD:** Yes.
 21 **MR. SULLIVAN:** Going over here, there's
 22 also a series of what I'll call MEPA documents.
 23 Those are documents that are either EISs or EAs
 24 that are explicitly criticized in the conclusions
 25 that are reached in here.

1 **MR. LONGFIELD:** Right.
 2 **MR. SULLIVAN:** When you say "documents in
 3 your report," the ambiguity is, are you including
 4 all of these or are -- do you see the distinction?
 5 **MR. LONGFIELD:** I do. Yeah, I do.
 6 Roger, that's helpful.
 7 And so I do mean to distinguish between
 8 legal documents such as EISs, EAs, Court orders
 9 and opinions. I'm not talking about those.
 10 I'm talking about documents that reach
 11 scientific conclusions about climate change.
 12 **THE WITNESS:** Uh-huh.
 13 **BY MR. LONGFIELD:**
 14 **Q. Okay. So, for example: The IPCC, the**
 15 **Montana Climate Action Plan.**
 16 A. Right.
 17 **Q. EQC report.**
 18 **Are you offering any opinions in your**
 19 **expert report about the scientific accuracy or**
 20 **validity of the scientific conclusions reached in**
 21 **any other document in your report?**
 22 A. I think that's a very difficult question
 23 to answer because, for example, in 1990, in the
 24 IPCC report, it was an inflection point in our
 25 nation's history on what we knew about climate

1 change.
 2 That report was incomplete. You know,
 3 the scientific data and the body of literature was
 4 nascent. It developed over time.
 5 So I am saying that I believe that
 6 document to be accurate, and they provided the
 7 most information they could, but the information
 8 and the science has evolved since that time.
 9 And my -- everything I do is premised on
 10 a concern about the climate crisis.
 11 So I am using that as a tool,
 12 understanding that it is an incomplete amount of
 13 information in 2022 than it was in 1990.
 14 It was a useful direction for, you know,
 15 policy experts to use to figure out a path
 16 forward, but there's been an evolution over time
 17 in the science.
 18 So I'm not quite sure how to answer your
 19 question because it's more complicated than that.
 20 **Q. Does the scope of your expert report**
 21 **cover anything about the evolution in the science**
 22 **related to climate change?**
 23 **Is that an opinion contained in your**
 24 **expert report?**
 25 A. I -- I do believe this -- as we have

1 evolved, it is -- I don't know if that opinion is
2 expressly stated or not, but certainly that
3 evolution is represented by the documents that I
4 refer to.

5 For example, there's a big difference
6 between the 1990 IPCC report and Dr. Whitlock's
7 and Dr. Running's report on the Montana Climate
8 Assessment, you know, 20, 30 years later.

9 **Q. Yeah.**

10 A. So it's -- it's all premised on that
11 science.

12 **Q. So perhaps that's a good example. In
13 this report, in your expert report, are you saying
14 anything about the relative validity of, for
15 example, the 1990s IPCC report versus the more
16 up-to-date science on climate change?**

17 A. I don't believe so.

18 **Q. Are you making any assessments about any
19 of the underlying science reporting the IPCC
20 reports?**

21 A. I am making an assumption that all of it
22 is accurate, as accurate as it could be at that
23 point in time.

24 **Q. What is that assumption based on?**

25 A. The fact that these are very smart

1 scientists from around the globe who got together
2 and reached consensus on the state of the science.

3 **Q. But that's not within the scope of your
4 expert opinions in this case?**

5 A. No, it is not.

6 **Q. Okay.**

7 A. To a certain degree. I mean, I want to
8 qualify that, that it's -- it's not -- I have to
9 understand science in order to form opinions about
10 what policy should be.

11 So it is a reliance on that science that
12 drives policy and that drives my actions and, you
13 know, what I would assume should be the actions of
14 the State of Montana.

15 So my expert opinions are absolutely
16 informed by that science.

17 **Q. By what science?**

18 A. By the science of climate change, the
19 IPCC, all the way up through and beyond
20 Drs. Whitlock and Running's analysis.

21 **Q. So any other -- when you say "science of
22 climate change," are you referring to anything
23 other than IPCC and Dr. Running and Whitlock's
24 analysis?**

25 A. The science of climate change -- yes,

1 it's all of the information that I've learned over
2 time regarding the science of climate change and
3 fossil fuels' contribution to the climate crisis.

4 **Q. Okay. But what specific studies or data
5 is that based on?**

6 **MR. SULLIVAN:** I'm going to object to the
7 form. Asked and answered.

8 **THE WITNESS:** It's the studies that the
9 IPCC has put out over time. For example, this
10 report is mentioning the 1990 and the 1995 IPCC
11 report, but the IPCC report -- or the IPCC comes
12 out with reports on a regular basis, and so
13 it's -- it's all IPCC reports.

14 **BY MR. LONGFIELD:**

15 **Q. When was the last time you read an entire
16 IPCC report?**

17 A. An entire IPCC report? It depends on how
18 you look at that.

19 I would say the most recent was about a
20 year ago, they came out with one that was very,
21 very concerning regarding climate impacts and the
22 science of climate.

23 **Q. Did you read that report?**

24 A. Yeah.

25 **Q. The whole thing?**

1 A. I read most of it. I mean, I read the
2 parts that were of interest. A lot of it is very,
3 very, very scientific and hard to discern for a
4 regular person. So oftentimes their summary
5 reports, their executive summaries, their summary
6 for policymakers are where I focus.

7 And then they always have the notes on
8 where you turn to, in the larger document, to get
9 more information on that.

10 And so I -- I use that as a
11 cross-reference.

12 **Q. Okay. So is it fair to say that your
13 background and qualifications don't make it easy
14 for you to read and understand technical or
15 scientific reports or data?**

16 A. It depends on the depth. No, that's not
17 true.

18 I do read scientific data all the time
19 and I understand it. But when you read the IPCC
20 reports, these are very, very technical reports
21 that I -- I would defer to somebody like
22 Dr. Whitlock and Dr. Running to have a better
23 understanding of the deep details of those
24 reports. I'm certainly capable of reading the
25 summary for policymakers.

1 Q. Sure. Why would you defer to
2 Dr. Whitlock or Dr. Running to understand the more
3 technical aspects of something like the IPCC
4 report?

5 A. They have more scientific background and
6 a deeper understanding of the hard sciences.

7 MR. SULLIVAN: Tim, we've been going for
8 an hour and 15 minutes. When it's good for you
9 and Anne to take a break, I suggest we take one
10 now.

11 MR. LONGFIELD: I'm at a good stopping
12 point, Roger. So why don't we take a ten-minute
13 break.

14 THE WITNESS: Great.

15 (Whereupon, a break was then taken.)

16 BY MR. LONGFIELD:

17 Q. So, Anne, I want to pick back up by
18 asking this: Is it fair to say that throughout
19 your expert report you refer to and criticize many
20 actions by the government of Montana that, in your
21 view, contributed to the climate change?

22 A. Yes.

23 Q. Does the scope of your expert report
24 include any opinions about the extent to which the
25 government actions you refer to and criticize in

1 your report impact climate change?

2 MR. SULLIVAN: Objection. Form.
3 Document speaks for itself.

4 You may answer.

5 THE WITNESS: I'd have to go back and
6 look. I don't -- I'm not sure.

7 Certainly, I know, you know, what the
8 Highwood Generating Station, the Roundup power
9 plant, the mines that we mentioned in here -- I
10 know their emissions. Yes, it does.

11 BY MR. LONGFIELD:

12 Q. Okay. So when you say "it does," you
13 mean that the scope of your report does include
14 opinions about the extent to which the government
15 actions you refer to contribute to climate change?

16 A. No, to your statement. I think what you
17 just asked was different.

18 My report states what the government
19 actions allow when it comes to climate change.

20 For example, the Highwood Generating
21 Station, on page 17, the draft EIS said that,
22 "Fossil fuel consumption was the major source of
23 greenhouse gases released in Montana, accounting
24 for 71 percent of emissions' in 1990."

25 So I believe I said something similar

1 regarding the Roundup Power Project.

2 So -- and I'd have to look and see.

3 We've calculated those numbers for the mines, but
4 I don't recall if we included them in here. I'd
5 have to look.

6 But we do reference some of the figures,
7 yes, we do.

8 The Roundup Power Project included
9 8.2 million tons per year of CO2 and 65.96 tons per
10 year of methane.

11 So if that was your question, then I do
12 provide some of the information regarding how some
13 of the examples we have provided contribute to the
14 climate crisis.

15 Q. Okay. And in sort of a brief tangent
16 here, I notice that you were saying that "we" have
17 provided or that "we" list things.

18 Who is the "we" that you were referring
19 to?

20 A. I would say it is MEIC. It is the
21 attorneys in this case.

22 I just say "we" generally because MEIC is
23 an entity. You could change those we's to I
24 easily, but I certainly worked with my attorneys
25 to develop my expert report.

1 Q. Is this your report?

2 A. It is.

3 Q. Okay. I'm not sure I got the answer, and
4 so I'm going to try asking it again in a different
5 way.

6 A. Uh-huh.

7 Q. Are you offering any opinions, in this
8 expert report, about the impact of any government
9 action on climate change?

10 MR. SULLIVAN: Objection. Form. Report
11 speaks for itself. Asked and answered.

12 You may answer.

13 THE WITNESS: Could you repeat that
14 question, please?

15 BY MR. LONGFIELD:

16 Q. Sure.

17 Does your expert report contain any
18 opinion from you about the impact of any
19 government action on climate change?

20 A. Yes.

21 Q. Okay. What is the basis for those
22 opinions?

23 A. The basis for those opinions are the
24 science of climate, the impact of government
25 decisions on contributions to greenhouse gases

1 being put into the atmosphere, and the impact --
2 I'd have to think about whether I really delve
3 into impacts.

4 **Q. And that's all I'm trying to ask about.**

5 A. But certainly I have an opinion that
6 things like the Energy Policy Act of 2011 and
7 the -- the changes in MEPA in 2011 both are
8 contributing to the climate crisis.

9 **Q. Is that opinion that you just stated,
10 that the state energy policy and the 2011 MEPA
11 addendums are contributing to the climate crisis,
12 contained in your expert report?**

13 A. Yes.

14 **Q. Where?**

15 **MR. SULLIVAN:** I would object on the
16 basis that the report speaks for itself. It's a
17 burdensome -- the form of the question is
18 unnecessarily burdensome.

19 **THE WITNESS:** I think -- well, can you
20 repeat that question so I can make sure I answer
21 the right question?

22 **BY MR. LONGFIELD:**

23 **Q. I can.**

24 **You said that that opinion -- you
25 understand what opinion I'm talking about, just so**

1 **Q. Okay. So let's start with 19, and the
2 2011 amendments to MEPA.**

3 A. Okay.

4 **Q. Where in this section do you offer an
5 opinion that the 2011 amendments to MEPA
6 exacerbated or contributed to climate change in
7 Montana?**

8 A. You'll have to give me a minute.

9 **Q. Absolutely. Take your time.**

10 A. I believe that you can refer to page 21.

11 **Q. Thank you.**

12 A. And it is the first full paragraph,
13 "Based on my extensive work in this field,
14 including during the process" of changing the MEPA
15 law, that that change is the reason for state
16 agencies not to permit additional -- well, sorry.

17 "It caused the fossil fuel industry to
18 lobby our state government to lock in laws that
19 would protect their product and their business
20 model, at the expense of Montana's environment and
21 the young people of our state. Despite deep
22 statewide opposition, including concerns that"
23 this might be unconstitutional -- and then when
24 you proceed and you see how, in Section 4,
25 starting on page 24, the defendants moving forward

1 **I don't have to restate it?**

2 A. Uh-huh.

3 **Q. -- is contained in your expert report,
4 correct?**

5 A. Can you restate the opinion?

6 **Q. Sure.**

7 **I believe your -- you just said that you
8 have an opinion that the 2011 changes to the state
9 energy policy --**

10 A. Yep.

11 **Q. -- and amendments to MEPA in 2011 have
12 contributed to the climate crisis.**

13 A. Yes.

14 **Q. Is that an accurate rephrasing of what
15 you told me a few minutes ago?**

16 A. Yes.

17 **Q. Okay. What I'm asking about is whether
18 that opinion is contained in your expert report?**

19 A. I -- from my perspective, I believe so,
20 yes.

21 **Q. Where?**

22 A. In Section D, starting on page 19,
23 discussing the 2011 amendments to MEPA, and then
24 continuing on, on page 21, the 2011 amendments to
25 the state energy policy.

1 to approve projects based upon those new laws, and
2 those projects did contribute to the climate
3 crisis because it allowed more emissions to be put
4 into the atmosphere.

5 I think when you read those two sections
6 in tandem that that is the outcome, and that is my
7 opinion that that change in the law has
8 contributed to projects being permitted that allow
9 an increase in greenhouse gases, and that is what
10 is causing the climate crisis.

11 **Q. Okay. Thank you.**

12 **What is the basis for your opinion that
13 the 2011 amendment to MEPA was the impetus for the
14 state agencies granting the permits that you refer
15 to in page 24, 25, 26, 27 and 28?**

16 **MR. SULLIVAN:** And I'm going to object to
17 the form. The report speaks for itself.

18 You may answer.

19 **THE WITNESS:** Could you break that down a
20 little bit?

21 **BY MR. LONGFIELD:**

22 **Q. Sure.**

23 **I think you just told me it's your
24 opinion that the change in the law to MEPA in 2011
25 led to the permitting of the projects you refer to**

1 in pages 24, 25, 26, 27 and 28.

2 A. Uh-huh.

3 Q. What's the basis for that opinion?

4 A. My experience and the fact that the state
5 failed to analyze or consider any public comment
6 or expert analysis of how these -- these projects,
7 some of which are described here, but certainly
8 not all, contribute to the climate crisis.

9 Q. Did you compare the rate at which state
10 agencies approved permits before the 2011 changes
11 to MEPA with the rate at which those agencies
12 approved permits after the 2011 changes to MEPA?

13 A. I don't understand your question, when
14 you say "did you compare." What do you mean by
15 "compare"?

16 Q. Was it more likely that state agencies
17 would grant or approve a permit for a fossil fuel
18 project before the 2011 amendment to MEPA or less
19 likely?

20 A. State agencies certainly approved fossil
21 fuel projects prior to the 2011 amendment to MEPA.

22 However, they disclosed those impacts so
23 that everybody had an opportunity to comment on
24 them, to discuss them, to think about whether
25 things like best available control technology in

1 it is that you're asking, Tim, I think that would
2 help us tether the question to the answer so we're
3 not missing ships in the night here.

4 MR. LONGFIELD: Sure, I can.

5 BY MR. LONGFIELD:

6 Q. So we were discussing, Anne, whether a
7 lack of documentation about the environmental
8 impacts outside of Montana of a project, after
9 2011's MEPA amendment, made it more likely that a
10 fossil fuel project would be permitted, would be
11 approved for a permit.

12 You said, "I believe so."

13 A. I disagree with what your -- your
14 question. Because after 2011, the state didn't
15 only exclude consideration of impacts outside
16 Montana, the state also excluded any consideration
17 of impacts from climate change inside Montana; so
18 let's start there.

19 Now, could you please rephrase your
20 question or say it again?

21 MR. SULLIVAN: Because that's the
22 premise; that was her answer to which you're
23 predicating a question.

24 MR. LONGFIELD: Right. I understand.
25 Fair.

1 the air pollution arena should be employed.

2 After 2011 we had a void in any
3 documentation on what the impacts were or any
4 discussion of alternatives that could be employed
5 to deal with the emissions.

6 Q. Did that void of documentation make it
7 more likely that a fossil fuel project would be
8 permitted?

9 A. I believe so, and I believe they thought
10 so too when they changed MEPA in 2011.

11 Q. Why do you believe so?

12 A. Because they -- they -- could you please
13 state what your -- the question was again so I can
14 answer the right question?

15 Q. You said you believe so.

16 A. Before that, you asked a question. And
17 before I say why do I believe so, I'd like to know
18 what your specific question was so I can answer
19 it.

20 Q. I guess what did you mean when you said,
21 "I believe so"?

22 MR. SULLIVAN: Well, I'm going to ask --
23 I'll just state an objection of ambiguous, so
24 form.

25 And then if you could refer back to what

1 BY MR. LONGFIELD:

2 Q. Does that make it more likely?

3 A. What is "it"? Can you please be
4 specific?

5 Q. What you just described. So I'm not
6 going to go and requote what you just said because
7 I don't think that's a good use of time.

8 But do you understand what I'm talking
9 about when you say "what you just said"?

10 A. I think so. I'm losing the thread --

11 Q. Okay.

12 A. -- more.

13 Q. So the -- maybe it will be more simple to
14 put it this way.

15 Is it your opinion that the 2011
16 amendment to MEPA made it more likely that a state
17 agency would approve a permit for a fossil fuel
18 project than before the 2011 amendment to MEPA?

19 A. Yes.

20 Q. Okay. What is the basis for that
21 opinion?

22 A. My expertise over time. I was watching
23 agencies prior to 2011 start to grapple with how
24 they would deal with greenhouse gases, how they
25 would deal through a BACT analysis, whether they

1 would do a BACT analysis, whether their
2 alternatives analysis would be robust and consider
3 alternatives to the project that was being
4 proposed.

5 For example, in the Highwood Generating
6 Station, it was a CFB plant, and it could have
7 been other types of plants or could have included
8 carbon capture and sequestration.

9 That -- there was an evolution that was
10 occurring in the 2000s in the thinking on how you
11 do a MEPA and analysis and what is the breadth of
12 that analysis when it comes to climate change.

13 And after 2011, that abruptly stopped.
14 There was no longer a consideration of different
15 types of technologies that could be available to
16 minimize or eliminate climate-changing pollutants.
17 And the state, in addition to that, shut off any
18 public discourse on that analysis as well.

19 **Q. Prior to 2011, how often did state
20 agencies deny permits to fossil fuel projects?**

21 A. They did not.

22 **Q. Ever?**

23 A. In my knowledge, I don't believe so.

24 **Q. Okay. And after 2011, how often did
25 state agencies deny permits to fossil fuel**

1 **projects?**

2 A. Never.

3 **Q. So what was the change, based on the 2011
4 MEPA amendment, in the likelihood that a permit
5 would be approved?**

6 A. It was the -- it was an evolution that
7 was occurring in the 2000s regarding how state
8 agencies were addressing climate, how they were
9 incorporating public considerations, how they were
10 incorporating the science and what courts were
11 starting to say about these -- these facilities
12 that were being proposed.

13 And after that, there was no longer an
14 opportunity for that conversation and those
15 considerations to be incorporated into the state
16 agencies' process of permitting.

17 **Q. Did that evolution make it -- make any
18 change in the amount of permits issued to fossil
19 fuel projects?**

20 A. I haven't counted the number of fossil
21 fuel projects prior to 2011 and post 2011, so I --
22 I don't know the answer to that.

23 **Q. Thank you.**

24 **Would you agree with me that you're not
25 an expert in the area of climatology or climate**

1 **science?**

2 A. No.

3 **Q. Why not?**

4 A. Because I do have a scientific
5 background, to a certain degree. It may be just a
6 bachelor's of science, but I study climate change
7 regularly.

8 Am I of the caliber of Dr. Running or
9 Dr. Whitlock? Absolutely not.

10 But compared to the average person in
11 this state, I know more about climate science than
12 most people.

13 **Q. I guess, what do you -- I'll strike that.**

14 **Have you conducted any research in the
15 area of climatology?**

16 A. No.

17 **Q. And you've never published any
18 peer-reviewed publications in the area of
19 climatology or climate science?**

20 A. No.

21 **Q. What about for meteorology? Any research
22 or peer-reviewed publications?**

23 A. Research -- I mean, it depends on how you
24 define "research."

25 **Q. I'm talking about scientific research.**

1 A. No. I've not done any initiating studies
2 on studying the atmosphere.

3 **Q. Okay. What is the scientific method?**

4 A. What is the scientific method?

5 **Q. Yes.**

6 A. It is -- you have a hypothesis, you
7 collect data, you analyze the data, and you use
8 that data to determine whether your hypothesis was
9 accurate or not.

10 **Q. Is it true that hypotheses should be
11 falsifiable under the scientific method?**

12 A. I'm sorry. Could you repeat that?
13 Falsifiable?

14 **Q. Uh-huh.**

15 A. That is a term that I am not familiar
16 with.

17 **Q. Okay. What is the purpose of testing a
18 hypothesis within the scientific method?**

19 A. To determine if it's accurate or if you
20 need to make adjustments to your hypothesis.

21 **Q. Okay. Did you apply the scientific
22 method in reaching any of your opinions in this
23 expert report?**

24 A. I believe that I employ the scientific
25 method in just about everything I do, so I would

1 have to say yes.

2 **Q. Okay. Tell me about that. How did you**
3 **apply the scientific method in reaching the**
4 **opinions in your report?**

5 A. It is not -- well, it is not so much the
6 opinions in my report, per se. It is the body of
7 evidence that I have analyzed over the last nearly
8 30 years, through forming hypotheses, analyzing --
9 you know, collecting information to determine
10 whether that's accurate, and then trying to
11 determine whether that -- the approach in the
12 policy arena that would be proposed would be the
13 appropriate approach to address the issue.

14 I think the scientific method is just the
15 basis of how I go about my work.

16 **Q. Would it be possible for someone without**
17 **your life and work experience to test any of the**
18 **claims that you make in this report?**

19 A. I believe so.

20 **Q. How could that be done?**

21 A. They would have to go back and look at
22 the body of evidence that I have collected over
23 time and my experience.

24 I mean, I have many, many file cabinets
25 and computer documents that, if they reviewed,

1 **Would someone have to have the body of**
2 **experience that you have had to understand and**
3 **reach the opinions that you've arrived at in your**
4 **expert report?**

5 A. I -- that's a very broad question. You
6 know, some people would be capable of reaching
7 conclusions based upon all the information in my
8 report, certainly.

9 But it is better informed by the
10 knowledge that I have gained over time, and my
11 experiences.

12 I mean, most people didn't live through
13 the drama of the Highwood Generating Station or
14 the Roundup power plant or the mines that have
15 been going in.

16 So I think that it is the breadth of my
17 experience that contributes to this product.

18 **Q. Is it fair to say that the opinions**
19 **you've arrived at in this report draw heavily from**
20 **your personal experience?**

21 A. I'm not sure "draw" from is appropriate.
22 They are certainly informed by my -- my work
23 experience.

24 **Q. Okay. Does your report provide anything**
25 **more than a summary of publicly available records?**

1 they could reach the same conclusions, but it is a
2 lifetime of experience.

3 **Q. Okay. Do your opinions in your expert**
4 **report add anything other than what a lay reader**
5 **could glean from reading the numerous publicly**
6 **available documents you cite in your report?**

7 A. Can you say that again or rephrase it?

8 **Q. Yeah.**

9 **If someone were to read all of the**
10 **documents that you refer to in your report, would**
11 **they be able to reach the same conclusions that**
12 **you reached in this case?**

13 **MR. SULLIVAN:** I'm going to object to the
14 form in the sense that it calls for speculation.

15 **THE WITNESS:** Yeah, it's very
16 hypothetical. I think so, but I don't know, I'm
17 not them. And I do believe the lifetime of
18 experience in this arena is informing my expert
19 report.

20 So they may need to have the body of
21 information that I have gained from my years at
22 work.

23 **BY MR. LONGFIELD:**

24 **Q. And I think that's what I'm trying to**
25 **understand.**

1 A. I believe it does.

2 **Q. What does it provide that exceeds a**
3 **summary of publicly available records?**

4 **MR. SULLIVAN:** Object to form. Report
5 speaks for itself.

6 **THE WITNESS:** Could you repeat that
7 question so I can think about it again?

8 **BY MR. LONGFIELD:**

9 **Q. Sure.**

10 **You said that you believe your report**
11 **provides something more than a summary of publicly**
12 **available records, correct?**

13 A. Right.

14 **Q. What is that "more"?**

15 A. It provides context, it provides history,
16 it provides evolution of the state's thinking and
17 knowledge of how all these pieces fit together.

18 **Q. Is it fair to say that that context is**
19 **informed by your personal experience?**

20 A. Yes.

21 **Q. Is it informed by anything outside of**
22 **your personal experience?**

23 A. If you include in personal experience my
24 research and my analysis and my engagement in
25 various, you know, legislative, legal, executive

1 agency proceedings, then is it informed by those
2 things.

3 **Q. Okay. Thanks.**

4 **And can you go to page 4 of your report,**
5 **please? I'm looking at the first full paragraph**
6 **under subheading A, where you write, quote, "In**
7 **the 1960s, there was a growing recognition in**
8 **Montana and throughout the United States of the**
9 **need to protect the environment and natural**
10 **resources from destructive extraction practices,**
11 **including those related to fossil fuel**
12 **extraction," end quote.**

13 **What do you mean in this paragraph that**
14 **there was a, quote, "growing recognition" of the**
15 **need to protect the environment, throughout the**
16 **United States?**

17 **A. Throughout the United States, there were**
18 **things like Silent Spring and other publications**
19 **that were increasingly raising concerns about the**
20 **impact of pollutants in the environment and what**
21 **that was doing to air quality, to public health,**
22 **to water quality, to wildlife, to our**
23 **environmental life support system.**

24 **Q. Who was experiencing this growing**
25 **recognition?**

1 **A. I believe people all over the country**
2 **were doing that. But certainly in Montana you**
3 **were having people raising concerns air quality,**
4 **for example, Missoula air quality and the -- the**
5 **smell and the haze that was in their air.**

6 **They didn't have the same understanding**
7 **as we have today because we have better data than**
8 **they did back then, but they knew enough to know**
9 **that it wasn't right.**

10 **Q. I guess what I'm asking about at first is**
11 **the United States. So when you say there was a**
12 **growing recognition in the United States --**

13 **A. Right.**

14 **Q. I'm not sure I heard the answer.**

15 **Who are you referring to that had the**
16 **growing recognition of the need to protect the**
17 **environment in the 1960s in the United States?**

18 **A. I believe -- I would say the scientific**
19 **community and the public --**

20 **Q. Okay.**

21 **A. -- who was starting to demand change.**

22 **Q. Okay. So let's start with scientific**
23 **community.**

24 **A. And -- sorry.**

25 **Q. I apologize.**

1 **A. And politicians.**

2 **Q. And politicians, okay.**

3 **So scientific community, the public and**
4 **politicians are the people that were experiencing**
5 **this growing recognition?**

6 **A. Uh-huh.**

7 **Q. Can you please describe all the facts,**
8 **data and sources you relied on in reaching the**
9 **conclusion that there was a growing recognition**
10 **among the scientific community in the 1960s of the**
11 **need to protect the environment?**

12 **A. All -- I can't recall all of the data**
13 **that I've learned over a lifetime.**

14 **Q. How about any? How about any?**

15 **A. Okay. Let's start with Silent Spring and**
16 **people's concern about DDT in the environment. I**
17 **think that that is a really great example of the**
18 **emerging knowledge that pollutants were harming**
19 **people's lives.**

20 **Q. Silent Spring is a good example of that?**

21 **A. It's one example.**

22 **Q. Okay. How was Silent Spring received in**
23 **the scientific community when it was published?**

24 **A. As most science, it's cutting edge. It**
25 **was not received well.**

1 **Usually scientists are a little bit**
2 **hesitant to accept new ideas before they go**
3 **through the scientific method themselves. They**
4 **are, by nature, a very skeptical group of people.**

5 **Q. Other than Silent Spring, is there any**
6 **other evidence or data or facts that you can point**
7 **to suggesting that there was a growing recognition**
8 **in the scientific community in the 1960s that --**
9 **that there was a need to protect the environment?**

10 **A. Montana passed a Clean Air Act in the**
11 **'60s. So, yes, we know that there was concern in**
12 **the halls of our capitals that we do something**
13 **about -- about air pollution, water pollution,**
14 **waste, waste streams.**

15 **What knowledge -- I don't recall all the**
16 **things I've read, I'm sorry, that indicate that**
17 **the '60s were a time of growing public awareness**
18 **about the problems that we were facing and the**
19 **impacts that they were having, but it certainly**
20 **was -- you know, there's -- there's plenty of**
21 **evidence to that effect. As I sit here today, I**
22 **can't recall.**

23 **Q. Okay. Okay. So that plenty of evidence**
24 **you don't recall other than Silent Spring and the**
25 **Clean Air Act in Montana?**

1 A. Yeah.
 2 **Q. Okay.**
 3 A. Other than just the -- the nature of the
 4 1968 proceedings, right?
 5 The proceedings in -- the "Montana
 6 Strategy for a Livable Environment: Conference
 7 Proceedings," that was a wonderful recitation of
 8 the growing concern, by the governor, by agencies,
 9 by -- by people like George Darrow, about the
 10 growing concern about air pollution, water
 11 pollution and climate change.
 12 So that is just one example, and it's a
 13 great example, which is why it's here. There was
 14 a growing concern.
 15 **Q. Okay. Yeah. So let's talk about that**
 16 **1968 conference.**
 17 So, first, I presume that you're talking
 18 about the Montana Department of Health conference
 19 referred to in this paragraph, titled "A Montana
 20 Strategy for a Livable Environment," end quote?
 21 A. Yes.
 22 **Q. Okay. The first time you heard about**
 23 **this was when plaintiffs' attorneys provided you**
 24 **with information about it, correct?**
 25 A. Yes.

1 **Q. Okay. I'll read the provision -- or the**
 2 **statement in your report that introduces this**
 3 **conference.**
 4 So you say on page 4, quote, "In 1968,
 5 the Montana Department of Public Health held a
 6 conference titled," quote, "'A Montana Strategy
 7 for a Livable Environment,'" end quote. "The
 8 conference proceedings explicitly warned of the
 9 dangers of air pollution and GHG emissions" --
 10 okay. So I'll end the quote there.
 11 **And who attended this conference?**
 12 A. It was a conference that seemed to be for
 13 agencies and people who had to make decisions
 14 about how we would proceed.
 15 So the introductory pages talked about
 16 who had been invited, and if you would provide me
 17 with a copy of it, I would be happy tell you.
 18 **Q. But you don't know, as you sit here**
 19 **today, who attended this conference?**
 20 A. No, but it is in the document.
 21 **Q. Okay. And what document is that?**
 22 A. It's in this -- the document that is
 23 cited here. And whether it's the breath of every
 24 person who attended, I don't believe that's the
 25 case. But it does talk about who attended in

1 the -- in that document.
 2 **Q. And when you say "document cited here,"**
 3 **is that the document at footnote 4, page 4?**
 4 A. Yes.
 5 **Q. Okay.**
 6 A. Well, footnote 4 on page 4 of my thing.
 7 **Q. Of your expert report?**
 8 A. It's throughout the document itself.
 9 It's not page 4 of that document.
 10 **Q. But the document that we're talking about**
 11 **is the document to which you cite at footnote 4,**
 12 **page 4, of your expert report?**
 13 A. Uh-huh, yes.
 14 **Q. Okay. Thank you.**
 15 Tell me about what government officials
 16 knew about the findings of this department of
 17 health conference. Let's start with just in the
 18 remainder of the 1960s.
 19 What was the level of knowledge that
 20 government actors in Montana had about the
 21 findings of this 1968 department of public health
 22 conference?
 23 A. All I can say is the conference was
 24 intended to inform how the state would proceed
 25 with protecting the environment, which everybody

1 in the -- you know, from the governor, to agency
 2 people, and others who spoke, were very concerned
 3 about and were hoping would be a blueprint for how
 4 the state should go about responding to the issues
 5 that were raised.
 6 **Q. How do you know that the governor was**
 7 **hoping that the issues raised at the conference**
 8 **would be a blueprint for responding to**
 9 **environmental issues moving forward?**
 10 A. He said it in his introduction.
 11 **Q. Okay. Did he use the word "blueprint"?**
 12 A. I don't know. If you gave me the
 13 document, I could tell you.
 14 **Q. Do you have any opinions about the 1968**
 15 **department of public health conference, that**
 16 **aren't contained within the document?**
 17 A. No.
 18 **Q. Okay. So it's just a summary of the**
 19 **document itself?**
 20 A. Uh-huh.
 21 **Q. Not informed by your personal experience**
 22 **or expertise?**
 23 A. It's certainly informed by my -- what I
 24 have heard over time from people who lived through
 25 that era.

1 **Q. Well, tell me about that; that's what I'm**
2 **asking about.**

3 A. People who lived in Montana and were
4 cognizant, which, I admit, I was not old enough to
5 be cognizant at that time of these proceedings,
6 but they talk about the concern and how all of
7 that concern led to the buildup to the
8 constitutional convention.

9 There was no -- there was a deep
10 understanding that we were doing something wrong
11 to cause our water to be unfit for drinking, to
12 cause our air to be dirty and polluted. So there
13 was this buildup of concern over time.

14 This conference really does summarize
15 very nicely that concern of: Here are the factors
16 that we need to start looking at and address.

17 And that was intended to move forward and
18 not be a stagnant document. It was intended to
19 inform future decision-making.

20 **Q. How do you know that it was intended to**
21 **inform future decision-making?**

22 A. Well, the document said so.

23 **Q. Okay. So everything you know about the**
24 **1968 department of public health conference is**
25 **just from reading the document that's cited --**

1 George Darrow, did George Darrow remember anything
2 about the 1968 public health conference?

3 A. We didn't discuss that.

4 **Q. Okay.**

5 A. And I would say, of course he did.

6 **Q. Well, how do you know?**

7 A. If you would show me the document, I
8 could show you where George Darrow is -- provides
9 information in it.

10 **Q. I'm not asking about whether he's in the**
11 **document. I'm asking about when you spoke with**
12 **George Darrow --**

13 A. Okay.

14 **Q. -- did he have any knowledge or awareness**
15 **of the 1968 conference at that time, the time you**
16 **spoke with him?**

17 A. We didn't discuss it.

18 **Q. So do you know --**

19 A. We discussed MEPA.

20 **Q. Do you know whether he had any**
21 **recollection of the 1968 conference?**

22 A. I didn't discuss it.

23 **Q. The question is: Do you know?**

24 A. No.

25 **Q. Okay. Looking now at the paragraph**

1 A. That's correct.

2 **Q. -- footnote 4, page 4 of your report?**

3 A. Yes.

4 **Q. Nothing else?**

5 A. It's -- right. Everything I know about
6 that, that's true.

7 **Q. Okay.**

8 A. It's the context in which it was
9 occurring.

10 **Q. Do you know any -- you said you had met**
11 **people from the time.**

12 A. Uh-huh.

13 **Q. Did you meet anyone who attended this**
14 **conference?**

15 A. George Darrow.

16 **Q. Did you talk with George Darrow about**
17 **this conference?**

18 A. I didn't know the conference had existed.
19 When I spoke with George Darrow, we were talking
20 about MEPA.

21 **Q. Does George Darrow know that the**
22 **conference existed?**

23 A. Of course he did, he was included in the
24 conference proceedings.

25 **Q. At the time that you spoke with**

1 underneath the quoted language from the 1968
2 conference. I'll read it.

3 It says, quote, "Perhaps the most obvious
4 acknowledgment of the need to protect Montana's
5 environment was the express enumeration of the
6 right to a 'clean and healthful environment' in
7 Montana's Constitution in 1972," end quote.

8 And I'll keep going, so, quote, "As
9 regards the environmental provisions, the rich
10 constitutional convention history reveals, and
11 Montana's courts have affirmed, that it was the
12 intent of the delegates to enact the most
13 protective constitutional provisions possible,"
14 end quote.

15 And how does the constitutional
16 convention history reveal that it was the intent
17 of the delegates to enact the most protective
18 constitutional provisions possible?

19 A. Because many delegates said so.

20 **Q. Which delegates?**

21 A. If you would provide me with the
22 constitutional convention -- with this document,
23 I'd be happy to point that out. It might take me
24 a little bit of time.

25 But I believe Mae Nan Ellingson, Cate,

1 Bob Campbell, if my memory serves me.
2 But certainly a number of them said
3 things to that effect.

4 **Q. Okay. Why did the delegates arrive at**
5 **the modifier "clean and healthful" to describe the**
6 **right that they were creating?**

7 A. Because they wanted to make sure that it
8 was the strongest right possible, and they wanted
9 to make sure the courts were not confused.

10 And in numerous conversations with
11 Bob Campbell since, before his death, he repeated
12 many times how he didn't want Montana to just have
13 an environment. He wanted to make sure that
14 courts understood what that environment should be
15 like. He wanted to make sure courts knew that it
16 was supposed to be clean and healthful.

17 **Q. Did you ever talk with delegate Campbell**
18 **about what he believed the phrase "clean and**
19 **healthful" to mean?**

20 A. We talked about that phrase many times,
21 and he meant it to be, as I just said, something
22 that was more meaningful than just an environment.

23 He -- he mocked the idea many times of
24 just having the word "environment" in there
25 because that did not describe what was need ed to

1 **Q. 'So -- but what is your opinion about what**
2 **"clean and healthful" means in the context of the**
3 **environment?**

4 A. I think it means different things in
5 different contexts.

6 **Q. What are some examples of what it means?**
7 **And could you also provide the context in**
8 **which it means that thing?**

9 A. I believe that "clean and healthful"
10 means that we have a right to live as free from
11 harmful pollution as possible.

12 Things that kill fish, things that create
13 cancer, things that harm children's lungs; we have
14 a right to be free from those, to the degree --
15 maximum degree possible.

16 **Q. Okay. What has the Montana Supreme Court**
17 **said about what "clean and healthful" means in the**
18 **context of a clean and healthful environment?**

19 A. That's a body of law that I assume is in
20 the record someplace.

21 But the first time the court interpreted
22 it was in 1999 in MEIC, VDEQ. And in that, the
23 court said that it was -- that you don't need dead
24 fish, that it was anticipatory and preventive,
25 that we are allowed -- or the state and each

1 protect public health and the environmental life
2 support system.

3 **Q. So it sounds like delegate Campbell**
4 **thought that the phrase -- delegate Campbell, in**
5 **his conversations with you, stated that the phrase**
6 **"clean and healthful" was more meaningful or more**
7 **descriptive about the quality of environment the**
8 **constitution was guaranteeing; is that correct?**

9 A. Yes. And he also said it in the
10 proceedings.

11 **Q. Uh-huh. Did delegate Campbell ever tell**
12 **you what he thought "clean and healthful" meant in**
13 **the context of Montana's constitutional**
14 **provisions?**

15 A. I don't recall.

16 **Q. Okay. What do you think "clean and**
17 **healthful" means in the context to the right to a**
18 **clean and healthful environment?**

19 A. I think it is the court's jurisdiction to
20 decide that. I believe that it is supposed to be
21 the most protective constitutional provision in
22 the United States. And I believe that you don't
23 need dead fish floating on the surface of the
24 water in order to invoke those constitutional
25 protections.

1 person shall maintain and improve, which means we
2 are not just bystanders.

3 We are supposed to be working towards
4 betterment of the environment, particularly in
5 regard to pollutants.

6 **Q. Are you a constitutional scholar?**

7 A. It depends on how you define that.

8 **Q. How would you define it?**

9 A. I --

10 **MR. SULLIVAN:** Well, I'm going to object
11 to the form of the question. I believe it's up to
12 the interrogator to define the term so that we
13 have a clear question.

14 If you have something in mind with the
15 question, I think it's useful to let the deponent
16 know what it is that you're querying about.

17 **MR. LONGFIELD:** I'd like to know how she
18 defines the term "constitutional scholar."

19 **THE WITNESS:** I believe a constitutional
20 scholar is somebody who has studied the
21 constitution and its history and its legal
22 implementation.

23 **BY MR. LONGFIELD:**

24 **Q. Okay. And would you meet that**
25 **definition?**

1 A. Yes.

2 **Q. Okay. Have you ever published any**
3 **articles in law reviews on Montana's Constitution?**

4 A. No.

5 **Q. On any constitution?**

6 A. No.

7 **Q. Have you ever published any article in**
8 **any law review at all?**

9 A. As I've said, I've never been published.

10 **Q. Okay. Do your opinions about the 1972**
11 **constitutional convention add anything other than**
12 **what a lay reader could glean from reading the**
13 **transcripts of the convention for him or herself?**

14 A. Could you repeat that question, please?

15 **Q. Sure.**

16 **Do your opinions about the 1972**
17 **constitutional convention add anything other than**
18 **what a lay reader could glean or understand about**
19 **the meaning of the clean and healthful environment**
20 **right from reading the transcript of the**
21 **convention for him or herself?**

22 A. Perhaps not, although they are -- they
23 are a part of my entire expert report and the
24 history of this state and the evolution of this
25 state when it comes to environmental protection.

1 So while they could read that, they
2 wouldn't necessarily understand the whole context
3 of how that has played out in Montana's, you know,
4 fairly recent history.

5 **Q. Why couldn't they understand the context**
6 **of how the constitutional provision has played out**
7 **in fairly recent history?**

8 A. They would have to do -- maybe they
9 could, if they did a whole lot of reading of law
10 review articles, of legal opinions, of briefings
11 to courts.

12 I think that all of that colors this
13 report. I mean, I think that is the foundation
14 upon which our environment is -- is protected.

15 **Q. Did you review any law review articles**
16 **while you were drafting this report?**

17 A. No, not while I was drafting it.

18 **Q. Did you review any law review articles**
19 **while you were forming the opinions contained in**
20 **this report?**

21 A. No. I had read some before I began the
22 process of developing this report. I've read some
23 since.

24 But in the window of time in which I was
25 developing this report, I did not read law review

1 articles.

2 **Q. Okay. Did law review articles influence**
3 **the opinions that you reached in this report in**
4 **any way?**

5 A. I think they augment. I wouldn't say
6 that they change my opinions. They augment my
7 opinions.

8 **Q. How do they augment your opinions?**

9 A. They reinforce that -- what the
10 constitutional language means when it comes to a
11 right to a clean and healthful environment.

12 **Q. What law review articles are those that**
13 **reinforce what the right means?**

14 A. You know, if they were in here, I could
15 give you exact specifics on what those law review
16 articles are.

17 But it's the self-executing nature of the
18 constitution and what the legal history was that
19 led to where we are today, when it comes to
20 interpretation of the constitution.

21 **Q. When you say "self-executing nature of**
22 **the constitution," what do you mean?**

23 **What are you referring to there?**

24 A. It is a -- it doesn't need, you know,
25 anyone to provide it. Everyone has an obligation

1 right from the start. There is nothing more that
2 really needs to be done to say that we have this
3 obligation to maintain and improve a clean and
4 healthful environment.

5 **Q. Is it your opinion that the right to a**
6 **clean and healthful environment in the Montana**
7 **Constitution is a self-executing provision?**

8 A. It is my opinion that's the case.

9 **Q. What is the basis for that opinion?**

10 A. Just research and analysis of other
11 constitutional provisions that are self-executing
12 and that are in the bill of rights.

13 **Q. What has the Montana Supreme Court said**
14 **about when a constitutional provision is**
15 **self-executing?**

16 A. I don't recall.

17 **Q. Okay.**

18 A. I read it. I don't recall.

19 **Q. Okay. And is it your opinion that both**
20 **the Article 2, Section 3 right to a clean and**
21 **healthful environment and the Article 9 clean and**
22 **healthful environment provisions are both**
23 **self-executing?**

24 A. Article 2 is one that's definitely
25 self-executing. I'm a little unclear on

1 Article 9.
 2 **Q. Do you remember what Article 9 says?**
 3 A. Article -- no. If you provided me with a
 4 copy, I could tell you, but it's very similar
 5 language. But it provides additional language
 6 underneath.
 7 **Q. Okay. Let's move on to the paragraph at**
 8 **the bottom of page 4. So you say that, quote,**
 9 **"During the 1970s, Montana's political branches**
 10 **were increasingly raising concerns about the need**
 11 **to protect Montana's environment and concerns**
 12 **about the degradation of Montana's environment and**
 13 **natural resources from fossil fuel extraction,**
 14 **especially coal," end quote.**
 15 **What do you mean by "increasingly" in**
 16 **this sentence?**
 17 A. Well, there -- "increasingly," more than
 18 before.
 19 So Major Facility Siting Act, for
 20 example, is a very good example of a demonstration
 21 of the increasing concern the state had regarding
 22 coal extraction and use.
 23 **Q. Okay. What are the political branches?**
 24 A. I'm sorry. What did you say?
 25 **Q. What are political branches?**

1 about what that impact would be on agricultural
 2 and on air quality and water. So there are so
 3 many documents that indicate that Montana was
 4 increasingly concerned.
 5 But the ones that -- for this purpose,
 6 that are listed in this report, are the ones that,
 7 you know, I think demonstrate that concern.
 8 **Q. Are there any documents or sources, other**
 9 **than the ones listed in this report, that form the**
 10 **basis for that conclusion?**
 11 A. As I just said, the history of the Clean
 12 Air Act, the history of MFSA certainly contribute.
 13 The debates over the building of the Colstrip
 14 power plant and the reinvigoration of the mine
 15 down there, I've read all those transcripts. Not
 16 all, I've read a lot of those transcripts.
 17 **Q. Yeah.**
 18 A. And all of that colors my judgement.
 19 **Q. Sure.**
 20 **Why didn't you cite to any of those in**
 21 **your report?**
 22 A. I thought that these did a good job of
 23 summarizing the concerns. There are many
 24 political individuals mentioned, and their letters
 25 are very clear in addressing the issues.

1 You say in sentence one, "Montana's
 2 political branches." What are those?
 3 A. Oh. That's the legislature and the
 4 executive branch.
 5 **Q. Okay. Can you please describe all facts,**
 6 **data and sources you relied on in forming the**
 7 **conclusion that the political branches were**
 8 **increasingly concerned about the environment**
 9 **during the 1970s?**
 10 A. No. This is -- I can't provide you with
 11 every document. I mean, I have an entire file
 12 cabinet full of MEIC's work on the Clean Air Act
 13 in the '70s and implementation of the Clean Air
 14 Act.
 15 There's no doubt about the fact that
 16 there was increasing concern about air pollution
 17 and its impacts and the need -- a resolve to do
 18 something about it.
 19 I mean, that's just one example, but
 20 Major Facility Siting Act is another.
 21 **Q. Okay.**
 22 A. There was a great concern that Montana
 23 was going to become the boiler room of the nation
 24 and have coal mines and coal plants scattered
 25 across our landscape, and people were concerned

1 **Q. Sure.**
 2 **Okay. Let's take a look at paragraph 5,**
 3 **and I'm beginning at the second full paragraph**
 4 **on -- I'm sorry, page 5, second full paragraph**
 5 **where you're describing the 1975 EQC report.**
 6 **Is it fair to say that from that**
 7 **paragraph, on through the next paragraph on page**
 8 **6, you're describing conclusions of the 1975 EQC**
 9 **report?**
 10 **MR. SULLIVAN:** And then, Tim, once we get
 11 the question at hand, I think it will be about an
 12 hour since we had our last break. And if no one
 13 else, at least I could use a short break.
 14 **MR. LONGFIELD:** I could too.
 15 **THE WITNESS:** I would disagree with your
 16 question. I mean, you said that this summarizes
 17 the conclusions, but, no, it is more than that.
 18 It is -- it is a discussion of the report
 19 itself and the process and the information that
 20 they developed and relied on in order to reach the
 21 conclusions that you were referring to.
 22 **BY MR. LONGFIELD:**
 23 **Q. Sure.**
 24 **So I didn't mean to ask whether the only**
 25 **thing that's happening in these paragraphs is**

1 summarizing the conclusions, but is that one of
2 the things that you're doing in the paragraphs I
3 referenced.

4 So beginning with the second paragraph on
5 page 5, continuing on to -- through the second
6 paragraph on page 6, are you summarizing the
7 conclusions contained in the EQC report?

8 A. Am I summarizing conclusions? I'm doing
9 more than just summarizing conclusions. I'm
10 summarizing the report.

11 Q. Okay. Thanks.

12 MR. LONGFIELD: Let's take a quick break.
13 Ten minutes?

14 MR. SULLIVAN: Ten minutes sounds good.
15 (Whereupon, a break was then taken.)

16 BY MR. LONGFIELD:

17 Q. Anne, so I want to start asking you a
18 series of questions about page 5 and 6 of your
19 report.

20 So I'm looking at the second full
21 paragraph on page 5, and I'll just quote from it.
22 You say, "Two years later, in 1975, the Montana
23 Environmental Quality Council issued the report,
24 Montana Energy Policy Study," which you define as
25 the "1975 EQC report," quote, "which was 'designed

1 to provide data and policy recommendations to
2 assist Montana legislators in developing a state
3 energy policy."

4 You go on to say, quote, "According to
5 the 1975 EQC report: 'The principle finding of
6 the study is that Montana must take immediate
7 action if it is to protect much of its long-range
8 agricultural base, its economic stability, its
9 environmental quality and its unique way of
10 life,'" end quote.

11 Does your expert report contain any
12 opinions from you about the accuracy of the
13 "principle finding" of the 1975 EQC report?

14 A. Can you say that again?

15 Q. Yeah.

16 Does your expert report contain any
17 opinions from you about the accuracy or validity
18 of the "principle finding" of the 1975 EQC report?

19 A. My expert report provides information
20 regarding the report and is provided in the
21 context of what was going on at the time.

22 Q. But are you saying anything about whether
23 the EQC report was accurate, inaccurate, making a
24 valid state, invalid statement?

25 A. Certainly I believe that the EQC report

1 was reflecting the times, the concern.

2 I mean, this is the body of evidence that
3 we've been seeing from the '68 conference, to the
4 1971 passage of the Montana Environmental Policy
5 Act, to the 1972 constitutional convention, the --
6 you know, the concern that was going on at the
7 time regarding fossil fuel development in Montana.

8 So my report reflects the EQC report and
9 provides some history in the context in which that
10 report was brought forward and created.

11 Q. Okay. But your report does not offer
12 opinions about the validity of the conclusions
13 that the EQC report reached; is that correct?

14 A. Not in this section.

15 Q. Does it at all?

16 A. Yeah.

17 Q. Okay.

18 A. Well, let me think about this. I guess
19 I'm a little confused by the question.

20 Q. Okay. I'll try restating it.

21 A. Okay.

22 Q. Does your expert report offer any
23 opinions about the validity of any of the findings
24 reached in the 1975 EQC report?

25 A. It provides context for that EQC report.

1 Q. I understand that. But does it provide
2 any assessment of the accuracy of the findings of
3 the report?

4 A. I think the findings speak for
5 themselves. It's the context and evolution of the
6 policy development in a state that is what's
7 provided here. The report itself is a report that
8 I'm not here to argue with.

9 Q. Okay. So you're not trying to make any
10 assessment about the validity of the findings of
11 the report; am I hearing you correctly?

12 A. I mean, that's an odd phrasing. I guess
13 I'm still stuck on the word "validity."

14 Q. Okay. What about "validity" isn't
15 tracking with you?

16 A. Well, if I agree with the findings; is
17 that what you're saying or are you saying --

18 Q. Yeah. If you think that they're
19 accurate.

20 A. In what context? I guess I'm kind of
21 confused by what you mean by "accurate."

22 It is a report that was created in which
23 they -- they reach conclusions. I agree.

24 Q. Do you agree or disagree with the
25 conclusions of the 1975 EQC report?

1 A. I certainly agree with some of those
2 conclusions. If you give me the report, I could
3 tell you the things I don't agree with.
4 But I think the things that I believe
5 were important have been referenced directly here.
6 **Q. Okay. But so the specific finding that**
7 **I'm asking about now is the one that the report**
8 **says was its "principle finding."**
9 **And you quote it on page 5 of your expert**
10 **report. It says, quote, "the principle finding of**
11 **the study is that Montana must take immediate**
12 **action if it is to protect much of its long-range**
13 **agricultural base, its economic stability, its**
14 **environmental quality and its unique way of life,"**
15 **end quote.**
16 **So that's the finding I'm talking about**
17 **for this next series of questions.**
18 A. Thank you.
19 **Q. So let me just ask the question.**
20 **Are you offering any opinions in your**
21 **expert report about the accuracy or validity of**
22 **that finding, or are you simply stating that the**
23 **finding existed, that that's what the report said?**
24 A. I am stating the finding existed which,
25 in the context of the times, was important.

1 **Q. Okay. Is it important for the opinions**
2 **you reach in your report whether this finding was**
3 **accurate or not?**
4 **Does it make any difference?**
5 A. Yes, it does.
6 **Q. What difference does it make?**
7 A. Because it raises concern about the need
8 to protect environmental quality and our unique
9 way of life and agricultural.
10 So I -- I believe that this was just
11 another important document and process in the
12 evolution of Montana's environmental policy.
13 **Q. But do you believe it was an accurate**
14 **finding?**
15 A. Accurate for the time.
16 **Q. Okay. What is your basis for believing**
17 **it was accurate for the time?**
18 A. Based upon the other documents that I've
19 already cited. You know, the correspondence the
20 agencies had with the governor, that they had with
21 the Federal Power Commission, with the
22 constitutional convention, the enactment of MEPA
23 itself. It's a whole body of what was going on,
24 both in Montana and the country at that time.
25 So I believe that that's an accurate

1 depiction of the concerns.
2 **Q. What is your understanding of what the**
3 **report means when it recommends that Montana take**
4 **immediate action?**
5 **What does "immediate action" mean?**
6 A. I don't think that the EQC report is --
7 is in-depth about what those immediate actions
8 should be.
9 I think they are implying that there is a
10 risk that is being posed by development in this
11 state, particularly coal development, that could
12 harm these things and that Montana needs to do
13 something about it.
14 **Q. Okay.**
15 A. And part of that is develop an energy
16 policy.
17 **Q. Okay. Let's move on to the final full**
18 **paragraph at the bottom of page 5. I'm looking at**
19 **the sentence that begins with "significantly," and**
20 **I'll read from it directly.**
21 **It says, quote, "Significantly, the 1975**
22 **EQC report warned that," quote, "'the extraction**
23 **of coal by strip mining is potentially one of the**
24 **most environmentally destructive methods of**
25 **obtaining fuel for energy production now used in**

1 **Montana," end quote.**
2 **So for the next series of questions, I'm**
3 **going to be talking about the finding that I just**
4 **read regarding the extraction of coal strip mining**
5 **and its dangers.**
6 **Does that sound good?**
7 A. Uh-huh.
8 **Q. Okay. Do you agree with the finding of**
9 **the 1975 EQC report that the extraction of coal**
10 **strip mining is or was at the time potentially one**
11 **of the most environmentally destructive methods of**
12 **obtaining fuel for energy production used at the**
13 **time in Montana?**
14 A. Yes.
15 **Q. Okay. What is the basis for your**
16 **agreement with that statement?**
17 A. The knowledge of, for example, the
18 Rosebud mine and its impact on water resources
19 over time and the debate that occurred over the
20 Colstrip power plant and the development of those
21 units and the impact that they would have because
22 they -- they had to have -- the mine was adjacent,
23 they had to have coal from that mine.
24 So there's a whole body of information
25 regarding what was occurring at that time on the

1 ground that helps inform this statement and
2 that -- it does seem to me that that was a very
3 accurate description of what people's concerns
4 were and what they were starting to see when it
5 came to coal mining on that kind of scale.

6 **Q. Okay. Are you an expert on the
7 environmental impacts of coal mining?**

8 A. I know a whole lot more than most people,
9 so it depends on how you define "expert." But I
10 certainly, in Montana, would consider myself an
11 expert.

12 **Q. Okay. So you think most people in
13 Montana don't know very much about the
14 environmental impacts of coal mining?**

15 A. No, I don't.

16 **Q. I guess, is one of the opinions you
17 provide in your expert report related to the
18 environmental impact of coal mining?**

19 A. Could you rephrase that, or could you say
20 that again?

21 **Q. Yeah. Are any of the opinions put forth
22 in your expert report related to the environmental
23 impacts of coal mining in Montana?**

24 A. Yes.

25 **Q. What opinions are those?**

1 A. They are -- they are that coal mining is
2 responsible for the coal that is inevitably burned
3 and goes into the atmosphere, that greenhouse
4 gases go into the atmosphere.

5 So I think that there's a number of
6 places where that is true, where that is present.

7 **Q. What scientific studies or data did you
8 rely on in forming your opinion that coal
9 contributes to greenhouse gas emissions and
10 exacerbates climate change?**

11 A. All of the IPCC reports.

12 **Q. Okay. And when did you last review
13 those?**

14 A. As recently as this week, I've reviewed
15 some of them. But over the course of last year,
16 I've reviewed the most recent one.

17 **Q. Okay.**

18 A. Or the most recent, I should say, ones,
19 because they come out in bunches.

20 **Q. Okay. So I guess I'm just trying to
21 understand, are the impacts of particular methods
22 of energy extraction on climate change part of
23 what your expert report is discussing?**

24 A. Sorry. Can you say that again?

25 **Q. Sure.**

1 **Is your expert report discussing the
2 impacts of particular methods of energy extraction
3 on climate change?**

4 **MR. SULLIVAN:** And I'll object to the
5 form. The report speaks for itself.
6 Answer.

7 **THE WITNESS:** There are only two types of
8 coal mining in Montana. There's strip mining and
9 there's underground mining.

10 So, yes, my expert report discusses both,
11 I believe, but certainly I know underground
12 mining.

13 But strip mining, if it's not in my
14 expert report, then it -- you know, my knowledge
15 is informed by my knowledge of the strip mines in
16 the state and the environmental -- the MEPA
17 documents, expert reports that we have gathered
18 from our experts in various litigation.

19 So if it's here -- I think it is, but I'd
20 have to look.

21 Yeah, I see the Decker -- you know, on
22 page 25, you have the Decker mine; you have the
23 Signal Peak mine; you have -- moving on to page
24 26, you have the Rosebud mine. Again, 26, the
25 Rosebud mine, then the Spring Creek mine.

1 **BY MR. LONGFIELD:**

2 **Q. And I would agree with you that your
3 report discusses several mining activities in
4 Montana.**

5 **But what I'm asking you is whether you
6 discuss in your report the impact of any coal
7 mining activity on climate change?**

8 **Is that something you discuss in your
9 report?**

10 A. That is information I provide in the
11 report, yes.

12 **Q. Where do you provide that information?**

13 A. That is, again, in the description of
14 some of those -- the description of some of those
15 mines in Section 4, the things that defendants
16 have approved for fossil fuel projects.

17 **Q. Okay. So in the summary of your
18 opinions, which I believe is on page 29 -- yes, on
19 29 of your report, which of these opinions relates
20 to whether and to what extent coal impacts climate
21 change in Montana -- coal mining projects impact
22 climate change in Montana?**

23 A. I would -- well, certainly, the seventh
24 and eighth bullets.

25 **Q. Okay. So let's start with seven. Could**

1 **you read seven for me?**

2 A. "Seventh, defendants have a long-standing
3 track record of working closely with the fossil
4 fuel industry to support fossil fuel extraction,
5 transport and burning. As far as I know,
6 defendant agencies have never denied a permit
7 sought by a fossil fuel company."

8 **Q. Is that opinion about the extent to which
9 coal mining impacts climate change in Montana?**

10 A. It is part of that, yes.

11 **Q. How so?**

12 A. Because the, as courts have said many
13 times, the extraction of coal is only for one
14 purpose, and that contributes to greenhouse gases
15 in the atmosphere, which are contributing to the
16 climate crisis.

17 **Q. What scientific studies did you review
18 in, you know, forming your opinion that coal
19 mining contributes to climate change?**

20 A. The IPCC reports.

21 **Q. Okay. And you reviewed those when
22 drafting this report?**

23 A. I reviewed those prior to and after
24 drafting the report. I mean, I review those when
25 they come out. I go back in time and review those

1 as I work on various projects.

2 **Q. Okay. Let's go to page 6. And looking
3 at the first paragraph, I'll read one excerpt.
4 So, quote --**

5 A. Where are you, please?

6 **Q. At the first paragraph. And I'm at,
7 quote, "It discussed how solar and wind power were
8 'available now' as energy sources and noted that
9 solar heating and cooling was cost competitive
10 with conventional (i.e., fossil fuel) energy
11 sources and that wind for electricity would be
12 economically viable in a few years," end quote.**

13 **In your expert report, are you offering
14 any opinions or conclusions about whether the 1975
15 EQC report was correct to conclude that solar and
16 wind power were available at the time as viable
17 energy sources?**

18 A. I believe they were. I'm not sure if it
19 would rise to the level of saying that that is the
20 case, but certainly the -- the state believes
21 so -- yeah.

22 **Q. What's the basis, or why do you believe
23 that they were?**

24 A. Because those technologies existed and
25 were being utilized, you know, back in the '70s.

1 Solar and wind power didn't just start a decade
2 ago, they've been going on for a very long time.

3 **Q. Does your opinion contain any conclusion
4 or -- excuse me.**

5 **Does your report contain any opinions or
6 conclusions about the availability of alternative
7 sources of energy during the '70s?**

8 A. No. I think I'm, at least for this --
9 this purpose, this is relying on the documents
10 that we have provided, that I have provided in my
11 expert report.

12 **Q. So the answer, I'm sorry, just to make
13 sure I caught it, is, no, you don't provide any
14 opinions in your expert report about the
15 availability of renewable forms of energy in the
16 1970s?**

17 A. In my expert report I refer to those who
18 were present at that time to say that there was
19 clean energy available; so I'm relying on their
20 knowledge at the time that there was this
21 technology available. But, certainly, history
22 proves that correct.

23 **Q. How does history prove that correct?**

24 A. Because people were using solar and wind
25 at that time.

1 **Q. Do you -- but I guess -- did you look at
2 any historical evidence for use of solar and wind
3 during the '70s, when preparing this report?**

4 A. When preparing this report, no.

5 **Q. Okay.**

6 A. Do I know that, yes.

7 **Q. But you didn't look at it when preparing
8 this report?**

9 A. I knew it when preparing the report.

10 **Q. Did you rely on that historical evidence
11 when preparing this report?**

12 A. I relied on that historical evidence
13 to -- to believe that this was an accurate
14 statement.

15 **Q. Okay. And what historical evidence was
16 that?**

17 A. I don't recall. There's -- there's a lot
18 of history in the solar and the wind technology
19 arenas that this technology existed.

20 **Q. Okay.**

21 A. I have an old windmill in my backyard
22 from a very long time ago. Wind is not new
23 technology.

24 **Q. Any other evidence other than the
25 windmill in your backyard?**

1 A. Yes, there is other evidence, but it is
2 not here today, and it is not included in this
3 report, other than the documents that have been
4 provided to you.

5 Q. Okay. And then I'm looking at the
6 finding from the EQC report from the same
7 paragraph that I most recently quoted. I'll read
8 it again.

9 Quote, "wind for electricity would be
10 economically viable in a few years," end quote.

11 Same question: In your expert report,
12 are you offering any opinions about the accuracy
13 of the 1975 EQC's report -- EQC report's
14 conclusion that wind for electricity would be
15 economically viable within a few years?

16 A. I believe that conclusion is correct, but
17 I don't recall if I have anything in here that
18 says anything more than what I know based upon the
19 information I already have.

20 Q. Why do you believe that conclusion was
21 correct?

22 A. Because wind power existed. You know,
23 farms across the state were using wind for their
24 operations. This is nothing new.

25 Q. But the conclusion isn't whether wind

1 economically viable for electricity within a few
2 years?

3 A. Yeah, I do.

4 Q. Okay. Why do you agree with that?

5 MR. SULLIVAN: Objection. Form. Asked
6 and answered.

7 THE WITNESS: Because it was -- it was
8 accurate. Wind energy is certainly even more
9 economic today than it was back then.

10 But it depends on -- you know, economics
11 is a whole body of scientific study, and I believe
12 that economics must include externalities. And
13 when you consider externalities, the economics of
14 wind are very different than if you exclude the
15 externalities of coal in that calculation in that
16 comparison.

17 BY MR. LONGFIELD:

18 Q. Are you an economist?

19 A. No, but I took a lot of econ.

20 Q. When did you take econ classes?

21 A. In my undergrad.

22 Q. Okay. Are you offering any opinions in
23 the field of economics in this expert report?

24 A. It is colored by my knowledge of
25 economics and the knowledge I have of what

1 existed, it's whether it was economically viable.

2 A. Yes -- well --

3 Q. In a few years.

4 A. Let me find that sentence. I was looking
5 at a different sentence. It says, "Some
6 alternative energy sources are very practical in
7 Montana today, especially conversion" --

8 Q. So I'm looking --

9 A. -- to "wind power to electricity."

10 So --

11 Q. So I'm talking about the part of the
12 sentence that says, quote, "wind for electricity
13 would be economically viable in a few years," end
14 quote. It's three lines up from the one you just
15 read.

16 A. I think that you're -- that that is --
17 you have to put that in context.

18 So they -- wind is -- was viable back
19 then for generation of electricity. It was a
20 matter of, on the scale, that was necessary to
21 replace coal as a power -- as a -- yeah, as a
22 power source.

23 Q. Okay. And sorry, I'm not trying to be
24 tedious here, but do you agree with the EQC's
25 report that wind at that time would be

1 economists have said in this arena.

2 Q. Okay. What economists' opinions do you
3 rely on in coloring your opinions in this report?

4 A. A lot of it -- well, not a lot. But some
5 of it, for example, would be the Lazard annual
6 study of comparing the cost of various energy
7 resources. That's been going on for a very long
8 time. I don't know when the Lazard study started,
9 but they release annually their analysis of
10 various resources. So that's one.

11 Q. Did you review the Lazard study in
12 preparing this report?

13 A. I did not review it for the purpose of
14 this report, but I review it regularly.

15 Q. Did you cite to the Lazard study at any
16 point in this report?

17 A. No. But that's part of -- you know, as I
18 said early on, it is including but not limited to.

19 Q. Uh-huh. Okay. Skipping down a few
20 lines -- and this is actually a line that you were
21 reading a moment ago, same paragraph.

22 So quote, "Some alternative energy
23 sources are very practical in Montana today,"
24 ellipses, "especially conversion of wind power to
25 electricity," end quote.

1 Are you, in your expert report, offering
2 any opinions about the accuracy of that finding
3 from the 1975 EQC report?

4 A. I believe it's accurate. I'm not sure if
5 I provide -- I don't think I provide anything
6 that, you know, says that that is the case, but
7 my -- my expertise, again, informs my belief that
8 that is an accurate statement.

9 Q. Okay. Is one of the purposes of your
10 report to assess the merits of the findings of the
11 1975 EQC report?

12 A. The purpose of my report is to provide
13 the context in which the 2011 changes in the law
14 were made and, you know, what happened before that
15 point in time and what happened after that point
16 in time and how the political situation in Montana
17 was making those decisions, what decisions they
18 were making and why, and this is another piece of
19 evidence as to why they were making the decisions
20 they were making.

21 Q. Okay. I understand.

22 I'm looking now at the second full
23 paragraph on page 6, okay?

24 And I will read from an excerpt there.
25 You say, quote, "This history shows that for the

1 past five decades, the State of Montana has known
2 that continuing to promote coal as an energy
3 resource came with great risk for Montana's
4 environment, natural resources, economy and
5 residents, and that viable alternatives exist,"
6 end quote.

7 First question: Did you write that
8 sentence?

9 A. I don't recall. I don't recall.

10 Q. If you didn't write it, who would have
11 written it?

12 A. My attorneys.

13 Q. Okay. If you had to estimate, what
14 percentage of the sentences in your report were
15 written by your attorneys?

16 A. I don't recall.

17 Q. More than half?

18 A. Possibly. I don't recall.

19 I mean, this is -- these are my words. I
20 put my name on this document. These are the words
21 that I believe.

22 So who actually put the word "decade" in
23 there, I think is irrelevant.

24 I have signed my name to this statement
25 saying that it is true, and I believe it's true.

1 Who --

2 Q. Didn't you also sign your name saying you
3 wrote this statement?

4 A. I -- I wrote this -- I was involved in
5 the writing of this document, as any expert is
6 involved in the writing of their expert report for
7 any litigation.

8 This is -- it is an iterative process in
9 which you work with your attorneys to put things
10 on paper.

11 I am a very, very busy person, and so I
12 did not sit down and type out every word. I
13 relied on my attorneys for assistance in that,
14 based upon the conversations that we had.

15 Q. Second question about this statement:
16 What do you mean by, quote, "the State of Montana
17 has known," end quote?

18 Who are you referring to when you say
19 "the State of Montana"?

20 A. The governor, the con -- con delegates,
21 the agencies, the legislative branch. EQC is a
22 part of the legislative branch.

23 Q. Okay. Anyone else?

24 A. Probably, but I would say the branches of
25 government. I can't speak to the judicial branch,

1 but certainly the executive and the legislative
2 branch were aware.

3 Q. Every member of the legislative branch
4 was aware?

5 A. I cannot guarantee you every member of
6 the legislative branch was aware, but I can tell
7 you that their arm, known as the EQC, prepared a
8 report for them in which they were provided
9 information. Whether a politician reads every
10 word, I can't say yes or no to.

11 Q. Tell me what you know about the extent to
12 which members of the legislature reviewed the 1975
13 EQC report after it was issued.

14 MR. SULLIVAN: Objection. Form. Asked
15 and answered.

16 THE WITNESS: The EQC generally presents
17 its reports to the actual EQC. So there's a staff
18 component to EQC, and then there's a legislator
19 public component to EQC.

20 And the report is prepared for the
21 committee, and then that report is provided to
22 legislators.

23 Back in 1975, I can't tell you if they do
24 what they do today, which is they give legislators
25 training at the beginning of every session, in

1 which they inform them of the documents that are
2 available to them to review.

3 Whether legislators review those
4 documents or not, you know, is -- it varies.

5 **BY MR. LONGFIELD:**

6 **Q. So I guess given the -- your statement**
7 **that "whether legislators review those documents**
8 **or not" varies, what makes you confident that the**
9 **legislative branch knew about the findings of the**
10 **1975 EQC report?**

11 **A. Because the -- they were required to**
12 **provide that, I believe, to the legislature.**

13 That's -- the Environmental Quality
14 Council issued the report and it was intended to
15 assist legislators. I would assume that they
16 provided that to legislators, as they do today, as
17 they have done for my whole time in Montana. That
18 is what the EQC does.

19 **Q. Do you know if the EQC in 1975 presented**
20 **its report to the legislature?**

21 **A. I assume so, but I don't know for a fact.**

22 **Q. Why do you assume so?**

23 **A. Because that's the way the system worked.**

24 **Q. Do you know whether it worked in 1975 the**
25 **way that it does today?**

1 **MR. SULLIVAN:** Objection to form.
2 Argumentative. Asked and answered.

3 **THE WITNESS:** It's the same answer I just
4 gave you, which is that is how the EQC operates.
5 It is -- it is embedded in the legislative branch.

6 **BY MR. LONGFIELD:**

7 **Q. So I understand that you're saying that's**
8 **how it operates, and my question is: Do you know**
9 **whether that's how it operated in 1975?**

10 **A. I've already told you I don't know.**

11 **Q. Okay. Thank you.**

12 **Okay. Let's turn to page 8. And I am**
13 **looking at the bottom of page 8.**

14 **Sorry. I got to find my spot here.**

15 **Sorry. I'm actually in the third**
16 **paragraph on page 8.**

17 **A. Okay.**

18 **Q. Okay. So there you write, quote, "With**
19 **the adoption of the Montana state energy policy in**
20 **1993, we at MEIC expected that the emphasis on**
21 **energy that represented the least social,**
22 **environmental and economic costs would lead to**
23 **increasing renewable energy development in**
24 **Montana. This expectation was due in part to the**
25 **fact that by the 1990s there was increasing**

1 **awareness of the dangers posed by fossil fuels and**
2 **climate change and renewable energy sources as an**
3 **alternative to fossil fuels were becoming**
4 **increasingly available and cost competitive."**

5 **So I want to hone in on the second**
6 **sentence in that paragraph.**

7 **What do you mean by "increasing awareness**
8 **of the dangers posed by fossil fuels" in that**
9 **sentence?**

10 **A. The 1990 IPCC report, for the purposes of**
11 **this document.**

12 **Q. Are you referring to anyone else's**
13 **increasing awareness, other than the authors of**
14 **the 1990s IPCC report?**

15 **A. Only my knowledge of the times.**

16 **Q. Whose awareness was increasing in the**
17 **1990s?**

18 **A. Everybody who had to live near the**
19 **Colstrip power plant.**

20 **Q. Everyone?**

21 **A. Well, no, no, but some of the people who**
22 **had to live near the Colstrip power plant.**

23 **Q. Anyone else?**

24 **A. Can you repeat that question?**

25 **Q. Yeah.**

1 **You say, quote, "by the 1990s, there was**
2 **increasing awareness of dangers posed by fossil**
3 **fuels," end quote.**

4 **I'm trying to understand whose awareness**
5 **you're referring to there.**

6 **A. I would say the legislature's and the**
7 **executive branch.**

8 **Q. Okay. Anyone else?**

9 **A. For the purposes of this -- I would say**
10 **the public as well. But for the purposes of this**
11 **report, those are the two most important.**

12 **Q. So what you mean in this sentence is that**
13 **the legislature and the executive branch had**
14 **increasing awareness of the dangers posed by**
15 **fossil fuels in the 1990s?**

16 **A. Yes. And I think that the report speaks**
17 **to that.**

18 **Q. Okay. What is the basis for your opinion**
19 **that the legislature had an increased awareness of**
20 **the dangers of fossil fuels in the 1990s?**

21 **A. The passage of -- you know, that the**
22 **history of that environmental -- of the energy**
23 **policy.**

24 **So you had the -- first the**
25 **introduction -- so you had, in 1991, the**

1 Department of Natural Resources and Conservation
2 prepared a report entitled, "Energy in Montana, an
3 Overview," for the EQC, and it noted that energy
4 policy should be concerned about end uses because
5 people, you know, don't use gas, oil or
6 electricity as much as they need heat, motive
7 power and light.

8 And then in 1992, the EQC submitted HJR31
9 to the legislature, which we refer to as "HJR31
10 energy study."

11 And in that study, they talk about the
12 goals of -- what our energy goals should be.

13 **Q. Okay. Could you please describe all the
14 facts, data and sources you relied on in making
15 this statement that it was a quote, "fact that by
16 the 1990s there was increasing awareness of the
17 dangers posed by fossil fuels and climate change,"
18 end quote?**

19 A. I think the report speaks for itself. If
20 you would provide me a copy of the EQC report, I'd
21 be happy to point out where that is.

22 **Q. I'm not sure I heard the answer to my
23 question.**

24 **My question is: Can you give me the list
25 of the facts, data, sources that you relied on in**

1 **making the statement that it was a quote, "fact
2 that by the 1990s there was increasing awareness
3 of the dangers posed by fossil fuels and climate
4 change," end quote?**

5 A. Well, it is a fact that the IPCC in 1990
6 put out a report that raised the awareness of the
7 dangers posed by fossil fuels and climate change.

8 So -- and -- and it is a fact that
9 renewable resources have been increasing in price.

10 **Q. So I'm just talking about the statement
11 that "there was increasing awareness of the
12 dangers posed by fossil fuels and climate change"
13 in the 1990s.**

14 **So you mentioned the IPCC report.**

15 A. Uh-huh.

16 **Q. Anything else that you relied on in
17 forming that opinion?**

18 A. The Montana state energy policy and its
19 history of development.

20 **Q. Okay. Anything else?**

21 A. For the purposes of this, minutes from
22 the Senate hearing, the committee on natural
23 resources, and minutes from the House of
24 Representatives committee on natural resources.

25 **Q. During what session?**

1 A. 1993.

2 **Q. Okay. And on what dates?**

3 A. February -- well, February 1st, 1993, for
4 the Senate. March 5th, 1993 for the House. And
5 prior to that, they had passed HJR31 back in
6 1992 -- no, was it then?

7 Well, they had passed direction to the
8 EQC to create this report, so there was a record
9 in our legislature of wanting to establish an
10 energy policy that would address the impacts of
11 energy development in the state.

12 **Q. During the legislative history that you
13 reference, did any member of the legislature refer
14 to the IPCC reports?**

15 A. I don't -- I don't recall.

16 **Q. Okay. I guess, what evidence do you have
17 that any member of the legislature had any
18 awareness of the IPCC reports during the 1993
19 session?**

20 A. I don't have evidence other than it
21 was -- it was reported, and I would assume that a
22 legislature that is concerned about the impacts of
23 fossil fuels would be reading the latest reports
24 of the day.

25 **Q. Well, you know a lot of legislators,**

1 **right?**

2 A. And many of them read a lot. Legislators
3 can be very, very informed.

4 **Q. I certainly agree, but what I'm asking
5 is: Do you know of any legislators who read the
6 IPCC report during the 1993 session?**

7 A. I -- I do not know.

8 **Q. How do you know that they -- any
9 legislator was aware of that report?**

10 A. Because lobbyists provide information to
11 legislators, and I would assume that my co-worker,
12 Jim Jensen, at the time, or Janet Ellis, who were
13 quoted in here, provided that information to at
14 least some legislators.

15 **Q. Did either of those co-workers tell you
16 that they provided the IPCC report to any
17 legislators during the 1993 session?**

18 A. They did not, but I've worked with them
19 for so long that I can't believe that
20 nobody brought -- that neither one of those two
21 people would bring that up to legislators as
22 they're debating this.

23 **Q. Okay. Are there any other bases for your
24 statement that the legislative branch had an
25 increasing awareness in the 1990s that -- you**

1 know, of the dangers posed by fossil fuels and
2 climate change?

3 A. I think it's all outlined in my report
4 regarding what legislators were thinking and doing
5 at that time.

6 Q. Okay. Let's move on to the second half
7 of that sentence, where you say that -- so I'll
8 just throw --

9 A. So where are you? Sorry.

10 Q. So I'm starting on --

11 A. Page --

12 Q. -- page 8.

13 A. Okay.

14 Q. Second full paragraph.

15 A. Great.

16 Q. Okay. Starting on line 4, where you
17 reference, quote, "the fact that by the 1990s" --

18 A. Uh-huh.

19 Q. -- and then I'm going to move on, you
20 say, quote, "renewable energy sources as an
21 alternative to fossil fuels were becoming
22 increasingly available and cost competitive," end
23 quote.

24 Do you see where I'm reading from?

25 A. Yes.

1 A. That was -- that was part of the
2 discussion at that time, that rooftop solar was an
3 alternative available to homeowners and
4 businesses, and that they could avoid paying
5 utility bills if they could offset those costs.

6 So it was -- it was hotly contested in
7 the session and it passed.

8 So I am assuming that legislators read
9 the bills that are before them and listen to the
10 debates that occur on the House and the Senate
11 floors.

12 Q. Was that bill passed during the same
13 session as deregulation?

14 A. No.

15 Q. Before or after deregulation?

16 A. It was after deregulation. The bill that
17 passed, I believe it was during deregulation, was
18 called the Universal Systems Benefit law, which
19 was a law that allowed -- it created a fund to
20 help fund renewable energy projects across the
21 state and allowed industries to self direct that
22 funding to projects that would decrease emissions.

23 Q. And I'm sorry to go back here. I want to
24 return to the statement about increasing awareness
25 about the dangers of fossil fuels and climate

1 Q. Okay. Who had an increasing awareness of
2 what you call the fact that "renewable energy
3 sources as an alternative to fossil fuels were
4 becoming increasingly available and cost
5 competitive"?

6 A. Both the legislature and the Public
7 Service Commission.

8 Q. Okay. Anyone else?

9 A. Those are the two that -- and the
10 governor.

11 Q. And the governor, okay.

12 What evidence do you have that any member
13 of the legislature in the 1990s was aware that
14 renewable energy sources were becoming a viable
15 alternative?

16 A. They passed the renewable energy law
17 that -- net metering law at our urging, at the
18 urging of MEIC.

19 Q. During what session did they pass that
20 law?

21 A. I want to say it was 1999.

22 Q. Okay. And I guess in what way did
23 awareness of the -- what you call the increasing
24 availability of renewable energy sources inform
25 the passage of that bill?

1 change.

2 You mentioned that you're also referring
3 to the executive branch's increasing awareness of
4 fossil fuels and climate change during the 1990s;
5 is that correct?

6 A. The executive branch certainly had an
7 increasing awareness of whether -- well, certainly
8 the dangers of fossil fuels, I know, because --
9 whether they believed in the dangers of fossil
10 fuels was different, but they did sign the bills
11 that came before them for the Universal System
12 Benefit law as well as net metering.

13 So the executive branch had some
14 understanding that there was an issue that there
15 were technologies available to replace some of the
16 energy in our system.

17 Q. Okay. So is what you're saying the fact
18 that governors during the '90s signed laws that, I
19 guess, advanced renewable energy in some way is
20 evidence that they had an increasing awareness of
21 the dangers of climate change?

22 A. That they had it, at least, and the
23 renewable energy sources as available -- as
24 alternatives to fossil fuels; I would say that is
25 absolutely the case.

1 Q. Okay.

2 A. But they also -- you know, they didn't --
3 they had to sign the energy policy SV25, so -- you
4 know, a governor doesn't just sign bills. They
5 have the right to veto those bills, so they review
6 all bills.

7 So in 1993, our governor did analyze
8 whether that energy policy was appropriate for the
9 state of Montana and determined that it was and
10 signed that bill into law.

11 Q. Other than signing bills into law, what
12 evidence do you have that governors in the 1990s
13 had an increasing awareness of the dangers of
14 climate change and fossil fuel use?

15 A. I would probably harken back to the
16 Otter Creek track transfer. There was a lot of
17 contention over the transfer of those tracks
18 because of the Noranda mine on the outskirts of
19 the Yellowstone -- Yellowstone National Park.

20 And people were raising concerns with the
21 governor not to do that deal, including the
22 secretary of the interior at the time raised
23 concerns with the governor about not wanting that
24 deal to move forward.

25 So there were a whole host of reasons

1 provided for not doing that transfer, and the
2 dangers of fossil fuels were certainly, absolutely
3 a part of that conversation.

4 MR. LONGFIELD: Okay. I'm at a good,
5 quick breaking point. Do you want to take a
6 five-minute break and keep rolling?

7 MR. SULLIVAN: You bet.

8 (Whereupon, a break was then taken.)

9 BY MR. LONGFIELD:

10 Q. So, Anne, I believe before we broke you
11 mentioned that the PSC was included in your
12 statement that there was increasing awareness,
13 right?

14 A. Right.

15 Q. What's your basis for saying that the PSC
16 had increasing awareness of the dangers of fossil
17 fuels and climate change in the 1990s?

18 A. Because we were in front of the Public
19 Service Commission at that time. Ken Tool was
20 representing us and was bringing those issues to
21 their attention.

22 Q. Were they responsive to MEIC's raising
23 those issues?

24 A. I don't recall. I don't recall.

25 Q. Okay. I'm looking at the third full

1 paragraph on page 8 of your report, and it's under
2 the subheading, "2. Dangers of Climate Change and
3 Fossil Fuels Becoming Increasingly Clear."

4 The first sentence of the paragraph, you
5 say that, "During the 1990s," quote, "MEIC was
6 increasingly raising concerns about GHG emissions
7 resulting from fossil fuel combustion and
8 extraction in Montana, the resulting climate
9 impacts and the harms to Montana's environment and
10 natural resources," end quote.

11 What do you mean by "increasingly" in
12 that sentence?

13 A. Over the course of that decade, we
14 increased our public discourse of those issues.

15 Q. How did you increase your public
16 discourse?

17 A. We did it through oral conversations. We
18 did it in -- through lobbying legislators and our
19 writings.

20 So I haven't gone back and looked through
21 our newsletters, but I would assume that our
22 newsletters were raising that issue.

23 Q. Okay. One thing I wanted to ask you:
24 Has MEIC's understanding of climate change
25 remained static since the '90s, or has it evolved

1 over time?

2 A. Science isn't static, so our
3 understanding has evolved with science.

4 Q. Okay. Can you explain to me the change
5 in MEIC's understanding of climate change since
6 1990 till now?

7 A. Our understanding is -- well, our
8 understanding and conclusion is the same, the
9 evidence has increased.

10 So as we read IPCC reports and other
11 types of documents that -- that discuss climate
12 change, you learn, and you learn how much of the
13 problem is being created by coal, oil, gas,
14 refineries, transportation.

15 So it's an evolution in learning as more
16 evidence becomes available through federal
17 government, through scientific analysis, through
18 the IPCC, through reports like Whitlock and
19 Running's.

20 Q. Can you give me an example of something
21 MEIC believes to be true about climate change
22 today that it did not believe in the 1990s?

23 A. We did not understand the dangers of
24 methane.

25 Q. Okay. Tell me more about that.

1 A. The more we have learned about methane
2 emissions and leakage in the transport system and
3 at the wellhead, we've learned about how methane
4 contributes to the climate crisis and how much is
5 entering our atmosphere each year.

6 People used to believe that our pipelines
7 were pretty well sealed. We know now that they
8 leak about 2 percent, if not more, every year, and
9 so that's a type of evidence that we have learned
10 over time, making our concern even deeper.

11 **Q. Okay. Returning back to the final full
12 paragraph on page 8, and looking at the second
13 sentence, full sentence, and I'll read.**

14 You said, quote, "We were raising these
15 concerns with the State of Montana, including
16 defendant agency the Public Service Commission,
17 the governor of Montana and state legislators,"
18 end quote.

19 A. Sorry. I had to catch up to where you
20 were. Uh-huh.

21 **Q. Do you need me to read it again?**

22 A. No.

23 **Q. Okay. Can you please describe the
24 efforts MEIC undertook in the 1990s to raise these
25 concerns before the governor of Montana?**

1 testimony in public. But, yes, we raise these
2 issues with legislators.

3 **Q. Did anyone at MEIC ever have a direct
4 conversation with a state legislator during the
5 '90s about climate change?**

6 A. Oh, sure. I'm certain that we did.

7 I mean, Bob Raney, Hal Harper,
8 Steve Doherty; these are the kind of people that
9 we hung out with and we had conversations with
10 about the issues of our time, and climate change
11 certainly was amongst those issues.

12 **Q. Okay. Did you ever discuss the two 1990s
13 IPCC reports with any legislators?**

14 A. I don't recall.

15 **Q. Okay. I'm now looking at page 9, and I'm
16 looking at the first sentence of text underneath
17 subheading 1. Okay.**

18 It says, quote, "By the mid-2000s,
19 climate change and Montana's reliance on fossil
20 fuels for energy was increasingly being recognized
21 as a problem that needed to be addressed," end
22 quote.

23 **Who was recognizing climate change and
24 Montana's reliance on fossil fuels for energy as a
25 problem that needed to be addressed?**

1 A. It was through our public -- through our
2 discourse.

3 I can't say whether my meetings with the
4 governor resulted in a conversation regarding
5 climate change, but I certainly met with the
6 governor and his staff over time, regarding
7 various bills, as did other members of the MEIC.

8 But part of what we do is help people
9 engage in the political process and contact
10 elected officials.

11 And so that is part of what we did when
12 it came to wanting to pass the net metering law,
13 for example.

14 **Q. Okay. Did anyone at MEIC at any point in
15 the 1990s have a conversation with the governor of
16 Montana about the dangers of climate change?**

17 A. I don't know.

18 **Q. Okay. Similar question: Can you
19 describe any efforts that MEIC engaged in during
20 the 1990s to raise these concerns before state
21 legislators?**

22 A. Conversations with state legislators, I
23 mean, that's what we do. We talk to legislators
24 about the concerns of the time. They aren't
25 always the same concerns we raise in oral

1 **Who are you referring to in this
2 sentence?**

3 A. Certainly MEIC staff and our members, for
4 starters.

5 But we were raising these issues with
6 state agencies, we were raising them with
7 governors, we were raising them with legislators,
8 so...

9 **Q. Okay. So you were raising these issues
10 with agencies, the governor and state legislators.**

11 A. Uh-huh.

12 **Q. Are state agencies, the governor and
13 legislators included in your statement that
14 climate change was being recognized as a problem
15 that needed to be addressed?**

16 A. Yes.

17 **Q. Okay. What evidence do you have that by
18 the mid-2000s the governor's office was
19 increasingly recognizing climate change as a
20 problem that needed to be addressed?**

21 A: Footnote 34, "Governor Brian Schweitzer,
22 letter to Richard Opper," his director of the
23 Department of Environmental Quality, on
24 December 13th, 2005.

25 **Q. Anything else?**

1 A. The -- all of the work of the climate
2 change advisory committee, which we had
3 Patrick Judge in our office, on that committee,
4 working on that issue with the Department of
5 Environmental Quality and other state agencies.

6 **Q. When did you become aware of
7 Governor Schweitzer's letter to Richard Opper?**

8 A. As soon as it was issued.

9 **Q. And how did you become aware of that
10 letter?**

11 A. I work in the political sphere.
12 That's -- I mean, that's what we do.

13 **Q. Sure. Is that letter a publicly
14 available document?**

15 A. Sure. I mean, it was at the time. I
16 don't know if it is today, but it certainly is in
17 my files.

18 **Q. What evidence do you have that
19 legislators in the mid-2000s were increasingly
20 recognizing climate change as a concern that
21 needed to be addressed?**

22 A. Conversations with legislators in
23 addition to the formation of the climate change
24 caucus in the legislature, which was very, very
25 heartening for somebody who had been working on

1 climate change for a while.

2 **Q. What conversations -- sorry.**

3 **With which legislators did you have
4 conversations that led you to believe climate
5 change was becoming an increasing concern?**

6 A. I think it's fair to say with every
7 legislator in that caucus, and that caucus is
8 listed on the letter in your -- in the file.

9 **Q. Yeah, fair enough.**

10 **Any others?**

11 A. We talked about climate change with a lot
12 of legislators during that era. There was a lot
13 of concern over power plants that were being
14 proposed and -- on both sides of the aisle, for
15 various reasons.

16 And so we conversed with many
17 legislators; that's what we do.

18 **Q. I'm looking at page 10, where you begin
19 discussing the Montana Climate Change Action Plan
20 issued in 2007. I'll just refer to it as the 2007
21 Climate Change Action Plan like you do in your
22 report.**

23 A. Uh-huh.

24 **Q. Are you, in your expert report, offering
25 any opinions about the accuracy or the validity of**

1 **the conclusions or recommendations contained in
2 the 2007 Climate Action Plan?**

3 A. Again, your wording confuses me, I'm
4 sorry to say.

5 **Q. I'm happy to clarify.**

6 **Does your expert report say anything
7 about the accuracy of the opinions reached in the
8 2007 Climate Action Plan?**

9 A. Yes.

10 **Q. All right. Where?**

11 A. At a minimum -- start here. At a
12 minimum, on page 12.

13 **Q. Okay.**

14 A. First paragraph.

15 **Q. Okay. Can you please identify where you
16 offer an opinion about the accuracy of the
17 conclusions in the 2007 Climate Action Plan?**

18 A. I'll just read that paragraph.

19 "The 2007 Climate Action Plan was the
20 most comprehensive climate plan the State of
21 Montana had ever produced. It was notable for its
22 acknowledgments of the dangers of climate change
23 and the risks it posed to Montana's environment
24 and natural resources, as well as the importance
25 of the need to take immediate steps to reduce

1 Montana's greenhouse gas emissions. There had
2 never been a more explicit acknowledgment from the
3 State of Montana of the dangers of climate change
4 and of the need to drastically reduce Montana's
5 greenhouse gas emissions or a more explicit threat
6 to Montana's fossil fuel industry."

7 **Q. Which part of what you just read is an
8 opinion about the accuracy of the conclusions in
9 the 2007 Montana Climate Action Plan?**

10 A. I think the entire paragraph. It was
11 comprehensive, it recognized the dangers, it
12 explicitly acknowledged the problem, and it
13 explicitly acknowledged the need to take immediate
14 steps to reduce those emissions.

15 **Q. Okay. And so comprehensive -- does
16 "comprehensive" mean accurate?**

17 A. Well, I don't think I would call it
18 comprehensive if it weren't accurate, in addition
19 to being broad reaching.

20 **Q. Okay. So I guess is one way to say it
21 that your opinion about the Climate Action Plan is
22 premised on your belief that it was accurate?**

23 A. Yes.

24 **Q. Okay. Why do you believe the 2007
25 Climate Action Plan was accurate?**

1 A. Because it was, up until that point, the
2 most comprehensive in-depth analysis of what was
3 causing the climate crisis, what the emissions
4 from various sources were in the state of Montana.

5 It has been the only time that Montana
6 has really dug down and said this is where our
7 emissions of greenhouse gases are coming from, and
8 help create a road map for the types of activities
9 Montana needed to engage in, in order to reduce
10 emissions.

11 **Q. Okay. So it was accurate because it was
12 comprehensive?**

13 A. It was accurate because it was accurate.

14 **Q. Okay. But you're not a climatologist, I
15 think we've established.**

16 A. I study climate change. Am I a Ph.D. in
17 climatology? No.

18 **Q. Right.**

19 A. Do I rely --

20 **Q. Do you have a master's in climatology?**

21 A. I rely on people who know a whole -- I
22 rely on experts in the various arenas of the
23 climate crisis the provide information that helps
24 me form expert opinions.

25 There are various different types of

1 **accuracy of the 2007 Climate Action Plan rely on
2 experts in the field of climatology, climate
3 science?**

4 A. Among other things, yes.

5 **Q. Okay. What are those other things?**

6 A. The state of technology, the -- I mean,
7 climate scientists don't know much about energy
8 efficiency, for example, but yet some of the
9 recommendations in that report and the analysis
10 was about the importance of energy efficiency in
11 addressing the climate crisis.

12 So it's not just climatologists who have
13 an understanding of the climate crisis; that is
14 too narrow.

15 That -- that report was far broader. It
16 was an action plan. It was about the basis of the
17 problem, but it was about where to go from here.

18 And so there's a whole lot of information
19 that goes into discerning whether that information
20 is accurate and appropriate.

21 **Q. Okay. So fair to say that the Climate
22 Action Plan relied on information from
23 multi-disciplinary experts?**

24 A. Correct.

25 **Q. Are you an expert in any of those**

1 scientific arenas in which they look at climate
2 change and impacts and -- the causes and the
3 impacts, so it is a very broad field.

4 And I know something about a number of
5 those fields, but I absolutely rely on other
6 experts in those fields who have done the original
7 science, to help reach my conclusions.

8 **Q. Okay. Are any of your conclusions about
9 the accuracy of the 2007 Climate Action Plan based
10 on your own expertise or experience?**

11 A. Yes.

12 **Q. Okay. What expertise or experience is
13 that?**

14 A. My expert experience -- I'm sorry. I
15 don't understand your question.

16 **Q. Yeah. I think you said that your
17 opinions about climate change -- and remember
18 talking about all of this in the context of
19 whether the 2007 Climate Action Plan is accurate?**

20 A. Uh-huh.

21 **Q. You said that your opinions about climate
22 change rely on experts in the field, right?**

23 **Is that correct?**

24 A. Yes.

25 **Q. Okay. Do your opinions about the**

1 **disciplines on which you rely?**

2 A. Depends on how you define "expert."

3 But I have a lot of expertise in many
4 areas, and so I am able to discern when -- for
5 example, that that report did rely heavily on
6 carbon capture and sequestration.

7 And I learned a lot about carbon capture
8 and sequestration during that period of time. I
9 tried to pass a bill on it, I opposed another bill
10 on it, helped pass it in the end.

11 But I learned a lot, and I learned that
12 it was a technology that didn't actually exist
13 yet. So while that report talked about the need
14 for carbon capture and sequestration, I also knew
15 that that wasn't an immediate viable alternative
16 for addressing the climate crisis.

17 So it's complicated.

18 **Q. Okay. I'm not sure there was any answer
19 to my question.**

20 **Are you an expert in any of the
21 disciplines --**

22 A. Oh, sorry. I thought I turned my phone
23 off.

24 **Q. So --**

25 **MR. SULLIVAN:** And, Tim, I'm going to

1 object to the form. Asked and answered.
 2 **MR. LONGFIELD:** Sure. Sure.
 3 **MR. SULLIVAN:** And let's see, it is now a
 4 little after 1:00, so whenever you're done with a
 5 line of questioning and you think it's a good time
 6 to take a break, let's take a break.
 7 **MR. LONGFIELD:** Okay. Give me maybe just
 8 five more minutes and we should be good to go.
 9 **THE WITNESS:** Many people rely on my
 10 knowledge to make decisions, so depends on how you
 11 define "expert."
 12 I would say I'm an expert in a lot of
 13 arenas when it comes to climate change and the
 14 problems and the solutions, but I also rely on
 15 scientists who do original research.
 16 **BY MR. LONGFIELD:**
 17 **Q.** Okay. Are the -- so earlier you told me
 18 that you rely on experts in the area of climate
 19 science; is that correct?
 20 A. Correct.
 21 **Q.** What did you mean when you said "experts
 22 in the area of climate science"?
 23 A. Okay. Those people who do original
 24 research.
 25 **Q.** People who do original research. So

1 **let's just stick with that definition for a few**
 2 **minutes.**
 3 A. Let me qualify that. They do original
 4 research that's credible.
 5 **Q.** Okay.
 6 A. It's well done. They just follow the
 7 scientific method that is based upon precedent.
 8 **Q.** Sure. The scientific method, would peer
 9 review be a part of the credibility there?
 10 A. Not always, but it is certainly helpful.
 11 **Q.** Sure, sure. Okay. So let's just take
 12 that definition of "expert."
 13 **Are you an expert in any of the**
 14 **disciplines upon which the 2007 Climate Action**
 15 **Plan relied?**
 16 **MR. SULLIVAN:** Objection. Asked and
 17 answered.
 18 **THE WITNESS:** Could you read back my
 19 answer because -- sorry, I don't remember it.
 20 It's late in the -- you know, it's before lunch.
 21 (Whereupon, a portion of the
 22 previous testimony was read
 23 back.)
 24 **THE WITNESS:** The original question was
 25 who -- what I'm saying for climatologists that I

1 reach out to for their expertise or I rely on for
 2 their expertise.
 3 There are a whole host of ways you can
 4 define an expert.
 5 So when I'm looking at climate science, I
 6 want to build upon the knowledge that I already
 7 have, from all the research I've already done, by
 8 talking or interacting or reading research of
 9 people who do original science.
 10 But you could be an expert in many things
 11 without ever having done that -- you know, a
 12 peer-reviewed scientific study or original
 13 research.
 14 I think "expertise" is a matter of
 15 definition.
 16 **BY MR. LONGFIELD:**
 17 **Q.** Okay. But fair to say that you haven't
 18 done any original research or peer-reviewed
 19 studies that could be deemed credible in the area
 20 of any of the disciplines upon which the 2007
 21 Montana Climate Action Plan rely?
 22 **MR. SULLIVAN:** I would object on the
 23 basis of ambiguity. What were those studies? You
 24 said "studies." What studies are you referring
 25 to?

1 **MR. LONGFIELD:** I don't think I referred
 2 to any studies. I said disciplines.
 3 **MR. SULLIVAN:** Oh.
 4 **BY MR. LONGFIELD:**
 5 **Q.** I may have misspoken, but discipline.
 6 A. The disciplines. Could you repeat the
 7 question? I'm sorry.
 8 (Whereupon, a portion of the
 9 previous testimony was read
 10 back.)
 11 **THE WITNESS:** Oh, my God, that's a long
 12 question.
 13 **BY MR. LONGFIELD:**
 14 **Q.** Well, give me an answer.
 15 A. Well, I have not done any original
 16 research, other than in the policy arena, where I
 17 do research all the time. And I've not done any
 18 peer-reviewed, as I've said many times.
 19 **Q.** So in forming scientific conclusions that
 20 form the basis of your opinion that the 2007
 21 action plan was credible --
 22 A. Uh-huh.
 23 **Q.** -- do you rely on anything other than the
 24 opinions of other experts?
 25 A. I rely on myself and my knowledge and my

1 base of knowledge. So experts, activists, people
2 who are knowledgeable and what I term "credible,"
3 and, you know, just a body of individuals and
4 writings and research to help inform whether I
5 think something like that is a credible document.

6 **Q. Okay. Yeah. Thank you. That answers my
7 question.**

8 **I'm looking at the highlighted sentence
9 in the second paragraph on page 13 of your report,
10 so it's the first sentence of the second
11 paragraph.**

12 A. It's not highlighted.

13 **MR. SULLIVAN:** Partially italicized.

14 **BY MR. LONGFIELD:**

15 **Q. Italicized.**

16 A. Italicized, okay.

17 **Q. Okay. I'll read from it. You say, "As
18 the above communications and reports make clear,
19 the dangers of climate change and fossil fuels,
20 and the need for the State of Montana to
21 significantly reduce its GHG emissions and
22 reliance on fossil fuels was being widely
23 discussed in both the executive and legislative
24 branches of government by 2007 and 2008, though
25 there was also ample evidence of the dangers posed**

1 So this is -- you know, this is just
2 based upon all sorts of information, but mainly
3 what's in the report.

4 **Q. Is any of that information that this is
5 based on not contained in a publicly available
6 document or record?**

7 A. Sure. Conversations that I've had with
8 legislators during that period of time,
9 conversations I had with the governor's office
10 during that time, the governor himself, when we
11 would go and meet with him to talk about various
12 issues. So yes.

13 **Q. Okay. And did you feel like -- this is
14 Governor Schweitzer that we're talking about,
15 correct?**

16 A. Uh-huh.

17 **Q. Was Governor Schweitzer more receptive to
18 discussions with MEIC about climate change than
19 previous governors had been?**

20 A. Yes.

21 **Q. Okay. Was he the most receptive of any
22 governor, in recent memory?**

23 A. I'd say Bullock was also accessible and
24 interested.

25 **MR. LONGFIELD:** Okay. I think I'm at a

1 **by climate change and fossils fuels well before
2 2007," end quote.**

3 **What do you mean by "widely discussed" in
4 this sentence?**

5 A. The -- the legislature had bills
6 considering climate change and they debated those
7 bills.

8 The -- the governor's climate advisory
9 committee, whatever the official name was, was
10 full. I mean, it was really -- it was an amazing
11 effort by individuals all over the state and --
12 who formed themselves into various subcommittees
13 and discussed amongst themselves and with their --
14 the people they were representing, about climate
15 change and what should be in this report.

16 So I'm not sure -- I mean, it was an
17 issue of the time, in addition to the fact that it
18 was being discussed in the courts. And the
19 legislature and the executive branch were either
20 defending their decisions or they were involved in
21 those actions.

22 So it was very much on everybody's mind.

23 I -- you know, Schweitzer put some of
24 this in his state of the union one year, maybe
25 every year, but certainly one year.

1 good breaking point, if you want to do lunch.

2 **MR. SULLIVAN:** Yeah.

3 (Whereupon, a break was then taken.)

4 **BY MR. LONGFIELD:**

5 **Q. Anne, welcome back from lunch.**

6 **So looking at page 13 of your report.**

7 A. Uh-huh.

8 **Q. And the subsection beginning halfway
9 through page 13. It's under the subheading, "MEIC
10 Challenging Fossil Fuels Projects, Raising Climate
11 Change Arguments, and Winning."**

12 **Would you agree with me that that
13 subsection continues on until the middle of
14 page 19 of your report?**

15 A. Yes.

16 **Q. This is all one section?**

17 A. Uh-huh.

18 **Q. Okay. Is it fair to say that the
19 contents of this section are a summary of MEIC's
20 litigation and efforts to challenge fossil
21 fuel-related projects?**

22 A. To legally challenge fossil fuel-related
23 projects, yes.

24 **Q. Okay. Through the court system and
25 administrative agency review?**

1 A. Right. And it doesn't include all of the
2 challenges. We also had some regarding mercury
3 pollution from these plants that are not mentioned
4 here, but we're talking greenhouse gases here, so
5 yes.

6 **Q. Okay. Do you refer to any documents in
7 this section that are not publicly available
8 records?**

9 And if you need to take a moment to scan
10 over, that's completely fine.

11 A. Sorry. I probably do.

12 **Q. Okay.**

13 A. I believe that is correct.

14 **Q. Okay. Thank you.**

15 Next I'd like you to turn to page 23 of
16 your report, if you would.

17 **Okay. And looking at the first complete
18 paragraph on page 23, in which you quote, "One
19 important report on the impacts of climate change
20 in Montana was the 2017 Montana Climate
21 Assessment, which was prepared by researchers from
22 Montana universities, state and federal agencies.
23 Defendants DNRC and DEQ were acknowledged for
24 their contributions to the report, the Montana
25 governor's office, non-governmental organizations**

1 and tribal colleges."

2 **"The 2017 Montana Climate Assessment
3 included a thorough review of the observed changes
4 in Montana's climate through 2015, as well as
5 projected changes through the end of the century
6 under different GHG emission scenarios."**

7 **The 2017 climate assessment "found that
8 climate change was already causing numerous
9 adverse impacts to Montana's environment, natural
10 resources and residents, including those related
11 to rising temperatures, wildfires, drought,
12 extreme weather events and others. All of those
13 impacts were expected to worsen in the coming
14 years as GHG emissions were expected to continue
15 to rise," end quote.**

16 **Is everything that you say about the 2017
17 Montana Climate Assessment, in this paragraph,
18 just a paraphrase of the contents of the
19 assessment itself?**

20 A. And the development of that assessment,
21 yes.

22 **Q. Okay. Is it within the scope of your
23 expert report or your testimony in this case to
24 offer opinions about the scientific reliability of
25 any of the conclusions contained in the 2017**

1 **climate assessment?**

2 A. I would rely on Dr. Running and
3 Dr. Whitlock for those since they're experts in
4 this case, and I reviewed their expert report as
5 well. So they heavily rely on this document.

6 So I think that they are the right people
7 to be asking questions of regarding this
8 assessment.

9 **Q. Okay. Not you?**

10 A. No. I mean, I've read it. I've referred
11 to it many, many, many, many times, but they're
12 the authors.

13 **Q. Okay. Would you be qualified to offer
14 conclusions about the scientific validity of any
15 part of the 2017 climate assessment?**

16 A. I would be qualified to answer, you know,
17 some things about the validity of that report, but
18 I would -- I trust their judgement.

19 **Q. Okay. I guess, what aspects of the
20 report would you be qualified to assess the
21 scientific validity of?**

22 A. Well, you can look at the report and you
23 can -- any person could look at that report and
24 look at the sources that they relied on, refer to
25 those sources and verify that they are credible

1 sources. So that's as far as I would go in an
2 analysis.

3 **Q. Okay. Thank you.**

4 **In your expert report and your testimony
5 in this case, are you offering any opinions about
6 the 2017 climate assessment, other than the fact
7 that it exists and says what it says?**

8 A. It exists, it says what it says, but it
9 also was providing information to policymakers, to
10 help them determine the state of the science and
11 where policy should go.

12 So I think of this as the nexus between
13 that scientific report and the political arena in
14 which decisions are made, so...

15 **Q. Is that sort of purpose statement
16 contained in the climate assessment itself?**

17 A. That it is to inform policymakers?

18 **Q. Yeah.**

19 A. I don't recall. If you would provide me
20 with a copy, I could look for you, but I certainly
21 understand that that was an intent.

22 Dr. Running and I have had a number of
23 conversations about policymakers needing the
24 information to make their decisions.

25 **Q. Okay. So other than your conversations**

1 with Dr. Running, are there any other bases for
2 your opinion that the purpose of the 2017 climate
3 assessment was to inform policymakers?

4 A. There were many purposes of that climate
5 assessment, but the main purpose of the climate
6 assessment was to provide everybody, not just
7 policymakers, but everybody, the public, elected
8 officials, scientists, everybody, information that
9 was up-to-date about how this was impacting
10 Montana and our resources.

11 Q. How do you know that that was its main
12 purpose?

13 A. Because I read it.

14 Q. Okay. So the contents of the report
15 indicate that --

16 A. Yeah.

17 Q. -- that's its main purpose?

18 A. Right.

19 Q. Okay.

20 A. That's what I got out of it, so yes.

21 Q. Anything outside of the report that
22 indicates to you what its purpose was?

23 Like anything based on your experience or
24 conversations that you had?

25 A. Regarding what Dr. Whitlock and the --

1 what their intention was, I can't speak to their
2 intent.

3 Q. Okay.

4 A. I can only speak to how it has been used,
5 the fact that it exists, and how it has come into
6 play in various political proceedings.

7 Q. Okay. All right. Thank you.

8 Okay. I'm looking at the last full
9 paragraph on page 23 --

10 A. Uh-huh.

11 Q. -- where you state, and I'll quote, "The
12 following year, in August 2020, the Montana
13 Climate Solutions Council released its final
14 report, the Montana Climate Solutions Plan," the
15 "'Climate Solutions Plan.' The Climate Solutions
16 Plan reiterated the ways in which climate change
17 is already harming Montana and its residents,
18 referencing rising temperatures, early snowmelt,
19 earlier spring runoff, flooding, changes in water
20 availability and stream temperatures, an increase
21 in forest mortality due to insects, and increasing
22 wildfires. It also included 37 recommendations
23 and strategies to reduce Montana's GHG emissions
24 through increasing energy efficiency, increased
25 renewable energy development, expanded use of

1 electric vehicles, increasing carbon sequestration
2 and reducing methane emissions. The Climate
3 Solutions Plan recommended achieving economy-wide
4 GHG neutrality between 2045 and 2050," end quote.

5 Of everything I just read, is that all a
6 paraphrase of the contents of the 2020 Climate
7 Solutions Plan?

8 A. Yes.

9 Q. Okay. Are you, in the scope of your
10 expert report or your testimony in this case,
11 offering any opinion about the scientific
12 reliability of any of the conclusions or
13 recommendations put forth in the 2020 Climate
14 Solutions Plan?

15 A. The next sentence, "While the Climate
16 Solutions Plan did not go far enough to reduce
17 emissions on the timeline needed to avert the
18 worst impacts of climate change, it, once again,
19 underscored the need for Montana to rapidly reduce
20 its reliance on fossil fuels and to eliminate
21 nearly all greenhouse gas emissions by between
22 2045 and 2050."

23 Q. Okay. What is the basis for your opinion
24 that "the Climate Solutions Plan did not go far
25 enough to reduce emissions on the timeline needed

1 to avert the worst impacts of climate change"?

2 A. Because the Climate Solutions Plan really
3 didn't touch much on fossil fuels.

4 Q. And why should it have?

5 A. Because fossil fuels, as in
6 Dr. Erickson's -- not doctor, but Mr. Erickson's
7 report indicates fossil fuels are what is the
8 primary contributor of Montana to emissions of
9 greenhouse gases.

10 So you can have all sorts of -- you can
11 do all sorts of nice things which are helpful, but
12 unless you also reduce the reliance on fossil
13 fuels and their subsequent emissions, then you
14 aren't dealing with the real problem.

15 Q. Is it within the scope of your expert
16 report or your testimony in this case to offer any
17 opinion about the causes of climate change and how
18 to ameliorate those causes?

19 A. I would -- for the causes of climate
20 change, I would certainly defer to Mr. Erickson's
21 report. I thought it was very thorough. I
22 thought it was accurate, based upon my knowledge
23 of the science and eight federal agencies,
24 particularly.

25 So I don't know -- I forgot your

1 question.

2 **Q. Yeah. Are any of your opinions in this**
3 **case, whether within your expert report or your**
4 **eventual testimony at trial, if we have trial,**
5 **related to the causes of climate change?**

6 **Are you offering any opinions about the**
7 **causes of climate change in this case?**

8 **MR. SULLIVAN:** And I would object to the
9 extent the report speaks for itself.

10 **THE WITNESS:** Let me go back because I do
11 think I have a section in here on it.

12 My report relies on documents that pretty
13 clearly spell out any -- there certainly are, you
14 know, an abundant number of resources that also
15 say the same thing.

16 But my report does have, under the
17 Dangers of Climate Change and Fossil Fuels Well
18 Known by the State of Montana, that section,
19 you'll see on page 9, 10, and subsequent pages, I
20 do discuss some of the causes of climate change.

21 **BY MR. LONGFIELD:**

22 **Q. Do you discuss them -- do you offer your**
23 **own opinions about the causes of climate change in**
24 **those pages and sections that you just referenced?**

25 **A.** It's very much a compilation of other

1 original science, as well as my knowledge as an
2 expert.

3 **Q. Okay. Are you a scientist in any of the**
4 **fields related to climate change?**

5 **MR. SULLIVAN:** Objection. Form. Asked
6 and answered.

7 **THE WITNESS:** There are dozens of fields
8 related to climate change, and one of those fields
9 would be public policy, so it depends on how you
10 define "expert."

11 **BY MR. LONGFIELD:**

12 **Q. I asked if you were a scientist.**

13 **A.** I am not a scientist in the sense that I
14 do not have a Ph.D. in any particular field in
15 science, but I do have a Bachelor of Science and I
16 have a knowledge and a background in science, and
17 I have been using science to inform policy work
18 for decades.

19 **Q. Should individuals without Ph.D.s in a**
20 **scientific field be forming opinions about the**
21 **causes and effects of climate change?**

22 **A.** I sure hope so.

23 **Q. So you would be willing to rely on**
24 **somebody without a Ph.D. in a scientific field**
25 **related to climate change when it comes to a**

1 **conclusion about the causes and impacts of climate**
2 **change?**

3 **A.** Yes.

4 **Q. Who would you not be willing to rely on**
5 **when it comes to an opinion about the causes and**
6 **effects of climate change?**

7 **A.** Somebody who is not relying on credible
8 data, data that has been rigorously created.

9 So I think about the Energy Information
10 Administration, for example. I don't know who's
11 behind that science, but yet it is very credible
12 and useful information, and you can tell it's
13 credible because it's there and it stays up on
14 their website and nobody has sued them to take it
15 down. And it has built upon the body of science
16 that already exists.

17 So, yeah, I don't think you have to have
18 a "Ph.D." behind your name in order to make a
19 credible argument on climate change and to be
20 reliable.

21 **Q. Okay. Why are you relying on**
22 **Mr. Erickson's report rather than just offering**
23 **your own opinions about the causes and effects of**
24 **climate change?**

25 **A.** He has done more rigorous analysis than I

1 have regarding the various components of
2 greenhouse gases and the contributions they've
3 made and how they intersect with each other and
4 how they intersect with in-state, out-of-state
5 transportation, generation mining.

6 It's -- it is a very -- I think a very
7 detailed and useful analysis, so I don't know why
8 I wouldn't rely on it.

9 **Q. Fair enough.**

10 **Okay. I want to go back a bit to page 7**
11 **of your report, kind of move on to a different**
12 **topic now. I'm looking at the final full**
13 **paragraph on page 7.**

14 **A.** Uh-huh.

15 **Q. And this is, I think, four lines down.**
16 **I'll read an excerpt. Quote, "At MEIC, we**
17 **understood that the purpose of the state energy**
18 **policy was to direct and guide future energy**
19 **decisions for the state of Montana. This**
20 **understanding was echoed by others," end quote.**

21 **Who is the "we" in this sentence, "At**
22 **MEIC, we understood"?**

23 **A.** "We," as an organization. So Jim Jensen
24 was our executive director, he is the one who
25 testified at the time.

1 At the time, it was Brian McNitt.
 2 Right after Brian left, it was me.
 3 **Q. And you're not testifying today on behalf**
 4 **of MEIC, correct?**
 5 A. I am not -- well, I think it's
 6 complicated.
 7 I -- MEIC is aware I am here, MEIC
 8 supports my being here. I am a salaried employee
 9 of MEIC, and my knowledge was gained through my
 10 job at MEIC, so...
 11 **Q. Are you being paid by plaintiffs for your**
 12 **report and testimony in this case?**
 13 A. No.
 14 **Q. Okay. Is MEIC receiving any money from**
 15 **plaintiffs due to your work in this case?**
 16 A. No.
 17 **Q. Okay. Returning back to that sentence,**
 18 **what was MEIC's understanding "that the purpose of**
 19 **the state energy policy was to direct and guide**
 20 **future energy decisions for the state of Montana"**
 21 **based on?**
 22 **What was the basis for that**
 23 **understanding?**
 24 A. The language in the HJR3, the language
 25 that went into the energy policy; that the state

1 should promote energy conservation, production and
 2 consumption of a reliable and efficient mix of
 3 energy sources that represent the least social,
 4 environmental and economic costs and the most
 5 long-term benefits to Montana citizens.
 6 **Q. Did the legislature share MEIC's**
 7 **understanding in the '90s?**
 8 A. I believe the legislature that adopted it
 9 did.
 10 **Q. And why do you believe that?**
 11 A. Because they wouldn't have adopted it. I
 12 mean, that's the language that they adopted, so
 13 I'm not quite sure if they -- you know, I assume,
 14 and we all should assume, legislators read bills
 15 and vote on things based upon the language in the
 16 bill.
 17 **Q. Uh-huh. So MEIC's understanding was**
 18 **based on nothing other than the plain language of**
 19 **the state energy policy at the time?**
 20 A. It may have been based upon Jim Jensen's
 21 conversation with legislators outside that
 22 committee room, but I can't tell you that for
 23 sure.
 24 **Q. Are you familiar with the statutory and**
 25 **jurisprudential rules of statutory construction?**

1 A. To some degree, yes.
 2 **Q. Was MEIC's understanding of the purpose**
 3 **of the state energy policy based in any way on**
 4 **those rules?**
 5 A. Could you tell me what rule -- rules
 6 you're referring to?
 7 **Q. The ones that you're familiar with.**
 8 **MR. SULLIVAN:** And I object on the basis
 9 of ambiguity and confusion in the sense that there
 10 are, as Counsel knows, numerous rules of statutory
 11 construction, and I -- I would say that it would
 12 be more productive to focus on which ones you're
 13 concerned with.
 14 **MR. LONGFIELD:** Your objection's noted.
 15 **THE WITNESS:** The first rule in statutory
 16 construction is the plain language of the statute,
 17 and I believe the plain language of the statute is
 18 quite clear.
 19 **BY MR. LONGFIELD:**
 20 **Q. Okay. Are there any other rules of**
 21 **statutory construction that MEIC applied to this**
 22 **policy to determine its purpose?**
 23 A. I would assume, as we usually do, that we
 24 look at the history and how it was developed and
 25 what the -- what process the EQC went through.

1 We generally participate in EQC
 2 proceedings, especially one of this import, and so
 3 we look at what conversations occurred during the
 4 course of that -- the development of this
 5 language.
 6 **Q. Okay. And then I want to focus on a**
 7 **different aspect of this paragraph that says,**
 8 **quote, "This understanding was echoed by others,"**
 9 **end quote.**
 10 A. Uh-huh.
 11 **Q. So I assume that "this understanding" is**
 12 **referring to MEIC's understanding of the purpose**
 13 **of the state energy policy; is that correct?**
 14 A. Right.
 15 **Q. Okay. What do you mean by "echoed" here?**
 16 A. Janet Ellis, on behalf of Montana Audubon
 17 Legislative Fund stated in her testimony that
 18 "'SB225 sets up a systemic way to find solutions
 19 to identified energy policy problems' and that 'it
 20 coordinates the executive and legislative
 21 branches...'"
 22 **Q. Okay.**
 23 A. And I know Janet Ellis. I've known
 24 Janet Ellis for 30 years. And she reads every
 25 bill and she doesn't do anything she doesn't

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1 believe in, so I believe she thought the plain
 2 language of the statute was sufficient.
 3 **Q. Okay. Were there any others besides**
 4 **Janet Ellis?**
 5 **A. Oh, gosh, I just re-watched this hearing,**
 6 **and I don't recall. I'm sorry.**
 7 **Q. Okay. No, totally fine.**
 8 **All right. So sorry I got you jumping**
 9 **around a little bit. Let's go to page 22, please.**
 10 **A. Are you really sorry?**
 11 **Q. I'm sorry we're still here.**
 12 **A. That's on you, man.**
 13 **Q. Not necessarily.**
 14 **So I'm looking at the final full**
 15 **paragraph on page 22 that begins with, "In my**
 16 **opinion."**
 17 **A. Uh-huh.**
 18 **Q. Okay. I'll read it. Quote, "In my**
 19 **opinion, both of these bills became laws as a**
 20 **direct response to rising concerns statewide over**
 21 **climate change and the defeat of the Roundup Power**
 22 **Project and Highwood Generating Station and**
 23 **ongoing work to prevent the construction of new**
 24 **fossil fuel projects due to GHG emission and air**
 25 **pollution concerns through the MEPA review**

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1 **process. They were also a response to the**
 2 **mounting evidence of the need for Montana to**
 3 **reduce GHG emissions and transition away from**
 4 **fossil fuels, evidence that threatens the**
 5 **relevance and utility of the fossil fuel**
 6 **industry," end quote.**
 7 **What bills are you referring to in this**
 8 **paragraph?**
 9 **And you can review the preceding**
 10 **sentences if you need to.**
 11 **A. The bills in this -- the bills in this**
 12 **section.**
 13 **So you have Senate Bill 305, which was**
 14 **Energy Policy Act, and then 233.**
 15 **Q. Okay. What did Senate Bill 305 do?**
 16 **A. It amended the state energy policy.**
 17 **Q. Okay. And what did it change in the**
 18 **state energy policy?**
 19 **A. In particular, it -- it added all sorts**
 20 **of language about the State wanting to promote the**
 21 **development of fossil fuels, expand, promote,**
 22 **increase.**
 23 **Q. Is the quoted language on page 21 a**
 24 **direct quote from Senate Bill 305, under the**
 25 **subheading, "2. 2011 Amendments to State Energy**

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1 **Policy"?**
 2 **A. To the best of my knowledge, yes.**
 3 **Q. Okay. So going back to page 22, where**
 4 **you say, "In my opinion, both of these bills**
 5 **became laws as a direct response to rising**
 6 **concerns," dot, dot, dot.**
 7 **What do you mean by "direct response"**
 8 **here?**
 9 **A. A direct response that there was concern**
 10 **on behalf of some legislators and the governor's**
 11 **office that our success in defeating some fossil**
 12 **fuel projects was problematic and that they needed**
 13 **to -- as somebody in the governor's office told**
 14 **me, We needed to have skin in the game.**
 15 **Q. Who was that at the governor's office who**
 16 **told you that?**
 17 **A. Evan Barrett.**
 18 **Q. And who is that person?**
 19 **A. He was the governor's economic**
 20 **development advisor.**
 21 **Q. Okay. Later in this same paragraph, you**
 22 **go on to say, these bills, quote, "were also a**
 23 **response to the mounting evidence of the need for**
 24 **Montana to reduce GHG emissions and transition**
 25 **away from fossil fuels, evidence that threatens**

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1 **the relevance and utility of the fossil fuel**
 2 **industry," end quote.**
 3 **What do you mean by "response" in this**
 4 **sentence?**
 5 **A. It's stated above, and it was in the**
 6 **hearing that was provided.**
 7 **The -- Todd O'Hair, with Cloud Peak**
 8 **Energy, was very clear that this was -- you know,**
 9 **these bills were -- the goal was to prevent the**
 10 **same thing happening at Cloud Peak that had**
 11 **happened with the Roundup Power Project or the**
 12 **Highwood project. They wanted to continue mining.**
 13 **Q. Okay. So what is your basis for the**
 14 **opinion that these two amendments to the state**
 15 **energy policy in 2011 were a response to the**
 16 **mounting evidence of climate change?**
 17 **A. The science of climate change was coming**
 18 **into better focus every year. It was being**
 19 **refined through the scientific method.**
 20 **And there was a concern, on behalf of the**
 21 **fossil fuel industry and its representatives, that**
 22 **they were going to -- their work would be impaired**
 23 **if they didn't try to prevent us from being able**
 24 **to use these laws to force disclosure of impacts**
 25 **and to give direction to state agency officials**

1 who had to review permit applications so...

2 **Q. Okay. Is there anything in the plain**

3 **language of the 2011 amendments to the state**

4 **energy policy that indicates it was a direct**

5 **response to what you call "mounting evidence" of**

6 **climate change?**

7 A. Can you repeat that question? Let me

8 think about that.

9 **Q. Sure.**

10 **Do you need time to think, or would you**

11 **like me to repeat?**

12 A. Can you repeat it?

13 **Q. I can, yeah.**

14 **Is there anything in the text of the**

15 **bill -- and what I mean, "bill," we're talking**

16 **about the 2011 amendments to the state energy**

17 **policy quoted on page 21 of your report -- that**

18 **indicates that the purpose of this law was to**

19 **respond to the mounting evidence of climate change**

20 **in Montana?**

21 A. I would say in the rules of statutory

22 construction, one of the rules is you look at

23 legislative intent, and that is told through

24 legislators speaking to these -- to the bill.

25 And in this instance we certainly had

1 people stand up and say, I don't care about

2 climate change, and, I don't want it to stop any

3 business in this state, especially mine, I think

4 is what somebody said on the senate floor.

5 **Q. I'm sorry, who said that?**

6 A. I forget. It's in the record. It's

7 attached in here.

8 **Q. And was that during a hearing?**

9 A. It was on the floor during floor debate.

10 **Q. On what bill?**

11 A. That's a good question. I don't recall.

12 It was one of the two bills.

13 **Q. Okay. Do you a copy of the Complaint?**

14 A. I don't have one with me.

15 **Q. Okay. We should have one.**

16 **MR. SULLIVAN:** Exhibit 1.

17 **MR. LONGFIELD:** Can I just give her this

18 whole binder?

19 **BY MR. LONGFIELD:**

20 **Q. So I'm handing you what's been marked as**

21 **Exhibit 1.**

22 A. Uh-huh.

23 **Q. Does this appear to be a true and**

24 **accurate copy of the plaintiffs' Complaint in this**

25 **case?**

1 A. I assume so. Yeah, it's nice and long.

2 **Q. When was the last time you reviewed the**

3 **Complaint in this case?**

4 A. Last week.

5 **Q. Could you turn to paragraph 118 of the**

6 **Complaint?**

7 **And take a moment to read through it. I**

8 **won't ask you to read the whole thing out loud.**

9 A. Sorry, I have to read where I'm at in the

10 context of this first.

11 **Q. Totally fine.**

12 A. Okay.

13 **Q. I believe it continues on to the next**

14 **page too.**

15 A. Oh, sorry. I was just reading the first

16 paragraph.

17 **Q. Including the subparagraphs. I**

18 **apologize.**

19 A. Okay.

20 **Q. Yeah.**

21 A. (Witness complied.)

22 Okay.

23 **Q. Okay. So can you briefly summarize your**

24 **understanding of what is being described in the**

25 **allegations in paragraph 118 of the Complaint?**

1 A. That the State continues -- well, despite

2 their knowledge of climate change dangers and

3 their rhetoric on the importance of reducing

4 greenhouse gas emissions and the profound

5 consequences of climate change, "defendants,

6 pursuant to and in furtherance of the state energy

7 policy, have taken and continue to take

8 affirmative actions to authorize, implement and

9 promote projects, activities and plans,

10 hereinafter aggregate acts, that cause emissions

11 of dangerous levels of greenhouse gas pollution in

12 the atmosphere."

13 And what follows are examples.

14 **Q. Okay. Thanks, Anne.**

15 **What is the relationship between the**

16 **state energy policy and the aggregate acts**

17 **described in paragraph 118 of the plaintiffs'**

18 **Complaint, in your opinion?**

19 A. In my opinion, it provides direction to

20 state agencies who have to make the decisions on

21 all of these activities. When they go through and

22 they have to permit these activities, they have

23 been given guidance from the legislature on how

24 they should -- what lens they should be using when

25 they review these activities.

1 **Q. Is the state energy policy the guidance**
 2 **that you're referring to there?**
 3 A. Yes.
 4 **Q. Okay.**
 5 A. As well as MEPA.
 6 **Q. Okay. What is the basis for your opinion**
 7 **that the state energy policy provides guidance to**
 8 **agencies as they engage in the aggregate acts**
 9 **described in 118?**
 10 A. My knowledge, in conversation with agency
 11 personnel. This is -- they understand the
 12 legislature, they understand the legislature's
 13 role in setting direction and setting their
 14 budgets, and they want to make sure that they
 15 comply with the direction the legislature has
 16 given them when they review permits and the other
 17 types of activities that are, you know, described
 18 in here.
 19 **Q. Okay. How did the 2011 amendments to the**
 20 **state energy policy impact the manner in which**
 21 **agencies granted or approved permits?**
 22 A. It became very clear that they simply
 23 were not allowed to consider greenhouse gases in
 24 the process of reviewing or considering permit
 25 leases, things like that.

1 **Q. Were agencies more likely to approve**
 2 **permits after the 2011 amendments to the state**
 3 **energy policy?**
 4 A. No. They were approving beforehand.
 5 However, the science has improved over
 6 time, and I strongly believe that the evolution of
 7 state energy permitting would have incorporated
 8 climate change as it went forward, but instead it
 9 didn't.
 10 And primarily what it did is it -- it
 11 barred -- these two things barred the state from
 12 really going beyond the -- going beyond where they
 13 were at. It stagnated the state in its knowledge.
 14 You know, state agencies, they are
 15 iterative as they analyze things over time, and
 16 that changes. And as that changes, they make
 17 different decisions.
 18 But what these two laws did is they
 19 caused the state to stagnate in its evolution of
 20 consideration of climate, regardless of the
 21 science.
 22 **Q. I have to stop you there.**
 23 **What two laws are you referring to?**
 24 A. I'm referring to 233 and 305.
 25 **Q. Okay. And I guess, what is the basis for**

1 **your opinion that, but for those two laws, the**
 2 **state agencies would have begun to incorporate**
 3 **science related to climate change in their**
 4 **permitting decisions?**
 5 A. I think a number of their permits say, We
 6 simply can't consider those things.
 7 I know the people who work over there. I
 8 know they believe in climate change, and that
 9 would have entered into the equation.
 10 And we have a very strong constitutional
 11 right to public participation. And the public
 12 engages in these permitting processes. We bring
 13 experts to the table in these permitting and
 14 leasing processes. And that helps create an
 15 environment in which agencies make decisions.
 16 And agencies were barred from considering
 17 public concerns regarding those issues, and they
 18 knew it, and they said it in their response to
 19 comments.
 20 **Q. But were they considering climate change**
 21 **before either of these two laws went into effect?**
 22 A. Yes.
 23 **Q. Did it affect the rate at which they**
 24 **approved or denied permits?**
 25 A. Not in those instances.

1 **Q. Did it in any instance?**
 2 A. Not that I know of.
 3 **Q. Okay. Let's go ahead and turn to page 20**
 4 **of your report. Let me know when you're there.**
 5 A. Okay.
 6 **Q. Okay. I'm looking at the first full**
 7 **paragraph on page 20, where you say, quote, "MEIC**
 8 **opposed the 2011 amendment because its goal was to**
 9 **preclude agencies from considering climate change**
 10 **impacts when conducting MEPA environmental**
 11 **reviews. My understanding of the intent of this**
 12 **MEPA provision is affirmed by the 2011 MEPA**
 13 **amendment legislative history and the way in which**
 14 **Montana's agencies have interpreted the amendment**
 15 **ever since," end quote.**
 16 **Is it fair to say the basis for your**
 17 **opinion that the goal of the 2011 MEPA amendment**
 18 **was to preclude agencies from considering climate**
 19 **change impacts, has nothing to do with the plain**
 20 **text of the 2011 amendment?**
 21 A. I'm sorry. I'm confused by your
 22 question. Perhaps it's the time of day.
 23 **Q. It could be the form of the question too.**
 24 **What is the basis for your opinion that**
 25 **the purpose of the 2011 MEPA amendment was to**

1 preclude agencies from considering climate change
2 impacts?

3 A. Legislative history.

4 Q. Was the text of the statute a basis for
5 that opinion?

6 A. Partially, not entirely. The statement
7 of that -- that opinion is based upon my lobbying
8 that bill, talking to legislators, talking to
9 other lobbyists and hearing from the industry.

10 Q. Okay. In your view, how could the state
11 agencies measure the impact of one permitting
12 decision within Montana on global climate change?

13 A. I'd say the federal government does it
14 all the time.

15 Q. How does the federal government do it?

16 A. They -- they do an analysis of emissions.
17 They do an analysis of the climate crisis, the
18 components of the climate crisis and how this will
19 affect that level of greenhouse gas pollution in
20 the air, over and above what it otherwise would
21 be.

22 Q. But how do they do that analysis?
23 What is the substance of that analysis?

24 A. I guess I don't understand your question.

25 Q. You said they do an analysis. How do

1 they perform that analysis?

2 A. They rely on scientific data; they rely
3 on agency expertise; they -- they gather together
4 data about climate change; they look at IPCC
5 reports; they look at scientific studies; they
6 look at EIA data. They pull all that information
7 together.

8 They do -- you know, they break down what
9 is the state of the climate at the moment and
10 emissions that are causing it and how does this
11 project fit into that larger hole.

12 Q. I get that that's what they do. Maybe
13 let's ask it another way.

14 So, you know, assume that DEQ is
15 considering a permit under the Clean Air Act for a
16 project in Montana.

17 A. Uh-huh.

18 Q. How can DEQ determine what the respective
19 impact of that project will be on global climate
20 change?

21 A. Well, DEQ would probably rely on the
22 science that Dr. Whitlock and Dr. Running have
23 created regarding the impacts of climate change in
24 Montana and the increase in greenhouse gases and
25 how that would parse out, how that would play out

1 over time, both individually and cumulatively.

2 Q. Okay. So they would just rely on
3 information from scientists, I suppose?

4 A. They do their own analysis, they rely on
5 information from scientists, and government
6 agencies use all sorts of information. And then
7 they ask the public to contribute.

8 And then organizations like ours and
9 individuals and an industry will go forth and
10 augment the record so that agencies have a robust
11 body of information from which to make decisions.

12 Q. Climate change is a global problem,
13 right?

14 A. Climate change is everybody's problem.
15 It's an individual, a state, a nation and a global
16 problem.

17 Q. Right. But I guess, scientifically
18 speaking, it affects the entire earth; is that
19 correct?

20 A. It affects the earth and everything on
21 it.

22 Q. Okay. How can an agency determine the
23 extent to which one project's greenhouse gas
24 emissions will impact the global problem of
25 climate change?

1 A. I'd say you're showing your ignorance,
2 because agencies do this all the time.

3 Q. I'm asking you: How can that be done?

4 A. It is done all the time. You just --

5 Q. How?

6 A. They -- they say, okay, this -- this
7 particular project will result in this many
8 greenhouse gases, these types of greenhouse gases.
9 They break that into something called CO₂E, which
10 is -- you make everything equivalent to CO₂,
11 whether that's methane or nitrous oxide, and you
12 say this is how much it is going to cause in
13 Montana, this is the emissions we have now, this
14 is the emissions that we will have with this
15 project in place.

16 And then you use data like -- or
17 scientific evidence, like the social cost of
18 carbon, which is a very detailed analysis of how
19 greenhouse gases will impact society economically,
20 based upon a huge body of scientific evidence.

21 And you can start putting numbers to it,
22 and you can also look at impacts from things like
23 the Whitlock and the Running reports.

24 Q. So you mentioned social cost of carbon.
25 Could you explain to me your understanding of how

1 **social cost of carbon analysis works?**
 2 A. Not entirely. There's -- there is some
 3 really smart scientists who have put together the
 4 social cost of carbon. It was something that was
 5 asked by the federal government for this body to
 6 come up with a metric. Because when we analyze
 7 projects, we always talk about their benefits and
 8 the economic benefits, but we don't have a
 9 corresponding cost analysis, what is this costing
 10 society.

11 Fossil fuels have externalities, and the
 12 social cost of carbon is intended to put a cost to
 13 that equation so that you can have a -- an
 14 apples-to-apples analysis of certain projects.

15 **Q. Do Montana state agencies have**
 16 **jurisdiction to consider the impacts of a**
 17 **permitted project within Montana on the**
 18 **environments of any other states?**

19 A. Sometimes, yes.

20 **Q. When are those times?**

21 A. Regional Haze, for example. Our -- under
 22 the Clean Air Act there's a program called
 23 Regional Haze in which we analyze the impacts on
 24 Class 1 areas, national parks, wilderness areas
 25 above 5,000 acres.

1 And it doesn't matter if that national
 2 park or Class 1 area is within your own confines
 3 of your state, you still have to consider what the
 4 impacts would be.

5 So, for example, if you look at the
 6 Colstrip power plant, it impacts Class 1 air sheds
 7 in other states, and we have to consider that.

8 **Q. Okay. Any other examples besides**
 9 **Regional Haze?**

10 A. Water quality. We can't just pollute our
 11 rivers and say, It's going downstream.

12 **Q. Uh-huh. Okay. Anne, let's look at**
 13 **page 28 of your report. I'm looking at the first**
 14 **full paragraph that doesn't begin with a number,**
 15 **in the middle of that paragraph.**

16 And I'll quote. You write, quote, "And
 17 all of these projects, collectively and
 18 individually, are responsible for significant GHG
 19 emissions which are exacerbating the climate
 20 crisis as described in the expert report of
 21 Peter Erickson, which I have reviewed," end quote.

22 Is what I just read your opinion or is it
 23 Dr. Erickson's opinion?

24 A. "All of these projects, collectively and
 25 individually, are responsible" -- sorry, I had to

1 catch up to where you were. I was looking at the
 2 beginning of the paragraph.

3 **Q. No problem.**

4 A. That is my opinion.

5 **Q. Okay. What's the basis for your opinion?**

6 A. Basis for my opinion is based on all
 7 those projects that I have reviewed that
 8 contribute greenhouse gases to an already
 9 overloaded atmosphere.

10 **Q. Did you look at the specific amount of**
 11 **greenhouse gas emissions emitted from each of the**
 12 **projects that you're referring to in this**
 13 **sentence?**

14 A. Yes.

15 **Q. Okay. Did you include any of those**
 16 **numbers in your report?**

17 A. Some of them, yes.

18 **Q. What do you mean by "significant" in this**
 19 **statement? "Significant GHG emissions."**

20 A. We're talking collectively hundreds of
 21 millions of tons of greenhouse gases which have --
 22 you know, if you look at the data, have a really
 23 profound impact on the overall level of greenhouse
 24 gases in our atmosphere.

25 **Q. Is the amount of greenhouse gas emissions**

1 **emitted from any one of these projects**
 2 **individually significant?**

3 A. Yes.

4 **Q. Okay. What do you mean by "significant"**
 5 **in the context of the individual amount of**
 6 **emissions from each of these projects?**

7 A. Greatly increasing Montana's overall
 8 greenhouse gas emissions.

9 **Q. What do you mean by "greatly"?**

10 A. It is -- it is anything -- I mean, it is
 11 anything over -- I don't have a number, but
 12 anything over what -- you know -- well, let me
 13 think about this.

14 All of these projects are millions of
 15 tons of greenhouse gases going into the
 16 atmosphere; that's -- that's all I can say.

17 Millions of tons is an awful lot.

18 **Q. Fair enough. Let's talk about Montana's**
 19 **total amount of greenhouse gas Emissions.**

20 A. Okay.

21 **Q. Do you know what percentage of global**
 22 **greenhouse gas emissions Montana is responsible**
 23 **for?**

24 A. No. I've read it, but I don't recall.

25 **Q. Okay. Where have you read it?**

1 A. Just about everywhere. Everybody has
2 that data. That's in the Whitlock report
3 probably. It's certainly in the IPPC reports.
4 It's what the federal government puts out on a
5 regular basis. They give you fact sheets for each
6 state on what your contribution is.

7 **Q. Would those facts sheets be from the**
8 **Energy Information Administration?**

9 A. Or I think maybe from EPA.

10 **Q. I'm sorry. I'm talking about EIA.**

11 A. Oh, no, I'm sorry. I think these are
12 from EPA. The fact sheets that I just referred
13 to, I think that's -- that's what I'm talking
14 about. I'm pretty sure they're EPA documents.

15 **Q. Do you know what percentage of the**
16 **United States' total greenhouse gas emissions**
17 **Montana is responsible for?**

18 A. Not off the top of my head, no.

19 **Q. Do you have like a back-of-the-napkin**
20 **estimate?**

21 A. I -- I believe that Dr. Erickson talked
22 about that in his report.

23 **Q. Okay. But you don't know?**

24 A. If you gave me his report, I could tell
25 you.

1 greater than de minimis.

2 **BY MR. LONGFIELD:**

3 **Q. Greater than de minimis. Can there be a**
4 **number associated with de minimis that you can**
5 **provide me?**

6 A. I would be reluctant to do that because,
7 collectively, cumulatively, certain activities
8 might be small, but collectively they're large.

9 So I don't want to give a number in which
10 indicates that, you know, this particular oil well
11 doesn't matter, when all of the oil wells that are
12 being permitted do matter.

13 So it is just a matter of -- of
14 cumulative impacts.

15 **Q. Okay. But you don't know what the number**
16 **is?**

17 A. Yeah, I do know what the number is. I
18 don't recall. It's in Dr. -- it's in
19 Mr. Erickson's report.

20 **Q. Okay. I think earlier you said that you**
21 **were constantly looking at the Energy Information**
22 **Administration's website; is that correct?**

23 A. Yes.

24 **Q. Do you ever look at their state-by-state**
25 **data on greenhouse gas emissions?**

1 **Q. Do you know as we sit here today?**

2 A. Not -- not that I recall.

3 **Q. Do you know whether it's significant?**

4 A. It is significant.

5 **Q. How do you know?**

6 A. Because the numbers were significant,
7 they were large.

8 **Q. You don't know what the numbers are today**
9 **though, right?**

10 A. It's not a small percentage.

11 **Q. What is the percentage?**

12 **MR. SULLIVAN:** Excuse me. Asked and
13 answered. She indicated, if you wanted to, she
14 could go to Dr. -- Mr. Erickson's report.

15 **BY MR. LONGFIELD:**

16 **Q. Well --**

17 A. I'd be happy to do that.

18 **Q. Okay. But you say it's not a small**
19 **percentage, correct?**

20 A. It is not a small percentage.

21 **Q. What do you mean by that?**

22 A. I mean something --

23 **MR. SULLIVAN:** Objection to form. Asked
24 and answered.

25 **THE WITNESS:** What I mean is something

1 A. Yes, I've seen -- I definitely have seen
2 that.

3 **Q. Would you agree that the EIA is a**
4 **reliable or credible source?**

5 A. Not always.

6 **Q. I think earlier you said it was credible.**

7 A. It's fairly credible. They don't always
8 get it right. Their projections of the future are
9 often wrong.

10 **Q. Are you familiar with where Montana ranks**
11 **in terms of the 50 states in terms of its total**
12 **greenhouse gas emissions in EIA data?**

13 A. No, not off the top of my head.

14 **MR. LONGFIELD:** Okay. I've got probably
15 ten minutes left. Do you want to take a quick
16 break and we can wrap up?

17 **MR. SULLIVAN:** That would be fine.

18 **MR. LONGFIELD:** Thanks.

19 (Whereupon, a break was then taken.)

20 **BY MR. LONGFIELD:**

21 **Q. All right. Almost done. So if you**
22 **would, Anne, could you turn to page 29, please?**

23 **Looking at the very last paragraph that**
24 **begins with, "In conclusion." Do you see that?**

25 A. Uh-huh.

1 Q. Okay. I'll read from it. It says,
2 quote, "In conclusion, this history indicates that
3 defendants have demonstrated that notwithstanding
4 the incontrovertible evidence of the climate
5 crisis and its impacts in Montana, they will
6 continue to promote the increasing development and
7 utilization of fossil fuels, while turning a blind
8 eye to the consequences for climate change,
9 Montana's environment, Montana's residents and
10 these youth plaintiffs."

11 What evidence are you referring to when
12 you say "incontrovertible evidence of the climate
13 crisis and its impacts in Montana"?

14 A. I believe -- well, the IPCC reports, the
15 Whitlock and Running report, the Montana Climate
16 Assessment and Peter Erickson's, for starters.

17 Q. Anything else?

18 A. Its impacts on Montana are those things
19 that have happened since those documents were
20 created, things like flooding this summer or
21 the -- well, I guess they refer to the wildfires
22 and the drought that we've been experiencing in
23 this state.

24 Q. Why is the evidence you refer to
25 incontrovertible?

1 A. Because I believe it's 99 percent of the
2 scientists who have been involved in the climate
3 agree that fossil fuels and greenhouse gases, in
4 particular, are changing our climate.

5 Q. Were 99 percent of scientists involved in
6 any of the sources of evidence that you just
7 mentioned, the IPCC report, Whitlock, Running,
8 Montana Climate Assessment, Erickson report?

9 A. I think the rigor of the IPCC reports is,
10 bar none, the best system that we could possibly
11 have to double-check people's work, where you're
12 constantly changing out scientists and replacing
13 them with others to make sure that you're not
14 getting stuck in a rut.

15 So I think that as the IPCC continually
16 pulls in new scientists, best in their fields,
17 from around the world, to review and to update
18 that you are getting the best science possible.

19 Q. Okay.

20 A. And it's consensus based, so oftentimes
21 it's the lowest common denominator, which means
22 it's actually conservative.

23 Q. And that's all about the IPCC that you're
24 discussing, right?

25 A. Uh-huh.

1 Q. What is the "incontrovertible evidence of
2 the climate crisis and its impacts in Montana,"
3 specifically in Montana?

4 A. In Montana, the -- there have been a
5 number of studies, but I would point to the
6 Whitlock -- or the climate assessment. I would
7 point to the impacts that were pointed out by
8 Dr. Tom Powers in his reports on the impact of
9 climate change, on -- the economic impacts of
10 climate change from wildfires and on recreation or
11 recreation economy, as well as on agricultural. I
12 think that was a -- both of those were very
13 thorough studies.

14 Q. Okay. Did you cite Dr. Powers' study in
15 your report?

16 A. I don't recall if I cited it directly or
17 whether it was cited indirectly. I don't recall.

18 It's certainly -- you know, I did see a
19 reference to it in some of the materials I
20 reviewed, so it's certainly in the record
21 someplace.

22 Q. Okay. What do you mean by "cited
23 indirectly"?

24 A. The economic impacts, I mean, how we gain
25 knowledge. As an expert in this arena, I rely on

1 people like Dr. Powers to help inform the body of
2 information that we use to make decisions about
3 what the state needs to do to address climate
4 change.

5 Q. Okay.

6 A. So -- and I do believe I've seen this --
7 it referred to, in the record.

8 Q. Okay. And I don't ask this to be
9 redundant, but does Attachment 1 to your report
10 contain all of the sources you cite within the
11 body of your expert report?

12 A. Yes, it does, all of the ones I cite.
13 But as we indicated, as I indicated early on in my
14 report, the -- you know, this is including but not
15 limited to, so...

16 Q. Help me understand those two answers.

17 It sounds like the beginning of your
18 report says: There are sources outside of the
19 ones, which I refer to in Attachment 1, that
20 informed my report.

21 So I guess what's the point of
22 Attachment 1?

23 What is listed in Attachment 1?

24 A. Those are the documents that help
25 underscore the arguments that we're making that --

1 that I am making that -- they help show --
2 demonstrate what I'm saying.

3 However, I have 30 years of knowledge in
4 this arena, and I've been drawing on that to
5 create this expert report and to provide answers
6 in this deposition.

7 So there -- there is not enough room in
8 this room for you to have all of the information I
9 have garnered over time that have helped inform
10 this expert report.

11 These are the ones we cite because we
12 believe -- I believe they're the most important
13 for making the arguments --

14 **Q. Did you --**

15 **A. -- in this case.**

16 **Q. Did you draft Attachment 1?**

17 **A. I did not.**

18 **Q. Who did?**

19 **A. My attorneys.**

20 **Q. Your attorneys, okay.**

21 **A. Uh-huh.**

22 **Q. Did you inform your attorneys that you**
23 **were relying on sources other than the ones they**
24 **provided to you in Attachment 1 in preparing this**
25 **report?**

1 **A. I assume my attorneys have a -- after**
2 **our -- many conversations with them, have a very**
3 **good understanding of my body of knowledge and**
4 **expertise and that they knew that I would be**
5 **drawing on that in order to inform my opinions.**

6 **Q. Would you agree that one important aspect**
7 **of a reliable report is citation of the sources**
8 **upon which opinions in the report are based?**

9 **A. Yes. But you can't -- you can't include**
10 **everything that contributed to somebody's**
11 **knowledge that results in an expert report like**
12 **this.**

13 You know, you -- for example, if I were a
14 doctor, in creating an expert report, I wouldn't
15 give you everything I learned in medical school.

16 **Q. Sure.**

17 **A. I mean, this is -- this is an iterative**
18 **process over time, which is how you form**
19 **expertise.**

20 **Q. I take the point, but if an opinion -- a**
21 **hypothetical doctor's report was based on a**
22 **specific source, wouldn't it be important for the**
23 **doctor to cite to that source?**

24 **A. I think the most important sources are**
25 **cited here. But as in my expert report, I**

1 indicated that it is including but not limited to.

2 **Q. Well, you gave me Dr. Tom Powers' report**
3 **as one of two examples of the incontrovertible**
4 **evidence of the impacts of climate change in**
5 **Montana, so that would seem pretty important to**
6 **me.**

7 **A. Yes. And I -- you know, I'm happy to**
8 **work with my attorneys, if they think it's**
9 **appropriate to make sure that a report like that**
10 **is entered into the record.**

11 **Q. Okay. And changing gears here a little**
12 **bit.**

13 You know, you spent a lot of your career
14 in the policy world, in the lobbying world.

15 **Do you believe in democracy?**

16 **A. Absolutely.**

17 **Q. Why?**

18 **A. Because I -- I believe that people make**
19 **good choices when they're given good information.**

20 **Q. Is part of your role at MEIC, on the**
21 **information side of that equation, making sure**
22 **that people have the information they need to make**
23 **good choices?**

24 **A. Yes.**

25 **Q. Do you think that that applies to issues**

1 **related to the environment in Montana, your**
2 **statement that people make good choices when given**
3 **good information?**

4 **A. That was a confusing question.**

5 **Q. Sure, it was.**

6 **If people have good information about**
7 **climate change in Montana, will they make good**
8 **decisions? Will the voters make good decisions?**

9 **A. Voters or people? So there's -- there's**
10 **more than just voters.**

11 **Q. In a democracy?**

12 **A. In a democracy -- there's a lot that goes**
13 **into a democracy.**

14 **Q. Who makes decisions in a democracy?**

15 **A. Your three branches of government make**
16 **decisions, influenced by the people they**
17 **represent.**

18 **Q. Who elects the representatives?**

19 **MR. SULLIVAN: Could I just object on the**
20 **basis of the people we are -- for the most part,**
21 **Tim, we represent youths who are not electors, and**
22 **that's a problem and we've described that as a**
23 **problem.**

24 I think some of your deponents who have
25 been deposed by you have described the fact that

1 they're not electors, but they are residents and
 2 citizens of the state of Montana.
 3 **MR. LONGFIELD:** Yeah. Thank you, Roger.
 4 Objection noted.
 5 **BY MR. LONGFIELD:**
 6 **Q. You can go ahead and answer.**
 7 A. Can you repeat the question?
 8 **Q. Absolutely, yeah.**
 9 **Will the voters of Montana make good**
 10 **decisions about climate change if they have good**
 11 **information about climate change?**
 12 A. That's an unknown, but we don't know the
 13 answer to that because currently they don't have
 14 good information about climate change.
 15 I do believe the people in Montana will
 16 make better choices if they have access to valid
 17 information about the climate crisis.
 18 **Q. Why don't voters in Montana have access**
 19 **to good information about climate change?**
 20 A. Because state agencies do not provide
 21 that information when they do reviews of projects
 22 that -- one of many things, but it's one of those
 23 things.
 24 When an agency does an analysis of a
 25 large fossil fuel project, and it is barred from

1 providing information regarding the most urgent
 2 issue of our time, people don't have access to
 3 that information because it simply wasn't
 4 provided.
 5 **Q. Isn't one purpose of an organization like**
 6 **MEIC to make sure that people in Montana have**
 7 **valid information about climate change?**
 8 A. I believe it is the government's job to
 9 help provide that information, not to prevent that
 10 information from being distributed.
 11 MEIC is a small nonprofit organization
 12 that doesn't have the resources of the State or
 13 the federal government to educate everybody in the
 14 state.
 15 The State has the resources and the
 16 capacity to do so when it does environmental
 17 analyses, as it's required to do under MEPA, which
 18 implements the constitution.
 19 And the constitution says that they have
 20 a right to a clean and healthful environment, and
 21 the State and each person shall maintain and
 22 improve that clean and healthful environment.
 23 So if they don't have the information
 24 they need to verify that the State is doing so in
 25 compliance with the constitution, then they can't

1 make good choices.
 2 **Q. Okay. Whose fault is it that they don't**
 3 **have that information?**
 4 A. It is the fault of the legislature for --
 5 in the state of Montana for adopting 233 and 305.
 6 **Q. So is it your view that because of those**
 7 **two laws, it's impossible for voters in Montana to**
 8 **access any valid information about climate change?**
 9 A. Absolutely not. It is really difficult
 10 for them to access information regarding
 11 particular projects and their impacts on the
 12 climate, especially in the time frames that
 13 they're given to review these applications.
 14 They're very, very tight time frames, and nobody
 15 has the time to go through and conduct that type
 16 of analysis. We expect that to be done before
 17 that analysis is released so that people can
 18 comment on it, not create it.
 19 **Q. What environmental issues do you think**
 20 **should be decided by the voters in the state of**
 21 **Montana?**
 22 A. I think the voters should decide whether
 23 we want to have nuclear power in this state.
 24 We opposed the -- the bill last session
 25 that took away the voter's rights to decide on

1 whether we wanted to have nuclear power developed
 2 in the state.
 3 **Q. You wrote an op-ed about that, right?**
 4 A. I believe so. I don't recall. I write a
 5 lot of op-eds.
 6 **Q. Any other issues that relate to the**
 7 **environment that the voters should get to decide**
 8 **on?**
 9 A. Well, the voters decided on our
 10 constitution. They decided on our constitution a
 11 long time ago. They decided on the constitution
 12 when it came up for a vote again, and they decided
 13 they wanted to maintain that constitution.
 14 So I think that is a really important
 15 part of our democracy, is allowing voters to vote
 16 on the very foundation of our democracy.
 17 **Q. Sure. What about any other environmental**
 18 **issues that voters should get to decide?**
 19 A. I think there certainly are some, but
 20 I -- you know, that's not the purpose of this
 21 case.
 22 **Q. Why not?**
 23 A. The purpose of this case is about
 24 greenhouse gases and these two bills.
 25 And, you know, these -- we don't put

1 laws, generally -- sometimes we do -- through
2 referendum, to the voters. That's why people vote
3 for legislators, is to make laws.

4 But when legislators make laws that
5 violate our constitutional rights that voters have
6 adopted, then the people of the state have a right
7 to go to court and try to prevent the legislature
8 and agencies from implementing those laws.

9 **Q. I'm going to ask you this.**

10 **If Montana's greenhouse gas emissions**
11 **were to immediately cease overnight, so tomorrow**
12 **Montana emits zero greenhouse gases, what impact**
13 **would that have on global climate change, in your**
14 **opinion?**

15 A. It would have a profound impact in many
16 ways.

17 **Q. Tell me what those ways are.**

18 A. First off, I don't agree that that is the
19 right approach; so let's just put that on the
20 record.

21 I think we need --

22 **Q. This is a hypothetical.**

23 A. -- a just and equitable transition away
24 from fossil fuels in a way that's very thoughtful
25 and planned. So dropping off a cliff doesn't seem

1 like a very good idea.

2 But can you repeat your question?

3 **Q. Sure, yeah.**

4 **If Montana's greenhouse gas emissions**
5 **were to completely cease overnight, what impact**
6 **would that have on global climate change?**

7 A. It would absolutely have an impact.
8 Montana has an enormous amount of coal in the
9 ground that -- some of it is coming out of the
10 ground. We have refineries.

11 We have one of the biggest coal plants
12 that pollutes -- I think last time I looked, it
13 was the top 25 in the United States for greenhouse
14 gas emissions.

15 So those are real numbers. Those are
16 significant impacts.

17 If we could plug all of the emissions
18 that come from methane and the distribution system
19 and at the wellhead, if we could stop flaring, you
20 are -- you're having a profound impact on methane
21 emissions. And methane is a very potent
22 greenhouse gas in the short run.

23 So collectively, if we did that, we would
24 have a significant impact on -- on our
25 contribution to the climate crisis.

1 **Q. Are you able to quantify that opinion in**
2 **terms of the difference it would make in the**
3 **projected rising of the temperature caused by**
4 **greenhouse gases?**

5 **So if you get rid of Montana's**
6 **contribution to climate change, how much less**
7 **would temperatures increase over the next decade?**

8 A. I would certainly defer to Whitlock and
9 Running, and all the analyses that have gone into
10 the IPCC report.

11 But, to my understanding, temperature
12 very closely follows CO2, or greenhouse gases,
13 CO2E, in the atmosphere.

14 **Q. And you don't know what Montana's**
15 **contribution of greenhouse gas emissions in the**
16 **atmosphere is?**

17 A. It's in the expert reports that you won't
18 provide me.

19 **Q. It's in whose expert report?**

20 A. Erickson talks about it.

21 **Q. But you don't know?**

22 A. Not off the top of my head.

23 **Q. Okay. Would you agree that you share a**
24 **state with a lot of people who disagree with you**
25 **about climate change?**

1 A. Yes.

2 **Q. How do you think your dispute with those**
3 **people should be resolved in Montana?**

4 A. I believe information and data and having
5 everybody have the facts of the matter is the best
6 way to solve disputes.

7 And if we got rid of these two laws, that
8 would be a step in the right direction towards
9 helping people understand the impacts of projects
10 that are proposed.

11 **Q. You say information and data would be a**
12 **better approach to resolve disputes about climate**
13 **change.**

14 **Why is a lawsuit a good approach rather**
15 **than just educating people?**

16 A. We do both. I believe both are
17 necessary.

18 A lawsuit is always a method of last
19 resort. You -- we educate. As an organization,
20 we try to bring people up to speed on the latest
21 science and policy.

22 We participate in administrative
23 proceedings on a regular basis, whether that's
24 rulemaking or permit issuance or administrative
25 appeals of permits that we disagree with.

1 You do all that. And that's often not
2 enough, and so sometimes you have to go to court.
3 We have three branches of government for a very
4 good reason.

5 **Q. So people disagree with you, you just sue
6 them?**

7 A. No, absolutely not.

8 **MR. SULLIVAN:** I would object to the form
9 of the question. It misstates the deponent's
10 testimony.

11 **THE WITNESS:** That is wrong.

12 **BY MR. LONGFIELD:**

13 **Q. Tell me how.**

14 A. There are a lot of people who disagree
15 with me. My children disagree with me.

16 **MR. SULLIVAN:** Objection. Form. Asked
17 and answered.

18 **THE WITNESS:** My children disagree with
19 me on a regular basis and I don't sue them.

20 When state agencies fail to do their job
21 and comply with the law, then sometimes, after
22 going through the whole process, the only avenue
23 left to you to get relief, under the constitution
24 and under the laws of this state and this
25 nation -- the only way to go about getting that

1 suffer. I mean, we may suffer in providing energy
2 and I think it's a very easy problem to solve, but
3 you have to do proper planning. And that is the
4 purpose of our energy laws, that is why our
5 utilities do resource planning.

6 It is -- it is the whole PSE purview and
7 NorthWestern purview as it interacts with the
8 Public Service Commission to make sure we have
9 adequate resources.

10 And so we need to make sure that we have
11 adequate resources going forward. It's doable,
12 but it's not something you can just switch
13 overnight. It takes time.

14 **Q. Okay. You say you believe in democracy.
15 Does it sound very democratic to have one district
16 judge in Montana determine the energy policy for
17 the entire state?**

18 **MR. SULLIVAN:** I would object to form.
19 And it calls for a legal conclusion.

20 **THE WITNESS:** That is the system we have.
21 We have a system in which you go to a singular
22 judge, you make your case, you present evidence on
23 both sides, and they -- they pose a decision.

24 And then if you don't like that decision,
25 you can go up -- in Montana, you can go up to

1 relief is to go to court.

2 **BY MR. LONGFIELD:**

3 **Q. Okay.**

4 A. I don't see anything wrong with the
5 judicial branch of government myself.

6 **Q. Is there any harm that would come from
7 significantly drawing down the use of fossil fuels
8 in Montana over a short period of time?**

9 A. Yes, of course.

10 **Q. What kind of harms would occur from that?**

11 A. I think it's mainly human. I think
12 there's a couple things that would occur.

13 First off, a lot of people would be
14 abruptly out of work and would have to quickly
15 retool, and I think we need a little bit of time
16 to stage that transition. That's why we passed
17 some laws to that effect, or tried, in other
18 instances, to do so.

19 Also, we have, you know, an expectation
20 in our society that when you go and turn on your
21 light switch, the lights go on. So the energy
22 system is incredibly complicated. It involves a
23 lot of players and a lot of moving pieces, and it
24 is evolving quickly.

25 If you evolve too quickly, you may

1 Montana Supreme Court. These are elected
2 officials and it's as good as I can think of for a
3 judicial system to oversee government activity to
4 make sure that they're behaving in a
5 constitutional manner.

6 **BY MR. LONGFIELD:**

7 **Q. Why not present that evidence to the
8 voters instead of to one court?**

9 A. Do you know how expensive an initiative
10 is? It's not reasonable.

11 **Q. It's too expensive; that's the reason
12 why?**

13 A. I don't like the initiative process
14 often. Sometimes I do, but oftentimes I think
15 it's a very difficult process. There's too much
16 money involved. It is -- it is not a process that
17 leads, I think, oftentimes to a durable solution.

18 I think a more durable solution is
19 relying on the laws and the constitution of this
20 state and this nation to help determine our
21 future.

22 **MR. LONGFIELD:** All right. That's all I
23 have. Thank you very much.

24 **MR. SULLIVAN:** Could we take just about
25 60 seconds to confer and be right back?

1 **MR. LONGFIELD:** Absolutely.
 2 (Whereupon, a break was then taken.)
 3 **MR. SULLIVAN:** Okay. Back on the record.
 4 Plaintiffs' counsel have no questions.
 5 **MR. LONGFIELD:** Thank you. Thank you
 6 very much.
 7 **THE WITNESS:** Thank you.
 8 (Whereupon, the deposition
 9 concluded at 3:35 p.m.)
 10 Signature Reserved
 11 * * * * *

1
 2 **C E R T I F I C A T E**
 3
 4 STATE OF MONTANA)
 5 COUNTY OF GALLATIN) : Ss
 6 I, Kasey L. Fisher, Registered
 7 Professional Reporter and Notary Public for the
 8 State of Montana, residing in Bozeman, do hereby
 9 certify:
 10 That I was duly authorized to and did
 11 swear in the witness and report the deposition of
 12 ANNE HEDGES in the above-entitled cause; that the
 13 foregoing pages of this deposition constitute a
 14 true and accurate transcription of my stenotype
 15 notes of the testimony of said witness, all done
 16 to the best of my skill and ability; that the
 17 reading and signing of the deposition by the
 18 witness have been expressly reserved.
 19 I further certify that I am not an
 20 attorney nor counsel of any of the parties, nor a
 21 relative or employee of any attorney or counsel
 22 connected with the action, nor financially
 23 interested in the action.
 24 IN WITNESS WHEREOF, I have hereunto set
 25 my hand and affixed my notarial seal on this the
 27th day of October 2022.

1 **DEPONENT'S CERTIFICATE**
 2
 3 I, ANNE HEDGES, the deponent in the foregoing
 4 deposition, DO HEREBY CERTIFY, that I have read
 5 the foregoing - 229 - pages of typewritten
 6 material and that the same is, with any changes
 7 thereon made in ink on the corrections sheet, and
 8 signed by me a full, true and correct transcript
 9 of my oral deposition given at the time and place
 10 hereinbefore mentioned.
 11
 12 _____
 13 ANNE HEDGES
 14
 15
 16 Subscribed and sworn to before me this _____
 17 day of _____, 2022.
 18
 19
 20 PRINT NAME: _____
 21 Notary Public, State of Montana
 22 Residing at: _____
 23 My commission expires: _____
 24
 25 KF - Rikki Held, et al vs. State of Montana, et al

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EXHIBIT 6

MONTANA FIRST JUDICIAL DISTRICT COURT
LEWIS & CLARK COUNTY

RIKKI HELD, et al.,)	
)	
Plaintiffs,)	
)	
vs.)	Cause No. CDV 2020-307
)	
STATE OF MONTANA, et al.,)	
)	
Defendants.)	

DEPOSITION UPON ORAL EXAMINATION
OF
PETER A. ERICKSON

600 University Street, Suite 1715
Seattle, Washington 98101

DATE: Monday, December 12, 2022
REPORTED BY: Donald W. McKay, RMR, CRR, CCR 3237

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ALSO PRESENT (by Zoom videoconference):

BLAIRE BERNSTEIN
 Law Clerk
 Our Children's Trust

1 Seattle, Washington; Monday, December 12, 2022
 2 8:10 a.m.

3

4 PETER A. ERICKSON called as a witness in the
 5 above-entitled cause, being
 6 first duly sworn, testified
 7 as follows:

8

9 (Exhibit 109 marked for identification.)
 10 (Exhibit 110 marked for identification.)
 11 (Exhibit 111 marked for identification.)
 12 (Exhibit 112 marked for identification.)
 13

14 EXAMINATION

15 BY MR. STERMITZ:

16 Q. Good morning, sir. Could you please tell us
 17 your name for the record.

18 A. Hello, Mr. Stermitz. My name is Peter Erickson.

19 Q. And we're doing this here in Seattle, as we
 20 speak. Is that your residence, in the Seattle area?

21 A. Yes.

22 Q. Have you had your deposition taken before, at
 23 any point?

24 A. Yes, I have.

25 Q. How often? How many times has that happened?

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1 A. I believe, twice.

2 Q. Okay. In connection with your profession both
 3 times?

4 A. Yes.

5 Q. When was the last time, roughly? How long ago?

6 A. I think it was in the last year.

7 Q. Okay. Can you tell me what that was about.

8 A. Sure. That was a case about a liquefied natural
 9 gas facility in the City of Tacoma, Washington.

10 Q. What was your role in that?

11 A. I was an expert witness concerning greenhouse
 12 gas emissions accounting for the facility.

13 Q. What was the dispute about, generally?

14 A. The dispute -- the part of the dispute that I
 15 was asked to provide expert testimony about was about
 16 the Environmental Impact Statement for the facility and
 17 that statement's treatment of greenhouse gas emissions.

18 Q. So was this a facility that was seeking
 19 environmental permits in Washington?

20 A. That's correct.

21 Q. Okay. And was there litigation over that?

22 A. Groups were challenging the permit.

23 Q. Okay. And I guess what I'm getting at is --
 24 obviously, there were lawyers involved. Who were the
 25 lawyers that you worked with on your side in your work

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1 for that particular case?
 2 A. The main firm I worked with was Earth Justice.
 3 Q. And the attorney or attorneys there?
 4 A. His name was Jan Hasselman.
 5 Q. Jan Hasselman? Okay.
 6 I noticed in your references, there was a recent
 7 one. I think the most recent one was the reference to a
 8 publication or something you're working on with Jan.
 9 Did it stem from this situation you talked about just
 10 now?
 11 A. Yes. In part.
 12 Q. Okay. And then you said you had your deposition
 13 taken one other time possibly. What was that about?
 14 A. That was the national case, Juliana, et al.,
 15 versus U.S.
 16 Q. Okay. Did you prepare an expert report in that
 17 case, the Juliana case?
 18 A. Yes.
 19 Q. Was it -- never mind. Strike that.
 20 I just have a few questions here, not many,
 21 about your background. On your CV -- well, in your
 22 report, you indicate that you have a B.A. in geology
 23 from Carleton College. Correct?
 24 A. Yes.
 25 Q. And you have done some postgraduate course work

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1 at the University of Washington, it sounds like.
 2 Correct? In economics. Your report said economics.
 3 A. Yes. Those were undergraduate-level courses,
 4 but I took them after graduating from college, yes.
 5 Q. I see. Okay. Have you had any other degrees
 6 besides the B.A. from Carleton?
 7 A. No, sir.
 8 Q. Do you hold any certificates of any kind or
 9 professional licenses of any kind?
 10 A. No. No certificates or licenses. Those aren't
 11 exactly common in my field.
 12 Q. Sure. Okay. Your CV indicates that you've been
 13 associated with the Stockholm Environment Institute
 14 since 2008. Are you employed there? What is your
 15 relationship with the Stockholm Institute?
 16 A. I was employed there between 2008 and the first
 17 week of September of this year. I'm currently
 18 considered an affiliated researcher there.
 19 Q. So from 2008 until September of this year, you
 20 were actually an employee. Is that a fair statement?
 21 A. Yes.
 22 Q. And are you now consulting sort of? What is the
 23 arrangement that you just described?
 24 A. The classification of affiliated researcher
 25 is -- yeah, it's like a consulting relationship. It's

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1 basically understood that I am a researcher, I may
 2 continue to perform research in the vein that I did
 3 before, and that I may do so under the umbrella and in
 4 collaboration with other people at SEI.
 5 Q. How are you compensated now then?
 6 A. I'm not being compensated -- at the very moment,
 7 I'm not being compensated. I haven't created any sort
 8 of new financial structure with them for this time
 9 today, for example.
 10 Q. Okay. And do you have any other profession or
 11 employment at this point?
 12 A. No.
 13 Q. Okay. The Stockholm Institute, what is its
 14 mission?
 15 A. Sure. For clarification, it's the Stockholm
 16 Environment Institute.
 17 Q. I'm sorry. Correct. Yes.
 18 A. Which I will refer to as SEI, if that's okay
 19 with you.
 20 Q. Sure. Okay.
 21 A. The mission of SEI, which is a global,
 22 international, non-governmental organization, is to
 23 bridge science and policy in the fields of environment
 24 and global development. On a practical level, what that
 25 means, for example, in the course of my work over the

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1 years there, is that we provide technical analysis on
 2 matters of environmental policy; and specifically, in my
 3 case, on policy related to climate change.
 4 Q. So like the Juliana case, for example, is your
 5 work there outside, I guess, the direct work of SEI? Is
 6 it on the side, so to speak, or are they typically
 7 involved in things like litigation?
 8 A. Typically, no. We have not been involved in
 9 areas of litigation; however, starting about, you know,
 10 five or seven years ago, it became clear to us that
 11 there were some very salient climate policy issues being
 12 put in front of courts; and so, on a limited basis, we
 13 started -- especially me -- started engaging in some
 14 such debate. So the work I did on Juliana was
 15 compensated in the sense that I did it while I was an
 16 employee of SEI.
 17 Q. And would you say, then, that this particular
 18 case -- the Held case -- is that different, then,
 19 because you're not directly affiliated with -- well,
 20 that's not a correct statement. Is it different than --
 21 are you doing this on your own, I guess is the question
 22 I'm getting at?
 23 A. The work I did on this case to prepare an expert
 24 report was -- I was an employee of SEI, I was paid by
 25 SEI. So, in that regard, it was very similar to the

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1 Juliana case. The only difference now is that in this
 2 post expert report phase, I'm not officially an
 3 employee.
 4 It's possible, if this case or others were to
 5 continue in a substantial way in 2023, for example, that
 6 I would go to SEI and say, you know, "Does this still
 7 fit your mission? Would you like to be involved and
 8 compensate me for this?" But I haven't yet had those
 9 discussions.
 10 Q. Are you working on any other case like this one,
 11 like the Held case or like Juliana, anywhere else?
 12 A. Can I ask you to clarify what you mean by "like
 13 these cases."
 14 Q. Well, my understanding is that there are other
 15 lawsuits that are, in a way, similar to the Held case
 16 here in Montana where Children's Trust, in particular,
 17 has brought claims in other states. I don't know the
 18 extent of that, but that's my understanding. Are you
 19 involved in any other case on climate change brought by
 20 Children's Trust? Maybe we should just put it that way.
 21 A. No, I'm not involved in any other case brought
 22 by Our Children's Trust.
 23 Q. Okay.
 24 A. I have been involved in another case brought by
 25 individuals, I think including children, in Europe, but

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1 Our Children's Trust was not involved in that.
 2 Q. In Europe. Okay.
 3 Are you currently working on any -- as an
 4 expert -- providing advice or consulting on any other
 5 permit challenges or environmental disputes of any kind?
 6 A. Not presently. It's not always clear to me when
 7 a case ends. I bring that up simply in the spirit of
 8 being complete in my answers. I consider my work done
 9 on every other case I've been involved in, but sometimes
 10 matters arise again.
 11 Q. Sure. Right now, are you providing any expert
 12 help for any environmental permitting issues -- I mean
 13 active issues -- in the State of Washington?
 14 A. Again, not presently actively currently.
 15 Q. Okay.
 16 A. I have no outstanding reports due, no
 17 outstanding conversations. I mean, I have submitted
 18 expert materials on cases that may not be resolved yet;
 19 and if someone were to call me back and ask me a
 20 question about that, I would respond. But I don't have
 21 any contractual or other commitments to do any such work
 22 presently or in the future.
 23 Q. Okay. How were you first contacted with regard
 24 to this case, the Held case?
 25 A. Can you clarify what you mean by "how."

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1 Q. Yes. Well, how did you first have any knowledge
 2 about this case? Let's put it that way.
 3 A. It was through the attorneys at Our Children's
 4 Trust.
 5 Q. And they had worked with you before on the
 6 Juliana case. Right?
 7 A. Correct.
 8 Q. So did they just reach out to you to say they
 9 have another case they'd like you to work on kind of
 10 thing?
 11 A. That's my recollection.
 12 Q. Do you know whether when they contacted you, the
 13 lawsuit had been filed yet or not?
 14 A. I can infer that simply because I believe the
 15 complaint was filed in 2020, and I don't believe they
 16 contacted me until 2021. But that's just my memory.
 17 Q. Okay. That's fine.
 18 Have you read the complaint that was filed in
 19 this case?
 20 A. I've read most of -- I've looked at every page.
 21 I can't promise I looked at every single word, but yes,
 22 I read the complaint.
 23 Q. Have you met with any of the plaintiffs in this
 24 case?
 25 A. No.

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1 Q. I said met with. Have you talked to them on the
 2 phone or in some other way other than in person?
 3 A. I've had no communication with the plaintiffs.
 4 Q. So are you familiar at all with the factual
 5 allegations that they have made in the lawsuit? I
 6 mean -- and let me narrow it down. I'm talking about
 7 their own individual circumstances and not, you know,
 8 climate change or global warming generally.
 9 A. I understand that in the complaint, there are
 10 discussions of each plaintiff's individual
 11 circumstances. I can't recall many of those right now,
 12 but --
 13 Q. Okay. Did you see that your consulting work
 14 here depended at all on those individual circumstances
 15 or was it important for you to know them for what you
 16 have provided?
 17 A. I'm not sure I understand the question.
 18 Q. Well, you've provided various reports here, a
 19 couple of reports at least. It sounds like you didn't
 20 really feel that you needed to know the individual
 21 circumstances of the plaintiffs in order to provide the
 22 information that you did. Is that right?
 23 A. If, by "individual circumstances," you mean that
 24 plaintiff X was impacted by climate change on their
 25 ranch due to factors Y and Z, then no. That was not

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1 important to me. The collective complaint was something
 2 that overlapped with my professional expertise, and
 3 which, therefore, seemed like it would be suitable for
 4 my involvement.
 5 Q. What is your understanding of the goal of this
 6 lawsuit? What does it seek?
 7 A. In my understanding, they are seeking that the
 8 State of Montana recognize the -- because of Montana's
 9 constitution, that climate change be recognized under
 10 the existing constitution, and that there be a remedy
 11 applied.
 12 Q. Do you know what the remedy that is being sought
 13 is exactly?
 14 A. Not in specific detail, but it would involve a
 15 plan for reducing greenhouse gas emissions.
 16 Q. I take it from your answer that you wouldn't
 17 have knowledge of what the Court decision would be
 18 exactly that would reduce Montana's greenhouse gas
 19 emissions.
 20 A. I guess that's right. I mean, I would consider
 21 that a legal issue to be sorted out during the course of
 22 the case, and I would not attempt to speculate what
 23 future decision would look like. But I can answer
 24 follow-up -- further questions.
 25 Q. Yeah, all I'm trying to nail down is that it

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1 seems, from your report, that you're conveying your
 2 knowledge about greenhouse gases, global warming,
 3 climate change, but -- I mean, nowhere do I see, I don't
 4 believe, anything specific about what you think the
 5 Court should do or something like that. Right?
 6 A. That's correct. My testimony is about emissions
 7 and fossil fuels associated with Montana's economy. It
 8 does not recommend any specific remedy.
 9 Q. I guess, then, another way to put that would be,
 10 is it fair that you don't know whether the Court that's
 11 handling this case should -- whether it could do
 12 anything or not. Right?
 13 MS. RODGERS: Objection, vague and ambiguous.
 14 MR. STERMITZ: Okay. That's probably fair.
 15 BY MR. STERMITZ:
 16 Q. I mean, you don't know what the power of the
 17 Court is to do anything with regard to climate change in
 18 Montana; do you?
 19 A. I mean, I understand the different branches of
 20 government, and that sometimes there are limits on their
 21 powers with respect to executive versus legislative
 22 branches of government. It sounds like you're trying to
 23 get at something like that. But --
 24 Q. Fair enough. I'm sorry to interrupt you.
 25 I could ask it this way, and usually I get an

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1 objection for asking for a legal conclusion, so I'll ask
 2 it that way and see what happens.
 3 What is the Court authority over the regulation
 4 of greenhouse gases in Montana?
 5 MS. RODGERS: Objection to the extent that it
 6 calls for a legal conclusion.
 7 Mr. Erickson, you can go ahead and answer.
 8 THE WITNESS: I can only, you know, make an
 9 intelligent guess at your question because of its legal
 10 ramifications, but I would imagine that the Court can
 11 interpret the existing laws and policies of the State of
 12 Montana, and make judgments with regard to the extent to
 13 which those laws allow for the regulation of greenhouse
 14 gases.
 15 BY MR. STERMITZ:
 16 Q. Would it be a goal of your work here to educate
 17 the Court about global warming and greenhouse gases and
 18 so forth?
 19 MS. RODGERS: Objection, vague and ambiguous.
 20 Go ahead and answer.
 21 THE WITNESS: I'm not sure, sir, if educate has
 22 a legal meaning in this context. The goal of my report
 23 is to provide expert information on the greenhouse gas
 24 emissions and fossil fuel use and production associated
 25 with Montana's economy.

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1 BY MR. STERMITZ:
 2 Q. Okay. Let's go ahead and get your initial
 3 expert report in front of you there. It should be
 4 Exhibit 111.
 5 A. I have that in front of me.
 6 Q. I'm going to continue with the same vein of
 7 questions. At the very end of it, the end of the
 8 narrative, page 20, under your Summary and
 9 Conclusions --
 10 A. Sir, can I ask a question about this. I see on
 11 page 20 that this is dated the 17th of May, and I
 12 thought I had submitted a version dated September 30th.
 13 MS. RODGERS: Mark, that's correct. This isn't
 14 his updated version of his expert report that was served
 15 on September 30th; and unlike Dr. Van Susteren's, there
 16 were some changes made to Mr. Erickson's expert report.
 17 MR. STERMITZ: Great. Okay.
 18 MS. RODGERS: I have a hard copy of the
 19 September 30th version here.
 20 MR. STERMITZ: Well, I'm sure I have one -- I
 21 must have one somewhere. With my technology limitation
 22 here, because of my microphone, I can't look at it
 23 simultaneously.
 24 THE WITNESS: I am happy to answer questions
 25 about this version, but I don't -- I mean, if this is to

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1 be submitted in the record as my expert report, it
 2 should be the later one, of course.
 3 MR. STERMITZ: Yes.
 4 MS. RODGERS: Mark, do you want us to e-mail you
 5 the September 30th version?
 6 MR. STERMITZ: Maybe if we could -- I apologize
 7 for this. I did the same thing with Van Susteren,
 8 apparently. I don't know what the issue is with me
 9 here. If we could take a break. What I can do, if you
 10 e-mail it to me, is print it out here, and then I'd have
 11 the hard copy. Actually, I can get it from my office.
 12 I'm just trying to think of how I can best avoid a break
 13 here, use this time.
 14 THE WITNESS: If I may, there are very few
 15 differences between the two versions.
 16 BY MR. STERMITZ:
 17 Q. Let me ask you this: Are there differences in
 18 the totals that you talk about for greenhouse gas
 19 emissions in Montana and, you know, extraction of fossil
 20 fuels and that kind of thing? Did you change any of the
 21 math there basically?
 22 A. I'm looking at page 19, just to get a sense of
 23 that, and the total at least is the same in this version
 24 as in my final version. I can't confirm, without
 25 reading through both side by side, that every number is

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1 the same. But I don't recall revising any of my
 2 calculations between the two versions.
 3 Q. On the September version -- is that what you're
 4 looking at now? Do you have them both there in front of
 5 you?
 6 A. I do not. I just have the version that you
 7 provided. Like I said, I'm going from my memory of the
 8 more recent one.
 9 MR. STERMITZ: Maybe if we could get that one
 10 that Andrea has there --
 11 MS. RODGERS: Sure.
 12 MR. STERMITZ: -- we might be able to make a
 13 little progress here, and then take a break and I can
 14 fix it.
 15 BY MR. STERMITZ:
 16 Q. It looks like -- what I'm looking for is
 17 something similar to what you have on page 19, the
 18 summary that has the categories listed and the numbers.
 19 Is there a similar section in the September report?
 20 A. Yes, sir. Upon quick visual examination here,
 21 they appear identical.
 22 Q. Okay. With headings of the tons of CO2, for
 23 example, and then a short paragraph following that
 24 describes that. Is that what you see there?
 25 A. Yes.

Page 20

1 Q. Okay. Well, let's go through that at least,
 2 since it's the same, and then we don't take a break now
 3 and interrupt things prematurely.
 4 Go ahead and refer, if you would, to the
 5 September one, because we're going to substitute that
 6 in. I'm not looking at it; but if they're the same, it
 7 should be okay.
 8 A. So I'm going to put in front of me the September
 9 version and look only at that.
 10 Q. Yeah, if I say something that looks different to
 11 you, just let me know.
 12 Under your Summary and Conclusions, the first
 13 bolded subparagraph says, "Total annual fossil fuel
 14 extraction in Montana led to about 70 million tons of
 15 CO2 once those fuels were combusted." Is that what you
 16 have there?
 17 A. Yes.
 18 Q. Okay. And where primarily does Montana's coal
 19 that's not combusted in Montana, that's shipped
 20 somewhere else -- where does it go? Who is the biggest
 21 consumer of Montana coal outside of Montana?
 22 A. I don't recall. It's been a while since I
 23 looked at the details, but I can recall that some went
 24 to a power plant in Oregon, other went to power plants
 25 in the Upper Midwest, and some other was exported via

Page 21

1 terminals in British Columbia.
 2 Q. Okay. And if I understand this correctly, it
 3 looks like the next paragraph shows, as it says, annual
 4 fossil fuel consumption in Montana has led to about
 5 32 million tons of CO2. Is that -- whether it's coal or
 6 anything else -- that 32 million tons, that's combusted
 7 in Montana?
 8 A. Yes.
 9 Q. Okay. So then if my math is right, it looks
 10 like about 38 million tons of coal -- Montana ships
 11 about 38 million tons of coal -- never mind. I'm sorry.
 12 Okay. Then the third category, "Fossil fuels
 13 transported through or refined in Montana led to at
 14 least 80 million tons of CO2 annually once those fuels
 15 were combusted."
 16 If we just focus on the transporting through
 17 Montana, do I read your report here right to say that
 18 when we just look at transport, we're looking mainly at
 19 oil? I think that's how I read that. Is that right?
 20 A. When we're just looking at fuels transported
 21 through Montana, then the largest share is oil, yes.
 22 Q. Okay. And this 80 million ton figure of fossil
 23 fuels transported through Montana, that includes fossil
 24 fuels that are extracted elsewhere, but traverse
 25 Montana. Is that right?

Page 22

1 A. Yes.

2 Q. And do you know how much of that 80 million tons

3 is accounted for by fossil fuels extracted somewhere

4 other than Montana?

5 A. I don't offhand recall that fraction.

6 Q. Do you have any vague understanding? I mean, is

7 it the lion's share of 80 million tons or a fraction of

8 80 million tons, or do you know at all? "It" being,

9 again, fossil fuels extracted somewhere other than

10 Montana, but transported through, in your category here.

11 A. My recollection is that the majority of that

12 80 million tons would be fuels extracted outside

13 Montana.

14 Q. And then, if I understand the last -- let me

15 make sure it's the last -- yeah, the last section there,

16 where you say, "Accounting for overlap..." -- by that,

17 you mean making sure we're not counting twice,

18 basically, for something that's in two categories.

19 Right?

20 A. That's exactly right.

21 Q. Okay. I know you must have it somewhere else in

22 your report. We can look. But what is the total --

23 maybe the math is right here -- what is that overlap?

24 How much is that of the total? Do you know? What do we

25 subtract out there?

Page 23

1 MS. RODGERS: Objection, vague and ambiguous.

2 BY MR. STERMITZ:

3 Q. Well, you account for the overlap. In other

4 words, you don't want to count twice between fossil --

5 you know, transport or something that falls into more

6 than one category. Correct?

7 A. Correct. I mean, one way to answer your

8 question would be to add up the three numbers above,

9 which add up to 182, and compare that to the 166. The

10 166 has no double counting in it.

11 Q. So that would be -- if my math is right, there

12 is 16 million tons somewhere in here that would be the

13 overlap. Does that sound about right?

14 A. Yes.

15 Q. Okay. Just looking on the transport part, you

16 describe in your report in various places that Montana

17 is a thoroughfare, quote, unquote, for transportation of

18 fossil fuels. Right?

19 A. Correct.

20 Q. And do you know -- let's take -- well, what are

21 the means by which these fossil fuels are transported?

22 How is it shipped, depending on which fossil fuel you're

23 talking about?

24 A. Sure.

25 Q. Rail? Rail is one. Right?

Page 24

1 A. Rail, especially for coal. Pipeline for oil.

2 Pipelines for natural gas. Sometimes oil is also

3 shipped by rail, although what I look at here is mainly

4 by pipeline.

5 Q. Okay. And do you know whether -- let me

6 rephrase this.

7 Do you know whether the Court in Montana would

8 have the power to limit or eliminate transportation of

9 fossil fuels through Montana that originate somewhere

10 else?

11 A. I'm limited in my legal knowledge, sir, of the

12 Court's powers; however, to the extent there are permits

13 issued by the State of Montana for these different

14 activities that could consider climate change, then that

15 would seem to be within the power of the Montana state

16 government, and, therefore, of the Court, to at least

17 weigh in on that matter.

18 Q. I'm going to assume you don't have a working

19 knowledge of the respective authority of the State of

20 Montana versus the authority of the Federal Government

21 in regulating, let's say, pipeline transport through the

22 state of Montana.

23 MS. RODGERS: Objection to the extent it calls

24 for a legal conclusion.

25 Go ahead and answer.

Page 25

1 THE WITNESS: I'm aware of national -- Federal

2 Government agencies that regulate interstate pipelines.

3 They may regulate interstate transmission on rail as

4 well.

5 But as to the relative powers, which I believe

6 was your question, I find that difficult to answer. It

7 seems like either level of government has power to

8 affect those flows, and I wouldn't be able to speak to

9 the relative power.

10 BY MR. STERMITZ:

11 Q. Well, and to be more specific -- and maybe I'll

12 get an objection here -- but you don't know, for

13 example, do you, whether Montana could prohibit the

14 transport of oil through the state without running into

15 a legal problem with the Federal Government?

16 MS. RODGERS: Objection to the extent it calls

17 for a legal conclusion.

18 Go ahead and answer.

19 THE WITNESS: I don't know about a

20 prohibition -- you know, a statewide prohibition, but I

21 do know from -- at least from other states where

22 facilities that have been proposed to transport a fossil

23 fuel through a state, when climate change is considered,

24 you know, state governments do have power to decide not

25 to build facilities and to make those decisions based on

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1 climate change grounds.
 2 BY MR. STERMITZ:
 3 Q. Backing up here to the first paragraph in this
 4 section, the total annual fossil fuel extraction in
 5 Montana, you say there that coal extraction levels were
 6 far higher than a major economy such as Brazil, Japan,
 7 Mexico, Spain, or the United Kingdom. Do you see that?
 8 A. Yes.
 9 Q. I mean, in simplistic materials, in layman's
 10 terms, are you just saying that Montana mines more coal
 11 than any of these countries? Is that another way of
 12 saying that?
 13 A. Yes. And for there, I'm talking about in the
 14 year 2019.
 15 Q. Okay. What is the relevance of the fact that
 16 Montana mines more coal than some other country, to your
 17 report?
 18 A. The reason that I bring in those other countries
 19 is to provide a relative sense of scale. Those are
 20 countries that have used considerable -- produced rather
 21 considerable amounts of coal. You know, much of the
 22 coal-based energy economy started in the United Kingdom,
 23 for example. So the goal there is to say -- to provide
 24 a relative sense of scale of Montana's coal extraction,
 25 and to help provide some benchmark for why I argue that

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1 it is a substantial amount.
 2 Q. Okay. That's helpful.
 3 So these countries that you chose, are these all
 4 countries that have some history of mining coal? Am I
 5 hearing you right?
 6 A. Looking at that list now, I'm not -- I'm not --
 7 I'm not sure about the level of coal extraction
 8 historically in a couple of them, but, you know, these
 9 are major economies of the world that have either -- you
 10 know, that have major energy systems that have major
 11 quantities of CO2 emissions, and that in most cases,
 12 have either produced or used large quantities of coal.
 13 Q. Well, I'm trying to figure out why you picked
 14 them in particular. So, for example, I mean, are there
 15 other countries that mine coal, I guess, that aren't on
 16 this list for comparison? Right? Like do they mine
 17 coal in Russia? I don't know.
 18 A. They do mine coal in Russia, yeah.
 19 Q. Or Canada, do they mine --
 20 A. Yes.
 21 Q. I mean, then on the other end of the spectrum,
 22 we mine more coal probably than they do in Portugal,
 23 too, but Portugal is not on the list. So I guess I'm
 24 looking for the thought that went into picking these in
 25 particular.

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1 A. I think I see what you're getting at. And I
 2 don't think there is any -- I'm not sure how specific of
 3 a reason there is for each one. I went to the list of
 4 coal producers and looked at the ones that were either
 5 about or smaller than Montana, and listed off a few that
 6 may be relevant either because of their history of
 7 producing coal or their prominence in global emissions
 8 or in emission reductions or in just the economy.
 9 Q. Okay.
 10 A. One --
 11 Q. Maybe -- go ahead. I'm sorry.
 12 A. If I could just amend that. One could provide a
 13 whole much longer list and put Montana in that. The
 14 point here was just to provide a more, you know, casual
 15 comparison.
 16 Q. Okay. Then kind of keeping that in mind, in the
 17 next section where you talk about fossil fuel
 18 consumption in Montana, you have a list of countries
 19 that you provide there. Does the same kind of theme, I
 20 guess, apply to that list; that is, it's sort of
 21 illustrative and not anything more than that, I guess?
 22 A. That's right. It's illustrative. I'm not
 23 trying to suggest that there is any, you know,
 24 particular policy mechanism or economic link between
 25 Montana and these other economies in either case.

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1 Q. In that second section, Peter, you say that
 2 Montana's fossil fuel consumption has also been
 3 dominated by coal, but that is starting to change as gas
 4 and diesel have been increasing and coal has been
 5 decreasing. What is the reason that coal consumption
 6 has been decreasing in Montana -- or what are the
 7 reasons, I should say?
 8 A. Well, the most notable recent reason is the
 9 closure of two of the generating units at the Colstrip
 10 Power Plant. Presuming that that's permanent, that
 11 would, you know, continue to be a decrease relative to
 12 historic times.
 13 There is a more recent decrease due to reduction
 14 in energy consumption and production associated with the
 15 pandemic, but that's a smaller reason.
 16 Q. Has renewable energy had any kind of impact on
 17 the trend that you reference here?
 18 A. Generally, in my field, to make a conclusion
 19 about that, you would need to look at whether renewable
 20 energy specifically displaced a certain amount of coal
 21 power, and I'm not aware that that's the case. I mean,
 22 more generally, it's the case that building out of new
 23 renewable power is occurring at a faster rate than say
 24 the expansion of coal-fired power generation. But
 25 whether there is a causal link there, I can't comment.

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1 Q. I noticed, from somewhere in your report, your
 2 CV, that you have done work for the City of Seattle. Am
 3 I right about that?
 4 A. Yes.
 5 Q. Did you have any involvement or have you
 6 provided any advice to any of the west coast utilities
 7 that are, were, using power from Colstrip?
 8 A. I have not provided any advice to power
 9 utilities.
 10 MR. STERMITZ: Sorry, Peter, but I'm getting --
 11 is that noise there or somewhere else? I'm getting like
 12 a -- I don't know -- some kind of feedback. Does anyone
 13 else hear that?
 14 MS. RODGERS: We don't hear that here, Mark.
 15 MR. STERMITZ: I think everybody should make
 16 sure their phones are on mute. Okay. We'll move
 17 forward.
 18 BY MR. STERMITZ:
 19 Q. So do you know then whether this trend of coal
 20 consumption in Montana decreasing will continue for the
 21 foreseeable future or not?
 22 A. I believe the closure of Colstrip -- two of the
 23 units at Colstrip was initiated by Puget Sound Energy;
 24 and I believe that that's, you know, likely to be
 25 permanent, although, you know, there are factors pushing

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1 the other way as well. You know, there are other
 2 policies that have been put in place at the national
 3 level that may suggest that coal power would not grow,
 4 but whether that plays out is yet to be seen.
 5 Q. This is jumping around a little bit. For that,
 6 I apologize. But you attached to your report a list of
 7 permits issued by the State of Montana. Right?
 8 A. Yes.
 9 Q. How did you select the permits that are on that
 10 list?
 11 A. Those were provided by the attorneys for the
 12 plaintiffs.
 13 Q. Okay. And do you know whether that's a
 14 comprehensive list or whether there are other permits
 15 that were issued that aren't on it, during the time
 16 frame that's covered by this?
 17 A. I imagine there would be others. I mean, I
 18 reviewed all of those permits. I also reviewed some
 19 materials from the State of Montana that were intended
 20 to guide businesses or members of the public to what
 21 type of agency issues what type of permit for what
 22 activities. And, you know, when you sort of compare the
 23 general list of who is supposed to issue permits and the
 24 list of permits that I reviewed, I would guess that
 25 there are others that are, you know, not included in my

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1 list. So I can't make any attestations that that list
 2 is complete.
 3 Q. Do you know, for example, whether -- or which,
 4 if any, of the permits that are on that list are
 5 actually held in abeyance due to litigation?
 6 A. I don't know.
 7 Q. While I'm on this page -- and we'll see if the
 8 version you have says the same thing -- if you go up
 9 further on the page I have, above the Summary and
 10 Conclusions, there is a paragraph that starts,
 11 "Accordingly, it is likely that actions taken in
 12 Montana..." Is that paragraph in the version that you
 13 have there?
 14 A. Yes.
 15 Q. Okay. And tell me if this sentence is verbatim,
 16 what you have there. "Accordingly, it is likely that
 17 actions taken in Montana to reduce fossil fuel reliance
 18 and greenhouse gas emissions would have ripple effects
 19 in other states." That sentence appears in your later
 20 report as well?
 21 A. Yes.
 22 Q. Is that part of the -- well, let me ask it this
 23 way: What is the point of your stating that these
 24 actions taken in Montana would ripple elsewhere? Why do
 25 you include that language?

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1 A. The main reason is because efforts to address
 2 climate change are inherently cooperative and linked and
 3 interdependent with other governments. So what Montana
 4 does or doesn't do has effects beyond Montana's borders.
 5 Q. Okay. And the same would be true for any other
 6 state that produces fossil fuels. Correct? In any
 7 significant amount.
 8 A. Yes. And that influence beyond one state can be
 9 amplified when states, you know, purposefully work in
 10 concert together. So, you know, there are alliances of
 11 states that work on climate change together, and,
 12 therefore, have even more of a magnifying effect.
 13 Q. Do you know whether that is a goal of the
 14 plaintiffs in this case; that is, to have Montana take
 15 action that would ripple to other states?
 16 A. I don't know if that's a specific theme. My
 17 read of the complaint is more about what Montana does on
 18 its own. But, I mean, it's just a fact that what a
 19 state do (sic) will have other -- will have effects
 20 outside its borders. I'm trying to provide some expert
 21 sort of texture to that point.
 22 Q. Further in that paragraph, at least the way that
 23 it's written here that I have, you talk about there
 24 might be some detriment to that; and you say that were
 25 Montana to move away from coal, oil, or gas extraction,

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1 refining, or transportation, the costs could increase
 2 and may cause some fraction of production to shift
 3 elsewhere, a process sometimes called "leakage" or
 4 substitution.
 5 Is that in the version that you have there in
 6 front of you from September, too?
 7 A. Yes.
 8 Q. And have you given any thought to if that were
 9 to occur in Montana -- that is, Montana moves away from
 10 fossil fuels and leakage took place -- where would it
 11 go? Where would that -- where is the elsewhere you have
 12 in that sentence most likely to occur?
 13 A. I didn't put much thought into that question for
 14 purposes of my expert report. Are you asking me to
 15 think about that now?
 16 Q. Well, I guess you answered the first part, so --
 17 you were talking about leakage generally and not
 18 specifically where it might go when you stated this. Is
 19 that fair?
 20 A. Correct.
 21 Q. And if you were asked, though, you could give
 22 some thought to where it would be most likely to be --
 23 where it would be most likely to shift?
 24 A. I could. And it would depend very much on which
 25 fuel, which market.

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1 Q. Okay. Is the trend for extraction of coal in
 2 Montana -- you may have answered this already, but I
 3 want to make sure I understand -- you talked about
 4 consumption changing and decreasing, coal consumption.
 5 Has coal extraction been decreasing in Montana as well
 6 recently or over some time frame you can identify?
 7 A. I have a figure in my expert report about this.
 8 Shall we turn to that?
 9 Q. Yes, please. Yes, thank you.
 10 A. Figure 2 on page seven of the September version
 11 of my report.
 12 Q. Okay.
 13 A. So if I may continue in answering your question.
 14 Q. Yes, please.
 15 A. You can see on the left panel of that chart,
 16 which shows historical extraction of coal, gas, and oil
 17 in Montana, that coal extraction has been fairly steady
 18 since maybe the 1980s. It's a little hard to tell,
 19 because it is superimposed -- the coal figures are
 20 superimposed on there with gas and oil, but it appears
 21 as if there is a slight, if general, trend towards coal
 22 extraction decreasing in Montana since about the mid
 23 2000s, but it hasn't been uniform. It's gone up and
 24 down within that time period.
 25 Q. Okay. On that same page there, the paragraph

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1 below the figures, the last sentence of that paragraph,
 2 that first paragraph, in my version here says,
 3 "Montana's CO2 emissions attributable to fossil fuel
 4 extraction are thus globally" -- emphasis on globally --
 5 "significant and are greater than the total CO2
 6 emissions of many countries."
 7 Is that the same language in the September
 8 version?
 9 A. Yes.
 10 Q. So several questions about this. I don't think
 11 I saw in your report, but I'm not going to swear to it,
 12 figures for global extraction of coal -- totals for
 13 global extraction of coal. Did you include those
 14 anywhere?
 15 A. I don't believe so.
 16 Q. And, actually, in your rebuttal report, you make
 17 a comment -- and we can look at it if you need to --
 18 that comparing Montana's coal extraction to global coal
 19 extraction is not essentially a worthwhile or a
 20 legitimate exercise. Am I stating your opinion fairly?
 21 A. I wouldn't say it's not -- you know,
 22 categorically not worthwhile. It all depends on the
 23 context of what is being considered. But, you know,
 24 Montana's coal extraction or its greenhouse gas
 25 emissions of any of the sort that I described here

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1 should be, you know, considered on an absolute basis;
 2 not purely in a relative basis, relative to global
 3 totals.
 4 Q. But wouldn't global totals give us -- to use the
 5 words you did for the states -- a relative sense of
 6 scale? Wouldn't it provide that for us, that's not here
 7 now?
 8 A. It would provide a relative sense of scale to
 9 the global quantities of emissions or fossil fuel
 10 extraction, yes.
 11 Q. And the greenhouse gas, global warming problem
 12 is a global problem. Right?
 13 A. Yes.
 14 Q. And you are aware, from reading the complaint,
 15 that part of what the plaintiffs allege is they're
 16 experiencing personal harm from Montana's production and
 17 consumption and so forth of fossil fuels. Right?
 18 A. Yes.
 19 Q. And that that personal harm for global warming,
 20 for example, then is tied to -- wouldn't it be tied to
 21 the extent to which Montana's contribution impacts them?
 22 Let me rephrase that.
 23 What I'm getting at, obviously, is that I wonder
 24 how we can have a frame of reference here for Montana's
 25 contribution to greenhouse gas problems globally without

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1 knowing the extent to which Montana's contribution could
 2 potentially change the global equation. Right?
 3 A. If you're essentially making the point that
 4 other parts of the world also emit emissions, and that
 5 those emissions are large or larger than Montana, that's
 6 true. I don't dispute that. But I'm suggesting here
 7 that Montana's emissions in absolute are substantial.
 8 What other nations are or not doing also has effects.
 9 You know, each ton of CO2 matters basically the
 10 same as any other ton. But I think it's important to
 11 start with the absolute quantities and be clear about
 12 what those are, because that's the most important thing.
 13 The comparison to other parts of the world, as we've
 14 already discussed, can provide some context, but is not
 15 the main concern.
 16 Q. I see that. What I'm asking, though, is if
 17 you've got people who are asking the Court to do
 18 something that's going to help or that's going to impact
 19 what they're experiencing due to global warming at all,
 20 wouldn't you have to know whether the action that the
 21 Court could take -- you know, even if it were to ban all
 22 greenhouse gas emissions and so forth in Montana --
 23 would affect them in any way? That's why I'm getting at
 24 the global part. Do you understand what I'm getting at?
 25 A. I think I understand what you're getting at. It

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1 sounds to me -- and I can't make legal conclusions
 2 here -- but you're trying to get at the effectiveness of
 3 the remedy. And, you know, there are many dimensions to
 4 effectiveness of a remedy. And, you know, part of
 5 Montana's responsibility for emissions is, you know, all
 6 the specific numbers that I put in here. Those numbers
 7 are substantial on their own, and Montana would be doing
 8 its part or could -- has the opportunity to do its part
 9 in the solution. That part is substantial and extends
 10 beyond the borders in ways I've described here. But,
 11 you know, Montana not doing its part has consequences,
 12 too.
 13 Q. Okay. I'm going to have you jump to a different
 14 area here, but I believe kind of the same line of
 15 questioning.
 16 In your rebuttal report -- would you go to that,
 17 please.
 18 A. Sure. So are we leaving this behind?
 19 Q. Well, not -- for now. I think what I will do
 20 is -- let me ask a couple questions about this, and then
 21 let's take a break and I'll track down the September --
 22 maybe get somebody to e-mail that September report. We
 23 don't have to mess around anymore with that.
 24 A. Okay. I'm handing the September report back to
 25 the attorney.

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1 Q. To Andrea?
 2 A. To Andrea. And now I'm going to ask if I may
 3 take this copy of the rebuttal report. Thank you.
 4 Okay. I have it in front of me now.
 5 Q. On page two of your rebuttal report, there is a
 6 paragraph that starts, "Moreover, the misleading
 7 comparison of Montana's emissions to global emissions is
 8 also at odds with current U.S. Government guidance for
 9 agencies' consideration of greenhouse gases and climate
 10 change." Do you see that?
 11 A. Yes.
 12 Q. The words "misleading comparison," I take it
 13 that's your description and that's not CEQ's
 14 description. Am I right about that?
 15 A. Those are my words, "misleading comparison."
 16 Q. And if, as you've said, that it would provide
 17 basically a frame of reference -- those are my words,
 18 not yours -- but context, other kind of phrases that are
 19 similar, like it does for comparisons to states or
 20 countries, why would it be misleading to provide a
 21 comparison to global emissions?
 22 A. It's misleading because of the context in which
 23 those two experts made those remarks. My read of their
 24 reports was to say -- was to interpret their argument as
 25 Montana represents a small, or I think in their words,

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1 minuscule fraction of emissions, and, therefore, is a
 2 minuscule contributor to the problem, but that defies
 3 the basic agreements and just science of the issue of
 4 climate change and how governments have agreed to work
 5 together and need to work together.
 6 If I may continue. The reason that I put the
 7 CEQ quote in there is because -- you know, these are
 8 government planners that have dealt with this very issue
 9 for a long time, of individual actors saying, "Oh, well,
 10 we are a small part, therefore, we don't matter."
 11 So in their careful wording here, they're saying
 12 you can't do that. You can't just say that because
 13 you're a small fraction of the total, you don't matter,
 14 because that's illogical. Right? Everybody needs to do
 15 their part, because everybody is, on their own -- every
 16 source is, on their own, a small part of the overall
 17 total.
 18 Q. Yeah, I get that. And you say it in various
 19 ways, I think, in your report. We talked about the
 20 ripple effect already. Right? That's kind of the same
 21 thing; isn't it?
 22 A. (Nods head).
 23 Q. And further down in your rebuttal report, you
 24 say, "Actions by US states can encourage other states
 25 and local governments to increase their efforts..." And

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1 then you say, "Montana could take an active role in such
 2 efforts, and in so doing would help lessen impacts of
 3 climate change."
 4 The problem that I'm getting at and the one I
 5 don't think -- and you can tell me if I'm wrong -- that
 6 you can speak to is whether we can -- whether the Court
 7 can act as a means to encourage or a means to cooperate
 8 or a means to make people feel better about themselves
 9 and global warming. Any intangible thing, the Court has
 10 certain actions it can take; and you don't have an
 11 opinion, do you -- and let me ask you -- on whether the
 12 Court can do what it is you're advocating for in your
 13 report? Is that fair?
 14 MS. RODGERS: Objection to the extent it
 15 mischaracterizes what's in the expert report, and also
 16 an objection to the extent it's calling for a legal
 17 conclusion as to the Court's interpretation of law.
 18 Go ahead and answer, if you can.
 19 THE WITNESS: Yes, sir. I don't view my report
 20 as advocating for any particular outcome. I'm providing
 21 the expert characterization of emissions. If Montana's
 22 laws and if Montana's policies are supportive of that
 23 and the Court finds that, then, you know, certain
 24 actions may be taken, but that's not the subject of my
 25 report.

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1 BY MR. STERMITZ:
 2 Q. So when you say, for example, in that paragraph,
 3 down towards the bottom, that starts out, "Actions by
 4 U.S. states can encourage other states...", and then at
 5 the end of that sentence, you say, "Montana could take
 6 an active role in such efforts, and in so doing, would
 7 help lessen impacts of climate change," that's not a
 8 statement of advocacy, in your mind?
 9 A. I don't mean to overly parse words, sir, but
 10 when I use the word "could" there, I do so deliberately,
 11 instead of should, because I'm trying to point out a
 12 simple observation and fact based on the way that states
 13 already do cooperate and work on these issues together.
 14 MR. STERMITZ: Andrea, can we -- I'm sorry.
 15 MS. RODGERS: I was just going to say the same
 16 thing. Go ahead.
 17 MR. STERMITZ: I was going to say, we should
 18 take a break so I can get my act together here on that
 19 report.
 20 MS. RODGERS: Well, I was going to say the
 21 break, but not the second part. So I think we're ready
 22 to do that. Thank you.
 23 MR. STERMITZ: Do you want to go ahead and
 24 e-mail that to me?
 25 MS. RODGERS: Nate e-mailed that to you earlier,

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1 so you should have that now.
 2 MR. STERMITZ: Okay. All right. Then why don't
 3 we take about a 15-minute break so I can get that and
 4 print it, if that's okay with you guys.
 5 MS. RODGERS: That's great. Thanks, Mark.
 6 MR. STERMITZ: Thank you.
 7 MS. RODGERS: Fine.
 8 (Recess taken from 9:30 to 9:49.)
 9 MR. STERMITZ: Back on the record.
 10 BY MR. STERMITZ:
 11 Q. For the record, I have now in front of me, the
 12 September version of Peter's report. So we hopefully
 13 won't have to do any correlating anymore.
 14 In various places in your report, I think it's
 15 fair to say, Peter, you talk about, among other things,
 16 Montana's per-capita level of coal or fossil fuel
 17 extraction. Right?
 18 A. (Nods head).
 19 Q. We can go to -- of course, all my notes are on
 20 the other -- I think page five, possibly, going onto the
 21 next page, page six. Yes. The top of page six. Do you
 22 see that? "Even as a proportion of overall United
 23 States fossil fuel production, Montana produces
 24 significantly more fossil fuels per capita than other
 25 U.S. states."

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1 A. I see that.
 2 Q. What is the relevance of per-capita production
 3 of fossil fuels? And just to be clear, the reason I'm
 4 asking is that you could have a state or a country that
 5 has a lot of people and not much fossil fuels, and their
 6 per capita would be very low; but then you've got
 7 Montana with a lot of fossil fuels and not much
 8 population, relatively, so it's high. So why do we use
 9 that measure at all?
 10 A. The reason I use it is that it is people who are
 11 responsible for anthropogenic climate change. It's, in
 12 this case, people who are going to be affected by it.
 13 So it seems like it can be useful to understand the size
 14 of any given contributor relative to the number of
 15 people that are in that jurisdiction.
 16 Q. Okay. And -- that's fine.
 17 So just to wrap up the discussion we had on, you
 18 know, comparison to global greenhouse gas emissions, you
 19 haven't done a calculation -- or have you? -- of the
 20 percentage of Montana's contribution to greenhouse gas
 21 emissions globally. Is that right?
 22 A. I believe that's correct. I did, in reviewing
 23 the expert reports of Dr. Curry and the other
 24 gentleman -- I believe it was Dr. Anderson -- I think
 25 that they put forward percentages. And I looked at

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1 those, and, you know, kind of maybe did some sort of
 2 rough mental math to say that -- to at least make myself
 3 believe that what they were saying was likely true. But
 4 I haven't done, from scratch, my own such calculations.
 5 Q. Do you know, off the top of your head -- I don't
 6 know if it's a fair question -- but do you know, off the
 7 top of your head, what global -- how many tons -- the
 8 most recent time that there is data available -- of CO2
 9 is emitted on a global basis?
 10 A. It's somewhere around 40 billion tons a year. I
 11 mean, that's not going to be super precise, but
 12 somewhere in that ballpark.
 13 Q. And do you know how the countries rank in terms
 14 of their contribution to that, just the top two or
 15 three?
 16 A. I think I know the top two. I'm not sure I am
 17 confident in the top three.
 18 Q. And who are those? Which countries are those?
 19 A. I believe China is first and the U.S. is second.
 20 But that's a fairly recent development. Ten years ago,
 21 the U.S. was first.
 22 Q. Okay.
 23 A. And historically -- I should say that the
 24 statistics I just gave were annual emissions, but
 25 historically, cumulatively, the U.S. is still the

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1 largest emitter.
 2 Q. Over a greater period of time than --
 3 A. Correct.
 4 Q. Than what? Recently?
 5 A. That's right.
 6 Q. Sorry. I'm trying to compare the new version to
 7 my -- on page 18 of your report, your main report, in
 8 the middle there, there is a paragraph that says, "The
 9 state of Montana, and each defendant, holds substantial
 10 influence over the levels of fossil fuels that are
 11 extracted," et cetera.
 12 Do you know, as you sit here today, who all the
 13 defendants are in this case?
 14 A. I don't believe I could list them all.
 15 Q. Okay. So if I went through defendant by
 16 defendant, would you be able to confirm whether that
 17 particular entity has substantial influence over the
 18 levels of fossil fuels that are extracted or consumed in
 19 Montana?
 20 A. I mean, you're welcome to try me. There is a
 21 particular document that I've gone to as sort of my
 22 guidepost on that, and there is -- it's a Montana state
 23 website and memo that says, if you are interested in
 24 doing this in the energy sector, this is who you need to
 25 get the permit from. And it's agencies like the

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1 Department of Environmental Quality, like the industry
 2 that controls the mineral rights. I don't remember the
 3 name of that right now. But, you know, there are a
 4 number of different agencies.
 5 Q. Okay. You reference, in the next sentence
 6 there, "The State of Montana has its State Energy
 7 Policy," and the citation, "that dictates the energy
 8 policy goals Montana is to achieve...," and it goes on.
 9 Did you read that code section that's referenced
 10 there?
 11 A. I did. I don't remember if I read it all, but I
 12 looked at a bunch of it.
 13 Q. And I assume that was provided to you by
 14 plaintiff's counsel.
 15 A. Yes. Although not solely. I mean, there are
 16 also -- I went and did my own research about where the
 17 energy policy was documented.
 18 Q. Okay. Do you have a recollection, as you sit
 19 here today, as to whether or not the -- as to whether
 20 the energy policy as a whole is a problem from a global
 21 warming standpoint? Let me rephrase that.
 22 Do you recall -- do you have an independent
 23 recollection now, today, as to all the sections of the
 24 energy policy that are included within that statute that
 25 you have there?

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1 A. No. And to your prior question that you
 2 restated, I recall that there -- I mean, the State
 3 Energy Policy is a thing that's been amended -- you
 4 know, it could be complicated to find, just as a
 5 layperson, even an expert, all the different ways that
 6 it has changed. So no. But I do recall that there was
 7 a provision that seemed to essentially promote fossil
 8 fuels.
 9 Q. Yeah, there is. There is a lot of other
 10 provisions in it, though. And I guess my question, to
 11 be fair, is whether you took those into account when you
 12 speak of the State Energy Policy as a whole here,
 13 because that's what you've done in your report.
 14 A. I don't recall other aspects in detail of the
 15 State Energy Policy.
 16 Q. Okay. At the bottom of this page 18, there is a
 17 paragraph that starts, "Montana could meet its energy
 18 needs while reducing, even eliminating, its dependence
 19 on fossil fuels for the energy consumed in, produced in,
 20 or otherwise creating economic activity (e.g., transport
 21 and refining of fossil fuels) in the state."
 22 Would you agree that if Montana were to prohibit
 23 the transport of fossil fuels through the state,
 24 hypothetically, that that wouldn't have any impact -- I
 25 mean, I'm talking about transport -- let me be clear --

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1 fossil fuels that are extracted somewhere else, cross
 2 the State of Montana, are consumed or emitted somewhere
 3 else, that wouldn't have an impact at all on whether
 4 Montana could meet its energy needs, itself; would it?
 5 A. (No response).
 6 Q. I mean, you're talking about fossil fuels that
 7 are extracted outside Montana, combusted outside
 8 Montana. Montana's connection is that they traverse
 9 Montana. How would banning those transported fossil
 10 fuels help Montana meet its energy needs without fossil
 11 fuels?
 12 A. I'm going to try to answer what I think you're
 13 asking, and just be clear about what I'm saying.
 14 I think there are pathways that were Montana, in
 15 your hypothetical, to ban the transport of fossil fuels
 16 through the state -- I think there are pathways for that
 17 to affect Montana's own energy use. If I may give an
 18 example. Crude oil is imported to the state in
 19 pipelines and then exported again as sometimes refined
 20 product. Some of that refined product is retained
 21 within the state to provide fuels for vehicles.
 22 Were Montana to say, again, in your
 23 hypothetical, you cannot send oil into the state and
 24 then send it out of the state again, I believe that it
 25 would be very difficult for those refineries to still

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1 operate economically. So that may affect the price at
 2 which Montana residents and businesses can access those
 3 fuels.
 4 My point is that it's all connected. I can't
 5 say categorically that were Montana to prohibit the
 6 transport of fuels through the state, that that would
 7 have zero effect on Montana's own energy consumption.
 8 Q. Well, if I understand your answer, you're
 9 talking about the portion of transported fossil fuels
 10 that are refined in Montana? I mean, was that your
 11 example?
 12 A. Yes.
 13 Q. Okay. And I'm wondering -- maybe I could ask it
 14 this way: Of the total figure that you have for fossil
 15 fuels transported in Montana, 80 million tons -- is that
 16 right? Let me go back to the page here.
 17 A. That's correct, sir.
 18 Q. Eighty million tons.
 19 Of that 80 million tons, do you know what
 20 portion of that never leaves the means of
 21 transportation, whether it's rail or whatever, when it's
 22 in Montana and just passes through?
 23 A. I don't know that percentage offhand.
 24 Q. What are the sources for making the calculation
 25 that you did, 80 million tons is transported? Where did

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1 you find those figures?
 2 A. There are a number of steps to those
 3 calculations. I'll describe in general terms and then
 4 give a few specifics, and you can ask follow-up
 5 questions, of course.
 6 The main -- first source is government reports
 7 about what fossil fuels are entering and leaving the
 8 state. That's especially true for oil and gas where
 9 there are regulatory agencies that track that,
 10 especially the U.S. Department of Energy, Energy
 11 Information Administration or EIA.
 12 For coal, I believe, likewise, there are some
 13 reports. Because that is by rail and not in a very
 14 specific facility like a pipeline, it's sometimes harder
 15 to judge, and, you know, other inferences need to be
 16 made. Regardless, those are the main sources.
 17 In some cases, then, I need to subtract out what
 18 fossil fuels are consumed within the state to get
 19 essentially, you know, a net amount of throughput. And
 20 then I have quantities of fossil fuels to turn that into
 21 estimate of CO2 is a whole other process, but the main
 22 source of data there are simply the emission factors or
 23 carbon contents of fuels that are used by the U.S.
 24 Department of Energy and U.S. EPA -- that's
 25 Environmental Protection Agency -- in their national

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1 greenhouse gas inventory. So those are
 2 non-controversial sources.
 3 To sum up, it's -- you know, almost all of the
 4 data are from U.S. Government sources about quantities
 5 of fossil fuels transported or used, and then the carbon
 6 that's within those fuels.
 7 Q. In describing Montana as a thoroughfare for the
 8 transport of fossil fuels, I infer from that -- tell me
 9 if I'm wrong -- I mean, the word "thoroughfare" seems
 10 like a descriptive term to emphasize that it's busy or
 11 there is a lot of it, something to that effect. Is that
 12 fair? Is that what you intended to suggest?
 13 A. I would say the main intent was to try to find a
 14 word that conveyed, well, it's coming in and then going
 15 out again. I think it was a secondary intent to
 16 characterize it as busy. But I landed on that word
 17 "thoroughfare" because it meets -- you know, it seems to
 18 convey both of those objectives.
 19 Q. Is there a factor in that circumstance of
 20 Montana being a thoroughfare for fossil fuels that isn't
 21 attributable to Montana's control over the extraction of
 22 fossil fuels in Montana; in other words, it's
 23 attributable to sources that Montana doesn't control?
 24 MS. RODGERS: Objection, vague and ambiguous.
 25 THE WITNESS: It depends what one means by

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1 "attributable to." I'm looking at Montana's emissions
 2 and fossil fuel handling through different lenses, and
 3 I'm trying to be clear about what lens I'm using at each
 4 time for doing that attribution.
 5 I mean, the most direct way I can answer your
 6 question is, yes, it would be certainly possible to
 7 attribute the oil traveling through the pipeline from
 8 Canada to Wyoming through Montana -- it would be
 9 completely possible to attribute those emissions to
 10 Wyoming or wherever the ultimate emissions are being
 11 released. I'm not ruling out such attribution.
 12 BY MR. STERMITZ:
 13 Q. Okay. Yeah, and I mean, it's -- okay. That's
 14 fair. You've answered my question.
 15 I'm about finished here. Bear with me.
 16 Have you spent much time in Montana, for either
 17 personal or professional reasons?
 18 A. I don't believe I've spent any time within
 19 Montana for professional reasons. For personal reasons,
 20 I recall a family trip there in roughly the year 1990 or
 21 early 1990s.
 22 Q. Okay. On page 15 -- whoops, I've got to look at
 23 the right version. Yeah, on page 15 of your report,
 24 down toward the bottom of the page, there is some bold
 25 language in the last paragraph where you say, "Emissions

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1 associated with Montana being such a thoroughfare for
 2 fossil fuels -- on the order of 80 million tons or more
 3 CO2 annually since 2006 -- represent at least as large a
 4 contribution to climate change as do the emissions
 5 associated with the fossil fuels consumed or produced
 6 in-state."
 7 So in your calculations of fossil fuels that
 8 Montana is responsible for -- my word -- this transport
 9 is a large factor in the overall effect. It's about
 10 roughly half of the total amount that you attribute to
 11 Montana. Correct?
 12 A. Yes. With the clarification that -- as you are
 13 defining -- I think you used the words "responsible
 14 for." I'm not sure I used that term. And I would just
 15 say that I think the -- you know, the responsibility is
 16 of a different qualitative nature for those three
 17 categories.
 18 I, myself, did not make such a characterization
 19 of it as about half of Montana's responsibility, because
 20 I think that would be a more nuanced -- there would be
 21 many other factors that go into determining what and
 22 exactly how Montana takes responsibility for those, if
 23 you get what I mean.
 24 Q. Yeah, that's fair. But just mathematically,
 25 80 million tons of transported fossil fuels is roughly

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1 half of the total of the three categories that you've
 2 identified.
 3 A. Yes. Especially it's about half of the total of
 4 166, which is the sum of those three categories, less
 5 the overlaps.
 6 Q. Correct. Okay. I don't have any -- well, I do
 7 have one. You've done this rebuttal report which we've
 8 referred to. Do you have any direction or plans at this
 9 point, sitting here today, to do any further evaluations
 10 or reports of any kind?
 11 A. No, sir. But just as I didn't anticipate doing
 12 the rebuttal report a few months ago -- you know, new
 13 questions could be asked of me, new reports could be
 14 submitted that I wish to respond to.
 15 MR. STERMITZ: Correct. Sure. Okay.
 16 That's all I have. Do you guys want to talk
 17 about whether you have any questions?
 18 MS. RODGERS: Yes. Why don't you just give us a
 19 couple minutes, Mark, and then we'll get back on.
 20 MR. STERMITZ: Okay. Sounds good.
 21 THE WITNESS: Thank you, Mr. Stermitz.
 22 MR. STERMITZ: Thank you.
 23 (Recess taken from 10:19 to 10:21.)
 24 MS. RODGERS: Thank you. We don't have any
 25 further questions.

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1 MR. STERMITZ: Okay. Thank you.
 2 Let's make a copy of that September report and
 3 mark it as Exhibit 111 and throw the other one in the
 4 garbage.
 5 MS. RODGERS: Okay.
 6 MR. STERMITZ: You guys can do that after we
 7 close out here. That's not a problem.
 8 THE REPORTER: Are you ordering the transcript,
 9 Mr. Stermitz?
 10 MR. STERMITZ: Yeah, I think so. Yeah, I think
 11 we are. I'm not the boss of that, but I think that's
 12 what we're typically doing. So yes.
 13 MS. RODGERS: We'll also review corrections and
 14 reserve, and order a copy.
 15 THE REPORTER: Thank you.
 16 (Deposition adjourned at 10:22 a.m.)
 17 (Signature reserved.)
 18
 19
 20
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 22
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 25

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1 SIGNATURE

2

3 I declare under penalty of perjury under the laws

4 of the State of Washington that I have read my within

5 deposition, and the same is true and accurate, save and

6 except for changes and/or corrections, if any, as

7 indicated by me on the CHANGE SHEET 1/leaf page herof.

8 Signed in _____, Washington,

9 this _____ day of _____ 20__.

10

11

12

13 _____

14 PETER A. ERICKSON

15 Taken: Monday, December 12, 2022

16

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21

22

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24 Re: Rikki Held v. State of Montana

25 Cause No.: CDV 2020-307

 Donald W. McKay, RMR, CRR, CCR

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5

6 CHANGE SHEET

7 PLEASE MAKE ALL CHANGES OR CORRECTIONS ON THIS SHEET,

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10	11	12	13
PAGE	LINE	CORRECTION AND REASON	
11	---	---	---
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23 _____

24 PETER A. ERICKSON

25 Taken: Monday, December 12, 2022

 Re: Rikki Held v. State of Montana

 Cause No.: CDV 2020-307

 Donald W. McKay, RMR, CRR, CCR

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1 CERTIFICATE

2

3 STATE OF WASHINGTON)

4)ss

5 COUNTY OF KING)

6

7 I, the undersigned Washington Certified Court

8 Reporter, hereby certify:

9 That the foregoing deposition upon oral examination

10 of the witness named herein was taken stenographically

11 before me and transcribed under my direction;

12 That the witness was duly sworn by me pursuant to

13 RCW 5.28.010 to testify truthfully;

14 That the transcript of the deposition is a full,

15 true and correct transcript to the best of my ability;

16 That I am neither an attorney for, nor a relative

17 or employee of any of the parties to the action or any

18 attorney or counsel employed by the parties hereto, nor

19 financially interested in its outcome.

20 I further certify that in accordance with CR 30(e),



21 the witness was given the opportunity to examine, read,

22 and sign the deposition, within 30 days upon its

23 completion and submission, unless waiver of signature was

24 indicated in the record.

25

 Donald W. McKay, RMR, CRR

 Washington Certified Court Reporter No. 3227

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EXHIBIT 7

MONTANA FIRST JUDICIAL DISTRICT
LEWIS AND CLARK COUNTY

1			
2			
3	RIKKI HELD, ET AL.,)	
4)	
5	Plaintiffs,)	
6)	
7	v.)	Case No. CDV-2020-307
8)	
9	STATE OF MONTANA, ET AL.,)	
10)	
11	Defendants.)	
12)	

DEPOSITION OF DR. RICHARD BARRETT

13 On the 26th of October, 2022, beginning at
14 9:00 a.m., the deposition of DR. RICHARD BARRETT was heard
15 at Crowley Fleck Law Firm, 305 South Fourth Street East,
16 Missoula, Montana, before Holly E. Fox, Court Reporter and
17 Notary Public.
18
19
20
21
22
23
24
25

A P P E A R A N C E S

APPEARING ON BEHALF OF THE PLAINTIFFS:

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1 The following proceedings were had and testimony
2 taken:

3 * * * * *

6 DR. RICHARD BARRETT,
7 having been first duly sworn by the Court Reporter, was
8 examined and testified as follows:

11 EXAMINATION

12 BY MR. LONGFIELD:

13 Q. Good morning, Dr. Barrett. Thank you for taking
14 the time to be here today. My name is Tim Longfield. I'm
15 an assistant attorney general. All that means for today is
16 that I'm one of the attorneys representing the state
17 defendants in this case.

18 Before we start, I want to go over a few general
19 guidelines for today's deposition. So the goal today is to
20 learn more about you, your expert report, and the testimony
21 you'll be offering in this case. I'll be asking you
22 several questions to that effect. I will not be asking
23 about any conversations that you've had with the attorneys
24 in this case.

25 If you don't understand a question, please just

I N D E X

4 EXAMINATION

By Mr. Longfield
By Ms. Hornbein

Page

4
93

E X H I B I T S

9 No. Description
10 24 Expert report

Page

6

1 let me know, and I'll do my best to rephrase it.

2 If you need a break, also please just let me know.

3 As a general rule, I'll try to take a 5- to 10-minute break
4 every hour. Hopefully we won't be here past noon, but if
5 we do, maybe we'll take a longer lunch break over the noon
6 hour.

7 A. Okay.

8 Q. Does that all sound good to you?

9 A. Yep.

10 Q. Okay. All right. First question is an easy one.

11 Can you please state and spell your name for the
12 record?

13 A. My name is Richard Barrett. R-i-c-h -- Barrett,
14 B-a-r-r-e-t-t.

15 Q. Thank you. What is your residential address?

16 A. 219 Agnes, Missoula, Montana 59801.

17 Q. Thank you. Are you under the influence of any
18 substances that could affect your ability to provide true
19 and accurate testimony today?

20 A. No.

21 Q. Thank you. Have you ever participated in a
22 deposition before?

23 A. No.

24 Q. Have you testified as an expert witness in any
25 litigation before?

1 A. No.
 2 Q. I want to introduce a copy of your expert report
 3 in this case and mark it as Exhibit 23.
 4 MS. HORNBEIN: 24.
 5 MR. LONGFIELD: 24, rather.
 6 (Exhibit 24 marked for identification.)
 7 Q. (By Mr. Longfield) If you would, Dr. Barrett, take
 8 a moment to scan that report, and let me know whether it is
 9 a true and accurate copy of the report you submitted in
 10 this case.
 11 A. (Complies.)
 12 Yes, I believe it is.
 13 Q. Thank you. So before we delve into the report, I
 14 want to ask you a little bit about your preparation for
 15 today.
 16 A. Okay.
 17 Q. What did you do to prepare for this deposition?
 18 A. I reviewed the report itself because I hadn't seen
 19 it since last spring really. And I met with Ms. Hornbein
 20 and Mr. --
 21 MS. HORNBEIN: Bellinger.
 22 THE DEPONENT: Bellinger, but --
 23 MR. LONGFIELD: Gregory?
 24 MS. HORNBEIN: Gregory. Thank you.
 25 Q. (By Mr. Longfield) Okay. Did you meet or discuss

1 Q. Do you remember approximately when you gave your
 2 report to Mr. Bellinger and the two economists you
 3 mentioned?
 4 A. It would be late spring sometime.
 5 Q. Okay. How much did your report change after you
 6 gave it to the people you mentioned for their comments?
 7 A. Very little.
 8 Q. In forming your opinions in this case, did you
 9 rely on the opinions of anyone or anything that you didn't
 10 cite or reference in your report?
 11 A. No.
 12 Q. Are all the studies and research that you used to
 13 form the basis of your opinions in the report cited in the
 14 report?
 15 A. Yes.
 16 Q. Dr. Barrett, have you ever been the subject of an
 17 ethical complaint or ethics investigation in your
 18 professional or academic career?
 19 A. No.
 20 Q. Okay. So we can shift now to talking a bit about
 21 your background.
 22 I understand that you served as a faculty member
 23 in economics at the University of Montana until 2007; is
 24 that correct?
 25 A. From 1970 to 2007, yes.

1 this deposition with anyone other than the attorneys for
 2 plaintiffs?
 3 A. No.
 4 Q. Okay. When did you draft this report?
 5 A. I would say approximately in February and March of
 6 this year.
 7 Q. Okay. Of 2022?
 8 A. Yes.
 9 Q. Okay. Did plaintiff supply you with any facts or
 10 data in advance of writing your report?
 11 A. Facts or data. No, I don't think so.
 12 Q. Did they provide you with any assumptions on which
 13 they wanted you to premise the conclusions in your report?
 14 A. They didn't provide me with any assumptions, no.
 15 Q. Okay. Would you say that you were the sole author
 16 of your report?
 17 A. I'm -- I am the sole author of the report,
 18 although, as I do frequently when I write anything, I give
 19 it to other people to comment.
 20 Q. What other people did you give it to solicit their
 21 comments?
 22 A. I got comments from Mr. Bellinger and from two
 23 professional economists.
 24 Q. What were the names of those economists?
 25 A. Thomas Power and Doug Dalenberg.

1 Q. Okay. So I understand 40 years ago you published
 2 an article -- I believe in 1982 -- entitled "The Logic of
 3 Resource Conservation: A Discussion of Our
 4 Responsibilities to the Future"; does that sound correct?
 5 A. Boy, you got me. I don't remember that at all,
 6 but I'll take your word for it.
 7 Do you have a copy of it?
 8 Q. I do not.
 9 A. Oh, okay.
 10 Q. Do you know if this article addressed any issues
 11 related to human-caused global warming?
 12 A. I don't remember the article. I kind of doubt
 13 they did because I don't think at that time -- you said
 14 1982?
 15 Q. Yes, sir.
 16 A. I don't think global warming was a topic with
 17 which I was dealing at that point. I -- I don't know. I
 18 just -- sorry. I don't remember the article.
 19 Q. Totally fine.
 20 A. It's not on my -- it's not on my vitae, I'm sure.
 21 Q. Around what time did you begin dealing with the
 22 topic of global warming or climate change in your
 23 professional work?
 24 A. That's a little hard to say. I -- as you may
 25 know, I taught environmental economics, and so I suppose

1 that I first began to -- to consider work with global
2 warming in the context of teaching about environmental
3 economics, and that would go back to the '90s. I don't
4 know. Something like that.
5 Q. Sure. Do you remember when you personally first
6 became concerned about global warming or climate change?
7 A. No, I don't think so. I -- I don't remember when
8 I first became concerned about it.
9 Q. Okay. It's my understanding that you published a
10 book in 1999 entitled "Montana: People and the Economy."
11 A. Yes.
12 Q. Does that ring a bell?
13 A. That was a report we published. Yeah.
14 Q. Okay. Did that report address any issues related
15 to human-caused global warming?
16 A. I don't recall.
17 Q. Okay. Do you remember the subject matter,
18 roughly, of that report?
19 A. Generally speaking, what -- what that work was
20 about was the relationship between natural resources and
21 natural resource production and economic well-being. That
22 was the subject of that report.
23 And then there's a subsequent book that you may be
24 aware of, the "Post-Cowboy Economics" book. And what we
25 did in those books was trace out our notion of how -- our

1 book, did that book, to your knowledge, address any issues
2 related to human-caused global warming or climate change?
3 A. No, but it addressed the general question of
4 environmental quality and its relationship to economic
5 well-being.
6 Q. Okay. But when it -- in its addressing the
7 general question of environmental quality, it didn't cover
8 topics related to human-caused global warming or climate
9 change?
10 A. It didn't deal specifically with climate change, I
11 don't believe.
12 Q. Okay. Do you recall an article four years ago
13 that you published in 1984 [sic] entitled "Montana's
14 Economic Growth: Theories" ?
15 A. I recall writing the article, but I don't recall
16 much about it.
17 Q. So fair to say you don't recall today whether it
18 dealt with human-caused climate change or global warm --
19 A. It would not have dealt with climate change. I'm
20 virtually certain it didn't deal with climate change.
21 Q. Okay. How long did you teach environmental
22 economics?
23 A. 20 years. Something like that.
24 Q. Do you remember when climate change or global
25 warming -- I'll just use those terms interchangeably today.

1 findings with respect to how natural resources contribute
2 to economic well-being.
3 Q. Okay. And it's my understanding that the
4 Post-Cowboy Economics book was published in 2002; does that
5 sound right?
6 A. Yeah. It was -- it basically followed on that
7 other research that we did for the Ortenberg Foundation.
8 Q. Did you say the Ortenberg Foundation?
9 A. The Ortenberg Foundation, yeah. The -- "People
10 and the Economy" was a report for the Art Ortenberg
11 Foundation.
12 Q. Okay. Tell me about how the Ortenberg Foundation
13 solicited you to develop the research contained in that
14 report?
15 A. I guess it's -- to name it correctly, it was the
16 Art Ortenberg Liz Claiborne Foundation, and they approached
17 the university. They wanted to -- they wanted a
18 commissioned report on the state of the economy and how it
19 could be improved and so forth. They had environmental
20 concerns as well, so they were interested in the
21 relationship between environmental and resource problems
22 and economic well-being. They approached the university --
23 President Dennison, at the time. And he asked us to become
24 involved with it.
25 Q. Okay. Returning to the Post-Cowboy Economics

1 I'll try to stick with "climate change."
2 Do you remember when climate change became a part
3 of the curriculum for that course?
4 A. No. I -- as I say, I would imagine it was in
5 the '90s.
6 Q. Okay. So probably not before 1990, certainly
7 after 1999?
8 A. Before 1999, certainly after 1990.
9 Q. You began teaching?
10 A. I think that's probably when I began to deal with
11 climate change in those classes, yeah.
12 Q. Okay. Dr. Barrett, have you published any more
13 recent articles or books that address issues related to
14 Montana's environmental concerns other than the ones I
15 mentioned?
16 A. No.
17 Q. Okay. Have you published any more recent articles
18 that address any aspect of human-caused climate change or
19 its economic impacts in Montana?
20 A. No.
21 Q. Have you attended any scientific conferences,
22 let's say in the last 20 years, that addressed the topics
23 of environmental economics related to human-caused climate
24 change?
25 A. Specifically addressing climate change, no.

1 Q. Okay. So as we've discussed a bit, you've taught
 2 courses in environmental economics for almost 20 years? Or
 3 around 20 years?
 4 A. Uh-huh.
 5 Q. Is it fair to say that in these courses you
 6 included material about human-caused climate change or the
 7 social cost of carbon?
 8 A. Yes.
 9 Q. What about specifically the social cost of carbon,
 10 have you taught on that in your environmental economics
 11 courses?
 12 A. I can't recall whether I've -- I've certainly
 13 talked about the concept. I don't recall talking about the
 14 actual measurement.
 15 Q. Does that mean perhaps you talked -- help me
 16 understand that statement a little bit more.
 17 Did you teach topically on the social cost of
 18 carbon to any of your students?
 19 A. Well, the concept of social cost is an integral
 20 part of -- of environmental economics.
 21 Q. Uh-huh.
 22 A. And it refers to damages that occur to third
 23 parties through the environment, of which climate change is
 24 just an example. So I know I certainly applied the concept
 25 of -- of -- of externality -- or of a social cost or

1 Q. Okay. But no fact-finding or hearings on that
 2 subject?
 3 A. Well, we had hearings on -- on -- on bills related
 4 to global warming.
 5 Q. What bills were those?
 6 A. The one I remember was one from Representative Joe
 7 Read, and it had to do with his -- actually, I believe -- I
 8 believe he was contending that global warming was
 9 beneficial. And I don't remember exactly what the -- what
 10 the -- what the bill provided for, but I do remember that
 11 the basis of his argument was that global warming was
 12 beneficial.
 13 Q. Okay.
 14 A. I think because it created employment or something
 15 like that. I can't remember.
 16 Q. Okay. Did that bill pass?
 17 A. No.
 18 Q. Okay. You also served, I think, on the senate
 19 energy committee; is that correct?
 20 A. Yes.
 21 Q. What sessions did you serve on that committee?
 22 A. 2017 and 2019.
 23 Q. Okay. And during your service on the senate
 24 energy committee, were you involved in any fact-findings,
 25 hearings, or development of legislation related to global

1 externality to -- to the case of climate change. But
 2 if you -- but I didn't specifically spend time talking
 3 about how those social costs are measured.
 4 Q. And why is that?
 5 A. Well, I think that the first attempts to measure
 6 social cost probably were occurring in the -- the early
 7 2000s. It was pretty close to the end of the time I was
 8 teaching, so it was not a -- that would probably be why it
 9 wasn't a part of the curriculum. You know, the --
 10 specifically the use of the integrated assessment models.
 11 That was not very robust at the time that I was teaching
 12 environmental economics.
 13 Q. Okay. I understand also, Dr. Barrett, that you
 14 served on the state house natural resources committee; is
 15 that correct?
 16 A. Yes.
 17 Q. Over what time did you serve on that committee?
 18 A. I was on the Natural Resources Committee for one
 19 session.
 20 Q. And what session was that?
 21 A. 2011.
 22 Q. Okay. In your service on that committee, were you
 23 involved in any fact-finding hearings or development of
 24 legislation related to human-caused global warming?
 25 A. We heard legislation on that subject, yeah.

1 warming?
 2 A. Yes.
 3 Q. Okay.
 4 A. I carried, in 2019 -- I worked with -- well, I
 5 guess probably in 2017 as well -- in both senate taxation
 6 and in senate natural resources I worked on a number of
 7 bills with Senator Mike Phillips from Bozeman concerning
 8 such things as having the state create a carbon inventory.
 9 I carried a bill for a carbon tax.
 10 So, yeah, there -- that's a couple of examples. I
 11 can't remember all the bills. I think in 2019 we had,
 12 between us, Mike and I had, like, 19 -- five -- five
 13 different global warming-related bills.
 14 Q. Okay. During the '17 and '19 sessions?
 15 A. No, just in the '19 --
 16 Q. Just in the '19. Okay.
 17 What about during the '17 session?
 18 A. We had a couple, I think. They were not heard in
 19 senate tax. They were heard in senate natural resources
 20 committee.
 21 Q. Okay.
 22 A. None of them passed.
 23 Q. Dr. Barrett, before preparing this expert report,
 24 have you written any published work or made any published
 25 calculations regarding the social cost of carbon in

1 Montana?
 2 A. No.
 3 MR. LONGFIELD: Did you catch that?
 4 THE COURT REPORTER: Yes.
 5 Q. (By Mr. Longfield) Did you bill the plaintiffs for
 6 your work in preparing your expert report in this case?
 7 A. No.
 8 Q. How many hours did you spend preparing that
 9 report?
 10 A. I didn't keep track of that. I -- I can't really
 11 tell you. I -- between reading and writing, I don't
 12 know, 40. I don't know. Something like that.
 13 Q. About 40?
 14 A. A five-day week. A workweek, maybe. Not all at
 15 once, but -- that's a rough guess.
 16 Q. Fair enough. Have you spent any time on this
 17 report since the spring of this year?
 18 A. Only to review it now. And I did -- at some point
 19 I found that I had committed an error in one of my
 20 calculations, and I discussed that with -- with
 21 Mr. Bellinger, and we submitted a revision.
 22 Q. Okay. And was that error contained in
 23 this version of the report that you have before you today?
 24 A. No. This is the corrected version.
 25 Q. Okay. So let's begin to discuss the contents of

1 behind this -- behind the report is -- is the notion of --
 2 of the theory of externality and of Pigouvian tax.
 3 (Court reporter clarification.)
 4 THE DEPONENT: Pigouvian, P-i-g-o-u-v-i-a-n.
 5 Q. (By Mr. Longfield) And why did you feel it
 6 unnecessary to cite any sources laying out those basic
 7 economic concepts?
 8 A. Because they are so basic.
 9 Q. Sure. Sure.
 10 A. Basically they're common sense. I mean, they
 11 don't need a lot of explication.
 12 Q. Sure. Sure. Can you please turn to Page 9 of
 13 your report?
 14 A. Uh-huh.
 15 (Complies.)
 16 Q. And if you would direct your attention to the
 17 first paragraph under Subheading A, Rationale of use of --
 18 A. Uh-huh.
 19 Q. Do you see where I'm at?
 20 A. Uh-huh.
 21 Q. Okay. So, Dr. Barrett, a key premise for your
 22 SCC -- I'll just use that term interchangeably with "social
 23 cost of carbon" -- calculation in your report is found in
 24 that paragraph, and I'll read from it. You said, quote:
 25 The damages from CO2 emissions that Montana uses

1 your report.
 2 A. Okay.
 3 Q. To begin, can you please tell me, Dr. Barrett, as
 4 specifically and thoroughly as you're able, what
 5 conclusions you reached in this report?
 6 A. Yeah. The basic conclusion that I reached is that
 7 increasing the output of fossil fuels would be economically
 8 inefficient. It would produce larger damages in -- damages
 9 of a large economic magnitude than the benefits that would
 10 be derived from it.
 11 Q. Okay. Anything else?
 12 A. No, that's the basic conclusion.
 13 Q. Okay. And I think I already asked this, but I
 14 just want to confirm.
 15 Are all of the studies, data, facts, assumptions
 16 that you relied on in reaching that basic opinion you just
 17 described contained in the report or cited in the report?
 18 A. I guess so, except that, you know, after 40 years
 19 as an economist, there's a lot of just sort of well-known
 20 economic theory that -- that I relied on. I mean, it's
 21 very, very simple economic theory, but a lot of well-known
 22 economic theory that I relied on that I didn't cite any
 23 particular source for.
 24 Q. Sure. What economic theories would those be?
 25 A. Well, I think that probably the underlying theory

1 to calculate its SCC value for the purposes of
 2 policy-making should be global in nature rather than
 3 confined to the borders of the state. There is no cogent
 4 rationale for solely considering CO2 emissions damages that
 5 are confined to Montana state boundaries when determining a
 6 SCC value to be used in evaluating state policy, end quote.
 7 Dr. Barrett, do you know what percentage of United
 8 States greenhouse gas emissions come from Montana?
 9 A. No.
 10 Q. Do you think it's more or less than 1 percent of
 11 total U.S. emissions?
 12 A. I don't know. I suspect it's in the neighborhood
 13 of 1 percent. It's a small percentage.
 14 Q. Okay. If I told you the answer was
 15 roughly 0.6 percent, would that surprise you?
 16 A. No.
 17 Q. Okay. Do you know what percent of global
 18 emissions, based on most recent estimates, come from
 19 Montana?
 20 A. It would be much smaller than 0.6 percent.
 21 Q. If it was smaller than 0.1 percent, would that
 22 surprise you?
 23 A. No.
 24 Q. Okay. It's 0.09 percent, according to the most
 25 recent data that we have.

1 In your report, are you claiming that a 0.09
 2 percent emissions impact from Montana is having a
 3 noticeable impact on either the global climate or Montana's
 4 climate?
 5 A. It -- I'm not claiming -- I don't think the
 6 percentage is relevant. I mean, what -- what is -- what is
 7 relevant is -- in terms of this analysis, is, what is the
 8 damage that those emissions are doing, whatever their
 9 level. There's about -- depending on how you look at it,
 10 there's about 30 million tons of CO2 emitted in Montana
 11 every year; okay? And so, you know, you multiply that
 12 by \$125, and you come up with something like \$3.7 billion
 13 worth of damage being done by those emissions.
 14 And what do you do? You compare those to the
 15 benefits that we derive from producing those emissions. So
 16 that's the relevant comparison. I don't -- the 0.6 or 0.1
 17 or 0.01 or whatever it is, I don't think is -- is the
 18 point.
 19 Q. Okay. Can you turn to Page 2 of your report?
 20 A. (Complies.)
 21 Q. And I'm going to read from the first full
 22 paragraph at the top of Page 2 --
 23 A. Okay.
 24 Q. -- where you say, quote:
 25 Climate change is inherently both a local and a

1 mean by the word "cause" in that sentence.
 2 A. I mean specifically that those emissions
 3 contribute to carbon dioxide concentrations in the
 4 atmosphere, which result in -- higher concentrations of
 5 carbon dioxide in the atmosphere result in physical effects
 6 on the environment that damage the economy and damage human
 7 health and damage agricultural productivity and so forth.
 8 So I'm saying that it -- that's the sense in which I use
 9 the word "cause."
 10 Q. Okay. In the analysis contained in this report,
 11 does the total amount of greenhouse gases emitted by
 12 Montana impact your calculation in any way?
 13 A. No. What the report seeks to do is say, what
 14 are -- the policies that are in contention here in the
 15 suit, I assume, are -- are largely -- they're called
 16 policies, but they're really policy goals, and there's an
 17 overarching policy goal which is to increase the production
 18 of -- of fossil fuels. And so the question is -- that I'm
 19 addressing is, if you increase the production of fossil
 20 fuels by a small amount, okay, what kinds of additional
 21 damages -- everything that's relevant here is what's
 22 happening at the margin. You're producing a little bit
 23 more, you're causing a little bit more damage, you're
 24 generating additional benefits. And so I am looking at
 25 the -- so what I'm considering in the report is

1 global phenomenon, and greenhouse gas emissions from
 2 Montana's use of fossil fuels cause climate injuries both
 3 within Montana and beyond Montana's borders, end quote.
 4 A. Yeah.
 5 Q. So, Dr. Barrett, does your report claim that
 6 Montana's 0.09 percent of global greenhouse gas emissions
 7 causes climate injuries outside of Montana or within
 8 Montana?
 9 A. Yeah. It causes probably about 0.09 percent of
 10 all the climate injuries that are occurring in the world.
 11 Q. When you use the word "cause" in this sentence,
 12 that I just read --
 13 A. Uh-huh.
 14 Q. -- what do you mean?
 15 A. I guess you'll have to explain that question. The
 16 common use of the word "cause."
 17 What are you getting at? I don't understand your
 18 question.
 19 Q. Well, I'm just simply asking in what sense you're
 20 using the word "cause" there. As an economist, you know
 21 that causal relationships are difficult to identify and
 22 define. People use the word "cause" colloquially, they use
 23 it in scientific terms, they use it just, you know, sort of
 24 loosely.
 25 I just want to know, in your own words, what you

1 comparing -- what I'm doing is comparing the additional
 2 damages that result from producing a little more fossil
 3 fuel to the additional benefits that are received by
 4 producing a little bit more fossil fuel.
 5 Q. Okay.
 6 A. And that calculation is -- is a calculation at the
 7 margin. It has to do with what happens if you do more of
 8 it. It's not an -- it is not an assessment of the total
 9 value of fossil fuels or the total value of damages. It's
 10 an assessment of the incremental value. Because what the
 11 policy is calling for is an increment.
 12 Q. Okay. So would it be fair to say then that your
 13 report doesn't offer any conclusions about the social cost
 14 of Montana's actual -- and by "actual," I mean current
 15 level of greenhouse gas emissions?
 16 A. The total social cost?
 17 Q. Yes.
 18 A. Correct.
 19 Q. Okay. You're just simply trying to find the
 20 marginal social cost and compare it with the marginal
 21 social benefit of an additional unit of --
 22 A. Yes.
 23 Q. Yeah. Okay. In your opinion, would completely
 24 eliminating Montana's greenhouse gas emissions tomorrow
 25 make any impact on the harms alleged by the plaintiffs in

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1 this case?
2 **A. That's really kind of beyond my competence, so I**
3 **guess I have to say I don't know. I -- I would -- if you**
4 **completely eliminated greenhouse gases produced by Montana**
5 **tomorrow, there would be some small marginal effect**
6 **presumably, and so it would have some effect on the**
7 **plaintiffs, I assume. But I couldn't begin to quantify it.**
8 Q. So fair to say then that your report contains no
9 opinions or conclusions as to the effect of removing the
10 two challenged Montana policies --
11 **MS. HORNBEIN:** I'm going to object to that as
12 leading, but you can go ahead and answer, Dick.
13 **MR. LONGFIELD:** Well, I wasn't finished with the
14 question, so -- and I'll try to rephrase it.
15 Q. (By Mr. Longfield) Is it fair to say that you
16 don't opine in your report about what impacts striking down
17 the two challenged statutes in this case would have on the
18 harms that the plaintiffs allege in this case?
19 **A. My report doesn't address that question.**
20 Q. Okay. Okay. Do you know how much of the global
21 electricity supply is based in fossil fuels or relies on
22 fossil fuels?
23 **A. Globally?**
24 Q. Yes, sir.
25 **A. No.**

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1 Q. Roughly 63 percent.
2 **A. Okay.**
3 Q. Do you know how much of the United States'
4 electricity supply is based on fossil fuels?
5 **A. I would guess it was in the neighborhood of 80**
6 **to 90 percent.**
7 Q. Currently data shows it's about 61 percent.
8 **A. Okay.**
9 Q. Do you know how much of Montana's electricity
10 supply is based on fossil fuels?
11 **MS. HORNBEIN:** I'm going to object to this whole
12 line of questioning because it's outside of the scope of
13 Dr. Barrett's expertise.
14 But you can go ahead and answer.
15 **THE DEPONENT:** Montana's. I think that Montana's
16 electric supply is probably -- if I remember the figures
17 correctly, it's like 85 percent hydro, maybe 15 percent
18 fossil fuels.
19 Q. (By Mr. Longfield) Fair enough. I think it's
20 close to 47 percent, based on the most recent data we
21 looked at.
22 **A. Hmm.**
23 Q. Would you agree that Montana's electricity supply
24 uses a lower fraction of fossil fuels than the U.S.
25 average?

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1 **A. Yes.**
2 Q. Same question about the global average.
3 Does -- would you agree that Montana's electricity
4 supply uses a lower fraction of fossil fuels than the
5 global average?
6 **A. Yes.**
7 Q. Okay. Dr. Barrett, can you explain to me how
8 eliminating Montana's fossil -- excuse me. Strike that.
9 Can you explain to me how eliminating Montana's
10 greenhouse gas emissions would benefit the youth plaintiffs
11 economically?
12 **A. Well, to the extent that it reduced the climate**
13 **damages that they experienced, that would -- that would**
14 **benefit them economically. I -- if you're asking for me to**
15 **make a distinction between environmental effects and**
16 **economic effects -- is that what you're getting at with the**
17 **question?**
18 Q. I think I'm simply asking whether you have any
19 opinions about the effect of removing the two challenged
20 laws.
21 **MS. HORNBEIN:** I'm going to object to that as
22 calling for a legal conclusion.
23 Q. (By Mr. Longfield) Well, I'm asking an economics
24 question, so perhaps I'm phrasing it inartfully.
25 Like, what effect would striking down the two

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1 challenged statutes in this case have on the plaintiffs in
2 this case economically?
3 **A. Well, without speaking -- without being able to**
4 **talk about the magnitude, it would reduce the amount of**
5 **damage that they experienced.**
6 Q. In economic terms?
7 **A. Well, you're -- I -- if -- if -- if you, for**
8 **example, experienced reduced damage to the environment**
9 **around you -- let's suppose, for example, that you**
10 **experienced reduced air pollution, and that benefits you,**
11 **those benefits have an economic magnitude. They don't have**
12 **a commercial value necessarily, but they have an economic**
13 **magnitude. And so you could place an economic value on**
14 **improved environmental quality.**
15 **So if -- so you could place an economic magnitude**
16 **on the improved environmental quality of the youth**
17 **plaintiffs if they -- if we reduced emissions in Montana.**
18 **I don't know what the magnitude is, but certainly you could**
19 **do that.**
20 Q. How could that be done? What would be the process
21 of forming that opinion?
22 **A. Well, I think somewhere in the report I -- I**
23 **mention -- let me see if I can find it.**
24 Q. Okay.
25 **A. I mention just in passing the -- if you look at**

1 Footnote 7 on Page 4, I talk -- I'm concerned here. I
 2 think what -- what you're doing -- I don't want to put
 3 words in your mouth, but what you seem to be doing is to be
 4 saying that there are damages that are, quote, non-economic
 5 and that there are damages that are economic; that is, in
 6 the sense that -- clearly commercial kinds of damages.
 7 And -- and as I say here, there are other damages from
 8 climate change, such as extinction of species or loss of
 9 recreational amenities -- okay, so there's an example --
 10 that are more difficult to quantify, but nonetheless
 11 economically significant.
 12 And then I believe somewhere I list the techniques
 13 that are available for estimating -- oh, yeah. It's on
 14 Page 18. Excuse me. Footnote 18 on Page 6. The
 15 techniques include contingent evaluation, travel cost
 16 models, hedonic pricing, benefit transfer, and so forth.
 17 So, you know, if I were required to do it, I
 18 could -- you'd have to go to the -- to the physical
 19 scientists to -- to tell you how much reducing Montana's
 20 emissions would affect, say, recreational opportunities. I
 21 suspect the effect would be small, but it would be there.
 22 And then you then you'd apply one of these techniques to --
 23 to figure out what the economic magnitude of that was.
 24 Q. Okay. Okay.
 25 A. But that's obviously way beyond the scope of what

1 appropriate social cost of carbon is a global cost of
 2 carbon and not the limited economic Montana cost of carbon.
 3 Q. And I'd like to discuss that with you in just a
 4 little bit, but I want to make sure I understand what
 5 you're saying about the analysis you just described being
 6 Montana-specific. So I guess what makes it
 7 Montana-specific if you're using a global social cost of
 8 carbon?
 9 A. No, it's on the benefit side that's
 10 Montana-specific.
 11 Q. So on the cost side, the analysis is premised on a
 12 global social cost. On the benefit side, the benefits are
 13 Montana-specific?
 14 A. Well, no, they're not really. They're not
 15 Montana-specific in the sense that we know that the
 16 benefits accrue specifically to Montana. It's -- the
 17 benefits may be accruing to the -- a mining company
 18 stockholder living in New York. So, no, they're both
 19 global.
 20 Q. Because, for benefits, you just used sales
 21 profit -- a sale of a unit of a particular carbon-based
 22 resource; right?
 23 A. Net of cost.
 24 Q. Okay. Yep.
 25 A. Although it's difficult to know what cost is in

1 I'm trying to do here.
 2 Q. Understood. Understood. So just maybe to
 3 summarize, your report does not contain any opinions about
 4 the economic magnitude of reducing Montana's emissions on
 5 any of the recreational harms or physical harms or
 6 psychological harms alleged by the plaintiffs?
 7 A. No.
 8 Q. Okay. That's a fair statement?
 9 A. Yeah.
 10 Q. Okay. Am I correct to understand that your report
 11 does not contain any Montana-specific analysis of the
 12 social cost of carbon or the costs and benefits of
 13 emissions reductions for Montana?
 14 A. No, you're not -- that's not correct. It does not
 15 include a Montana-specific social cost of carbon; that is,
 16 a social cost of carbon limited to the damage done to
 17 Montana by a ton of carbon emitted anywhere in the world.
 18 That -- the social cost of carbon is the same no matter
 19 where -- no matter where the emission takes place. So --
 20 so, no, it does not include a Montana-specific social cost
 21 of carbon, but it does include Montana-specific
 22 cost-benefit analysis of -- I mean, it is, in essence, a
 23 Montana-specific cost-benefit analysis of the -- of the --
 24 of the increase in production of fossil fuels, a marginal
 25 increase in fossil fuels. The assumption is that the

1 some cases. But net of cost, yes.
 2 Q. Okay. And I think I understood that from the
 3 report. But then in what sense is the social cost analysis
 4 you performed Montana-specific?
 5 A. I guess -- I guess viewed in that light, it's not
 6 Montana-specific.
 7 Q. Okay. So do you think there's another light in
 8 which to view the report that does this Montana-specific,
 9 or would you agree that the conclusions are not
 10 Montana-specific?
 11 A. They're specific to fossil fuel production.
 12 Q. In what sense?
 13 A. Well, in a sense that they -- they consider the
 14 costs and benefits of an additional unit of fossil fuel
 15 production, not the additional costs and benefits of
 16 additional fossil fuel production that are exclusively
 17 experienced by Montana residents.
 18 Q. Would your analysis have changed in any way if you
 19 were asked to perform it for Wyoming. For example? Would
 20 the conclusions change?
 21 A. No, probably not.
 22 Q. What about California?
 23 A. No. As I say, it's specific to an additional unit
 24 of production. I mean, you could have different -- it is
 25 conceivable that you could have different conclusions for a

1 unit of fossil fuel produced in California versus Montana
2 because of difference in cost conditions.
3 Q. Right. Right. So does your calculation rely on
4 Montana-specific cost conditions?
5 A. Actually, we don't have cost conditions. It's --
6 it isn't possible to find -- it isn't possible to find the
7 marginal costs. You only can kind of intuit them. So the
8 only sort of way that you can -- that you could begin to
9 assess cost conditions -- the only thing that I can think
10 of that's Montana-specific, for example, is if you look at
11 the price of oil at which exploration and development
12 starts in Montana, that tells you something about the costs
13 in Montana.
14 Q. Uh-huh.
15 A. So if -- you know, if you find, for example, that
16 people happily explore for, drill, and produce oil at \$40 a
17 barrel in one state and -- but it takes \$100 a barrel in
18 Montana, you can safely conclude that the costs are higher
19 in Montana.
20 Q. Uh-huh.
21 A. So does that -- that's the only way in which you
22 can kind of intuit what the cost conditions are. I don't
23 have -- you know, I don't have the cost accounting data
24 that would allow you to determine that.
25 Q. Did you look at any of the cost accounting data

1 Q. And the only Montana-specific part of the
2 calculation you performed is the sales price of the
3 specific natural resources you identified -- or the sales
4 profit, rather, net of cost?
5 A. Yeah. Uh-huh.
6 Q. Okay. Let's talk for a moment about the economic
7 losses for Montana associated with climate change. So if
8 you would turn to Page 4 of your report.
9 A. Uh-huh.
10 (Complies.)
11 Q. And for the next few questions I'm looking at the
12 list under Point 5, so the list of bullet points in Point 5
13 that extends onto Page 5.
14 A. Uh-huh.
15 Q. It might be helpful if you just take a moment to
16 scan over the specific items you identify under Point 5.
17 A. Okay.
18 (Complies.)
19 Okay.
20 Q. Okay. So the first item you identify is wildfires
21 as an example of climate change-caused economic loss to
22 Montana.
23 So with regard to wildfires, are you familiar
24 with, I think, what's called the Big Burn fire in Montana
25 in 1910?

1 for Montana in forming your opinions in this report?
2 A. It isn't necessary to. Because in this -- the
3 social cost of carbon that I use in this report exceeds the
4 value of the -- of natural gas and coal, not -- without
5 even taking account of the net value, without even taking
6 account of the private costs. So, you know, like coal at
7 \$20 a ton, that can't be -- I mean, the largest net value
8 could possibly have is, you know, something in the
9 neighborhood of \$20. You know, if you can imagine
10 producing coal for almost next to nothing, then the largest
11 net value that coal would have would be \$20. But the
12 social cost of carbon that's produced when you burn that
13 coal is way, way, way more than \$20 dollars, so you don't
14 have to worry about the cost of -- the cost of producing
15 coal. Same thing with natural gas. In the case of oil,
16 prices can get high enough that you can -- as I say in the
17 report, there are perhaps a few days in the last 10 years
18 in which the price of oil has been high enough so that it's
19 conceivable that, indeed, the net value of the oil produced
20 on those days would be greater than the social cost of
21 carbon entailed in burning it up.
22 Q. So fair to say that the social cost of carbon you
23 identify applies uniformly regardless of location, whether
24 in the United States, outside of the United States --
25 A. Sure. Sure.

1 A. Sure.
2 Q. Would you agree that that was the biggest forest
3 fire recorded in Montana history?
4 A. I would believe that if you told me that, yes. I
5 think it probably was.
6 Q. Okay. Do you know whether the average recorded
7 temperature in Montana in 1910 was warmer or cooler than
8 the average recorded temperature today?
9 A. I suspect it was cooler, but I don't know.
10 Q. Okay. Do you believe that the 1910 Big Burn fire
11 was caused by human fossil fuel use and emissions?
12 A. I'm not an expert on that. I -- I have no idea
13 whether human-caused emissions contributed to that fire or
14 not.
15 Q. Are you aware of the history of various
16 firefighting practices employed by the U.S. Forest Service?
17 MS. HORNBEIN: Again, I'm going to object to this
18 line of questioning as outside the witness's area of
19 expertise.
20 MR. LONGFIELD: Thank you, Counsel.
21 THE DEPONENT: Are -- would you like to clarify
22 that question? I -- are you speaking of fire -- fire
23 reduction practices?
24 Q. (By Mr. Longfield) Yes. Employed by the U.S.
25 Forest Service.

1 A. I'm aware of them. Yeah.
 2 Q. Okay. Do you know how the 1910 Big Burn fire
 3 influenced U.S. Forest Service's firefighting practices in
 4 Montana?
 5 A. No.
 6 Q. In your opinion, would eliminating fossil fuel
 7 emissions in Montana eliminate forest fires in Montana?
 8 A. No.
 9 Q. Would you agree with me that the economic damages
 10 associated with forest fires in the recent decade, let's
 11 say, are associated with human development in fire-prone
 12 regions?
 13 A. In part.
 14 Q. The next item here is climate surprises, and I
 15 believe you cite a 2010 Billings tornado as an example of a
 16 climate surprise?
 17 A. Yeah.
 18 Q. So I guess, Dr. Barrett, what I'd ask you first
 19 is, do you think that global warming or climate change is
 20 increasing the number or intensity of tornados in Montana?
 21 A. Well, I don't know specifically about whether it's
 22 increasing the number in Montana. The association between
 23 climate change and any one of these -- something like
 24 forest fires or tornados or whatever -- it's a statistical
 25 association. It's not -- you know, it's -- they're

1 Q. It's not a causal relationship, in your opinion;
 2 right?
 3 MS. HORNBEIN: Objection; asked and answered.
 4 THE DEPONENT: I would suspect that it is a causal
 5 relationship. But, again, there's causes there, but --
 6 there are multiple causes for tornados; okay? So it's not
 7 causal in the sense that it is the exclusive cause; it's
 8 causal in the sense that it raises the probability that it
 9 will happen.
 10 Q. Yep. In statistics, what metric is used to
 11 measure the strength of a causal relationship?
 12 A. To really -- to measure a causal relationship?
 13 Q. Uh-huh.
 14 A. It's measuring -- correlation doesn't measure a
 15 causal relationship. It measures a statistical
 16 association. It doesn't measure the cause. There are ways
 17 of measuring cause. And -- but in this particular case --
 18 I mean, it is possible to -- to assume that -- that the
 19 relationship between -- the correlation between climate
 20 change and the frequency of tornados is attributable to
 21 some other phenomenon like a third factor. There could be
 22 an omitted factor here. So, you know, that's plausible to
 23 assume that.
 24 So -- I'm sorry. I guess I lost the question.
 25 Q. No problem at all. I guess, would you say that

1 multifactorial problems, obviously. So you -- you -- you
 2 can't say -- so what the -- I think the proper way to view
 3 this is that climate change increases the probability that
 4 these effects will occur, but not that it is the sole cause
 5 of these events. So when you consider, for example, a,
 6 quote, climate surprise like the tornado in Billings, the
 7 claim isn't that it was climate change that caused the
 8 tornado. It's that climate change raises the probably that
 9 tornados will occur. And the way to verify that is to see
 10 whether or not, in fact, as the climate changes, the
 11 frequency of severe tornados increases. If you find that
 12 indeed that's the case, that it appears to be that with the
 13 changing climate, the probability of severe tornados
 14 increases, then you say -- the claim isn't that climate
 15 change for sure caused this tornado. It's just that
 16 tornados do happen, and it's certainly plausible that
 17 climate change increased the probability that they would
 18 occur.
 19 Q. Do you have an opinion about to what extent
 20 climate change increases the probability that tornados will
 21 occur?
 22 A. No.
 23 Q. So no opinion about the strength of that
 24 correlation?
 25 A. No.

1 the relationship between climate change and the number of
 2 tornados is a causal relationship or a correlative
 3 relationship?
 4 A. Well, it can be both.
 5 Q. Which one do you think it is?
 6 A. Well, I think there's a correlated relationship,
 7 and I think that there's scientific opinion that says it's
 8 causal.
 9 Q. Okay. What scientific opinion says it's causal?
 10 A. Well, I cite sources here.
 11 Q. Just the sources that you cite in your report?
 12 A. Yeah.
 13 Q. Fair enough. Fair enough.
 14 Have you read the IPCCAR 6 Working Group 1 report
 15 at all?
 16 A. I've read -- I haven't read the whole thing but,
 17 I've read part of it. Yeah.
 18 Q. Did you read Chapter 11 on weathering climate
 19 events?
 20 A. No.
 21 Q. Would it surprise you if I told you that this
 22 report states that it has low confidence in any trend in
 23 tornados increasing due do climate change?
 24 MS. HORNBEIN: I'm going to object to that as
 25 asking the witness about facts not in evidence and

1 potentially mischaracterizing the source of the quote.
 2 **THE DEPONENT:** I'm going to -- I'll -- it's a
 3 strange thing to say "would it surprise me." I don't --
 4 no, it wouldn't surprise me.
 5 Q. (By Mr. Longfield) Do you know how many tornados
 6 strike in Montana in a given year on average?
 7 A. No.
 8 Q. Why, in your own words, do you view the 2010
 9 Billings tornado as a climate surprise?
 10 A. Well, the tornado -- the tornado was a surprise,
 11 and there exists the possibility that it's climate-related,
 12 that the climate increased the probability that it would
 13 occur.
 14 Q. Okay. I'm at a good stopping point. Do you want
 15 a take a quick 10-minute break and return in, say, 10 --
 16 let's call it 10:07?
 17 A. Sure.
 18 Q. Okay. Thank you.
 19 (Break taken from 9:58 a.m. until 10:15 a.m.)
 20 Q. (By Mr. Longfield) Okay. Thank you, Dr. Barrett.
 21 So I'd like to continue on in the list that began on
 22 Page 4?
 23 A. Uh-huh.
 24 Q. I'm now looking at recreation.
 25 A. Uh-huh.

1 Q. Would you agree that several degrees of warming
 2 have already occurred to date due to human-caused climate
 3 change?
 4 A. Well, several degrees.
 5 Q. By "several," I just mean more than one.
 6 A. Yeah. Okay.
 7 Q. Have the effects of climate change to date had an
 8 adverse impact on Montana's recreation-based economy?
 9 A. It's possible. That is to say, I think if you
 10 looked, for example, at the length of ski seasons or
 11 something like that, you might find that that effect had
 12 occurred. Yeah.
 13 Q. Okay. Anything other than length of ski seasons?
 14 A. Well, if you -- if you consider, for example,
 15 these visitation rates, the fact that the visitation rates
 16 have gone up doesn't mean that climate change has not had a
 17 deleterious effect. Maybe without climate change they
 18 would have gone up more than they did. So you can't
 19 conclude anything from the change in visitation rates about
 20 whether or not climate change has had an -- a negative
 21 impact. You have to control for -- in a multifactorial --
 22 I mean, there are obviously lots of things that affect
 23 visitation rates -- the price of gas, the level of income,
 24 the level of employment, the pandemic. I mean, there's all
 25 kinds of things that affect visitation rates. So it's

1 Q. Is it fair to say that a summary of the sort of
 2 premise that you describe here is that climate change will
 3 adversely impact Montana's recreation and tourism industry
 4 in the future?
 5 A. Yes.
 6 Q. Would you agree that the number of visitors to
 7 Montana state parks correlates with the health of Montana's
 8 tourism and recreation sector?
 9 A. Yeah.
 10 Q. Are you aware that Montana state park visitation
 11 has grown by over 71 percent or 1.4 million people
 12 since 2010?
 13 A. I wasn't aware, but I'll take your word for it.
 14 Q. Okay. Were you aware that visitation at
 15 Yellowstone National Park and Glacier National Park has
 16 increased by 33.5 and 40.1 percent, respectively,
 17 since 2010?
 18 A. Again, I'm aware, of course, that visitation at
 19 both those parks has increased. I'm not aware of the exact
 20 numbers. I'll take your word for it.
 21 Q. Okay. Are you aware that according to Montana
 22 Business Quarterly in 2021 Yellowstone National Park set
 23 records for the number of out-of-state visitors?
 24 A. I don't know that I'm -- I know that visitation
 25 was very, very high.

1 impossible to look at visitation rates and isolate the
 2 impact of climate change -- that climate may be having.
 3 Q. Sure. Is it fair to say that your report doesn't
 4 contain any analysis of the degree to which climate change
 5 impacts visitation rates?
 6 A. These are illustrative of the way in which climate
 7 change can potentially affect -- can potentially affect the
 8 economy. There's obviously uncertainty with them. But the
 9 estimate of the -- I use here of the social cost of carbon
 10 is not based on sort of identifying each of these things
 11 and putting a price tag on them and adding them up.
 12 Q. Uh-huh.
 13 A. The uncertainty of these effects imply that
 14 there's going to be some uncertainty in the estimation of
 15 the social cost of carbon.
 16 Q. Sure. I understand that.
 17 Fair to say that the future of the ski industry in
 18 Montana is also a multifactorial question?
 19 A. Sure.
 20 Q. It's similar to visitation rates in the national
 21 parks or state parks.
 22 A. Yeah. Or, you know, use of outfitters for hunting
 23 or whatever it might be.
 24 Q. Yeah.
 25 A. I'd emphasize, by the way, that it's -- the

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1 effects on recreation, it's not just the commercial impact.
 2 If climate change degrades the quality of recreational
 3 opportunities for Montanans, regardless of how much money
 4 they spend, that constitutes an impact on them that has an
 5 economic magnitude that you can assign to it again.
 6 Q. Right. And we were discussing earlier, many sort
 7 of hedonic elements of life can be assigned an economic
 8 magnitude; right?
 9 A. Uh-huh.
 10 Q. But you didn't do any of that in this report;
 11 correct?
 12 A. No.
 13 Q. Okay. So on Page 5 of your report, you state --
 14 and this is under the agriculture bullet point -- quote:
 15 It is expected that by mid-century climate change
 16 will reduce Montana's crop yields by as much as 25 percent,
 17 costing farmers around \$372 million in earnings. Climate
 18 change will also reduce the productivity of the rangeland
 19 cattle industry by 20 percent, costing ranchers over \$364
 20 million in earnings, end quote.
 21 Do you know what emissions scenario those
 22 projections were based on?
 23 A. No.
 24 Q. Okay.
 25 A. I would have to go -- you'd have to go look back

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1 at Power and Power on that.
 2 Q. Okay. Would you agree with me that this case
 3 involves a constitutional challenge to two state laws?
 4 A. Yes.
 5 Q. Do you know what those two laws are?
 6 A. Yes.
 7 Q. What are they?
 8 A. They are certain elements of the -- of what's
 9 called the state energy policy -- not all of it, but
 10 certain elements of it -- and the -- the law that disallows
 11 consideration of environmental impacts beyond the state's
 12 border in the application of MEPA.
 13 Q. Okay. Just as an aside, were you in the
 14 legislature when the relevant provisions of these two laws
 15 were enacted or amended?
 16 A. I think I was in the legislature when the MEPA
 17 exception was enacted. That was 2011. I think the energy
 18 policy is 20 -- I can't remember what year it was, but I
 19 don't think I was -- no, I don't think I was there then.
 20 But, yes, in 2011, I was in the legislature when the MEPA
 21 exception was enacted.
 22 Q. Thank you.
 23 For the next set of questions, I'll just be
 24 referring to the provisions that we just identified as the
 25 two state laws --

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1 A. Sure.
 2 Q. -- is that fair, just as a shorthand?
 3 A. Sure.
 4 Q. Okay. Dr. Barrett, does your report analyze the
 5 extent to which the two challenged state laws contribute to
 6 or impact Montana's greenhouse gas emissions?
 7 A. No.
 8 Q. Do you have any opinions about the extent to which
 9 the two challenged state laws influence or alter Montana's
 10 greenhouse gas emissions?
 11 A. I have -- I guess I have a suspicion, but I don't
 12 have a -- I don't have -- I wouldn't say that I have any
 13 expertise on that.
 14 Q. What is your suspicion?
 15 A. My suspicion is that we -- with respect to the
 16 energy -- the energy policy provisions, I don't think that
 17 they necessarily constrain the formation of energy policy.
 18 They -- they -- for example, we have that energy policy --
 19 that energy policy is on the books, but Governor Bullock
 20 formulated an energy policy that was different from that
 21 particular one. They are -- they're not policies, they are
 22 aspirations. And -- they're not specific policies.
 23 Q. Would you agree that the state energy policy, you
 24 know, that's codified into law sets sort of aspirational
 25 goals for Montana's further energy development, but doesn't

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1 directly control the policy of --
 2 MS. HORNBEIN: I'm going to object --
 3 Q. (By Mr. Longfield) I'll just finish the question.
 4 Doesn't directly control Montana's state energy policy?
 5 MS. HORNBEIN: I will object to that as calling
 6 for a legal conclusion.
 7 MR. LONGFIELD: Thank you, Counsel.
 8 THE DEPONENT: State the question again?
 9 Q. (By Mr. Longfield) Sure.
 10 Is it fair to say the state energy policy sets
 11 sort of aspirational goals for energy development in
 12 Montana but does not directly control decision-making
 13 related to energy policy in Montana?
 14 A. I haven't looked at the whole document, so I
 15 hesitate to respond in terms of the entire policy. But as
 16 I -- excuse me -- as I say, the specific provisions that
 17 are being contested here are aspirational.
 18 Q. Thank you. If the 2011 amendment to MEPA -- we'll
 19 just call it the "MEPA limitation" --
 20 A. Okay.
 21 Q. -- didn't exist, would Montana's greenhouse gas
 22 emissions be any lower, in your opinion?
 23 MS. HORNBEIN: And I'll reiterate my prior
 24 objection.
 25 THE DEPONENT: And I'd have to speculate a bit

1 here, but I would assume that if there were a project that
 2 was undergoing a MEPA analysis, and if that project
 3 produced lots of greenhouse gases, if, in the absence of
 4 the MEPA exception, the MEPA analysis would identify large
 5 concerns about the -- about the -- about the environmental
 6 impact of the -- of the project and therefore make it less
 7 likely that the project would be approved. So I think that
 8 it is likely, but I can't say specifically whether the
 9 MEPA -- whether a MEPA analysis -- whether greenhouse gas
 10 emissions would be smaller. But I think it's likely.
 11 Because under the exception, no account is taken of
 12 greenhouse gas emissions. So once you take account of
 13 greenhouse gas emissions -- or, of course, you could look
 14 at it the other way around, and could there also be
 15 projects which have the effect of the reducing emissions
 16 which would be more likely to be approved under a MEPA
 17 analysis without the exception because that would be, you
 18 know, a positive impact that would make the project more
 19 attractive.
 20 Q. Are you aware of any change in the rate at which
 21 permits were granted to fossil fuel-based projects before
 22 the MEPA amendment was passed and after the MEPA amendment
 23 was passed?
 24 A. No.
 25 Q. If the challenged provisions of the state energy

1 development is unconstitutional. But I think more
 2 specifically what I'm asking you is whether removing from
 3 law the challenged provisions of the state energy policy
 4 would have any impact on Montana's greenhouse gas
 5 emissions -- the amount of greenhouse gas emissions in
 6 Montana?
 7 A. Well, I don't think you can consider it in the
 8 abstract. You have to consider the circumstances under
 9 which it is removed from law. It would be removed from law
 10 under the circumstances that a court ruled that the
 11 language was unconstitutional. So, yes, it would have -- I
 12 mean, I can't tell you what the answer to the hypothetical
 13 is that if they were just suddenly gone; okay? They're not
 14 going to just be suddenly gone. If they're gone, it's
 15 going to be because a court has determined that they're
 16 unconstitutional.
 17 Q. Okay. And so your opinion is that the court's
 18 determination that the policy is unconstitutional, I think
 19 you said, would influence the policy-making environment --
 20 and I'm not trying to quote you here, but just to
 21 paraphrase -- and shape the way in which the legislature
 22 views energy policy moving forward. Is that a fair summary
 23 of your answer?
 24 A. I think it's fair. But I would emphasize again
 25 that that's sort of my best guess based on my, you know,

1 policy didn't exist, would Montana's greenhouse gas
 2 emissions be any lower?
 3 A. I'm sorry. Ask it again?
 4 Q. Sure. If the challenged part of the state energy
 5 policy, the part that plaintiffs challenged, didn't exist,
 6 if you took it off the books, would Montana's greenhouse
 7 gas emissions be any lower?
 8 A. Again, I could only speculate on that. If -- if
 9 those provisions didn't exist, it could affect, it seems to
 10 me -- it could affect the policy-making environment in the
 11 legislature. And -- and, I mean, suppose that, you know,
 12 the plaintiffs prevail and -- and the Court says, yes
 13 indeed, developing fossil fuels violates the constitutional
 14 rights of these kids. I would think that that would have
 15 some affect on the legislature such that they would be --
 16 become wary about policies that, in fact, promoted fossil
 17 fuel development and created more emissions.
 18 I can't swear that's true, but it seems to me that
 19 if a court said, yeah, promoting fossil fuel development
 20 violates constitutional rights, then the legislature would
 21 become wary about promoting fossil fuel development because
 22 they would face the prospect of people going to court and
 23 saying, Look, you're violating my constitutional right.
 24 Q. Yeah. So I think I understand your answer to
 25 refer to the effect of a court declaration that fossil fuel

1 experience in the legislature. Although I do think that
 2 you can see times in which court rulings on
 3 constitutionality have affected legislative behavior -- I
 4 think, for example, of the school funding...
 5 Q. Yeah.
 6 A. So -- yeah.
 7 Q. Just didn't want to cut you off.
 8 A. Yeah.
 9 Q. Is any of that contained in your report?
 10 A. No.
 11 Q. And do you expect to testify about any of that at
 12 trial?
 13 A. Not unless you ask me, no.
 14 Q. And I think you alluded to this, but what is the
 15 basis for your opinion that a court order declaring the
 16 state energy policy unconstitutional would influence the
 17 legislature in a certain way? What's the basis for that
 18 opinion?
 19 A. The basis for that opinion is that -- is that in
 20 the legislature, I frequently heard discussions that --
 21 there was frequently discussions about whether or not a
 22 particular piece of legislation was constitutional or not.
 23 Q. Sure.
 24 A. And if you could make a compelling argument that a
 25 particular piece of legislation was unconstitutional, it

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1 tended to reduce enthusiasm for that piece of legislation.
2 There's -- there are legislators who I think -- who will
3 say, Damn the torpedoes, full speed ahead, I don't give a
4 damn what the Court says, I'm going to go ahead and pass
5 this thing and see what happens.
6 We know that -- we know about a lot of that;
7 right? But it is the case that legislators, I think, are
8 deferred from passing legislation when the Court has said
9 that it is unconstitutional. Deterred. Not prevented, but
10 deterred.
11 Q. Sure. Understood.
12 A. I'm sure you're familiar with some of those
13 instances.
14 Q. Do you know, Dr. Barrett, whether there was any
15 increase or decrease in the rate at which permits for
16 fossil fuel projects were approved before and after the
17 challenged provisions of the state energy policy were
18 enacted?
19 A. No.
20 Q. Okay. Let's return to Page 9, if you would. I'd
21 like to ask you some questions about a passage that we've
22 discussed in part, and that's your sort of choice to use a
23 global social cost --
24 A. Uh-huh.
25 Q. -- and the kind of free-rider analysis underlying

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1 that choice.
2 A. Right.
3 Q. So, again, just to situate ourselves here, I'll
4 read some of the relevant language. You say that, quote:
5 The damages from CO2 emissions that Montana uses
6 to calculate its SCC value for the purposes of policymaking
7 should be global in nature rather than confined to the
8 borders of the state. There is no cogent rationale for
9 solely considering CO2 emissions damages that are confined
10 to Montana state boundaries when determining the SCC value
11 to be used in evaluating state policy.
12 And then -- that's an end quote -- you go on to
13 justify this conclusion by stating, quote:
14 The logic for Montana's use of a global SCC is the
15 reciprocal effect climate policies in one country or
16 state -- Montana, in this case -- have on the climate
17 policies of other countries and states, end quote.
18 So stopping right there, my first question for
19 you, Dr. Barrett, is what evidence suggests that climate
20 policies in Montana have any influence on the climate
21 policies of other countries?
22 A. It's a -- it's difficult because you're looking
23 for an absence of evidence. If -- if Montana doesn't --
24 doesn't pursue climate policies that recognize the damages
25 that are being done elsewhere, then you don't -- I think

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1 the evidence consists of the fact that other countries
2 aren't pursuing climate policies that have -- that take
3 account of damages occurring outside of their boundaries.
4 Q. So it's kind of a first-mover problem, in a sense?
5 A. It could be a first-mover problem. It could --
6 it's a "race to the bottom" problem. If every -- if
7 Montana decides that, you know, it's going to enjoy
8 whatever benefits are conferred upon it by -- by producing
9 fossil fuels and ignore the impact that that has on others,
10 you know, basically exploiting the opportunity to -- to
11 pass on the true costs of -- of production, or part of the
12 true costs of production, the external costs of production,
13 on to others, it's reasonable to expect that others will do
14 the same thing.
15 Q. Okay. What sources or data did you rely on in
16 forming your opinion that it's reasonable to expect that
17 others will do the same thing if Montana does that?
18 A. Well, it's actually a theoretical argument. It's
19 a pretty common game, theoretical -- it's a prisoner's
20 dilemma problem.
21 Q. Prisoner's dilemma. Could you describe the
22 prisoner's dilemma briefly?
23 A. Prisoner's dilemma occurs when -- do you want the
24 prisoners themselves --
25 Q. Whichever you prefer, in its most brief.

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1 A. The notion of the prisoner's dilemma game is that
2 you have two prisoners, and they have been isolated from
3 one another, they cannot communicate with one another.
4 They have made no prior arrangement with one another. And
5 so what happens is that -- and they -- they are told that
6 if they confess, and the other -- if Prisoner A confesses
7 and Prisoner B doesn't confess, Prisoner A will -- will
8 benefit. If Prisoner A confesses and Prisoner B also
9 confesses, then that will -- that's the worst possible
10 outcome for Prisoner A. The best possible outcome is for
11 neither of them to confess. The worst possible outcome is
12 for both of them to confess.
13 The best strategy for each of them, in the absence
14 of the ability to -- to communicate with one another and
15 agree to not confess, the best strategy for them is to
16 confess. Because regardless of whether the other one
17 confesses or not, that's the best outcome that they can
18 see. So the result is going to be that they're both going
19 confess, and they're going to come out with the worst
20 collective outcome.
21 So what you have here is a similar -- kind of
22 something similar to a prisoner's dilemma, except that in
23 this particular case it's not the case that parties can't
24 communicate.
25 Q. Okay.

1 A. In this particular case, parties can communicate,
2 can reach an agreement, whether formally or informally, and
3 can avoid that worst possible outcome. The worst possible
4 outcome in this case would be if everybody ignored the
5 impacts that they had on everybody else.

6 If every government, let's say, decision-making
7 government, whether a state or country or whatever -- if
8 every country made their decisions about resource use
9 deliberately ignoring the impact that external costs impose
10 on other countries, that's the worst possible outcome. The
11 best possible outcome is for all of them to -- to take
12 account of the cost -- the best possible collective outcome
13 is for all of them to take account of the impacts they're
14 having on others.

15 Q. Uh-huh.

16 A. So it's a theoretical argument, although there is
17 some statistical evidence -- I think that's cited here --

18 Q. Is that Footnote 21?

19 A. Footnote 21, yeah, in which they calculate a
20 reciprocity ratio, which is an attempt to measure the
21 extent to which the efforts of one country to control its
22 climate impacts affect the ability of other countries to
23 control their climate impacts.

24 Q. So let's talk about that footnote, and I'll just
25 read it into the record. So this is Page 9, Footnote 21.

1 States' reciprocity ratio is likely quite different from
2 the reciprocity ration of one state within the United
3 States?

4 A. Could be different, could be higher, could be
5 lower. I don't know.

6 Q. Well, I guess, does it seem plausible that a state
7 like Montana would be as influential on international
8 policymaking as the United States acting as a country?

9 MS. HORNBEIN: I'm going to object to that as
10 being asked and answered.

11 THE DEPONENT: Well, you know, it depends on -- I
12 suppose it would depend on what kind of reciprocity you're
13 looking at. I think you could -- for example, you can look
14 at a model like the Western Governors Association efforts
15 on behalf of -- of climate and see that there's high
16 reciprocity there. I mean, that is a formalized form of
17 reciprocity.

18 So -- so, yeah, I can't -- it's hard to comment on the
19 reciprocity ratio because -- I mean, let's suppose that --
20 that Montana, you know, says, Okay, we're going to take
21 account -- we're going to have a policy that takes account
22 of the damages that we're doing to China and India and
23 Germany and England and so forth. And that causes them, to
24 some degree -- Montana's contribution is relatively small,
25 but it nevertheless has some small impact on their -- on

1 You cite a study that calculates, quote:
2 An international climate reciprocity ratio for the
3 United States of 6.1 to 6.8, which means that for every ton
4 the United States pledged to reduce its emissions by under
5 the Paris Agreement, other nations pledged to reduce their
6 emissions by 6.1 to 6.8 tons, end quote.

7 Dr. Barrett, do you believe that this study
8 supports your conclusion that Montana's policies will
9 influence other states' and countries' policies?

10 A. Well, the point of the footnote is to illustrate
11 that there is statistical evidence for reciprocity, not
12 specific to Montana.

13 Q. Yeah. I understand that. I think what I'm trying
14 to get at is, is it your opinion that that study arrives at
15 a reciprocity rate that can be applied generally, or is the
16 reciprocity rate in that study only to the United States'
17 influence on other countries?

18 A. I think that that reciprocity ratio is -- I'm not
19 suggesting that that reciprocity ratio is -- I don't want
20 to suggest that it applies Montana necessarily.

21 Q. Okay. So --

22 A. As I say, it illustrates the existence of
23 statistical evidence for reciprocity, but I'm not applying
24 that particular number to Montana.

25 Q. Would you agree that it's possible that the United

1 their emissions. And -- but that small relative impact on
2 their emissions is quite large compared to the size of
3 Montana's emissions. So the reciprocity could be quite
4 high.

5 Q. Okay. What evidence suggests that Montana's
6 climate policy has any influence on the policies of other
7 states within the United States?

8 A. As I said before, you're -- you're looking for a
9 negative here. I mean, Montana doesn't have really a
10 climate policy, a robust climate policy.

11 Q. Uh-huh.

12 A. And so -- and so the influence that it might have
13 would be -- you know, other states look at -- how would
14 Montana's influence -- if other states looked at Montana
15 and said, They're not doing anything, we're not going to do
16 anything. So the evidence would be they're not doing
17 anything.

18 Q. Uh-huh.

19 A. You don't know, of course, if other states don't
20 have active climate policies -- you don't know whether
21 that's because Montana doesn't have one. But that's the
22 only evidence you could have if you did.

23 Q. Yeah. Why does it seem plausible that Montana's,
24 you know, future development of a more robust climate
25 policy would encourage other states to adopt a similar

1 climate policy?
 2 A. I think it seems -- what word did you use?
 3 Plausible?
 4 Q. Plausible.
 5 A. I think it's plausible because you can see
 6 reciprocity, in fact, occurring. You see, for example --
 7 all across the country you see municipal governments
 8 engaging in climate policies, incurring costs in order to
 9 limit -- in order to limit emissions. They incur costs in
 10 order to limit emissions, and it is inconceivable that --
 11 that the -- that the reduced damages from their limiting
 12 their own emissions are sufficient to outweigh the costs.
 13 So they are -- so why are they doing it? They're doing it
 14 because they recognize that they're part of a -- of a
 15 larger -- it's -- it's a form of spontaneous cooperation in
 16 which they realize that they're part of a larger group of
 17 municipalities or states or what have you that are doing
 18 the same thing, and that they're going to benefit as a
 19 result.
 20 So, I mean, that's a real phenomenon. It's not --
 21 I'm not making it up. It's not imaginary. It's a real
 22 phenomenon. And, you know, you used the term "first
 23 mover." I mean, as -- as more states or municipalities or
 24 countries or whatever make the move to do this, the more
 25 will do it. Because they -- because they, unlike the

1 anticipate that they substantially reduce the damages to
 2 themselves because they're not the only ones that are doing
 3 it.
 4 Q. Uh-huh. In that scenario are you presuming that
 5 municipalities are acting rationally?
 6 A. Yeah.
 7 Q. And that's a basic economic assumption in many
 8 economic theories; right? That economic actors are
 9 rational?
 10 A. In many theories, yes. There are -- there are
 11 theories that -- in which they are not rational. But it is
 12 a -- they're also acting strategically. I mean, they're
 13 playing a game. The prisoners' dilemma games -- the
 14 prisoners in the prisoners' dilemma game are acting
 15 rationally. It leads to a very bad outcome; okay?
 16 Q. Uh-huh.
 17 A. But in the absence of -- well, to say it the other
 18 way around, in the presence of the ability to communicate,
 19 it can be rational -- and, you know, some experimental
 20 economists and behavioral economists have demonstrated the
 21 rationality of spontaneous cooperation.
 22 Q. Okay. What municipalities are you referring to?
 23 A. Well, Missoula, for one.
 24 Q. Okay. Any others?
 25 A. I wish I could name them. There is a group of

1 prisoners' dilemma, they can communicate, and they can have
 2 spontaneous formal or informal agreement to work together.
 3 Q. Yeah. I want to touch on a few things that you
 4 brought up there.
 5 I think the initial example you gave of the sort
 6 of altruistic, let's say, climate change policy occurring
 7 was in municipalities; right? And I think you made the
 8 point that the direct climate harms reduced on those
 9 municipalities can't be sufficient to justify, you know,
 10 the cost that they're incurring to draw down their
 11 greenhouse gas emissions. So, in your view, there must be
 12 some other explanation, and it seems most likely that these
 13 municipalities recognize that they're part of a global
 14 problem and then hoping to engage in the kind of
 15 spontaneous cooperation that you're referring to.
 16 Does that -- anything you'd change about what I
 17 just summarized there?
 18 A. I think that summarizes it. Why do they do it?
 19 They do it because they realize that -- or they hope, at
 20 least, they suspect -- there is some likelihood that if
 21 they do it, others will do it.
 22 Q. Uh-huh.
 23 A. And so the yield in terms of reduced damages to
 24 them goes well beyond just their own impact on their
 25 damages; okay? They -- they substantially -- they can

1 municipalities that have joined together. There are states
 2 that have joined together for climate action as well.
 3 Q. Okay. Let's take Missoula since that's an example
 4 you have top of mind.
 5 What evidence is there that Missoula's actions to
 6 combat climate change have been influential on other
 7 municipalities?
 8 A. Again, I guess the evidence would -- to the extent
 9 there's evidence -- it's hard to observe. But if there are
 10 other cities that are doing what Missoula is doing, that
 11 would seem to justify Missoula's assumption that if it does
 12 something, then other cities will do it as well.
 13 Q. And maybe this will help. The reason I ask is,
 14 when I ask for evidence that Montana's policies would
 15 influence other states or countries, you responded, I
 16 think, pretty reasonably that there's a sort of absence of
 17 evidence. Other countries and, you know, states aren't
 18 acting because Montana isn't acting, and so maybe we can
 19 intuit some causal relationship there.
 20 But I guess I'm asking you about Missoula because
 21 there we have an example of a municipality that is acting
 22 in a way that seeks to reduce climate change. And so I'm
 23 asking, there we have the evidence or a policy that's
 24 acting to reduce climate change, what influential impact
 25 has that had on any other governmental unit -- state,

1 municipality, country?
 2 A. The only evidence is that there are groups of
 3 cities that are doing it. I mean, what is the evidence for
 4 the existence of spontaneous cooperation? Cooperation.
 5 Q. Does that seem circular to you at all?
 6 A. No.
 7 Q. The evidence for the existence of spontaneous
 8 cooperation is spontaneous --
 9 A. Is that it happens.
 10 Q. Sure.
 11 A. You hypothesize the existence of a phenomenon
 12 called spontaneous cooperation, and you look around, and
 13 you see that it, in fact, exists.
 14 Q. Sure.
 15 A. That's the evidence.
 16 Q. Sure. Specifically -- so maybe to quote language
 17 from your report, on Page 9 you note that we already,
 18 quote:
 19 See, for example, states and cities in the United
 20 States voluntarily executing policies to reduce their
 21 climate impacts, which is clearly economically efficient,
 22 but only if these states and cities are accounting for
 23 global, rather than merely local, climate costs, end quote.
 24 What states, in your opinion, are voluntarily
 25 executing policies to reduce their climate impacts?

1 a legislature has said, Oh, look, California is doing it;
 2 we'll do it too. But, I mean, that's not the way policy
 3 works. I mean, it -- policy -- I would say, for example,
 4 that what's happening in Missoula, what's happening in
 5 Bozeman -- I mean, there are a number of communities,
 6 companies, states, whatever, that are responsive to those
 7 kind of efforts.
 8 Q. Do you have an opinion about to what extent other
 9 states', as you say, leadership on climate issues
 10 influences policymaking on Montana's? In other words, do
 11 you think it's possible to quantify the degree of influence
 12 in any rough sense?
 13 A. I don't think you can quantify it, but -- and in
 14 some ways, I would say we're late to the party. Frankly, I
 15 think that the dynamics are different for fossil
 16 fuel-producing states than for fossil fuel-consuming
 17 states. The nature of our interests are different. But --
 18 but I do think that those -- that you can trace the
 19 influence of those kinds of efforts that are being made in
 20 other states on policymakers or politicians or political
 21 discourse or planned legislation.
 22 A concrete example: I proposed a carbon tax.
 23 Would I have done that if BC and Washington hadn't had a
 24 carbon tax? No, probably not. Or if I hadn't been in
 25 contact with the Citizens' Climate Lobby people in

1 A. California, Oregon, Washington, most of the New
 2 England states, and so forth.
 3 Q. Okay. So if it were true that climate policies in
 4 one state influence climate policies in other states, why
 5 haven't the environmental policies from states like
 6 Washington, Oregon, and California influenced Montana's
 7 policy?
 8 A. Well, it's a process. I mean, there have to be
 9 first movers. I would say, for example, that the -- the
 10 climate policy that Governor Bullock proposed suggests --
 11 suggests to me that the climate policies of other states
 12 were having an influence. There's no -- in these kinds
 13 of -- on these kind of phenomena, there's no sort of
 14 smoking gun-type of evidence. But it seems to me quite
 15 apparent that you have states that have taken significant
 16 leadership in climate policy. So you have, for example, a
 17 state like Washington or Oregon or whatever that has --
 18 that have -- for example, the state of Washington will no
 19 longer use coal-fired, you know, fossil fuel power.
 20 Q. Uh-huh.
 21 A. They happen to have the benefit of significant
 22 hydro resources. Oregon similarly. California does a
 23 number of things to try and reduce its emissions. It seems
 24 to me that those -- those states' efforts have probably
 25 had -- I can't -- I mean, I can't cite for you a case where

1 California? Probably not. So, yeah, I think that --
 2 evidence in the sense of, you know, stone proof that it's
 3 happening is hard to come by, but I don't think it's hard
 4 to see at all that states like California, Washington,
 5 taking an initiative influences policy in other states.
 6 Q. Do different states have different degrees of
 7 influence on the policies of other states?
 8 A. That -- that goes well beyond what I could
 9 possibly express any expertise about. I mean, you know --
 10 I mean -- I mean, if you look the particularities of
 11 Montana politics and Montana political values, probably
 12 Washington has a bigger influence than California because
 13 people don't like Californians here. Or Coloradoans, as
 14 you may have experienced.
 15 Q. This is true. The reason I ask is I want to know
 16 how influential you think Montana's policies would be.
 17 Would they be more influential on other states than, say,
 18 an Oregon or Washington? Roughly the same amount of
 19 influence, more or less?
 20 MS. HORNBEIN: I'm going to object as calling for
 21 speculation.
 22 THE DEPONENT: Yeah, I -- I -- it would be
 23 speculative for me to answer that.
 24 Q. (By Mr. Longfield) Yeah.
 25 A. It's -- you know, how influential Montana would

1 be, I don't know.
 2 Q. Yeah.
 3 A. But spontaneous cooperation is in all our
 4 interests. And when I say "spontaneous cooperation," it
 5 doesn't have to be -- it could have its formal dimensions
 6 to it. It's in all our interests. The presence of a free
 7 rider in a group of -- when spontaneous cooperation --
 8 breaks down spontaneous cooperation.
 9 The best example from economic theory is a cartel.
 10 Our cartel operates by -- in case of OPEC, for example --
 11 restricting output. Every single member of the cartel has
 12 the temptation to free ride on the cartel; that is, to
 13 cheat on the agreement. And the consequences are that the
 14 cartel breaks down and the benefits, in this case, to the
 15 cartel are lost.
 16 Q. Right. Right. Would you agree that it's an
 17 important premise underlying your choice to use a global
 18 social cost of carbon that Montana's climate policy will
 19 have some reciprocal effect on other states and countries?
 20 A. Yes.
 21 Q. Does it matter for the purposes of your report how
 22 much Montana's climate policy will influence or have a
 23 reciprocal effect on other states' and countries' climate
 24 policies?
 25 A. If you wanted to calculate a Montana-specific

1 interests served by ignoring its impact on others, then
 2 that same logic applies to others. And so it's not
 3 reasonable or realistic to expect others not to pursue the
 4 same rational strategy that Montana pursues, which is -- in
 5 the case of a prisoners' dilemma game.
 6 Q. Uh-huh. Earlier in regard to a different topic we
 7 discussed multifactorial phenomena.
 8 Would you agree that states' climate policies are
 9 multifactorial phenomena in the sense that there are
 10 multiple complex causes that go into why states select the
 11 policies that they do?
 12 A. Sure.
 13 Q. You'd agree with that?
 14 A. Yeah.
 15 Q. Okay. So you would agree, then, I take it, that
 16 there could be other reasons for other state actors not
 17 adopting policies to reduce their impact on the climate
 18 than the refusal of states like Montana to do the same?
 19 A. Sure.
 20 Q. Do you have an opinion about how important the
 21 sort of spontaneous cooperation factor is in the hierarchy
 22 of factors that would contribute to states setting their
 23 climate policy? Is the most important? Is it of medium
 24 importance? Is it of low importance?
 25 A. I think the possibility of spontaneous

1 social cost of carbon which included the effects of
 2 spontaneous cooperation, then, yes, it would matter.
 3 Q. Okay. Why don't we take a quick 10-minute break.
 4 Right now it's 11:08. Come back at 11:18?
 5 A. Okay.
 6 Q. All right. Thank you.
 7 (Break taken from 11:08 a.m. until 11:31 a.m.)
 8 Q. (By Mr. Longfield) Dr. Barrett, returning to the
 9 rationale you stated for selecting a global social cost or
 10 carbon, you state on Page 9 that, quote:
 11 It is neither realistic nor reasonable to expect
 12 other states to behave in a way that Montana does not, end
 13 quote.
 14 And the way you're referring to is taking action
 15 to reduce impact on the climate through, you know, fossil
 16 fuel use.
 17 Is this an economic claim that you're making here
 18 that it's not reasonable or realistic to expect other
 19 governmental actors to act in a way Montana doesn't?
 20 A. I'd say it is more a political claim.
 21 Q. A political claim? Okay.
 22 A. It's not -- it's -- I think it could be an
 23 economic claim in the sense of sort of a game, theoretical
 24 claim that if -- if you conceive of the situation as a
 25 gaming environment in which Montana finds its best

1 cooperation -- the potential that spontaneous cooperation
 2 provides is very important in inducing states to control
 3 their emissions, to have a climate policy. Absent the
 4 possibility of cooperation -- I mean, supposed that you
 5 absolutely knew nobody was going to cooperate, nobody else
 6 was going to do it. You knew that. Then you'd have very
 7 little incentive to do it yourself. So the possibility of
 8 cooperation is, I would say, vital to assuring states
 9 that it's worthwhile to undertake a climate control policy.
 10 Q. Yeah.
 11 A. I had another thought, but now I've lost it, so...
 12 Q. Is it possible for Montana to forecast the
 13 likelihood of further cooperation in the event that Montana
 14 enacts sort of protective climate policies?
 15 A. I suspect that it's -- forecast is a strange word
 16 to use in this context. It -- I suspect -- I mean, suppose
 17 that you're the governor of Montana.
 18 Q. Uh-huh.
 19 A. You -- and you -- you go to the -- the Western
 20 Governors Conference, okay, and you talk to other governors
 21 about their climate policies, about your climate policy.
 22 That ability to communicate gives you the opportunity to
 23 realize, if we act, others will act, or we'll all act in
 24 concert. So communication between parties is what makes, I
 25 think, the possibility of cooperation -- spontaneous

1 cooperation suggests that you just do it, you know. But
 2 it -- but with communication, it doesn't have to be
 3 spontaneous. But I think, you know, communication makes
 4 the possibility of cooperation more attractive --
 5 Q. Uh-huh.
 6 A. -- more likely to work. I mean, in -- more likely
 7 to influence your climate policy. If you can communicate
 8 and know that others are going to do the same thing because
 9 you're doing it, and you've agreed to cooperate, you know,
 10 yeah, I think -- so you can anticipate that.
 11 Q. Maybe to make it more concrete, if the plaintiffs
 12 win this lawsuit --
 13 A. Okay.
 14 Q. -- how will that influence other states' climate
 15 policies?
 16 MS. HORNBEIN: Calls for speculation.
 17 MR. LONGFIELD: Agreed.
 18 THE DEPONENT: You agree that it calls for
 19 speculation, so -- but I should leap in to speculate all
 20 the same.
 21 Q. (By Mr. Longfield) Well, it seems to be an
 22 important aspect of your report that there would be some
 23 impact or other states' policy decision-making if policy
 24 changes in Montana. And correct me if I'm wrong there, but
 25 I think we've covered that ground at length.

1 Q. Uh-huh.
 2 A. That's going in the opposite direction from what
 3 you want to.
 4 Q. Do the two laws being challenged in this case, in
 5 your opinion, promote production of fossil fuels?
 6 A. Yeah. Well, the MEPA provision makes it more
 7 likely that -- that -- that climate -- that emission --
 8 that projects with emissions will be approved.
 9 Q. Okay. What is the basis for that opinion, that
 10 the MEPA amendment makes it more likely that greenhouse gas
 11 emitting projects will be approved?
 12 A. Because it prohibits -- let me take a particular
 13 project. The provision prohibits taking into account the
 14 damages that that project does to the environment outside
 15 the state. So in -- sort of in -- the MEPA process is not
 16 really an economic optimization process, but it weighs, you
 17 know, impacts of both the negative environmental impact and
 18 some positive impacts and so forth. It weighs those
 19 impacts. You're not allowed to include in the MEPA
 20 analysis some large negative impacts. That makes it more
 21 likely that the project will be approved.
 22 You have a project with lots of emissions --
 23 whatever it might be; okay -- and you're not allowed -- and
 24 you're trying it figure out, should we approve -- what's
 25 the balance of, you know -- here between positive and

1 A. Presumably if the lawsuit succeeded, the policy
 2 stance of the state changes --
 3 Q. Uh-huh --
 4 A. -- puts us in a position in which we're more
 5 likely to be able to engage in cooperative reductions in
 6 emissions with other states, communities, whatever it might
 7 be. If -- if we have a policy on the books that requires
 8 us to promote fossil fuel production, we can hardly go to
 9 another state and say, Oh, well, we believe in reducing
 10 fossil fuel production.
 11 Q. What policy are you referring to in that statement
 12 that promotes fossil fuel production?
 13 A. Any policy that promotes fossil fuel production.
 14 There -- I mean, any policy that promotes fossil fuel
 15 production that -- it may be tax incentives -- okay. I'll
 16 give you one. Reducing the coal severance tax; okay? You
 17 reduce the coal severance tax in order to promote more
 18 fossil fuel production.
 19 If -- if you -- if you're the governor of the
 20 State of Montana and you're talking to other governors
 21 about -- about -- about the ability to reduce emissions and
 22 control fossil fuel production and reduce emissions, and
 23 you say, But it's the policy of the State of Montana to cut
 24 the -- the coal severance tax, they're going to say, Well,
 25 that's not cooperating.

1 negative impacts. And you're -- but you're not allowed to
 2 consider a big chunk of negative impacts. And so it makes
 3 it more likely that the project will be approved. And
 4 therefore, a high emitting project will be more likely to
 5 be approved. Yeah, it will have that effect.
 6 Q. Has there be any change in the rate at which
 7 permits are approved for greenhouse gas emitting projects
 8 in Montana since the passage of the 2011 MEPA amendment?
 9 A. I don't know.
 10 Q. Okay.
 11 A. That, again, is, of course, a multifactorial
 12 phenomenon that you have to deal with, so...
 13 Q. Okay. Okay. Well, let's turn to Page 12, if you
 14 would.
 15 A. Okay.
 16 (Complies.)
 17 Q. The next line of questions are all related to
 18 sub -- or to Heading 3 in which you discuss the cost side
 19 of the equation.
 20 A. Okay.
 21 Q. So we'll start with your conclusions about the
 22 cost of coal and social cost of coal --
 23 A. Uh-huh.
 24 Q. -- and that's under Heading A.
 25 A. Uh-huh.

1 Q. Sorry. I -- strike that. I'd actually like to
2 talk about your conclusion about the benefits of coal.
3 A. Okay.
4 Q. So can you explain what your analysis included in
5 calculating the benefits of coal?
6 A. What I'm -- what you're trying to do is determine
7 the net benefit of a ton of coal.
8 Q. Uh-huh.
9 A. Okay. So what is that net benefit? It is the
10 price of the ton of coal, less the cost of producing it.
11 That's the net gain for producing a ton of coal. I don't
12 know the cost necessarily of -- particularly the marginal
13 cost.
14 Q. Uh-huh.
15 A. So presumably it's less than 20, or less than 21,
16 or nobody would be producing; okay? It's more than zero.
17 Q. Uh-huh.
18 A. So the net benefit can range from something as
19 high as 21 to something as -- you know, approaching zero,
20 depending on what those costs are. So somewhere, the net
21 benefit from -- created by producing another ton of coal is
22 between zero and \$20 or zero and \$21. So that's -- that's
23 about the best I can do without access to marginal cost
24 data.
25 Q. Sure. Why, in your view, is the -- I'll just call

1 Q. Are there any ancillary or downstream economic
2 benefits that result from the production of an additional
3 unit of coal to Montana's economy?
4 A. I'm sorry. I don't understand what you mean.
5 Q. What I mean is, is there any economic value
6 associated with one unit of coal to Montana's economy that
7 is not captured by the sale price or reflected by the sale
8 price?
9 A. I'm hard pressed to think of one. I mean,
10 normally, what we, in the theory of market economies, say
11 that the value of something is its price. The net
12 contribution is -- at the margin is the difference between
13 price and additional -- the price and the additional cost
14 that you have to incur.
15 Q. Uh-huh.
16 A. You could, I suppose, imagine that there are some
17 kind of positive externalities associated with mining of
18 coal, but I don't know what those would be. I don't -- I
19 have no idea what they are or how quantitatively
20 significant they would be. There would probably also be
21 some non-climate negative externalities from mining coal.
22 So I'm not taking account of either the non-climate
23 negative externalities or any positive externalities
24 associated with it. It's -- this analysis assumes that all
25 of the private benefits and private costs are captured by

1 it "sale profit." Is that a fair term to say -- a fair way
2 to describe the figure you arrive at here?
3 A. Uh-huh.
4 Q. You know, sales price net costs?
5 A. Yeah.
6 Q. Why, in your view, is the sale profit the only
7 economic benefit of coal? Why is it reflective of the --
8 A. What we're interested in here is what marginal
9 benefit is being created.
10 Q. Uh-huh.
11 A. And so the cost of coal -- of the ton of coal
12 reflects -- it results from having to employ resources --
13 labor, capital, so on and so forth -- to produce it. And
14 they could be -- and if they weren't producing coal, they
15 would be producing something else.
16 Q. Uh-huh.
17 A. And what, you know, sort of the standard factor
18 pricing model in economics suggests is that what you pay
19 them in order to produce coal is roughly equivalent to the
20 value of what they could produce somewhere else. So you're
21 ahead by the \$20 worth of coal and you're behind by --
22 let's just for the sake of the argument suppose that the
23 cost is \$15; okay? So you're behind by \$15 of something
24 else and ahead by \$20 worth of coal, so, on net, you're
25 ahead by five.

1 their commercial value.
2 Q. Right. But you did consider the climate-related
3 externalities on the cost side of your equation; right?
4 A. Sure. Uh-huh.
5 Q. Why, in your view, is that an appropriate
6 comparison to compare the climate-related externalities on
7 the cost side but not to consider any externalities on the
8 benefit side?
9 A. Because I don't think there are any externalities
10 on the benefit side.
11 Q. I thought you just said there may be some?
12 A. I suppose you could speculate, but I don't know of
13 any.
14 Q. Did you examine whether there are any or look to
15 any research attempting to identify positive externalities
16 of coal?
17 A. Could you give me an example of what you mean by a
18 positive externality of coal?
19 Q. Sure. For example, do you think there's any
20 economic value produced due to the energy use of coal
21 production? Is there any sort of ancillary economic value
22 that comes from the energy use of coal in Montana?
23 A. I think that the value of coal for producing
24 energy is captured in its price. Energy producers pay for
25 coal. The value of coal in producing energy is captured in

1 its price. In fact, that's the only value that coal has.
2 I mean, you don't use coal for much of anything except
3 producing energy, and its value for producing energy is
4 captured in its price.
5 Q. So, in your view, none of the -- sorry. To state
6 it positively, all of the positive externalities associated
7 with coal are captured in its sale price?
8 A. They're not externalities if it's captured in its
9 price.
10 Q. Right. So are there any externalities that have
11 an economic magnitude -- a positive --
12 A. That are not --
13 Q. Isn't that the definition of an externality, not
14 captured in price?
15 A. The definition of an externality is a positive or
16 negative effect on a third party that is not a party to the
17 transaction that creates the -- that we're examining; in
18 this case, the production of coal. It's a transaction.
19 There are parties involved in it -- buyers, sellers,
20 workers, so on and so forth.
21 Q. Right.
22 A. A positive externality would be some kind of a
23 benefit that was received by third parties who didn't have
24 to pay for it.
25 Q. Right.

1 internalized. As a result of policy, they've been forced
2 to be internalized. But, no -- otherwise, no, I -- I don't
3 think there's any positive externalities attached to coal.
4 Q. Okay.
5 A. I'm -- if you would suggest some, I would be happy
6 to comment on it, but --
7 Q. Sure. Sure. And, again, maybe just to ask it
8 more clearly, is it your opinion that the energy services
9 provided by the use of coal in Montana has no economic
10 value?
11 A. What?
12 Q. Is it your opinion that the energy produced
13 through the use of coal in Montana has no economic value?
14 A. No.
15 Q. Okay. Is that -- what is the economic value of
16 the use of coal in Montana? Is that something you
17 considered in analyzing the benefits of carbon?
18 A. The value of coal for producing energy in Montana
19 is reflected in its price.
20 Q. And there no externalities that are not reflected
21 in the price, in your opinion?
22 MS. HORNBEIN: Asked and answered.
23 THE DEPONENT: Not that I know of, no.
24 Q. (By Mr. Longfield) Okay. All right. Same thing
25 for oil?

1 A. No, I do not see -- I do not know -- I have no
2 reason to believe that there are positive externalities
3 associated with the production of coal.
4 Q. Do you have reason to believe there are negative
5 externalities associated with the production of coal?
6 A. Yes.
7 Q. Okay. Are those negative externalities reflected
8 in the figure you arrived at for the social cost of coal?
9 A. Well, the social cost of carbon is -- those are
10 climate effects.
11 Q. Uh-huh.
12 A. There are other presumed negative externalities
13 from coal -- dust, you know, road noise, water pollution,
14 so on and so forth. Those do not get included in the
15 social cost of coal.
16 Q. Okay.
17 A. In the climate cost of coal.
18 Q. Uh-huh.
19 A. So I believe that there are -- you know, there
20 clearly are those kind of negative externalities. They've
21 been the subject of a great deal of discussion. And, you
22 know, reclamation costs and so on and so forth. Well,
23 reclamation costs -- explicit reclamation costs would get
24 included in the cost to produce coal, but they are not
25 externalities because -- because they've been forced to be

1 A. Yeah.
2 Q. Natural gas?
3 A. Yeah.
4 Q. Okay. If fossil fuel-produced energy were to
5 immediately cease in Montana, can you estimate, in whatever
6 terms you think appropriate, the percentage economic loss
7 that would result from that?
8 A. No. And the reason for that is what you're
9 talking about is non-marginal change. This analysis
10 focuses on marginal increase, not a non-marginal decrease.
11 So this data does not allow me to -- this approach doesn't
12 allow that calculation to be made.
13 Q. Okay. Do you think that the current reliance of
14 Montanans for energy purposes on carbon should be factored
15 into the social benefit or cost of carbon?
16 A. I'm sorry. I don't quite understand the question.
17 Q. Is the degree to which fossil fuels support and --
18 is the degree to which Montanans rely on fossil fuels for
19 energy relevant in any way to either the social cost or
20 benefits of carbon, in your opinion?
21 A. Sure. I mean, again, it's captured in price.
22 We -- you rely on these lights, okay, and you pay -- well,
23 you don't, but somebody pays NorthWestern, and NorthWestern
24 turns around and pays for coal. And ultimately the value
25 of coal for the purpose of providing you with these lights

1 is captured in the price that NorthWestern pays.
 2 Q. Okay. Okay. In your opinion, what are the
 3 largest uncertainties in regards to calculating the social
 4 cost of carbon?
 5 A. The -- I -- probably the largest uncertainty --
 6 well, there are lots of uncertainties, and -- and I don't
 7 know how to classify the largest. The social cost of
 8 carbon is produced by these integrated assessment models,
 9 and there are uncertainties -- the models have inputs. For
 10 example, assumed rate of growth of population, assumed rate
 11 of growth of output, and so forth. And they also have
 12 parametric relationships, like the relationship between the
 13 rate of growth of the output and the rate of growth of
 14 emissions or -- just to take two examples. So -- and you
 15 need to -- you know, you need to make use of assumptions
 16 about the rate of growth of population, you need to make
 17 use of estimates of what the parametric relationship
 18 between the rate of growth of population and the rate of
 19 growth of emissions is. And there's uncertainty in all of
 20 those. There's uncertainty in estimating the rate of
 21 growth of output, and there's uncertainty in estimating
 22 those parametric relationships. There's a lot them.
 23 There's a lot of assumptions. There's a lot of parametric
 24 relationships.
 25 And so, I mean, the way that you could talk about,

1 negative externality, there are net gains to be had,
 2 benefits versus costs. There are net gains to be had by
 3 reducing output. But that same standard theory says that
 4 you can -- that you can reduce it so much that first you
 5 realize net gains, and then you realize losses.
 6 Q. Uh-huh.
 7 A. The policy we're talking about is not about -- is
 8 a policy to increase fossil fuel production, so that's what
 9 I'm focused on.
 10 Q. I understand.
 11 A. And the whole spirit of this -- of -- in the
 12 calculation of the social cost of carbon is to suggest --
 13 by the way, not all economists believe in this approach --
 14 but to suggest that there is an optimal level of emissions
 15 reductions, which would probably be non-zero.
 16 Q. Uh-huh. So I understand that perhaps your
 17 analysis is not primarily concerned with this question, but
 18 I still would like to know your opinion on what economic
 19 harms would come from significantly reducing the use of
 20 fossil fuels in Montana.
 21 A. Well, you could reach the point where the net
 22 value of the -- of the fossil fuels that you -- I mean,
 23 suppose you get to the point where, you know, your
 24 production is very, very low; okay? Costs are very, very
 25 low because you're -- let's say as you revert to a lower

1 well, what's the biggest uncertainty, I can't tell you for
 2 sure. But I suppose that the intelligent way of answering
 3 that question, if you wanted to answer it, would be to say
 4 given the plausible range of uncertainty in any one of
 5 these parameters or in any one of these assumptions, given
 6 the plausible range of uncertainty, which one of those
 7 plausible ranges of uncertainty has the biggest impact on
 8 the final calculated value of the social cost of carbon.
 9 But I have no opinion on that.
 10 Q. Okay.
 11 A. Just to note that because of those ranges of
 12 uncertainties -- there are obviously uncertainties in the
 13 social cost of carbon, and -- but there are statistical
 14 methods of dealing with that.
 15 Q. Okay. Are there any economic harms that would
 16 come from significantly reducing the use of fossil fuels in
 17 Montana?
 18 A. Again, in terms of the calculus that I am engaging
 19 in here, it is certainly theoretically possible to reduce
 20 emissions too much. That's -- that it is --
 21 Q. Again, can I just --
 22 A. Too much to be efficient.
 23 Q. Can I ask what you mean by "too much"?
 24 A. As you -- the sort of the standard theory of
 25 externalities here suggests that in the presence of a large

1 level of production, you stop using high-cost sources and
 2 start using low-cost sources. And so you get to the point
 3 where your costs are low enough and the value is high
 4 enough, the price is high enough, so that the difference is
 5 greater than the social cost of carbon. Because you're
 6 gaining a reduction in the social cost of carbon.
 7 Now, I don't think it would be possible in the
 8 case of coal. There's no -- I suppose it's possible to
 9 imagine a situation in which the price of coal could --
 10 could be \$252 higher than the cost of extracting it. It
 11 seems highly unlikely. But imagine that that were the
 12 case, that you could so reduce the production of coal that
 13 the price got -- the price exceeded cost by \$252. Then
 14 you'd be losing more than you were gaining in terms of
 15 reduced carbon.
 16 Q. Yeah.
 17 A. It would take a rather heroic decline in the case
 18 of coal. Not so much in the case of oil or gas.
 19 Q. Yeah. But I'm not asking what would be necessary
 20 for the social benefits of a particular natural resource to
 21 exceed the social cost. I'm just asking you what costs
 22 would result from a significant reduction in the use of
 23 fossil fuels in the state of Montana?
 24 A. I think I've answered that.
 25 Q. Okay. That's your answer to that --

1 A. That's my answer, yes.
 2 Q. Would the costs be evenly distributed across
 3 Montana, or would -- I guess, do you have any opinions
 4 about the extent to which those costs would be evenly
 5 distributed? In other words, would --
 6 A. Evenly distributed.
 7 Q. -- would certain economic -- let's say, would
 8 certain socioeconomic groups bear the costs more than
 9 others if we were to significantly reduce the use of fossil
 10 fuels in Montana over a short period of time?
 11 A. Well, the benefits would be received by --
 12 presumably by a broad spectrum of the population in the
 13 form of reduced climate damages. That would be the
 14 benefits. The costs would be borne by the producers of
 15 fossil fuel in the form of reduced opportunities to make
 16 money. And you could reach a point at which the reduced
 17 opportunities to make money exceeded the benefits in the
 18 form of reduced damages. So...
 19 Q. So the only parties that would bear the cost would
 20 be fossil fuel producers? There wouldn't be any downstream
 21 costs borne by private parties outside of fossil
 22 fuel-producing entities?
 23 A. The producers would primarily bear the cost.
 24 Q. Would anyone else bear the cost?
 25 A. If the effect of the policy was to raise energy

1 A. The other factors are the work of the interagency
 2 working group. And basically what they -- what they're
 3 working on is the notion of the declining marginal utility
 4 of income and pure time preference.
 5 Q. Okay. So it's kind of classic discount rate
 6 concepts?
 7 A. Yes.
 8 Q. Okay. Do you think that the degree to which
 9 future generations are allowed to use fossil fuels are a
 10 question of ethics to any degree, or is it purely a
 11 question of economics?
 12 A. Future generations are allowed -- I'm sorry --
 13 Q. Of Montanan, say. Allowed to -- continue to use
 14 fossil fuels.
 15 Is that a question of ethics or economics, or is
 16 it both?
 17 A. Both.
 18 Q. Okay. Do you think it is ethically justifiable to
 19 require living generations to incur the costs associated
 20 with reducing fossil fuel use so that future generations
 21 can ostensibly benefit from, you know, the reductions in
 22 climate harms that you posit?
 23 A. Well, I don't think it -- you make it sound
 24 like would I approve some externally -- some external
 25 mandate coming from, I don't know, the sky.

1 prices, the consumers would bear some of the cost.
 2 Q. Okay. Just a few more questions. I'd like to ask
 3 you about your selection of a discount rate in your
 4 analysis.
 5 A. Okay.
 6 Q. Would you agree that your selection of a discount
 7 rate in calculating the social cost of carbon in this
 8 report is a question of ethics?
 9 A. Ethics figure into it.
 10 Q. Okay. Does anything figure into it other than
 11 ethical considerations?
 12 A. Well, yes, because it -- because I take as a point
 13 of departure the work of the interagency working group,
 14 which -- in which they use a discount rate of 2.5 percent
 15 but suggest that a lower one is appropriate. And then you
 16 have opinions -- for example, from Joseph Stiglitz -- that
 17 it should be zero or negative or...
 18 And so -- and I think, you know, Stiglitz to a
 19 great extent represents it as an ethical -- or suggests
 20 that there's an ethical component to it. But -- but that's
 21 not what's the driving consideration with the interagency
 22 working group.
 23 So ethical considerations enter into it, but
 24 they're not the only factor.
 25 Q. Okay. What are the other factors?

1 Q. What about the state government?
 2 A. Well, then I wouldn't describe it -- yes, it's
 3 ethical for a community, through its government, to
 4 constrain itself in that way.
 5 Q. Okay.
 6 A. It's not unethical --
 7 Q. Okay.
 8 A. -- surely.
 9 Q. Sure. Sure. Sure. All right. I think that's
 10 all I have.
 11 MS. HORNBEIN: Okay. I had a quick thing I wanted
 12 to check with you on, Dick, if we can have, like, five
 13 minutes or less?
 14 MR. LONGFIELD: Sure.
 15 MS. HORNBEIN: And then I may have just a few
 16 follow-up questions.
 17 MR. LONGFIELD: Okay.
 18 (Break taken from 12:12 p.m. until 12:19 p.m.).
 19
 20 EXAMINATION
 21 BY MS. HORNBEIN:
 22 Q. Dick, I just want to clarify something about how
 23 you phrased the question your report was designed to
 24 address and the conclusion that you ultimately came to, and
 25 I want to harken back to your experience as a state


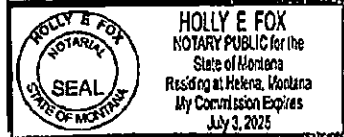
1 legislator.
 2 In your experience, when the legislature enacts a
 3 statute, do they expect that the executive branch, in the
 4 form of the state agencies, will carry that statute out to
 5 the best of their ability?
 6 **MR. LONGFIELD:** I'll object on the grounds that
 7 it's outside the scope of his expertise.
 8 **MS. HORNBEIN:** Okay. I am going to continue with
 9 this line of questioning, and if you want to just sustain
 10 the objection, Tim, that may save time. It's up to you how
 11 you want to do it.
 12 **MR. LONGFIELD:** Yeah. I will.
 13 **MS. HORNBEIN:** Okay.
 14 **THE DEPONENT:** Excuse me. Am I to answer that
 15 question or not?
 16 Q. (By Ms. Hornbein) Yes, you can answer that
 17 question.
 18 **MR. LONGFIELD:** Did you catch his answer?
 19 **THE COURT REPORTER:** I didn't.
 20 **THE DEPONENT:** I haven't answered it.
 21 You objected, and now I can answer --
 22 Q. (By Ms. Hornbein) Now you can answer, yes.
 23 **A. Okay. Sure. In my experience as a legislator, I**
 24 **believe that when we passed laws, we expect state agencies**
 25 **to carry them out.**

1 required to comply with the provisions of 90-4-1001 or the
 2 state's energy policy?
 3 **MR. LONGFIELD:** I'll object on the grounds that it
 4 calls for speculation and sustain my objection that it's
 5 outside the grounds of his expert report -- or outside the
 6 scope. Excuse me.
 7 Q. (By Ms. Hornbein) Do you want me to rephrase the
 8 question?
 9 **A. Only if there was a law that specifically**
 10 **contradicted the provisions of the policy.**
 11 Q. Okay. Otherwise, is it fair to say that they
 12 would be expected to carry those out?
 13 **A. Sure.**
 14 Q. Okay. On Page 1 of your report, in the first
 15 paragraph, you describe the question your report is
 16 designed to answer as, and I'm quoting here from the first
 17 paragraph:
 18 This report answers the following question: Do
 19 the statutes being challenged promote or lead to a use of
 20 resources; i.e., fossil fuel-based energy sources, and a
 21 collection of economic activities that are beneficial, or,
 22 to the contrary, harmful to the state's economy at large.
 23 Is that an accurate phrasing of the question you
 24 addressed in your report?
 25 **A. Yes.**

1 Q. Is it common in your experience that statutes
 2 enacted by the legislature contain statements of policy?
 3 **A. Yes.**
 4 Q. Do you understand or do you believe that those
 5 statements of policy -- is there an intent that those will
 6 be carried out in terms of how the agencies implement the
 7 laws?
 8 **A. Yes.**
 9 Q. Does Montana Code Annotated 90-4-1001, which is
 10 excerpted on the first page of your report -- does that
 11 articulate, in your understanding, the state's energy
 12 policy?
 13 **A. I believe it's a directive to the agencies to --**
 14 **in terms of their ability to perform policies, yeah. To**
 15 **form policies or take measures, yeah.**
 16 Q. Are you aware of any other statutes that
 17 articulate the state's energy policy?
 18 **A. No.**
 19 **MR. LONGFIELD:** I -- and sorry, Melissa, are you
 20 talking about any others than the statute you just --
 21 **MS. HORNBEIN:** -- than 90-4-1001.
 22 **MR. LONGFIELD:** Thank you.
 23 **MS. HORNBEIN:** Was that clarification -- okay.
 24 Q. (By Ms. Hornbein) Can you think of any reason why
 25 a state agency or state agencies generally would not be

1 Q. Quoting again from your report, the rest of that
 2 sentence:
 3 The state's promotion of fossil fuels provides
 4 more harm than benefits to Montana's economy.
 5 Is that an accurate characterization of the
 6 conclusion that you reached in your report?
 7 **A. Yes.**
 8 **MR. LONGFIELD:** I'll object on the grounds that
 9 the report speaks for itself.
 10 **MS. HORNBEIN:** Okay. That is all I have.
 11 **MR. LONGFIELD:** Thank you. I have nothing
 12 further.
 13 (Deposition concluded at 12:23 p.m.)
 14 (Signature reserved.)
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1 CERTIFICATE OF WITNESS
 2 PAGE LINE CORRECTION
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 17
 18 I, DR. RICHARD BARRETT, have read the foregoing
 19 transcript of my testimony and believe the same to be true,
 20 except for the corrections noted above.
 21 DATED this day of , 2022.
 22
 23 WITNESS
 24
 25

1 C E R T I F I C A T E
 2
 3 STATE OF MONTANA)
 4 COUNTY OF LEWIS AND CLARK ss.)
 5
 6 I, HOLLY FOX, Freelance Court Reporter and a
 7 Notary Public for the State of Montana, do hereby
 8 certify:
 9 That I did report the foregoing sworn deposition
 10 after having duly sworn the deponent.
 11 IN WITNESS WHEREOF, I have set my hand and seal
 12 on this 9th day of November, 2022.
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EXHIBIT 8

In The Matter Of:
Rikki Held, et al. v.
State of Montana, et al.

Mark Jacobson, Ph.D.
December 13, 2022

Behmke Reporting and Video Services, Inc.
455 Market Street, Suite 970
San Francisco, California 94105
(415) 597-5600

1 MONTANA FIRST JUDICIAL DISTRICT COURT
 2 LEWIS & CLARK COUNTY
 3 -----
 4 RIKKI HELD, et al.,)
 5 Plaintiffs,)
 6 v.) CASE NO.
 7) CDV 2020-307
 8 STATE OF MONTANA, et al.,)
 9 Defendants.)
 10 -----
 11
 12 DEPOSITION OF MARK JACOBSON, PH.D.
 13 TUESDAY, DECEMBER 13, 2022
 14
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 17
 18
 19
 20
 21 BEHMKE REPORTING AND VIDEO SERVICES, INC.
 22 BY: SUZANNE I. ANDRADE, CSR NO. 10682
 23 455 MARKET STREET, SUITE 970
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 25 (415) 597-5600

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 10 Deposition of MARK JACOBSON, Ph.D.,
 11 taken on behalf of DEFENDANTS, at 1900 South Norfolk
 12 Street, Suite 350, San Mateo, California, commencing at
 13 9:26 A.M., TUESDAY, DECEMBER 13, 2022, before Suzanne I.
 14 Andrade, Certified Shorthand Reporter No. 10682,
 15 pursuant to Notice and Subpoena.
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25

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 25

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2 TUESDAY, DECEMBER 13, 2022

3 MARK JACOBSON, Ph.D.

4 PROCEEDINGS

5 Examination by MR. STERMITZ 7

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10 QUESTIONS WITNESS REFUSED TO ANSWER:

11 Page Line

12 None.

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1 TUESDAY, DECEMBER 13, 2022; 9:26 A.M.

2 (Deposition Exhibits 113 through 116 were

3 marked for identification.)

4 MARK JACOBSON, Ph.D.,

5 after having been duly administered the oath to tell the

6 truth, the whole truth, and nothing but the truth,

7 testified as follows:

8 THE WITNESS: Yes, I do.

9 EXAMINATION

10 BY MR. STERMITZ:

11 Q. Good morning, sir. Can you tell us your name,

12 please.

13 A. Yeah. Mark Jacobson.

14 Q. And you have in front of you some papers that

15 we've just been off the record talking about?

16 A. Yes.

17 MR. STERMITZ: And with counsel there, Phil, I'm

18 going to say for the record that we previously marked

19 these documents, the deposition notice as Exhibit 113,

20 the subpoena duces tecum as Exhibit 114, your September

21 22 report as 115, and rebuttal report as Exhibit 116.

22 Does that sound right, Phil?

23 MR. GREGORY: Yes.

24 MR. STERMITZ: Thank you.

25 BY MR. STERMITZ:

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1 EXHIBITS

2 MARK JACOBSON, Ph.D.

3 Number Description Page

4 Exhibit 113 Defendants' Notice of Taking the

5 Deposition of Dr. Mark Jacobson

6 - 3 pages 7

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8 Exhibit 114 Deposition Subpoena Duces Tecum

9 - 5 pages 7

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11 Exhibit 115 Expert Report of Mark Z. Jacobson,

12 Ph.D.

13 - 45 pages 7

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15 Exhibit 116 Rebuttal Expert Report of Mark Z.

16 Jacobson, Ph.D.

17 - 14 pages 7

18

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1 Q. And we'll make those exhibits for this

2 deposition.

3 Thank you for your patience this morning,

4 Dr. Jacobson. This Zoom stuff is -- for an old guy like

5 me is just tough, but we're doing the best we can.

6 You've had your deposition taken before, I can

7 see from your background information, so I'm going to

8 skip the usual preliminaries, if you don't mind, and if

9 you can hear me okay, we'll just go ahead and go

10 forward.

11 A. Yes, fine.

12 Q. Thank you.

13 I'm going to go right to the September report,

14 which is Attachment 6. This is the -- as I understand,

15 it's a specific plan per Montana or analysis for

16 Montana's situation.

17 Take a look at that, please.

18 A. It only goes up to Attachment 3.

19 Q. Oh, okay. Somehow we goofed that up. Let me

20 just ask you this.

21 You've done a write-up for -- is it for all

22 50 states similar to what you did for Montana here?

23 A. Yes.

24 Q. And just focusing on the Montana, I don't know,

25 I'm calling it a plan, how would you describe it just in

1 shorthand?
 2 A. Road map or (inaudible) --
 3 Q. Road map?
 4 (Reporter clarification.)
 5 THE WITNESS: Road map or end result.
 6 BY MR. STERMITZ:
 7 Q. Thank you.
 8 Outside of this case, where has that been
 9 distributed?
 10 A. The Montana plan --
 11 Q. Yes.
 12 A. -- or all 50 states?
 13 Q. Just the Montana -- I'm just focusing on
 14 Montana.
 15 A. Well, the Montana plan -- I mean, it's public
 16 because I published a paper with my co-authors in 2021,
 17 I think it came out early '22, and it was published in a
 18 journal, and so it's publicly available. And the
 19 Montana plan, along with all 50 states, is on the
 20 Internet. I mean, the summary of the plan.
 21 Is that...
 22 Q. Okay. I guess, to be more specific, have you
 23 presented it anywhere in Montana, for example?
 24 A. I have not presented it in Montana, no, I've
 25 not visited Montana in the last few years.

1 the ground at the time. Very cold at the time.
 2 Q. Okay. Just for a family thing or something
 3 like that?
 4 A. Yes. Yeah, it was more of a personal visit.
 5 Q. I see.
 6 Let me then go to -- I am just going to ask you
 7 a question. You shouldn't really need to refer to that
 8 section, the section -- Attachment 6, I'm hoping,
 9 because I don't really have much.
 10 But for that -- for these roadmaps and then in
 11 your report, you describe, as a shorthand, a description
 12 of the sort of non-greenhouse gas world as WWS, wind,
 13 water, solar; is that right?
 14 A. Correct.
 15 Q. And for Montana -- well, for everywhere, but I
 16 think Montana will be included -- tell me if I'm wrong,
 17 when we looked at wind, part of what you or your team
 18 has envisioned is greater connection between wind
 19 turbines across a wider geographic area; is that a fair
 20 statement?
 21 A. Well, the idea, if I can clarify, is, yeah, the
 22 greater the geographic distribution of wind farms -- and
 23 the same applies to solar or even mixing solar and
 24 wind -- the greater the geographic distribution, the
 25 smoother the overall output, because when it's not windy

1 Q. Okay.
 2 A. Or...
 3 Q. Other than being publicly available, are these
 4 state roadmaps -- have you made a presentation to, say,
 5 a specific state, their government or an agency of their
 6 government anywhere?
 7 A. Yes. Well, there are past versions of this
 8 plan. We published -- in 2015 we published the original
 9 version of the 50 state plans. And I spoke to several
 10 of -- there are several laws and policies throughout the
 11 United States that are based in part on these plans.
 12 So I spoke to the governor's office in
 13 California, spoke to the governor's office in New York,
 14 and different offices and individuals in many different
 15 states, in fact.
 16 Q. Now that you mention it, I recall seeing that
 17 some states have made decisions based on this or
 18 partially based on this.
 19 You mentioned you hadn't been to Montana in
 20 some time.
 21 What is your experience in terms of visiting
 22 Montana or spending any time here?
 23 A. Well, it was back in the 19- -- let's see.
 24 1980s, yeah. I went to Havre, Montana, during
 25 Christmastime, and it was beautiful. Lots of snow on

1 in one place, it's often windy somewhere else. Same
 2 thing with sunlight.
 3 And, yeah, so we've found from separate studies
 4 that when you can -- we looked, for example, at the
 5 Midwest or Kansas, Oklahoma region, that the more wind
 6 farms you interconnect, the smoother the overall output
 7 is, and so you can in fact eliminate -- at some point
 8 you can eliminate zero hour power during the year.
 9 So you can eliminate hours during the year,
 10 when there's zero power from wind, when you aggregate
 11 over a large geographic region.
 12 Q. Putting it in lay terms, this would be to deal
 13 with the fact -- deal with the variation in amount of
 14 wind from one place to another; is that right?
 15 A. Basically, yeah. The wind is variable. At one
 16 location the wind varies regularly, so it's called
 17 intermittent.
 18 But when you have two wind farms that are far
 19 enough apart, then -- and you sum the overall energy
 20 from the two, the overall variability decreases. And if
 21 you have three wind farms, the variability decreases
 22 even more.
 23 So you get up to about 18, 19 wind farms, you
 24 pretty much eliminate any hours during the year when you
 25 have no wind power, if it's over like a 400-kilometer

1 square region, for example.
 2 **Q. That in turn would reduce the need or**
 3 **eliminate, I guess is the idea, for reliance on fossil**
 4 **fuel-generated electricity so make up those low times,**
 5 **correct?**
 6 A. It reduces -- well, in the case of Montana,
 7 Montana has so much hydroelectric power that
 8 hydroelectric power basically can replace fossil fuels
 9 as a back up. And, in fact, it does because 92 percent
 10 of Montana's consumption during the last year was
 11 powered by wind, water, solar of electricity.
 12 **Q. I know you've done a lot of modeling for the**
 13 **work you've done here.**
 14 **Does any of that modeling involve how the**
 15 **viewshed would change -- would need to change in Montana**
 16 **to have the sort of wind distribution and**
 17 **interconnection that you're talking about?**
 18 A. To the extent that I looked at land area
 19 requirements, yes. In the report, I think in the --
 20 which I don't have in front of me, but I'm just going by
 21 memory -- it's -- I think it's the second-to-last table,
 22 maybe -- it has the percent of Montana's area that would
 23 be occupied by new wind or solar, and I think it's
 24 pretty tiny.
 25 **Q. I need to clarify my question, I think.**

1 look -- we can't just look at what -- for example, what
 2 happens when we add a wind turbine. We have to look at
 3 what we're replacing.
 4 In North America there are 50,000 new oil and
 5 gas wells drilled every year, and there are 1.3 million
 6 active ones and 3.2 million abandoned ones. So we have
 7 to keep adding 50,000 new oil and gas wells pockmarking
 8 the country. And we have millions of miles of
 9 pipelines, oil and gas.
 10 When you add it all together, the structures,
 11 the power plants, the storage facilities, the gas
 12 stations, the refineries, the coal mines, oil wells, gas
 13 wells, you add it up, it's 1.3 percent of the land area,
 14 and we decrease that.
 15 But not only does the oil and gas affect the
 16 land, but there's leakage of chemicals into the
 17 groundwater when you're doing natural gas,
 18 hydrofracking, two-thirds of gas is hydrofrack. You're
 19 spraying chemical -- water spray laced with chemicals
 20 under high pressure to crack rock, so the chemicals get
 21 into groundwater.
 22 So you eliminate all that with wind, water,
 23 solar. The only objection that I'm familiar with with
 24 wind, for example, is effuse sometimes and bird kills.
 25 But even bird kills it's one tenth the number of bird

1 **What I'm asking more is, it's possible to -- is**
 2 **it not, to model what a geographic area would actually**
 3 **look like visually if the changes were made to it in the**
 4 **form of additional wind farms or transmission, right?**
 5 A. I mean, one could, I suppose, but it's not
 6 something that I do -- I don't -- I don't actually do
 7 that in looking at the visual, but...
 8 **Q. All right. So -- and was there any -- did you**
 9 **do any analysis of what, if any, environmental impacts**
 10 **there would be from adding the amount of wind farms that**
 11 **you would need to have this -- you know, the area**
 12 **covered sufficient to eliminate the downtimes?**
 13 A. Well, I've done analyses for the U.S. as a
 14 whole and California -- in the case -- again, if we look
 15 at the area as occupied, I'll clarify like just to give
 16 you an example of what I'm talking about.
 17 In the United States as a whole, 1.3 percent of
 18 the land is occupied by the fossil fuel industry. If we
 19 go to 100 percent wind, water, solar for all purposes,
 20 that's electricity, transportation, buildings and
 21 industry, we reduce our overall land requirements down
 22 to on the order of less than 1 percent of the U.S. land
 23 area.
 24 So whatever that impact is in terms of visual
 25 or other impact, it's much less because we have to

1 kills per kilowatt hour of electricity generated than
 2 natural gas, for example, or coal because the air
 3 pollution from the coal and gas kill birds, the land --
 4 taking up the land destroy habitats, and the buildings
 5 and facilities like even -- well, will cause damage to
 6 the birds.
 7 So I think when you compare adding wind --
 8 nobody wants to add anything to the environment. We're
 9 all agreed on that. But if you're comparing different
 10 types of energy to add to the environment, wind and
 11 solar are by far less damaging than the alternatives
 12 that we have right now, which are fossil fuels and even
 13 biofuels.
 14 **Q. Let's take another example I happen to have a**
 15 **little bit of familiarity with, focusing not so much on**
 16 **Montana.**
 17 **But is kinetic energy or ocean wave energy one**
 18 **of the components of what would be part of WWS in your**
 19 **plans?**
 20 A. Yes, but not in Montana.
 21 **Q. No, I understand.**
 22 A. Yeah, yeah, they are -- yes, so wind -- I'm
 23 sorry -- yeah, wave -- wave energy and tidal energy and
 24 ocean currents. But, yeah, we just call it wave and
 25 tidal.

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1 Q. For other states or other areas, did you do an
2 analysis of what we would need to add for those sorts of
3 energy generation -- generators --
4 A. Yeah.
5 Q. -- to reach the zero GHG?
6 A. Yeah, for states that are coastal where they
7 have some offshore wave or tidal resources, we did
8 include it but in very small amounts, because wave
9 technology is not so advanced right now and it's more
10 expensive. It takes -- because of the harsh ocean
11 conditions right near the surface of the ocean, you need
12 a lot more repairs and downtime.
13 So it's not so advanced that we -- it's really
14 a tiny amount of wave and tidal power that we're
15 including at this time.
16 Q. Okay. With regard to hydro, I just have to
17 ask, because I've been involved for a lot of years in
18 litigation over hydro.
19 I mean, when we make choice of energy sources,
20 it strikes me that -- and tell me if you've run into
21 this or talked about it in your plans -- that you create
22 at times a conflict between different -- well, among
23 groups that would normally support this kind of plan.
24 And I'll be specific.
25 Hydro, of course, has impacts to fisheries, in

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1 particular, and there are a lot of litigation over --
2 over that. And that litigation is brought by entities
3 and individuals who would normally support, you know,
4 going to a zero greenhouse gas world.
5 Is that part of the calculus at all, the
6 practical implications of these choices and who would
7 support it if it was --
8 A. Yes. In fact -- well, in our plans we do not
9 actually increase hydro in any state of the U.S. We
10 just maintain the existing hydropower. And that's for
11 that reason. It is a political football, and there are
12 people who don't support growth of hydro.
13 I should point out, though, that in the United
14 States, there are 80,000 dams, but only 3 percent of
15 them have hydroelectric power on them, so -- and the
16 concerns about hydro is often misplaced because people
17 want to get rid of dams, which a lot of people do, and
18 the focus should be on the non-electricity generating
19 dams. There are a lot of them. There are basically
20 77,000 or more of those dams that have no hydro.
21 Yeah, but just the point is that we don't
22 actually increase hydro in any of our plans. So, for
23 Montana, the hydro that we propose for 2050 is the same
24 amount of hydro in the annual average that is being
25 generated today.

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1 The only difference might be that we would
2 optimize the times of the year or the times of the month
3 or year when that hydro is delivered, but on the annual
4 average it's the exact same amount that we produce
5 today.
6 Q. And the dams that do not have generating
7 facilities, they would be -- been created originally, I
8 presume, for flood control or irrigation; is that right?
9 A. Yeah. Well, they're either water supply,
10 irrigation, recreation. It's usually a combination of
11 water supply and recreation and maybe irrigation. Well,
12 I guess that's water supply.
13 Q. And when you talk about the timing of needing
14 hydro, you're aware, I'm sure, are you not, that the
15 timing of spill and generation is a sensitive subject,
16 especially for the big dams, because of the impacts on
17 the fisheries, correct?
18 A. In some locations, yes, yes.
19 Q. Jumping around here a little bit, Dr. Jacobson.
20 On your -- I have reviewed your CV, and I don't
21 really have any specific questions about it, but I did
22 want to ask you about your background overall.
23 Where are you from originally?
24 A. I'm from California, Los Altos, which is south
25 of San Francisco, north of San Jose.

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1 Q. Okay. And have you lived in California most or
2 all of your adult life now?
3 A. A hundred percent of my life I've lived in
4 California.
5 Q. Do you have any connections to Montana
6 personally, relatives or friends or anything like that
7 here?
8 A. Not -- I wouldn't say anybody close at this
9 time.
10 Q. Okay. Have you worked professionally with
11 anyone in the state of Montana?
12 A. I can say I don't know offhand. I mean,
13 I've -- there's a decent chance I have, but I just don't
14 remember offhand. But at some point I probably have.
15 Q. When we look at your road map for Montana or
16 for any state, I guess, the premise is that, as you say,
17 technologically and economically feasible to get
18 completely away from fossil fuels by 2050 at the latest,
19 correct?
20 A. Yes. Although, I mean, there are really three
21 purposes. One is to -- well, get away from fossil
22 fuels, but really it's not only fossil fuels. We want
23 to get rid of all combustion, so that includes biofuels,
24 because we're trying to solve air pollution, global
25 warming, and energy security problems simultaneously.

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1 So we're trying to solve three problems together.
 2 **Q. And that would -- would that include, then,**
 3 **vehicles as well?**
 4 A. Yes, transportation, buildings and industry,
 5 along with electricity.
 6 **Q. So we would go to all electric vehicles, for**
 7 **example?**
 8 A. Yeah, battery, electric, or hydrogen fuel cell,
 9 electric vehicles. Hydrogen fuel cell for long
 10 distance. Battery, electric for everything else.
 11 **Q. In your report, you say, quote -- and we can**
 12 **refer to it if you need to, but I'll just read it to**
 13 **you: "The main concept behind the plan is to electrify**
 14 **all energy sectors with existing or near-existing**
 15 **appliances and machines and then to generate the**
 16 **electricity for all sectors with WWS." I'm shortening**
 17 **it up.**
 18 What I'm going to focus on here for a second is
 19 "existing or near-existing appliances and machines."
 20 Can you break that down, what's meant by that a
 21 little bit more?
 22 A. Sure. And most -- we have, I would say, 95
 23 percent of the technologies we need. The main ones are
 24 like long-distance jumbo jets, for example, which could
 25 only be really hydrogen fuel cell and make long-distance

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1 ships.
 2 For buildings we have a hundred percent of
 3 everything. I mean, I electrified my home a hundred
 4 percent five and a half years ago, and it's amazing. So
 5 going -- so we replace and -- take a building. What do
 6 you use fossil fuels in a building for?
 7 Well, there's -- for heating, air heating,
 8 water heating, stoves, maybe a dryer, natural gas dryer.
 9 So we'd replace a water heater with an electric heat
 10 pump water heater that uses one fourth the energy as a
 11 natural gas heater.
 12 For air heating and air conditioning, we'd use
 13 electric heat pumps which use one fourth the energy as
 14 natural gas heaters.
 15 And for stoves, electric induction cooktops,
 16 these are all existing technologies.
 17 And then, of course, on top of that, we have
 18 energy efficiency to make more -- you know, caulking
 19 windows and doors, use energy-efficient light bulbs,
 20 more insulation. Those are low-hanging fruit, very
 21 straightforward. You know, triple-pane windows to
 22 prevent loss of heat and cold.
 23 So we can go through -- you know, we even have
 24 heat pump dryers for clothes right now that you use one
 25 fourth the energy as even electric resistance dryers.

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1 So everything in your home could be
 2 electrified, and it costs so much less. I haven't paid
 3 an electricity bill, a natural gas bill, or a gasoline
 4 bill in five and a half years after -- and I've paid --
 5 and I have a home that generates its own electricity,
 6 generates 120 percent of the electricity, the annual
 7 average, over five and a half years.
 8 And I sell the rest of the electricity back to
 9 the grid. I have batteries to store the electricity. I
 10 have electric cars to replace a gasoline car. So I
 11 haven't paid an electric bill, a natural gas bill, or
 12 gasoline bill in five and a half years, and I get paid
 13 for the extra electricity that I generate.
 14 And this whole thing has paid itself off with
 15 subsidies -- there were subsidies available -- paid
 16 itself off in five years. If there are no subsidiaries,
 17 it would take ten years. But solar is warranted for
 18 25 years.
 19 So it's -- economically it's beneficial, I
 20 think, for everybody. Everybody should do this.
 21 It's -- I've never been in a more comfortable home in my
 22 life, just perfect temperature all year.
 23 And, I mean, it doesn't get as cold as Montana,
 24 but we have -- you know, for heating and cooling --
 25 well, heating, in particular, I use what's called an air

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1 source heat pump. But for a place that has snow on the
 2 ground, you'd want to use what's called a ground source
 3 heat pump. And those cost similar -- now they're just
 4 very similar in cost to air source heat pumps.
 5 So, anyway, that's how you'd transition a
 6 building, is just by electrifying, using heat pumps,
 7 electric induction cooktops, energy efficient light
 8 bulbs, like LEDs.
 9 And for transportation, for most people, it's
 10 just battery electric vehicles. For industry, we would
 11 use electric arc furnaces, electric induction furnaces,
 12 electric resistance furnaces.
 13 These are all existing technologies. In fact,
 14 one third of all industry in the U.S. is already
 15 electrified, so just pretty much replacing the rest.
 16 And then for electricity itself, we would just use wind,
 17 water, and solar and try to eliminate the use of
 18 combustion fuels.
 19 **Q. You mentioned air transportation.**
 20 **What would it take to change over all existing**
 21 **air transportation to electric or non-greenhouse gas**
 22 **emission system?**
 23 A. Well, right now there are actually prototype
 24 airplanes that are short-distance that are electric and
 25 some hydrogen fuel cell, and, in fact, there are orders

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1 in by several companies that I've seen where the actual
2 commercial electric aircraft are being -- are going to
3 be delivered within the next year or two.

4 So we're already on -- well, I should just put,
5 you know, worldwide there are 33 million commercial
6 flights each year. Of these, 84 percent by number are
7 what we call short-haul flights, which are flights that
8 are -- well, they're basically going to be less than
9 1,500 kilometers. And so 84 percent. So all of those
10 could be literally electric airplanes.

11 Now -- and there is progress. There are
12 already companies building electric airplanes, not --
13 you know, we're not at that scale yet, but we're talking
14 a few. So that's really -- it's -- from a technological
15 point of view, that's not an issue.

16 For the long-distance flights, longer than
17 1,500 kilometers, we'll need hydrogen fuel cell. And
18 Airbus is already planning to build hydrogen fuel cell
19 aircraft for long-distance flights.

20 That will take longer. That might take, you
21 know, until 2035 to get -- you know, that's the last
22 5 percent. It might take 2035 to really get there
23 commercialized and going.

24 But the short-haul flights I would expect
25 within the next one -- well, within the next year we'll

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1 see some commercial flights. Within the next five
2 years, we'll see a lot of commercial flights with
3 electric airplanes.

4 **Q. Overall, accepting that you're -- for present**
5 **purposes that everything you created here could in**
6 **theory be done. I know in various places you address**
7 **social costs, quote/unquote.**

8 **What would it take attitudinally or**
9 **politically, what would it take to actually accomplish,**
10 **in your view, from the social side?**

11 A. Well, collective willpower, I mean -- yeah,
12 this is something that if we wanted -- want to happen,
13 it requires support by sufficient people, sufficient
14 numbers of people.

15 So it could be -- you know, I think the public
16 opinion polls on paper that I've seen, over 80 percent
17 of people support a transition to entirely renewable
18 energy. Now, that doesn't necessarily translate into
19 political willpower in actually doing it. But I think
20 the public is actually very supportive of it regardless
21 of the party.

22 I mean, it's very interesting to note that
23 where -- I mean, if you're looking at it from a
24 political point of view, sure, what we call "blue
25 states" are more supportive of these types of laws, but

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1 red states actually have more installations of wind
2 power by far.

3 If you look at the nine of the ten biggest
4 states -- well, sorry, nine of the ten states with the
5 most installed wind powers as a percent of their
6 electricity are what we call "red states," so it's
7 because it's so efficient and cost-effective to do it.

8 I mean, there's a cost benefit right now of
9 going to wind and solar. It's just the cheapest form of
10 electricity. It's half the cost of natural gas.

11 So we see -- in fact, we see like some states
12 like Iowa has virtually no policies to push for
13 renewable energy, yet it actually has -- it has -- aside
14 from South Dakota, it has the highest fraction of their
15 electricity from wind, might even be the generation. So
16 it's like on the order of 65 percent wind. I think
17 South Dakota actually might be higher. I don't remember
18 the exact number. But it was -- in terms of
19 consumption, South Dakota -- 77 percent of South
20 Dakota's consumption of electricity is from wind.

21 The equivalent of 77 percent of its consumption
22 is generated by wind. In fact, 120 percent of South
23 Dakota's consumption is generated by the sum of wind and
24 hydropower, and it exports different and also produces
25 fossil fuels that get exported as well.

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1 But my point was in Iowa -- well, also South
2 Dakota, there's really no policies pushing for wind, but
3 there's a huge growth because it's so cheap. It helps
4 farmers. It helps, you know, landowners. It helps
5 communities. It's a form -- farmers love it because
6 it's an additional source of income.

7 Wind hardly takes up any area on the ground.
8 It's just a pole in the ground, basically. So you can
9 have a farm and put a few wind turbines, get royalties
10 for those. It doesn't take hardly any of your land.
11 You can still have a crop underneath. That's why
12 farmers love it, and it's...

13 But wind is so cheap because in the Great
14 Plains you have an amazing resource. Montana is an
15 amazing wind resource. It's right in the -- the Great
16 Plains of the U.S. is called the Saudi Arabia of wind
17 because it just has so much wind.

18 Yeah, so it's a financial benefit to
19 communities and states where this wind is present. Same
20 with solar. There's a lot of sunlight in Montana as
21 well.

22 So I think there's -- so we can make progress
23 both because of people actually pushing for policies,
24 like renewable portfolio standards, to move towards
25 renewables, but also we make progress because it's so

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1 cheap and beneficial to communities.
 2 I think just by educating the public about the
 3 benefits of transitioning, then a lot of people want to
 4 do it. I mean, a lot of people would rather be able to
 5 produce their own energy. I mean, why not have -- if
 6 you can build it, why rely on a utility when you can
 7 have solar on your roof, for example, to produce a good
 8 portion of your own energy.
 9 So, I know I've been droning on, but I think
 10 it's a combination --
 11 Q. No, I'm getting exactly what I wanted to ask
 12 you about.
 13 If -- let's just take Montana, for example. If
 14 we just -- people were left to their own devices and,
 15 you know, things were to continue the way they are now,
 16 I assume you would recognize that Montana wouldn't get
 17 to a zero fossil fuel situation by 2050.
 18 Something would have to change in the way the
 19 government approaches this or the way society approaches
 20 it, right?
 21 A. Well, the issue is it's really a speed problem.
 22 I think ultimately -- I mean, everywhere eventually,
 23 just because of the economics and the health and social
 24 benefits and the fact that fossil fuels will run out at
 25 some point, there will be a transition. The problem,

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1 it's the speed and the damage that's done in the
 2 meantime.
 3 So we need -- from the client point of view, we
 4 need an 80 percent transition by 2030, but it's not just
 5 electricity. I mean, Montana is already 92 percent
 6 wind, water, solar in the electric power sector, so it's
 7 actually past the 80 percent mark, but it's not -- but
 8 that's not the only sector.
 9 There's -- it's transportation. It's buildings
 10 and industry. Those are the sectors that there's hardly
 11 any movement on anywhere, not only Montana, but
 12 anywhere. So that's really where we need to speed up
 13 primarily.
 14 So from a climate point of view, we need it by
 15 2030. From a health point of view, it's immediate. I
 16 mean, worldwide there's 7 million people die from air
 17 pollution each year from -- 90 percent from fossil fuels
 18 and biofuels.
 19 And, you know, the number of deaths in Montana
 20 is much smaller. I think I have it in the last -- well,
 21 it's in that summary. But it's still -- there's a
 22 cost -- there's a big cost associated with it, but those
 23 deaths are avoidable. And then there's hundreds of
 24 thousands of people who become ill from air pollution.
 25 And when -- every -- every -- every fire that

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1 we put out, everything that we stop burning, that helps
 2 to reduce health problems and costs immediately, so
 3 there's an immediate benefit to that.
 4 And from an energy security point of view,
 5 there's also an immediate benefit, although, you know,
 6 depends on which centers of the security issue you're
 7 referring to.
 8 So it's really a speed problem, and that's
 9 really why we need kind of more action and more push
 10 because, sure, wind and solar are cheap, so they will --
 11 they're going to get the lion's share of new energy.
 12 But, you know, we have also coal plants that
 13 are grandfathered in under the Clean Air Act that can
 14 run really cheap, so there's no reasonable -- there's no
 15 motivation for them to go out of business or to
 16 transition to renewables.
 17 And same -- and there's also -- you know,
 18 there's this huge amount of natural gas that's right now
 19 needed or -- well, it's used for like heating buildings,
 20 for example, and power plants. And so there's a big
 21 rush for mining. All these gas wells are being drilled
 22 like in North Dakota and I'm sure Montana as well.
 23 Lots of oil and gas drilling going on that, you
 24 know, there's no motivation or anything to stop that
 25 from continuing, so it's really to speed up the

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1 transition. That's really what the push is here.
 2 I'll stop there.
 3 Q. And, to speed it up, would you envision that
 4 this would require sort of a top-down approach to
 5 government, basically making the decision that this is
 6 the direction it wanted to go and telling people it has
 7 to be this way whether they like it or not?
 8 A. Well, I think it has to happen at all levels of
 9 government, including the top. Of course -- and -- I
 10 mean, that's kind -- yeah, I do think there needs to be
 11 a top-down approach, but also at all levels, at the
 12 community level, too.
 13 But I think it's also an education problem.
 14 Because you said it's kind of a -- the way that question
 15 is framed was like it's the way it has to be. Well,
 16 there's a reason that we want to go to wind, water,
 17 solar from a health climate and energy security point of
 18 view.
 19 So unless people -- it's not like we're just
 20 willy-nilly saying, okay, we want you to change what
 21 you're doing and just -- just because we're an autocracy
 22 and we could do that.
 23 It's -- I think like any other public health
 24 problem, this is a public health problem, and I think
 25 that's the responsibility of leaders to not cause damage

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1 to our children in future generations.
 2 I think that's what it comes down to. This is
 3 a health problem in addition to a climate problem and
 4 the -- well, the climate problem itself results in
 5 health problems, and so, I mean, air pollution affects
 6 everybody, more people in concentrated cities, of
 7 course, than in the rural areas. But even in rural
 8 areas, you get -- I mean, there are people who are
 9 susceptible to air pollutants who suffer significantly.
 10 So I would say we want to do it collectively,
 11 but we want to do it as -- in all levels of government,
 12 including the top levels, from a public -- public goods
 13 point of view. It's something -- it's -- I think in
 14 education -- part of this is also educating the public
 15 about why we would make this change. I think once
 16 people understand why we would make this change, then
 17 people are less resistant to doing -- to changing.
 18 **Q. Is that educational component part of the basis**
 19 **for this lawsuit in your -- to your knowledge?**
 20 A. I don't -- I can't comment on that because I
 21 don't know exactly. Yeah, I don't know.
 22 **Q. Have you had any contact with any of the**
 23 **plaintiffs in this case?**
 24 A. No. Well, no, just attorneys, I suppose.
 25 **Q. Yeah. I mean the parties themselves.**

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1 A. No.
 2 **Q. And so do you know whether this case actually**
 3 **would have the ability to help move Montana toward a**
 4 **greenhouse gas-free situation by 2050?**
 5 A. Well, from my understanding of what's being
 6 asked, yes, I believe so.
 7 **Q. And what is your understanding?**
 8 A. That to impose -- well, I think right now there
 9 are statutes allowing or encouraging oil and gas
 10 drilling, maybe other fossil fuel drilling and use, and
 11 so I think it would place a -- some kind of -- repeal
 12 those statutes or ban. So I don't know technically
 13 exactly the mechanism, but basically to prevent
 14 subsidies from being applied to oil and gas operations
 15 and maybe coal -- well, coal operations, too, because
 16 Montana has a lot of coal. So it's to stop the
 17 expansion of fossil fuels, and that would then imply a
 18 transition to renewable energy.
 19 **Q. It is your understanding, then, that -- that**
 20 **if -- well, first of all, let me back up.**
 21 **You understand, apparently, that there are**
 22 **statutes in question in this lawsuit, Montana laws,**
 23 **right?**
 24 A. Basically. I mean, I'm going on a summary
 25 conversation.

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1 **Q. I'm asking basically. Basically are Montana**
 2 **laws that are in dispute here in this case.**
 3 A. Well, I don't know if the laws are in dispute,
 4 but I think, from my understanding, laws that are
 5 present, the idea is to try to either repeal or override
 6 them to prevent the implementation of subsidies and
 7 other encouragements of fossil fuels in Montana.
 8 **Q. And this -- in your understanding, this would**
 9 **be the court repealing them or overriding them, correct?**
 10 A. Well, I think declaring them unconstitutional.
 11 I think that was...
 12 **Q. Right.**
 13 **So in this instance, your understanding -- tell**
 14 **me if I'm wrong -- is that the goal of getting away from**
 15 **fossil fuels in Montana is furthered by the court**
 16 **overriding or invalidating laws that the legislature has**
 17 **created, right?**
 18 **MR. GREGORY:** Objection; misstates his -- the answer
 19 he just gave.
 20 **BY MR. STERMITZ:**
 21 **Q. Did you understand my question, Dr. Jacobson?**
 22 A. Well, I -- I think that -- yeah, the goal is to
 23 declare unconstitutional laws that promote fossil fuels.
 24 **Q. And so one branch of government, the court,**
 25 **telling another branch of government that what they did**

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1 **is not legal, right?**
 2 **MR. GREGORY:** Objection; question calls for a legal
 3 conclusion.
 4 **THE WITNESS:** The -- well, that's what a court does.
 5 I mean, a court -- a court is supposed to declare laws
 6 constitutional or unconstitutional. That's its job.
 7 **BY MR. STERMITZ:**
 8 **Q. Right.**
 9 A. So it's not interfering with the normal process
 10 of government.
 11 **Q. Well, yeah, I didn't mean to imply that. I**
 12 **guess what I am getting at, though, is that to -- do you**
 13 **agree -- well, strike that.**
 14 **That's good enough for that.**
 15 **MR. GREGORY:** Excuse me, Mark. Is this a good point
 16 for a break?
 17 **MR. STERMITZ:** Yeah. I don't actually have a lot
 18 more, but let's go ahead and take a break.
 19 **MR. GREGORY:** Okay. Okay. Thanks.
 20 **MR. STERMITZ:** So let's see. It's 10:15, almost
 21 there. Ten minutes or so?
 22 **MR. GREGORY:** Yeah. No more. We just need water.
 23 (Recess taken from 10:13 a.m. to 10:20 a.m.)
 24 **BY MR. STERMITZ:**
 25 **Q. I did want to refer to your rebuttal report**

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1 briefly. And I don't know we need to even look at it.
 2 You can decide, but let me ask you this.
 3 Is discussion -- some discussion in there about
 4 grid stability. You remember that?
 5 A. Yes.
 6 Q. And critiquing Dr. Curry's opinions.
 7 When we talk about the grid in, let's say,
 8 transmission in Montana, for example, Montana itself
 9 doesn't control the demands on that, on the grid, does
 10 it?
 11 A. Well, the people who are using electricity
 12 control the demand on the grid.
 13 Q. Well, but there are agencies or regional
 14 authorities that make the decisions about the power
 15 that's transmitted on the grid, including Montana; is
 16 that right?
 17 A. So I think you're referring to the supply on
 18 the grid rather than the demand. Because the demand --
 19 Q. I am.
 20 A. Okay. So the supply on the grid -- yeah, there
 21 are -- yeah, the utility operators will control -- well,
 22 also, Montana is interconnected to the western -- all
 23 the western states, so there's -- so, you know, wind or
 24 solar from California can help Montana's grid stability
 25 as well.

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1 So it's not only what's produced in Montana
 2 that helps grid stability; it's all the other states
 3 surrounding. That's the nice thing about
 4 interconnecting geographically over large regions, is
 5 that each state can help the other state. And
 6 especially when you have the whole western United States
 7 interconnected, it's like there's plenty of energy to be
 8 had.
 9 And like when the wind is not blowing, the sun
 10 is not shining in Montana, it's going to be somewhere
 11 else. Or even hydro, there's lots of hydro in Idaho and
 12 Washington State and Oregon and California that can help
 13 Montana keep the grid stable. So I think it's the least
 14 of the issues.
 15 Q. Well, and in talking about that supply grid,
 16 the regional authorities and the utilities decide the
 17 mix of sources that are on the grid at any given time
 18 between hydro and coal or gas or whatever, right?
 19 A. Well, each state will decide what sources they
 20 will produce. And so, yeah, you can't control like
 21 California, what it's going to produce.
 22 So whatever the electrons -- you know, once the
 23 electrons are on the grid, you know, you can't tell
 24 whether they came from wind or solar or fossil fuels or
 25 whatever, but you can control what's produced in the

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1 state. And so the utility --
 2 Q. Right.
 3 So, for example, when you talk about hydro and
 4 Montana's ability to get hydropower at 80-plus percent
 5 or whatever it is, that's not a guaranteed thing, is it?
 6 Because the hydro facilities that are supplying that
 7 power aren't all in Montana, and doesn't that vary from
 8 time to time?
 9 A. Well, the -- now, the numbers like this -- I
 10 think it was 70 percent hydro in Montana, and that's all
 11 generated inside the state. That's in-state hydro --
 12 in-state -- so I think the number I have is the
 13 consumption of -- the consumption of electricity in
 14 Montana, about 70 percent is generated by
 15 hydroelectricity in Montana. So that -- yeah.
 16 Q. There -- okay. But whether it's generated in
 17 Montana or whether it's generated in eastern Washington,
 18 it goes on the grid, and then persons, other than
 19 exclusively people in Montana, make a decision about
 20 where it gets distributed, right?
 21 A. Well, I think -- maybe -- maybe rephrase that
 22 question again.
 23 Q. Well, the system isn't set up, is it, so
 24 that -- you know, we generate X kilowatts, megawatts of
 25 power, from hydro in Montana, and the people in Montana

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1 will be guaranteed that they -- that that power that's
 2 generated in Montana stays in Montana?
 3 A. I think the state controls how much can be
 4 exported and imported from other states and also from
 5 Canada, by the way. I mean, there's -- some of the
 6 electricity comes from Canada.
 7 Q. So are you saying -- for example, let's look at
 8 Libby.
 9 Are you familiar with that facility at all?
 10 A. I mean, I've heard of it.
 11 Q. It's -- you're aware, I'm sure, are you not --
 12 let's back up a little bit -- that like on the Columbia
 13 River system that goes all the way up into Montana that
 14 the power generation facilities are controlled by either
 15 the Corps of Engineers or the Bureau of Reclamation --
 16 A. Okay.
 17 Q. -- right?
 18 A. Okay.
 19 Q. Those are federal agencies?
 20 A. Okay. Yeah.
 21 Q. You know that?
 22 A. Yeah. I mean, I know the bureau and...
 23 Q. And they're not -- there are other smaller
 24 hydro generation facilities, dams, that are controlled
 25 or -- I guess it's not the right word -- regulated by

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1 the federal agency -- regulatory commission, but
 2 regardless, the energy that is created from those dams
 3 goes onto the grid, right?
 4 A. Right.
 5 Q. And that grid includes transmission that goes
 6 outside the state of Montana, correct?
 7 A. Yes.
 8 Q. I mean --
 9 A. Well --
 10 Q. -- also out of state.
 11 A. It's -- yeah, it does, but, again, I think, you
 12 know, the state can have some control over how much it
 13 wants to export versus import. But I guess -- well,
 14 maybe if you can -- what's the bottom line question
 15 you're asking?
 16 Q. Well, I'm asking generally about the concept
 17 that we could -- we in Montana or any state could say
 18 that they can control their own -- the source of their
 19 own electrical energy completely because of the fact
 20 that there are federal facilities and there are federal
 21 regional power distribution entities that are created
 22 for a legitimate reason, which is to move the power
 23 where it's needed and to create the mix of power that's
 24 needed at any time, given the vagaries of renewable.
 25 We don't have our own -- control over our own

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1 fate when it comes to choice of type of electrical
 2 energy or where that electrical energy goes in any given
 3 state; is that right?
 4 A. I don't think that's correct. I don't think
 5 that's correct, because like in California, for
 6 example -- I mean, I look at the California -- the main
 7 California grid. I look at -- you can every minute,
 8 every day you can go online and you can look at the
 9 generation from wind, solar, geothermal, hydro, natural
 10 gas, nuclear. You can also look at imports.
 11 And there are days and hours -- in fact, on
 12 Mother's Day this year, California was over 100 percent
 13 wind, water, solar for like an hour or so. So it was
 14 actually the largest location in the world that was a
 15 hundred percent wind, water, solar, and it was an hour.
 16 Imports went down to zero because it didn't
 17 need any imports. So, actually -- you know, California
 18 went -- it -- it will -- if it doesn't produce enough
 19 for a given minute, then it will turn on the spigot and
 20 import electricity from the grid. So it actually does
 21 control.
 22 Otherwise because -- if what you were saying
 23 were the case, which is, you know, electrons will just
 24 fly and there's no control at the borders of the
 25 electricity, then you would always have the same percent

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1 of -- you know, you'd always have imports into
 2 California that are proportional to the -- in all of
 3 California, electricity would be exported because -- you
 4 know, you can imagine a day when you have like a huge
 5 amount of local electricity.
 6 Like, let's say Montana is producing 130
 7 percent of its electricity demand on a given day. It's
 8 not importing anything, right? It's going to be a net
 9 exporter that day. It's only importing when it's
 10 producing less than a hundred percent of its demand.
 11 So I don't know the exact mechanism by which
 12 it's doing it, but it's clearly -- that's what's
 13 happening, is that you're only exporting when you're --
 14 when you have too much supply, and you're only importing
 15 when you don't have enough supply. So...
 16 Q. So let's say you have a hot summer day in, you
 17 know, eastern Washington where everybody is flipping on
 18 their air conditioners.
 19 A. Yep.
 20 Q. And in Montana it's more -- it's moderate. And
 21 so the demand comparatively for power in eastern
 22 Washington is greater than what Montana needs.
 23 In that instance, would you disagree that the
 24 controllers of the grid can make decisions that shift
 25 electricity from Montana to eastern Washington?

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1 A. Well, in this case, are you saying that Montana
 2 has a surplus of electricity or --
 3 Q. Well, yeah. I mean, that there's more being
 4 produced than Montana needs if needed -- that's exactly
 5 my premise. The energy gets moved around where it's
 6 needed, depending on things like temperature and so
 7 forth.
 8 A. Well, and price. Like I said if -- yeah, if
 9 Montana -- in that scenario, if Montana is producing
 10 excess electricity that it would otherwise -- let's say
 11 it didn't have a demand for the electricity, what would
 12 Montana do? It would shed the electricity. So it would
 13 stop the wind turbines, basically.
 14 So, yeah, there's a reason it would shift --
 15 send it to Washington State because there's a demand
 16 there and they can get a price for that electricity.
 17 Otherwise you would have to shed it, so...
 18 Q. Part of what I'm saying -- I just want to be
 19 clear, if I'm not -- that that decision or those
 20 decisions about where the electrical energy goes, where
 21 it's needed the most, are not -- is not in the hands of
 22 the State of Montana exclusively in respect to Montana.
 23 A. Well, I wouldn't say exclusively, but, yeah,
 24 Montana can control. I mean, if Montana decided not to
 25 ship that electricity and shed it instead, it could, but

1 it would just be wasting money, so it wouldn't do that.
 2 Or maybe it has a contract -- there might be a
 3 contract between Montana and different states that has
 4 to do it in certain conditions. I mean, that's more
 5 likely.
 6 But I think Montana does have most of the
 7 control. I mean, if it decided it didn't -- it wanted
 8 to be an energy island, it could decide that, to shut
 9 off the connections between others -- with other states.
 10 But it's to Montana's advantage to cooperate
 11 with the other states. So if it has too much
 12 electricity, send it to the other states. If it needs
 13 electricity, import it from other states or Canada.
 14 **Q. And it's your opinion or belief that Montana**
 15 **has the authority to make those decisions regardless of**
 16 **what other states might think or what -- let me ask it**
 17 **this way -- what the federal government might think?**
 18 **A.** Well, right now, I mean, they might be under a
 19 contract through the Western Interconnect where
 20 they're -- so they've ceded some of that authority, but
 21 I think originally they did have the authority, and they
 22 could renegotiate the contract at some point.
 23 But it -- but that authority basically is -- I
 24 mean, this is to everybody's advantage. It doesn't
 25 interfere with our proposals to have -- in fact, it's

1 wind but then lesser, you know -- or eliminate footprint
 2 for fossil fuels generation.
 3 And I guess what I'm going to ask is, given
 4 that the way things are interconnected, the success of
 5 this depends, does it not, on all the pieces being
 6 implemented?
 7 It wouldn't work, would it, if you couldn't,
 8 for some reason or another, accomplish a portion of what
 9 you're proposing?
 10 **MR. GREGORY:** Objection; vague and ambiguous,
 11 incomplete hypothetical.
 12 **THE WITNESS:** You know, I think you can do it
 13 incrementally. I mean, every little bit of transition
 14 is going to help. You don't have to go -- you're not
 15 going to go from zero to a hundred percent overnight.
 16 I mean, each -- each addition -- each new wind
 17 farm, each solar farm we've seen in history, you know,
 18 it helps. And then you have also battery storage, too.
 19 I should point out like hydroelectric is not the only
 20 type of storage or backup. There are batteries that are
 21 really relatively inexpensive now that help.
 22 So, you know, yeah, each wind farm and solar
 23 farm helps. I think its incremental improvements
 24 definitely help the situation.
 25 **MR. STERMITZ:** I think that's about it. Hang on a

1 advantageous to be interconnected.
 2 I mean, the more the interconnection, the
 3 better. If the whole U.S. is interconnected, that would
 4 be the best situation because it just reduces the cost
 5 of keeping the grid stable everywhere for the exact
 6 reason you just mentioned.
 7 If you don't have enough wind energy in
 8 Washington State, other states that have too much energy
 9 can send it there. So that's a good thing, but it's
 10 not -- I mean, I think, you know, the state is going
 11 to -- whatever -- whoever is controlling it, you know,
 12 the state of Montana is going to get its electricity
 13 first before -- it's not going to like -- if it's in a
 14 deficit, it's not going to be forced to ship out the
 15 electricity it's creating to another state and then go
 16 in more of a deficit and have blackouts.
 17 **Q. Your plan, regardless of whether it's Montana**
 18 **or elsewhere, these roadmaps, obvious -- I'm just going**
 19 **to use an analogy.**
 20 **You're sort of like whack-a-mole in that if you**
 21 **make a decision to move away from fossil fuels in one**
 22 **sector or one technology, then there has to be a way to**
 23 **deal with the void, and -- and a good example of this is**
 24 **like the land use that you describe where, you know,**
 25 **you're going to have more wind -- greater footprint for**

1 second, if you wouldn't mind.
 2 I have no further questions, Dr. Jacobson.
 3 Thank you for your time today.
 4 **MR. GREGORY:** Thanks, Mark.
 5 **THE WITNESS:** Thank you, Mark.
 6 **MR. STERMITZ:** No questions.
 7 **MR. GREGORY:** No questions.
 8 **MR. STERMITZ:** Okay. Sorry for the little delay at
 9 the beginning, but that's how it goes with this.
 10 (At 10:38 a.m. the deposition proceedings
 11 concluded.)

MARK JACOBSON, Ph.D.

1 STATE OF CALIFORNIA)
2) ss.
3 COUNTY OF SAN FRANCISCO)

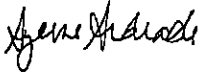
4 I hereby certify that the witness in the
5 foregoing deposition, MARK JACOBSON, Ph.D., was by me
6 duly sworn to testify to the truth, the whole truth and
7 nothing but the truth, in the within-entitled cause;
8 that said deposition was taken at the time and place
9 herein named; that the deposition is a true record of
10 the witness' testimony as reported by me, a duly
11 Certified Shorthand Reporter and disinterested person,
12 and was thereafter transcribed into typewriting by
13 computer.

14 I further certify that I am not interested in
15 the outcome of said action nor connected with, nor
16 related to, any of the parties in said action, nor to
17 their respective counsel.

18 IN WITNESS WHEREOF, I have hereunto set my hand
19 this 22nd day of December, 2022.

20 Reading and Signing was:

21 requested ___ waived ___ not requested

22
23 

24
25 SUZANNE I. ANDRADE, CSR NO. 10682

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EXHIBIT 9

*Rikki Held, et al. v
State of Montana, et al.*

*Lori G. Byron, M.D.
October 11, 2022*

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MONTANA FIRST JUDICIAL DISTRICT COURT
LEWIS AND CLARK COUNTY

RIKKI HELD, ET AL.,

PLAINTIFFS,

VS. CAUSE NO.
CDV-2020-307

STATE OF MONTANA, ET AL.,

DEFENDANTS.

DEPOSITION UPON ORAL EXAMINATION OF

LORI G. BYRON, MD

BE IT REMEMBERED, that the deposition upon oral examination of LORI G. BYRON, MD, appearing at the instance of Attorneys for Defendants, was taken at the offices of Fisher Court Reporting, 2711 First Avenue North, Billings, Montana on Tuesday, October 11, 2022, beginning at the hour of 8:51 a.m., pursuant to the Montana Rules of Civil Procedure, before Jacqueline A. Hill, Court Reporter and Notary Public.

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I N D E X

EXAMINATION OF LORI G. BYRON, MD BY: PAGE:
EXAMINATION BY MS. JONES: 4

E X H I B I T S

DEPOSITION EXHIBITS: PAGE:
Exhibit 2 9/30/2022 Expert Report of Lori G. Byron, MD, MS and Robert G. Byron, MD, MPH 39

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LORI G. BYRON, MD,
having been first duly sworn, testified upon her oath as follows:

EXAMINATION

Q. BY MS. JONES:
Q. Good morning, Dr. Byron. We just met a few minutes ago. My name is Emily Jones, and I am counsel for the defendants in this litigation. You can feel free to call me Emily today.
We have never met before this deposition; is that true?
A. That is true.
Q. Okay. Have you had your deposition taken before?
A. I have.
Q. Okay. When was that?
A. Many years ago.
Q. Okay. What type of a case was that?
A. Child abuse and a tort claim.
Q. Okay. And were you a witness in the child abuse case?
A. An expert witness.
Q. Okay. Were you the child's treating physician?
A. I have done depositions where I have been

1 the treating physician and where I have been the
2 fact witness.

3 Q. Okay. How many depositions have you
4 given before?

5 A. Just a few.

6 Q. Okay. Fewer than five?

7 A. I think so.

8 Q. Okay. Since you have had your deposition
9 taken before, you kind of know the routine.

10 I will be asking you some questions
11 today, and you will be answering those questions.

12 The court reporter will be transcribing this
13 deposition. Because of that, so that we have a
14 clear record, it's important that we don't talk
15 over each other. So in a natural conversation, of
16 course, sometimes there is a little bit of back
17 and forth. I will try to let you complete your
18 entire answer before I begin my next question, and
19 please -- even if you know where I'm going with
20 the question, please let me ask my full question
21 before you begin your answer; is that fair?

22 A. Uh-huh.

23 Q. Okay. Please give a verbal response. So
24 "uh-huh," "huh-uh," things like that, again, just
25 don't come across as clear as they could be on the

1 in philosophy, a doctor of medicine, and then
2 you've obtained a master's in energy policy and
3 climate recently in 2020; is that correct?

4 A. Yes.

5 Q. Okay. So your CV gives me a pretty good
6 idea of what your qualifications are and your
7 areas of expertise. But I want to talk about some
8 areas that you are not going to delve into today.

9 So would it be fair to say that you don't
10 have a degree and have not worked in the following
11 areas: Physics.

12 Do you have a degree in physics?

13 A. I do not have a degree in physics. I
14 have worked in physics.

15 Q. Okay. When was that?

16 A. I was a lab instructor and secretary to
17 the physics department in college.

18 Q. Okay. And which college was that?

19 A. Kentucky Wesleyan.

20 Q. Okay. And was that as a student?

21 A. Yes.

22 Q. Okay. And have you had any professional
23 career experience in any area in physics?

24 A. No.

25 Q. Okay. How about meteorology?

1 transcript. So, again, of course, gestures, nods
2 of the head, things like that won't get captured
3 at all, so please give me verbal responses to my
4 questions.

5 If I ask you a question that you don't
6 understand, please ask me to rephrase the question
7 in a way that is understandable to you.

8 This is not a "gotcha" by any means. On
9 the other hand, if you answer my question, I'm
10 going to assume that you understood the question
11 and that your answer is responsive to the
12 question; is that fair?

13 A. That is fair.

14 Q. Okay. If you need a break, let me know.

15 You have just been sworn in by the court
16 reporter, so the testimony that you are giving
17 today is under oath, just as if we were in court.
18 If you give me different responses to my questions
19 today -- at trial than you give me today in this
20 deposition, I'm going to use your transcript to
21 point that out; do you understand that?

22 A. I do understand that.

23 Q. Dr. Byron, I have had the opportunity to
24 review your CV. I see that you have a bachelor of
25 science and math and bachelor of arts in religion

1 A. No.

2 Q. Okay. How about anthropology?

3 A. No.

4 Q. How about climatology? As in the study
5 of the climate --

6 A. Possible --

7 Q. I know it's a broad topic area.

8 A. Again, complete the whole question.

9 Q. Sure.

10 Do you have a degree in climatology?

11 A. No.

12 Q. Okay. And have you had any professional
13 work experience in the field of climatology?

14 A. No professional work experience.

15 Q. Okay. How about atmospheric sciences?

16 A. No.

17 Q. How about any other earth sciences?

18 A. No.

19 Q. Okay. Now, you had an extensive career
20 with Indian Health Services in Crow Agency,
21 Montana; fair to say?

22 A. Yes.

23 Q. Okay. Did you live in Crow Agency when
24 you worked at IHS?

25 A. I lived on the border of the reservation.

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1 **Q. Where did you live?**
 2 A. Outside of Hardin, Montana.
 3 **Q. Okay. And did you live there the entire**
 4 **time that you worked for Indian Health Service?**
 5 A. Yes.
 6 **Q. And I notice in your report you have said**
 7 **that you provided mental health and psychological**
 8 **services as part of your job duties as IHS; is**
 9 **that correct?**
 10 A. That is correct.
 11 **Q. Can you tell me what type of mental**
 12 **health and psychological services you provided?**
 13 A. I probably won't list them all. It's
 14 pretty common for pediatricians to care for mental
 15 health disorders in children, including anxiety,
 16 depression, fears, posttraumatic stress disorder,
 17 phobias, attention deficit hyperactivity disorder.
 18 **Q. Those types of things?**
 19 A. Autism. I'm sure there is more.
 20 **Q. Okay. And were you trained to make those**
 21 **diagnoses?**
 22 A. Yes. You are trained in pediatrics to
 23 care for mild to moderate psychiatric disorders.
 24 **Q. Okay. How would you go about making**
 25 **those diagnoses when you were working at IHS?**

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1 A. As we had all -- making all diagnoses, it
 2 starts with a good history and with a physical
 3 exam. Reviewing other records, if there is
 4 records from elsewhere, reviewing school records.
 5 Sometimes forms, surveys of both patients and
 6 parents and teachers and other people in their
 7 lives. And then just knowing the -- the -- what
 8 are called the DSM codes and what's required to
 9 make a diagnosis of various diseases.
 10 **Q. You also stated that you treated victims**
 11 **of trauma in inclement weather.**
 12 **Would that be like exposure to the**
 13 **elements?**
 14 A. That would be, yes, exposure to heat or
 15 cold, flooding. Those are probably the -- the
 16 biggest ones.
 17 **Q. So tell me -- I mean, give me an example**
 18 **of some patients that you treated for exposure to**
 19 **inclement weather. Like what exactly was the**
 20 **scenario there?**
 21 A. When patients are exposed to extreme heat
 22 and get overheated, they can develop heat
 23 exhaustion or heatstroke, they can die from this.
 24 And when patients are exposed to cold, they can
 25 also die from that. And certainly have had a

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1 number of people die from that during the time I
 2 worked in Indian Health Service.
 3 With flooding, it was more the affects --
 4 the -- the stresses on children related to losing
 5 their home or their parents losing their job or
 6 having to move or being homeless.
 7 **Q. And so those would be examples of actual**
 8 **patients that you treated at IHS?**
 9 A. Yes.
 10 **Q. Okay. Would you agree with me that many**
 11 **children who live on tribal lands in Montana live**
 12 **in extreme poverty?**
 13 A. I would say a lot of them do.
 14 **Q. They lack access to heat in the winter or**
 15 **air conditioning in the summer, in your**
 16 **experience?**
 17 A. Sometimes they do.
 18 **Q. In your experience, what do your**
 19 **patients' family use as a primary source of heat**
 20 **in the winter?**
 21 A. I -- I'm not positive, not -- not many
 22 had wood-burning stoves. I think most of them
 23 were either on propane or electric.
 24 **Q. Okay. And did you treat some children**
 25 **who didn't have any source of heat in their homes?**

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1 A. I definitely -- I definitely treated
 2 patients who were -- who were homeless, so again,
 3 were living on the street or in a car, in which
 4 case the car wasn't running most of the time.
 5 Sometimes people who lived in an outbuilding,
 6 again, wouldn't have -- wouldn't have heat, and
 7 some people that just couldn't afford to turn the
 8 heat on.
 9 **Q. Sure.**
 10 **Did you primarily treat children at IHS?**
 11 A. Majority.
 12 **Q. Yes, okay.**
 13 **You also stated that you cared for**
 14 **premature babies.**
 15 **For the most part, what was the cause of**
 16 **premature births on the reservation?**
 17 A. I would say the same causes as elsewhere.
 18 Lots of times there is medical conditions with the
 19 mother that makes them go into labor, sometimes we
 20 don't know why they go into labor early.
 21 **Q. Did you see a higher incidence of**
 22 **premature date of births at IHS than other medical**
 23 **facilities where you have worked?**
 24 A. Statistically there is more preterm
 25 births among Native Americans if you look at the

1 whole population, but looking at one single
 2 pediatrician's practice, I don't think you can
 3 make relevant statistical observations because the
 4 number are just too small.

5 **Q. Okay. What are adverse childhood events?**

6 **A.** Those are -- it was first created over a
 7 decade ago, but those are events that lead to what
 8 we call toxic stress in children. When the
 9 concept was first identified, they identified, I
 10 believe, seven different conditions, such as
 11 having a parent that had been in jail, being
 12 homeless, having substance abuse issues with your
 13 guardians or parents. I don't remember all of
 14 them. And then since that time, they've realized
 15 that other things cause toxic stress also.

16 **Q. Who developed the -- can I call it the**
 17 **ACEs test --**

18 **A.** Uh-huh.

19 **Q. -- do you know what I'm referring to?**

20 **A.** Yes.

21 **Q. Who developed the ACEs test?**

22 **A.** It was an internist or two at Kaiser
 23 Permanente, but I don't remember his name.

24 **Q. Okay. Was the CDC involved with that at**
 25 **all?**

1 **A.** As far as I know, the initial research
 2 was done by this internist at Kaiser Permanente,
 3 and then a lot of organizations got on board to
 4 confirm that -- that this was accurate in other
 5 populations.

6 **Q. Okay. And how many ACEs are there**
 7 **currently?**

8 **A.** I do not know.

9 **Q. Does ten sound right?**

10 **A.** That could be correct.

11 **Q. Okay. And I think you mentioned a couple**
 12 **things: Divorce, having a parent who is**
 13 **incarcerated, physical or sexual abuse.**

14 **You would agree with me, all of those**
 15 **things are listed as ACEs?**

16 **A.** I believe so.

17 **Q. Okay. Has climate change been added to**
 18 **that list?**

19 **A.** It has been proposed for that list.

20 **Q. Has it been added?**

21 **A.** No.

22 **Q. In your report you state that, In Montana**
 23 **the experiences of each of the plaintiffs in this**
 24 **lawsuit dreading and/or experiencing repeated**
 25 **wildfires, exposure to prolonged periods of time**

1 **with poor air quality due to wildfire smoke,**
 2 **extreme heat, and extreme weather events are all**
 3 **stressful situations, trigger fear and anxiety and**
 4 **activated the stress or response system similar to**
 5 **the way ACEs do.**

6 **Did I accurately capture what you've**
 7 **written in your report?**

8 **MR. GREGORY:** Excuse me. The record
 9 should reflect the witness doesn't have the report
 10 in front of her.

11 **And, Counsel, if you are going to quote**
 12 **from the report, could you please tell me the page**
 13 **number in advance before you start reading what**
 14 **purports to be a quote.**

15 **So what page is that from?**

16 **MS. JONES:** Sure. I would be happy to do
 17 that.

18 **So I was referring to page 12 of**
 19 **Dr. Byron's report. The first sentence, right**
 20 **under the graphic in the middle of the page there.**

21 **MR. GREGORY:** Thank you.

22 **MS. JONES:** You are welcome.

23 **(Begin cut in transcript for confidential**
 24 **material prudent to the Confidentiality**
 25 **Order in this case.)**

1 **Q. BY MS. JONES:**

2 **Q. In your opinion, Dr. Byron, is exposure**
 3 **to -- excuse me -- is repeated exposure to**
 4 **wildfires or prolonged exposure to wildfire smoke**
 5 **akin to physical or sexual abuse, witnessing a**
 6 **parent being abused, or having a family member**
 7 **addicted to drugs or alcohol?**

8 **A.** It definitely can be.

9 **Q. Has it been for any of these plaintiffs**
 10 **in this case?**

11 **A.** I don't know the plaintiffs personally,
 12 and they are not my patients. So I have read some
 13 of the medical reports, and I have read the
 14 complaint made by the plaintiffs. And the --
 15 the -- I believe it is distinctly possible when,
 16 in particular, that I talked to, too, Georgi and
 17 Rikki, I was very impressed by -- by the -- the
 18 severity of the affects on them.

19 **Q. Have you administered --**

20 **MR. GREGORY:** Excuse me, Counsel. We
 21 have a protective order in this case, which I can
 22 talk to you about in greater detail on a break.

23 **But I would like to designate that**
 24 **question and answer as confidential under the**
 25 **protective order.**

1 (End cut in transcript for confidential
2 material prudent to the Confidentiality
3 Order in this case.)
4 **Q. BY MS. JONES:**
5 **Q. Have you personally spoken with Rikki and**
6 **Georgi?**
7 A. I have.
8 **Q. Okay. When was that?**
9 A. Earlier this year.
10 **Q. Have you administered an ACEs test to**
11 **Rikki or Georgi?**
12 A. No.
13 **Q. Have you conducted any medical evaluation**
14 **of Rikki or Georgi?**
15 A. No.
16 **Q. Have you made any diagnosis regarding**
17 **Rikki or Georgi?**
18 A. No. I am not their treating physician.
19 **Q. Okay. And you have conducted no medical**
20 **evaluation of Rikki or Georgianna?**
21 A. No. Except that when a physician meets
22 another human being in any context, we frequently
23 see and feel and hear things that might perk our
24 ears. It might not do so with other people that
25 haven't been trained in the medical field.

1 **Q. Okay. When you worked at IHS, how did**
2 **you administer medical and psychological care to**
3 **your patients?**
4 A. By -- most of the time, by seeing them in
5 the clinic. Sometimes I rode in the ambulance
6 with patients, and sometimes I did home visits.
7 **Q. Did you perform any telehealth?**
8 A. I did not.
9 **Q. Okay. Would you agree with me that you**
10 **are better able to make the best diagnosis and**
11 **treatment plan for a patient when you have the**
12 **patient's subjective history and information**
13 **combined with your own objective medical**
14 **examination of the patient?**
15 A. Will you repeat that, please?
16 **Q. Would you agree with me that you are**
17 **better able to make a diagnosis and treatment plan**
18 **for a patient when you have their subjective**
19 **medical history combined with your own objective**
20 **clinical observations?**
21 A. I would never make an -- a medical
22 judgement on a patient without having
23 subjective -- subjective information from the
24 patient or the family, if they were nonverbal,
25 with a caretaker.

1 **Q. Would you do so without having a clinical**
2 **assessment of them?**
3 A. As far as writing something in a chart,
4 giving them a diagnosis -- an official diagnosis
5 that would go in a medical record, correct.
6 **Q. You would agree with me that that would**
7 **be the best practice, to have the subjective**
8 **history combined with a clinical assessment?**
9 A. To make an official diagnosis that goes
10 in a medical record, yes.
11 **Q. Okay. Did you ever have a patient in**
12 **your practice whose subjective medical history did**
13 **not align with your objective medical findings?**
14 A. Sure. That would be -- yes, that would
15 be not uncommon.
16 **Q. I'm sorry. Did you say that would be not**
17 **uncommon?**
18 A. Not -- that would be not uncommon,
19 especially in medical situations, a physical
20 nonmental situations.
21 **Q. Okay. Have you personally conducted any**
22 **scientific studies regarding the impacts of**
23 **climate change on Montana children?**
24 A. Research studies?
25 **Q. Yes.**

1 A. No.
2 **Q. Okay. When were you first contacted**
3 **about this case?**
4 A. 2021, but I don't recall when.
5 **Q. Do you know who contacted you?**
6 A. I believe it was Nate.
7 **Q. Okay. And what were you asked to do, as**
8 **far as the scope of your assignment for this case,**
9 **for your expert services?**
10 A. To write the report of an expert witness.
11 **Q. Okay.**
12 A. Along with my husband.
13 **Q. Were you familiar with Our Children's**
14 **Trust before this lawsuit?**
15 A. I was.
16 **Q. How do you know about Our Children's**
17 **Trust?**
18 A. Newspapers, news, reports.
19 **Q. Okay. And did you reach out to Our**
20 **Children's Trust about this lawsuit, or did Our**
21 **Children's Trust reach out to you?**
22 A. They reached out to me.
23 **Q. Okay. Had you had any working**
24 **relationship with Our Children's Trust before this**
25 **lawsuit?**

1 A. With what aspect of Our Children's Trust?
 2 Q. Any aspect.
 3 A. A -- the expert witnesses are colleagues
 4 of mine.
 5 Q. Okay. But did you have any relationship
 6 with Our Children's Trust?
 7 A. No.
 8 Q. Okay. And I'm sorry, I already asked you
 9 this, but I forgot your answer.
 10 What were you asked to do as far as the
 11 scope of your assignment for this case?
 12 A. To serve as an expert witness, to write
 13 the report, and I'm sure at some point we were
 14 told we would probably be deposed or -- or be put
 15 on the stand in court.
 16 Q. Okay. But I guess what were you asked to
 17 do in terms of like what area of expertise or what
 18 like opinions about what subject matter?
 19 A. Any aspects of the children's -- of the
 20 plaintiffs' health.
 21 Q. Okay. So you were asked to render
 22 opinions about the health of the plaintiffs in
 23 this case?
 24 A. Definitely the plaintiffs in this case,
 25 and I do not recall if it was the -- also the

1 health of children in general. Especially Montana
 2 children.
 3 Q. Do you understand that these plaintiffs
 4 are bringing these claims on behalf of themselves
 5 only in this case?
 6 MR. GREGORY: Object. Question calls for
 7 a legal conclusion.
 8 Q. BY MS. JONES:
 9 Q. I'm just asking you what your
 10 understanding is.
 11 A. I'm not sure what options there are for
 12 the plaintiffs.
 13 Q. Okay. What did you tell Our Children's
 14 Trust that you would need to do in order to render
 15 opinions about the health of the plaintiffs in
 16 this case?
 17 MR. GREGORY: Objection. There is no
 18 testimony she spoke with Our Children's Trust.
 19 MS. JONES: What's the objection?
 20 MR. GREGORY: Lacks foundation.
 21 Q. BY MS. JONES:
 22 Q. Did you speak with Our Children's Trust
 23 about what your assignment was to serve as an
 24 expert in this case?
 25 A. We e-mailed with Nate and eventually

1 talked with Nate, Zoom.
 2 Q. Okay. And did you have a conversation
 3 about what you would need to do and what
 4 information you would need in order to make expert
 5 opinions in this case?
 6 A. I do not recall.
 7 Q. Okay. What would you need to do in order
 8 to form opinions about the health of the
 9 plaintiffs in this case?
 10 A. Mostly read their complaint.
 11 Q. Okay. Would it be helpful to conduct a
 12 medical evaluation of the plaintiffs if you are
 13 opining about their health?
 14 A. Not necessarily.
 15 Q. Okay. Did you tell Our Children's Trust
 16 that you would like to conduct a medical
 17 examination of the plaintiffs?
 18 MR. GREGORY: Objection. Lacks
 19 foundation. No testimony the witness spoke with
 20 Our Children's Trust.
 21 Q. BY MS. JONES:
 22 Q. That's my question. Did you tell Our
 23 Children's Trust that you would need to evaluate
 24 the plaintiffs in order to render opinions about
 25 their health?

1 MR. GREGORY: Same objection.
 2 Q. BY MS. JONES:
 3 Q. You can answer.
 4 A. Okay. We talked with Nate, and I
 5 honestly do not recall if he offered or if we
 6 asked if we could talk with any of the plaintiffs.
 7 But we did end up being able to talk to two of the
 8 plaintiffs and one of the mothers.
 9 Q. Okay. And I think you said before you
 10 talked with Rikki and Georgi?
 11 A. Uh-huh.
 12 Q. Is that a "yes"?
 13 A. That is a yes.
 14 Q. Okay. And which of the mothers did you
 15 talk to?
 16 A. I need to see the report.
 17 Q. Okay. You don't remember her name as you
 18 sit here today?
 19 A. Not right this second.
 20 Q. Okay. Were you asked by any of the
 21 plaintiffs's attorneys to render any opinions
 22 about the amount of greenhouse gases that Montana
 23 emits?
 24 A. No.
 25 Q. Were you asked to render any opinions

1 about how much Montana's greenhouse gas emissions
2 affect global climate change?

3 A. No.

4 Q. Were you asked to render any opinions
5 about whether reduction of greenhouse gas
6 emissions in Montana would affect global climate
7 change?

8 A. I don't recall.

9 Q. Okay. Did you render any opinions about
10 whether reduction of greenhouse gas emissions in
11 Montana would affect global climate change?

12 A. I ren- -- I'm not sure if it's in the
13 report. I would render an opinion on whether
14 reduction of Montana greenhouse gases would affect
15 these plaintiffs.

16 Q. Okay. But my question is: Do you have
17 an opinion in this case about whether reduction of
18 greenhouse gas emissions in Montana would affect
19 global climate change?

20 A. I do have an opinion.

21 Q. And what is that opinion?

22 A. That any reductions in greenhouse gas
23 emissions anywhere will help reduce the affects on
24 the global climate change.

25 Q. And is that an opinion that you are going

1 to be talking about at the trial of this matter?

2 MR. GREGORY: Objection. Question calls
3 for speculation.

4 THE WITNESS: I don't know.

5 Q. BY MS. JONES:

6 Q. Okay. Was that part of the scope of the
7 expert services that you were asked to provide for
8 this case?

9 A. I don't think so.

10 Q. Okay. Were you asked to measure the
11 extent to which Montana greenhouse gases have
12 caused temperature increases in Montana?

13 A. No.

14 Q. Were you asked to measure the extent to
15 which Montana's greenhouse gas emission have
16 increased wildfires in Montana?

17 A. No.

18 Q. Were you asked to measure the extent to
19 which Montana's greenhouse gas emission have
20 increased pollen in Montana?

21 A. No.

22 MR. GREGORY: Excuse me, Counsel. I'm
23 sorry.

24 Tim's joining. I just wanted the record
25 to reflect.

1 MS. JONES: Thank you.

2 Q. BY MS. JONES:

3 Q. Were you asked to render any opinions
4 about Montana's constitutional provisions
5 regarding clean and healthful environment?

6 A. Repeat that, please.

7 Q. Sure.

8 Were you asked to render any opinions
9 about Montana's constitutional provisions
10 regarding a clean and healthful environment?

11 A. Are you referring to render opinions in
12 our expert witness report?

13 Q. Right. As part of the scope of your
14 assignment in this case.

15 A. I'm sorry. Repeat the question.

16 Q. Sure. I'm not trying to trick you, and
17 so I'll try to ask in a way that you can
18 understand.

19 As part of the scope of your assignment
20 and the expert opinions you were asked to render
21 in this case, was part of that scope providing
22 opinions about Montana's constitutional provisions
23 regarding a clean and healthful environment?

24 A. Our -- my opinions on the plaintiffs'
25 health, which includes mental health, would

1 include knowing what the constitution says.

2 Q. Are you an attorney, Dr. Byron?

3 A. I am not.

4 Q. Okay. Do you have any legal training at
5 all?

6 A. Very little.

7 Q. Okay. Do you have any knowledge of what
8 the Montana Supreme Court has said Montana's
9 constitutional right to a clean and healthful
10 environment means?

11 A. I do not recall.

12 Q. Do you have any knowledge about what the
13 Montana Supreme Court has said the government's
14 responsibility is to implement the constitutional
15 provisions regarding a clean and healthful
16 environment?

17 A. I do not recall.

18 Q. Okay. Is that something you were asked
19 to provide opinions about in this case?

20 MR. GREGORY: Objection. Asked and
21 answered.

22 Q. BY MS. JONES:

23 Q. You can answer.

24 A. Only in the aspect of the way it affects
25 the plaintiffs' health.

1 Q. And what is your opinion about how the
2 constitutional provision regarding clean and
3 healthful environment affects these plaintiffs'
4 health?

5 A. When children find that their -- their
6 supervisors and instructors and caretakers, anyone
7 that's responsible for them, are not doing what
8 they say they are going to do, it's detrimental to
9 their health.

10 Q. And who in the plaintiffs' lives has not
11 done what they said they were going to do?

12 A. Elected officials and other government
13 officials in Montana.

14 Q. And in what way have those elected
15 officials done that?

16 A. In my opinion, they have not followed
17 that part of the constitution.

18 Q. In which ways?

19 A. In providing a clean and healthful
20 environment.

21 Q. But you agree with me that you don't know
22 what the Montana Supreme Court has said a clean
23 and healthful environment is?

24 A. I -- I guess for my opinion, I think what
25 the constitution says is the most important thing,

1 to my clients?

2 A. I'm sorry. The -- the only -- the only
3 use of the phrase "standard of care" that I'm
4 familiar with is what we use in -- in medical
5 fields.

6 Q. Not in relation to this case?

7 MR. GREGORY: Objection. Vague and
8 ambiguous.

9 Q. BY MS. JONES:

10 Q. Has anyone from Our Children's Trust used
11 the term "standard of care" with you when they've
12 talked about this case?

13 A. I don't think so.

14 Q. Okay. When did you accept your
15 assignment in this case to become an expert
16 witness?

17 A. As I recall, pretty much when we got an
18 e-mail, we said we were interested in it.

19 Q. And when was that?

20 A. I believe sometime in 2021.

21 Q. Do you know when in 2021?

22 A. I do not.

23 Q. Okay. What information were you provided
24 about the case?

25 MR. GREGORY: Objection. Vague as to

1 regardless of what other people say about it.

2 Q. Regardless of what the Montana Supreme
3 Court says about it?

4 A. Possibly.

5 Q. Were you asked to render any opinions
6 about a particular standard of care applicable to
7 the State defendants in this case?

8 MR. GREGORY: Objection. Question calls
9 for a legal conclusion.

10 Q. BY MS. JONES:

11 Q. You can answer.

12 A. I'm not sure what -- what you mean by
13 "standard of care."

14 Q. Okay. That's not a term that someone has
15 mentioned to you in this case?

16 A. I don't think so.

17 Q. And not something you were asked to talk
18 about and form expert opinions about?

19 MR. GREGORY: Objection. Vague and
20 ambiguous.

21 THE WITNESS: Repeat your initial
22 question, please.

23 Q. BY MS. JONES:

24 Q. Did anyone in this case ask you to form
25 any opinions about a standard of care applicable

1 time.

2 At any time?

3 MS. JONES: At any time.

4 THE WITNESS: What information have we
5 been provided about the case to date?

6 Q. BY MS. JONES:

7 Q. Correct.

8 A. We received a copy of the Complaint to
9 the State early on. We received the -- I don't
10 remember the proper terminology... when the State
11 tried to reject the case. I'm not sure what
12 that's called.

13 Q. Oh, the motion to dismiss.

14 A. Motion to dismiss, thank you.

15 Q. Uh-huh.

16 A. And then there was a rebuttal to the
17 motion to dismiss, maybe, if that's what it's
18 called.

19 And then we had the opportunity to talk
20 with the various patients and mother that we
21 discussed.

22 And then more recently we received a few
23 of the medical records, at least parts of medical
24 records of a few of the plaintiffs. That's all
25 that I recall right now.

1 **Q. Where did all that information come from?**
 2 **A.** It was all virtual. I believe it was all
 3 from Nate. I can't say that for positive.
 4 **Q. Okay. And then how -- or let me ask it**
 5 **this way: Do you know how it was determined which**
 6 **medical records you should receive?**
 7 **A.** I do not.
 8 **Q. Okay. Did you request all the medical**
 9 **records for the plaintiffs?**
 10 **A.** I am not even sure if I requested them,
 11 but said I would be glad to review them if they
 12 were available.
 13 **Q. Okay. And then someone provided you, at**
 14 **least, some partial medical records?**
 15 **A.** Correct.
 16 **Q. Correct?**
 17 **And you had no say in the scope or the**
 18 **time frame or the completeness of those records?**
 19 **A.** Correct.
 20 **Q. Do you know when you were provided the**
 21 **medical records for review?**
 22 **A.** It was fairly recently. Within the last
 23 four months, I would guess.
 24 **Q. When you review the medical records, did**
 25 **you have a sense about whether they were complete?**

1 **A.** They -- they appeared to be complete. I
 2 did not receive any sort of forwarding letter
 3 saying, you know, This is all of the
 4 hospitalizations and ER visits and -- and clinic
 5 visits for this particular patient.
 6 Sometimes you do receive that when you
 7 get a copy of medical records.
 8 **Q. Do you know whether the medical records**
 9 **you received were complete?**
 10 **A.** I do not.
 11 **Q. Did you ask?**
 12 **A.** I do not think I did.
 13 **Q. You provided an attachment to your report**
 14 **of references. I'm not going to make this an**
 15 **exhibit, but I'll show it to you. A list, I**
 16 **believe, of the articles that you relied on in**
 17 **forming your opinions in this case; is that**
 18 **correct?**
 19 **A.** That is correct.
 20 **Q. Were those articles materials that you**
 21 **obtained on your own, or were those things that**
 22 **Our Children's Trust provided to you?**
 23 **MR. GREGORY:** Objection. There is no
 24 evidence Our Children's Trust provided anything.
 25 **MS. JONES:** That's what I'm asking, Phil.

1 That's the question.
 2 **Q. BY MS. JONES:**
 3 **Q. Did Our Children's Trust provide it to**
 4 **you, or are those things that you obtained on your**
 5 **own?**
 6 **A.** My husband or I obtained on our -- on our
 7 own, yes.
 8 **Q. Okay. Did you review all of the**
 9 **materials that were provided to you for this case?**
 10 **A.** From Nate or...
 11 **Q. From -- yes. From Nate.**
 12 **A.** I did not -- I perused but did not read
 13 word for word everything that was provided. I
 14 read word for word the plaintiffs' complaints more
 15 than once, but the rest of that initial document
 16 and motion to dismiss, et cetera, I did not read
 17 word for word.
 18 **Q. Okay. Are you serving as an expert in**
 19 **any of the other lawsuits filed by Our Children's**
 20 **Trust?**
 21 **A.** No.
 22 **Q. Have you -- actually, never mind.**
 23 **You mentioned at the beginning of this**
 24 **deposition that you also testified in a tort-type**
 25 **case. What type of case was that? That you had**

1 **given a deposition before.**
 2 **When I asked you if you had given any**
 3 **depositions before today, you said you had been**
 4 **deposed in a tort case?**
 5 **A.** Yes. Just to clarify for me, I'm not
 6 sure what you are allowed to say about even a
 7 30-year-old case.
 8 **Q. Was it a patient of yours?**
 9 **A.** Yes.
 10 **Q. Okay. What was the type of injury?**
 11 **A.** Drug addiction and death.
 12 **Q. Okay. And were you the treating**
 13 **physician in that case?**
 14 **A.** Yes.
 15 **Q. Okay. Have you ever spoken to any**
 16 **employee of any of the defendant government**
 17 **agencies in this case about this lawsuit?**
 18 **A.** About this lawsuit? I don't think so.
 19 **Q. Were there any documents or other**
 20 **evidence that you would have liked to review in**
 21 **order to form your opinions in this case?**
 22 **A.** No.
 23 **Q. Were there any other people you would**
 24 **have liked to talk to in forming your opinions in**
 25 **this case?**

1 A. I don't -- I don't think it would have
2 changed my opinions to have been able to talk to
3 all of the plaintiffs or their patients. I -- I
4 wouldn't have minded talking to them or seeing all
5 the medical records, but I don't think it would
6 have changed opinions.

7 **Q. Other than Rikki Held, Georgianna
8 Fischer, and the mother whose name you can't
9 recall, have you talked to any other plaintiff or
10 one of the plaintiff's guardians in this case?**

11 A. I don't think so. We have done climate
12 work in Montana for well over a decade, so it's
13 possible that I could have talked to somebody not
14 in regards to this case.

15 **Q. Fair enough.
16 Is it fair to say that many of the facts
17 on which your opinions are based come from the
18 plaintiffs' complaint?**

19 A. Correct.

20 **Q. And would you agree with me that that
21 complaint was written by the plaintiffs' lawyers?**

22 **MR. GREGORY:** Objection. Question lacks
23 foundation.

24 **THE WITNESS:** I do not know who writes
25 the plaintiffs' complaint.

1 **As you sit here today, do you intend to
2 change your report -- or, excuse me, do you intend
3 to change your opinions before trial?**

4 A. I do not.

5 **Q. Your husband helped you write this
6 report; is that correct?**

7 A. My husband wrote sections, and I wrote
8 sections, and we both reviewed and edited the
9 other person's report.

10 **Q. If I handed you a copy of the report,
11 would you be able to tell me which sections you
12 authored and which sections he authored?**

13 A. Largely.

14 **Q. Okay. Let's go ahead and mark this.
15 This would be Exhibit 2.
16 (Exhibit No. 2 marked for identification.)**

17 **Q. BY MS. JONES:**

18 **Q. And so take all the time you need,
19 Dr. Byron, to review the report and refresh your
20 recollection.**

21 **But my question is going to be: Which
22 parts of this report were authored by you and
23 which parts were authored by your husband?**

24 **MR. GREGORY:** And just for the record, I
25 would state that the -- Exhibit 2 does not include

1 **Q. BY MS. JONES:**

2 **Q. Okay. Is your expert report accurate and
3 complete?**

4 A. Yes, it is accurate. There is hundreds
5 and probably thousands of articles on the affects
6 of climate change and air pollution and human
7 health, so certainly all of those articles are
8 not -- are not within there.

9 It's also possible that articles could
10 have been written in the last few months that we
11 haven't been aware of.

12 **Q. And is your report complete?**

13 **MR. GREGORY:** Objection. Asked and
14 answered.

15 **Q. BY MS. JONES:**

16 **Q. Does your report contain all of the
17 opinions that you have rendered in this case?**

18 A. I believe so.

19 **Q. Are those opinions full and final?**

20 A. Again, if there were evidence either
21 related to the health of the plaintiffs or new
22 medical research that's published in the near past
23 and near future that could alter the report.

24 **Q. Okay. As you sit here today, do you
25 intend to change -- excuse me.**

1 the attachments to the expert report.

2 **THE WITNESS:** I wrote the Roman Numeral
3 I, Education and Background, for Lori G. Byron.

4 And, again, because we edited each
5 other's sections, I'm sure there is -- there is
6 alterations of the way one of us wrote, so there
7 may be complete sentences within his section that
8 I wrote, et cetera.

9 Roman Numeral VI, A, B, and C was largely
10 written by me. And I'm pretty sure we both
11 contributed to the Conclusion and Basis and
12 Methodology, Roman Numeral III.

13 **Q. BY MS. JONES:**

14 **Q. So did your husband write the sections
15 labeled Roman Numeral IV and Roman Numeral V?**

16 A. Yes. He did the initial drafts that
17 we -- that we then edited, yes.

18 **Q. So your husband wrote the section that's
19 titled "Youth Are Disproportionately Harmed By
20 Climate Change," et cetera?**

21 A. Correct.

22 **Q. Is your husband a pediatrician also?**

23 A. No. He's a physician.

24 **Q. Okay. Other than you or your husband,
25 did anyone else assist in writing the report?**

1 A. No.
 2 **Q. Do you know what the legal age of**
 3 **majority is in Montana?**
 4 A. That's not a term that I use. Legal age
 5 for consent, I'm sure -- sorry.
 6 **Q. There is a statutory legal age of**
 7 **majority in Montana, do you know what that is?**
 8 A. That's not a term we use in medicine, I
 9 do not.
 10 **Q. Okay. Are there significant**
 11 **developmental differences between a 21-year-old**
 12 **and a 25-year-old?**
 13 A. Are there significant -- what kind of
 14 differences?
 15 **Q. Developmental differences --**
 16 A. Yes.
 17 **Q. -- between a 21-year-old and 25-year-old?**
 18 A. Yes.
 19 **Q. Okay. What are those?**
 20 A. The biggest one that I would point out
 21 would be brain development, which most people say
 22 isn't -- is still continuing up through easily the
 23 mid 20s. Lung development is also continuing,
 24 there wouldn't be -- there wouldn't be huge
 25 differences, but there could still be differences.

1 **Q. Are there significant developmental**
 2 **differences between an 18-year-old and a**
 3 **21-year-old?**
 4 A. Yes.
 5 **Q. What are those?**
 6 A. That would be the same.
 7 **Q. Significant brain developmental**
 8 **differences?**
 9 A. Yes.
 10 **Q. And lung developmental differences?**
 11 A. More significant brain and some lung,
 12 yes.
 13 **Q. Okay. Which plaintiffs in this case have**
 14 **experienced heat-related illnesses?**
 15 A. I do not recall without looking at the
 16 complaint.
 17 **Q. Which plaintiffs --**
 18 A. Or at --
 19 **Q. Oh, I'm sorry. Go ahead.**
 20 A. Or at our report, if you want me to...
 21 **Q. Yeah. Go ahead. Absolutely.**
 22 A. You asked about heat in particular?
 23 **Q. Yes.**
 24 A. Olivia, Jeffrey, Nathaniel, and Ruby are
 25 the ones we mentioned here with heat-related

1 physical health issues.
 2 **Q. And what are those?**
 3 A. For each of them?
 4 **Q. Correct.**
 5 A. And I -- I'm still not done, but...
 6 **MR. GREGORY:** I'm sorry. Were you not
 7 finished with your prior answer when she asked the
 8 full question?
 9 **THE WITNESS:** Well, I was finished with
 10 that sentence, that those four people had physical
 11 health issues related to heat.
 12 **Q. BY MS. JONES:**
 13 **Q. And what are those health issues for each**
 14 **of those plaintiffs?**
 15 A. The -- Olivia with her exercise-induced
 16 asthma, and worsening with heat. Again, anyone
 17 with respiratory issues -- respiratory issues tend
 18 to worsen with heat.
 19 So Jeffrey with his birth defect in his
 20 lungs is worsened by heat. His brother Nathaniel
 21 with his respiratory issues. And Ruby with her
 22 asthma.
 23 (Court reporter clarification.)
 24 **Q. BY MS. JONES:**
 25 **Q. And are you saying that asthma is a**

1 **heat-related injury -- or, excuse me, heat-related**
 2 **illness?**
 3 A. No. I'm saying that heat exacerbates
 4 asthma symptoms.
 5 **Q. Okay. But would you classify it as a**
 6 **heat-related illness?**
 7 A. No. I'm saying that -- that heat affects
 8 the asthma that you have.
 9 **Q. Okay. Which plaintiffs have cardiac**
 10 **diseases?**
 11 A. I don't recall if someone has a cardiac
 12 disease.
 13 **Q. Which plaintiffs have gastrointestinal**
 14 **diseases?**
 15 A. Illness or disease?
 16 **Q. Disease.**
 17 A. I don't recall gastrointestinal disease
 18 being mentioned. Most human beings suffer from
 19 gastrointestinal illnesses during the course of
 20 their childhood.
 21 **Q. Which plaintiffs have infectious diseases**
 22 **from spread of vectors?**
 23 A. That's not something I read about in the
 24 complaint.
 25 **Q. Okay. Which plaintiffs have adverse**

1 birth outcomes?

2 A. Well, Jeffrey has a birth defect called
3 pulmonary sequestration.

4 Q. Okay.

5 A. And a lot of neurodevelopmental birth
6 defects aren't noted until considerably later. So
7 it's possible that some people have
8 neurodevelopmental issues that have not yet been
9 diagnosed.

10 Q. You don't know that any of these
11 plaintiffs have any undiagnosed conditions like
12 that, do you?

13 A. I don't think so.

14 Q. Which plaintiffs have experienced heat
15 rash?

16 A. I would have to look. There was at least
17 one.

18 Q. And I'm looking at page 6 of your report,
19 if that helps. It's the second paragraph under
20 "Health Impacts Caused By Extreme Heat and Heat
21 Waves."

22 A. Uh-huh.

23 Q. Heat illnesses range from -- okay...

24 A. I know that at least one plaintiff had
25 rashes related to heat, and I do not recall which

1 one. And I don't know if it is in this report.

2 Q. Which plaintiffs have experienced
3 miliaria? Excuse my Latin.

4 A. Right. And that would be a -- that can
5 be a heat-related rash.

6 At this time, I am not finding it in this
7 report, but I know it's in the complaint of the --
8 of the plaintiffs.

9 Q. Okay. Which plaintiffs have experienced
10 muscle cramps?

11 A. Again, in my report -- in our report to
12 the court, I do not see it mentioned. And I do
13 not recall if someone mentioned muscle cramps in
14 the complaint.

15 Q. Which clients have experienced
16 heatstroke?

17 A. I do not believe any of them have
18 experienced heatstroke.

19 Q. Which plaintiffs have experienced kidney
20 or liver injury?

21 A. There is a couple different issues with
22 kidneys and heat. When you have heatstroke, you
23 can develop severe acute kidney illness. Repeated
24 exposures to heat, and especially working or
25 exercising in the heat, can actually damage our

1 kidneys.

2 Q. Which of the plaintiffs in this lawsuit
3 have experienced kidney or liver injury?

4 A. None of them have it in the complaint.

5 Q. Which of the plaintiffs have experienced
6 decreased cognition?

7 A. Georgianna noticed -- notes symptoms that
8 would be related to decreased cognition, such as
9 dizziness and lightheadedness. And I don't recall
10 if anyone else did.

11 However, all human beings -- at least the
12 research indicates that all human beings' ability
13 to think is affected by the heat, to heat -- to
14 think and perform on -- on tests and use
15 judgement.

16 Q. Well, what data do you have that these
17 plaintiffs have experienced that?

18 A. We have -- I'm pretty sure it was Rikki
19 who mentions having 110-degree days of heat on
20 her -- the ranch homeland where she lives.

21 Q. And did that affect her cognition?

22 A. It would have -- it would have affected
23 her cognition, whether she knew it or not.

24 Q. Do you know the last time Rikki was at
25 her family ranch?

1 A. I do not.

2 Q. Which --

3 MR. GREGORY: Excuse me, Counsel. We've
4 been going about an hour. When you get to a
5 convenient point, can we break?

6 BY MS. JONES: Yeah. Can I get about
7 five more minutes?

8 Q. BY MS. JONES:

9 Q. Which plaintiffs have experienced
10 emergency room visits due to extreme heat?

11 A. Again, I'm not sure. I don't have all
12 the medical records of all the clients, and the
13 ones that I do have, I'm not sure if that's all of
14 their medical records.

15 The kids who went into the emergency room
16 for various respiratory -- that -- that have ER
17 visits from respiratory illnesses, if those occur
18 during times of heat. And, again, I'm not sure
19 which ones did and which ones didn't.

20 Q. Okay. Which plaintiffs have experienced
21 bacterial enteritis?

22 A. As far as I recall, that was not
23 mentioned in the complaint.

24 Q. Which plaintiffs have experienced otitis
25 media or externa?

1 A. Media.
2 Again, that's an incredibly common
3 condition in children. It tends to -- not to be
4 mentioned very often, and I don't recall in the
5 medical records that we saw if any of the kids had
6 otitis.

7 **Q. Okay. Which plaintiffs have experienced
8 preterm birth?**

9 A. I don't -- I don't recall in the
10 complaint that anyone noticed -- anyone noted that
11 their child was born preterm or that they were
12 born preterm.

13 **Q. Which plaintiffs have experienced low
14 birth weight?**

15 A. I do not know because I haven't seen all
16 the medical records.

17 **Q. Which plaintiffs have experienced
18 congenital heart defects?**

19 A. I do not recall that being mentioned in
20 the complaint.

21 **Q. Okay. This is a good time for a break.**

22 **MR. GREGORY:** Thank you.

23 (A recess was taken.)

24 **Q. BY MS. JONES:**

25 **Q. Dr. Byron, did you perform a**

1 **Q. Okay. What was the disposition of that
2 case?**

3 A. All of our cases with Indian health
4 Service go through US District Court, and
5 they're -- they look at an expert -- they --
6 they -- not hire, they have someone else review
7 the case. And found it to be unfounded. And the
8 Montana Medical/Legal Panel also reviews all
9 cases, and they found it to be unfounded. But as
10 is happened every single time that I'm aware of
11 since I was with -- in Indian Health Service in
12 this area, they settled out of court for a very
13 small amount.

14 **Q. Okay. And that was a decision, I'm
15 assuming, that was made by your professional
16 liability insurance carrier?**

17 A. The federal government, yes.

18 **Q. Oh, is IHS insured through the federal
19 government?**

20 A. Yes.

21 **Q. Okay. Is that the only case in which you
22 have been a party?**

23 A. As far as I recall.

24 **Q. Okay. We talked a little bit about the
25 sections of your report that were authored by you**

1 **psychological examination of any of the plaintiffs
2 for this case?**

3 A. Not a formal examination.

4 **Q. Okay. I forgot to ask you, have you ever
5 been a party to a lawsuit?**

6 A. Define "party."

7 **Q. Where you were either the one being sued
8 or the one suing someone else, or if you were a
9 criminal defendant in a case.**

10 A. I mean, again, I've done a lot of -- of
11 child abuse work.

12 **Q. Uh-huh.**

13 A. And then the tort claim, I'm not sure if
14 you call that suing.

15 **Q. Were you a witness in the tort claim, or
16 were you a party to that case?**

17 A. Again, define "party."

18 **Q. Were you the one being sued in that case?**

19 A. I'm the one to whom a tort claim was
20 filed, yes.

21 **Q. Were you the injured party, or were you
22 the one accused of --**

23 A. Accused of --

24 **Q. -- negligence?**

25 A. -- negligence, yeah.

1 **and those that were authored by your husband.**

2 **As far as you are aware, are there
3 opinions contained in your report about which you
4 will testify in this case and different opinions
5 about which your husband will testify?**

6 A. I'm sorry. Are there opinions about...

7 **Q. Do you know which opinions in your report
8 you will testify about and which opinions your
9 husband will testify about?**

10 A. By "opinions," do you mean what -- the
11 sections of the report?

12 **Q. Well, sure. If that's how you understand
13 it.**

14 A. I -- I -- I would say I know the end
15 sections that I initially authored better than I
16 do the other sections, as far as exactly what's in
17 here, but I think we're both pretty comfortable
18 testifying on both.

19 **Q. Okay. As far as you know, do you and
20 your husband intend to testify about the same
21 things?**

22 A. I would guess that depends on what we're
23 asked in court.

24 **Q. Do you have any opinions that are
25 different from those of your husband in this**

1 report?
 2 A. Not in this report.
 3 Q. Yeah. Good point.
 4 Okay. And as far as you know, are any of
 5 his opinions for this case different from the
 6 opinions that you have rendered for this case?
 7 A. Not that I'm aware of.
 8 Q. Okay. Would you agree with me that
 9 Montana has a highly variable climate?
 10 A. I would agree with you that we have
 11 highly variable weather patterns.
 12 Q. Yeah.
 13 We have cold winters and hot summers,
 14 correct?
 15 A. Sometimes.
 16 Q. I mean, compared to Hawaii, we don't have
 17 a temperature of 85 degrees year round, right?
 18 A. Right. We have a variable weather
 19 system, yes.
 20 Q. Correct.
 21 Do you know what percentage of global
 22 greenhouse gas emissions come from Montana?
 23 A. I do not.
 24 Q. Are you familiar with the IQ Air report
 25 on world air quality?

1 A. That's not a site that I use very often.
 2 Q. Okay. Are you familiar with the report?
 3 Have you seen it ever?
 4 A. No. We tend to do the State of the Air
 5 Report from the American Lung Association more
 6 than --
 7 Q. Okay.
 8 A. -- more than --
 9 Q. Would you agree with me that Montana has
 10 some of the best air quality in the world?
 11 A. No.
 12 Q. Okay. I noticed in your report that you
 13 say that, Children born in 2020 are estimated to
 14 experience a two-to-sevenfold increase in extreme
 15 weather events... compared with those born in
 16 1960.
 17 Is that one of your opinions in this
 18 case?
 19 A. It is.
 20 Q. Isn't it true that extreme weather events
 21 in Montana were actually worse in Montana in the
 22 first half the 20th Century, according to the
 23 National Oceanic and Atmospheric Administration?
 24 A. I'm not aware of that.
 25 Q. Okay. Did you know that the hottest

1 temperatures ever recorded in Montana were in 1893
 2 and 1937?
 3 A. I am not aware of that.
 4 Q. Did you know that 1934 was one of
 5 Montana's record hottest years?
 6 A. I recall that there was one year back in
 7 the mid 20th Century. I wouldn't recall which
 8 one.
 9 Q. Did you know that Montana's record driest
 10 year was 1931?
 11 A. That would make sense, given the Dust
 12 Bowl, but no.
 13 Q. Okay. Do you know that Montana's wettest
 14 year was 1927?
 15 A. No.
 16 Q. Do you know Montana's precipitation
 17 record for a 24-hour period was in 1921?
 18 A. No.
 19 Q. Did you know that Montana's worst floods
 20 occurred in 1908, 1948, 1964, 1978, and 2011?
 21 A. I know about 2011.
 22 Q. When did you move to Montana?
 23 A. 1988.
 24 Q. You'd agree with me that anthropogenic
 25 climate change wasn't a factor for those years,

1 wouldn't you?
 2 MR. GREGORY: Objection. Vague and
 3 ambiguous.
 4 Q. BY MS. JONES:
 5 Q. You can answer.
 6 A. Anthropogenic climate change began in the
 7 19th Century with the initiation of the Industrial
 8 Revolution. It has amplified throughout time.
 9 Q. Did anthropogenic climate change begin in
 10 Montana in the 19th Century?
 11 A. Anthropogenic climate change for the
 12 globe began in the mid 19th Century.
 13 Q. What year did Montana become a state?
 14 A. It was around 1889, but I'm not sure
 15 exactly. I just remember the hundred-year
 16 celebration.
 17 Q. Do you know the degree to which Montana
 18 was contributing to anthropogenic climate change
 19 at statehood?
 20 A. No.
 21 Q. You would agree with me that there are
 22 substantial year-to-year variabilities in
 23 temperature and precipitation in Montana, wouldn't
 24 you?
 25 A. Yes.

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1 **Q. The lowest precipitation decade in**
 2 **Montana was the 1930s; were you aware of that?**
 3 A. Again, from your previous question, that
 4 was the Dust Bowl era. But I'm not sure the exact
 5 years.
 6 **Q. Do you dispute that the worst wildfire in**
 7 **Montana occurred in 1910?**
 8 A. I do not know.
 9 (Court reporter clarification.)
 10 **Q. BY MS. JONES:**
 11 **Q. Would you agree with me that the**
 12 **plaintiffs' ancestors have experienced worse**
 13 **climate extremes in Montana than the plaintiffs?**
 14 A. No, I would not agree with that.
 15 **Q. Would you agree with me that people**
 16 **living in the 1910s, '20s, and '30s didn't have**
 17 **air conditioning or air filtration systems?**
 18 A. I think that would be correct.
 19 **Q. Would you agree with me that they would**
 20 **have greater exposure to extreme heat and smoke**
 21 **with less ability to mitigate it than these**
 22 **plaintiffs?**
 23 A. I'm sorry. Repeat your question.
 24 **Q. Would you agree with me that people**
 25 **living in the 1910s, '20s, and '30s would have**

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1 **greater exposure to extreme heat and smoke with**
 2 **less ability to mitigate those things?**
 3 A. I would agree that they have had less
 4 ability to mitigate those things. I'm not sure
 5 that they were -- if they were exposed to more.
 6 **Q. Would you agree with me that we can rely**
 7 **on data from the National Oceanic and Atmospheric**
 8 **Administration?**
 9 A. Yes.
 10 **Q. Would you agree with me that forest fires**
 11 **would still occur even if Montana eliminated all**
 12 **greenhouse gas emissions?**
 13 A. Absolutely.
 14 **Q. They are a natural phenomenon, correct?**
 15 A. They are a natural phenomenon with
 16 triggers.
 17 **Q. How do you heat your home?**
 18 A. We are living at a friend's house right
 19 now.
 20 **Q. Oh, okay. Do you live in Red Lodge?**
 21 A. We live in Crow Agency.
 22 **Q. Oh, you do? Okay. For some reason I**
 23 **thought you were in Red Lodge. I don't know where**
 24 **I got that information.**
 25 A. We are building a home.

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1 **Q. In Red Lodge?**
 2 A. Uh-huh.
 3 **Q. Okay. A "yes"? I'm sorry, I just need**
 4 **a verbal --**
 5 A. We are building a home in Red Lodge,
 6 correct.
 7 **Q. Okay. How do you plan to heat the home**
 8 **that you are building in Red Lodge?**
 9 A. It has very minimal electric heat, but
 10 98, 99 percent of the heat will be based on the
 11 net zero archistructure of the house.
 12 **Q. So what does that mean, I guess?**
 13 A. It will maintain heat and will not
 14 require a heat source.
 15 **Q. Oh, I gotcha.**
 16 A. Except in the coldest of weather.
 17 **Q. Would you agree with me that many**
 18 **Montanans use wood fireplaces for heat, as a heat**
 19 **source?**
 20 A. I know a number of them do. I don't know
 21 percentagewise.
 22 **Q. Okay. Would you agree with me that wood**
 23 **smoke in the winter is a bigger contributor to air**
 24 **pollution than propane, natural gas, or electric**
 25 **heat?**

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1 A. In the area directly around your home, if
 2 you heat with a wood stove, the air right around
 3 your house is going to be more affected than
 4 someone who has propane or -- or another form of
 5 heat.
 6 But if you look at the emissions from the
 7 power plants that are creating the electricity or
 8 you look at the emissions from the propane and the
 9 pipelines, et cetera, that brought the propane to
 10 your house, I am not sure about that.
 11 **Q. Okay. When you worked at Indian Health**
 12 **Service, would be it be fair to say that you saw**
 13 **some of the most impoverished living conditions in**
 14 **the state?**
 15 A. I -- I would say I saw significant
 16 impoverishment, possibly some of the worst in the
 17 state.
 18 **Q. Okay. Is it true that the Crow Nation**
 19 **has some of the largest coal and coalbed methane**
 20 **deposits in the region?**
 21 A. They do for coal, and I know they have
 22 significant methane. I'm not sure if it's --
 23 again, if it's significantly greater than areas
 24 surrounding.
 25 **Q. Okay. From an economic standpoint, if**

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1 the Crow Tribe were to develop those natural
 2 resources and could generate revenue to help bring
 3 tribal members out of poverty and provide better
 4 opportunities for those families and communities,
 5 should they be allowed to have that opportunity?
 6 MR. GREGORY: Objection. Incomplete
 7 hypothetical.
 8 THE WITNESS: The people in this room
 9 probably know better than I the legalities around
 10 Indian reservations, which are their own entities
 11 in many ways. But I believe there are many other
 12 ways to bring better, more consistent, and more
 13 long-lasting economic opportunities to the tribe.
 14 Q. BY MS. JONES:
 15 Q. You don't think the tribe should develop
 16 coal or coalbed methane?
 17 A. I don't think any more development of
 18 fossil fuel should occur.
 19 Q. You are not being paid for your expert
 20 services in this case, correct?
 21 A. That is correct.
 22 Q. Is anyone making a donation to Montana
 23 Health Professionals For a Healthy Climate in
 24 exchange for your expert services in this case?
 25 A. Not that I know of.

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1 Q. Are you paid a salary from that
 2 organization?
 3 A. No.
 4 Q. Do you want the plaintiffs to win this
 5 case?
 6 A. Yes.
 7 Q. Do you view yourself as an advocate for
 8 the plaintiffs?
 9 A. I'm an advocate for any -- for any action
 10 on climate. In this particular case, I'm an
 11 expert witness.
 12 Q. What did you do to prepare for your
 13 deposition today?
 14 A. I reread the expert report, and I looked
 15 at some of the references, and I looked at the
 16 brief notes I had made regarding the -- the
 17 encounters -- the Zoom encounters we had with the
 18 two plaintiffs and one mother. And --
 19 Q. Were those recorded?
 20 A. Not that I'm aware of.
 21 Q. Did you talk to anyone from Our
 22 Children's Trust to prepare for your deposition
 23 today?
 24 A. I talked with Nate and with Phil
 25 yesterday.

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1 Q. And how long did you meet with them?
 2 A. Counting small talk? At least an hour.
 3 Q. Did they show you any --
 4 A. I didn't keep track.
 5 Q. I'm sorry. I didn't mean to interrupt
 6 you.
 7 A. No. I -- I didn't keep track. So...
 8 Q. Okay. Did they show you any documents to
 9 prepare you for your deposition today?
 10 A. At least one of them had a folder that
 11 looked like that, or that actual folder with them.
 12 And I know that this (indicating) was in there, as
 13 was the original complaint, and I believe the
 14 motion to dismiss was in there. And an academic
 15 article that I had written was in there, that's in
 16 my CV.
 17 Q. Okay. What date was your report
 18 complete?
 19 A. This report?
 20 Q. Yes.
 21 A. Pretty recently, but I don't recall. I
 22 think it was around September 3rd -- yeah.
 23 September 30th.
 24 Q. When did you provide it to Our Children's
 25 Trust?

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1 MR. GREGORY: Objection --
 2 THE WITNESS: I provided it to Nate --
 3 MR. GREGORY: Objection. Assumes facts
 4 not in evidence. Lacks foundation.
 5 Q. BY MS. JONES:
 6 Q. Did you provide a copy of your report to
 7 Our Children's Trust --
 8 A. I --
 9 Q. -- for purposes of this lawsuit?
 10 A. I provided a copy to Nate.
 11 Q. When did you provide it to Nate?
 12 A. The actual "final" final copy? This one
 13 here?
 14 Q. How many are there?
 15 A. Well, there was -- it was written before
 16 the -- when we were supposed to get deposed
 17 several months ago.
 18 Q. This report was written several months
 19 ago?
 20 A. Yes. And then it was mildly edited, like
 21 you always do with editing. And I'm pretty -- I'm
 22 pretty sure it was since the time that we
 23 originally wrote it that we saw some of the
 24 medical records.
 25 Q. Did that change any of your opinions from

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<p>1 the draft that you had previously written? 2 A. It did not. 3 Q. Did this report that we -- 4 A. We -- I'm sorry. 5 We -- 6 Q. Go ahead. 7 A. -- we included in here the sentence or so 8 that we had seen the records of -- the ones that 9 we had seen the records of, on page 3. 10 Q. Other than Exhibit 2 that you have in 11 front of you, how many other drafts of your report 12 exist? 13 A. I -- I think just the one that we were 14 planning to use when we were supposed to get 15 deposed several months ago. 16 Q. Okay. And as far as you are aware, does 17 Exhibit 2 substantively differ from that first 18 draft? 19 A. No. 20 Q. When did you provide the document that 21 we've marked as Exhibit 2 to Nate? 22 A. I -- I don't recall. It -- at some point 23 September 30th or before. I would assume within 24 the last week or two before then. 25 Q. Did anyone from Our Children's Trust ask</p>	<p>1 A. No. 2 Q. And has your board certification ever 3 been suspended or revoked or lapsed? 4 A. No. 5 Q. I think I'm pretty close to done, 6 Dr. Byron, so let's just take a quick break so I 7 can review my notes and make sure I didn't miss 8 anything. 9 (A recess was taken.) 10 Q. BY MS. JONES: 11 Q. I just have a couple more questions for 12 you, Dr. Byron. 13 With respect to the case in which you 14 were a party, I understand you said it involved a 15 drug overdose and a death? 16 A. A drug addicted person in withdrawal -- 17 Q. Okay. 18 A. -- and death. 19 Q. What -- what were the allegations of the 20 lawsuit? What were they saying that you did 21 wrong? 22 A. This was 30 years ago. That the patient 23 would have -- wouldn't have died if he had been in 24 a private hospital. 25 Q. Was -- so was this when you were employed</p>
<p>Page 66</p> <p>1 you to change any of your draft reports at all? 2 A. I think there were a couple minor edits, 3 the same kind of edits I would do on my husband's 4 writing or vice versa, to make something -- a 5 sentence sound more complete. That's all I 6 recall. 7 Q. Did they ask you to change any of your 8 opinions? 9 A. No. 10 Q. Have you ever had any disciplinary 11 actions taken against your medical license? 12 A. That would have been the tort claim that 13 we referred to before. 14 Q. Okay. 15 A. Around 1990. 16 Q. And I guess my question is a little 17 different. So I understand that was like a 18 malpractice claim. 19 But like has anyone ever filed something 20 with a regulatory board saying that you should be 21 disciplined or that your license should be 22 suspended? 23 A. Not that I'm aware of. 24 Q. Okay. Has your medical license ever been 25 suspended or revoked?</p>	<p>Page 68</p> <p>1 with Indian Health Service? 2 A. Yes. 3 Q. Okay. And what were they saying you 4 should have done that wasn't done? 5 A. Nothing. There was nothing specific. 6 Q. Did you say that case was filed in 7 federal court? 8 A. US District Court, yes. 9 Q. Okay. Okay. Those are all the questions 10 I have for you today. Thank you very much for 11 your time. I appreciate it. 12 MR. GREGORY: No questions. Read and 13 sign. 14 (The deposition was concluded at 10:33 a.m. 15 Witness excused; signature reserved.) 16 17 18 19 20 21 22 23 24 25</p>

DEPONENT'S CERTIFICATE

I, LORI G. BYRON, MD, the deponent in the foregoing deposition, DO HEREBY CERTIFY, that I have read the foregoing - 68 - pages of typewritten material and that the same is, with any changes thereon made in ink on the corrections sheet, and signed by me, a full, true and correct transcript of my oral deposition given at the time and place hereinbefore mentioned.

LORI G. BYRON, MD, Deponent

Subscribed and sworn to before me this _____ day of _____, 2022.

PRINT NAME: _____
Notary Public, State of
Montana
Residing at: _____
My commission expires: _____

JH - Held v. State of Montana

C E R T I F I C A T E

STATE OF MONTANA)
COUNTY OF YELLOWSTONE) : ss

I, Jacqueline A. Hill, court reporter and Notary Public for the State of Montana, residing in Billings, Montana, do hereby certify:

That I was duly authorized to and did swear in the witness and report the deposition of LORI G. BYRON, MD in the above-entitled cause; that the foregoing pages of this deposition constitute a true and accurate transcription of my stenotype notes of the testimony of said witness, all done to the best of my skill and ability; that the reading and signing of the deposition by the witness have been expressly reserved.

I further certify that I am not an attorney nor counsel of any of the parties, nor a relative or employee of any attorney or counsel connected with the action, nor financially interested in the action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal on this the 22nd day of October, 2022.

<p style="text-align: center;">A</p>	<p>62:7,9 affect (6) 25:2,6,11,14,18; 47:21 affected (3) 47:13,22;60:3 affects (7) 11:3;16:18;25:23; 28:24;29:3;38:5;44:7 afford (1) 12:7 again (16) 5:24;6:1;8:8;12:2,6; 38:20;40:4;43:16; 46:11;48:11,18;49:2; 50:10,17;57:3;60:23 against (1) 66:11 age (3) 41:2,4,6 agencies (1) 36:17 Agency (3) 8:20,23;58:21 ago (7) 4:7,17;13:7;64:17, 19;65:15;67:22 agree (22) 11:10;14:14;18:9,16; 19:6;29:21;37:20;53:8, 10;54:9;55:24;56:21; 57:11,14,15,19,24; 58:3,6,10;59:17,22 ahead (4) 39:14;42:19,21;65:6 air (11) 11:15;15:1;38:6; 53:24,25;54:4,10; 57:17,17;59:23;60:2 akin (1) 16:5 alcohol (1) 16:7 align (1) 19:13 allegations (1) 67:19 allowed (2) 36:6;61:5 Along (1) 20:12 alter (1) 38:23 alterations (1) 40:6 always (1) 64:21 ambiguous (3) 30:20;31:8;56:3 ambulance (1) 18:5 American (1) 54:5</p>	<p>Americans (1) 12:25 among (1) 12:25 amount (2) 24:22;51:13 amplified (1) 56:8 ancestors (1) 57:12 and/or (1) 14:24 answered (2) 28:21;38:14 anthropogenic (5) 55:24;56:6,9,11,18 anthropology (1) 8:2 anxiety (2) 9:15;15:3 appeared (1) 34:1 applicable (2) 30:6,25 appreciate (1) 68:11 archistruecture (1) 59:11 area (5) 7:23;8:7;21:17; 51:12;60:1 areas (4) 7:7,8,11;60:23 around (6) 56:14;60:1,2;61:9; 63:22;66:15 article (1) 63:15 articles (5) 34:16,20;38:5,7,9 arts (1) 6:25 aspect (3) 21:1,2;28:24 aspects (1) 21:19 assessment (2) 19:2,8 assignment (6) 20:8;21:11;22:23; 27:14,19;31:15 assist (1) 40:25 Association (1) 54:5 assume (2) 6:10;65:23 Assumes (1) 64:3 assuming (1) 51:15 asthma (5) 43:16,22,25;44:4,8</p>	<p>at_ (1) 0:22 atmospheric (3) 8:15;54:23;58:7 attachment (1) 34:13 attachments (1) 40:1 attention (1) 9:17 attorney (1) 28:2 attorneys (1) 24:21 authored (7) 39:12,12,22,23; 51:25;52:1,15 Autism (1) 9:19 available (1) 33:12 aware (10) 38:11;51:10;52:2; 53:7;54:24;55:3;57:2; 62:20;65:16;66:23</p>	<p>biggest (2) 10:16;41:20 birth (6) 43:19;45:1,2,5;49:8, 14 births (3) 12:16,22,25 bit (2) 5:16;51:24 board (3) 14:3;66:20;67:2 border (1) 8:25 born (4) 49:11,12;54:13,15 both (5) 10:5;39:8;40:10; 52:17,18 Bowl (2) 55:12;57:4 brain (3) 41:21;42:7,11 break (5) 6:14;16:22;48:5; 49:21;67:6</p>
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EXHIBIT 10

*Rikki Held, et al. v
State of Montana, et al.*

*Robert G. Byron, MD, MPH
October 11, 2022*

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Min-U-Script® with Word Index

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1 MONTANA FIRST JUDICIAL DISTRICT COURT
 2 LEWIS AND CLARK COUNTY

3 RIKKI HELD, ET AL.,
 4 PLAINTIFFS,
 5 VS. CAUSE NO.
 6 STATE OF MONTANA, ET AL., CDV-2020-307
 7 DEFENDANTS.

10 DEPOSITION UPON ORAL EXAMINATION OF
 11 ROBERT G. BYRON, MD, MPH

16 BE IT REMEMBERED, that the deposition
 17 upon oral examination of ROBERT G. BYRON, MD, MPH,
 18 appearing at the instance of Attorneys for
 19 Defendants, was taken at the offices of Fisher
 20 Court Reporting, 2711 First Avenue North,
 21 Billings, Montana on Tuesday, October 11, 2022,
 22 beginning at the hour of 11:02 a.m., pursuant to
 23 the Montana Rules of Civil Procedure, before
 24 Jacqueline A. Hill, Court Reporter and Notary
 25 Public.

Page 2

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Page 3

1 I N D E X
 2
 3 EXAMINATION OF ROBERT G. BYRON, MD, MPH BY: PAGE:
 4 EXAMINATION BY MS. JONES 4
 5
 6 E X H I B I T S
 7 DEPOSITION EXHIBITS: PAGE:
 8 Exhibit No exhibits marked for
 9 identification.
 10
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1 ROBERT G. BYRON, MD, MPH,
 2 having been first duly sworn, testified upon his
 3 oath as follows:
 4 EXAMINATION
 5 BY MS. JONES:
 6 Q. Good morning, Dr. Byron. We met just
 7 before this deposition. My name is Emily Jones,
 8 and I represent the defendants in this litigation.
 9 You and I have never met before this
 10 deposition; is that correct?
 11 A. That is correct, yes.
 12 Q. Have you ever been deposed before?
 13 A. To my knowledge -- not that I remember,
 14 no.
 15 Q. Okay. Have you ever served as an expert
 16 witness in any case before?
 17 A. I have not.
 18 Q. I talked with your wife, Lori, a little
 19 bit about the extent to which you each
 20 participated in drafting the expert report that
 21 we've marked as Exhibit 2.
 22 Go ahead and take a look at that, if you
 23 would.
 24 Are there any opinions in that report
 25 that your wife would not be able to testify about,

1 that only you would either be qualified to testify
2 about or have the knowledge to testify about?

3 A. Not to my knowledge. I think she's --

4 Q. She could testify about all the opinions
5 that are rendered in that report?

6 A. I believe so, yes.

7 Q. What expert services were you asked to
8 provide for this case?

9 A. I -- we were asked to provide opinions
10 relative to the impacts of climate change.

11 MR. GREGORY: Excuse me. Sorry to
12 interrupt.

13 (Technical difficulties.)

14 BY MS. JONES:

15 Q. Let's start over with that question,
16 Dr. Byron.

17 What were you asked to do for this case?

18 A. I -- we were asked to provide expert
19 testimony or opinions relative to the impacts of
20 climate change on the health of the plaintiffs and
21 children and people in Montana.

22 Q. Were you asked to do anything different
23 than what your wife was asked to do for this case?

24 A. No.

25 Q. Have you -- have you personally conducted

1 A. I believe so.

2 Q. Do you recall what those questions were?

3 A. No. I just remember three or four or
4 five questions.

5 Q. Did you review all the information that
6 was provided to you?

7 A. Yes.

8 Q. Have you reviewed any medical records of
9 any of the plaintiffs in this case?

10 A. Yes. I have reviewed some of the medical
11 records of some of the plaintiffs.

12 Q. Do you know which ones?

13 A. I -- I believe it's in the report. I
14 would have to look at that. I do not recall
15 specifically at this time.

16 (Court reporter clarification.)

17 MR. GREGORY: Excuse me. Just slow down
18 a little bit.

19 THE WITNESS: Okay.

20 BY MS. JONES:

21 Q. Have you served as an expert witness in
22 any of the other lawsuits filed by Our Children's
23 Trust?

24 A. No, I have not.

25 Q. Do you intend to?

1 any research studies regarding the impacts of
2 climate change on Montana children?

3 A. No, I have not.

4 Q. When were you first contacted about this
5 case?

6 A. I don't recall.

7 Q. How did you find out about this case?

8 A. We were contacted.

9 Q. By whom?

10 A. By Nate Bellinger.

11 Q. And he asked you to serve as an expert
12 witness in this case?

13 A. Yes.

14 Q. Okay. Do you know how Nate found you
15 guys or...

16 A. I -- I do not.

17 Q. Okay. What information were you provided
18 in order to form your expert opinions in this
19 case?

20 A. As best I recall, we were -- were
21 provided copies of the complaint itself, which we
22 had the opportunity to -- to review. And I
23 believe there was a list of some general
24 questions.

25 Q. Was that a written list?

1 A. No, I --

2 Q. Or have they asked you to?

3 A. No, I have not been asked to.

4 Q. Have you spoken to any employee of any
5 defendant government agency about this lawsuit?

6 A. I have not.

7 Q. Unlike your wife, you are not a
8 pediatrician; is that correct?

9 A. That is correct.

10 Q. Do you have a degree or have you had any
11 professional experience in physics?

12 A. No professional experience. I took
13 physics as an undergraduate in college.

14 Q. Okay.

15 A. That's about the extent of it.

16 Q. Same question for meteorology?

17 A. No. And same answer as -- some course as
18 an undergraduate, and as a Naval Officer, had some
19 experience, but not at a professional level, no.

20 Q. Would you consider yourself an expert in
21 meteorology?

22 A. No, absolutely not.

23 Q. How about anthropology?

24 A. No.

25 Q. How about climatology?

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1 A. No.
 2 **Q. How about atmospheric sciences?**
 3 A. No. Not an expert at all. Passing
 4 acquaintance from self-education and learning, but
 5 only passing acquaintance.
 6 **Q. Sure.**
 7 A. Not an expert.
 8 **Q. Are you an expert in any other earth**
 9 **sciences?**
 10 A. I am not.
 11 **Q. Did you conduct any medical examinations**
 12 **of any of the plaintiffs?**
 13 A. No, I did not.
 14 **Q. Did you conduct a psychological**
 15 **examination of any of the plaintiffs?**
 16 A. No, I did not do any formal psychological
 17 evaluations of any of the plaintiffs.
 18 **Q. Have you talked with any of the**
 19 **plaintiffs?**
 20 A. Yes.
 21 **Q. Which ones?**
 22 A. Again, I would -- I don't recall. I
 23 believe that's entered into the report, and would
 24 have to refresh my memory in that regard.
 25 **Q. Okay. And you can feel free to refer to**

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1 **your report at any time.**
 2 As you sit here today, do you recall the
 3 **names of the plaintiffs that you spoke with?**
 4 A. I don't specifically.
 5 **Q. You have made no diagnoses or treatment**
 6 **plans regarding any of the plaintiffs in this**
 7 **lawsuit; is that correct?**
 8 A. That is correct. No diagnoses and
 9 treatment plans relative to any of the plaintiffs.
 10 **Q. Is it fair to stay that many of the facts**
 11 **on which your expert opinions are based come from**
 12 **the complaint that the plaintiffs filed in this**
 13 **case?**
 14 A. Is -- my and our opinions are based on
 15 experience and our expertise relative to the
 16 health impacts on people, especially children, of
 17 air pollution and climate change. Having reviewed
 18 some of -- or talked with some of the plaintiffs
 19 and reviewed some of their medical records, there
 20 is some overlap, yes.
 21 **Q. And would you agree with me that a lot of**
 22 **the facts about those impacts on these particular**
 23 **plaintiffs come from the complaint?**
 24 A. I can -- I can -- I am hesitating -- you
 25 know, I have a little bit of a concern about the

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1 word in -- in that having -- having looked at the
 2 complaints -- at the complaint and -- and looked
 3 at those, but the facts are based on scientific
 4 evidence and medical experience.
 5 **Q. Would you agree with me that you cite to**
 6 **the complaint on page 6 of your report?**
 7 A. Yes.
 8 **Q. Page 7?**
 9 A. I would agree -- agree with that.
 10 **Q. You also cite to it repeatedly on page 7?**
 11 A. Yes, we do. That's --
 12 **Q. Repeatedly on page 8?**
 13 A. Agreed. That is true, I agree.
 14 **Q. Again, repeatedly on page 9?**
 15 A. Yes, I...
 16 **Q. Repeatedly on page 10?**
 17 A. Agreed.
 18 **Q. Repeatedly on page 14?**
 19 A. Agreed.
 20 **Q. Do you know whether at trial your**
 21 **testimony will differ in any way from your wife's**
 22 **testimony?**
 23 **MR. GREGORY:** Objection. Question calls
 24 for speculation.
 25 **BY MS. JONES:**

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1 **Q. The question is: Do you know whether at**
 2 **trial you will be testifying differently than your**
 3 **wife in any way?**
 4 **MR. GREGORY:** Same objection.
 5 **THE WITNESS:** I do not -- I would not
 6 expect it to. My opinion is -- opinions are
 7 included in the report that you have a copy of
 8 that has been submitted.
 9 **BY MS. JONES:**
 10 **Q. Why didn't you draft a separate expert**
 11 **report in this case from your wife's?**
 12 A. Well, we've been working together in
 13 climate change and health issues for many years.
 14 We have learned to work together and learn from
 15 each other, and are better together than we are
 16 separately.
 17 **Q. In which ways are you better together**
 18 **than you are separately?**
 19 A. Because we share ideas and analyze things
 20 together, so we think that builds strength rather
 21 than getting just one opinion, which we feel is
 22 stronger.
 23 **Q. Okay.**
 24 A. It comes with many years experience of
 25 working together.

1 Q. As part of the scope of your assignment,
 2 in terms of your expert services for this case,
 3 were you asked to render any opinions about the
 4 amount of greenhouse gases Montana emits?
 5 A. No.
 6 Q. Were you asked to render any opinions
 7 about how much Montana's greenhouse gas emissions
 8 affect global climate change?
 9 A. No, I was not.
 10 Q. Were you asked to render any opinions
 11 about whether reduction of greenhouse gas
 12 emissions in Montana would affect global climate
 13 change for this lawsuit?
 14 A. No.
 15 Q. Were you asked to measure the extent to
 16 which Montana's greenhouse gases have caused
 17 increased temperatures in Montana?
 18 A. No, we were not.
 19 Q. Were you asked to measure the extent to
 20 which Montana greenhouse gas emissions have caused
 21 increased wildfires in Montana?
 22 A. No, we were not.
 23 Q. Were you asked to measure the extent to
 24 which Montana's greenhouse gas emissions have
 25 caused increased pollen in Montana?

1 that occur?
 2 A. That occurred because, as you noted, my
 3 wife, Lori, is a pediatrician. I'm an --
 4 internist -- internal medical specialist, the --
 5 and we wanted to work in a public health arena,
 6 either in the United States or overseas. And
 7 we've work overseas some, and we felt this is
 8 where our professional needs were greater, where
 9 we could be the most help.
 10 Q. Did you have a particular desire to come
 11 to Montana?
 12 A. We had done a rotation here during
 13 medical school, on the Crow Reservation, and like
 14 the people and the people we worked with, and
 15 obviously liked the state of Montana and decided
 16 to come back here.
 17 Q. Are you retired?
 18 A. I am, yes.
 19 Q. Is your wife retired, too?
 20 A. She is not. She works -- still works
 21 part-time.
 22 Q. Okay. Where does she work now?
 23 A. She worked for Saint Vincent Healthcare
 24 as a pediatric hospitalist.
 25 Q. Okay. When did you retire?

1 A. No.
 2 Q. Were you asked to render any opinions
 3 about Montana's constitutional provisions
 4 regarding a clean and healthful environment?
 5 A. We weren't asked to -- to offer an
 6 opinion; however, we were very concerned about --
 7 as my wife said -- has probably said, children
 8 or -- both of us -- people, in general and the
 9 importance that, whether it be adults, elected
 10 officials or others, adhere with our
 11 responsibilities as laid out in the constitution.
 12 Q. Is that something you were asked to
 13 provide an opinion about in this case?
 14 A. No. But we feel strongly about that.
 15 Q. Were you asked to render any opinions
 16 about a particular standard of care applicable to
 17 the State defendants in this case?
 18 A. Not that I recall.
 19 Q. When did you first move to Montana?
 20 A. In 1988.
 21 Q. What brought you to Montana?
 22 A. We came to work for Indian Health Service
 23 on the Crow Agency Reservation.
 24 Q. Was that like something that you set out
 25 to do, or just the opportunity arose? How did

1 A. Officially retired last fall.
 2 Q. Okay. And your wife told me that you
 3 guys have lived in -- or outside of Hardin during
 4 the course of your career with Indian Health
 5 Service?
 6 A. That is correct, yes.
 7 Q. And you are moving to Red Lodge now?
 8 A. Yes.
 9 Q. Why is that?
 10 A. A different location from where we
 11 practiced our entire careers.
 12 Q. Okay. What drew you to Red Lodge?
 13 A. It's a small town, it's Montana. We, you
 14 know, have come to -- have come to love Montana.
 15 And we like this general area. And as I said,
 16 that we like the small-town atmosphere.
 17 Q. Tell me about the nonprofit that you and
 18 your wife started.
 19 A. Montana Health Professionals for a
 20 Healthy Climate was started to help improve the --
 21 what health professionals -- the message that
 22 health professionals -- to make them more aware of
 23 the climate change issues and to amplify their
 24 voice, is one -- one reason.
 25 Secondly is, we know health care

1 professionals in lots of and areas in Montana that
2 were working alone, to be able to support them in
3 those messages.

4 And then thirdly, to help educate the
5 public-elected officials, others about the impacts
6 of climate change on people's health.

7 **Q. Does your organization do any lobbying in
8 front of the Montana Legislature?**

9 A. We do not lobby. We are a nonprofit.

10 **Q. Do you engage in any activities to effect
11 policy making in regard to climate change issues?**

12 A. The organization does not. As an
13 individual, I have testified, as my wife has
14 before, to offer public comment for issues that
15 are related when that becomes available.

16 **Q. Who founded the nonprofit?**

17 A. There are about six board members -- some
18 of them are still on the board, others are not --
19 in addition to my wife and I.

20 **Q. Okay. Were you guys original founding
21 members?**

22 A. Yes.

23 **Q. Or board members?**

24 A. Yes, we are.

25 **Q. And did you say there were six original**

1 approached them to see if they would be interested
2 in this.

3 **Q. Are there other nonprofits like this
4 around the country?**

5 A. There are a number of them, yes.

6 **Q. Is that what gave you the idea to start
7 one in Montana?**

8 A. That -- yes.

9 **Q. Had you been involved in other similar
10 nonprofits?**

11 A. Not at this -- not at the state level,
12 not with the others, though we worked -- have
13 worked over the past ten years with a variety of
14 climate and health organizations.

15 **Q. Which ones?**

16 A. Medical Society Consortium on Climate and
17 Health -- the -- we also work within our own
18 organizations: Lori's American Academy of
19 Pediatrics; mine, American College of Physicians,
20 are a couple of them that we have worked with.
21 Citizens Climate Lobbying we have worked with.

22 **Q. And so how have you been engaged with
23 those organizations on climate change issues?**

24 A. With the Medical Society of Consortium on
25 Climate Health, for example, that's a national

1 **founding --**

2 A. I would have to look at the exact
3 numbers, but five or six, yes.

4 **Q. What year was it founded?**

5 A. 2019.

6 **Q. And so were you and your wife -- like did
7 you play a pretty big role in starting the
8 nonprofit?**

9 A. Yes, we did.

10 **Q. Do you recall the names of the other
11 founding members?**

12 A. Dr. Mari Eggers, who is a PhD at MSU.
13 Dr. Beth Schenk, a PhD with Providence Healthcare
14 System. Dr. Nick Silverman, who is a PhD
15 hydrologist. And I do believe one or two others
16 that I don't recall at this time.

17 **Q. Whose idea was Montana Health
18 Professionals for a Healthy Climate?**

19 A. I believe it was Lori's and mine,
20 primarily.

21 **Q. How did you go about recruiting other
22 people to start the nonprofit with you?**

23 A. Mostly asked -- those are all people who
24 have been engaged in -- in health and climate
25 impacts, or climate and health impacts. And we

1 organization which has tried to -- very similar to
2 the things that -- that we are doing.
3 They were -- they were in existence before Montana
4 HPHC. But to amplify the voice of the health
5 impacts of climate change and air pollution,
6 because many of us felt that the health care
7 sector was not addressing this as much as we
8 should be. So we've been engaged with them over
9 the years. Citizen Climate Lobby is a -- a
10 different organization which does try to effect
11 policy change at the national level.

12 **Q. And how were you involved in that
13 organization?**

14 A. We are two of the cochairs of their
15 health team.

16 **Q. Any other organizations that you have
17 been involved in, as far as climate change issues
18 are concerned?**

19 A. There are -- probably are because we work
20 with a lot of organizations, and -- and are
21 members or have been members of other
22 organizations, but none come to mind now.

23 **Q. Are you paid a salary from Montana Health
24 Professionals for a Healthy Climate?**

25 A. No.

1 Q. What's your primary source of funding?
 2 A. Grants.
 3 Q. Which grants do you typically apply for?
 4 A. We will apply for any grants that are
 5 available for nonprofits that are working in the
 6 climate and health sector -- or climate and health
 7 sector.
 8 Q. On average, how much income from any
 9 source does Montana Health Professionals for a
 10 Healthy Climate bring in on an annual basis?
 11 A. It's entirely dependent on our grants. I
 12 would have -- I don't recall at this point. I
 13 would have to look at our -- our balance sheets to
 14 see.
 15 Q. How about for last year?
 16 A. I would have to look at the balance
 17 sheets. Just --
 18 Q. Can you give me a rough estimate?
 19 A. 15 to 20,000 --
 20 Q. And what --
 21 A. -- dollars.
 22 Q. Sorry, yeah.
 23 I'll try to let you finish your full
 24 answer before --
 25 A. Yes. Sorry.

1 Q. Does the organization have like a
 2 separate political action committee or (c)(4)?
 3 A. No. We do not at this point.
 4 Q. Do you have any plans to?
 5 A. Not at -- not at this point in time, no.
 6 Q. Is anybody making a donation to Montana
 7 Health Professionals for a Healthy Climate in
 8 exchange for your expert services in this case?
 9 A. No.
 10 Q. Do you want the plaintiffs to win this
 11 case?
 12 A. Yes.
 13 Q. Do you consider yourself to be an
 14 advocate for the plaintiffs in this case?
 15 A. I consider myself to be an advocate for
 16 all patients, all people in the interest of public
 17 health, and that includes the plaintiffs in this
 18 case, yes.
 19 Q. Have you ever been a party to a lawsuit
 20 before?
 21 A. In the distant past.
 22 Q. What was that case?
 23 A. That was a professional case.
 24 Q. Like a malpractice claim?
 25 A. Yes.

1 Q. -- I begin my next question.
 2 A. It was an add-on, just to be clear.
 3 Q. Didn't mean to talk over you there.
 4 What do you use the money for?
 5 A. Outreach to communities. We hope to --
 6 hope to put on a conference -- a climate change
 7 and health conference next spring or next winter,
 8 later this winter, the new calendar year. The --
 9 we were funded or -- or given a grant to help
 10 introduce or help increase the EPA flag program
 11 into schools and organizations throughout Montana,
 12 to -- to reach out to -- to those. We give
 13 members of our board, members -- our -- or
 14 membership, we have lots of presentations across
 15 the state. We are happy to talk with any -- any
 16 group about climate change and health.
 17 Q. Are there any affiliates of Montana
 18 Health Professionals for a Healthy Climate?
 19 A. There are some affiliates. At -- at this
 20 point, I believe -- I would have to look at our
 21 website and see. I believe that Montana American
 22 Academy of Pediatrics is, Montana America College
 23 of Physicians is. I believe the Montana Public
 24 Health Association, but I would have to check that
 25 to be sure.

1 Q. Okay. How long ago?
 2 A. Thirty-some years.
 3 Q. And were you a defendant in that case?
 4 A. I was originally named, and then it
 5 was -- it was settled, and I was not on the final
 6 settlement.
 7 Q. Okay. What were the allegations in that
 8 case?
 9 A. The allegations were that someone had
 10 missed a diagnosis on a patient.
 11 Q. Were you the one accused of missing the
 12 diagnosis?
 13 A. There were many people named.
 14 Q. Okay. How many physicians were on the
 15 case?
 16 A. I would have to look and see, but I think
 17 six or eight. But I may -- I do not recall any
 18 more details.
 19 Q. Okay. Was this when you were with Indian
 20 Health Service?
 21 A. It was.
 22 Q. Do you know if that case went to the
 23 Montana Medical Legal Panel?
 24 A. Yes, I do.
 25 Q. Did it?

1 A. It did. It was found without merit, to
 2 have no merit.
 3 Q. And then they filed a lawsuit anyway?
 4 That's a "yes"?"
 5 A. Yes.
 6 Q. Was that in federal court; do you know?
 7 A. Yes.
 8 Q. And the disposition of the case was that
 9 it was settled?
 10 A. Yes.
 11 Q. Did you have to give any testimony in
 12 that case?
 13 A. No.
 14 Q. Have you ever had any disciplinary
 15 actions for ethical violations?
 16 A. I have not.
 17 Q. Have you ever had anyone file a complaint
 18 against yours medical license?
 19 A. Not to the best of my knowledge.
 20 Q. Okay. Has your medical license ever been
 21 suspended or revoked?
 22 A. It has not been.
 23 Q. Has your board certification ever been
 24 suspended, revoked, or lapsed?
 25 A. It has not.

1 and you can either look at the table of contents
 2 or if you look at whatever parts of the report you
 3 need to, to answer this question.
 4 But my question is going to be: Which
 5 parts were primarily authored by you and which
 6 parts were primarily authored by your wife?
 7 A. With -- with considerable overlap, I
 8 would roughly say that -- let's see... the early
 9 parts 1, 2, and 3, we combined. Sections 1, 2,
 10 and 3 would be -- that was pretty combined between
 11 both of us. We both did a lot of work on both
 12 those.
 13 Both did a lot of -- a fair amount of
 14 work on 4. Five, I probably did more of the work
 15 on. And 6, my wife probably did more of the work
 16 on. That is to say with lots -- lots of back and
 17 forth on those.
 18 Q. And you said there was considerable
 19 overlap in terms of both of you authoring this
 20 report?
 21 A. Yes.
 22 Q. Would both of you have the requisite
 23 knowledge to render the opinions that you were
 24 asked to form in this case?
 25 A. Yes. I think so.

1 Q. Okay. Let's take a quick break actually,
 2 Dr. Byron, if we could.
 3 A. Okay.
 4 (A recess was taken.)
 5 BY MS. JONES:
 6 Q. Dr. Byron, tell me a little bit about the
 7 process that you and your wife went through in
 8 terms of forming your expert opinions in this
 9 case.
 10 A. We -- we started by kind of deciding what
 11 we wanted to use, I think, as a framework, or kind
 12 of what we wanted to cover. Given that we were
 13 both authors on the Climate Change and Human
 14 Health Report in Montana, which is at least a
 15 couple of years ago, that had a lot of the
 16 information we wanted, so kind of started with
 17 that as a -- a background.
 18 The -- I wrote parts of the report, she
 19 wrote parts of the report, we exchanged parts of
 20 the report to -- to combine it so that we were
 21 both familiar with the report in its entirety and
 22 comfortable with the report in its entirety.
 23 Q. If you take a look at the report --
 24 A. Uh-huh.
 25 Q. -- which has been marked as Exhibit 2,

1 Q. Would both of you have the necessary
 2 qualifications to render -- or to testify
 3 regarding the expert opinions that you formed in
 4 this case?
 5 A. As far as -- as I can tell, yes.
 6 Q. You don't have any more information or
 7 knowledge than your wife does regarding the
 8 opinions that you formed in this case?
 9 A. I might be familiar with some of the
 10 studies -- more familiar than -- in detail than
 11 she is. The -- and I can say the same for her
 12 relative to me, the -- having read a lot, maybe
 13 most, I don't know if I've read every single study
 14 in its entirety that's quoted in here, but I've
 15 read a lot of them. And I don't know how many
 16 she's read in their entirety. So, I guess, I
 17 am -- I am comfortable with everything that we say
 18 in here.
 19 Q. Would you say that your wife's education
 20 and experience as a pediatrician qualifies her to
 21 testify about climate change impacts on children?
 22 A. Yes, I would.
 23 Q. Those are all the questions I have for
 24 you, Dr. Byron.
 25 A. Okay.

1 Q. Thank you very much for your time today.
 2 A. Okay. Thank you.
 3 MR. GREGORY: No questions. Thank you.
 4 Read and sign.
 5 (The deposition was concluded at
 6 11:40 a.m. Witness excused; signature
 7 reserved.)
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1 CERTIFICATE
 2
 3 STATE OF MONTANA)
 4 COUNTY OF YELLOWSTONE) : ss
 5 I, Jacqueline A. Hill, court reporter and
 6 Notary Public for the State of Montana, residing
 in Billings, Montana, do hereby certify:
 7 That I was duly authorized to and did
 8 swear in the witness and report the deposition of
 ROBERT G. BYRON, MD, MPH in the above-entitled
 9 cause; that the foregoing pages of this deposition
 constitute a true and accurate transcription of my
 10 stenotype notes of the testimony of said witness,
 all done to the best of my skill and ability; that
 11 the reading and signing of the deposition by the
 witness have been expressly reserved.
 12 I further certify that I am not an
 13 attorney nor counsel of any of the parties, nor a
 relative or employee of any attorney or counsel
 14 connected with the action, nor financially
 interested in the action.
 15 IN WITNESS WHEREOF, I have hereunto set
 16 my hand and affixed my notarial seal on this the
 22nd day of October, 2022.
 17
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 22
 23
 24
 25

1 DEPONENT'S CERTIFICATE
 2
 3 I, ROBERT G. BYRON, MD, MPH, the deponent in
 4 the foregoing deposition, DO HEREBY CERTIFY, that
 5 I have read the foregoing - 29 - pages of
 6 typewritten material and that the same is, with
 7 any changes thereon made in ink on the corrections
 8 sheet, and signed by me, a full, true and correct
 9 transcript of my oral deposition given at the time
 10 and place hereinbefore mentioned.
 11
 12
 13 ROBERT G. BYRON, MD, MPH
 14
 15 Subscribed and sworn to before me this _____
 16 day of _____, 2022.
 17
 18
 19 PRINT NAME: _____
 20 Notary Public, State of
 21 Montana
 22 Residing at: _____
 23 My commission expires: _____
 24 JH - Held v. State of Montana
 25

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EXHIBIT 11

MONTANA FIRST JUDICIAL DISTRICT COURT
LEWIS AND CLARK COUNTY

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_____	:	
IN THE MATTER OF:	:	
	:	
RIKKI HELD, ET AL.,	:	
	:	
PLAINTIFFS,	:	
	:	
v.	:	Case No.
	:	CDV-2020-307
STATE OF MONTANA, ET AL.,	:	
	:	
DEFENDANTS.	:	
_____	:	

Tuesday,
December 6, 2022

DEPOSITION OF:

DR. LISE VAN SUSTEREN

called for examination by Counsel for the
Defendants, pursuant to Notice of Deposition, via
Videoconference, when were present on behalf of
the respective parties:

APPEARANCES:**On Behalf of Plaintiffs:**

MELISSA A. HORNBEIN, ESQ.
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On Behalf of Defendants:

MARK STERMITZ, ESQ.
Crowley Fleck PLLP
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ALSO PRESENT:

SELENA SAUER, Crowley Fleck PLLP

1 P-R-O-C-E-E-D-I-N-G-S
 2 (10:34 a.m.)
 3 WHEREUPON,
 4 LISE VAN SUSTEREN
 5 was called as a witness by Counsel for the
 6 Defendant and, having been first duly sworn, was
 7 examined, and testified as follows:
 8 MR. STERMITZ: Could you tell us your
 9 name, please for the record?
 10 THE WITNESS: Lise Van Susteren.
 11 MR. STERMITZ: I want to make sure I
 12 pronounce your name right. You said it's Lise?
 13 Is that how's pronounced?
 14 THE WITNESS: Correct.
 15 MR. STERMITZ: Dr. Van Susteren, I
 16 apologize for the mix up here. I think it's
 17 going to be especially important that we both
 18 speak up, and speak slowly, and clearly. Even
 19 more than it usually is. Understood?
 20 THE WITNESS: Can you hear me at this
 21 volume? Not well?
 22 MR. STERMITZ: Not, not great, but

1 it's good enough.
 2 THE WITNESS: I am speaking quite
 3 loud. I have two choices either I can try to
 4 speak louder, which probably would become a
 5 strain.
 6 MR. STERMITZ: Right.
 7 THE WITNESS: Or try to improve the
 8 audio.
 9 MR. STERMITZ: Yes, it's a little
 10 muffled. I don't know how you're hearing me.
 11 THE WITNESS: Very clearly.
 12 MR. STERMITZ: Okay. Yes, it's not
 13 quite as great on your end there, somehow.
 14 THE WITNESS: Well, maybe there's a
 15 way for us to --
 16 MS. RODGERS: Yes, that's it there's
 17 no apparent microphone.
 18 MR. STERMITZ: That might explain it.
 19 But let's do that let's take a pause off the
 20 record.
 21 (Whereupon, the above-entitled matter
 22 went off the record at 10:36 a.m. and resumed at

1 10:43 a.m.)
 2 MR. STERMITZ: Okay. Did you, have we
 3 sworn in Dr. Van Susteren, yet? Okay, all right
 4 and you said your name, that's right. Okay.
 5 MS. RODGERS: One thing we didn't do,
 6 we didn't do, I didn't do an appearance. So
 7 maybe Melissa and could I do that to just get
 8 that out of the way. Andrea Rodgers on behalf of
 9 the plaintiff. And on Zoom?
 10 MS. HORNBEIN: Melissa Hornbein, also
 11 on behalf of the plaintiffs.
 12 MS. RODGERS: Thank you. Go ahead.
 13 MR. STERMITZ: Yes, and I don't see
 14 anyone else on Zoom. So it's just us, I guess.
 15 MS. RODGERS: Okay.
 16 MR. STERMITZ: All right. Well, thank
 17 you, Dr. Van Susteren. Have you been through
 18 this deposition process before I assume? Am I
 19 right?
 20 THE WITNESS: Yes.
 21 MR. STERMITZ: Many times or how often
 22 do you think you've had to go through this

1 before?
 2 THE WITNESS: Ten times.
 3 MR. STERMITZ: Okay. I'm not going to
 4 bother with a lot of the preliminaries that you
 5 hear in these depositions then. I think you know
 6 the rules of engagement. Just stop me if you
 7 don't hear me, or you don't understand the
 8 question, please.
 9 THE WITNESS: I will.
 10 MR. STERMITZ: Thank you.
 11 DIRECT EXAMINATION
 12 BY MR. STERMITZ:
 13 Q How was it that you came to be engaged
 14 in this particular case? And by that, I mean,
 15 who reached out to you first? Or what was the
 16 first point of contact that led to your
 17 engagement?
 18 A On this particular case?
 19 Q Yes, ma'am.
 20 A The lawyers for the plaintiffs reached
 21 out to me.
 22 Q Okay. And you clearly, from your

1 c.v., have a long history of involvement with the
2 issue of global warming or climate change,
3 correct?

4 A Well, let me just clarify what you
5 mean by long history?

6 Q Well, I think if I read your c.v.,
7 correctly, you've been working in your field, as
8 it intersects the subject of climate change since
9 like the early 2000s, or something like that, is
10 that right?

11 A Well, it's a 2006 would be the
12 accurate time.

13 Q Okay. And you this, this is not the
14 only case, this Montana case is not the only one
15 that you've been involved with children and the
16 subject of global warming, right?

17 A That's correct.

18 Q I know about the Juliana case in
19 Federal Court in Oregon. You were an expert in
20 that case, true?

21 A Correct.

22 Q And are there any others besides,

1 complaint?

2 A My information about the plaintiffs is
3 a reflection of what I've read in the complaint
4 and my personal interviews with them.

5 Q Any other documents or sources to
6 obtain factual information about the Montana --

7 A Not -- sorry.

8 Q -- Montana situation?

9 A Not that I recall.

10 Q Okay. Thank you. I noticed that it
11 looks like you're in your report. There's quite
12 a bit of, I would say background information on
13 global warming that's very similar, if not
14 identical to have the written report you provided
15 in the Juliana case. Would you agree with that?

16 A Well, obviously, a lot -- the science
17 hasn't changed is what I can say. So what I
18 reported will be consistent with the scientific
19 consensus about global warming.

20 Q Right. And I guess that's what I was
21 referring to statements about global warming and
22 its effects on humans generally, I would say,

1 similar type of cases, besides Juliana and
2 Montana?

3 A No.

4 Q Did you have your deposition taken in
5 the Juliana case?

6 A Yes.

7 Q Did you review any materials in
8 preparation for your deposition today?

9 A What's the question?

10 Q Did you review any materials in
11 preparation for your deposition today?

12 Q Yes.

13 A Can you tell me what you looked at?

14 Q My report and the complaint.

15 A Okay. Your report indicates that you
16 got information about the plaintiffs and the case
17 by reviewing the complaint. And you've indicated
18 you just again reviewed the complaint.

19 Have you obtained any other, aside
20 from interviews with the plaintiffs themselves,
21 have you obtained any other factual information
22 about this case any place other than the

1 right?

2 A Correct.

3 Q Okay, thank you. What is your
4 understanding of the goal of this case in
5 Montana?

6 A I'll refer you to the complaint for
7 you to have that information.

8 Q Okay. I know, apparently, we don't
9 have the complaint in front of you. Just if you
10 could say, generally, what you believe the Court
11 should do in this case?

12 A Well, that's not really for me.

13 That's not my purview. My purview is to report
14 about the plaintiffs. And my goal is in working
15 with the plaintiffs, to express their anguish
16 about the conditions, and to have the Court begin
17 the process to restore their safety and healing.

18 Q As far as the Court is concerned then,
19 your understanding is not, not more specific than
20 what you just stated in terms of what you think
21 the Court should do here?

22 A Let me express it this way. If

1 someone has a sharp object, and is pointing it
2 into your flesh, the role of a doctor, or well
3 the goal of a doctor.

4 And certainly my goal here is to
5 address the root cause, which is to get the
6 offending injurious action to stop. So I use
7 that as a metaphor for what I see the Court as
8 being in a position to do, is to stop the pain,
9 stop the injury.

10 Q And how would the Court do that in
11 Montana, if you know?

12 A I would refer you to the complaint.

13 Q Okay. Your report, and we can look at
14 it more specifically in a bit here, but generally
15 your report details the impacts of global warming
16 on these plaintiffs. But it also suggests that
17 only a favorable ruling in this case would help
18 them does it not?

19 A Do you mind say that again please?

20 Q All right, let me find that specific
21 provision. I think that will make it easier.
22 Would you, do have your report on you?

1 A Yes.

2 Q Fine.

3 A Yes.

4 Q Let me just go to the conclusion.
5 Okay. If you turn to -- I'm looking just at
6 your conclusion, Dr. Van Susteren on page 22 of
7 your report.

8 A Got it.

9 Q Okay. About midway down the page,
10 there's a sentence that's paragraph in and of
11 itself that begins the mental health impacts of
12 climate change. Do you see that?

13 A Yes.

14 Q It goes on to say can be reduced and
15 future harms avoided through immediate action by
16 the defendants consistent with the relief sought
17 in this case.

18 Sitting here today, can you tell me
19 what the immediate action by the defendants would
20 be that would reduce the health impacts on the
21 plaintiffs?

22 A Stop the injurious behavior.

1 Q And that injurious behavior is what?
2 If you could summarize?

3 A The energy policies in the State of
4 Montana. But I will refer you again to the
5 complaint for the details.

6 Q Okay. Is it your understanding that
7 a favorable ruling by the Court here would
8 eliminate the negative impacts on the plaintiffs
9 from climate change or global warming?

10 A Well, let me refer back to my original
11 metaphor, which is when you see an injury, and
12 you see what the root cause of the injury is,
13 stopping that action is what will end the pain.

14 And I will leave it up to the global
15 warming specialists, economists, people who have
16 a knowledge of energy policy, et cetera, to
17 specifically cite what needs to happen. But the
18 corrective measures that would protect these
19 children are within the hands of the judicial
20 system.

21 Q So it's your understanding that the
22 judicial system of Montana has the power to stop

1 the injurious actions as you refer to them?

2 A Correct.

3 Q And the injurious actions, what are
4 they? However you want to approach it. Either
5 in general, or if you could detail them,
6 specifically?

7 A The energy policies that are based on
8 fossil fuels.

9 Q So I think what we've come to, correct
10 me if I'm wrong, is that if the judiciary in
11 Montana stops the energy policies of Montana,
12 then that will remove the injurious behavior
13 that's impacting the plaintiffs? Did I summarize
14 your position correctly?

15 A Yes, except I would like to change the
16 verb stop and change it to correct. Because,
17 obviously, we need energy policies. But we need
18 correct energy policies that don't injure the
19 populace in order to end the pain, the
20 psychological harms that are coming to the
21 plaintiffs.

22 Q Are Montana's energy policies, in your

1 opinion, the sole source of the pain being
2 experienced by these plaintiffs?

3 A That's not within my purview. Again,
4 I will refer you to the complaint for that.

5 Q So if Montana corrects its energy
6 policies, you don't have an opinion as to whether
7 that would eliminate the injuries being felt by
8 the plaintiffs?

9 A It would be very helpful. And it is
10 the sole remedy, in my opinion that addresses the
11 harm that children feel from the State of
12 Montana's current policies on energy.

13 Q Are the plaintiffs experiencing their
14 injuries as a result of the policies themselves,
15 in your opinion, or as a result of the climate
16 effects of the policies?

17 A I can't see how those are any
18 different.

19 Q Well, would you agree with me that
20 whatever the impacts are from global warming,
21 they're generated by sources other than Montana,
22 correct?

1 A If you're asking me -- the global
2 warming that I am looking at, and that I have
3 been asked to respond to relates to the energy
4 policies of the State of Montana. So that's what
5 I can tell you about my experience here with this
6 case.

7 Q Global warming is global. It's, it's
8 a global problem, though, correct?

9 A It is.

10 Q What in your opinion, if anything,
11 makes Montana unique compared to other places in
12 the world, in regard to the impacts of global
13 warming?

14 A I don't see that as relevant to my
15 purpose and role in this case to compare Montana
16 to other regions. I can say this, and that is
17 that the energy policies of the State of Montana
18 are specifically injurious to the mental health
19 of the plaintiffs.

20 Q And what is the vector there?

21 A The energy policies is that are fossil
22 fuel are dependent.

1 Q But it's not the sole backer,
2 apparently, since the fossil fuel consumption and
3 emissions are global, not just in Montana, right?

4 A Again, my role is not to assess what
5 other states and countries are doing. My role
6 was to answer the question of whether or not the
7 State of Montana, specifically, was injuring the
8 mental health of these children plaintiffs. And
9 the answer to that is yes.

10 Q So you, you're not in a position to
11 say whether, if Montana corrects its energy
12 policies the climate change, global warming
13 impacts on plaintiffs will change at all, right?

14 A I'm not saying that. I am saying
15 that. If the State of Montana were to correct
16 its energy policies, it would be hugely
17 beneficial to the mental health of these
18 plaintiffs.

19 Q Why would it be hugely beneficial?

20 A Because they would know and see that
21 the people who are entrusted with their welfare
22 care about what they're going through? And that

1 they are willing to take action that is
2 consistent with the scientific consensus about
3 the dangers they face.

4 Q Do you believe from your contacts with
5 the plaintiffs -- well, let me back up. You met
6 with some of the plaintiffs, but you haven't met
7 with all of them, is that right?

8 A That's correct.

9 Q Have you talked to all of them? I
10 asked about meeting them in person. Have you
11 talked to all of them in one way or another at
12 all?

13 A I have not.

14 Q Okay.

15 A And when you say one way or another?

16 Q Verbal, like on the phone, or
17 something.

18 A No, I have not.

19 Q Okay. Is it your belief that, at
20 least as regards the ones that you met, they have
21 an understanding that global warming is a global
22 problem?

1 A The focus of our discussion was on the
2 State of Montana and the energy policies of the
3 State of Montana.

4 Q So when you say that a favorable
5 ruling here, or a correction of Montana's energy
6 policies would provide a benefit to the
7 plaintiffs through demonstrating that the State
8 cares about them -- I'm paraphrasing. But you
9 don't have an opinion about whether what's left
10 behind from the rest of the world would continue
11 to impact them in one way or another?

12 A That was not the subject of our
13 discussion. Our discussion related to the impact
14 of Montana's energy policies on their mental
15 health and physical health.

16 Q Do you know whether or to what extent
17 these plaintiffs are situated differently than
18 the rest of the citizens of the State of Montana,
19 in terms of the impacts on their mental or
20 physical health from global warming?

21 A By their own admission, they are aware
22 of the scientific consensus, and they are

1 knowledgeable about the energy policies that are
2 harming them in the State of Montana.

3 And they, as you will see, or perhaps
4 will remember, in my profiles, they lament the
5 unconsciousness or denial of the, many of the
6 people around them about the scientific consensus
7 that they and we are in danger.

8 Q Do you believe, or is it your opinion
9 that the anxiety, or physical, or mental injuries
10 being experienced by the plaintiffs is, in their
11 view, solely attributable to the action or
12 inaction of the State of Montana?

13 A Our focus was on the energy policies
14 of the State of Montana.

15 Q But my question is whether you have a
16 understanding that the plaintiffs, themselves,
17 feel that that's the sole source of their
18 injuries.

19 A I did not ask them about what they
20 thought were other sources of their injuries.
21 Their injuries, as reported to me, were defined
22 by the conditions in Montana, the policies in

1 Montana, their experiences with others in
2 Montana, their attitudes about the Government and
3 public officials in Montana.

4 We did not discuss conditions,
5 policies, et cetera, outside of the State of
6 Montana. They may, at times, have made allusions
7 to the impacts around the globe.

8 But we did not specifically discuss
9 that because my job was to look at the energy
10 policies of Montana and how they were
11 specifically injuring the mental health of the
12 plaintiffs.

13 Q And when you say, as reported to you,
14 what do you mean specifically?

15 A I don't understand what you mean.

16 Q Okay. By whom? When you say it was
17 reported to you, by whom were you, to whom were
18 you referring?

19 A It was reported to me by the
20 plaintiffs.

21 Q Okay.

22 A Sorry.

1 Q So is it a fair statement for me to
2 say that your charge here did not include an
3 analysis of whether, if Montana corrected its
4 energy policies to use your phrase, that would
5 eliminate the mental and physical harm being
6 experienced by these plaintiffs?

7 A I'm sorry, can you ask that question
8 again?

9 Q I'll ask the court reporter to read it
10 back. Because I don't want it -- hopefully, we
11 can do that here.

12 (Whereupon, the record was read back.)

13 MS. RODGERS: I'm going to object to
14 the extent it mischaracterizes prior testimony.
15 But you can answer.

16 THE WITNESS: So I still don't
17 specifically understand. I can speculate about
18 what I'm answering, but the answer is nuanced.
19 And I will reserve the right to amend it if I
20 have misunderstood the question.

21 I understand the question to be if --
22 well, I will try to answer. And that is that the

1 plaintiffs specifically addressed the
2 institutional betrayal that they feel from the
3 State of Montana, the feeling of abandonment, the
4 alienation from peers, at times.

5 The difficulty talking with adults,
6 the feeling of isolation, the belief that the
7 State does not have their interests at heart.
8 And that a key factor in their suffering is what
9 is instructive. Because that correct would mean
10 that much of those states of mind that I just
11 described would find relief.

12 BY MR. STERMITZ:

13 Q Okay, that's fair. And I think maybe
14 I'll try to clarify this. You speak of
15 institutional betrayal, which I will paraphrase
16 as the failure of the Government that would show
17 or demonstrate to the plaintiffs that the global
18 warming problem is being dealt with. Is that a
19 fair general description of it?

20 A Yes.

21 Q Okay. So that's in your report,
22 documented as what is one problem. What I'm

1 getting at, as well, though, and I want to ask
2 you about is, the impacts to the plaintiffs of
3 global warming, generally, from all of the
4 factors that cause that problem. And, and would
5 you -- so there's, that's a different type of
6 injury? Would you agree?

7 A I'm sorry, I don't understand exactly
8 what I'm agreeing to. What I can say, again, is
9 that the plaintiffs themselves have said
10 repeatedly, that were they to prevail in Court,
11 this would be hugely beneficial to their mental
12 health.

13 Q Okay. They, and I get that. But what
14 you're saying is that a favorable ruling here
15 would make them feel better because they would
16 see action, right.

17 A Yes. But it's not just action. It's
18 all that action implies.

19 Q Okay. But what I'm going to ask now
20 is what that would do to the actual physical
21 causes of global warming. And by that, I mean
22 what a favorable ruling here on Montana's energy

1 policies would do in terms of the scientific
2 causes of global warming. Do you know what that
3 would?

4 A I'll refer you to the complaint for
5 those details.

6 Q So would you agree then that -- let's
7 take Ms. Held, for example. You met with her?
8 Let me back up. You met with Ms. Held as one of
9 the several people that you met in Montana,
10 right?

11 A Correct.

12 Q And she's the, you remember, she's
13 the, from the ranching background?

14 A Correct.

15 Q And so just focusing on her for the
16 moment, a ruling that corrects, "Montana's energy
17 policies" would be beneficial to her because of
18 the reasons you've discussed in your report? It
19 would show action by the State on the problem
20 that is acute for her, right?

21 A That's correct.

22 Q And but you don't know whether a

1 favorable ruling by the Court would actually
2 impact global warming itself, right?

3 A Well, if you reduce emissions, it
4 impacts global warming. But again, you can look
5 at the complaint. There are many, obviously,
6 graphs and climate scientists who have cited the
7 consensus that emissions are leading to global
8 warming, and increased emissions are leading to
9 global warming.

10 So that's not my purview. But that is
11 the scientific consensus. That if you reduce
12 emissions, you reduce the vulnerability to global
13 warming.

14 Q Yes, I think we can agree on that.

15 I'm going to ask it a little differently to make
16 it clearer. If Montana, if the Court rules in
17 plaintiffs' favor here and cracks Montana's
18 energy policies, do you have an opinion whether
19 that would be impact global warming to an extent
20 that would actually be felt on Ms. Helds' ranch,
21 as regards the problems that she relayed to you
22 when you met with her?

1 Q Again, I will refer you to the
2 complaint. My purview is, as I've said, to share
3 with you the emotional toll of the State of
4 Montana's energy policies.

5 And I again, I'll leave it up to the
6 climate scientists and others to describe the
7 physical impacts. I don't mean their bodily
8 impacts the physical impact generally.

9 MR. STERMITZ: Can I, would you be
10 agreeable to take about a ten minute break. I
11 know we haven't gotten that far, but we've been
12 here a long time already it seems like.

13 THE WITNESS: Okay, sure.

14 MR. STERMITZ: Is that okay with
15 everyone?

16 MS. RODGERS: That's fine. And just
17 to let you know, it looks like the Dr. Van
18 Susteren's expert report will be Exhibit 60.

19 MR. STERMITZ: 60?

20 MS. RODGERS: Yes.

21 MS. HORNBEIN: Hang on. Now I'm
22 checking that with me, Nate. We had an exchange

1 about it. And I'm just confused because as far
2 as I know, there haven't been any depositions
3 between Dr. Anderson's and this one. And so I'm
4 not sure how we got to 60. So I want to make
5 sure that's correct before we change.

6 MS. RODGERS: Yes, that's from Tara
7 and Melissa. So, she told me.

8 MS. HORNBEIN: Okay.

9 MS. RODGERS: That's fine, okay.

10 MR. STERMITZ: All right. Let's be
11 off record for ten or 15 minutes. Ten minutes
12 let's say.

13 (Whereupon, the above-entitled matter
14 went off the record at 11:18 a.m. and resumed at
15 11:35 a.m.)

16 BY MR. STERMITZ:

17 Q Dr. Van Susteren in your report when
18 you talk about actions that the State of Montana
19 takes or that the judiciary could take regarding
20 Montana's energy policies and how that would help
21 the plaintiffs feel better, this is, am I right,
22 a form of your discussion about institutional

1 betrayal, correct?

2 A Wait a minute. I'm sorry, what was
3 that? I didn't --

4 Q Well no, let me ask it this way. You
5 discuss in your report the concept of
6 institutional betrayal or judicial betrayal, do
7 you recall that?

8 A I don't believe I said judicial
9 betrayal. I believe I only said institutional
10 betrayal.

11 Q Well, can you turn to page 19 of your
12 report, please?

13 A Sure. Yes.

14 Q Okay. That big paragraph there.

15 A Oh.

16 Q That first full paragraph talks about
17 institutional betrayal, do you see that?

18 A I'm sorry. I was referring to the
19 answer to your question. When I mentioned
20 institutional betrayal, I did not at that time,
21 mention judicial betrayal. But you are correct,
22 it is in my report.

1 Q Okay.

2 A I just thought you were referring to
3 my answer to you, which I believe did not include
4 judicial betrayal.

5 Q I got it. And basically, tell me if
6 this is right. These, whether its judicial or
7 institutional, these are, these occur when people
8 who depend on these entities feel they've been
9 let down by them? Is that a kind of a fair
10 general characterization of those theories?

11 A Yes, although -- yes, let down. I
12 would say betrayal is something much greater in
13 magnitude than just being let down.

14 Q Okay. And is this what you have
15 observed in, let's just focus on the plaintiffs
16 that you've met with?

17 A The institutional betrayal or the
18 judicial betrayal?

19 Q Yes.

20 A That is correct. I do believe that
21 they were reflecting in their interactions with
22 me the sense of institutional betrayal.

1 Q Okay.

2 A Of judicial betrayal, if we want to
3 make it writ large or specific?

4 Q And do you have an opinion about the
5 degree to which institutional betrayal negatively
6 impacts the plaintiffs as compared to the
7 negative impacts from global warming itself?

8 A Well, I would say that they're very
9 much linked because it is the institutional
10 betrayal that is the root cause of the emissions,
11 which are causing global warming. So they're
12 inextricably linked.

13 Q But if the institution, in this case,
14 the State of Montana, eliminated its
15 contributions, hypothetically, eliminated its
16 contributions to global warming, that would, that
17 would resolve the institutional betrayal, true?

18 A Well, let's look at it this way.
19 Since the energy policy right now in the State of
20 Montana is creating the intensity of the
21 institutional betrayal, as described by the
22 plaintiffs.

1 Were Montana to correct its energy policies
2 and make them consistent with the health and
3 safety of the State of Montana and its residents,
4 it would be immensely beneficial to the
5 plaintiffs in terms of the healing for the
6 institutional betrayal that they are
7 experiencing.

8 Q And were that to occur, though, global
9 warming would still be present, true?

10 A Well, I mean, I'm not sure exactly
11 what it is that you are sort of trying to
12 underpin global warming with. We understand,
13 scientific consensus is that more emissions, more
14 global warming.

15 More global warming, more
16 psychological harm. So that's the basic concept.
17 And again, we can fiddle with the various
18 components of the equation, but that's the
19 equation.

20 Q Okay. If you would just turn back one
21 page, on your report, please to page 18. And
22 just looking at the heading there, this section

1 of your report, section 7.

2 It's labeled the mental health impacts
3 of climate change are exacerbated by the State of
4 Montana's role in creating and failing to respond
5 to climate change.

6 A Wait a second. Oh, the title, the
7 title.

8 Q The title.

9 A Yes, yes.

10 Q Okay.

11 A I was looking at the body.

12 Q All right. Is it your belief that
13 Montana creates climate change?

14 A Yes, of course. Insofar as it
15 increases greenhouse gas emissions, it creates
16 global warming.

17 Q And --

18 A Again, same equation.

19 Q And when that discussion begins there
20 on page 18, you discuss in the first paragraph, a
21 disaster and people looking for a cause of the
22 traumatic event.

1 And then you talk about natural
2 disasters. Do you equate the experiences people
3 have with a disaster to what they might be
4 experiencing with global warming, generally?

5 A Do you mind rephrasing that?

6 Q Let me try again. This discussion
7 about disasters, natural disasters, and the
8 reaction to them, how does that inform us as to
9 what plaintiffs are experiencing with global
10 warming?

11 A Well, I'm going to speculate a little
12 bit, again, about the specific nature of what
13 you're looking for me to answer. But I will
14 reserve the right, again, to amend my answer if
15 I've misunderstood.

16 But the issue here, the crux of the
17 issue is that disasters cause psychological harm.
18 And the more disasters there are, the more
19 psychological harm is experienced.

20 So that's what I can say is the basic
21 formulation. Is there something more that you're
22 looking for in your question? I would like to

1 answer it faithfully.

2 Q Yes. I mean, that's a good start. So
3 in this section of your report you discuss how
4 disasters may be a cause of trauma to a person,
5 first of all, right?

6 A Well, it not may, they are traumatic.

7 Q Okay. And this case, I'm going to
8 assume, tell me if I'm wrong, that you've
9 included this in your report, because you're --
10 as you believe -- that global warming is an
11 example of a disaster that would have impacts on
12 people, right? Otherwise, I don't know why it's
13 in here.

14 A Well, global warming is the condition
15 that causes the disasters. Now, if you want to
16 speak of heat, specifically, yes, that is global
17 -- a subset of global warming is a heat spell.

18 Q That --

19 A Yes?

20 Q Sorry. Okay, so. And, yes, I'm not
21 trying to make any more complicated than that.
22 Global warming, you discussed disasters and the

1 impact on people.

2 And then go into the governments or
3 trusted institutions responsible for those
4 disasters. Right? That's kind of the chronology
5 here in your report?

6 A Okay.

7 Q I mean, if you go to the next page, we
8 were just talking about institutional betrayal.
9 So that, that discussion of disasters precedes,
10 leads into your discussion of institutional
11 betrayal.

12 So, all I'm asking is, you've kind of
13 approached it from the standpoint, it looks to me
14 like, tell me if this is correct, positing that
15 global warming is a form of a disaster that has
16 traumatic impacts on people.

17 That's one effect that it has. And
18 then, there's the government's or trusted
19 institutions' response to that disaster/global
20 warming, as another problem. Correct? There's
21 two issues there. There, there --

22 A Well, I'm hung upon the fact that

1 global warming, I mean, in a sort of layperson's
2 sense is a catastrophe. Yes, a disaster. But
3 global warming is a condition. It's the result
4 of physics and, you know, et cetera.

5 And it is global warming that
6 unleashes the disasters. In a layperson's sort of
7 lingo, you would refer to it as a disaster. But
8 the scientists probably would describe it as a
9 condition that triggers the disasters.

10 Q Okay.

11 A Among which, of course, is a general
12 overheating of the planet.

13 Q And, and I'm just, I'm wanting to
14 clarify that in terms of impacts on human beings,
15 you're saying, I think, right, that there are
16 impacts from, or injuries, from the disasters
17 themselves, and then there are impacts from
18 trusted institutions' response to those
19 disasters. Is that fair?

20 A Yes, that's fair to say. There's more
21 to be said. But that that's fair to say, sure.

22 Q I mean, is it simple --

1 A Here's what's instructive, and that is
2 that the issue is natural disasters. And
3 anthropogenic greenhouse gases are increasing the
4 frequency and intensity of these disasters. So
5 they are no longer entirely natural. They are
6 unnatural.

7 Q Okay.

8 A I hope that, I hope that helps. I'm
9 not trying to be difficult. I'm just trying to
10 be precise.

11 Q Yes, no, that's fine. And you later
12 in the same section, talk about, I believe, as an
13 example. I think that, let me just ask you if
14 that's why it's included here.

15 A discussion about water, the water
16 situation in Flint, Michigan. What's the
17 relevance of that discussion to -- I'll just put
18 it that way, to what we're concerned with in this
19 lawsuit?

20 A Okay. The issue is one of accidental
21 harm versus intentional harm.

22 Q Okay. And the Flint situation tells

1 us what?

2 A That it was not an accident. The
3 exposure to lead was not an accident. The people
4 who were in charge of the safety of the water
5 going to Flint, Michigan had heard that there
6 were elevated levels of lead.

7 Indeed, scientists were pouring out,
8 if you'll forgive the verb, of academic
9 institutions, and others warning again and again,
10 that the lead levels were dangerous.

11 And those people who could have acted
12 to protect the health and safety of the
13 community, including children who are most
14 vulnerable, failed to take action.

15 Q And --

16 A Indeed -- yes, go ahead.

17 Q And then, in that case, I confess I'm
18 not sure of what the basic problem was, other
19 than I know, as you record here, it's dangerously
20 high levels of lead.

21 But it would be, it was possible, was
22 it not, for the government to remedy that

1 do something, and they have failed to do it, even
2 though they have been entreated again and again,
3 by scientists, academicians, the community
4 members et cetera.

5 And that they have failed to address
6 the problem. This is what creates the additional
7 harm. Because this is where that feeling of
8 institutional betrayal is so, so marks a person's
9 psychological health.

10 The ease or not, of addressing lead in
11 the water is not within my purview here, in this
12 particular case. It is really to address what
13 the State of Montana can do to protect its
14 citizens, as frankly, the Constitution very
15 explicitly states it must.

16 Q But I mean, as you say, in the Flint,
17 Michigan example, the government, I don't know,
18 whether it was State, or whichever, some
19 governmental entity had the ability to prevent
20 what occurred from happening. I mean that's
21 another way of saying, isn't it, that they didn't
22 contribute to the cause if they had acted

1 situation? That is to do whatever they needed to
2 do to remove the lead and make sure it wasn't
3 there in the future, right?

4 A No, the point that I was making here
5 was the difference between something that happens
6 accidentally, and something that happens because
7 people have failed to fulfill the role of
8 responsibility to take care of the community in
9 this particular domain. That was my point.

10 Q But I'm asking you in the Flint,
11 Michigan, situation, whether the government had
12 the ability to have prevented -- I think this is
13 what, just another way of saying what you're
14 saying, prevented this problem from arising in
15 the first place, correct?

16 A The reference to Flint was, again, to
17 underscore that things that happen accidentally
18 are much less harmful. Because if it happens
19 naturally, quote accidentally an act of God,
20 fate, et cetera, it's easier for people to heal
21 and move on.

22 But when they know that people could

1 properly?

2 A Well, again, I'm going to take a stab
3 at this, at what I'm trying to --

4 Q No, let me. I don't want you to have
5 to do that. I'll try to make a clear question.
6 In the Flint, Michigan example, without knowing
7 any more details than we know, here, we can say
8 that that was an issue, that was a problem that
9 could have been prevented by appropriate
10 government action?

11 A Again, that's not my point here. And
12 I will not get into the details of lead in the
13 water going from corroded pipes to the city of
14 Flint, Michigan.

15 My point is the principal. Is the
16 failure of those who are in power to respond to
17 warnings. And exactly how Flint, Michigan could
18 or couldn't respond is irrelevant, I think, to
19 the point that I'm making.

20 Which is institutional betrayal when
21 people in power, who can make policies fail to
22 address the warnings that are clearly put before

1 them, and repeatedly. And that there's a
2 scientific consensus that there's a problem,
3 overwhelming evidence, clear injuries.

4 Q So in citing the Flint, Michigan
5 example, in this case, you're saying that the
6 government failed in its duty to respond,
7 although you don't know what the government could
8 have done about the situation in Flint, Michigan,
9 or here?

10 A It's not relevant for me to address
11 what the government could do in Flint, Michigan.
12 It's relevant for me to address what the State of
13 Montana could do with respect to its energy
14 policies for the plaintiffs whose psychological
15 harm is evident.

16 Q Well, let's say hypothetically that,
17 and this is a hypothetical. That the plaintiffs
18 believe or are aware that the State of Montana
19 has the ability to affect global warming.

20 But regardless of what the State does,
21 hypothetically, it can't. Would with that?
22 Wouldn't that be a false reassurance for the

1 A It's relevant to the, in my opinion,
2 my role here, which is to show how Montana's
3 energy policies are harming the psychological
4 health of the plaintiffs. What China's doing, or
5 India, or anybody else is really not relevant to
6 what I have been charged to do.

7 Q Well, if Montana changes its energy
8 policies in the way that you think it should, it
9 doesn't -- given that you don't know what other
10 countries are doing, you don't have an opinion,
11 do you about whether this, that action would
12 actually benefit the plaintiffs?

13 A Here's what I can say is that, and
14 we've said it, or I've said it earlier. A
15 judgment that would restore the safety and health
16 of the citizens of Montana with energy policies
17 that are consistent with the warnings that are
18 being issued by scientific consensus, by
19 scientists all over the world, would be immensely
20 helpful to the mental health of the plaintiffs.

21 Q Your report has a lot of discussion
22 about the negative impacts of global warming on

1 plaintiffs. Wouldn't that be relying on fiction?

2 A Do you mind rephrasing that question?

3 Q Well, let me be more specific. Let's
4 say first of all, global warming is a global
5 problem. We agree on that, correct? The sources
6 of global warming are global problem, let's put
7 it that way.

8 A Well, I would answer that with
9 Montana's energy policies contribute to global
10 warming.

11 Q Well, China's energy policies
12 contribute to global warming too, don't they?

13 A Sorry?

14 Q China's energy policies --

15 A Yes, but that's not relevant to my
16 role, here. Which is --

17 Q Do you know whether or not China's
18 energy policies contribute to global warming?

19 A I'll refer you to the complaint.

20 Q So other than what's recorded in the
21 complaint, you don't know whether China's energy
22 policies contribute to global warming?

1 all citizens, right? Not just these plaintiffs?

2 A Maybe you can refer me to a specific
3 passage, so I can understand the context?

4 Q Sure, sure. Well, maybe let's just go
5 to your conclusion, on page, where it starts on
6 page 21, please.

7 A Yes, I'm there. Thank you.

8 Q Okay. The second, the beginning of
9 the second sentence of your conclusion, starting
10 on the bottom of page 21 says, as warming
11 accelerates and Earth's natural systems take
12 over, evermore inhospitable conditions will
13 become inevitable and take their toll. Are you
14 saying there that that applies only to these
15 plaintiffs?

16 A Well, it has to be understood if you
17 read, and I do, I don't say this disingenuously.
18 But if you read the profiles that I wrote of the
19 kids, the plaintiffs, you will see that an
20 enormous amount of their anguish comes from the
21 recognition or the empathy that they have, the
22 recognition of how many other people are being

1 hurt, and will be hurt in the future.

2 Q Hurt by Montana's energy policies?

3 A Well, again, let's back it up. And to
4 say that recognizing their, the response of
5 leaders in the State of Montana to the plight,
6 theirs, and the plight derivatively of people
7 generally, would be immensely helpful to their
8 psychological health.

9 Q And further on in your conclusion, you
10 say, and I'm looking, Dr. Van Susteren about the
11 middle of page 22.

12 A Yes.

13 Q You start a paragraph there that says,
14 I have seen children suffer physically and
15 emotionally at the hands of adults. I know abuse
16 when I see it.

17 The government supported and perpetual
18 climate crisis is an intolerable assault on our
19 children and is justifiably equivalent to child
20 abuse.

21 A Yes.

22 Q Is that --

1 I'm looking at those words and
2 interpreting them to mean that it's not just
3 these plaintiffs who are impacted by the problems
4 that you cited in your report?

5 A Well, that's one of the --

6 Q Is that --

7 A I'm sorry, did I interrupt you?

8 Q Is that true?

9 A What I was referring to earlier, was
10 the crushing sense that the plaintiffs have of
11 how much suffering is being unleashed. Not only,
12 I mean, how much suffering is being unleashed in
13 others. They're not just narrowly bothered by
14 their own experiences. They're very aware of the
15 repercussions on others.

16 Q Do the plaintiffs that you've
17 interviewed believe, if you know, that the
18 survival and well-being of humanity depends on
19 them?

20 A I'm sorry? Do I believe that the
21 individual plaintiffs feel that the survival of
22 humanity depends on them?

1 A Let me, just one correction. I'm
2 sorry. It wasn't perpetual climate crisis,
3 although one could make that argument, it's
4 perpetuated.

5 Q Oh.

6 A Government supported and perpetuated.
7 So the specific responsibility lying within
8 government.

9 Q Did I say perpetual? I misspoke?

10 A I thought I heard that.

11 Q That's fine.

12 A If I didn't, I apologize.

13 Q Yes, whatever the words say here. So
14 is that your professional opinion that the
15 government of Montana is engaging in the
16 equivalent of child abuse?

17 A That is correct. In justifiably
18 equivalent were the words that I used.

19 Q Right. Further down in your
20 conclusion -- well, the next paragraph. It says,
21 though the survival and well being of humanity is
22 on the line.

1 Q Yes.

2 A Personally?

3 Q Well, yes.

4 A Oh. I believe that they have said to
5 me, if you would look in the profiles, that they
6 feel the weight of the world is on their
7 shoulders.

8 They aren't saying that, their
9 specific experiences or they themselves in some
10 sort of megalomania, it depends entirely on them.
11 It feels as if the weight of the world is on
12 their shoulders.

13 And, of course, they recognize that
14 judicial action, in this case, can have impacts
15 not only on their mental health, but on the
16 mental health of others. This is reflection of
17 their innate sense of empathy, to their credit.

18 Q Further on in that same paragraph, Dr.
19 Van Susteren, you say, all of the accomplishments
20 and dreams of humanity, the breathtaking beauty
21 and life giving bounty of the natural world,
22 excuse me, now lies in the hands of a few

1 courageous and well-placed individuals who have
2 the capacity to turn the course of history
3 towards survival.

4 About that sentence, let me ask you
5 this first. Who? Who do you mean? Who are you
6 referring to when you say a few courageous and
7 well-placed individuals?

8 A People with power to change
9 destructive energy policies.

10 Q In Montana?

11 A It does not exclude people in Montana.

12 Q It, but, so there are -- you're
13 referring to others than just Montana in that
14 sense, right?

15 A It would be, the the issue is, let me
16 just state the issue. Is that people in power
17 have the capacity to restore the trajectory of
18 our planet, towards health.

19 And they have the power to reduce the
20 harm, the psychological harm, that comes from the
21 recognition of these plaintiffs and others, that
22 our course is on a self-destructive path.

1 Q And does Montana standing alone have
2 that power?

3 A It isn't within my purview to be able
4 to say, what role Montana can have in the future.
5 But Montana's role in restoring safe policies, in
6 accordance with its Constitution, would be hugely
7 advantageous to the plaintiffs and to the
8 psychological harm that they feel from the
9 leaders who have failed to act despite decades of
10 warnings and the scientific consensus.

11 Q In the next paragraph, Dr. Van
12 Susteren, you start the paragraph by saying, our
13 children and our posterity need help. Is it your
14 intention with that sentence that, to say that
15 the impacts that you've described to these
16 plaintiffs are felt by others as well?

17 A Correct.

18 Q Including other generations?

19 A Correct.

20 Q Then you say these plaintiffs are
21 confronting the perpetrators of the harm they are
22 facing. I'll just stop with that part. The

1 perpetrators are who?

2 A The people in power who are failing to
3 respond to the warnings, cries, pleas.

4 Scientific evidence of those who are
5 knowledgeable about climate conditions. I don't
6 know if that was a complete sentence. I'm sorry.

7 Maybe --

8 Q No, that's fine.

9 A Is that fine? Okay.

10 Q Yes, I mean, and when you say those
11 who, are your referring just to Montana, or other
12 places, as well?

13 A It's specifically here. It was to the
14 defendants in Montana.

15 Q But in your description, the
16 perpetrators, "of the harm that is global
17 warming" are, go beyond the State of Montana, do
18 they not?

19 A The implication is that, again, I'm
20 not going to parse this. But the responsibility
21 to take action on the part of those who have the
22 power is indisputable.

1 And wherever that power lies, and is
2 not acted upon, in a way that is consistent with
3 the welfare of the children is rightfully
4 described as a person who is complicit in the
5 perpetration of the harm.

6 MR. STERMITZ: Just a sec, please.

7 I'm going to gather my thoughts, here.

8 THE WITNESS: No, that's all right.

9 I'm just, I got my own thoughts.

10 BY MR. STERMITZ:

11 Q Let's go ahead, and in your report,
12 the next, if we go past the conclusion here, we
13 come to your c.v. Is that in front of you, as
14 well?

15 A It is.

16 Q The very first entry there on your
17 c.v., under work experience is private practice,
18 general and forensic psychiatry, 1987 to the
19 present. Do you maintain an active psychiatric
20 practice, today?

21 A I do.

22 Q And have you -- it looks like it, so

1 I may be stating the obvious, here. But have you
2 continuously been engaged in private practice
3 since 1987?

4 A I stopped during the time that I spent
5 running for the U.S. Senate in Maryland.

6 Q Okay. And that was 2005, I guess,
7 look at your c.v., here?

8 A That's correct, yes. I see there's a
9 mistake there. The subsequent line, the first
10 two words belong in the third line. The last two
11 words, I'm sorry.

12 Q The Maryland consultant should be the
13 next line?

14 A Actually, no, it's consultant to
15 should be in the next line.

16 Q Oh, I see what you're saying. Okay.
17 And do you have a particular focus in your
18 private practice today, let's focus on today, as
19 to the types of patients that you see?

20 A No.

21 Q So a general practice?

22 A Correct.

1 and after, and trauma can be a chronic condition.

2 Q Yes, I understand that I was imprecise
3 in my question. Did you, for the plaintiffs that
4 you met with, here in this case, did you apply
5 the same sort of approach in terms of taking
6 their history that you would typically for one of
7 your patients in your office in D.C. or Maryland?

8 A No.

9 Q And why is that?

10 A In my office, I am looking to diagnose
11 and treat. That was not my role with the
12 plaintiffs.

13 Q How would you describe your role with
14 the plaintiffs in this case?

15 A My role was to listen to what they had
16 to say about their experiences in Montana as a
17 result of Montana's energy policies. And then,
18 to faithfully report without leading them to any
19 conclusions, or leading them to particular areas
20 that were of interest to me, potentially. But
21 rather to track what it was that they were saying
22 and faithfully report that in my profiles.

1 Q And does some of your practice include
2 counseling or assessing persons who are, have
3 experienced trauma, either mental or physical of
4 some sort?

5 A Yes.

6 Q And as such, do you typically take a
7 history that includes their life experience
8 before whatever the traumatic event was?

9 A The history that I take includes their
10 earliest memories all the way to the present day.

11 Q Okay. And then does that give you a
12 picture of the individual as they were living
13 before the traumatic event occurred?

14 A Well, let me --

15 Q Or events?

16 A -- let me just elbow my way in a
17 little bit.

18 Q Okay.

19 A Traumatic events aren't necessarily
20 just a tree fell on my car during storm.
21 Traumatic events are of varying degrees of
22 intensity. So it is being described as a before

1 Q And consistent with that, it's, it's
2 fair to say, I think you specifically say, you
3 did not formally diagnose them, is that right?

4 A That's correct.

5 Q And that would be a different approach
6 from one of your patients in your regular
7 psychiatric practice, right?

8 A Correct.

9 Q So for example, you didn't for these
10 plaintiffs sort of holistically look at their
11 environmental conditions, or upbringing, other
12 factors that may be affecting them mentally or
13 physically and recommend -- well, just stop
14 there.

15 A Do you mind saying that again?

16 Q So for these plaintiffs you didn't
17 review their history in a way that you would with
18 your usual patients? Well, just let me stop
19 there.

20 A That's correct, with some footnotes.
21 But that's basically correct. The profile is,
22 when you are with a patient in your office

1 diagnosing and treating it involves very specific
2 questioning that is related to my job there,
3 which is to diagnose and treat them.

4 But the plaintiffs, of course, didn't,
5 were not subjected to my need to diagnose and
6 treat. So the questioning was of a very
7 different sort.

8 Q And maybe I could help this way. So
9 technically, they're really not your, they're not
10 your, these plaintiffs aren't your patients? Is
11 that fair to say?

12 A No, they are not my patients.

13 Q Okay.

14 A And I made that clear to them, that
15 they were not there for treatment, and I was not
16 diagnosing them.

17 Q Okay. And because they're not your
18 patients, you didn't feel it was necessary or
19 appropriate to go into the kind of history that
20 you normally would in diagnosing and recommending
21 a course of treatment for your patients, right?

22 A You know, that's, no reflection on

1 dealing with these plaintiffs?

2 A Let me just say that with plaintiffs,
3 my role was very careful not to influence their
4 train of thought, not to influence the themes
5 that they talked about, not to ask pointed
6 questions that would lead them to have an
7 understanding, inkling, or sense of where I was
8 on this particular issue.

9 In my office, I don't have to do that,
10 because I'm not doing a profile. But in the work
11 with the plaintiffs, the important thing for me,
12 and for the plaintiffs, and for the purposes of
13 work here, was to get out of the way and allow
14 them to tell me spontaneously, on their own, what
15 their feelings are or were.

16 So in those, non-leading questions.
17 In my office, I'm free to ask leading questions.
18 I might not or I might not be so clearly leading.
19 But I refrained from any indication to the
20 plaintiffs about what my needs, wishes, thoughts,
21 et cetera might be.

22 MR. STERMITZ: Okay, thank you. Thank

1 you, but it's a rather simplistic way of looking
2 at this. And again, no, no fault of yours
3 because you don't do this.

4 But there are many ways to find out
5 information. And in a profile, what you want to
6 do is ask open-ended questions, non-leading
7 questions. And the goal is to track where the
8 patient takes you.

9 So my questions were all open-ended,
10 and I followed up wherever they went, they took
11 me. And I would follow along, getting
12 information from them. It wasn't that I had a
13 particular design. I was there to listen and to
14 faithfully record what I saw and heard.

15 Q You have patients -- well, I'll just
16 ask for the current times. Do you have patients
17 now report to you with anxiety or other problems
18 from global warming?

19 A Yes.

20 Q And with those patient, how is your
21 approach to those patients, specifically the
22 global warming patients differ from your role in

1 you. Folks, I just thinking about this timing
2 here and taking another break. I'm struggling a
3 little with the fact that it's 2:00, almost 2:30
4 there.

5 And I have, just in the interest of
6 planning and disclosure here, maybe another hour
7 at the most left. I'd like to take a break now.
8 But what is your preference on going forward
9 here? Do you want to just do a short break and
10 then soldier on? Or what?

11 MS. RODGERS: Lise, what's your
12 preference. Do you need to a lunch break? Or do
13 you want to take a short break now?

14 THE WITNESS: I'll take a short break
15 now. I had scheduled a patient for 4:00 Eastern.
16 I can easily --

17 MS. RODGERS: Well, I think that
18 should be fine.

19 MR. STERMITZ: Yes, we won't go that
20 long.

21 MS. RODGERS: So if we go, if we go --

22 THE WITNESS: I just need time to get

1 home. That's the only thing because it takes me
2 half an hour to get home. But again, not to
3 worry, this is obviously more important.

4 And I, this is a patient whom I've
5 known for a long time. So it would not be a
6 problem if I explained that I had something that
7 interfered urgently and unexpectedly so much.

8 MS. RODGERS: Well, do you are okay
9 for lunch?

10 MR. STERMITZ: What's your --

11 THE WITNESS: Yes, I'm okay.

12 MS. RODGERS: Okay. I think we could
13 do that, Mark. Why don't we just take a short
14 break. And then, we'll go back. And we don't
15 need to take a lunch break right now.

16 MR. STERMITZ: Okay. Let's, if you
17 don't mind, let's do 15 minutes.

18 MS. RODGERS: Okay.

19 THE WITNESS: Okay, good.

20 MR. STERMITZ: All right, thank you.

21 (Whereupon, the above-entitled matter
22 went off the record at 12:25 p.m. and resumed at

1 attitude about what our role, my role is with
2 them.

3 Q No. I realize your role was different
4 here. I was asking, to be clear, you a
5 hypothetical about let's just say, for example,
6 if Rikki Held came to you saying that she, you
7 know, her history was exactly the same as she has
8 reported to you in this case. You know, what
9 would you advise her --

10 A Oh, okay.

11 Q -- in that instance?

12 A Okay, so here's what we know is that
13 when people are anxious about something, they
14 often see their anxiety, and studies show this, a
15 voluminous amount of studies show that if they
16 take some sort of action that responds to the
17 source of the anxiety, that it can help them
18 manage their anxiety.

19 Q Okay. Have you counseled patients, in
20 your experience, who have suffered anxiety
21 caused, in part or in whole by participating in a
22 lawsuit?

1 12:39 p.m.)

2 BY MR. STERMITZ:

3 Q We were talking about, with patients
4 who present to you in your practice experiencing
5 anxiety about global warming, would you
6 typically, if it's possible to answer that way,
7 develop some kind of a treatment plan to
8 alleviate their symptoms?

9 A No. What I -- because, you know, I
10 can't really alleviate their symptoms because
11 they're responding to an ongoing crisis. So I
12 can't eliminate their symptoms. But I can do
13 what I do. Listen to them, and respond
14 empathically to them. But I can't change the
15 global climate conditions.

16 Q And that would be true, would it not
17 if any of these plaintiffs had, hypothetically,
18 walked into your office with the anxiety that
19 they are experiencing today?

20 A Well, well, except that of course,
21 they're not my patients. In this particular
22 instance, of course, it's a completely different

1 A As I understand it, have I -- I'm
2 sorry, do you mind restating that?

3 Q No. Have you had patients in your
4 experience that have come to you because of
5 anxiety they're experiencing by virtue of being
6 involved in a lawsuit?

7 A By virtue of their being involved?
8 Yes.

9 Q And now, I'm trying to separate. I
10 want to be clear to be fair about it. Whatever
11 the cause of the lawsuit, that I want to separate
12 the cause of the lawsuit whatever that might be,
13 because that could be anything, from the actual
14 experience of being in litigation.

15 Have you had people who you've had to
16 counsel, or treat solely, or that is part of
17 their problems because of the impacts of being
18 part of a lawsuit? Does that make sense?

19 A Well, I'm not sure of the distinction.
20 I have had patients who are involved in a
21 lawsuit, and they feel anxiety about it.

22 Q And is it possible -- I mean, the

1 process of litigation is stressful for probably
2 everyone who's in it except those who are
3 professionally, you know, involved, right?

4 A Correct.

5 Q And are you saying, well, is it part
6 of your opinion --

7 A Well, let me just add, though, it's
8 anxiety-provoking to be in a lawsuit. But the
9 question is, is it also heartening to know that
10 you are hoping for a justice to be served, and
11 that is something which has also to be paired
12 with the anxiety of any experience of a lawsuit.
13 Because my patients also are looking forward to
14 justice being served.

15 Q And if a patient or maybe let's just
16 refer to, well, let's just keep it with your
17 patients, hypothetically. If a patient was in
18 that situation, they were in a lawsuit, and
19 they're hoping for vindication, or whatever
20 positive result might come from it, didn't
21 happen, they lost the case, or whatever, where
22 does that leave them psychologically? Are they

1 try to do a better job.

2 In the profiles that I did of the
3 kids, each of the kids said what a sense of
4 relief, and how heartening it was for them to be
5 involved in this case.

6 Q Okay. And you know, for minors,
7 they're required, as you know, to have a guardian
8 or parent make the decision to participate for
9 them. They can't do that on their own, right?

10 MS. RODGERS: Objection to the extent
11 it calls for legal understanding of guardianship
12 and the law. Go ahead and answer.

13 MR. STERMITZ: Well, I hope I'm right
14 about that. Maybe I'm wrong.

15 THE WITNESS: That's my understanding.

16 MR. STERMITZ: Okay.

17 BY MR. STERMITZ:

18 Q And I mean, would you agree that's
19 because in part, at least, they haven't reached
20 the age of majority. And generally, society
21 tries to protect them from making decisions that
22 really need to be made by what society at least

1 any worse off than they were to start with? Or
2 can you say?

3 A Well, they wouldn't have engaged in
4 the lawsuit if they felt that losing would be a
5 desirable outcome. So it is embedded in the very
6 process of bringing suit or being the subject of
7 a suit that prevailing is going to be better than
8 not. So the range of emotions, of course,
9 depends on the individual, the lawsuit, the
10 conditions, the context, et cetera.

11 Q Here, in this case, we're dealing with
12 minors, to a large extent, right?

13 A Correct.

14 Q At least some were minors, I gather,
15 when the case was filed. They may not be now.
16 But are there particular sensitivities that you
17 would be concerned about with patients that were
18 minors that were involved in litigation for one
19 reason or another, compared to say, adults?

20 A I know, I'm not answering your
21 question. But let me respond this way. And if
22 that's not good, please let me know and I will

1 has decided is an adult age?

2 A Thank you for adding what society --
3 yes, the parents what they need, well, again, I'm
4 not giving parents necessarily credit because
5 that implies a judgment on the part of parents to
6 know specifically and accurately what a child
7 needs.

8 And that's unfortunately, not always
9 the case. But I know that that is the principle
10 that underlies a guardian making, being
11 responsible for the decision. I'm quibbling with
12 the fact that it may or may not be what the child
13 needs.

14 Q Sure. I get that. For the plaintiffs
15 that you met with, do you have an impression as
16 to whether their understanding of what the
17 lawsuit is designed to do was independently
18 complete, as opposed to perhaps their parents'
19 understanding?

20 A I'm not, do you mind -- I'm sorry. Do
21 you mind restating that?

22 Q Well, do you think that, with the

1 plaintiffs that you met, that they understood
2 completely what the litigation was about? Let's
3 just put it that way first.

4 A They understood that, they understood
5 the case, correct.

6 Q Do you know, from talking to them, the
7 level of knowledge that their parents had about
8 the case?

9 A I do not, unless, the kids offered it.
10 I'd have to review my profiles to see because I
11 think that it varied from one child to another.
12 But I did not specifically ask them about their
13 parents knowledge about the case.

14 If they bring it up, and said
15 something about it, I would, as a matter of
16 course, because this is a profile, if they wanted
17 to bring their parents into the discussion then I
18 would say, tell me about that.

19 I might use what's called a tracking
20 question. I would not lead them to any
21 discussion. I might just encourage them if they
22 felt like talking about it that they would.

1 Q I'm asking the question this way, I'll
2 just say because I'm trying to avoid having to
3 dig in each of these profiles individually, just
4 in the interest of time and other things.

5 But so, if we have to, we can, but
6 generally speaking, was it your impression that
7 these children that you talked to had different
8 experiences at school, with peers, and other
9 students in terms of any knowledge of global
10 warming? Or their involvement in that?

11 A Yes.

12 Q And I'd ask the same question, do you
13 think the same was true for their experiences at
14 home, with parents or other people living in the
15 household, different experiences?

16 A Different levels of understanding,
17 experiences, yes. It wasn't like father like
18 son, if that's what you mean.

19 Q Right. Is it fair to say that their
20 description of the anxieties that they reported
21 to you was, would be in part impacted by whatever
22 they're experiencing at school or at home on the

1 topic of climate change, or global warming, is
2 that right?

3 A It is true that some of the plaintiffs
4 ascribe deeper anxiety to the apathy, or the lack
5 of knowledge, and the absence of a school
6 curriculum and teachers that were tasked with
7 teaching them about science and civics. That
8 their understanding was minimal, or that they
9 were deniers, and this contributed to their
10 anxiety.

11 Q Did you find, at least with these
12 people that you talked to, the children, that
13 there was any hint of the reverse being true?
14 That is, that their anxieties were exacerbated by
15 the anxieties their parents were reporting about
16 global warming?

17 A I did not get that impression.

18 Q Have you seen --

19 A And they did not state anything to
20 that matter.

21 Q In your experience, have you -- well,
22 let me back up just to make sure. Have you, if I

1 didn't ask this already, have you had underage
2 patients in your private practice who were there
3 because of anxiety about global warming?

4 A Not that I recall.

5 Q Okay. Back to your c.v., I'm sorry
6 for jumping around a little bit here.

7 A It's all right.

8 Q Turning to the second page, the second
9 page of your c.v., Dr. Van Susteren, where, under
10 the category, recent presentations, selected?

11 A Yes?

12 MR. STERMITZ: By the way, I'm getting
13 some feedback from some -- is there talking in
14 the background there?

15 THE WITNESS: I think that's talking
16 next door.

17 MS. RODGERS: I'm just going to go
18 quickly see that.

19 MR. STERMITZ: All right.

20 MS. RODGERS: Hopefully that will
21 help, Mark.

22 MR. STERMITZ: So back on the record.

1 BY MR. STERMITZ:

2 Q I was asking you about recent
3 presentations. Do you see that on your c.v.?

4 A I do. And you say you've given
5 hundreds of presentations around the world to
6 educate professionals, policymakers, and the
7 public on climate and health. These topics
8 include the emotional toll of climate disruption,
9 the plight of refugees, environmental injustice,
10 and so forth.

11 The rest of that paragraph, I won't
12 read right now. So would you say that, that the
13 largest focus of your practice is around the
14 subject of climate change?

15 A I'll use the approved term, or the one
16 that Frank Luntz devised, which is climate
17 change. But the real term, of course, is global
18 warming. So the answer is yes.

19 Q Okay, global -- if my question, if I'd
20 asked global warming?

21 A Well, hold on a second. That's not
22 exactly true. I take it back. Because in my

1 practice, I do not focus. These are the
2 presentations that I have done.

3 But in my practice, and I have, you
4 know, 15, 17 hours, or so of private practice
5 every week. And the focus is not on climate and
6 health.

7 Q Not necessarily, at least? Or is it?

8 A That is correct. If it comes up, I
9 certainly address it. But it is not the focus.
10 My presentations, under the category of recent
11 presentations, you're correct.

12 Q Okay. Going on with that same
13 sentence there, you, towards the end it says
14 creating coalitions and using the lessons of
15 behavioral psychologists to craft persuasive
16 messaging. Can you explain using different words
17 what that means exactly?

18 A Creating coalitions means simply
19 bringing people together for a common cause.

20 Q Yes, I get that.

21 A I'm sorry, I'm being a little concrete
22 myself here. And using the lessons of behavioral

1 psychologists to craft persuasive messaging. So
2 here's what we know. And that is that, for
3 example, if you -- and I'll give the example of
4 someone coming into my office.

5 And I've often said, if you just pull
6 their pants down the show how exposed they are to
7 their anxieties and depression and things like
8 that, without helping them pull their pants back
9 up, as they, or before they leave your office,
10 then you have, you've not helped.

11 So the goal is to help people look at
12 their vulnerabilities. And what they might be
13 able to do to reduce the sense of anxiety that
14 comes from those vulnerabilities.

15 Q So is that what you mean by the
16 lessons of behavioral psychologists craft
17 persuasive messaging?

18 A Yes.

19 Q Who is, in that statement, giving the
20 persuasive message? I'm kind of confused about
21 that. Is that, is that your, what you just
22 described? I guess, maybe your message to the

1 patient? Or am I saying that right?

2 A Well, you're saying it right.
3 Although, there are two arenas that we're talking
4 about. How I am in my office. And how I might
5 be in a presentation can be very different, or
6 it's different.

7 So when I say craft persuasive
8 messaging, if you warn a person about something,
9 what you want to do is segue from that warning,
10 pivoting to what an empowering action might be if
11 they feel threatened by that warning that you
12 issued.

13 So that's, sometimes people will
14 simply make a warning and stop there. And
15 sometimes they'll just say, here's what we got to
16 do. And it's pairing the two, for example, this
17 is one example of a persuasive message. Here's
18 the problem. Here's what you can do about it.

19 Q You've previously worked with
20 patients, I assume, tell me my assumptions wrong,
21 who's anxieties or injuries or trauma, whatever
22 they are experiencing that they're there to see

1 you about, is connected in some way to obtaining
2 a favorable outcome in the lawsuit?

3 MS. RODGERS: Objection, vague and
4 ambiguous.

5 MR. STERMITZ: Yes, it was.

6 BY MR. STERMITZ:

7 Q What I'm getting at is, have you had
8 a patient before whose psychological issues were
9 connected to, let's say, whose improvement in
10 psychological problems depended in part on
11 obtaining a favorable result in the lawsuit?

12 A Yes.

13 Q I mean, that's what's going on here,
14 right? I mean, you've said, they need, you know,
15 the Court to rule in their favor, here.

16 A It would be immensely beneficial to
17 their mental health to win in Court, yes.

18 Q There we go.

19 A Yes.

20 Q Have you have you seen that before in
21 private practice? Regardless of whether it's
22 climate change, or global warming, or anything

1 else?

2 A People, yes, are happy if they have
3 prevailed in court.

4 Q And, and if they don't? What would
5 you what would you counsel them? What would you
6 expect to see?

7 A Depends on the case, depends on the
8 person, the context, many, many other factors.
9 It isn't a black and white issue.

10 A Yes. And here I'm going to assume
11 that you couldn't speculate about that with these
12 plaintiffs because that wasn't your role? Is
13 that right? That is, the impact on them of a
14 negative result in the Court, correct?

15 A Well, wait a minute. No, it was my
16 role in the sense that they spoke about
17 conditions that they feel are worsening. And
18 absent action on the part of the Courts to
19 correct Montana's energy policy would mean that
20 conditions were going to get worse. And of
21 course, their anxieties are increased when
22 conditions get worse. And the psychological

1 harms, generally, exacerbated it.

2 Q Okay. So is another way to put that,
3 that the psychological health of these plaintiffs
4 is dependent to some extent on the judicial
5 system?

6 A Dependent is not a word that I would
7 use. What I would say, is putting it, because
8 the impact of reversals in anyone's life depend
9 on so many outside factors. So I can't make that
10 statement. What I can say is how beneficial that
11 would be for them to prevail in Court.

12 Q I gather from what you've said earlier
13 that you don't have any information about
14 Montana's laws other than what you read in the
15 complaint, is that fair?

16 A I mean, to the best of my ability, I'm
17 trying to tell you that I don't. I'm not aware
18 of knowing specifics about Montana law, other
19 than what I read in the complaint.

20 Q And for the plaintiffs that you did
21 not meet with, you don't have any additional
22 information other than what's in the complaint

1 about them? Is that fair?

2 A Correct.

3 Q And so, you know, I think the next
4 question, which is, if the information that's in
5 the complaint turns out to be not accurate, in
6 some respects, depending on what that information
7 is, you, would you agree you might have to adjust
8 your opinions?

9 A First of all, it would strain
10 credulity for me to imagine that there would be
11 anything so inaccurate about the children in the
12 rest of the complaint that it would alter my
13 opinion in the case.

14 Q Well, you have a lot of faith in the
15 plaintiffs here. Although, I am not making a
16 specific comment about them. But generally in
17 the legal system, you never know sometimes.
18 That's, you know.

19 A I just said, it would strain
20 credulity.

21 Q Okay. Did you get an impression from
22 the plaintiffs whether their knowledge, whatever

1 it was of Montana's energy policies was obtained
2 by them independently? Or how they came about,
3 their knowledge at all?

4 A Their knowledge about Montana policy?

5 Q Energy policies, correct?

6 A You know, I don't know, I'd have to go
7 back and read my profiles to see if they
8 specifically told me about where they learned
9 policies. What I did hear from them is the
10 intense emotional reaction at teachers, for
11 example, who were deniers.

12 One person in particular, and I can't
13 remember which plaintiff it was, said that
14 climate change, we call it spring, fall, winter.
15 Another said -- well, I'm not going to go through
16 it.

17 But that I can tell you that it was,
18 that was what was noteworthy about Montana policy
19 was the response of people who were in a position
20 to teach about it, or act upon it.

21 I'm sorry, that was an awkward answer.
22 I don't know where they got their information

1 literally. That is, the statutes that are in
2 question in this lawsuit. Do you recall, talking
3 with any of the individuals about that?

4 A Again, it's probably a misnomer to say
5 that I talked with them about it. I listened and
6 followed along. I did not engage in a dialogue
7 to question them about their knowledge.

8 I followed where they went as a stream
9 of consciousness in order to get a profile of
10 them that I thought was most accurate. Indeed,
11 they did cite energy policies in Montana that
12 favored the continued use of fossil fuels.

13 And the, what's the word? The
14 suffering, anguish, anger, despair, a feeling of
15 abandonment, et cetera, that they experienced as
16 a result. In some cases, I will add stupidity of
17 the people involved in creating energy policies
18 that were so destructive.

19 Q In the previous, in that Juliana case
20 you were involved in were the energy policies,
21 are Montana's energy policies more destructive
22 than whatever was at issue there?

1 about energy policy, only the bare lamentation
2 about people who didn't know anything about it.

3 Q Well, isn't it fair to say that the
4 anxiety that they reported and the discussions
5 that you had with them centered on climate on
6 global warming, not specifically on Montana's
7 laws about global warming? Isn't that, right?

8 A Well, no, Montana policy was a very
9 active theme in our time together, or lack
10 thereof.

11 Q Do you recall any of those individuals
12 you met with mentioning a statute specifically?

13 A Oh. Not that I recall. You mean like
14 a statute with a number, et cetera?

15 Q Yes.

16 A No, I did not hear that from them that
17 I recall. Again, I would have to review to make
18 sure that I'm not in error. But I don't recall
19 that.

20 Q Well, maybe I'm asking something more
21 specific. When I say energy policies, Montana's
22 energy policies, I meaning, so we're clear, that

1 A I would have to refer you to the
2 complaint on that.

3 Q When we talked about policies, maybe,
4 maybe we should clarify that. Let me ask it this
5 way, having a policy is different than acting in
6 furtherance of that policy, those are two
7 different things. Is that fair?

8 A If you're saying that policies are
9 written and not followed, I think we can all
10 agree that's true.

11 Q Okay. And, but really more of what I
12 was getting at is, when you, if you can recall,
13 and I'm just going to say, I don't know that
14 we'll get any clearer on this by looking at the
15 individual reports, but we can.

16 When you talked with these plaintiffs
17 about Montana's energy policies, this is, you
18 heard them talking about actions in furtherance
19 of the policies?

20 That as anything that promotes
21 greenhouse gas emissions, and so forth, not
22 necessarily the laws themselves or the policies

1 themselves? Is that an accurate statement do you
2 think?

3 A I'd need you to restate it. But I
4 also want to stress, that it isn't that I
5 "talked with them about policies". What I did
6 was I listened to the discourse as it happened
7 and unfolded as a stream of consciousness, and
8 would only track what it was that they were
9 saying.

10 So I didn't say hey, let's talk about
11 policy and what do you think about policy? I
12 might say, do you have some feelings about this?
13 So I don't lead them in any way. I follow. But
14 as far as your statement is concerned, and
15 whether or not I agree with it, do you mind
16 restating it?

17 Q Well, I think I'll just be asking the
18 same question in probably a slightly different
19 way. So --

20 A Okay.

21 Q -- I'm not going to bother. I guess,
22 the bottom line for me on this topic is that as

1 far as the law itself is concerned, the policies
2 themselves, what's in the books, it doesn't sound
3 like anyone reported anything specifically to you
4 with those interviews is that, is that right?

5 A Let me just state that the plaintiffs
6 are aware that the policies in Montana, the
7 energy policies in Montana are responsible for
8 creating additional risk by their, by the use of
9 fossil fuels as an energy source. Specific, more
10 specific than that I can't give you as I sit here
11 right now, today.

12 Q Okay. In your reports on these
13 interviews -- let me just check something real
14 quick. Okay. If we look just for starters at
15 Rikki Held's report, which is, well this our
16 attachment 3 and I'm looking at page 7, 3-7.

17 A Okay.

18 Q Which is at the very end of your
19 report about Ms. Held.

20 A Got it.

21 Q Okay. The very last paragraph says,
22 in my professional judgment, Rikki displays

1 psychological harms consistent with exposure to
2 traumatic stressors, and other unhealthy social
3 forces brought on by climate change, that
4 destabilize society.

5 I don't see -- well, then the next
6 sentence says, this is classic fallout from
7 climate disruption. And especially from
8 government betrayal on climate.

9 These consequences are referenced in
10 my expert report and increasingly documented in
11 the scientific literature. We can look, but I
12 think you made a similar statement for each of
13 the individuals you met with, is that right?

14 A I'd have to confirm it. But it would
15 be something that applies to each one of them.

16 Q Okay. On page 3-10, Dr. Van Susteren,
17 if you'd go there? This is your report on this
18 is recorded on Mica K. And under the top, very
19 top of the page -- are you with me?

20 A Yes.

21 Q In my professional judgment, Mica
22 displays psychological harms consistent with

1 exposure to traumatic stressors and other
2 unhealthy social forces. That paragraph appears
3 to be, you know, verbatim that we just looked at
4 for Rikki.

5 A Correct.

6 Q Okay. And then, I don't know. I
7 think, let's look at Olivia.

8 A Again, it does apply to all of them.
9 I don't, can't, couldn't confirm as I was sitting
10 here that it was always included, but it
11 certainly applies.

12 Q Sure. And then on page 3-14, at the
13 bottom of the page and this was for Olivia V.
14 There's, there appears the same paragraph we just
15 read. It goes on to the next page for her.

16 A Yes.

17 Q All right. So breaking this down a
18 little bit. Let's, let's go back to let's go
19 back to Rikki's. That would be --

20 A Got it.

21 Q -- page --

22 A 3-5.

1 Q -- well it says at 3-7.

2 A Okay.

3 Q I don't see it. Where was I? Okay,
4 let me, let me back up here a little. I'm sorry,
5 on page 3-6, at the bottom of page 3-6, it
6 repeats. The last paragraph starts there,
7 without action by the Court.

8 A Yes.

9 Q It says, without action by the Court,
10 there will be no peace of mind for Rikki, no
11 belief the world is basically a good and safe
12 place. No conviction that the dark thoughts she
13 has can reasonably give way to hope.

14 Ongoing despair, I believe will be
15 inescapable, with all the attendant behaviors
16 that go with it. Let's just stop with that part
17 for now.

18 So am I right in inferring that when
19 you say without action by the Court, there will
20 be no peace of mind for Rikki, and so forth?
21 That, with action by the Court, there will be
22 peace of mind?

1 And there will be a belief the world
2 is basically a good and safe place? And that she
3 can reasonably have hope? Is that, is the
4 corollary true there?

5 A It would help.

6 Q Hypothetically, if there was a
7 favorable Court decision, and Rikki obviously
8 would know that. Let's say they hit a home run,
9 the plaintiffs, on this case.

10 And then the next day, she would read
11 in the paper that there's, you know, additional
12 bad news about global warming that has nothing to
13 do with state of Montana. It's something,
14 somewhere else. How do you think she's going to
15 react to that?

16 A That's certainly speculative. But the
17 main issue is that the benefit of knowing that
18 the State of Montana responded to genuine needs,
19 legitimate needs that reflect scientific
20 consensus that are geared towards protecting the
21 populace, being overwhelmingly --

22 Well, maybe I shouldn't say

1 overwhelmingly, it would be an extremely positive
2 and healing experience for plaintiffs. What
3 happens the next day is beyond the purview of
4 what I can attest to here about what the benefit
5 of prevailing would be.

6 Q Okay. And, and you may have actually
7 answered the question in the next sentence of
8 that paragraph. And I apologize, I didn't mean
9 to mislead you. But you go on to say that --

10 A Yes.

11 Q Is at the top of page 3-7 actions that
12 promote the use of fossil fuels by the State of
13 Montana can be expected to exacerbate Rikki's
14 current emotional state, and cause mounting
15 psychological damages time and additional climate
16 disasters unspool. So when you use the word
17 exacerbate that means worsen, true?

18 A Correct.

19 Q And so that infers that there's sort
20 of -- what would be the word? A baseline level
21 of anxiety that is not necessarily attributable
22 to Montana, but it's attributable to climate

1 change, generally, is that fair?

2 A Well, let's, I got to replace it.
3 Because it is very clear. The kids are
4 conscious, sensitive to the suffering, not only
5 of their narrow interests, but they are very
6 conscious of suffering, generally.

7 These kids are very aware. So the
8 question is really, what's the belief, and what
9 the impact of a victory in Court would be. And,
10 you know, we can we can talk about that, you
11 know, if the true issue is about that.

12 But it doesn't suggest anything about
13 baseline anxiety, it only says that they are very
14 empathetically attuned to how other people are
15 suffering. And they have said that.

16 Q Okay. When you met with these
17 individuals, Dr. Van Susteren, were they all, did
18 you meet them all in one day? Maybe in --

19 A No, I did not meet them all in one
20 day.

21 them all in one day.

22 Q Okay. Did you do one each day? One

1 a day? Or how did that work out?

2 A I think that I did, if I recall
3 correctly, one day I did two. But I think,
4 otherwise, I did one a day. But I'm not 100
5 percent sure.

6 Q And it sounds like that there were
7 arrangements made for like a rental house, or
8 some Airbnb type thing for you to do this in? Is
9 that right?

10 A That's correct.

11 Q Do you -- if this is not a fair
12 question, just tell me. But do you see these
13 individuals, the ones you met with as typical, if
14 there is a such a thing, Montana youth?

15 A That wouldn't be for me to say what a
16 typical Montana youth is. What I can say is that
17 the kids felt isolated, and sometimes alienated
18 from their peers as a result of their knowledge
19 about what was happening.

20 Q Have you had any exposure to Montana
21 at all? Other than what's come through this
22 litigation and meeting with these, these

1 children?

2 A I once went a number of years ago to
3 Montana for a summer vacation with my kids and
4 husband. For maybe four days or something. It
5 was --

6 Q And for you that was good experience?

7 A Was it a good experience? Yes. I
8 wish the kids have gotten along a little better,
9 but yes.

10 Q And I assume you would agree that the
11 State of Montana can't do anything about the
12 attitudes of other children that these plaintiffs
13 might encounter when they're at school, for
14 example?

15 A I do not agree with that statement at
16 all.

17 Q Okay, please explain.

18 A Kids are very much affected by what
19 authority figures do. If the culture of Montana
20 was different because it had laws and policies
21 that were acted upon to preserve the --

22 And I'll say it here, the beauty and

1 bounty of Montana, that would influence how the
2 children around them, their peers would be
3 experiencing the need for action on climate.

4 Q You know, I mean, are you are you
5 generalizing as to children in Montana? Or I
6 mean, can you be sure that the children that
7 these plaintiffs, or anybody else encounters on
8 the playground, so to speak, are actually paying
9 that much attention to what's going on in the
10 world?

11 A Policies bleed into community life,
12 creating culture. And whether the kids could
13 specifically ascribe how they feel, what their
14 gut reactions are, et cetera, to a particular
15 policy or not, we'd have to see. But again,
16 policies affect, they bleed down into community
17 life, community life becomes culture, and culture
18 affects all of us.

19 Q So do you think that Montana's energy
20 policies reflect Montana's culture, to some
21 extent?

22 A My point was that policies that are

1 directed at the common good and the welfare,
2 safety, health, security of its residents can
3 bleed into the community creating a similar
4 attitude.

5 Q Well, you've said that you believe
6 that Montana's energy policies are the equivalent
7 of child abuse. Are citizens of Montana
8 complicit in that in some way in your view?

9 A And I'm going to quote Martin Luther
10 King here where he said that the vile statements
11 of some people, as bad as they are, pale
12 sometimes in comparison to the silence of people
13 who are apathetic.

14 So I will answer it in those terms,
15 which is that silence on the part of individuals
16 who have power to provide safety and security to
17 these children, these plaintiffs specifically,
18 and who failed to act are yes, complicit.

19 MR. STERMITZ: I think I'm, I think
20 I'm about finished, if not completely finished.
21 Can we take like five minutes off the record?

22 MS. RODGERS: Certainly.

1 MR. STERMITZ: Okay. Then, yes, I
2 don't know if you have anything, but maybe you
3 can decide now. And then, will be done pretty
4 quickly.

5 MS. RODGERS: Will do.

6 MR. STERMITZ: Okay, thanks.

7 (Whereupon, the above-entitled matter
8 went off the record at 1:33 p.m. and resumed at
9 1:49 p.m.)

10 MR. STERMITZ: And I have no further
11 questions, Dr. Van Susteren. And we've had a
12 discussion, we've agreed that the notice of
13 deposition will be Exhibit 60.

14 (Whereupon, the above-referred to
15 document was marked as Plaintiff Exhibit No. 60
16 for identification.)

17 MR. STERMITZ: Her expert report will
18 be 61.

19 (Whereupon, the above-referred to
20 document was marked as Plaintiff Exhibit No. 61
21 for identification.)

22 MR. STERMITZ: And the confidential

1 attachment to that report will be 61-A.

2 (Whereupon, the above-referred to
3 document was marked as Plaintiff Exhibit No. 61-A
4 for identification.)

5 MR. STERMITZ: They're being
6 electronically marked by the court reporter. And
7 she'll send those to me. And I'll get them to
8 Fisher, who's maintaining the hard copies. Does
9 that sound right, Andrea?

10 MS. RODGERS: Yes, that sounds
11 correct. Thank you, Mark. And we don't have any
12 questions.

13 MR. STERMITZ: Okay. All right, then,
14 I think we're finished. Thank you for your
15 patience, Dr. Van Susteren.

16 THE WITNESS: Thank you. Thank you.

17 (Whereupon, the taking of deposition
18 in the above-entitled matter concluded at 1:49
19 p.m., signature having NOT been waived.)
20
21
22

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EXHIBIT 12

*Rikki Held, et al. v
State of Montana, et al.*

*Michael Durglo, Jr.
October 28, 2022*

*Charles Fisher Court Reporting
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Bozeman, MT 59715
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MONTANA FIRST JUDICIAL DISTRICT COURT
LEWIS AND CLARK COUNTY

RIKKI HELD, ET AL.,
Plaintiffs,
vs. Cause No. CDV 2020-307
STATE OF MONTANA, ET AL.,
Defendants.

VIDEOCONFERENCE DEPOSITION UPON
ORAL EXAMINATION OF
MICHAEL DURGL0, JR.

BE IT REMEMBERED, that the
deposition upon oral examination of MICHAEL
DURGL0, JR., present at Fisher in Kalispell,
Montana, appearing at the instance of Defendants,
was taken at the offices of Charles Fisher Court
Reporting, 14 3rd Street E, Kalispell, Montana, on
Friday, October 28, 2022, beginning at the hour of
9:00 a.m., pursuant to the Montana Rules of Civil
Procedure, before Kasey L. Fisher, Registered
Professional Reporter - Notary Public.

APPEARANCES CONTINUED

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I N D E X

EXAMINATION OF MR. MICHAEL DURGL0, JR. BY: PAGE:
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E X H I B I T S

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1 WHEREUPON, the following proceedings were had
2 and testimony taken, to-wit:

3 * * * * *

4 MICHAEL DURGLLO, JR.,
5 called as a witness herein, having been first duly
6 sworn, was examined and testified as follows:

7 EXAMINATION

8 BY MR. LONGFIELD:

9 Q. Good morning, Mr. Durglo. Thank you for
10 taking the time to be here today.

11 And, again, I apologize, I'm not able to
12 be there with you in person. I don't think you
13 would have wanted to be around me today. I'm
14 feeling quite ill.

15 A. Sorry about that, and thank you very
16 much. It's very much an honor for me to be here.

17 Q. Thank you, sir. It's an honor to speak
18 with you too.

19 My name is Tim Longfield. As Roger said,
20 I'm the assistant attorney general for the State.
21 That just means I'm one of the attorneys
22 representing the defendants in this case.

23 Before we start, I briefly want to cover
24 a few general guidelines related to this morning's
25 deposition.

1 So the purpose of this deposition is
2 simply to learn more about you, your opinions and
3 your role in this case, and what your testimony
4 will be if this case goes to trial.

5 I will be asking you several questions
6 about the disclosure that you filed in this case,
7 but I will not be asking about any privileged
8 conversations you've had with your attorneys.

9 If you don't understand a question that I
10 ask, please let me know and I'll either ask it
11 again or rephrase it to try to make it more clear.

12 Since we're over Zoom, I'll do my best to
13 give a couple seconds after you complete your
14 answer, to make sure that I'm not speaking over
15 you, and would just ask that you do the same for
16 me.

17 And if you need to take a break, please
18 just ask. As a general rule of thumb, I'll try to
19 take a break once every hour, for about five to
20 ten minutes.

21 Does that all sound good?

22 A. Sounds good to me.

23 Q. Okay. First question is a softball.

24 Can you please state and spell your name
25 for the record?

1 A. My name is Michael Durglo; M-i-c-h-a-e-l,
2 D-u-r-g-l-o.

3 Q. Thank you. Mr. Durglo, what is your
4 residential address?

5 A. Physical or...

6 Q. Physical, yes.

7 A. 58378 Juniper Lane, St. Ignatius,
8 Montana.

9 Q. Thank you.

10 Are you under the influence of any
11 substances that could affect your ability to
12 provide true and accurate testimony today?

13 A. No, sir.

14 Q. Mr. Durglo, have you ever participated in
15 a deposition before?

16 A. No, I have not.

17 Q. Have you ever testified as an expert
18 witness before?

19 A. No.

20 MR. LONGFIELD: Okay. Mr. Durglo, I'd
21 like to introduce a copy of your expert
22 disclosure, and we'll mark it as Exhibit 46.

23 Kasey, I believe you should have a copy
24 of that.

25 And do you have a copy sitting there in

1 front of you?

2 THE WITNESS: Yes, sir.

3 MR. LONGFIELD: Thank you.

4 (Whereupon, Exhibit No. 46 was
5 marked for purposes of
6 identification.)

7 BY MR. LONGFIELD:

8 Q. Mr. Durglo, is the copy you have in front
9 of you an accurate copy of the disclosure that
10 you've submitted in this case?

11 MR. SULLIVAN: And I'm going to interject
12 an objection to the form of the question because
13 it presumes that Mr. Durglo submitted the report.

14 Tim, as you're -- you may be aware, all
15 of the other expert reports were submitted reports
16 by the experts that were submitted and signed by
17 them, with the exception of Mr. Durglo, who did
18 not because of circumstances beyond all our
19 control. He didn't have the opportunity to do
20 that.

21 So we -- as we state in the report and in
22 our submission, we submitted it on his behalf,
23 with the expectation that we were trying to be as
24 consistent as we could.

25 And so I just wanted the record to

1 reflect that it was the counsel that submitted the
2 disclosure for Mr. Durglo.

3 **MR. LONGFIELD:** Thanks for clarifying,
4 Roger. And I do intend to ask about that.

5 **BY MR. LONGFIELD:**

6 **Q. Mr. Durglo, have you seen a copy of this**
7 **disclosure before today?**

8 A. Yes, I have.

9 **Q. Does the copy in front of you appear to**
10 **be the same copy that you've seen before today?**

11 A. Yes.

12 **Q. Thank you, sir.**

13 **I'd like to first briefly ask you about**
14 **your preparation for today.**

15 **Can you tell me what you did to prepare**
16 **for today's deposition?**

17 A. First of all, I prayed. I'm a little bit
18 nervous.

19 But I read through the -- the
20 deposition[sic], correct? And I believe that it's
21 very accurate.

22 And -- as far as what my -- my own
23 personal testimony would be, I think Mr. Rogers
24 and his staff did a very good job in representing
25 what my -- my experience and my -- my feelings are

1 **did that process work?**

2 A. We had some -- I don't know how many, I
3 can't remember. I had COVID twice, so there's a
4 little bit of brain fog still going on. I mean,
5 I -- you know, all of us feel that.

6 But just over the last year, I think,
7 we've had phone calls and different -- and they
8 sent me the disclosure. I've read through it. I
9 have added a little bit of my own personal --
10 couple paragraphs of my own personal experience
11 and feelings about the whole thing.

12 And like I said earlier, it's really an
13 honor for me to be here because this is really
14 what my life -- my life's work is about, is -- you
15 know, I've said in the past and several times in
16 several different forums that the work I do is not
17 for myself, but for, you know, seven generations,
18 even beyond that, really, you know, from -- from
19 now.

20 And we hope that we can make a difference
21 in -- in the way the world is right now.

22 **Q. Thank you, Mr. Durglo.**

23 **You just mentioned that you added a few,**
24 **I believe, paragraphs of your own personal**
25 **experience.**

1 about the case, and I -- basically, you know, just
2 my own personal life experiences.

3 Like I said, it's an honor for me to be
4 here, and all the work that I do is about the
5 future generations.

6 **Q. Thank you, sir. It's an honor to have**
7 **you here.**

8 **In preparing for today's deposition, did**
9 **you speak with anyone, other than the attorneys**
10 **for the plaintiffs in this case?**

11 A. No.

12 **Q. Did the plaintiffs' attorneys supply you**
13 **with any facts or data -- well, I'll strike that.**

14 **Maybe it's better to start here.**

15 **So, Mr. Durglo, who wrote this**
16 **disclosure?**

17 A. I believe Mr. Sullivan and his staff
18 wrote the disclosure.

19 **Q. Okay. Who provided the content that's**
20 **contained within the disclosure?**

21 **Was it you, Mr. Sullivan and his staff,**
22 **both of you working in concert?**

23 A. Both of us working together -- or all of
24 us, I guess I should say.

25 **Q. Okay. Tell me about that process. How**

1 **Can you identify what paragraphs those**
2 **were that you're referring to?**

3 **MR. SULLIVAN:** Well, I think that's what
4 I just submitted to you, Tim, this morning, that's
5 in the green ink, that we discussed earlier, to
6 clarify.

7 **BY MR. LONGFIELD:**

8 **Q. Okay. Okay. So other than the amendment**
9 **that Mr. Sullivan submitted to me this morning,**
10 **did you draft any of the contents of this**
11 **disclosure or any part of the disclosure?**

12 A. No. I've just read through it several
13 times, and there's -- there are some minor
14 additions or corrections.

15 In the disclosure it says I've had three
16 decades of experience, and it's -- next year will
17 be four decades, actually. So probably about ten
18 more years added on to what's in here.

19 But other than that, it looks very good
20 to me.

21 **Q. Thank you, sir.**

22 **Did you make any edits or changes to the**
23 **disclosure that Mr. Sullivan and his staff**
24 **provided you with?**

25 A. No. Just what I just shared with you.

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1 Q. Yes, sir. Thank you.
 2 Mr. Durglo, can you please tell me, as
 3 specifically and as thoroughly as you're able to
 4 do today, what opinions do you put forth in your
 5 disclosure, or what opinions are contained in your
 6 disclosure?
 7 MR. SULLIVAN: And I'm going to object to
 8 the form of the question because the document
 9 speaks for itself.
 10 You may answer.
 11 THE WITNESS: So for my own -- from my
 12 own personal experience, like I shared earlier,
 13 I've been working for the tribes for almost 40
 14 years in different capacities.
 15 And for me, personally, whether -- I
 16 mean, I served on a tribal council, I've been a
 17 game warden, I've been in the environmental
 18 protection work for many years, and now currently
 19 in the historic preservation department, where I'm
 20 the department head there.
 21 But all of those years have been, for me,
 22 working to preserve and protect our resources,
 23 whether those resources are natural resources or
 24 cultural resources, and included in that is our
 25 children.

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1 A lot of my lifework -- I have -- I've
 2 raised three grandchildren, along with my own
 3 kids. So, I mean -- and if you have children, or
 4 any of you have children, that's what -- to me,
 5 that's what it's about. That's why I do what I
 6 do.
 7 Q. Yes, sir.
 8 Mr. Durglo, at many points in this
 9 disclosure it says that it is, quote,
 10 "anticipated," or, quote, "expected" that you will
 11 testify to certain topics at trial.
 12 When do you think you will know for
 13 certain about what topics you intend to testify at
 14 trial?
 15 A. I don't know. I don't know when for
 16 certain that will be.
 17 MR. SULLIVAN: Yeah. And I would object
 18 to the form of the question as ambiguous, Tim.
 19 I'm not quite sure if you're -- if you're talking
 20 about temporally or substantively. It's
 21 ambiguous. If you could maybe break it down.
 22 MR. LONGFIELD: Yes.
 23 BY MR. LONGFIELD:
 24 Q. I mean temporally. So if these topics
 25 are anticipated topics that implies, to me at

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1 least, that it's not certain whether you'll be
 2 testifying about the topics identified in the
 3 disclosure, at trial.
 4 So I'm just trying to get a sense of
 5 when -- at what point you will know for certain
 6 what topics you intend to testify about at trial.
 7 MR. SULLIVAN: And I would object to the
 8 form as calling for a legal conclusion. I would
 9 state that it's up -- I assume it's up to the
 10 obligation of the attorneys to supplement any
 11 disclosure.
 12 So if there's any change, I believe it's
 13 a legal obligation of the attorneys to make sure
 14 there is, of record, an indication of a change,
 15 and we would assume that burden.
 16 But -- the deponent can answer, but
 17 that's what I presume is a legal question you're
 18 asking. But go ahead, Tim.
 19 BY MR. LONGFIELD:
 20 Q. Mr. Durglo, you can answer, if you recall
 21 the question.
 22 A. Well, I -- I don't know when that time is
 23 going to be. You know, I'm hoping that it's not
 24 going to be too long. Within the year, I don't
 25 know. Whenever it comes to trial, if it does, I

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1 guess.
 2 Q. Okay. Mr. Durglo, did you or did
 3 plaintiffs' attorneys select the topics identified
 4 in this disclosure, as anticipated topics that
 5 you'll testify about at trial?
 6 Who picked the topics?
 7 A. I think it was a collaborative effort.
 8 This is basically my own -- this is my own work,
 9 right?
 10 All of this that's contained in this --
 11 not dissertation -- I want to -- I keep wanting to
 12 say "dissertation." I'm not getting my master's
 13 and my doctorate, but just -- what is it called?
 14 Deposition. Everything in here is my -- is my
 15 experience.
 16 Q. Okay. How did you go about communicating
 17 your experience to Mr. Sullivan and his staff so
 18 they could draft this disclosure?
 19 A. There's several documents that are
 20 referenced in this --
 21 MR. SULLIVAN: Disclosure, we'll call it,
 22 if that's okay.
 23 THE WITNESS: -- disclosure that
 24 reference the work that I have done in the past.
 25 So all of those documents are referenced in

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1 here -- well, not quite all of them. There's a
 2 recent one that -- that we just did, it's a --
 3 actually, it's a chapter in a book called "Climate
 4 Solutions" that we recently completed, so that's
 5 not -- I don't think that's included in here.
 6 But it's -- I mean, the work is ongoing.
 7 I don't stop, you know, what I'm doing just to do
 8 what I'm doing here. It continues to -- about
 9 pretty much every day of my life is about this.
 10 **BY MR. LONGFIELD:**
 11 **Q. Yes, sir, and I understand that.**
 12 **What I'm trying to ask, however, is: How**
 13 **did you go about communicating or explaining your**
 14 **work and experience to Mr. Sullivan and staff for**
 15 **purposes of this disclosure?**
 16 **For example, did you have a series of**
 17 **phone calls with them?**
 18 **Did you simply provide them with the**
 19 **documents that you referenced?**
 20 **Anything else?**
 21 **A. Yes. We had phone calls and I provided**
 22 **documents or links to documents to them.**
 23 **Q. Approximately how many phone calls did**
 24 **you have with them?**
 25 **A. Oh, my gosh. I don't know. Two or**

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1 three. I don't remember exactly.
 2 I can't even remember what I had for
 3 lunch yesterday.
 4 **Q. Do you remember roughly how long the two**
 5 **to three conversations lasted?**
 6 **A. No.**
 7 **Q. Earlier I think you noted one slight**
 8 **discrepancy between the disclosure and your**
 9 **real-life experience, namely that you've been**
 10 **doing this work for four decades and not three**
 11 **decades, as the disclosure says.**
 12 **Are there any other discrepancies or**
 13 **inaccuracies in the disclosure, that you've been**
 14 **able to identify?**
 15 **A. No, not that I've -- not that I've found,**
 16 **no.**
 17 **Q. Okay. Mr. Durglo, I -- if you would,**
 18 **please turn to page 2 of the disclosure.**
 19 **A. Okay.**
 20 **Q. And I'm looking at the first paragraph**
 21 **under heading II, Expert Opinions.**
 22 **So it says, quote, "It is expected that**
 23 **Mr. Durglo will testify to the spiritual,**
 24 **traditional and cultural significance of the**
 25 **natural environment and resources on the Flathead**

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1 **Reservation," end quote.**
 2 **And then below, on the paragraph that**
 3 **goes -- at the bottom of page 2, over to page 3,**
 4 **it says, quote, "It is further expected that**
 5 **Mr. Durglo will testify to how climate change**
 6 **impacts are already occurring on the Flathead**
 7 **Reservation and threatening tribal spiritual,**
 8 **traditional and cultural practices of tribal**
 9 **youth, including plaintiffs," end quote.**
 10 **My first question is: Do you plan to**
 11 **offer expert testimony on any topics other than**
 12 **the ones I just read from the disclosure?**
 13 **MR. SULLIVAN: And I would object to the**
 14 **form of the question and say that the document**
 15 **speaks for -- the disclosure document speaks for**
 16 **itself.**
 17 **BY MR. LONGFIELD:**
 18 **Q. You may answer, sir.**
 19 **A. I'm not quite sure what you mean by that,**
 20 **but this is -- basically what I would testify**
 21 **about is the cultural and spiritual significance**
 22 **of our resources that we have that are being**
 23 **impacted.**
 24 **I mean, if you had a chance to look at**
 25 **the work that we've done on -- I mean, you can**

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1 look at our website, CSKTclimate.org and look at
 2 the interviews that I've done with elders and just
 3 the knowledge that I carry forward from my
 4 parents, my grandparents and the elders on the
 5 reservation. We all feel the impact of climate
 6 change and other -- other things on the
 7 reservation.
 8 I'm not a scientific expert, so I don't
 9 know all of the science behind what -- you know,
 10 about climate change. I'm familiar with it
 11 because I've been working in the field for several
 12 years.
 13 But -- so, really, I'm just sharing my
 14 own personal observations and experience from my
 15 life.
 16 **Q. Thank you, sir.**
 17 **Maybe to rephrase the question, would you**
 18 **agree that the two quotes that I just read**
 19 **accurately summarize the topics that you would**
 20 **testify about at trial?**
 21 **A. Yes, sir.**
 22 **Q. Thank you.**
 23 **Is there anything that's not included in**
 24 **those paragraphs that you might testify about at**
 25 **trial?**

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1 **MR. SULLIVAN:** Well, I'm going to object
 2 again to the form of the question because those
 3 paragraphs that you ellipsed also say, "More
 4 specifically, it is anticipated Mr. Durglo will
 5 offer facts and opinions on the following topics,
 6 including"...

7 So the general proposition that you
 8 state, he agrees to, but the report then details
 9 specifics that have been disclosed to you and the
 10 other attorneys for the State.

11 **MR. LONGFIELD:** Right. But it's my
 12 understanding that those topics are subtopics
 13 within the broader categories identified in the
 14 quoted language that I just read.

15 And I suppose I'm just trying to get
 16 Mr. Durglo's understanding of the scope of his
 17 testimony.

18 But I take your point, Roger.

19 **BY MR. LONGFIELD:**

20 **Q. So, again, just to restate the question,**
 21 **Mr. Durglo.**

22 **Other than those summaries that I just**
 23 **quoted -- and I'm happy to read them again because**
 24 **I know we're a couple questions in here -- is**
 25 **there anything, I guess, that's not covered under**

Page 22

1 **those broad categories of topics that you plan to**
 2 **testify about at trial?**

3 A. Not that I can think of right now.

4 **Q. Okay. Did you select these topics or did**
 5 **plaintiffs' attorneys?**

6 A. I think -- like I -- like I stated
 7 earlier, this is my own personal -- this is me.
 8 It's not, you know, Mr. Sullivan's experience or
 9 anybody else's experience, this is mine.

10 So I can't share what his experience is.

11 I can only -- I can only share what
 12 I've -- what I've learned -- what I've -- you
 13 know, the knowledge that I've gained from my
 14 elders and others; that's, you know, what I can
 15 share.

16 **Q. Understood, sir.**

17 **Mr. Durglo, do you plan to offer any**
 18 **expert testimony on the science of climate change?**

19 A. No. I'm not an expert scientist. I
 20 think others can provide that.

21 **Q. Okay. Mr. Durglo, can you tell me in**
 22 **your own words what this case is about?**

23 A. Basically, I believe this case is about
 24 our responsibility to leave this planet, this
 25 earth, Mother Earth, a better place for our

Page 23

1 children and our grandchildren, our great
 2 grandchildren, than what we have today.

3 And -- it's our actions or our inactions
 4 are what have caused the climate impacts that
 5 we're seeing today. And I think that within the
 6 Constitution of the State of Montana, it provides
 7 the right to clean air, clean water for future
 8 generations.

9 And, to me, that's all of our
 10 responsibility. Not just me, but you and you and
 11 you. All of us have that responsibility to make
 12 sure that our children, our grandchildren, our
 13 great grandchildren, and so on, have clean air and
 14 clean water for the future.

15 **Q. Mr. Durglo, have you reviewed a copy of**
 16 **the plaintiffs' Complaint in this case?**

17 A. Yes. It's been a while, but I have, yes.

18 **Q. Okay. Do you know what Montana laws are**
 19 **being challenged in this case?**

20 A. Not specifically.

21 **Q. Do you have a general sense?**

22 A. General sense -- like I shared earlier, I
 23 worked in the natural resources field for probably
 24 20 years of my career -- well, really, all of my
 25 career has been in protecting natural and cultural

Page 24

1 resources, correct.

2 And, you know, as far as working with the
 3 state, I have a general sense of an idea of, you
 4 know, the natural resources and protection of
 5 those resources.

6 **Q. In your understanding, Mr. Durglo, what**
 7 **happens if plaintiffs win this lawsuit?**

8 **MR. SULLIVAN:** And I'm going to object on
 9 the basis of it being beyond the scope of his
 10 expert disclosure and expertise. And it also
 11 calls for a legal conclusion, all of that goes to
 12 form.

13 But you may answer, to the extent you
 14 can, Michael.

15 **THE WITNESS:** Can you repeat that
 16 question?

17 **BY MR. LONGFIELD:**

18 **Q. Sure, Mr. Durglo.**

19 **What is your understanding of what would**
 20 **happen if the plaintiffs win this lawsuit?**

21 A. What is my understanding or what is my
 22 hope?

23 My hope is that we change the way we
 24 live, that -- to change the way that we do
 25 business every day.

1 I mean, just for me personally, can I
2 share a personal experience? Is that okay?

3 **Q. Yes.**

4 A. So a few years ago, I was invited to
5 speak at the University of Florida about climate
6 change. So I got on a plane in Missoula, flew to
7 Florida, went to the university, spoke for 20
8 minutes about climate change, got back on a plane,
9 flew back to Missoula.

10 And I'm thinking, What the hell did I
11 just do?

12 I flew clear across the United States --
13 how much carbon did I just contribute to the
14 atmosphere by doing so -- just to speak for 20
15 minutes.

16 So, you know, it's -- for me, it's a
17 life -- kind of a life-changing thing. It's like
18 you -- all of a sudden you wake up and say, What
19 the hell am I doing?

20 You know, especially talking about
21 climate change. And, you know, I just feel like I
22 hope that, you know, we -- we take the time to --
23 to really look inside of ourselves and look at the
24 way that we do -- that we spend our life every
25 day.

1 Just driving up here this morning -- you
2 know, to me, this is very important. You have
3 to -- almost have to think about what -- what, if
4 anything, am I going to change by talking to you
5 or, you know, anybody else today?

6 And I hope that it makes a difference.
7 That's -- to me, that's what it's about. You
8 know, you hope that you make a difference in the
9 way that we live our lives and the way that we do
10 business every day.

11 Zoom is -- Zoom is a good thing because
12 we don't have to drive all over the country
13 anymore.

14 You know, like I said earlier too, it's
15 like sometimes it's nice to see you in person or
16 my friends or my family or the circles that I
17 travel in, but you have to think about what --
18 what is the -- what is the footprint that you're
19 leaving behind.

20 I don't know. I guess I just have hope
21 that we can make a difference.

22 **Q. Yeah. Thank you, Mr. Durglo.**

23 How do you think the lawsuit plays -- the
24 lawsuit that you're an expert in plays into that
25 hope for you?

1 A. I hope that it opens eyes and hearts and,
2 you know, just basically that -- and I'll share
3 another experience, I guess.

4 When I first started working in climate
5 change, you know, that was kind of the buzz word
6 back in 2010, whatever -- I know it's been going
7 on for a while, but, you know, we've called it
8 different things over the years. And I've worked
9 in natural resources.

10 So we've done a lot of restoration work
11 around trying to keep our streams pristine and
12 cold for the -- for the fish and stuff like that.

13 We didn't call it climate change back
14 then, but that's what we were doing.

15 But now it's like we know. We know
16 what's going on.

17 And I think we have an obligation and
18 a -- and a responsibility to do what we can to --
19 I don't know if we can -- I've heard people say
20 slow down the train, stop the train, turn the
21 train around. And, you know, just hopefully we
22 can make a difference.

23 You know -- and I don't know, I get kind
24 of -- when -- when the world shut down because of
25 COVID, I was sitting outside my house -- and I

1 live in the Mission Valley, about 30, 40 miles
2 south of here, Kalispell. And I'm sitting outside
3 and I noticed, wow, there's no jet streams going
4 over my -- there's no 50 or 60 jets going over my
5 head every day.

6 And I heard on, you know, media that in
7 some places, some cities, they could actually see
8 the blue sky, and there was some fish coming up in
9 some other streams that haven't been in those
10 streams for many years.

11 And I felt like, oh, my goodness, Mother
12 Earth is smiling today because we were shut down.

13 And, you know, I think that's -- if that
14 could happen every day, I don't know, maybe things
15 would change.

16 **Q. Thank you for that.**

17 **Yeah. I'm looking at page 4 of the**
18 **disclosure. And I'd like to read to you one of**
19 **the anticipated conclusions on that page.**

20 **So it says that one of your anticipated**
21 **conclusions is that, quote, "The State of**
22 **Montana's promulgation of fossil fuel energy and**
23 **refusal to consider the climate impacts of its**
24 **energy policy and decisions incrementally but**
25 **directly contribute to the harm that tribal**

1 members suffer as a result of climate change," end
2 quote.

3 Mr. Durglo, what, in your view, does the
4 phrase "incrementally but directly contribute to
5 the harm that tribal members suffer as a result of
6 climate change" mean in this disclosure?

7 A. Can I call you Tim? Is that your name?

8 Q. Sure, sir. Yes, that's okay.

9 A. You know, I spend a lot of time on the
10 river. I take my family down there to fish. I
11 take my family down there to hunt, to gather roots
12 and berries.

13 And when I see trainloads of coal going
14 by me on the -- on the railroad, it's like my
15 heart kind of sinks a little bit.

16 It's like, how -- how can we continue to
17 rape and pillage our Mother Earth and really feel
18 like, you know, that's not going to harm your
19 future? I mean -- even today, I mean, it's
20 harming us today.

21 As I drove up here, I -- you know, I was
22 telling Mr. Sullivan here about the beautiful
23 sunrise this morning and being able to see that.

24 You know, if we don't change the way that
25 we live every day, just like I shared earlier,

1 disclosure.

2 BY MR. LONGFIELD:

3 Q. You may answer, if you know, sir.

4 A. We all have to do our part. You know,
5 it's -- whether we contribute a small part or a
6 big part, I think we all have to do our part.

7 Q. Okay. Thank you, sir.

8 MR. LONGFIELD: If it's all right with
9 you, I'd like to take maybe a quick ten-minute
10 break and return -- should we just return at
11 10:00 a.m.?

12 MR. SULLIVAN: That works for us, Tim.
13 That would be fine.

14 (Whereupon, a break was then taken.)

15 MR. LONGFIELD: I think those are
16 actually all the questions I have for you,
17 Mr. Durglo, and, Roger.

18 So I apologize for the break. I just
19 wanted to review a few things, but that's all I
20 have for you today.

21 But Roger may have a few follow-ups.

22 THE WITNESS: I hope I meet you in person
23 someday, Tim. I'm hoping we do.

24 MR. SULLIVAN: Great. I have no
25 questions. Thank you, Tim.

1 it's just that ah-ha moment.

2 Like, what the hell am I doing flying
3 clear to Florida and back if I'm talking about
4 climate change?

5 You really have to make some decisions,
6 all of us, if we're going to really see a future
7 for our children and our grandchildren. That --
8 to me, that's what it is.

9 Q. Yes, sir. Thank you.

10 Mr. Durglo, do you know roughly what
11 percent of total United States greenhouse gas
12 emissions are attributed to Montana?

13 A. I do not.

14 Q. Do you know what percent of global
15 emissions come from Montana?

16 A. No, I don't. I know that we contribute.
17 I mean, that's -- you know, I can't drive my car
18 up here without contributing.

19 Q. Do you have any opinions or do you
20 anticipate having any opinions at trial about
21 whether completely eliminating Montana's
22 greenhouse gas emissions would make any impact on
23 the harms alleged by the plaintiffs in this case?

24 MR. SULLIVAN: Object to the form of the
25 question. It exceeds the bounds of his expert

1 MR. LONGFIELD: Thank you very much for
2 your time, sir.

3 (Whereupon, the deposition
4 concluded at 10:03 a.m.)

5 Signature Reserved
6 * * * * *

DEPONENT'S CERTIFICATE

I, MICHAEL DURGLO, JR., the deponent in the foregoing deposition, DO HEREBY CERTIFY, that I have read the foregoing - 32 - pages of typewritten material and that the same is, with any changes thereon made in ink on the corrections sheet, and signed by me a full, true and correct transcript of my oral deposition given at the time and place hereinbefore mentioned.

MICHAEL DURGLO, JR.

Subscribed and sworn to before me this _____ day of _____, 2022.

PRINT NAME: _____
Notary Public, State of Montana
Residing at: _____
My commission expires: _____

KF - Rikki Held, et al vs. State of Montana, et al

C E R T I F I C A T E

STATE OF MONTANA)
COUNTY OF GALLATIN) : Ss

I, Kasey L. Fisher, Registered Professional Reporter and Notary Public for the State of Montana, residing in Bozeman, do hereby certify:

That I was duly authorized to and did swear in the witness and report the deposition of MICHAEL DURGLO, JR., in the above-entitled cause; that the foregoing pages of this deposition constitute a true and accurate transcription of my stenotype notes of the testimony of said witness, all done to the best of my skill and ability; that the reading and signing of the deposition by the witness have been expressly reserved.

I further certify that I am not an attorney nor counsel of any of the parties, nor a relative or employee of any attorney or counsel connected with the action, nor financially interested in the action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal on this the 3rd day of November 2022.

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EXHIBIT 13

*Rikki Held, et al. v
State of Montana, et al.*

*Mark Haggerty
January 4, 2023*

*Charles Fisher Court Reporting
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Bozeman, MT 59715
(406) 587-9016
maindesk@fishercourtreporting.com*

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1 STATE OF MONTANA)
 2 COUNTY OF GALLATIN) SS:
 3)
 4)
 5 MONTANA FIRST JUDICIAL DISTRICT COURT
 6 LEWIS & CLARK COUNTY

6 RIKKI HELD et. al,)
 Plaintiff,)
)
 v.) CAUSE NO: CDV-2020-307
 STATE OF MONTANA, et.)
 al.,)
 Defendant.)

The deposition of MARK HAGGERTY, taken at the instance of the Defendants herein, pursuant to Notice as to time and place and pursuant to the Statutes of the State of Montana, before Josey Loney, Notary Public within and for the County of Gallatin, State of Montan, at Fisher Video Conferencing & Court Reporting, 442 E. Mendenhall Street, Bozeman, Montana, on the 4th day of January, 2023, commencing at the hour of 9:00 a.m.

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7 On behalf of the Defendant;

8 Philip L. Gregory
 9 Gregory Law Group
 10 1250 Godetia Drive
 11 Redwood City, California 94062

12 On behalf of Mark Haggerty.
 13 ALSO PRESENT: Barbara Chillcott, Tara
 14 Robinson, and Roger Sullivan.
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25

1 MARK HAGGERTY, a witness of lawful age,
 2 having been first duly sworn to tell the truth, the
 3 whole truth and nothing but the truth, testified upon
 4 her oath as follows:
 5

6 EXAMINATION
 7 BY MR. STERMITZ:

8 Q. Morning, sir. Would you tell us your name,
 9 please, for the record.
 10 A. My name is Mark Haggerty.
 11 Q. And my name is Mark Stermitz, so your name
 12 will be the only one I remember in all of this. Can
 13 I call you Mark?
 14 A. You may. Thank you. Can I call you Mark?
 15 Q. Sure. I represent the State of Montana, and
 16 this is your deposition regarding your rebuttal
 17 expert report that's been received in the Held case.
 18 Have you had occasion before to have your deposition
 19 taken?
 20 A. I have not.
 21 Q. There are just a couple things, up front,
 22 that we should understand to avoid any
 23 miscommunication problems as we can. The first one
 24 is that I'll do my best to make sure that I let you
 25 finish answering before I start talking, and ask that

1 you would do the same because the court reporter can
2 only take down one of us talking at a time; you
3 understand that, first of all?

4 A. I understand, yes.

5 Q. And another thing is that the transcript
6 doesn't do well with uh-huhs, huh-uhs, and things
7 like that, and I'll remind you, as best I can, to say
8 yes or no or something more affirmative that's
9 clearer in the transcript.

10 A. I will endeavor to speak clearly.

11 Q. Okay. And then, I guess, other than that,
12 do you understand a deposition is my one opportunity
13 to interview or examine your testimony outside the
14 courtroom, and this will be all -- I'm sure you've
15 dealt with transcripts before -- you know, they'll
16 all be typed up, and then, you'll have the
17 opportunity, at the end, to review it and make sure
18 it's correct. And we'll have it available at trial,
19 if we go that far, and, of course, if you answer
20 questions differently at trial, there's a possibility
21 I'll drag out this deposition and point out what your
22 testimony was today, so I just want to make sure you
23 understand one of the purposes we're doing this; do
24 you see that?

25 A. Yes, I understand that.

1 State of Montana were prior to this case.

2 Q. Okay. We've got several exhibits there, but
3 the one I want to -- well, first of all, the notice
4 of this deposition -- and that's Exhibit 196 -- been
5 marked, and 197 is a subpoena, and 198 is an expert
6 report, and we'll attach all these to the deposition
7 transcript. I would like to turn your attention to
8 198, the report, and ask you this about it: Did you
9 do any other written product for this case, other
10 than what's there in Exhibit 198?

11 A. No.

12 Q. When do you recall when you were first
13 retained to assist in this case -- roughly, I don't
14 need an exact date?

15 A. I don't recall exactly -- over the summer.

16 Q. This last summer of 2022?

17 A. Yes.

18 Q. And what did you understand the nature of
19 your engagement to be?

20 A. I understood that the Plaintiffs were
21 interested in my understanding of the statutes of the
22 State of Montana, specifically how fiscal policies,
23 related to oil, and natural gas, and coal, have an
24 impact on the State's economy and the ability of the
25 State to provide services.

1 Q. Very good. So looking at your CV, and your
2 extensive experience, and testifying, and so forth, I
3 didn't see -- it didn't look like you had experience
4 beforehand being retained by private attorneys in a
5 lawsuit; is that correct?

6 A. That is correct.

7 Q. So this is your first foray into litigation
8 -- I'll put it that way?

9 A. Yes.

10 Q. And what is your understanding of your --
11 well, let me ask it this way: What is your
12 understanding of the goal of this lawsuit?

13 A. My understanding is that the policies and
14 statutes of the State of Montana are potentially
15 contrary to the need to provide for a clean and
16 healthful environment, and this lawsuit is raising
17 that question.

18 Q. Did you review specific policies or statutes
19 of the State of Montana in -- as part of your work
20 here?

21 A. I didn't do any review specific for this
22 case. Everything that I have reviewed is in the due
23 course of my work, both as an appointed member of
24 committees, as a part of research projects I've been
25 engaged in, so my experience with the statutes of the

1 Q. Your report is entitled "Rebuttal Expert
2 Report", and in it, you refer to Dr. Anderson's work.
3 Did you understand that you would be rebutting his
4 testimony, also, as part of your engage here?

5 A. When I initially talked to the attorneys,
6 no, Mr. Anderson's report was not yet available. But
7 it was made clear to me that it was likely that the
8 State of Montana would make an argument that fossil
9 fuels are a really important contribution to the
10 State's economy and to revenue, and that, if the
11 State of Montana were to make that case, the
12 attorneys would be interested in having me review it.

13 Q. Okay. And eventually, then, you did review
14 Dr. Anderson's report?

15 A. That's correct.

16 Q. Now, do you know -- my understanding is he's
17 affiliated with Montana State University. Have you
18 worked with him at all over the years?

19 A. No, not directly. I'm aware of his work,
20 but I've never worked with him.

21 Q. Okay. Let me back up a little bit and ask a
22 couple questions about your bio. Where were you --
23 where are you originally from, Mark?

24 A. I was born in Massachusetts.

25 Q. Where did you go to high school?

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1 A. In New Hampshire.
 2 **Q. Is that where your family was from then, I**
 3 **gather, back then at least?**
 4 A. My dad was born and raised in Massachusetts,
 5 and my mother was born and raised in California, but
 6 we were living in New Hampshire at the time.
 7 **Q. And then, I see you went to college in**
 8 **Colorado, correct?**
 9 A. Correct.
 10 **Q. Do you still have family back east, or has**
 11 **everyone migrated elsewhere by now?**
 12 A. I don't have any family in New England
 13 anymore. My mother is in California.
 14 **Q. Okay. Are you -- you are currently an**
 15 **adjunct instructor at Montana State; is that right?**
 16 A. I have not taught a class on campus since
 17 COVID, so I'm not doing anything currently, but I
 18 occasionally teach -- served on masters committee, so
 19 I have, you know, kind of, an ongoing relationship at
 20 the University.
 21 **Q. Okay. On your CV, it says, "2015 to**
 22 **present, adjunct instructor." Is that a reference to**
 23 **the masters committee, or did you actually teach**
 24 **courses there?**
 25 A. I was teaching courses as well.

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1 **Q. And what were they?**
 2 A. Most -- well, all in the geography
 3 department. Several courses are one-credit courses
 4 that are focused on specific issues, so I taught a
 5 course on coal in Montana; on timber in Montana; and
 6 in those courses, we would cover the resource; the
 7 economy; the laws and statutes of the State of
 8 Montana. And I taught several three-credit courses,
 9 which are, again, geography courses, kind of, focused
 10 around a specific geography in the State and a set of
 11 resource issues and economic issues.
 12 **Q. The courses you referenced on coal and**
 13 **timber, were you the sole instructor for the course,**
 14 **or were you assisting somebody who was teaching it?**
 15 A. I've done it both ways. I've been the sole
 16 instructor, and I've also co-taught.
 17 **Q. And who, as far as professors at Montana**
 18 **State, would you say you've had the most contact**
 19 **with, in terms of you adjunct instructor work?**
 20 A. I taught two classes with Dr. Julia
 21 Haggerty, who's my wife.
 22 **Q. Okay. For some reason I didn't even think**
 23 **of that connection. All right. And I mean, was that**
 24 **between 1915 -- 2015 and COVID, you must have had**
 25 **underclasses as well through, right?**

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1 A. Yes, that is correct.
 2 **Q. Did you review any other expert reports in**
 3 **-- that were produced in connection with this case,**
 4 **besides Terry Anderson's?**
 5 A. No.
 6 **Q. And I'm including -- just to be clear --**
 7 **reports, regardless of which side prepared it; do you**
 8 **understand that?**
 9 A. Yes.
 10 **Q. Okay. In looking at your rebuttal report,**
 11 **you talk throughout it about Montana's -- in various**
 12 **ways -- tax policies, fiscal policies, and that sort**
 13 **of thing -- revenue generation -- is that really your**
 14 **focus, in terms of your area of expertise in**
 15 **particular?**
 16 A. Yes, that is correct.
 17 **Q. Okay. And I see, you know, a long list of**
 18 **references here for testimony at the legislature and**
 19 **that sort of thing. Did you review -- well, let me**
 20 **put it this way: Have you testified before the**
 21 **legislature or reviewed Montana's energy policy**
 22 **statute?**
 23 A. No, not specifically.
 24 **Q. Okay. And again, your focus has been on tax**
 25 **and -- well, the economic side of things, correct?**

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1 A. Yes, that is correct.
 2 **Q. Okay. I was curious, in your background --**
 3 **in some ways for personal reasons -- where you say**
 4 **you've helped build economic revival private land**
 5 **around conservation programs around Yellowstone**
 6 **National Park. What were you talking about?**
 7 **Conservation easements or something else?**
 8 A. I worked at the Greater Yellowstone
 9 Coalition, which is a nonprofit organization based
 10 here in Bozeman, and through that work, I helped
 11 establish a couple of land trusts around the
 12 ecosystem and also some local planning and
 13 conservation organizations in Montana/Idaho.
 14 **Q. So did your work center around the west side**
 15 **of the park then?**
 16 A. No, it would have been the three states
 17 surrounding Yellowstone National Park and all of the
 18 counties that were considered part of the greater
 19 Yellowstone ecosystem.
 20 **Q. So Park County as well?**
 21 A. Park County as well, yes.
 22 **Q. Did you do any work in the Cinnabar Basin**
 23 **area?**
 24 A. I have been up there. I visited. I didn't
 25 do any work directly there, in terms of, you know,

1 conservation easements. I don't know what you're
 2 referring to.
 3 **Q. Yeah. There's a Stermitz Angus Ranch in**
 4 **Cinnabar Basin. That's -- I'm getting there --**
 5 **whether you ran into my cousins or not?**
 6 A. No.
 7 **Q. So looking more specifically at what we're**
 8 **concerned with in this case, and with your opinion of**
 9 **Dr. Anderson's testimony, I think you -- let me ask**
 10 **this: Is this generally -- your point that is that**
 11 **his assertion that moving away from fossil fuels will**
 12 **have economic -- negative economic impact for the**
 13 **State of Montana; is that a fair way to summarize the**
 14 **thrust of your focus here?**
 15 A. I would maybe recast it a little bit.
 16 **Q. Go ahead, please.**
 17 A. The argument that Dr. Anderson begins with
 18 is that fossil fuels are a benefit to all Montanans,
 19 and therefore, moving away from them would be a harm.
 20 **Q. Okay. And your premise in response to that**
 21 **is what, in summary?**
 22 A. That fossil fuels, in the way that have been
 23 managed, from an economic standpoint in the state,
 24 have not conferred benefits to all Montanans.
 25 **Q. You have various examples in your report**

1 **expert opinions.**
 2 A. Uh-huh.
 3 **Q. And in the third paragraph down -- end of**
 4 **the third paragraph -- you say, "Planning to capture**
 5 **and invest revenue from the depletion of**
 6 **non-renewable resources is consistent with the theory**
 7 **and practice of natural resource economics and fiscal**
 8 **policy." I had a hard time understanding exactly**
 9 **what you meant there. Can you break that down a**
 10 **little bit?**
 11 A. Sure, I'd be happy to. I cite a paper in
 12 this report by Gunton, and he dives into the two,
 13 kind of, theoretical frameworks for natural resource
 14 depending economies. There are two possible
 15 outcomes, effectively, of managing fossil fuels and
 16 pursuing fossil fuels as an economic development
 17 strategy. One is that fossil fuels can lead to
 18 dependance and over specialization of rural
 19 economies, in particular, and that has long-term
 20 negative economic consequences for those places. And
 21 the second is a comparative advantage framework,
 22 where managed correctly, fossil fuels can confer
 23 benefits locally that can create more resilience and
 24 leverage that economy into a more diversified
 25 position over time. Those are policy choices that

1 **about the harm -- economic harm -- that has befallen**
 2 **communities where there was previously fossil fuel**
 3 **extraction that's, now, been reduced or eliminated,**
 4 **correct?**
 5 A. Correct.
 6 **Q. So it is fair for me to say that it is --**
 7 **there can be negative consequences from moving away**
 8 **from fossil fuel production, unless something else**
 9 **takes its place; is that a fair statement?**
 10 A. I think the point of my report is that the
 11 harm done when fossil fuels decline, for whatever
 12 reason, is not anything inherent to fossil fuels.
 13 Those are self-inflicted wounds because of the
 14 choices that the State has made about how to manage
 15 the revenue from those fossil fuels while they were
 16 being produced.
 17 **Q. Okay. And so to make a correction in those**
 18 **choices, you have listed various decisions that could**
 19 **be made about how -- that could have been made about**
 20 **how fossil fuels were taxed, or how that income was**
 21 **distributed, right?**
 22 A. Correct.
 23 **Q. I think this might get to what I'm talking**
 24 **about. On page 4 -- please turn to page 4 of your**
 25 **report -- which is the part where it lists your**

1 are made by the resource producing regions, and there
 2 is ample theory to back up how those policy choices
 3 ought to be made, and then, there's ample evidence
 4 that across the United States, in Montana and
 5 globally, about how different places have made
 6 decisions that have led in one or the other
 7 direction, so that's what I referring to there in
 8 that statement.
 9 **Q. Thank you. Can you give me the name, again,**
 10 **of the individual that you mentioned in the paper?**
 11 A. Gunton -- G-U-N-T-O-N -- and I will find the
 12 reference for you. It's listed here in the
 13 citations. Give me a second to find the right
 14 citation. It's in number six, Gunton, 2003, Natural
 15 resources and regional development: An assessment of
 16 dependency and comparative advantage paradigms in
 17 Economic Geography.
 18 **Q. Okay. I see it. Am I correct in inferring,**
 19 **from what you just said, that you're not necessarily**
 20 **advocating for a complete detachment from fossil fuel**
 21 **production or use, but that there are ways to prevent**
 22 **the negative consequences, in your opinion, of**
 23 **dependence on those resources?**
 24 A. Yes, that's correct.
 25 **Q. Okay. Have you talked to any of the**

1 **Plaintiffs in this case?**

2 A. I have not.

3 **Q. Have you reviewed any information about what**
4 **their specific stories are, in regard to the**
5 **allegations that they're making?**

6 A. I reviewed the website with their bios just
7 out of interest.

8 **Q. Okay. Did you read the complaint, by any**
9 **chance, that was filed?**

10 A. I have not.

11 **Q. Okay. The choices that the State makes, in**
12 **regard to tax policy -- tax policies and natural**
13 **resources, these are legislature choices, are they**
14 **not?**

15 A. Yes, they are. The legislature writes the
16 statutes that determine how revenue is collected and
17 managed from natural resources.

18 **Q. Do you have any impression at all of what**
19 **the judiciary can do from that regard?**

20 A. I'm not a legal expert, so I don't know
21 exactly what the judiciary can do regarding specific
22 revenue statutes. But in general, the judiciary is
23 there to review whether or not statutes comply with
24 the constitution, and if the judiciary finds that
25 that is not the case, then, they can ask the

1 **don't have an impression in particular about how, for**
2 **example, a state agency would apply these policies in**
3 **permanent decision, do you -- for, say, a water**
4 **permit, or air permit, or something like that?**

5 A. I don't have any opinion on the permitting
6 side. But in terms of how the State would organize
7 tax policy around a particular energy source, I don't
8 see any specific direction in the State energy policy
9 that would tell the legislature, or an agency, that
10 they have to tax at a certain rate, or that they must
11 use the revenue for a particular purpose, no.

12 **Q. Can I -- would it be a fair statement for me**
13 **to say you don't find a link between the energy**
14 **policies and tax policies? When I say "link", I mean**
15 **an actual connection -- specific connection --**
16 **referenced between those two things?**

17 A. To the extent that the energy policy
18 recommends, as a goal of creating economic benefits
19 from energy production in the state, there is an
20 implied goal of generating revenue. That would be
21 one way to read it. It does not go to the level of
22 directing agencies about how to, then, craft specific
23 policies to achieve that goal.

24 **Q. Okay. Thank you. That's helpful. On page**
25 **7 of your report -- if you could turn there -- in**

1 legislature to go rewrite those statutes in a way
2 that's consistent.

3 **Q. Is that your understanding of what could**
4 **occur in the case in particular?**

5 A. I believe so, yes.

6 **Q. Do you know whether Montana's energy**
7 **policies -- well, you said you didn't review the**
8 **statutes. So do you have any impression at all about**
9 **what is included in Montana's energy policies -- I'm**
10 **being specific about that, as opposed to tax**
11 **policies, for example?**

12 A. I've read the State's energy policy that is
13 in statute. I've never testified on it, which is
14 what I mentioned before -- answered before.

15 **Q. Okay.**

16 A. My understanding of the State's energy
17 policy is that it is a list of 24 goals that are --
18 that range from very general to very specific. They
19 seem to be uncoordinated, in my opinion. It's like a
20 laundry list of things. It's all of the above
21 effectively. It does not, as I understand it, tell
22 the State how to manage it's revenue. It is just a
23 series of statements about the kinds of energies that
24 the State might want to pursue.

25 **Q. That's a very good description. So you**

1 **this -- the second half of this page -- you've got,**
2 **kind of, a bulleted list of, as you describe it,**
3 **policy options for natural resource taxation and**
4 **revenue structure; is that a fair way to summarize**
5 **what you've got listed there?**

6 A. Yes.

7 **Q. And like I say, you've got a list. You've**
8 **got eliminating tax incentives and deductions on**
9 **fossil fuels; save a larger share of remaining coal**
10 **and oil natural gas revenue and permanent funds; more**
11 **diversified investment strategies; etcetera. These**
12 **are -- are these all things that could be done,**
13 **theoretically now, even with no changes to the**
14 **State's energy policy?**

15 A. I believe so, yes.

16 **Q. And are these things that you, you know,**
17 **testified about in previous legislative sessions?**

18 A. I don't recall if I have testified about
19 every single one of these specifics, but in general,
20 yes.

21 **Q. Okay. Last one on the top page 8 is a sales**
22 **tax recommendation -- or I don't know if these are**
23 **recommendations or just options, like you say, that**
24 **might be available -- have you provided testimony at**
25 **the legislature about sales tax in particular?**

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1 A. If you look at the list of testimony,
 2 attachment one -- well, no, let's back up. Let's
 3 look at page 2.
 4 **Q. Page 2 of your report?**
 5 A. Page 2 of the report.
 6 **Q. Okay.**
 7 A. Sorry, I apologize. It's page 3.
 8 **Q. Page 3?**
 9 A. The first bullet on that page -- "Montana
 10 joint subcommittee on the changing economy and
 11 impacts to the long term viability of Montana's tax
 12 structure".
 13 **Q. Uh-huh.**
 14 A. So that was testimony that I gave to that
 15 committee -- joint subcommittee. It stemmed from a
 16 talk that I gave at national -- it's the state
 17 legislature's conference -- National Conference of
 18 State Legislature's Fiscal Leader's Conference. The
 19 thrust of that testimony is that state's tax
 20 structures can become poorly aligned with the
 21 underlying economy for a variety of reasons. In
 22 Montana, in particular, our tax structure is very
 23 good at taxing goods, so physical things like barrels
 24 of oil and tons of coal. We do not have a sales tax,
 25 which means we do not tax services, right? We're not

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1 taxing the kind of broad economic activity that is
 2 driving growth in the State's cities like Bozeman,
 3 Kalispell, Missoula, right? So we are overly reliant
 4 on certain sectors of the economy, and we do not have
 5 a tax structure that allowed us to generate revenue
 6 from the places that the economy is growing fastest.
 7 That analysis, looking at Montana and other states,
 8 was influential in establishing this subcommittee in
 9 the first place. And in two subsequent interims in
 10 the Montana legislature, I served on the MARA study
 11 committee, where we took a deep dive into the
 12 relationship between the way Montana's economy is
 13 changing over time, and the tax structure and
 14 expenditures that Montana currently has in place, and
 15 asking that question -- "Do we have the tax structure
 16 that we will need going forward to be able to provide
 17 the services that we've already committed to?" But,
 18 also, anticipated changes in costs that might be
 19 associated with the growth, and changing
 20 demographics, and changing economic conditions around
 21 the state. So all of that testimony and all of that
 22 work directly raises the question of whether or not
 23 Montana's tax policy is sufficient. The question of
 24 the sales tax is an intrical part of that whole
 25 discussion. I have never testified that we

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1 specifically needed a particular type of sales tax,
 2 but it's been behind a lot of work I've done and the
 3 relationships I've had with the legislature over the
 4 years, yes.
 5 **Q. Thank you. And that alignment of tax and
 6 fiscal policy with the State's economic
 7 circumstances, that is -- is that a situation that
 8 exists regardless of whether you're talking about a
 9 natural resource-based economy or any other kind of
 10 economy?**
 11 A. Would say it is most common, and I can't
 12 tell you if it's exclusive, but it is certainly most
 13 common among states that have a dependence on natural
 14 resources. Fossil fuels are the prime example, so
 15 states like Wyoming, North Dakota, Louisiana have a
 16 high dependence on revenue from fuels, so the kind of
 17 physical products that are produced. Oregon, for
 18 example, at the local government level, has a tax
 19 structure that is highly dependent on timber --
 20 revenue generated from timber extraction. So it's
 21 common for states that are dependant on natural
 22 resources to evolve tax policies that over specialize
 23 the economy and actually serve to ossify the state's
 24 economy and the state's revenue structure around
 25 those natural resources, in ways that make it very

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1 difficult to transition to a more diversified economy
 2 or transition away from those resources, for example,
 3 to renewable energy, in order to meet climate goals
 4 or any other goals the state may have.
 5 **Q. Am I correct in saying that part of the
 6 problem with -- in particular, with natural resources
 7 is the economies are impacted by factors that are
 8 outside of Montana's control?**
 9 A. Yes, that's correct.
 10 **Q. I think there's several places where you
 11 make note of that, if I'm right?**
 12 A. Yeah.
 13 **Q. And -- okay. Strike that. Page 5 of your
 14 report, in the middle of the page, you start off with
 15 -- starts, "Montana's energy policy has exacerbated
 16 Montana's economic and fiscal risks would transition
 17 away from fossil fuels by delaying and imposing a
 18 policy related to renewable energy," and I'm just
 19 going to stop there for now. Now, this statement is
 20 about Montana's energy policy, as opposed to
 21 Montana's tax policy, correct?**
 22 A. I'm referring there to all of the fiscal
 23 policies related to energy resources in the state.
 24 So I consider those to be part of the State's energy
 25 policy, although, they are not specifically written

1 in statute in the State's energy policy, right? But
2 they are part and parcel of the way that Montana
3 manages its energy resources through a variety of
4 policies, including fiscal policies.

5 **Q. Okay. So are you including the 20 point, or
6 whatever it is, statute that we mentioned a short
7 time ago that's specifically entitled "Energy
8 policy," are you including that in your --**

9 A. No, I'm not. I'm referring to the revenue
10 policies related to energy resources.

11 **Q. All right. That's, kind of, what I
12 suspected. And then, the sentence goes on to say
13 that, "This exacerbation has occurred by creating
14 false hope about the State's ability to continue to
15 export coal and by foregoing opportunities to capture
16 early advantages in clean energy manufacturing and
17 deployment." Now, I want to break that down a little
18 bit, if I could, please. What's the false hope about
19 the ability to continue to export coal?**

20 A. So I'm referring to two publications and,
21 also, my experience working in Montana and couple of
22 other states. The two publications are from Roemer
23 and Righetti -- I think that's how you say her name
24 -- where they review state tax policy -- or state
25 transition policies in Montana, Wyoming, New Mexico,

1 and Colorado. I think those are the states they
2 reviewed -- maybe Washington state as well. And
3 there's a clear relationship between the State's
4 position related to coal, and whether or not the
5 State should be producing policies that would
6 facilitate a transition away from coal, whether those
7 policies are fiscal employment related or other,
8 right? And the ability and the willingness of local
9 governments to embrace transition. So for example,
10 in Colstrip, the State has tried several times,
11 through the Attorney General's Office and the
12 legislature, to force our consuming states --
13 Washington state in particular is one example -- to
14 continue to purchase coal; to try to impose costs on
15 our consumers before they make a decisions to move
16 away to coal; to intervene in lawsuits; to try to
17 develop coal export capacity; to get Montana's coal
18 into Asian and Pacific markets. All of those efforts
19 have been oriented towards saving Colstrip; and that
20 has delayed the conversations in Colstrip about a
21 transition. So it has created an expectation and
22 hope that the State was going to intervene
23 successfully and save that coal plant. None of those
24 actions have succeeded.

25 **Q. Okay. Thank you. And then, what do you**

1 **mean -- explain it a little differently -- our
2 understanding about foregoing opportunities to
3 capture early advantages in clean energy
4 manufacturing and deployment?**

5 A. So the comparison in New Mexico and
6 Colorado, for example -- states that have passed
7 legislation specifically oriented towards transition
8 -- comes with a set of decisions about investing in
9 renewable energy and infrastructure that would
10 facilitate renewable energy that Montana has not
11 pursued. So for example, in New Mexico, the State
12 owns state trust lands, as does Montana and all
13 western states. Those lands are managed to earn
14 income on behalf of beneficiaries. So beneficiaries
15 are common schools, public schools across the state,
16 and other -- technical colleges, universities, other
17 types of institutions.

18 One of the ways that those lands are managed
19 for revenue is by leasing to energy uses, so for oil,
20 and gas, and for coal. The lands were initially
21 granted to the states when they became a state --
22 when they entered the union -- by federal Congress,
23 in order to support public institutions, so generate
24 revenue to, you know, settle the west and support
25 public institutions. The mandate from Congress was

1 that that original trust be protected in perpetuity.
2 So if a state sells a non-renewable resource, whether
3 that's selling the land itself, or selling a
4 non-renewable source like coal, or oil, or a mineral,
5 they have to take that revenue and invest it in a
6 permanent fund. So the State of Montana has a common
7 school permanent fund where those resources are
8 invested. New Mexico has one as well, as do the
9 other states.

10 New Mexico has used its funds very
11 creatively to try to diversify its economy and to
12 facilitate the transition away from oil and gas. The
13 State investment counsel is responsible for investing
14 that fund. They invest it in a diversified portfolio
15 of stocks and bonds and other assets to try to
16 achieve a return. And that income -- that return
17 that they get -- is what is distributed to the
18 beneficiaries every year. The New Mexico House
19 passed a memorandum, which is effectively a
20 recommendation, to the State investment counsel that
21 they use the principle in the trust to invest in
22 renewable energy projects in the state of New Mexico.
23 So effectively, to become less diversified and
24 specialize in renewable energy investments in the
25 state. So the State investment counsel adopted a

1 policy that allows them to do that. So there are
2 states that have pursued policies to make investments
3 in renewable energy that would allow them to capture
4 early investment and market advantages in renewable
5 energy markets, and Montana has not done the same
6 things with its assets.

7 **Q. And that's specifically regarding state --
8 it sounds like the state trust lands?**

9 **A.** Yes, that's one example. Another example,
10 also New Mexico, is that the State passed
11 securitization -- a law that allows for
12 securitization -- which, effectively, allows
13 utilities -- public utilities -- to restructure their
14 debt at lower costs; to speed up the retirement of
15 coal fired power plants. Some of that savings -- the
16 difference between whatever their existing debt is
17 that was secured through markets -- whatever -- right
18 -- and the securitized rate that the state is backing
19 -- some of that savings, in New Mexico, is put into a
20 fund that helps communities plan for and implement
21 economic diversification and transition strategies.
22 So there's another example of how some states are
23 using state policy to advance investments in
24 renewable energy and also support communities in
25 transition.

1 **Q. Thank you, Mark.**

2 **MR. STERMITZ:** Could we take a ten-minute
3 break, or so? Does anybody have a problem with that?

4 **MR. GREGORY:** Fine with me.

5 **MR. STERMITZ:** I don't know that I have a
6 ton left, but I can think about it while we're on
7 break.

8 (Whereupon the deposition was on break
9 from 10:00 to 10:10.)

10 **MR. STERMITZ:** I have no further questions.

11 **MR. GREGORY:** Excellent. I have no
12 questions. He'll review and sign, and I think we're
13 all done.

14 **MR. STERMITZ:** I got the attachments there
15 of the three exhibits and that's it.

16 Thank you, Mark.

17 Thanks, everyone.

18 (Whereupon the deposition was concluded
19 at 10:11.)
20
21
22
23
24
25

C E R T I F I C A T E

1
2 I, Josey Loney and a Notary Public for the State
3 of Montana, do hereby certify that there appeared
4 before me the deponent, MARK HAGGERTY, at Fisher
5 Video Conferencing & Court Reporting, on January 4,
6 2023, who was thereupon first duly sworn by me to
7 testify the truth and nothing but the truth in
8 response to questions propounded to said deponent at
9 the taking of the foregoing deposition relating to
10 the above-captioned cause now pending and
11 undetermined in said court.

12 I further certify that I then and there reported
13 in machine shorthand the testimony so given at said
14 time and place, and that the testimony was then
15 reduced to typewriting from my original shorthand
16 notes, and the foregoing transcript is a true and
17 accurate record of said testimony given by said
18 deponent at said time and place.

19 I further certify that I am not related by blood
20 or marriage to any of the parties to said suit, nor
21 am I an employee of any of the parties or of their
22 attorneys or agents, nor am I interested in any way,
23 financially or otherwise, in the outcome of said
24 litigation.

25 I further certify signature was expressly
reserved.

Dated at Bozeman, Montana, this 9th of January,
2023.

DEPONENTS'S CERTIFICATE

1
2
3 I, Mark Haggerty, Deponent in the foregoing
4 deposition, DO HEREBY CERTIFY, that I have read the
5 foregoing pages of typewritten material and that the
6 same is, with any changes thereon made in ink on the
7 correction sheet and signed by me, a full, true and
8 correct transcript of my oral deposition given at the
9 time and place hereinbefore mentioned.

10
11
12 Mark Haggerty.

13
14 SUBSCRIBED AND SWORN to before me this day of
15 , 20____.

16
17 NOTARY PUBLIC

18 Residing at

19 My Commission Expires
20
21

22 JLL - Held v. State of Montana, et. al.
23
24
25

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EXHIBIT 14

*Rikki Held, et al. v
State of Montana, et al.*

*Kevin Trenberth
January 11, 2023*

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Min-U-Script® with Word Index

MONTANA FIRST JUDICIAL DISTRICT COURT
LEWIS AND CLARK COUNTY

RIKKI HELD, et al.,

Plaintiffs,

vs.

Cause No. CDV-2020-307

STATE OF MONTANA, et al.,

Defendants.

DEPOSITION UPON ORAL EXAMINATION OF
KEVIN TRENBERTH

BE IT REMEMBERED, that the deposition upon oral examination of KEVIN TRENBERTH, appearing at the instance of the Defendants, was taken via Zoom, on January 11, 2023, beginning at 3:00 p.m., pursuant to Montana Rules of Civil Procedure, before Robyn Ori English, Court Reporter - Notary Public.

I N D E X

EXAMINATION OF KEVIN TRENBERTH BY:

PAGE:

Mr. Mark Stermitz, Esq..... 5

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E X H I B I T S

DEPOSITION EXHIBITS:

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Exhibit 202 Notice of Deposition..... 7

Exhibit 203 Subpoena Duces Tecum..... 7

Exhibit 204 Kevin Trenberth Report..... 7

<p style="text-align: right;">Page 5</p> <p>1 WHEREUPON, the following proceedings were had and 2 testimony taken, to wit. 3 4 5 KEVIN TRENBERTH, 6 called as a witness herein, having been first duly sworn, 7 was examined and testified as follows: 8 9 EXAMINATION 10 11 BY MR. STERMITZ: 12 Q. Kevin, my name is Mark Stermitz. I'm 13 representing the State of Montana, and I will be 14 asking you questions today for the Plaintiffs' side. 15 Can I -- are you okay with me calling you 16 Kevin? 17 A. Yes, fine. 18 Q. Thank you. Did you have your deposition 19 taken in the Juliana case? 20 A. Yes, I did. 21 Q. Was that the only other time, other than 22 this, that you've had your deposition taken? 23 A. Yes. 24 Q. Was that -- was your work in Juliana the 25 only time besides this where you were retained as an</p>	<p style="text-align: right;">Page 7</p> <p>1 203, and Kevin's report as 204 and attach those as 2 exhibits to the deposition. 3 4 (Deposition Exhibit No. 202 was marked 5 for identification) 6 7 (Deposition Exhibit No. 203 was marked 8 for identification) 9 10 (Deposition Exhibit No. 204 was marked 11 for identification) 12 13 Q. (By Mr. Stermitz) Kevin, do you have 14 your report there in front of you? 15 A. I have it, yes, on the screen. 16 Q. Okay. And I'll be asking you questions 17 from that obviously, and as long as you have it in 18 front of you, we should be fine. 19 What was the scope of your engagement 20 here in the report that you prepared for the 21 Plaintiffs? 22 A. It was limited mainly to the aspects 23 concerned with climate change and especially the 24 rebuttal of Judy Curry's report, or parts of her 25 report. I didn't deal with all of it. Some other</p>
<p style="text-align: right;">Page 6</p> <p>1 expert in a lawsuit? 2 A. Maybe not quite. I was involved in the 3 Philippine's case. It may not -- I'm not sure 4 whether it was called a lawsuit or not, but, yeah, 5 that was -- there was a ruling on that just a little 6 while ago. 7 Q. And I don't see a reference to that in 8 your materials. 9 A. Yeah, it may not be there. 10 Q. Okay. So you're familiar with the 11 process, and I won't belabor that. 12 I guess the first thing we should do is, 13 I want to make sure we have the exhibits, or what 14 will be the exhibits, there or somewhere. 15 MR. STERMITZ: And, Robyn, what do you -- do you have 16 copies of -- 17 We should probably have done this off the 18 record. We can go ahead and go off the record, if you 19 don't mind, Phil. 20 MR. GREGORY: Don't mind. 21 22 (Off the record discussion) 23 24 MR. STERMITZ: So we're going to mark the Notice of 25 Deposition as Exhibit 202, the subpoena duces tecum as</p>	<p style="text-align: right;">Page 8</p> <p>1 parts, especially glaciology, were dealt with by 2 others. 3 Q. In your work or review of Dr. Curry's 4 report, was that the -- was that the first 5 assistance that you gave the Plaintiffs in this 6 case? 7 A. No. There was a brief introduction to 8 this back in June of last year when there was 9 another report of some sort, I've forgotten who it 10 was from, that I provided some comments to Julia and 11 Philip on. 12 Q. When were you first retained here, do you 13 know? 14 A. Well, that was for the first 15 communication, but it was really more like November, 16 I think. 17 Q. And how was -- what was the first 18 contact? Who contacted you? How did that come 19 about? 20 A. Well, it was through Julia especially, 21 and so it relates indeed to my earlier work with the 22 Juliana case. 23 Q. Okay. And other than this report that's 24 now Exhibit 204, have you prepared any other written 25 material for this case?</p>

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1 A. No.

2 **Q. Did you do anything today or in recent**
3 **history to prepare for this deposition, and, if so,**
4 **what did you do?**

5 A. Well, I continued to be active as a
6 climate scientist and stay up to date. In fact, I'm
7 very much involved at the moment with a report,
8 which is coming out today, on ocean heat content.
9 And as soon as -- almost as soon as this is over,
10 I'm involved in a press conference about that
11 particular report, which is announcing that the
12 ocean heat content, the oceans, are the warmest ever
13 on record. And so -- for 2022. And so, you know,
14 generally keeping up with what is going on in the
15 world and all of the events that are going on
16 associated with climate change.

17 **Q. Specifically with regard to this**
18 **deposition, did you meet or confer at all with**
19 **attorneys for the Plaintiffs? With Phil or**
20 **anybody --**

21 A. With Phil and Julia, yes.

22 **Q. Okay. When you prepared your report for**
23 **this case, did you do a draft that was reviewed by**
24 **counsel for the Plaintiffs?**

25 A. Yes.

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1 **Q. I'll just go right to the report. Toward**
2 **the end of your report, not the attachments, but the**
3 **report itself, and specifically page 12 -- if you**
4 **would go to page 12 -- there's a section there**
5 **titled, "Montana's Emissions Do Matter."**

6 A. Yes.

7 **Q. Okay. In the second paragraph, the end**
8 **of the second -- well, second paragraph of that**
9 **section, you say, "It is my expert opinion that**
10 **continued promotion of fossil fuels is extremely**
11 **reckless and constitutes willful endangerment and**
12 **harm to the citizens of Montana as well as the rest**
13 **of the world."**

14 **Is that your -- have you used that**
15 **description, that is, "extremely reckless and**
16 **willful endangerment," previously in any of your**
17 **work to describe the conduct of a government?**

18 A. No, I don't believe so.

19 **Q. So what -- let me ask you this then.**
20 **What is it about Montana that makes it stand out**
21 **from the world as extremely reckless and willfully**
22 **endangering Montana and the rest of the world?**

23 A. Nothing in particular, other than the
24 fact that Montana is the first example that I've
25 been involved with like this.

Page 11

1 So all of my previous involvement --
2 well, there was the Juliana involvement, which was
3 focused a bit on Oregon, but the focus has always
4 been much more on global aspects in my work. And so
5 I've been very much involved in the IPCC, for
6 instance.

7 **Q. I mean, you've got almost, you know -- I**
8 **mean, voluminous and incredible experience, and you**
9 **must have reviewed -- and tell me if this is**
10 **wrong -- climate -- the greenhouse gas emissions of**
11 **a particular political entity such as a nation,**
12 **right?**

13 A. There are national assessments by the
14 U.S. that occur, but I have not been involved in
15 those at all really. They're primarily done by
16 NOAA, but I'm familiar with some of them.

17 **Q. So except for Juliana -- well, let me**
18 **back up.**

19 **In Juliana, did you render an opinion**
20 **that Oregon or -- yes, Oregon or the federal**
21 **government, let's put it that way, that their**
22 **conduct was extremely reckless and constituted**
23 **willful endangerment?**

24 A. I didn't use those -- that particular
25 language, but there was very clear language to say

Page 12

1 that climate change was indeed potentially
2 existential threat to humanity.

3 **Q. In your draft of this report, did you use**
4 **those terms?**

5 A. Not exactly, no. I think it was
6 suggested to me by the -- by the counsel or their --
7 the people working with them. So the exact language
8 probably did not come from me.

9 **Q. What is your understanding of the -- of**
10 **the goal of this lawsuit?**

11 A. Well, you know, climate change, as I
12 mentioned, is a potentially existential threat to
13 humanity the way we're going because of the changes
14 in composition of the atmosphere and the fact that
15 we're not globally coming to grips with increasing
16 greenhouse gases, carbon dioxide, and the emissions
17 associated with those, which is the primary cause of
18 climate change.

19 And, therefore, it affects my children,
20 our children, and their children, the future
21 generations.

22 And so this is the -- future generation
23 filing a lawsuit against the state in which they
24 live in Montana, the State of Montana, and its
25 energy policies in order to try to get a change in

1 those policies so that they will be less threatened
2 in the future.

3 **Q. Have you reviewed Montana's energy
4 policies?**

5 A. No, not specifically, but I did read
6 through the Complaint.

7 **Q. Who -- and by that I mean what aspect of
8 government in Montana is responsible for creating
9 the energy policies?**

10 A. I believe there is a -- there is a part
11 of the state which deals with energy policies. I've
12 forgotten the name of the organization, but --

13 **Q. Do you know whether the courts are
14 involved in setting energy policy in Montana?**

15 A. Well, I --

16 **MR. GREGORY:** Objection, question calls for a legal
17 conclusion.

18 Go ahead, Kevin.

19 **THE WITNESS:** Yeah, I mean, I believe that they're
20 involved to the extent that issues come before them, and
21 so they make rulings relevant to this. But they're not
22 policy making, or they're not supposed to be.

23 **Q. (By Mr. Stermitz) Have you -- and I
24 apologize if I'm -- asked this already, but other
25 than this case and the Juliana case, have you been**

1 involved at all in advising anyone with regard to
2 the energy policies of a state in the U.S.?

3 A. No.

4 **Q. Have you met any of the Plaintiffs in
5 this case?**

6 A. No, I have not.

7 **Q. Even like by Zoom, let's say?**

8 A. No, I have not.

9 **Q. Have you been to Montana before?**

10 A. Yes. I've been through it, and I lived
11 in Colorado, of course, and so not that far away. I
12 lived in Colorado for 36 years.

13 **Q. I wondered. I saw a lot of connections
14 there to Colorado, and so I figured you must have
15 lived there.**

16 So turning to your critique of Dr. Curry,
17 I'm going to say -- you can tell me if this is not
18 fair -- that there's sort of a theme that runs
19 through your opinions that Dr. Curry was
20 right-minded, so to speak, at one point but has kind
21 of veered off course in more recent years into what
22 you have described as opinions that are affected
23 more by politics. Is that a fair statement or
24 summary?

25 A. Only in part. Certainly she has been

1 invited to testify before Congress and have an
2 influence on national policy because of her
3 position. But, you know, I would characterize her
4 position as being one which is much more emphasizing
5 the variability than the changes in climate.

6 **Q. And is it fair for me to say that you
7 would agree that there is variability, but you and
8 Dr. Curry sort of part company when it comes to
9 whether that variability has anything to do really
10 with the trends of global warming; is that right?**

11 A. I believe that's probably true. She
12 seems to be a little bit selective in the material
13 she uses and also in the attribution of just what is
14 going on and has no real basis for saying that the
15 decadal changes that are occurring are natural
16 variability.

17 **Q. In various places, just, for example, say
18 with regard to variability, on page 9 of your
19 report, two-thirds of the way down, there's a
20 paragraph -- I'll wait a sec to make sure you're
21 there.**

22 A. Yes.

23 **Q. You say, "Dr. Curry's report consistently
24 over-emphasizes variability and understates what we
25 can say for sure about climate change. It is easy**

1 to suggest Montana's weather and climate changes are
2 just due to natural variability, but Dr. Curry does
3 not cite to peer-reviewed science."

4 Let me stop there. There's several
5 places in your report where you criticize Dr. Curry
6 for relying on information that has not been
7 peer-reviewed; is that correct?

8 A. Yes.

9 **Q. And you go on to say here that, "There is
10 nothing special about Montana's climate that exempts
11 it from the impacts of global climate change."**

12 Is there anything special about Montana
13 that makes it a bad actor or significantly worse
14 than any other area in the world in terms of global
15 climate change?

16 **MR. GREGORY:** Objection, vague and ambiguous.

17 **THE WITNESS:** Well, I'm happy to have a crack at
18 answering or giving a comment at least. And my comment is
19 that Montana is a source of coal and natural gas, and
20 actually exports, I believe, both of those commodities,
21 and thereby contributes not just to what is happening
22 within Montana but also in other parts of the U.S. and
23 globally.

24 **Q. (By Mr. Stermitz) On page 12 of your
25 report, I think maybe this gets to what you're**

1 saying regarding Montana's emissions, in the second
2 sentence of that section, you say -- she talks about
3 the percentage of Montana's contribution to
4 greenhouse gases. And then you say, "Of course,
5 Montana's contribution is much greater than that
6 through exports of coal and natural gas."

7 Can you explain that to me a little bit
8 more? Dr. Curry is saying that Montana's
9 responsible for X percentage, and then you say the
10 contribution is greater than that. I'm not quite
11 understanding what the latter is.

12 A. Where are we exactly? We're on page --

13 Q. Oh, I'm sorry, page 12.

14 A. Yes. And --

15 Q. "Montana's Emissions Do Matter."

16 A. Yes, I found it here.

17 Q. And do you see, according to Dr. Curry
18 there, with a .09 percent?

19 A. Right.

20 Q. And then you say, "Montana's contribution
21 is much greater than that through exports of coal
22 and natural gas."

23 Maybe I'm confused about what that
24 .09 percent represents.

25 A. That was a number that came out. And so

1 percent, plus potentially exports, is the
2 contribution that's recklessly endangering the
3 world's population?

4 A. Yes, contributing to that. And you can
5 see what I did there. I just multiplied .09 by 50,
6 50 states, which gives you four-and-a-half percent,
7 and the actual number that U.S. is responsible for
8 global emissions in 2022 was 5 percent. So it turns
9 out to be quite close.

10 Q. Yeah.

11 A. You know, that's the second highest in
12 the world.

13 Q. What is the second highest in the world?

14 A. The 5 percent is the second highest of
15 any --

16 Q. Oh, right, of any country.

17 Now, do you believe that Montana should
18 be responsible for whatever percentage is attributed
19 to fossil fuels that are -- travel through Montana
20 but don't originate here and aren't combusted here?

21 MR. GREGORY: Objection, vague and ambiguous.

22 Q. (By Mr. Stermitz) Did you understand my
23 question, Kevin?

24 A. Well, let me clarify the question. The
25 whole business of assigning who is responsible for a

1 I believe the .09 percent related to the emissions
2 that occur within Montana. And as a result by
3 exporting coal and natural gas elsewhere, when those
4 commodities are used, when they're burned, there are
5 extra emissions which I believe probably should be
6 ascribed to Montana. And so that would boost that
7 number somewhat higher.

8 Q. Okay. If it -- and you may well be right
9 about that percentage. If it turns out that that
10 .09 percent includes the export of coal and natural
11 gas that Montana does, then that .09 percent would
12 be the correct figure; is that right?

13 A. Well, that would be the case, but I don't
14 believe that's what it refers to.

15 Q. Okay.

16 A. And, you know, so this is -- well --

17 Q. I mean, that's easily -- I just didn't
18 pin it down.

19 So minimum anyway, I guess you could say,
20 Montana has this nine hundredths of a percent
21 responsibility, and then you say if 50 states in all
22 had the same -- which I understand is probably not
23 the case -- the total would be four-and-a-half
24 percent. So your opinion is in summary, and tell me
25 if you disagree, that Montana's nine hundredths of a

1 particular emissions is a fraught question. It's
2 very difficult. I believe the only way you can do
3 it is at the origin of the fossil fuel itself.

4 Where it is mined, that's where you can track it.

5 Because otherwise it gets disbursed
6 and -- for instance, in the case of petroleum, it
7 gets burned in cars, you know, thousands of cars.
8 And you can't track each individual one. And, in
9 fact, you and I breathe and we emit carbon dioxide.
10 And so you can't properly account for that easily
11 either.

12 And so in terms of fossil fuels, it may
13 be possible to do it from the standpoint of where it
14 is mined, but then you don't deal with the
15 transportation of it and where it is actually
16 burned. And that refers back then to the fact that
17 Montana exports coal and natural gas, and, under
18 that kind of accounting, it would -- it would then
19 revert back to being a responsibility from Montana.

20 This relates to the whole business of
21 should you put a price on carbon and how could you
22 put a price on carbon, and, of course, this is very
23 uncertain and very much up for debate.

24 Q. So, I mean, let's just do it as a
25 hypothetical then. If Montana -- and this probably

1 does apply to other states I'm going to guess, but
2 if Montana has infrastructure, either pipelines or
3 rail or highways, that carry fossil fuels through
4 the state that are mined or extracted elsewhere and
5 combusted elsewhere, would you be comfortable in
6 making Montana responsible, you know, in terms of
7 its calculations, for that -- that segment of
8 greenhouse -- fossil fuels?

9 A. So it depends on your goal here as to
10 what you're trying to achieve. Certainly Montana
11 has enabled the use of the fossil fuels by building
12 those pipelines, and as you're I'm sure aware, this
13 is also very politically -- there's a lot of
14 protests relating to exactly that kind of activity,
15 the Keystone Pipeline being a case in point
16 recently.

17 But in the example that I used before, if
18 you're trying to say, you know, who is responsible,
19 I think the only way you can practically do it is at
20 the source, not dealing with the transport.

21 Q. Okay.

22 MR. GREGORY: Mark, I wanted to object that your
23 question had called for a legal conclusion.

24 MR. STERMITZ: Okay. All right.

25 Q. (By Mr. Stermitz) In your report, at

1 not a particularly valid way to look at assigning
2 responsibility, if you will, for -- for the overall
3 picture of global warming?

4 A. For the overall emissions and the
5 consequences, that's correct.

6 Q. I asked you already about your review of
7 Montana's energy policies. Do you have any
8 familiarity with whether Montana promotes the use of
9 fossil fuels outside the context of the energy
10 policies themselves?

11 MR. GREGORY: Objection.

12 Go ahead.

13 Q. (By Mr. Stermitz) In other words,
14 through means other than statutory?

15 A. I really don't --

16 MR. GREGORY: Objection, vague, ambiguous, calls for
17 a legal conclusion.

18 Q. (By Mr. Stermitz) Did you understand the
19 question? I can rephrase it.

20 A. Well, I mean, my answer is I really don't
21 know.

22 Q. And I'll -- I'm going back to your
23 opinion where you talk about Montana's promotion of
24 fossil fuels. I'm focusing on the word "promotion."
25 And I'll ask it this way: How does Montana promote

1 some point -- let me see. I probably can find it
2 here. You probably know off the top of your head.
3 At some point you say that -- that it's not helpful
4 to look at greenhouse gas emissions as a
5 percentage -- a per-capita-type calculation. Does
6 that sound familiar to you?

7 A. Yes. Well, that's -- I think that's
8 probably true. I mean, that's one way of doing it,
9 and, of course, China likes to do it that way
10 because they have a large number of emissions, but
11 they have a lot of people, and, therefore, their
12 emissions per capita is quite small.

13 But the thing that counts for the climate
14 system is the total emissions, and therefore the
15 population also matters.

16 Q. Right. I mean, that's part of the
17 equation literally, correct?

18 A. Yes.

19 Q. And so, from Montana's standpoint, sort
20 of the, I'll say -- and the other end of the
21 spectrum from China, fewer people and these exports
22 of fossil fuels, we would be higher on the per
23 capita scale, right?

24 A. Yes.

25 Q. But that -- your opinion is that that's

1 fossil fuels to your knowledge?

2 A. So that relates to the exports of coal
3 and natural gas. And so -- you know, often a large
4 portion of this is done by industry. It's done by
5 private sector. It may not be done by the state,
6 but it's enabled by the state in some fashion. And
7 I don't have detailed knowledge beyond that kind of
8 statement.

9 Q. Okay. Is it your impression that this
10 lawsuit involves a question of whether there is
11 actually human-caused global warming or
12 anthropogenic global warming?

13 A. I mean, that's not the main purpose of
14 the suit. The -- the -- the case itself mostly
15 assumes that, you know, climate change is real, and
16 I would certainly say that it is, and that's been
17 clearly stated by organizations like the IPCC in
18 increasingly strong terms, and so that should not be
19 an issue. That's -- yeah.

20 Q. Your report does address or explain the
21 effect that humans have had on global warming. Is
22 that simply because you're responding to Dr. Curry's
23 report?

24 A. In part it relates to the overall changes
25 in climate that are going on in Montana, in the

1 United States, and around the world.

2 **Q.** I guess my question is, if it turns out
3 here that no one is questioning the anthropogenic
4 causes of climate change, then it would leave much
5 of your report as unnecessary, wouldn't it?

6 **MR. GREGORY:** Objection, calls for a legal
7 conclusion, incomplete hypothetical.

8 **THE WITNESS:** I would certainly disagree that it's
9 irrelevant because of the Curry report.

10 **Q.** (By Mr. Stermitz) Now, do you have any
11 impression at all about what -- let's say, Montana,
12 if we eliminated Montana's .09 percent or whatever
13 the percentage is, if that just went away, what that
14 would do to alleviate the concerns that the
15 Plaintiffs have expressed here?

16 **MR. GREGORY:** The question calls for a legal
17 conclusion.

18 **THE WITNESS:** It certainly calls for conclusions
19 related to values and a whole lot of other things because
20 Montana would not be able to simply eliminate that without
21 interacting with surrounding states. And indeed this is
22 one of the big issues that if one state -- let's make it a
23 different state for the sake of argument. Say California
24 increases their regulations and maybe taxes emissions in
25 some fashion, then an industry may well just hop across

1 the border and go to Nevada or somewhere else.

2 And so it becomes somewhat fruitless to take
3 unilateral action. One has to actually work with
4 surrounding states to make sure that suddenly all of your
5 industry and so on doesn't just go across the border to
6 the next state.

7 And so it -- it does require, therefore,
8 political -- well, all kinds of interactions with other
9 states and with the U.S. as a whole.

10 **Q.** (By Mr. Stermitz) In your work, Kevin,
11 have you looked at, kind of in the same vein, what
12 the countries who use Montana's coal would do if
13 Montana no longer exported coal?

14 **A.** There are plenty of other sources of coal
15 within the U.S. and in places like Australia and
16 Indonesia who are the largest exporters of coal, for
17 instance. So you can certainly get it from
18 elsewhere, but the question is, you know, shouldn't
19 there be a tax on those and -- because of the
20 downstream of consequences of burning fossil fuels.

21 And so the thing that is apt to happen is
22 that, if they start buying from somewhere else,
23 suddenly it may become a whole lot more expensive.
24 You can see examples of this sort of thing happening
25 in Europe with the war between Russia and the

1 Ukraine.

2 **Q.** Because of having to find other sources
3 that are --

4 **A.** Yes.

5 **Q.** -- farther away or something or what?

6 **A.** Yes. And they may be more expensive in
7 some fashion, or they may get more expensive because
8 of other changes that are occurring in society.

9 **Q.** At some place in your report you address
10 international negotiations or international
11 cooperation or lack thereof, and -- well, we can
12 find it, I think. Page 11 -- page 11 and -- I just
13 need to find a specific -- oh, kind of in the middle
14 of the page. Are you on page 11?

15 **A.** Yes, I am.

16 **Q.** There's that paragraph that begins, "For
17 purposes of these children's lives well into the end
18 of the century" -- at the end of that paragraph, it
19 says, "Unfortunately, international negotiations
20 show no promise of reining in future climate
21 change."

22 Without those negotiations bearing fruit,
23 I'm going to ask sort of the corollary here, does
24 that mean that there will be no improvement in
25 global warming or climate change?

1 **A.** No. What it suggests is that the COP
2 process, which involves the United Nations and
3 involves, what is it, some nearly 200 countries, is
4 very, very cumbersome and ineffective in terms of
5 really making major changes.

6 The Paris Agreement was remarkable in
7 late 2015, and the U.S. was very much involved in
8 that through the Obama administration.

9 But the -- my own view is the main way
10 forward is either through the G7 or more likely the
11 G20. And, you know, these are the countries that
12 are probably producing the most emissions and --
13 and, in fact, if the U.S. and China could really get
14 together, all of the other countries would sort of
15 have to go along, I think. And so it relates to
16 global-scale politics, but, you know, not
17 necessarily the COP process.

18 **MR. GREGORY:** Mark, is this a convenient point to
19 take a quick break?

20 **MR. STERMITZ:** Sure. Let's see, what time is it?

21 **MR. GREGORY:** It's 3:44.

22 **MR. STERMITZ:** Our time. And we can do 10 minutes or
23 something like that.

24

25 (Whereupon, a recess was taken)

1
2 **Q. (By Mr. Stermitz) Kevin, I'm following**
3 **up on the questions about, you know, international**
4 **efforts to deal with global warming. I want to be**
5 **sure you understood what I was asking about in terms**
6 **of Montana's contribution, so I'm going to put it in**
7 **a hypothetical.**

8 **Assume the Court here has the ability to**
9 **just order that Montana have no more greenhouse gas**
10 **emissions. I mean, I know that's ridiculous, but**
11 **let's just assume that for the sake of argument. So**
12 **that whatever percentage that we have would just go**
13 **away.**

14 **You said you read the Complaint. So you**
15 **know the sorts of difficulties and concerns and**
16 **everything else the Plaintiffs expressed there.**
17 **What would you anticipate would happen if Montana's**
18 **greenhouse gas contribution disappeared that would**
19 **impact those things that the Plaintiffs are seeing**
20 **that cause them so much concern?**

21 **MR. GREGORY:** Objection, incomplete hypothetical,
22 vague and ambiguous.

23 **Q. (By Mr. Stermitz) Kevin, do you need me**
24 **to clarify that at all, or do you understand what**
25 **I'm saying?**

1 A. Well, you know, it's very speculative, if
2 anything, and, you know, there's a whole lot of
3 what-ifs that would apply in this case. You know,
4 Montana could set a good example. Who knows?

5 **Q. Well, let's say Montana decided to set a**
6 **good example. Would that reduce the drought or**
7 **water problems that some of the Plaintiffs expressed**
8 **in their -- in the complaint?**

9 A. Indeed, that's one of the biggest issues.

10 **MR. GREGORY:** Objection, incomplete hypothetical,
11 vague and ambiguous.

12 Go ahead, Kevin.

13 **THE WITNESS:** Yeah, I mean, drought issues in Montana
14 are one of the biggest issues that it should be concerned
15 about with regard to climate change, and --

16 **Q. (By Mr. Stermitz) So -- sorry.**

17 A. -- anything it can do to help cut that
18 risk --

19 **Q. So --**

20 A. -- is desirable.

21 **Q. (By Mr. Stermitz) I'm sorry. I keep**
22 **interrupting you. I apologize. Go ahead.**

23 A. Go ahead.

24 **Q. Okay. So if Montana's .09 percent were**
25 **eliminated, it's your opinion that that would have a**

1 **measurable impact on the drought cycles, whatever**
2 **you want to call it, that we're experiencing in**
3 **Montana?**

4 **MR. GREGORY:** Incomplete hypothetical, vague and
5 ambiguous.

6 **THE WITNESS:** The issue is that it depends on what
7 happens everywhere else. I'm assuming that if that
8 happened that other places would also do the same, and
9 then it would really have an impact on Montana. By
10 itself, it would be a small effect as you're hinting at.

11 **Q. (By Mr. Stermitz) Right. Okay. Are you**
12 **an advocate for reparations for impacts from global**
13 **warming?**

14 A. I wrote an article about reparations and
15 how difficult it is because it relates to assigning
16 blame. And that is fraught with difficulty on the
17 one hand.

18 On the other hand, it is clear that the
19 United States as a whole has contributed more to the
20 increases in carbon dioxide than any other nation
21 cumulatively. And so we certainly bear more
22 responsibility than -- the U.S. builds -- bears more
23 responsibility than any other nation.

24 **MR. GREGORY:** Excuse me. Kevin, I need you to pause
25 a little bit after the question.

1 Because I wanted to object that the question is
2 outside the expert report of the witness.

3 Go ahead.

4 **Q. (By Mr. Stermitz) Yeah, I'm referring, I**
5 **think you know, Kevin, to the -- I think it's the**
6 **last article or publication that is listed, most**
7 **recent anyway, in your references there. The**
8 **newsroom articles, that's what I'm talking about.**
9 **Is that what you were talking about as well?**

10 A. Yes.

11 **Q. And in that article, let me paraphrase**
12 **it, and tell me if I'm doing this accurately. When**
13 **it comes to this assigning blame, if you will, or**
14 **trying to pin down, if you were going to look at**
15 **reparations, who's responsible for what, you**
16 **emphasize that it's not just the -- that the**
17 **problems are caused not just by the emissions, but**
18 **by where they interact with the human activities**
19 **that are susceptible to greater harm. Is that a**
20 **fair statement?**

21 Let me -- let me just quote from the
22 article here, and tell me if you think this is
23 right. "As carbon dioxide has a long lifetime,
24 total accumulated emissions matter most."

25 A. Yes.

1 Q. Okay. And then you say, "But, in
2 addition, losses and damage depend hugely on the
3 resilience and vulnerability of infrastructure in
4 societies. Too many people are living in the wrong
5 places."

6 A. Yes.

7 Q. Can you maybe elaborate on what you mean
8 by that?

9 A. An example --

10 MR. GREGORY: Again, this is -- objection, this is
11 all outside the witness's expert report.

12 Go ahead.

13 THE WITNESS: I mean, I can, but as Phil says, this
14 is -- this is really going away from anything I have
15 written in my report.

16 Q. (By Mr. Stermitz) Well, let me put it
17 this way. If we're concerned here about whether a
18 judge in Montana can have any impact at all on any
19 of the problems that Plaintiffs are complaining
20 about, don't we have to look at the global picture
21 because, as you say, it is a global problem, number
22 one?

23 A. That's correct.

24 Q. And -- sorry, go ahead.

25 A. And Montana is a part of it.

1 Q. Montana is a part of it. And the -- the
2 harm that you've said Montana is causing its
3 citizens and the globe recklessly and willfully is
4 also a product of a particular location and where
5 the people are and what they're doing at that
6 location, correct?

7 A. Yes.

8 Q. So --

9 A. If you have a river and the river floods
10 and people have built too close to the banks of the
11 river where they probably shouldn't have built in
12 the first place, then they bear some responsibility,
13 right?

14 Q. That's what I was getting at with this --
15 I'm trying to understand what you were saying in
16 this article.

17 Do you believe -- if Dr. Curry wasn't
18 called as a witness here -- I don't know what will
19 happen. I'm just throwing this out as a
20 hypothetical. Have you been asked to do anything
21 else that wouldn't relate to rebutting Dr. Curry's
22 testimony?

23 A. No.

24 Q. At least at this time?

25 A. At this time.

1 Q. Okay.

2 MR. STERMITZ: I have no further questions at this
3 time.

4 MR. GREGORY: All right. Thanks.

5 The only thing I want to get on the record is,
6 Kevin, can you briefly describe right now -- I'm going to
7 call it your condition in terms of your pelvis, just
8 briefly.

9 THE WITNESS: You were breaking up badly there.

10 MR. STERMITZ: I couldn't quite get that, Phil.

11 MR. GREGORY: Can you hear me now?

12 MR. STERMITZ: Not consistently.

13 MR. GREGORY: Is this better?

14 MR. STERMITZ: Sounds better.

15 MR. GREGORY: Okay. Sorry.

16 I just wanted -- Kevin, if you could briefly
17 describe what your -- what happened to your -- as a result
18 of your accident, your medical condition.

19 THE WITNESS: My current situation?

20 MR. GREGORY: Yes.

21 THE WITNESS: So over four months ago, I was walking
22 my dog and attacked by a pit bull, and he threw me over a
23 small cliff, and I have a broken pelvis. So I am on
24 crutches and walking on one leg, recovering slightly but
25 still with difficulty. You wanted to get this on the

1 record?

2 MR. GREGORY: That's it. That's all I wanted to get
3 on.

4 THE WITNESS: Yes.

5 MR. STERMITZ: Sorry to hear that.

6 THE WITNESS: It does mean travel is difficult for
7 me.

8 MR. STERMITZ: Right.

9 MR. GREGORY: Okay. Okay. That's all I had.

10 MR. STERMITZ: Okay.

11
12 (Whereupon, the deposition concluded
13 at 4:08 p.m. MST for the day)

14
15 (Signature reserved)

DEPONENT'S CERTIFICATE

I, Kevin Trenberth, Deponent in the foregoing deposition, DO HEREBY CERTIFY, that I have read the foregoing pages of typewritten material and that the same is, with any changes thereon made in ink on the correction sheet and signed by me, a full, true and correct transcript of my oral deposition given at the time and place hereinbefore mentioned.

Kevin Trenberth, Witness

SUBSCRIBED AND SWORN to before me this day of , 20__.

NOTARY PUBLIC Residing at My Commission Expires

ROE - Held v. State of Montana

C E R T I F I C A T E

STATE OF MONTANA)

:ss

COUNTY OF BEAVERHEAD)

I, Robyn Ori English, Freelance Court Reporter and Notary Public for the State of Montana, residing in Dillon, do hereby certify:

That I was duly authorized to and did swear in the witness and report the deposition of Kevin Trenberth, in the above-entitled cause; that the foregoing pages of this deposition constitute a true and accurate transcription of my stenotype notes of the testimony of said witness, all done to the best of my skill and ability; that the reading and signing of the deposition by the witness has been expressly [waived reserved].

I further certify that I am not an attorney nor counsel of any of the parties, nor a relative or employee of any attorney or counsel connected with the action, nor financially interested in the action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed by notarial seal on this, the 19th day of January, 2023.

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EXHIBIT 15

*Rikki Held, et al. v
State of Montana, et al.*

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December 1, 2022*

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MONTANA FIRST JUDICIAL DISTRICT COURT
LEWIS AND CLARK COUNTY

RIKKI HELD, ET AL.,
Plaintiffs,
vs. Cause No. CDV 2020-307
STATE OF MONTANA, ET AL.,
Defendants.

VIDEOTAPED VIDEOCONFERENCE DEPOSITION UPON
ORAL EXAMINATION OF
DR. TERRY ANDERSON

BE IT REMEMBERED, that the
videotaped videoconference deposition upon oral
examination of DR. TERRY ANDERSON, present at
Fisher in Bozeman, Montana, appearing at the
instance of Plaintiffs, was taken at the offices
of Charles Fisher Court Reporting, 442 East
Mendenhall Street, Bozeman, Montana, on Thursday,
December 1, 2022, beginning at the hour of
9:00 a.m., pursuant to the Montana Rules of Civil
Procedure, before Kasey L. Fisher, Registered
Professional Reporter - Notary Public.

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Videographer: Nicole Tomac with Fisher
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I N D E X

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Mr. Philip L. Gregory, Esq.....8

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1 I represent the plaintiffs.

2 MR. STERMITZ: Mark Stermitz,

3 representing the State of Montana. And also on

4 the call from our firm is Selena Sauer, in

5 Kalispell.

6 MS. SAUER: Hi, I'm Selena Sauer. I'm in

7 Kalispell.

8 MR. SULLIVAN: Roger Sullivan, attorney

9 for plaintiffs. Kalispell.

10 MS. HORNBEIN: Melissa Hornbein, attorney

11 for plaintiffs, in Helena.

12 MR. BELLINGER: This is Nate Bellinger

13 with Our Children's Trust, attorney for

14 plaintiffs, in Eugene, Oregon. And also with me

15 in Eugene, Oregon, is David Schwartz with -- with

16 plaintiffs.

17 MS. ROGERS: And this is Andrea Rogers,

18 attorney for the plaintiffs. I'm in Seattle,

19 Washington.

20 MR. GREGORY: And also attending is a

21 paralegal from Our Children's Trust, Tara

22 Robinson.

23 I think we got everybody.

24 VIDEOGRAPHER: The court reporter will

25 now administer the oath.

1 WHEREUPON, the following proceedings were

2 had and testimony taken, to-wit:

3 *****

4 VIDEOGRAPHER: This is the video-recorded

5 and videoconference deposition of Dr. Terry

6 Anderson taken in the Montana First Judicial

7 District Court, Lewis and Clark County.

8 Cause No. CDV-2020-307.

9 Rikki Held, et al., versus State of

10 Montana, et al.

11 Today is December 1st, 2022. The time is

12 9:04 a.m.

13 We are present with the witness at the

14 offices of Fisher Court Reporting at 442 East

15 Mendenhall Street in Bozeman, Montana.

16 The court reporter is Kasey Fisher and

17 the video operator is Nicole Tomac of Fisher Court

18 Reporting.

19 The deposition is being taken pursuant to

20 notice.

21 I would now ask the attorneys to identify

22 themselves, who they represent and whoever else is

23 present. For those attending remotely, please

24 note from where you are appearing.

25 MR. GREGORY: My name is Philip Gregory.

1 DR. TERRY ANDERSON,

2 called as a witness herein, having been first duly

3 sworn, was examined and testified as follows:

4 EXAMINATION

5 BY MR. GREGORY:

6 Q. Good morning, sir, my name is Philip

7 Gregory. I represent the plaintiffs in this

8 matter.

9 Could you please state your full name?

10 A. My name is Terry Lee Anderson.

11 Q. What's your residence --

12 A. My residence --

13 Q. -- city and town?

14 A. My residence is Bozeman, Montana,

15 269 East Hodgeman Road.

16 Q. Are you currently employed?

17 A. I -- it's always a hard question to

18 answer.

19 I am a senior fellow at the Hoover

20 Institution, where I spend a part of the year, and

21 receive an honorarium for that position, so it's

22 not quite employment in the typical sense of the

23 word.

24 Q. And the Hoover Institution, that's in --

25 connected with Stanford University in Palo Alto,

1 California?
2 A. Yes, it is. Although, I think they would
3 say Stanford University in Stanford, California,
4 but...

5 Q. Have you ever had your deposition taken
6 before?

7 A. Yes.

8 Q. Okay. I'd like to go over a few ground
9 rules that I'd like to ask us to follow here
10 today.

11 The first is that I'm going to be asking
12 you questions, and hopefully you'll be able to
13 answer my questions.

14 As I'm asking a question, I would
15 appreciate it if you don't interrupt me till I
16 finish my question, and that way Kasey is not
17 attempting to take down two people speaking at the
18 same time.

19 I'll attempt to extend you the same
20 courtesy. If at any point I've interrupted your
21 answer to start another question, please tell me.
22 I'll be quiet, I'll let you finish your answer
23 before you -- I begin another question.

24 Does that make sense to you?

25 A. Understood. And thank you.

1 here today?

2 A. No, there's no such reason.

3 MR. GREGORY: Okay. Sir, what I'd like
4 to do is start off by marking as the next exhibit
5 in order in the case, but the first exhibit today,
6 which I believe is 49, a copy of what I believe is
7 your expert report.

8 (Whereupon, Exhibit No. 49 was
9 marked for purposes of
10 identification.)

11 BY MR. GREGORY:

12 Q. Sir, one of -- before you get going
13 through the expert report, I want to just give you
14 one admonition.

15 I notice you've got a pen in your hand.
16 And can you please not mark on the exhibits?

17 You can mark on your own little notepad
18 or anything else, but please not mark on the
19 exhibits.

20 A. Clear.

21 Q. Okay. Is what was marked as Exhibit 49 a
22 true and correct copy of your expert report?

23 A. It appears to be.

24 Q. Okay. And on page 15, is that your
25 signature?

1 Q. Sure.

2 And it's also important that you answer
3 the questions with a word and not a gesture like a
4 nod of a head or a sound that doesn't quite make
5 it as a word, and that way Kasey and I are not
6 attempting to interpret your answers.

7 Does that make sense?

8 A. Understood.

9 Q. Okay. If I ask you a question and for
10 any reason you don't completely hear the question
11 or don't understand the question, please tell me
12 and I'll either ask Kasey to read the question
13 back or I'll restate the question so that you have
14 the question completely in mind before you begin
15 your answer.

16 Do you understand that?

17 A. Clear.

18 Q. And you understand that your testimony
19 here today is under oath and has the same force
20 and effect, including the penalties of perjury, as
21 if you were a witness on a witness stand in a
22 court of law, correct?

23 A. Understood.

24 Q. Okay. Is there any reason you're aware
25 of why you can't give full and complete testimony

1 A. Yes, it is.

2 Q. And is Exhibit 49 a complete copy of the
3 expert report that you prepared for this case?

4 A. Yes, not including my vita, but...

5 Q. And, sir, that's where we're going to go
6 next.

7 A. Okay.

8 MR. GREGORY: So I'm going to now mark as
9 Exhibit 50 a document that was served on us, and
10 what it appears to be is your CV, or resume.

11 (Whereupon, Exhibit No. 50 was
12 marked for purposes of
13 identification.)

14 BY MR. GREGORY:

15 Q. Sir, if you could take a look at what
16 we've marked as Exhibit 50, and tell me if that is
17 a true and correct copy of your current CV.

18 A. It is.

19 Q. Okay. Now we're going to put that aside
20 for just a moment, and we're going to go back to
21 the expert report.

22 Do you have that in front of you?

23 A. I do.

24 Q. Is your expert report a complete
25 statement of all of the opinions that you

Page 13

1 anticipate giving as an expert witness at the
 2 trial in this case?
 3 A. Yes.
 4 Q. Does this report set forth the complete
 5 basis and reasons for each of your expert
 6 opinions?
 7 A. Yes.
 8 Q. Does this report contain all of the
 9 assumptions that you're relying on in forming each
 10 of your expert opinions?
 11 A. Yes.
 12 Q. Does this report contain all the
 13 underlying facts and data that you considered in
 14 forming your opinions?
 15 A. Yes.
 16 Q. As of today, does this report contain all
 17 of the exhibits that you might reference while
 18 testifying at trial?
 19 A. Yes.
 20 Q. If you'd turn, sir, towards the end, page
 21 16, it's a listing of sources.
 22 A. Yes.
 23 Q. Are these the documents that you relied
 24 on in forming your opinions in this case?
 25 A. Yes, they are.

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1 Q. Did you rely on anything, what I'm going
 2 to call at some level of importance, that isn't
 3 listed as one of these sources?
 4 A. I don't believe so, but yeah.
 5 Q. Sir, one of my goals here today is to
 6 just try to identify on the record all the
 7 documents you reviewed and considered for forming
 8 your opinions in this case.
 9 Are there any documents that you reviewed
 10 and considered in forming your opinions in this
 11 case that aren't on -- aren't set out in your
 12 expert report and, in particular, the page --
 13 pages headed "Sources"?
 14 A. Yes. I believe that page should include
 15 Professor Koonin's book, which I have in front of
 16 me. And I'm not sure why it wasn't listed here,
 17 but...
 18 Q. Sure.
 19 A. I don't know that I quoted from it, but I
 20 have read the book, and it has certainly
 21 contributed to my knowledge of -- of the issues.
 22 Q. And that book, sir, is titled,
 23 "Unsettled: What Climate Science Tells Us, What
 24 It Doesn't, and Why It Matters," by Steven E.
 25 Koonin, K-o-o-n-i-n?

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1 A. Correct.
 2 Q. Okay. And you brought that with you here
 3 today?
 4 A. Yes, I did.
 5 Q. Thank you.
 6 And other than the Koonin book, does the
 7 report contain all the documents?
 8 A. It does.
 9 Q. In terms of the preparation of your
 10 expert report, did anyone assist you in preparing
 11 or drafting your expert report?
 12 A. Yes.
 13 Q. Who?
 14 A. Dylan -- I'm sorry. I've gotten
 15 horrible -- it's worse and worse. Dylan Granum,
 16 listed on the first page.
 17 Q. That's G-r-a-n-u-m?
 18 A. Correct.
 19 Q. And what -- anybody else besides
 20 Mr. Granum?
 21 A. No.
 22 Q. What role did Mr. Granum play in
 23 assisting you in drafting your report?
 24 A. He found sources that I requested, he
 25 created tables and figures that I felt necessary

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1 for my understanding of the issues, and met with
 2 me to discuss the documents that -- that were
 3 pertinent to the report that I was preparing.
 4 Q. Did -- I know you talked about him
 5 creating tables. Did he help you draft any
 6 sections, other than creating tables?
 7 A. No.
 8 Q. Okay. And, sir, if we go into the expert
 9 report, there's -- at the end, there's no page
 10 number, but it's the page after page 17. And so
 11 in terms of the exhibit, it would be the 18th and
 12 19th pages.
 13 A. Yes.
 14 Q. Are these the -- is this -- first off,
 15 page 18, is this the table that Mr. Granum
 16 prepared?
 17 A. Yes.
 18 Q. And based on your recollection, sir, did
 19 he prepare any other tables?
 20 A. Not that I recall. I could look in my
 21 files to be sure of that, but not that I recall.
 22 Q. Okay.
 23 A. These are the most pertinent for sure.
 24 Q. And, sir, the other thing you said that
 25 he did was -- I'm going to paraphrase you -- that

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1 he found some sources.
 2 A. Yes.
 3 Q. And if you go to pages 16 and 17, looking
 4 at those pages, do those -- that -- does that
 5 refresh your recollection about which source or
 6 sources Mr. Granum found?
 7 A. Yes. I -- I know for sure that the
 8 Pindyck source is one that he found.
 9 Q. Excuse me, sir, I'm sorry to interrupt
 10 you. Just for spelling purposes, that's
 11 P-i-n-d-y-c-k.
 12 Any other sources?
 13 A. I don't believe so, but -- I don't
 14 believe so.
 15 Q. Okay. And going back -- I'm sorry. Are
 16 you still --
 17 A. No, that's fine.
 18 Q. Okay. Going back to the table, do you --
 19 did you instruct him how to prepare the table, or
 20 did he -- I'm going to use a colloquialism -- in
 21 essence, take a whack at it, you looked at it,
 22 talked to him about it, and then adopted it as
 23 part of your report?
 24 A. I can't be sure whether he gave me -- he
 25 certainly produced a table at one point, and then

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1 we talked about how it should be presented.
 2 So I -- I can't say this is a precise
 3 replica of -- of what he first prepared or one
 4 that I instructed him to create based on what he
 5 prepared.
 6 Q. And just to be clear, sir, you didn't
 7 consult with anyone other than Mr. Granum in
 8 preparing this report?
 9 A. No.
 10 Q. I'm sorry. I'm correct?
 11 A. Oops, yes, you're correct.
 12 Q. Thank you.
 13 Sir, in terms of this case, the Held
 14 case, when did you first hear of this case?
 15 A. When I was contacted by the assistant
 16 attorney general and asked if I might be
 17 interested or if I knew people who might be
 18 interested as serving -- in serving as
 19 professional witnesses.
 20 Q. And who's that person?
 21 A. Oh, that I suggested or --
 22 Q. No, that you contact -- that contacted
 23 you initially.
 24 A. Yeah. I can't -- Timothy -- help.
 25 Q. Longfield?

Page 19

1 A. Longfield.
 2 Q. Thank you. Okay.
 3 A. Where's my wife when I need her?
 4 Q. And so, just to be clear, prior to him
 5 contacting you, as far as you can recall, you
 6 hadn't heard of this case?
 7 A. No.
 8 Q. And he asked if you'd be interested in
 9 being a professional witness or if you knew of
 10 someone who might be interested; is that correct?
 11 A. Correct.
 12 Q. And did you identify any names?
 13 A. I definitely identified Steve Koonin
 14 and -- the author of the book we've referred to.
 15 And I believe I mentioned Bjorn Lomborg, the
 16 author of another book on the table. But I can't
 17 recall whether Timothy had already contacted Bjorn
 18 or not.
 19 Q. And Bjorn Lomborg is the author of, among
 20 other books, False Alarm, correct?
 21 A. Correct.
 22 Q. And that's the book you're alluding to in
 23 your answer?
 24 A. Yes.
 25 Q. When Mr. Longfield contacted you about

Page 20

1 professional witnesses for purposes of this case,
 2 did he describe the case in any way to you?
 3 A. Very briefly. I had not read the
 4 documents that had been filed in court, so only --
 5 only a brief description, and mostly focused on
 6 science issues, which is why I suggested
 7 Steve Koonin.
 8 Q. Do you remember at all how he described
 9 the case to you?
 10 A. Not in any detail.
 11 Q. Sir, I've been a little remiss. Do you
 12 remember when he first contacted you
 13 approximately?
 14 A. Probably in May or June of this year.
 15 Q. So -- and was that a phone call?
 16 A. Yes.
 17 Q. And so that was May or June 2022?
 18 A. Twenty -- yes.
 19 Q. And then did you have any other phone
 20 calls or e-mail correspondence with any other
 21 attorneys for the defendants prior to you
 22 generating your report, or was it Mr. Longfield
 23 that you dealt with?
 24 A. Mr. Longfield only.
 25 Q. And, sir, when he asked you about the

1 potential names for professional interest --
2 witnesses, did he ask you if you'd be interested?

3 A. Yes.

4 Q. And what did you say in that regard?

5 A. I said that I would not be interested in
6 serving as a science expert because I'm not a
7 climate scientist, and, for that reason, suggested
8 the other two people who are far better versed in
9 that topic.

10 We, at some point in those discussions,
11 turned to questions of the economics involved, and
12 that's when he first -- we first explored the
13 possibility of me serving as an expert.

14 Q. And in that initial call, do you remember
15 generally what you discussed were potentially
16 the -- I'm going to call them the economic issues,
17 that might be areas you could cover as a
18 professional witness?

19 A. I'm sorry. I'm not quite sure.

20 Do you mean were there specific topics
21 that he asked me about?

22 Q. Yes, sir.

23 A. I don't believe there were specific ones.
24 Mostly he wanted me to explore what the economic
25 questions might be and -- and what -- what I would

1 little background. I'm going to hit mute.

2 MR. GREGORY: Okay. And because of that,
3 Mark, if you're late in getting your objections
4 in, no problem, from my perspective.

5 MR. STERMITZ: Okay. I appreciate that.
6 That's -- yeah. That's the only problem with
7 muting. I'll go ahead and stay on mute unless I
8 object.

9 MR. GREGORY: Although you've got to do
10 it within an hour, Mark.

11 MR. STERMITZ: That seems fair.

12 MR. GREGORY: Okay.

13 Sir, I'm going to mark another document
14 because it might help us as we move through this
15 process. And it's -- perhaps it's technically two
16 documents, but, please, there's the amended notice
17 of your deposition and the deposition Subpoena.
18 We'll mark that as the next exhibit.

19 (Whereupon, Exhibit No. 51 was
20 marked for purposes of
21 identification.)

22 BY MR. GREGORY:

23 Q. Sir, what I -- first off, have you seen
24 any of these documents before?

25 A. Yes, I have.

1 say about them.

2 Q. And in terms of the initial call, you --
3 him asking you who'd be a good candidate for a
4 professional witness, you identifying Mr. Koonin
5 and Mr. Lomborg, you discussing that you weren't
6 the candidate to be the climate scientist, and you
7 discussing that the -- you might find potential
8 economic issues for purposes of serving as a
9 witness.

10 Do you remember anything else about that
11 call?

12 A. No, I don't. I'm trying to recall
13 whether there were any other names that I
14 suggested.

15 One of my colleagues at the Hoover
16 Institution I might have mentioned, but I really
17 don't -- couldn't testify that I mentioned anyone
18 else.

19 MR. GREGORY: Hey, Mark?

20 MR. STERMITZ: Yeah?

21 MR. GREGORY: I hate to -- we're picking
22 up somebody's voice --

23 MR. STERMITZ: Oh, okay.

24 MR. GREGORY: -- on the feed.

25 MR. STERMITZ: I'll mute. There may be a

1 Q. Okay. And if you note in the Subpoena,
2 it asks you to bring what's, in essence, the
3 complete expert file.

4 Do you see that?

5 A. Yes.

6 Q. Okay. And which -- that's part one, and
7 then I'm going to paraphrase it. And then it asks
8 for any materials you reviewed in anticipation of
9 the deposition.

10 Do you see that?

11 A. Yes.

12 Q. Okay. Now, we can put that aside for a
13 minute because you brought some stuff with you
14 today, sir.

15 A. Yes.

16 Q. But let's go back to the sequence of you
17 getting involved in this case.

18 After you first spoke with Mr. Longfield,
19 did you -- I'm going to call it, get some
20 documents from him?

21 A. Yes, I did. I got -- I think that he
22 sent me the court filings.

23 Q. Okay.

24 A. The initial filings. And he sent me --

25 I -- I don't know where in the sequence, but --

1 but the expert witnesses from the plaintiffs.
 2 **Q. Okay.**
 3 A. Expert reports from the plaintiffs.
 4 **Q. And did you bring any of those with you**
 5 **here today?**
 6 A. I don't believe I did.
 7 **Q. Okay.**
 8 A. Yeah. I can look and see, but I'm pretty
 9 sure I did not.
 10 **Q. Okay. Sir, I'm going to refer to some**
 11 **binders that are in front of us here today, just**
 12 **to see if perhaps looking at prior exhibits will**
 13 **refresh your recollection.**
 14 **So the first exhibit, sir, I'm going to**
 15 **ask you to look at is Exhibit 1, a copy of the**
 16 **Complaint.**
 17 **Do you see that?**
 18 A. Yes, I do.
 19 **Q. And have you seen that document before?**
 20 A. Yes.
 21 **Q. And have you read it?**
 22 A. Yes.
 23 **Q. And was that one of the documents**
 24 **Mr. Longfield originally sent you?**
 25 A. Yes. Whether he sent it to -- I'm pretty

1 **Q. Besides the statutes, any other**
 2 **documents?**
 3 A. Constitution.
 4 **Q. Any other documents?**
 5 A. Not that I recall.
 6 **Q. Sir, did you -- do you remember reading**
 7 **what I'm going to call copies of any orders of**
 8 **the -- of a Court in this case?**
 9 A. No.
 10 **Q. Sir, did you at some point enter into**
 11 **what I'm going to call a consulting or retainer**
 12 **agreement concerning this case?**
 13 A. Yes.
 14 **Q. Approximately when did you do that?**
 15 A. Probably in June of 2022.
 16 **Q. And is that something you drafted or**
 17 **counsel for the defendants drafted?**
 18 A. After discussions and correspondence,
 19 they drafted a document that is essentially the
 20 contract.
 21 **Q. And, sir, if you go to the signature**
 22 **page, page 15, of your expert report, do you see,**
 23 **sir, it's dated October 28th?**
 24 **Given that is the end date, when did you**
 25 **start doing work on the case that led to the**

1 sure he sent it to me, yes, but as -- as a -- as
 2 a -- an attachment to an e-mail.
 3 **Q. Yes, I understand that.**
 4 **And, sir, I'm going to show you another**
 5 **document. Excuse me, sir, but if you look --**
 6 **that's -- I think it's Exhibit --**
 7 A. Four.
 8 **Q. -- 4, and it's the defendant's answer.**
 9 **Do you see that, sir?**
 10 A. Yes.
 11 **Q. And did you -- have you seen that before?**
 12 A. Yes.
 13 **Q. And did you read it?**
 14 A. Yes.
 15 **Q. Okay. Do you remember any -- let's put**
 16 **aside other expert reports for a moment.**
 17 **Do you remember any documents, other than**
 18 **the Complaint and the answer, that you reviewed?**
 19 A. I reviewed the environmental policy
 20 that's in question.
 21 **Q. The statutes?**
 22 A. Yeah, the statutes, yes. I don't recall
 23 whether Mr. Longfield sent me those or whether
 24 I -- whether he just told me of them and I looked
 25 them up, but yes.

1 **finished product, if I may?**
 2 A. In June of 2022.
 3 **Q. And in terms of Mr. Granum, approximately**
 4 **when did he start assisting you in the work on**
 5 **this case?**
 6 A. I don't recall for sure, but I -- it was
 7 probably in July of 2022.
 8 **Q. And let's use June as the general**
 9 **starting point. Was there a date by which you had**
 10 **what I'm going to generally call a first draft?**
 11 A. Yes.
 12 **Q. When was that?**
 13 A. I should've brought my computer where
 14 it's dated and it's stored.
 15 **Q. That's --**
 16 A. But it was probably in late August.
 17 **Q. Of 2022?**
 18 A. 2022.
 19 **Q. Okay. Sir, I'm going to just allow you**
 20 **to look at -- whether it's Exhibit 49 or**
 21 **Exhibit 50, but in these documents I didn't see**
 22 **any reference to prior testimony that you've**
 23 **given.**
 24 **Do you -- first off, do you remember when**
 25 **the last time was you gave a deposition**

1 approximately?

2 A. Twenty years ago.

3 Q. And how -- approximately how many

4 depositions have you given?

5 A. Two -- again, I -- I don't have an exact

6 number, but...

7 Q. That's fine. And do you remember the --

8 generally the type of -- were -- were you a party?

9 Were you an expert witness? What were the

10 circumstances?

11 Let's -- the first deposition you

12 remember, what was the circumstances of that one?

13 A. That was a personal injury case, and I

14 was asked to estimate the -- the cost of the

15 person injured.

16 Q. In essence, a damages expert?

17 A. Yeah, damages, yeah.

18 Q. And the second case that you remember,

19 what were the circumstances of you giving

20 testimony?

21 A. Similar kind of damage case; estimate

22 damages, personal injuries.

23 Q. And those were -- I'm going to generally

24 call it cases here in the Bozeman area, for

25 personal injury damages?

1 claims, whatever they are.

2 Have you, as far as you can recall,

3 testified in what I'm going to generally call an

4 administrative proceeding?

5 A. No, unless that includes testimony to

6 congressional committees.

7 Q. I was just going to get there. So -- so

8 have you testified -- so, first off, in terms of

9 an administrative proceeding where someone's

10 trying to, whatever, get the property, have the

11 house built or get a wage claim processed in front

12 of some public body that isn't for purposes --

13 let's just call it potential legislation or

14 something; let's put those aside for a moment.

15 You haven't testified, as best you can

16 recall, in an administrative proceeding?

17 A. I have not.

18 Q. And, now, have you testified before a

19 political body?

20 A. Yes.

21 Q. And approximately how many times have you

22 done that?

23 A. Four.

24 Q. And, sir, I'm going to try to tax your

25 memory by going through each of those four, but

1 A. Yeah, if we call Montana the area.

2 Q. That's fine. And then have you ever

3 testified at a trial?

4 A. Yes, involving one of those cases.

5 Q. So it went to trial, you testified as an

6 expert?

7 A. Yes.

8 Q. Other than that, have you testified at a

9 trial?

10 A. Not that I can recall.

11 Q. Sir, there's also lately been a growing

12 trend for something called arbitrations. Have you

13 ever testified at an arbitration?

14 A. I have not.

15 Q. Often people will submit what's called a

16 Declaration or an Affidavit in a court proceeding.

17 Let's put aside the two damage, personal injury

18 expert engagements you had.

19 Have you, as far as you can recall,

20 submitted a Declaration or an Affidavit in a court

21 proceeding?

22 A. I have not.

23 Q. Another general type of proceeding

24 nowadays is an administrative proceeding before,

25 you know, a state body, on whatever -- a wage

1 have they been before four different bodies?

2 A. I believe they were all before

3 congressional committees, but might have been

4 different committees, but congressional

5 committees.

6 Q. And, again, so we're clear, for

7 committees of the United States Congress?

8 A. Correct.

9 Q. Do you remember the first time you gave

10 testimony before a congressional committee?

11 A. I do not.

12 Q. Was that -- let's just call it more than

13 ten years ago?

14 A. Absolutely.

15 Q. Do you remember the committee or anything

16 along those lines?

17 A. The house -- the house committee on

18 natural resources was one of the committees. And

19 then I don't recall whether there was a different

20 committee or a subcommittee.

21 Q. But the only committee that you can

22 specifically recall is the house committee on

23 natural resources?

24 A. Correct.

25 Q. Is that correct?

1 A. Correct.

2 **Q. And do you remember -- of the four**
3 **instances, do you remember the nature of your**
4 **testimony or the topic of your testimony before**
5 **the congressional committee?**

6 A. I remember two topics, and they may have
7 covered all -- all four.

8 One was on water quantity and quality
9 issues. And one was on grazing issues. Might
10 have been one on timber, but I don't recall for
11 sure.

12 **Q. And, sir, I'm going to take those in**
13 **reverse order because I think the third will be**
14 **the quickest.**

15 **So you're not sure if you testified on**
16 **timber, or you may have just submitted something**
17 **on timber?**

18 A. Yeah. Yes, I don't recall for sure.
19 I've done considerable research on -- on issues
20 regarding timber sales and timber harvesting on
21 national forests, but I don't recall whether any
22 of that ever made congressional record.

23 **Q. And grazing, sir, generally what was the**
24 **nature of the topic or topics you testified about**
25 **concerning grazing?**

1 **Q. And do you remember approximately when**
2 **that was?**

3 A. Twenty years ago.

4 **Q. Okay. Any other -- I'm going to**
5 **generally call it political body, like, you know,**
6 **whether it's a municipal, county, state, federal,**
7 **anything you recall where you gave testimony?**

8 A. No, I don't recall any others.

9 **Q. I -- I want to now include within that**
10 **umbrella perhaps you submitted a Declaration or an**
11 **Affidavit or anything like that, that -- as far as**
12 **you recall, that didn't happen, right?**

13 A. Did not. Did not.

14 **Q. Another thing I didn't see, sir, in your**
15 **CV, and it may not have happened, have you ever --**
16 **I'm going to call it been a consultant to a**
17 **political body or a government agency?**

18 A. Not that I can recall.

19 **Q. What about a consultant to any**
20 **legislative committee?**

21 A. Again, not that I recall.

22 **Q. What about the -- the office of a**
23 **governor or, you know, a mayor; anything along**
24 **those lines?**

25 A. I did consult with the governor of Texas.

1 A. Grazing, the topics included grazing fees
2 charged by the Bureau of -- well, I guess by the
3 Forest Service, but perhaps the Bureau of Land
4 Management as well. But grazing fees on public
5 lands was the main issue regarding grazing.

6 **Q. And then, sir, on the topic of water**
7 **quality or quantity, what, more specifically, did**
8 **you testify about?**

9 A. I testified mainly on ownership issues
10 regarding water, prior appropriation doctrine,
11 it's role in water allocation and the limits on
12 transfers and the value of allowing transfers for
13 conservation.

14 If I might interject, I just recall, I
15 did testify before the Idaho legislative committee
16 once on fees, cabin rental property fees on state
17 lands in Idaho.

18 **Q. So someone is -- in essence, has a land**
19 **lease on some -- a state lake or something like**
20 **that?**

21 A. Exactly.

22 **Q. And you're testifying about -- I'm going**
23 **to call it the appropriateness of the level of the**
24 **fees?**

25 A. Exactly.

1 At the time he was considering being a candidate
2 for president.

3 **Q. We'll put that aside for just a moment.**
4 **Anything else?**

5 A. No, not -- no.

6 **Q. Sir, we're going to shift gears a little**
7 **bit and now talk about payment for your services**
8 **as an expert in this case.**

9 **Are you getting paid as an expert?**

10 A. Yes.

11 **Q. And what's your rate of compensation?**

12 A. Five hundred dollars an hour.

13 **Q. Have you sent any bills so far?**

14 A. Yes.

15 **Q. How did you arrive at the \$500 rate?**

16 A. I guess the way any economist would
17 arrive at it, saying what's the minimum I would
18 take to spend my time doing this versus other
19 things.

20 But I don't recall -- I have lots of
21 friends, economists, who do consulting. I don't
22 recall asking any of them what their rates were.

23 **Q. Was a rate suggested to you or --**

24 A. No.

25 **Q. Okay.**

1 A. Oops, I interrupted you.
2 **Q. That's okay. We're doing fine in dancing**
3 **right now, so we're fine, as long as Kasey isn't**
4 **kicking one of us under the table.**

5 **Have you -- have you charged that rate in**
6 **other matters, "that rate" being 500 an hour?**

7 A. Yes.

8 **Q. What entity or entities?**

9 A. The government of Singapore.

10 **Q. Any other entity or entities?**

11 A. Not that I recall.

12 **Q. And when did you do work for the**
13 **government of Singapore?**

14 A. Initially I did work for them in the
15 early 1980s, I believe. And then was retained
16 again to do work in the -- early 2000. It
17 might -- may be in my resume, might be, but...

18 **Q. I didn't see it in that employment**
19 **history, but I didn't know if there might be**
20 **something else that could refresh your**
21 **recollection.**

22 A. The employment history is -- is focused
23 on my academic employment, not the consulting, if
24 you will, of that sort.

25 Perhaps I should add that I am still on

1 retainer with the government of Singapore.

2 **Q. And generally what do you on retainer**
3 **with, for the government of Singapore? What type**
4 **of work?**

5 A. Is -- the work has been on water pricing
6 and water contracting with the government --
7 between the government of Singapore and Indonesia.

8 **Q. So give or take, for about the past 20**
9 **years, you've been on your second stint with the**
10 **government of Singapore as a consultant on water**
11 **pricing issues?**

12 A. Yes.

13 **Q. And you're charging them the 500 bucks an**
14 **hour?**

15 A. I can't recall exactly what that rate
16 was. I believe it wasn't an hourly rate, but
17 rather was a -- a piecemeal, piece rate.

18 **Q. Oh, in other words, they contact you and**
19 **want you to do some work. You then quote them --**
20 **I'm going to call it --**

21 A. That -- that's what I recall. And
22 certainly the retainer that I'm on is a -- is a
23 flat rate, not a -- any kind of an hourly.

24 **Q. Any -- other than the government of**
25 **Singapore, any other entities, say, in the past**

1 **20 years, you have been paid for consulting or**
2 **expert work, other than also the two damage**
3 **testimony cases?**

4 A. I can't recall any.

5 **Q. Okay. Do you recall how many hours**
6 **approximately you've billed on this case?**

7 A. I could do the math in my head because I
8 have a number in mind. Let me see if I can do
9 that.

10 Twenty to 25; that's an approximation.

11 **Q. And we earlier referenced Mr. Granum.**
12 **Have you billed for his time?**

13 A. He billed for his time.

14 **Q. And do you know approximately how much he**
15 **bills or billed them?**

16 A. Per hour or...

17 **Q. Yes, sir.**

18 A. Twenty-five or \$27 an hour.

19 **Q. And do you remember about how many hours?**

20 A. I do not.

21 **Q. Okay. And do you -- who do you bill in**
22 **this case?**

23 A. I've sent the bills to the attorney
24 general's office.

25 **Q. And to your knowledge, are you getting**

1 **paid by the attorney general's office?**

2 A. I hope so.

3 **Q. Have they paid your bills?**

4 A. No.

5 **Q. Do you -- so using that math, which I'm**
6 **not very good at, but there's about 10 to \$15,000**
7 **outstanding; is that --**

8 A. That would be approximate, yes.

9 **Q. Okay. And do you have in your mind**
10 **anything -- any figure about how much time you**
11 **anticipate billing between -- after giving your**
12 **deposition today and testifying at trial?**

13 A. I don't have any specific number in mind,
14 but, in general, I would expect it to be not very
15 much.

16 **Q. And is there any -- as you sit here**
17 **today, is there any work you anticipate doing**
18 **between now and testifying at trial, other than**
19 **perhaps refreshing your recollection going over**
20 **your report that's --**

21 A. My answer will depend on what questions
22 you ask me that I can't answer today.

23 **MR. GREGORY:** So we've been going about
24 an hour, a little less, but let's take a quick
25 break and then we'll come back in five, ten

1 minutes.

2 **THE WITNESS:** Okay.

3 **VIDEOGRAPHER:** We're going off the
4 record. The time is 9:51 a.m.

5 (Whereupon, a break was then taken.)

6 **THE VIDEOGRAPHER:** We are back on the
7 record. The time is 10:08 a.m.

8 **BY MR. GREGORY:**

9 **Q. Sir, are you currently doing any research**
10 **independent of the work you're doing in this case?**

11 A. Any research, yes.

12 **Q. Where -- what research are you doing now?**

13 A. I direct a project at the Hoover
14 Institution on renewing indigenous economies.
15 I've written a book with that title, which was
16 released earlier in 2022. And I work with tribal
17 leaders on that topic.

18 In addition, I am co-directing and --
19 launching and co-directing a project at the Hoover
20 Institution on markets versus mandates for
21 environment and energy.

22 And that will launch on January 30, 2023,
23 with an all-day symposium, including Steve Koonin,
24 Matt Ridley.

25 I don't know if there are others, but I

1 Flathead. Covers most of them.

2 **BY MR. GREGORY:**

3 **Q. And in that work, are -- is any of that**
4 **work involved what I'm going to call working with**
5 **the tribes on extracting fossil fuels?**

6 A. To the contrary. It's involved with
7 keeping fossil fuels in the ground. The Hoover
8 markets versus mandate project has a component
9 which will include a case study of Crow coal
10 reserves and ways they might be compensated to not
11 dig the coal for the purpose of sequestering
12 carbon.

13 And then another part of that involves
14 the production of wind and solar on reservations
15 generally and the hurdles that -- regulatory
16 hurdles that prevent tribes from doing more of
17 that. That's not specific to Montana.

18 **Q. And generally to restate what -- the**
19 **example you just gave, so, in essence, a tribe**
20 **wants to put a -- a wind turbine on the**
21 **reservation, and the regulatory hurdles that tribe**
22 **runs into in putting that turbine on the**
23 **reservation?**

24 A. Yes. The -- a colleague and I, he's done
25 most of the research, so maybe I should just say,

1 bring those up because they're related, obviously,
2 to the topic here.

3 **Q. I'm sorry, sir, you said markets versus**
4 **mandates?**

5 A. Yes.

6 **Q. Any other research you're currently doing**
7 **besides the renewing indigenous economies and**
8 **markets versus mandates?**

9 A. I'd say no. Again, the -- the retainer
10 for Singapore could result in something that I --
11 would require some research, but it isn't at the
12 moment.

13 **Q. And when you say with -- on the renewing**
14 **indigenous economies you're working with tribal**
15 **leaders, are any of those tribes in Montana?**

16 A. Yes.

17 **Q. Are any of them not in Montana?**

18 A. Yes.

19 **Q. What tribe or tribes are in Montana?**

20 A. Crow, Northern Cheyenne, Assiniboine,
21 Gros Ventre.

22 **THE REPORTER:** Say it one more time, that
23 last one. What was that last one?

24 **THE WITNESS:** Gros Ventre, G-r-o-s, next
25 word, V-e-n -- V-e-n-t-e, but it might be a-n-t-e.

1 a colleague has done the research on reservations
2 generally and found that, despite the fact that
3 they have some of the best wind and solar
4 resources, we gave them the land that was hot and
5 windy, and they have the least amount of
6 alternative energy production.

7 **Q. Who's that colleague?**

8 A. Dominic Parker at the University of
9 Wisconsin. He's the co-director of the markets
10 versus mandates project.

11 **Q. That was going to be my next question.**

12 A. And he works with me on the renewing
13 indigenous economies.

14 **Q. And is he also a fellow with the Hoover**
15 **Institute?**

16 A. Yes. I don't -- I think he's labeled a
17 visiting fellow, but -- but, yes, a fellow.

18 **Q. And, I'm sorry, sir, you said in terms of**
19 **the markets versus mandates, it's -- it's**
20 **essentially studying the environment and energy?**

21 A. Yes.

22 **Q. And generally what aspect or aspects of**
23 **energy?**

24 A. The regulatory hurdles to developing
25 alternative sources of energy, the economic

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1 hurdles of developing alternative sources, given
 2 the abundance we have of fossil fuels. Broadly
 3 speaking, that covers it I think.
 4 **Q. And, sir, does -- do you study -- or will**
 5 **there be studying on how the regulatory or**
 6 **economic hurdles of what I believe you called**
 7 **renewable energy will compare with the regulatory**
 8 **and economic hurdles of fossil fuels?**
 9 A. Repeat that. I think I got it, but...
 10 **Q. Sure. Sure.**
 11 **Will there be a component of the markets**
 12 **versus mandates project on the regulatory and**
 13 **economic hurdles presented by renewable energy**
 14 **versus the regulatory economic hurdles of fossil**
 15 **fuels?**
 16 A. Yes.
 17 **Q. And who will -- I'm going to use the term**
 18 **lead that component or those components of the**
 19 **markets versus mandates session?**
 20 A. I'm not quite sure how to interpret
 21 "lead."
 22 Again, Dominic Parker and I are directing
 23 the project, and we have a symposium on
 24 January 30, 2023, that will include several other
 25 scholars.

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1 I mentioned Steve Koonin, Mark Mills, who
 2 does work on the difficulties of weaning ourselves
 3 from fossil fuels in light of the -- of the
 4 economic conditions.
 5 And we have just retained -- again, my
 6 colleague retained the former director of the
 7 Federal Energy Regulatory Commission under the
 8 Obama administration -- sorry, under the Trump
 9 administration, to help compare the regulatory
 10 regimes for both fossil fuels and renewables.
 11 **Q. And just so I'm clear, sir, is this**
 12 **like -- I'm going to call it a one-day symposium**
 13 **as opposed to what I'm going to call a quarter or**
 14 **a semester class?**
 15 A. No. This is a one-day symposium to
 16 launch what will be a multiyear program at the
 17 Hoover Institution.
 18 **Q. And --**
 19 A. We hope.
 20 **Q. And is there any -- other than**
 21 **Dominic Parker and yourself and what I'm going to**
 22 **call the -- a speaker for a day, is there anybody**
 23 **else generally involved in the markets versus**
 24 **mandates project?**
 25 A. No.

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1 **Q. And you get an -- is it an honorarium**
 2 **from the Hoover Institute?**
 3 A. Yes.
 4 **Q. And -- let's see. Is -- and, sir, if you**
 5 **go to your CV, it says -- and I don't want to --**
 6 **it says you're a -- how do you pronounce that**
 7 **name, John and Jean --**
 8 A. DeNault.
 9 **Q. -- DeNault Senior Fellow.**
 10 **Is -- is that a specifically funded**
 11 **fellowship?**
 12 A. Yes.
 13 **Q. So you get X for being that senior**
 14 **fellow?**
 15 A. Yes. Some of the fellowships at Hoover
 16 are named, and that means that, you know, somebody
 17 has said, Here's money for this fellowship, and
 18 they may even say, and we want Terry Anderson to
 19 be the named fellow. Yes.
 20 **Q. To your knowledge, sir, other than the**
 21 **State of Montana, is there any individual or**
 22 **entity that's funding your work in this case?**
 23 A. Well, the DeNault Foundation. The -- the
 24 family has a foundation that funds the named
 25 fellowship that I have -- part of the fellowship

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1 that I have, and then the rest is funded out of
 2 general funds at the Hoover Institution.
 3 The Arthur Blank Foundation has just
 4 pledged money for the markets versus mandates
 5 project.
 6 **Q. Sir --**
 7 A. And I'm just -- I would -- do want to add
 8 this, I think it's important to the topic at hand.
 9 They were particularly interested in the work we
 10 were trying to -- that we are doing with the Crow
 11 tribe on sequestering carbon by leaving coal in
 12 the ground.
 13 **Q. "They," the Arthur Blank Foundation?**
 14 A. Yes.
 15 **Q. Sir, I notice that prior to the Hoover**
 16 **Institution, you did work at the Property and**
 17 **Environment Research Center, otherwise known as**
 18 **PERC?**
 19 A. Correct.
 20 **Q. Would you mind if I refer to it as PERC**
 21 **in this deposition?**
 22 A. No.
 23 **Q. Okay. And generally what is PERC?**
 24 A. PERC is a research institute that
 25 explores market approaches to solving

1 environmental problems.
 2 **Q. Can you give me an example?**
 3 A. The work I've done on water markets is an
 4 example of how markets -- how water markets can
 5 lead to conservation and to pricing that reflects
 6 the opportunity cost of water and forces the user,
 7 or consumer of water, to face up to the real costs
 8 of using the resource.

9 **Q. Do you currently have any affiliation**
 10 **with PERC?**

11 A. No.

12 **Q. Sir, are you aware that the experts**
 13 **testifying on behalf of the plaintiffs are all**
 14 **donating their time in this case?**

15 A. I don't -- I don't -- no. Something
 16 makes me think that might have been mentioned, but
 17 I haven't seen any documentation or...

18 **Q. Sir, generally what did you do to prepare**
 19 **for your deposition in this case?**

20 A. I reread my report and went through it
 21 with a fine-tooth comb in terms of the documents
 22 cited and the calculations made, and spoke early
 23 on in a draft of the report with -- with
 24 Mr. Longfield about any questions that he might
 25 have or that he thinks you might have presented me

1 **through the documents you brought here today in**
 2 **just a moment, but have you read any depositions**
 3 **in this case?**

4 A. No.

5 **Q. Could you hand me the stack, sir?**

6 **And, just for the record, sir,**

7 **Exhibit 51, the Subpoena -- you brought a stack of**
 8 **documents with you?**

9 A. Uh-huh.

10 **Q. Is that correct, sir?**

11 A. Yes.

12 **Q. And I'm just going to, for the record, go**
 13 **through them, just attempt to properly describe**
 14 **them. And if I haven't properly described them,**
 15 **please tell me and I'll -- I'll accept your**
 16 **modification, whatever it is, okay?**

17 A. Okay.

18 **Q. So the first document is several pages**
 19 **from what appears to be the Matt Ridley Facebook**
 20 **website?**

21 A. Correct.

22 **Q. Then there's the paper, "The Economic**
 23 **Effects of Climate Change," by Richard Tol, T-o-l?**

24 A. Correct.

25 **Q. Then there's the Montana Code State**

1 with, one being how do I substantiate the claim
 2 that life expectancy is a way to measure the
 3 health of -- of a population or the environment
 4 that leads to that health.

5 And I met with -- by phone yesterday with
 6 Mark and -- Selena, rather, and discussed what
 7 questions I might want to prepare for.

8 **Q. Other than the individuals you've just**
 9 **named, have you spoken with anyone else to help**
 10 **you prepare for your deposition?**

11 A. No.

12 **Q. For example, did you receive any -- what**
 13 **I'm going to generally call advice, suggestions,**
 14 **from any of your colleagues about testifying in**
 15 **the deposition?**

16 A. No.

17 **Q. Did you -- other than your report, did**
 18 **you review any documents to prepare for your**
 19 **deposition?**

20 A. I refer -- no. For the -- you asked
 21 about the deposition.

22 **Q. Yes.**

23 A. So I referred to no other documents in
 24 preparation for the deposition.

25 **Q. Sir, have you -- we're going to go**

1 **Energy Policy 90-4-1001?**

2 A. Correct.

3 **Q. Then there's the executive summary of the**
 4 **EPA supplementary material that I sent to Mark?**

5 A. Correct.

6 **Q. Then there's two copies of "The Social**
 7 **Cost of Carbon Revisited" by Robert Pindyck?**

8 A. Yes. Two copies, one of which has some
 9 highlights, hence the reason for two copies.

10 **Q. And the highlights, sir, those are your**
 11 **highlights?**

12 A. Yes.

13 **Q. Then there's the paper on "Economic**
 14 **Growth and the Environment" by Gene Grossman and**
 15 **Alan Krueger?**

16 A. Yeah.

17 **Q. Then there's the paper on "Longevity and**
 18 **Environmental Quality in an OLG Model" by**
 19 **Pierre-Andre Jouvét, Pierre Pestieau and**
 20 **Gregory Ponthiere; is that correct?**

21 A. I don't know about the pronunciation, but
 22 the names are correct.

23 **Q. Then there's -- it appears to be a**
 24 **printout from a website, sir, on annual global**
 25 **carbon emissions?**

1 A. Correct.
 2 **Q. And what website is this printout from?**
 3 A. It would be referenced in my report.
 4 I'll have to look it up.
 5 **Q. Thank you.**
 6 A. All of the website -- all of the websites
 7 I viewed are hyperlinked into the report, so...
 8 but do you want me to look that up or...
 9 **Q. Yes, please, if you could just --**
 10 A. Sorry.
 11 **Q. It's one of the footnotes, correct?**
 12 A. Yeah, but...
 13 **Q. And my suggestion, sir, is it Footnote 2?**
 14 A. Correct, it is Footnote 2.
 15 **Q. Okay. And this is just a copy of what is**
 16 **hyperlinked as Footnote 2?**
 17 A. Correct.
 18 **Q. Then the next paper has several authors,**
 19 **I won't read them all. The lead author is lead --**
 20 **Lee Hannah, and it's "Climate Change, Wine and**
 21 **Conservation"?**
 22 A. Right.
 23 **Q. Then there's another printout, Life**
 24 **Expectancy At Birth.**
 25 **And I believe, sir, if you'll look, is**

1 A. The previous Ridley piece is not in the
 2 Sources because I didn't view it until I was
 3 preparing for the deposition.
 4 **Q. And by the "previous" one, you mean the**
 5 **Facebook page that I first identified?**
 6 A. Yes, which is also an article that was
 7 published. I don't recall where, but...
 8 **Q. And then, sir, the next one is the**
 9 **"Environmental Turning Points, Institutions, and**
 10 **the Race to the Top," by Bruce Yandle?**
 11 A. Correct.
 12 **Q. Then there's the "Gardening Map of**
 13 **Warming U.S. has Plant Zones Moving North," from**
 14 **January 26, 2012, by Dan Charles?**
 15 A. Correct.
 16 **Q. Then there's a copy of your expert**
 17 **report?**
 18 A. Yes.
 19 **Q. Then there's a copy of Dr. Curry's expert**
 20 **report?**
 21 A. Yes.
 22 **Q. Then there's a copy of an article by,**
 23 **among others, Daniel McKenney?**
 24 A. Yeah.
 25 **Q. Entitled "Change and Evolution in the**

1 **this Footnote 8 and Footnote 9?**
 2 A. Correct.
 3 **Q. Of your expert report?**
 4 A. Yeah, correct.
 5 **Q. Then there's a -- appears to be a paper**
 6 **call- -- by Akshat R-a-t-h-i, published in**
 7 **November 2017?**
 8 A. Uh-huh.
 9 **Q. Do you know where this is in your report,**
 10 **sir?**
 11 A. Again, I have to find it.
 12 **Q. Take your time. Oh, it's in the Sources,**
 13 **bottom of page 16.**
 14 A. Okay. You're quicker than I, thank you.
 15 **Q. Is that --**
 16 A. Yeah. Yeah.
 17 **Q. Okay. And then there's the -- some of**
 18 **the pages on the paper, in essence, by**
 19 **Matt Ridley, on climate change, "Doing More Good**
 20 **Than Harm"?**
 21 A. Yes.
 22 **Q. That's cited on your Sources page on "Why**
 23 **climate change is good for the world"?**
 24 A. Yes, from The Spectator.
 25 **Q. And then --**

1 **Plant Hardiness Zones of Canada"?**
 2 A. Correct.
 3 **Q. And then, finally, there's the Montana**
 4 **Climate Solutions Plan of August 2020?**
 5 A. Correct.
 6 **Q. And have I -- along with the three books,**
 7 **have I identified all the documents you brought**
 8 **with you here today?**
 9 A. Yes. Two of -- two of the documents I
 10 brought are also exhibits, but they're just copies
 11 of Exhibit 51.
 12 **Q. Yeah. Okay. The Subpoena and the Notice**
 13 **of Deposition?**
 14 A. Yes.
 15 **Q. Okay. And we've covered everything that**
 16 **you brought?**
 17 A. Yes.
 18 **Q. Sir, I want to ask you a couple questions**
 19 **about some of the documents you brought with you,**
 20 **hopefully without marking them. But if you think**
 21 **we need to, to talk about specific pages, I'm**
 22 **happy to do that.**
 23 **The Montana Climate Solutions Plan of**
 24 **August 2020, had you read that before you started**
 25 **your work on this case?**

1 A. No.
 2 **Q. And did you have any role in developing**
 3 **this Montana Climate Solutions Plan?**
 4 A. No.
 5 **Q. As to the expert report of Dr. Curry, did**
 6 **you read a draft of this report?**
 7 A. No.
 8 **Q. And have you read the final version of**
 9 **this report?**
 10 A. Yes.
 11 **Q. Have you ever spoken with Dr. Curry about**
 12 **her work in this case?**
 13 A. No.
 14 **Q. And that's spoken -- would that be --**
 15 **A. Or exchanged any correspondence.**
 16 **Q. So you've had no communications her?**
 17 A. Correct. You know, I have to go back. I
 18 recall her e-mail may be there, but I don't think
 19 I ever contacted her by e-mail, but I'm almost
 20 positive I didn't.
 21 **Q. Sir, at a break we'll copy a couple of**
 22 **these.**
 23 A. Okay.
 24 **Q. And before we copy them, I'll let you**
 25 **review what we're going to copy so we -- we don't**

1 believe, two chapters on climate policy.
 2 **Q. And did you write those chapters?**
 3 A. They're co-authored.
 4 **Q. What role did you have in writing those**
 5 **chapters?**
 6 A. I co-authored them.
 7 **Q. What does that -- generally, what does**
 8 **that mean, in your mind?**
 9 A. It means that one of the authors probably
 10 took a lead in drafting the chapter, the other
 11 took it from there, and it went back and forth.
 12 But I can't recall in either case who
 13 might have taken the lead, so I'm very careful to
 14 say co-authored.
 15 **Q. Okay, sir, what do you mean by**
 16 **conservation markets?**
 17 A. Well, first, there might be conservation
 18 markets for water that encourage more efficient
 19 uses of water and, hence, less diversion of water.
 20 I have done research on a group called
 21 the Oregon Water Trust, which actually engages in
 22 contracts with farmers to leave water in stream
 23 for salmon and steelhead spawning habitat.
 24 I've done research on the potential for
 25 ranchers to improve the water quality by changing

1 **pick up on family -- reuse documents, as you**
 2 **indicated, prior to us going on the record.**
 3 A. Okay.
 4 **Q. Sir, your training is as an economist,**
 5 **correct?**
 6 A. Correct.
 7 **Q. And would you say that your research,**
 8 **say, in the past decade, focuses on market**
 9 **approaches to solving environmental problems?**
 10 A. Yes.
 11 **Q. And that's generally known as free market**
 12 **environmentalism, correct?**
 13 A. Yes, yes.
 14 **Q. Are there any areas you consider yourself**
 15 **an expert in?**
 16 A. Yes.
 17 **Q. What area or areas?**
 18 A. Certainly water and water markets;
 19 conservation markets, generally; renewing
 20 indigenous economies; and climate policy.
 21 My book, Free Market Environmentalism, in
 22 its third edition, co-authored with Donald Leal,
 23 has a chapter on climate policy.
 24 And another book published by Cambridge
 25 Press and co-authored with Gary Libecap has, I

1 grazing practices, and done research on timber
 2 harvesting that can generate more habitat for
 3 wildlife, especially endangered species.
 4 **Q. And, sir, what do you mean by the term**
 5 **"climate policy"?**
 6 A. By "climate policy," I mean the
 7 regulatory, legal -- legislative and regulatory
 8 constraints and incentives for users of fossil
 9 fuel and producers of alternative energy.
 10 **Q. Can you give me an example of what you**
 11 **mean -- what you mean by "climate policy"?**
 12 A. The cap and trade is a form of climate
 13 policy that hasn't received much traction in the
 14 United States, but -- at least with respect to
 15 climate, but has in Europe.
 16 Cap and trade means that the government
 17 of whatever the country might be caps the amount
 18 of carbon that can be emitted into the atmosphere,
 19 allocates the cap to emitters and allows the
 20 people who have the cap to trade them so that they
 21 can -- if they -- trade them if they can reduce
 22 their emissions and allow others to -- to emit.
 23 **Q. Do you consider yourself an expert in**
 24 **climate science?**
 25 A. No.

1 Q. Do you consider yourself an expert in
 2 psychology?
 3 A. No.
 4 Q. Do you consider yourself an expert in
 5 mental health?
 6 A. No.
 7 Q. Do you consider yourself an expert in
 8 children's health?
 9 A. No.
 10 Q. Do you consider yourself an expert in any
 11 aspect of what I'm going to generally call the
 12 medical field?
 13 A. No.
 14 Q. Do you consider yourself an expert in
 15 glaciers?
 16 A. I've climbed on them. I'm an expert
 17 climber, but no.
 18 Q. Okay. Do you consider yourself an expert
 19 in electric power systems?
 20 A. No.
 21 Q. Do you have any training as an engineer?
 22 A. No.
 23 Q. Have you ever done any work in what I'm
 24 generally going to call accounting for greenhouse
 25 gas emissions?

1 but -- in forestry, but I guess I'd say I'm not an
 2 expert.
 3 Q. What about an -- do you consider yourself
 4 an expert in fish biology?
 5 A. I understand fish biology quite well
 6 because I've worked on market approaches to
 7 conserving fish populations, but I don't consider
 8 myself an expert on how baby fish grow up to be
 9 big fish.
 10 Q. Do you consider yourself an expert in
 11 wildfires?
 12 A. No.
 13 Q. Sir, if we could go to your resume, or
 14 CV, rather, Exhibit 50.
 15 A. You might be the first person who's ever
 16 read my resume.
 17 Q. Don't make any assumptions.
 18 Sir, if we go down in your employment
 19 history, we're at the stage of you serving as a
 20 professor in the Department of Agricultural
 21 Economics and Economics; do you see that?
 22 A. Yes.
 23 Q. And is it correct, sir, now you're a
 24 professor emeritus?
 25 A. Correct.

1 A. I guess you would have to explain to me
 2 what you mean by "accounting for."
 3 Q. Or do you have any expertise in -- I'm
 4 going to call it the field of greenhouse gas
 5 emissions?
 6 A. Again, I'm not sure what you mean by "the
 7 field of."
 8 Q. Do you -- have you worked in analyzing
 9 greenhouse gas emissions?
 10 A. No.
 11 Q. Do you consider yourself a political
 12 scientist?
 13 A. I consider myself a political economist.
 14 Q. And what is a -- what do you mean by the
 15 term "political economist"?
 16 A. "Political economy" is a term used widely
 17 in the profession of economics to describe people
 18 who study the interface between the economy and
 19 politics.
 20 Q. Do you consider yourself an expert in
 21 forests?
 22 A. Again, I don't know what you mean by
 23 "forests."
 24 Q. Forestry.
 25 A. I almost got my degree as a forester,

1 Q. And generally as a professor emeritus,
 2 that's an honorary title?
 3 A. I think it just means I'm old. Yes, it's
 4 an honorary title.
 5 Q. Okay. And when you were a professor in
 6 the Department of Agricultural Economics and
 7 Economics, was there a group of classes that you
 8 typically taught year in, year out?
 9 A. Yes.
 10 Q. What were they?
 11 A. They were introductory economics,
 12 economic history, and natural resource economics.
 13 Q. And generally what do you mean by
 14 "natural resource economics"?
 15 A. It is a field in economics that considers
 16 the interface between resource use -- "resource"
 17 is broadly to -- defined broadly to include
 18 everything from water to air to land -- and the
 19 interface with regulatory constraints and policies
 20 that might influence the use of those resources.
 21 Q. So something I forgot to ask you about in
 22 connection with your CV, one thing I didn't see in
 23 here -- and I'm not saying it should have been in
 24 here -- but have you made anything like what I'm
 25 going to call media appearances?

1 A. Many.

2 Q. And are they -- are they primarily what
3 I'm generally going to call pod- -- in the past
4 decade, are they primarily podcasts?

5 A. Again, I don't know how to define
6 "primarily," but if you meant, you know,
7 50 percent plus 1, I'd say no.

8 Q. What other type of media appearances have
9 you made besides podcasts?

10 A. I've done many radio interviews,
11 including everything from NPR to syndicated radio
12 programs, appeared on -- on some national
13 networks, but I can't tell you for sure which
14 ones. I think -- yeah, I can't recall all of
15 those. That -- that would -- between radio and
16 television, that -- that would cover most of them.
17 Yeah.

18 Q. And in terms of tele- -- let's use
19 television for a moment -- have any of those
20 been -- I'm going to call it longer than a
21 15-minute appearance?

22 A. No.

23 Q. Do you keep track of what I'm calling
24 media appearances?

25 A. No. I -- the Hoover Institution website

1 to call it in the past 20 years, that's been left
2 off your CV?

3 A. No.

4 Q. Sir, are you currently teaching any
5 classes?

6 A. No.

7 Q. Sir, what's your understanding about what
8 this case is about?

9 A. This case, I believe, is about the
10 interface between state laws and policies and the
11 constitutional guarantee of a right to a clean and
12 healthful environment.

13 Sorry. I said "policies" without saying,
14 energy and climate policies, or climate change
15 policies.

16 Q. And what state law or state laws do
17 you -- do you understand this case is about?

18 A. Well, first and foremost, if you call the
19 Constitution a state law, the Constitution.

20 And, secondly, the environmental policy
21 document that we referred to earlier.

22 Q. The statute that we marked as -- that we
23 referenced in your stack?

24 A. Yes, yes.

25 Q. And, sir, just for the record, is what

1 keeps track of them and lists them for me. And
2 when I report my activities for the year to the
3 DeNault Family Foundation, I keep track then by
4 listing those media appearances.

5 Q. And, in essence, what you're doing is
6 taking what's on the Hoover site and then
7 reporting that to the foundation; is that --

8 A. Correct.

9 Q. Sir, one thing I forgot to ask you about
10 is -- in the CV, is -- is there anything you are
11 working on now that is -- I'm going to call it
12 close to publication, not listed in your CV?

13 A. There's an article forthcoming in an --
14 in a journal called Public Choice, based on
15 renewing the indigenous economies work that I've
16 done.

17 Q. Anything else, sir?

18 A. No.

19 Q. And other than that Public Choice piece,
20 the document we marked as Exhibit 50 is correct --
21 is complete, rather, as to your publications?

22 A. There may be some that got left off.
23 That goes back a long ways, but I -- it's as
24 complete as it needs to be.

25 Q. There's nothing you know of -- I'm going

1 we've marked as Exhibit 9 the State Energy Policy?

2 A. Yes.

3 Q. Okay.

4 A. Yeah. I can write on this one?

5 Q. That's -- that's yours, yes, yes.

6 And, sir, who do you understand are the
7 defendants in this case?

8 A. The youth of Montana.

9 Q. I'm sorry. The defendants?

10 A. Oh, sorry. I'm showing my lack of formal
11 legal training. The defendants are the State of
12 Montana. The defendant is the State of Montana.

13 Q. Are you aware of any other defendants in
14 the case?

15 A. No.

16 Q. When you read through the Complaint, did
17 you read through the -- what I'm going to call the
18 individual plaintiff's stories?

19 A. Yes. I mean, I did read them, I -- yes.

20 Q. Did any of those plaintiffs' stories, do
21 you remember anything about any of the plaintiffs,
22 based on your reading?

23 A. Anything. I recall one of them comes
24 from a ranch family, the -- those kinds of ideas.
25 If I rack my brains, I could come up with other

1 examples, but that one sticks out.
 2 **Q. Okay. Anything else about any of the**
 3 **plaintiffs?**
 4 A. Concerns about skiing and water for
 5 fishing and elk hunting and -- to mention the ones
 6 that pop to mind.
 7 **Q. Anything else?**
 8 A. Not that are...
 9 **Q. And what do you understand the youth**
 10 **plaintiffs claim the state is doing that prompted**
 11 **this lawsuit?**
 12 A. That state policies are depriving those
 13 plaintiffs of their constitutional right to a
 14 clean and healthful environment.
 15 **Q. And based on your understanding, sir, how**
 16 **are these policies depriving these youth**
 17 **plaintiffs?**
 18 A. They're depriving the youth plaintiffs by
 19 en--
 20 **MR. STERMITZ:** Let me -- can I interject
 21 an objection? I want it to be clear that the
 22 question concerns what the allegations are as he
 23 read them in the Complaint; is that correct?
 24 **MR. GREGORY:** Just -- I just want his
 25 understanding, however he got it.

1 may not be happening in reality.
 2 That's -- that's the distinction I'm not
 3 clear is being made here.
 4 **THE WITNESS:** The connection that I see
 5 to the clean and healthful -- deprivation of a
 6 clean and healthful environment is that state
 7 policies are leading to carbon emissions that are
 8 causing climate change; and that then the climate
 9 change is the deprivation.
 10 **BY MR. GREGORY:**
 11 **Q. And, sir, you've got in front of you your**
 12 **copy of the Montana State --**
 13 A. Code.
 14 **Q. -- Energy Policy, Exhibit 9, correct,**
 15 **sir?**
 16 A. Yes.
 17 **Q. Okay. And --**
 18 A. I -- I -- I didn't look through the
 19 exhibit, but I -- I will -- will agree that my
 20 copy is the same as yours.
 21 **Q. Sure.**
 22 **And do you see, sir, the statute,**
 23 **90-4-1001, called, "State Energy Policy goal**
 24 **statement"?**
 25 A. Yes.

1 **MR. STERMITZ:** Of-- of-- of what?
 2 **MR. GREGORY:** How the policies are
 3 depriving the youth plaintiffs, to use his terms.
 4 **MR. STERMITZ:** You're -- I'm going to
 5 object as to -- as to vague. I'm still not sure
 6 what exactly you're asking.
 7 Go ahead, if you can answer.
 8 **THE WITNESS:** So repeat what you just
 9 said, if you don't mind.
 10 **BY MR. GREGORY:**
 11 **Q. Sure.**
 12 **As you just testified, sir, you said it**
 13 **was your understanding that, in essence, the**
 14 **claims in the case are based on state policies**
 15 **that are depriving the youth plaintiffs.**
 16 **Is that a fair paraphrase?**
 17 A. Yes.
 18 **Q. And when you use the -- you used the term**
 19 **"depriving," what did you mean by "depriving"?**
 20 **MR. STERMITZ:** Same objection. Vague.
 21 Let me -- let me -- Phil, what I'm
 22 getting at is that -- and I don't mean to make a
 23 narrative here -- a distinction between what's --
 24 what his understanding is of the allegations, as
 25 he read them in the Complaint, versus what may or

1 **Q. States, in part, that -- if you look at,**
 2 **1(c), "It is the policy of the State of Montana**
 3 **to: Promote development of projects using**
 4 **advanced technologies that convert coal into**
 5 **electricity, synthetic petroleum products,**
 6 **hydrogen, methane, natural gas, and chemical**
 7 **feedstocks."**
 8 **Do you see that, sir?**
 9 A. Yes.
 10 **Q. And, sir, coal is a fossil fuel, correct?**
 11 A. Correct.
 12 **Q. And do you understand that the state**
 13 **agencies have a duty to comply with statutes**
 14 **enacted by the legislature?**
 15 A. Yes.
 16 **Q. And if this provision, 90-4-1001, is an**
 17 **enactment of the state legislature, do you**
 18 **understand that the state agencies have a duty to**
 19 **comply with this policy?**
 20 A. These policies.
 21 **Q. These policies.**
 22 A. Yes.
 23 **Q. And by "these policies," you mean the**
 24 **ones listed from 1(a) through 1(x) and 2(a)**
 25 **through (f)?**

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1 A. Yes, and including, following the (c)
 2 that you just read, "environmentally sound
 3 manner," the one following that, labeled (d).
 4 So --
 5 **Q. Okay.**
 6 A. -- yes, that's why I emphasize
 7 "policies," plural. It's just not (c), but all of
 8 these, and that includes one that says "coal
 9 reserves in an environmentally sound manner."
 10 **Q. So, sir, how do you understand the State**
 11 **of Montana could increase utilization of Montana's**
 12 **vast coal reserves in an environmental sound**
 13 **manner?**
 14 A. It could pay the Crow to leave their coal
 15 in the ground.
 16 **Q. Would that be an increase on the**
 17 **utilization of Montana's vast coal reserves?**
 18 A. Yes. Because it is utilizing it to do
 19 something other than we usually think of
 20 utilization, namely burning it.
 21 **Q. So, in your mind, sir, utilizing can**
 22 **include not utilizing?**
 23 A. I wouldn't use the word "utilizing." I
 24 would just -- I guess I would use the word "use."
 25 But coal has alternative uses. It can

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1 sequester carbon by leaving it in the ground.
 2 **Q. So, in your mind, sir, when the State**
 3 **Energy Policy -- because I'm just using the term**
 4 **in the statute, and I'm asking what your**
 5 **understanding is.**
 6 "Increase utilization" can mean not
 7 utilizing?
 8 A. I certainly could interpret it that way.
 9 **Q. And then, sir --**
 10 A. I mean --
 11 **Q. -- you see in (c), "increase local oil**
 12 **and gas exploration and development to provide**
 13 **high-paying jobs and to strengthen Montana's**
 14 **economy."**
 15 **Do you see that?**
 16 A. Yes.
 17 **Q. And, in your mind, sir, could "increase"**
 18 **mean not doing anything for local oil and gas**
 19 **exploration and development?**
 20 A. I don't think that you could -- could
 21 conserve oil and gas or other fossil fuels without
 22 knowing what's there and how it's used and where
 23 it is.
 24 **Q. Well, so my question is a little bit**
 25 **different.**

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1 **In your mind, sir, can the state increase**
 2 **local oil and gas exploration and development to**
 3 **provide high-paying jobs and to strengthen**
 4 **Montana's economy by not doing any oil and gas**
 5 **exploration and development?**
 6 A. I -- without exploration and development,
 7 you wouldn't know what we have and you wouldn't
 8 know how to conserve it or utilize it in the other
 9 ways, namely to sequester carbon.
 10 **Q. So perhaps your answer -- maybe I**
 11 **misunderstood it.**
 12 **How is that increasing local oil and gas**
 13 **exploration and development?**
 14 **And the operative word in my question,**
 15 **sir, is "increase."**
 16 A. Yes. And -- well, I think the other
 17 operative word, to me, is "development," so let me
 18 take the first part.
 19 Increase oil and gas exploration means
 20 finding out where it is and how much there is.
 21 That is a necessary component for -- for using the
 22 market approach that I suggested earlier, with
 23 Crow coal. If we don't know the Crow have coal,
 24 we couldn't find ways to pay them to leave it
 25 there, and so I -- I separate the two.

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1 If development is taken to mean burning
 2 those fossil fuels, if increased the burning of
 3 those fossil fuels then -- then that would
 4 contribute to carbon emissions.
 5 If it's taken to mean utilizing them as a
 6 way to sequester carbon, that's quite a different
 7 solution or result.
 8 **Q. Sir, what, in your mind, are the**
 9 **high-paying jobs associated with sequestering**
 10 **carbon?**
 11 A. I do not have an answer. I do not know.
 12 **Q. Okay. And, sir, what, in your mind,**
 13 **would strengthen Montana's economy by sequestering**
 14 **coal?**
 15 **How would that strengthen Montana's**
 16 **economy?**
 17 A. Well, let me use the Crow tribe, which I
 18 know the most about.
 19 If they receive payments to sequester
 20 their coal, it strengthens the ability of the
 21 tribe to provide its services that governments
 22 provide, education, health care, police; all of
 23 those kinds of things.
 24 So with -- if they're simply required and
 25 told they can't mine their coal, then they don't

1 have that -- that revenue source from providing a
2 service to the rest of us, and then they can't --
3 can't provide the kind of services we expect from
4 government.

5 **Q. But by sequestering, they're, in essence,**
6 **doing nothing, correct?**

7 A. That's how I would describe sequestering,
8 yes.

9 **Q. Okay. So --**

10 A. But doing nothing with coal, not --

11 **Q. Right. So --**

12 A. -- with it.

13 **Q. So, sir, let's go to (f). And do you**
14 **see, sir, there's a reference for "enhanced oil**
15 **recovery in declining oil fields to increase**
16 **output"?**

17 A. Yes.

18 **Q. What do you understand that to mean?**

19 A. Going -- using technologies that weren't
20 available in the past to extract oil from under
21 the -- in the -- in the strata that weren't
22 recoverable, economically recoverable, with past
23 technologies.

24 **Q. Fracking being an example?**

25 A. For sure.

1 **Q. Well, this --**

2 A. I don't know how --

3 **Q. Did -- if you look -- oh, I'm sorry.**

4 A. -- how -- how the environmental agencies
5 use it, how agencies use it, but I don't know -- I
6 don't know how it's used.

7 **Q. Okay. Because, see, you -- if you look,**
8 **sir, at the beginning of the statute, it says, "It**
9 **is the policy of the State of Montana."**

10 **Do you see that?**

11 A. I understand.

12 **Q. So I'm asking you how the State of**
13 **Montana uses any of these policies?**

14 A. I -- I do not know.

15 **Q. You -- okay.**

16 A. I'm not a political scientist.

17 **Q. Okay.**

18 **MR. GREGORY:** Sir, why don't we take a
19 quick break?

20 **VIDEOGRAPHER:** We are going off the
21 record. The time is 11:07 a.m.

22 (Whereupon, a break was then taken.)

23 **VIDEOGRAPHER:** We are back on the record.

24 The time is 11:25 a.m.

25 ///

1 **Q. And, sir, let's take (g). Do you see,**
2 **sir, it talks about expanding "Montana's petroleum**
3 **refining industry."**

4 **Do you see, sir?**

5 A. Yeah.

6 **Q. How would sequestering coal expand**
7 **Montana's petroleum refining industry?**

8 A. I don't see any way that it would.

9 **Q. Okay. How -- what do you understand is**
10 **meant by the term "expand Montana's petroleum**
11 **refining industry"?**

12 A. I don't have a response. I don't -- I
13 don't -- I don't know what the legislator meant,
14 and I don't know what "expanding" means, other
15 than building another fracking -- fluid catalyst,
16 whatever those things are called, at refineries.
17 That might been an example, but I -- I don't know
18 how you would expand it.

19 **Q. Have you ever asked anybody, sir, how**
20 **does the state use this State Energy Policy?**

21 A. No, I have not asked anyone that.

22 **Q. Have you researched any way how the state**
23 **uses this State Energy Policy?**

24 A. No. But I don't really understand what
25 we mean -- what you mean by how the state uses it.

1 **BY MR. GREGORY:**

2 **Q. Sir, let's turn to page 2 of your expert**
3 **report. And do you see there, it says it's**
4 **"written in response to plaintiffs' expert**
5 **disclosures, in particular those of**
6 **Richard Barrett"?**

7 **Do you see that?**

8 A. Yes.

9 **Q. And by -- and then you have a term**
10 **"report." And is that the expert report of**
11 **Richard Barrett?**

12 A. Yes.

13 **Q. And, sir, I'm going to later mark, if we**
14 **haven't already marked, a copy of the expert**
15 **report of Richard Barrett.**

16 A. Okay.

17 **Q. But I'm going to generally show that to**
18 **you. Is that the expert report you're referencing**
19 **on page 2 of your report?**

20 A. Yes.

21 **Q. Okay. You can keep that in front of you,**
22 **sir.**

23 A. All right.

24 **Q. In case you need -- in case you need to**
25 **refer to it.**

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1 **Was your expert report written in**
 2 **response to any other expert reports besides**
 3 **Mr. -- besides Richard Barrett?**
 4 A. No.
 5 **Q. And, sir, I'm going to turn back to your**
 6 **expert report. And I just want to be clear on --**
 7 **we're still on page 2. We're just going to stay**
 8 **on page 2 for a little while.**
 9 A. Okay.
 10 **Q. Do you see you have the sentence that**
 11 **states, in part, "It argues that these statutes"?**
 12 And by "these statutes," do you mean the
 13 Montana Environmental Protection Act and the State
 14 Energy Policy?
 15 A. Yes.
 16 **Q. And, sir, what I'd like to do is -- do**
 17 **you see in your point 3 here on page 2, you**
 18 **reference a quote, "grave injuries to plaintiffs."**
 19 Do you see that?
 20 A. Yes.
 21 **Q. And there's -- then there's a citation**
 22 **report 4(21); do you see that?**
 23 A. Yes.
 24 **Q. Is that quote from the Barrett report?**
 25 A. Yes.

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1 **Q. Could you turn to page 4 and confirm**
 2 **that, please? Or wherever you want in the Barrett**
 3 **report.**
 4 A. Yeah. I -- I used -- the reason there's
 5 a parenthesis after all of these is there were two
 6 documents that I had, and I didn't bring them,
 7 including the one that's labeled as -- we're
 8 finding out whether it's labeled as -- as an
 9 exhibit. So I don't -- I don't know that it's on
 10 page 4, but I can look and see.
 11 **Q. Okay.**
 12 A. Because I'm guessing you're telling me
 13 it's not.
 14 **Q. Well, you referred to "two documents."**
 15 **What was the second document?**
 16 A. Well, it was the same report but it
 17 was -- there were different -- there was different
 18 pagination. I -- I honestly can't, at this point,
 19 tell you --
 20 **Q. Okay.**
 21 A. -- what those differences are or where --
 22 where 21 came from and --
 23 **Q. Okay. But can you tell me where -- if**
 24 **you look on -- wherever you want in the Barrett**
 25 **report --**

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1 A. I understand.
 2 **Q. -- do you see the quote "grave injuries**
 3 **to plaintiffs"?**
 4 A. Without going through this in great
 5 detail, I can't tell you where it is.
 6 **Q. Okay.**
 7 A. I --
 8 **Q. But you believe it's in the report?**
 9 A. I have no doubt I can find that, but
 10 not -- not in time to break for lunch.
 11 **Q. Sure.**
 12 But can you -- is it on page 4? Let's
 13 just start there.
 14 A. Again, you're going to have to bear with
 15 me while I look through the page to take -- to
 16 assure that it either is or is not.
 17 I do not see it on page 4.
 18 **Q. Okay. And then, sir, I'm going to ask**
 19 **you the same question regarding the second quote.**
 20 Do you see the second quote references --
 21 A. Causing substantial -- yep, yep.
 22 **Q. -- "causing substantial degradation and**
 23 **depletion of Montana's environment and natural**
 24 **resources"?**
 25 I'm going to ask the same question: Do

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1 you see it on page 4?
 2 A. I do not.
 3 **Q. Okay.**
 4 A. But, again, I have no doubt in my mind,
 5 and I'm testifying under oath that it is in one of
 6 the reports that I had.
 7 **Q. Okay. But -- what -- perhaps we should**
 8 **back up.**
 9 What report or reports did you review to
 10 prepare your report, that expert report that you
 11 were writing in response to?
 12 A. A report that I have on my computer at
 13 home that I do not have here.
 14 **Q. Okay.**
 15 A. So I -- I have a report from which I took
 16 that. It was written by Richard Barrett.
 17 But I can't find it in the materials in
 18 front of me now and can't tell you where it is.
 19 **Q. Okay. And by "it," you mean these**
 20 **quotes?**
 21 A. These quotes, yeah.
 22 **Q. The "grave injuries" quote and the**
 23 **"causing" --**
 24 A. Yes.
 25 **Q. -- "substantial degradation and**

1 depletion" quote?

2 A. Yes.

3 Q. And, sir, if you continue down on page 2,
4 there's a heading "Montana's Contribution to
5 Climate Change."

6 A. Yes.

7 Q. Do you see that?

8 A. Yes.

9 Q. And then you go on to talk about
10 Montana's contribution to global greenhouse gas
11 emissions; do you see that?

12 A. Yes.

13 Q. And, in your mind, sir, how does Montana
14 contribute to global greenhouse gas emissions?

15 A. The state -- within the borders of
16 Montana, greenhouse gas emissions -- there are
17 greenhouse gas emissions.

18 Q. Okay.

19 A. And those become a portion of the total
20 amount of greenhouse gases in the atmosphere.

21 Q. So they're emissions that are occurring
22 in Montana?

23 A. Yes.

24 Q. And in your understanding, sir, is that
25 the only way, for purposes of your expert report,

1 Montana and burning fossil fuels. I mean, I --

2 Q. Well, so let me ask a different way then.

3 So what you're looking at are just
4 emissions that occur within the geographic
5 boundaries of Montana?

6 A. Yes, that's what I said.

7 Q. Okay. And so if a lump of coal is mined
8 in Montana and burned in Idaho, that's not, in
9 your term, Montana's contribution to greenhouse
10 gas emissions?

11 A. That's what is in -- the literature on
12 climate change is referred to as slippage or
13 leakage. That -- the movement to other locations,
14 yes.

15 So a business can switch its business
16 operations from location A to location B because B
17 has less stringent regulations of any sort. And
18 then those emissions are attributed to location B,
19 not location A.

20 Q. So to put a specific example on what I've
21 just said, so if a -- my lump of coal is burned in
22 Idaho that -- in -- in the way you're looking at
23 Montana's contribution to a global greenhouse gas
24 emissions, that's a zero?

25 A. That's not the way I'm looking at it.

1 that Montana contributes to global greenhouse gas
2 emissions?

3 A. It is the only way that emissions within
4 the boundaries of Montana are calculated. I'm --
5 perhaps you can restate your question.

6 Q. Sure.

7 Well, sir, I'm -- you say -- and I'll
8 just quote from your report, "it is important to
9 put Montana's contribution to global greenhouse
10 gas emissions" -- and I'm going to stop there?

11 And what I'm asking you is: How -- for
12 purposes of that language, how does Montana
13 contribute to global greenhouse gas emissions?

14 A. It contributes by putting greenhouse gas
15 emissions into the atmosphere that are then added
16 to all other greenhouse gas emissions.

17 Q. And how does Montana put, to use your
18 term, greenhouse gas emissions into the
19 atmosphere?

20 A. It does so with the cows that emit
21 methane and the coal that's burned in the Colstrip
22 plants, and the list goes on.

23 Q. Can you give me other ways?

24 A. To the oil that is put into our
25 refineries, to the automobiles that are driven in

1 It's the way they're computed and allocated.

2 Q. But that's what you mean by Montana's
3 contribution to global greenhouse gas emissions?

4 A. Yes.

5 Q. So the -- in my example, the lump of coal
6 that's burned in Idaho doesn't contribute, on
7 behalf of Montana, to global greenhouse gas
8 emissions?

9 A. That's correct. It's simply an
10 accounting mechanism that attributes this to --
11 this -- the carbon emissions from that lump to one
12 location or another.

13 Q. And do you see --

14 A. And I'm not -- I'm not asserting -- not
15 passing any judgement on the accounting. I'm just
16 using the accounting technique.

17 Q. Sure.

18 And then, sir, you say, also on page 2,
19 "Montana emitted approximately 26.2 million metric
20 tons of CO2."

21 Do you see that?

22 A. Yes.

23 Q. And that's in 2020, correct?

24 A. Correct.

25 Q. And was that data just for the year 2020?

1 A. Yes.
 2 **Q. And why did you choose 2020?**
 3 A. Because those were the data that were
 4 available.
 5 **Q. So you couldn't find 2021 data?**
 6 A. I looked hard and did not find it when I
 7 was doing the report. That isn't to say they
 8 don't exist but...
 9 **Q. So if I'm clear, sir, you went -- where**
 10 **did you get -- where did you get the 26.2 million**
 11 **metric tons figure?**
 12 A. From Footnote 3, from the document
 13 referenced there.
 14 **Q. Okay. And when you went there, it didn't**
 15 **have 2019 data?**
 16 A. Did not. Well, I can't assert it didn't
 17 have 2019. I think it did have 2019. I just used
 18 the most current that was in that report.
 19 **Q. Sure. And it didn't have 2021 data?**
 20 A. Did not.
 21 **Q. Okay.**
 22 A. That's my recollection at least. I'd
 23 have to look at it to be sure.
 24 **Q. Okay. And 2020 data, sir, would you**
 25 **agree that the -- what I'm going to call**

1 the same time.
 2 **THE WITNESS:** Oh, sorry.
 3 **BY MR. GREGORY:**
 4 **Q. Now you may go.**
 5 A. I note that the bracket around -- and the
 6 No. 38 is a typo that I don't know how it got
 7 there.
 8 **Q. Sir, can you take a look at Exhibit 52?**
 9 A. Okay. Uh-huh.
 10 **Q. And is that the -- what you have**
 11 **hyperlinked in your expert report as Footnote 2?**
 12 A. Correct.
 13 **Q. Okay. And do you see, sir, in the second**
 14 **bullet point, at the bottom of the first page, it**
 15 **says that global CO2 emissions from fossil fuels --**
 16 **and I'm paraphrasing here -- are projected to grow**
 17 **above 2020 levels in 2021?**
 18 A. Yes.
 19 **Q. Okay. And did you factor that into your**
 20 **expert report in choosing a year?**
 21 A. No.
 22 **Q. Do you have an opinion one way or the**
 23 **other about whether or not CO2 emissions were**
 24 **expected to rebound or grow in 2021 and may**
 25 **actually be higher than pre-COVID levels based on**

1 **greenhouse gas emissions, dip due to the pandemic**
 2 **conditions?**
 3 A. I don't have any basis to agree or
 4 disagree.
 5 **Q. Okay. Did you look to see if, based on**
 6 **data for years prior to 2020, if 2020 was in any**
 7 **way -- I'm going to call it an aberration?**
 8 A. I did look at that, but not
 9 statistically. I didn't -- I didn't calculate
 10 a -- I didn't do a regression line to determine
 11 whether there was some aberration, as you called
 12 it.
 13 **Q. Sure.**
 14 **And, sir, the CO2 earth --**
 15 A. Oh, yeah.
 16 **MR. GREGORY:** Let's mark that -- here's
 17 your original copy. I'm going to put it back and
 18 I will mark it as an exhibit, as the next in
 19 order.
 20 (Whereupon, Exhibit No. 52 was
 21 marked for purposes of
 22 identification.)
 23 **THE WITNESS:** If I may note that the
 24 bracket around 30 --
 25 **MR. GREGORY:** She can't do two things at

1 **this Exhibit 52?**
 2 A. Again, repeat the question.
 3 **Q. Sure.**
 4 **Do you have an opinion about whether or**
 5 **not CO2 emissions were expected to rebound or grow**
 6 **in 2021 and may actually be higher than the**
 7 **pre-COVID, pre-pandemic level?**
 8 A. I have the statement that you read or
 9 paraphrased earlier that says that. It's not an
 10 opinion, it's what the statement says.
 11 **Q. And do you agree with that or --**
 12 A. It's -- it's a data point.
 13 **Q. Okay. And did -- did you read through**
 14 **Exhibit 52 when you prepared your report and saw**
 15 **that?**
 16 A. I read through it. I presume I saw it.
 17 I couldn't read it without seeing it.
 18 **Q. And that statement didn't alert you in**
 19 **any way, sir, that 2020 levels were lower than**
 20 **2019 and that 2021 was expected to be higher than**
 21 **2020?**
 22 A. Again, repeat what you're asking me.
 23 **Q. Sure.**
 24 **What I'm asking you, sir, is you chose**
 25 **2020, correct?**

1 A. Yes.
 2 **Q. And the document we have in front of us,**
 3 **Exhibit 52, which is your Footnote 2, points out**
 4 **that 2020 showed a dip from 2019 and, in fact,**
 5 **2021 is supposed to show an increase over 2019,**
 6 **right?**
 7 A. Yes.
 8 **Q. And -- but you used 2020 numbers?**
 9 A. Because I had both those numbers for -- I
 10 had both the global and the Montana numbers for
 11 2020 but not 2021.
 12 **Q. Okay.**
 13 A. Furthermore, I would -- I would note that
 14 if -- if I had used 2021 and compared them to 2020
 15 for Montana, Montana's share would even be smaller
 16 because the global share is -- because the global
 17 total's greater.
 18 **Q. And, sir, if you go back to the figure**
 19 **26.2 million metric tons -- do you see that?**
 20 A. Yes.
 21 **Q. Do you know what, if any, emissions are**
 22 **excluded from this number, that occurred in**
 23 **Montana?**
 24 A. I do not know.
 25 **Q. Okay.**

1 reports mixed up here. Now, this -- yours. Sorry
 2 about that.
 3 **Q. That's okay.**
 4 A. Yes.
 5 **Q. And, sir, how did you get that percent,**
 6 **.08621?**
 7 A. The -- let me explain the calculation.
 8 **Q. Please.**
 9 A. The calculation is quite simple. It is
 10 dividing 3. -- sorry -- 3.48 into 26 -- sorry.
 11 It is converting the million metric tons
 12 of 2. -- sorry.
 13 It is converting the million metric tons
 14 of 26.2 into gigatons and dividing by the global
 15 emissions of 34.8 gigatons.
 16 Note that metric tons and gigatons are
 17 not the same.
 18 **Q. Sure.**
 19 A. That calculation results in the share.
 20 And, again, this is -- it's a simple division
 21 of -- of Montana's, as I've called it,
 22 contribution, the accounted for carbon emissions
 23 in Montana as a share of the global -- global --
 24 global emission.
 25 **Q. So for gigatons, if we go back to**

1 A. I don't know -- I have no way to know
 2 whether something was emitted or was excluded
 3 because it wouldn't be there.
 4 **Q. Uh-huh. Oh, sir, and back to my earlier**
 5 **discussion about -- remember my lump of coal**
 6 **point?**
 7 **If -- if -- let's call it fossil fuels**
 8 **were transported through the state of Montana,**
 9 **say, from North Dakota to the state of Washington,**
 10 **that would not be included in the term "Montana's**
 11 **contribution to global greenhouse gas emissions,"**
 12 **correct?**
 13 A. Correct. This is an accounting
 14 technique, if you will, that is used to attribute
 15 emissions to a location.
 16 And so if that lump of coal from
 17 North Dakota transported through Montana and Idaho
 18 and burned in Washington, it would be accounted
 19 for in the Washington numbers, not in Idaho,
 20 Montana or North Dakota.
 21 **Q. And, sir, if you go at the bottom of**
 22 **page 2, very last part, continuing to the top of**
 23 **page 3, you reference a 0.08621 percent of your**
 24 **report.**
 25 A. Hold one second because I've gotten two

1 **page 2 -- are you on page 2?**
 2 A. Yeah, yeah.
 3 **Q. It's -- Montana's share is 0.0262,**
 4 **correct?**
 5 A. Gigatons, yes.
 6 **Q. Okay.**
 7 A. Not -- sorry. Share. Montana's
 8 emissions are. I wouldn't call that a share.
 9 **Q. Okay. Montana's emissions are -- and how**
 10 **would you take -- what would you do with that**
 11 **figure to get to what you called the -- Montana's**
 12 **percentage, how would you -- of .08621, how would**
 13 **you get to that?**
 14 **What -- what precise numbers would you**
 15 **use to get there?**
 16 A. I hope that what I used was dividing 0262
 17 by 34.8. I don't have a calculator so I can't --
 18 **Q. Sure.**
 19 **So we go .0262, correct?**
 20 A. Divided by.
 21 **Q. Divided by -- what was the figure?**
 22 A. 34.8.
 23 **Q. 34.8. And we get 75287.**
 24 **Do you see that?**
 25 A. I do see that.

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1 **Q. And the figure you have is 7634; do you**
 2 **see that?**
 3 A. I do see that.
 4 **Q. How -- do you -- do you know how you get**
 5 **to that figure?**
 6 A. Well, let me make two points first to
 7 answer your question.
 8 The difference of -- what was it again?
 9 575 -- whatever you have there. If I may, just
 10 give me one moment to...
 11 **Q. Take your time.**
 12 A. So in preparing for this deposition, I
 13 discovered that the correct number is 7529, not
 14 7634. I believe that's the number you have.
 15 **Q. 75- --**
 16 A. 7529 is what you have. So I -- there was
 17 someplace a miscalculation, whether it was a
 18 hitting of a wrong button on the calculator.
 19 And so the 7529 is the correct number.
 20 **Q. Instead --**
 21 A. And that is the division of the -- back
 22 to the 0262 by 34.8. So the 08621 is not the
 23 correct number; that's .1.
 24 So that -- in a redraft that I did of my
 25 own and you don't have, that -- that number is

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1 reported, the -- the 07529.
 2 **Q. Okay.**
 3 A. The number on your calculator.
 4 **Q. So when it says -- let's walk through**
 5 **this.**
 6 **At the top of page 3, it says .08621.**
 7 A. Is incorrect.
 8 **Q. And what should that be?**
 9 A. The one you came up with, 075, rounded,
 10 29. I think you had 87, but I rounded it to 29.
 11 **Q. Okay. And then when it says "contributed**
 12 **8.621e-4 percent," is that figure correct?**
 13 A. It is not correct to call it a percent.
 14 **Q. Okay.**
 15 A. Okay. And the -- the reason is that it's
 16 the share, not the percent. So let me -- let me
 17 use the simplest example.
 18 If -- if Montana had contrib- -- had
 19 contributed 10 and global was 100, we would come
 20 up with a number that says .1, and that would be
 21 Montana's share of the global that you would
 22 multiply .1 times global to get Montana's share.
 23 If we wanted to convert the .1 to
 24 percent, however, it would not be .1 percent, it
 25 would be 10 percent.

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1 So, again, that was a misnomer, a
 2 misstatement to call the -- the .007 -- sorry --
 3 the -- the -- yeah, the point -- the .07529 is not
 4 the percent. It is the share. It's the 10 out of
 5 100 in my example previous, not the percent.
 6 **Q. Okay.**
 7 A. Am I stating that clearly?
 8 **Q. I understand that, sir.**
 9 **Okay. So then let's go -- let's walk**
 10 **through something.**
 11 A. I'm not checking e-mail. I'm finding my
 12 calculator.
 13 **Q. Oh, take your time.**
 14 A. Not that I don't trust you.
 15 **Q. I don't -- I don't -- take your time,**
 16 **sir.**
 17 A. I'm taking my time.
 18 Go ahead.
 19 **Q. But if you need to do a calculation, I'll**
 20 **wait.**
 21 A. More importantly, I'm just trying to find
 22 the calculator.
 23 Go ahead. I can -- I can multitask.
 24 **Q. I'd rather you not. I'd rather just you**
 25 **focus.**

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1 A. Okay.
 2 **Q. So you tell me when you're ready and**
 3 **we'll move forward.**
 4 A. Okay. My calculator is up and running.
 5 **Q. Okay. Sir, if you -- if you'd turn to**
 6 **the top of page 3 -- oh, you're -- I'll wait for**
 7 **you to finish.**
 8 A. Okay. Yes.
 9 So the -- Montana's share, which -- which
 10 is the division that we just described, is
 11 .007528736. That's Montana's share.
 12 **Q. Could you state that to me again?**
 13 A. .000752 -- let's call it 9, rounded.
 14 **Q. So where you use --**
 15 A. That is the share. That is the 10 over
 16 100.
 17 **Q. And so where --**
 18 A. Sorry. Yeah. Let me -- let me finish
 19 the point -- which is the percent then is .07 -- I
 20 just lost it -- 529. That's the percent.
 21 **Q. Okay.**
 22 A. So as opposed to the share.
 23 **Q. Okay. So can I --**
 24 A. So this is a -- this statement is
 25 mathematically incorrect.

1 Q. And so, sir, where -- just to clarify
2 things, let's start at the top of page 3 of
3 Exhibit 49.

4 A. Okay.

5 Q. Your exhibit report.

6 A. Yep.

7 Q. And it says, "contributed 8.621e-4
8 percent."

9 A. Right. Strike that.

10 Q. Strike that.

11 A. That's incorrect.

12 Q. Okay. And then it says "or." And then
13 what figure should go in there?

14 A. That's -- let me read how it should have
15 written -- should be written.

16 And that is total emissions were 34.8
17 gigatons. Montana emitted 0.0262 gigatons. That
18 results in a share of .007529.

19 Q. And can you show me, sir, what you're
20 reading from?

21 A. I'm reading from my calculator right now.

22 Q. But you were earlier reading from
23 something?

24 A. I -- I -- this is not the document that
25 was sent as my report. This is a revision as I

1 and I don't have those.

2 Q. Okay. So we'll mark a copy of this at
3 the -- make a copy at the break, next break.

4 A. Okay.

5 Q. Okay. Go ahead.

6 A. Oh, sorry.

7 Q. But what -- the percentage you're talking
8 about, I want to just make clear because the
9 record's gotten a little -- those are just, again,
10 in-state emissions?

11 A. They're the accounted -- the
12 accounted-for emissions in Montana.

13 Q. And so if -- so where you talk -- do you
14 see at the top of page 3 of Exhibit 49 --

15 A. Yes.

16 Q. -- where you talk about the state's
17 policies?

18 Do you see that?

19 A. Yep.

20 Q. And if the state's policy is to produce
21 fossil fuels that are emitted outside the state,
22 your numbers have no bearing on the -- on the
23 analysis of the state policies?

24 A. My numbers, question mark.

25 The accounted-for emissions from Montana

1 would -- as it should be written.

2 Q. Okay.

3 A. And so it does not include the number I
4 just gave you, the share, because I think it
5 confuses things, .007529. The revised version
6 does not include that number.

7 It -- my revised one that you've not seen
8 says that Montana contributed .07529 percent,
9 where percent is different from share, as
10 described earlier with the simple 10 out of 100.

11 Q. May I take a look at the document?

12 Are there other changes that you made?

13 A. Further on, I corrected the percent
14 problem to the correct number.

15 In other words, again, just to restate
16 it, it is not .007 percent, it is .07 percent.

17 So Montana's percentage contribution was
18 7/100ths of a percent.

19 So I -- you know, again, mistake --
20 mistake in my calling the -- the .07, whatever, a
21 percentage.

22 Q. So, sir, can we mark as the next
23 exhibit -- do you need this copy back?

24 A. Yes, I guess because I don't have
25 another -- that's highlights that I put on there,

1 have virtually no effect on total global
2 emissions, the accounted-for emissions.

3 Q. Sir, my question is different.

4 Are you familiar with the term "fossil
5 fuel production"?

6 A. Of course.

7 Q. Okay. And if the fossil fuels come out
8 of the ground in Montana but the emissions occur
9 someplace else, those emissions are not accounted
10 for in the numbers, whether the original numbers
11 or your revised numbers, on pages 2 and 3 of your
12 expert report, correct?

13 A. They're not accounted for in the -- in
14 the way emissions are accounted for.

15 Q. Sir, can you try to answer my question,
16 and then later on you can do it your way?

17 But what I'm asking you for is -- the
18 numbers that you have on the bottom of page 2, the
19 top of page 3, of your expert report, do not
20 account for, in any way, shape or form, fossil
21 fuels that come out of the ground in Montana but
22 they're emitted in another state or another
23 nation, correct?

24 A. I report -- repeat -- or say what I've
25 said before. The numbers on the top of page --

1 bottom of 2 and 3 were incorrect. That is to say
2 that's not -- that was a share, not a percentage.

3 The copy that we'll make is in percentage
4 terms, and it is .07 percent of global emissions
5 as they are accounted for.

6 **MR. GREGORY:** Could you read my question
7 back, please?

8 (Whereupon, a portion of the
9 previous testimony was read
10 back.)

11 **THE WITNESS:** The numbers that are --
12 again, accepting that the numbers that we're
13 talking about on those two pages are incorrect and
14 are corrected in the copy we'll make at the break,
15 those numbers do not include the carbon emissions
16 from the lump of coal that's taken out of the
17 ground in Montana and burned elsewhere.

18 **BY MR. GREGORY:**

19 **Q.** So if the state's policies the -- see
20 that term at the top of page 3 --

21 A. Yes.

22 **Q.** -- "the state's policies" encourage or
23 promote fossil fuel production so that the
24 emissions occur outside the state of Montana,
25 those emissions would have no -- would not show up

1 **BY MR. GREGORY:**

2 **Q.** Sure. Or let's talk -- let's talk your
3 terms.

4 So if we wanted to talk about non-Montana
5 contribution to global greenhouse gas emissions,
6 if Montana produces fossil fuels and that results
7 in a gigaton of CO2 emissions that occurs in China
8 and India, out -- it occurs outside the state of
9 Montana, in terms of Montana's contribution to
10 greenhouse gas emissions, that, in my hypothetical
11 million gigatons, would not be reflected as part
12 of Montana's contribution, correct?

13 A. It would not be accounted for in
14 Montana's contribution.

15 **Q.** And so, sir, to continue on that same
16 sentence on page 3, where you talk about the
17 state's policy having -- and then you go on, "no
18 effect on the welfare of Montana's citizens," --
19 do you see that?

20 A. Yes.

21 **Q.** Okay. And if you're not looking at --
22 let's go back. You would agree, sir, if an
23 emission occurs in Idaho, it could have an effect
24 on the welfare of Montana's citizens, correct?

25 A. It could have, but we don't know how much

1 in the way you've set forth Montana's contribution
2 to global greenhouse gas emissions, correct?

3 A. In the way that greenhouse gas emissions
4 are accounted for.

5 **Q.** Is that correct?

6 A. What I just said is correct. I don't
7 think what you said is correct.

8 **Q.** What I'm trying to get at, sir, is you're
9 saying that the state's policies have virtually no
10 effect, correct?

11 A. On Montana's accounted-for share or
12 percentage of global; that's what I've said.

13 **Q.** And it's because what you are only
14 looking at is the emissions that -- that occur in
15 Montana?

16 A. That --

17 **MR. STERMITZ:** I'm going to object. I
18 don't -- I don't think that's what he said.

19 Go ahead and answer.

20 **THE WITNESS:** That -- the way the
21 emissions are accounted for does not include the
22 lump of coal that we have been -- you've been
23 using as your metaphor.

24 ///

25 ///

1 of that lump of coal is burned in Idaho. And
2 until we know that, we can't know what -- what the
3 effect of that is on the share of total
4 emission -- global emissions.

5 So if it were -- if it were one ounce of
6 carbon, then it would have no effect on Montana's
7 welfare.

8 If it were -- you just said a million
9 to -- a million gigatons, which I think is what
10 you said, but that -- that's a different
11 calculation.

12 **Q.** And so you can't tell what effect the
13 state's policies had, by only looking at Montana's
14 in-state emissions, correct?

15 A. You can.

16 **MR. STERMITZ:** Objection. Form of the
17 question. Policies have on what?

18 **THE WITNESS:** I didn't get -- I guess --
19 can -- can you ask Mark to repeat or -- I'm not
20 sure what...

21 **MR. GREGORY:** Mark, he's asking you to
22 repeat your objection.

23 **MR. STERMITZ:** My objection was to the
24 form of the question in that it was -- what the
25 impacts were. But I don't think you identified

1 impacts on what. I just don't think it was
2 specific enough to be able to answer.

3 **THE WITNESS:** The effect of Montana's
4 policies on the welfare of Montana's citizens, the
5 sentence to which you were referring, is accounted
6 for with emissions inside the boundaries of
7 Montana.

8 Adding to those emissions any fossil
9 fuels exported becomes a different number, to be
10 sure, a number we don't know.

11 And so without knowing it, I -- I
12 suppose -- I don't even -- I'd have to give some
13 thought to how you'd calculate it. But without
14 knowing it, we don't know whether that additional
15 amount not accounted for is big or small.

16 **BY MR. GREGORY:**

17 **Q. In terms of the effect on the welfare of**
18 **Montana's citizens?**

19 A. I would say in terms of the effect upon
20 Montana's share of emissions.

21 If -- and, again, now we're to the
22 questions later in the report as to how -- how
23 Montana's share, as you want to calculate it,
24 including that which is exported or that which
25 leaks, how that affects global temperatures and,

1 of the fossil fuel production to the jobs or to
2 the state's economy, as I've stated.

3 **Q. Sir, did you analyze at all, when you**
4 **talk about maybe you don't have snow to ski on or**
5 **water for fishing, you don't have water for**
6 **agriculture?**

7 A. I was taking term -- points made in
8 the -- by some of the -- the plaintiffs.

9 But, sure, if you don't have water for
10 agriculture, that's a negative, but...

11 **Q. And --**

12 A. So if I'm the farmer, I don't have water
13 for my crop. If you're the coal miner, you have
14 money in your pocket from coal production.

15 How do those balance? I have no idea.

16 **Q. And you didn't do that form of**
17 **analysis --**

18 A. I did not.

19 **Q. -- for purposes of this case?**

20 A. I did not.

21 **MR. GREGORY:** Sir, we're at a good point
22 for our lunch break. Why don't we come back at
23 1:00 o'clock.

24 Does that make sense?

25 **THE WITNESS:** I don't -- I can even get

1 hence -- because -- and, hence, the welfare of the
2 citizens.

3 I don't -- I -- you're -- we don't know
4 that.

5 **Q. Okay. Sir, also at the top of page 3,**
6 **just to make sure I'm clear, when you talk about**
7 **fossil fuel production in -- what I believe you're**
8 **saying here is in the state's -- or in Montana's**
9 **economy, generally what do you mean by "fossil**
10 **fuel production"?**

11 A. It would have -- the proper wording
12 should be "carbon emissions."

13 So -- well, sorry. In this case, we're
14 talking about fossil fuel production, its
15 contribution to the state's economy.

16 Producing that lump of coal in Montana
17 has an effect on the state's, Montana's, economy.
18 It adds to Montana's economy. So that statement
19 is correct there. The welfare of Montana, "other
20 than the contribution of fossil fuel production
21 makes to the state's economy."

22 Maybe you have less water in the stream
23 for your fishing or less snow to ski on, but you
24 also have a job, and the -- the -- the phrase
25 within the commas is the contribution of those --

1 by without a lunch break.

2 **VIDEOGRAPHER:** We are going off the
3 record. The time is 12:13 p.m.

4 (Whereupon, a break was then taken.)

5 **VIDEOGRAPHER:** We are back on the record.
6 The time is 1:09 p.m.

7 (Whereupon, Exhibit No. 53 was
8 marked for purposes of
9 identification.)

10 **MR. GREGORY:** Sir, earlier we referenced
11 the exhibit report for Richard Barrett. And we
12 don't have a copy of that prior exhibit, so I'm
13 just going to put what we've marked as Exhibit 53
14 in front of you, and it's a copy of what you
15 previously said you believed was the expert
16 report.

17 And then, sir, among the documents you
18 brought with you today, is the document you
19 alluded to before we broke -- I'm going to call it
20 a -- containing some revisions to the calculations
21 and -- and the whole share-versus-percentage
22 discussion that we have, and we've marked that
23 document as Exhibit 54.

24 ///

25 ///

1 (Whereupon, Exhibit No. 54 was
2 marked for purposes of
3 identification.)
4 **BY MR. GREGORY:**
5 **Q.** And, sir, I know you have a
6 highlighted -- your own personal highlighted
7 version of Exhibit 54. I'm going to put this copy
8 here. You can look at either one, as far as I
9 care.
10 **A.** But just to be clear, this -- this is
11 just a copy of what I had?
12 **Q.** Yes, Kasey --
13 **A.** What I was reading from?
14 **Q.** -- made a copy. Yes.
15 **A.** Okay.
16 **Q.** And then --
17 **A.** I guess maybe I should ask Mark whether
18 he has any objections to -- I don't even know if
19 he can object to an exhibit, but...
20 **Q.** Ask -- ask away.
21 **THE WITNESS:** Mark, is there --
22 **MR. STERMITZ:** Yeah.
23 **THE WITNESS:** -- any --
24 **MR. STERMITZ:** No, I don't have an
25 objection to what's going on here with these

1 exhibits.
2 **THE WITNESS:** Okay.
3 **MR. STERMITZ:** Is that your question?
4 **THE WITNESS:** Yeah, the question really,
5 a bit more specific, is, I, based on doing those
6 recalculations, created a -- went back to the
7 original document. I kept the original document,
8 but I made some changes to it as I would have
9 written it had I caught the misinterpretation, if
10 you will, of percentage --
11 **MR. STERMITZ:** Right.
12 **THE WITNESS:** -- and put those
13 calculations.
14 So I have the -- I have the document that
15 has those changes in it, but it's not the document
16 that was submitted as the report and...
17 **MR. STERMITZ:** Yeah, I think I understood
18 that.
19 I think, Phil, I mean, we've got an
20 ongoing obligation to supplement discovery
21 responses, and so we can -- I mean, we'll send
22 that -- I mean, I just don't -- we'll get it
23 straightened out either here or through additional
24 production. But you can give that copy to the
25 plaintiffs.

1 **THE WITNESS:** I have no objection. Not
2 that I can, but...
3 **BY MR. GREGORY:**
4 **Q.** Are you ready, sir?
5 **A.** Yeah.
6 **Q.** Okay. So Exhibit 54 does not contain the
7 highlights, the yellow markings on the texts that
8 is in the original. Okay, sir?
9 **A.** Yes.
10 **Q.** But if you go to page 4 of Exhibit 54,
11 there's a paragraph that begins, "In 2020, total
12 global emissions," and it goes on.
13 And that, in Exhibit 54, is a paragraph
14 you revised from your original expert report; is
15 that correct?
16 **A.** That is correct. And it's the revision
17 of the paragraph that started in the original
18 report on page 2 and continued onto page 3.
19 **Q.** And, sir --
20 **A.** So the -- the paragraph that is in the
21 revised document, if you will, replaces the
22 paragraph that's on page 2 and continues on 3.
23 **Q.** And, sir, in Exhibit 54, other than the
24 yellow highlighting and that paragraph, the only
25 other change is, if we go to Exhibit 54, page 18,

1 there's a number in the Conclusion section that
2 has also changed, which is now 0.07529 percent?
3 **A.** Correct.
4 **Q.** And those are the only changes --
5 differences between Exhibit 54 and your original
6 expert report?
7 **A.** Correct.
8 **Q.** Then, sir, if you turn to Exhibit 54.
9 **A.** That's the new one?
10 **Q.** Yes, sir. And you go to the page 18.
11 **A.** Yeah. Where did my pen go? Okay.
12 **Q.** And you go to page 18 at the back.
13 **A.** Yep.
14 **Q.** Do you see it -- Exhibit 54 bears the
15 date October 28, 2022, correct?
16 **A.** I'm sorry. What -- oh, yeah. Sorry.
17 **Q.** And, sir, when did you do -- when did you
18 prepare the version that we have in front of us,
19 Exhibit 54?
20 **A.** Want the exact date? It was like a week
21 ago, but I can tell you the exact date of the --
22 **Q.** That's -- about a week ago; that's fine.
23 **A.** Yeah, yeah.
24 **Q.** You don't need to look at your phone,
25 sir.

1 A. Okay. No, I just -- my calendar's on my
 2 phone.
 3 Q. That's fine.
 4 A. I can look at it and get it precise --
 5 Q. And then since you've -- since you
 6 prepared Exhibit 54, other than bringing it here
 7 today, did you show it to anybody?
 8 A. I don't recall whether I showed it to the
 9 defense attorneys.
 10 Q. And --
 11 A. I might have e-mailed it to them. I
 12 don't remember. But no one other than that for
 13 sure.
 14 Q. Sure. And did you -- did you discuss it
 15 yesterday?
 16 A. Yes.
 17 Q. Okay. And -- and you essentially
 18 discussed that you have new numbers?
 19 A. Yes.
 20 Q. Now, sir, going back to --
 21 A. Sorry. If I may, discussed new numbers,
 22 as well as the correct interpretation of
 23 percentage versus share.
 24 Q. Thank you, sir.
 25 Okay. Sir, if we go now to -- so we're

1 Q. Okay. And then you go on, sir, that --
 2 oh, and, I'm sorry, sir, we talk about here,
 3 "fossil fuel combustion in Montana."
 4 That is the same effective term as
 5 Montana's contribution to global greenhouse gas
 6 emissions that we've been discussing earlier?
 7 A. Yes, it's the way that greenhouse gases
 8 are accounted for.
 9 Q. Okay. And then -- and, sir, how do you
 10 know that's the way greenhouse gases are accounted
 11 for?
 12 A. I don't even -- I guess -- what do you
 13 mean how do I know?
 14 Q. Well, sir, have you looked at various
 15 methods for calculating fossil fuel or greenhouse
 16 gas emissions?
 17 A. Yes. And they are attributed to
 18 political and, hence, geographic locations. And
 19 they are -- yeah, they are attributed to the
 20 locations where the gases are emitted.
 21 Q. And, sir, you're testifying here under
 22 oath that that's the only way it's done?
 23 A. Somebody might want to calculate them a
 24 different way; I don't know that. But if you look
 25 at the reports that I've used to make these

1 going to put 54 away. You don't need -- unless
 2 you want to look at it, we don't need it anymore,
 3 okay?
 4 And we're now going to go back to your
 5 original expert witness report, okay?
 6 And do you see, sir, on page 3, you talk
 7 about that "between 2005 and 2020, CO2 emissions
 8 from fossil fuel combustion in Montana decreased
 9 by 21 percent"?
 10 Do you see that?
 11 A. Yes.
 12 Q. And how did you get this number?
 13 A. I took the -- the number as -- as
 14 referenced in the Footnote 4 of -- for 2025 and
 15 2022 and calculated the percentage of decline.
 16 Q. I'm sorry. You said 2025. Did you mean
 17 2005?
 18 A. Sorry. Yeah, 2005.
 19 Q. Okay. So you took two numbers. You took
 20 a 2005 number?
 21 A. Uh-huh.
 22 Q. And you took a 2020 number. And you saw
 23 that the 2020 number was 21 percent less than the
 24 2005 number?
 25 A. Correct.

1 calculations, such as the Montana 2000 -- 2020, or
 2 whatever the report date is, that's the way it's
 3 done.
 4 I -- if -- there -- there's discussion in
 5 the literature about leakages, as I just mentioned
 6 earlier, and leakages are -- refers to -- in fact,
 7 the main definition is -- refers to a company
 8 moving its burning of -- or its production
 9 facilities from location A to location B because
 10 location B is more favorable in whatever
 11 regulations might be. In this case, is more
 12 favorable in terms of regulations regarding
 13 greenhouse gas emissions, so...
 14 Q. Sir, have you looked to see if there are
 15 other methods of calculating how fossil fuel
 16 production results in greenhouse gas emissions,
 17 other than the method employed by the EIA in
 18 Footnote 3 or the Montana DEQ in Footnote 4?
 19 A. Have I looked at; were those your words?
 20 Q. Sure. Investigated whether there are
 21 other methods.
 22 A. I've investigated the efforts to estimate
 23 leakages.
 24 Q. And what have you found?
 25 A. That people try to calculate leakages.

1 I -- I have no other conclusion to draw other than
2 that.

3 Q. Okay. Sir, in -- have you -- are you
4 familiar with the IPCC?

5 A. Yes.

6 Q. Have -- have you read any of the reports
7 of the IPCC?

8 A. Yes.

9 Q. Have you read, for example, the most
10 recent IPCC report?

11 A. Since they come out often, I don't know
12 if I've read the most recent one.

13 Q. But you -- you read -- and do you read
14 the whole report, or are you someone who reads
15 like the executive summary or something along
16 those lines?

17 A. Combination of the executive summary
18 and -- and -- and other things in it. I don't
19 claim that I read every footnote, but...

20 Q. And, sir, what about the National Climate
21 Assessment; do you read that?

22 A. That's -- I -- I don't know if I've read
23 it, per se. If I have, it would have been, no
24 doubt, the -- the executive summary, whatever
25 might have been there.

1 **Montana Climate Solutions Plan, and it's your**
2 **guesstimate that it's in the Montana Climate**
3 **Solutions Plan?**

4 A. That's where I would first look for it.

5 Q. Okay.

6 A. But I -- I -- I would -- if it's not
7 there, I can find it.

8 Q. Okay.

9 A. Sorry.

10 Q. **I'm not going to do two things at the**
11 **same time. I just want to make sure.**

12 A. I don't -- in thumbing through it, I
13 don't see it. But I visually recall the table
14 from which that -- the table that breaks down the
15 changes over that period, in emissions, by various
16 categories, has transportation and so on.

17 Q. **And, sir, in that statement, what do you**
18 **mean by "electrical power production from fossil**
19 **fuels"?**

20 A. What's unclear?

21 What I mean is the reduction in
22 electrical production from fossil fuels.

23 Q. **Well, I'm not asking you about the**
24 **reduction, sir.**

25 **What do you mean -- what did you mean by**

1 Q. Okay. And then, sir, continuing on
2 page 3 of your report, do you see where you point
3 out that is a -- the reduction?

4 And I assume you're saying there, the
5 21 percent reduction?

6 Sorry, sir, may I point?

7 A. Sure.

8 Q. Okay. Do you see right in there?

9 A. Yeah. So the 35 percent reduction in
10 electrical power production.

11 Q. Okay. When you say "this reduction," are
12 you talking about the 21 percent?

13 A. Yes.

14 Q. Okay. And then you're saying it "was
15 driven mainly by a 35 percent reduction in
16 electrical power production from fossil fuels."

17 Do you see that?

18 A. Yes.

19 Q. And where did you get -- what's the
20 support for that statement?

21 A. I would guess that it's in the -- the
22 document that we've referred to as the 2020 -- but
23 it isn't referenced there. I -- I'm guessing it's
24 in here, but...

25 Q. I'm sorry. And so Footnote 4 is the

1 "electrical power production from fossil fuels"?

2 A. I mean electrical production -- power
3 production for fossil fuels. I don't know what
4 the question --

5 Q. Can you give me some examples?

6 A. Colstrip burns coal, generates
7 electricity and puts it into the power lines;
8 that's electrical production from coal at
9 Colstrip.

10 Q. Okay. And in Montana, is there
11 electrical power production not from fossil fuels?

12 A. Well, yes.

13 Q. Okay. And, sir, when you talk about the
14 "35 percent reduction in electrical power
15 production from fossil fuels," was there -- I'm
16 going to call it -- another source of power
17 production that took over that 35 percent?

18 A. I don't know that for sure.

19 Q. Okay.

20 A. The -- obviously that -- your point is
21 that -- two -- two ways that could be. We'd
22 have -- we'd have no production from fossil fuels
23 if wind power substituted for all fossil fuel
24 production. That would mean we'd have 100 percent
25 reduction.

1 But the number that's there, I don't know
2 how -- whether that broke out -- state it
3 differently.

4 The number that's there could not
5 possibly, given the tiny percentage of -- of
6 electrical production that comes from
7 alternatives, is so small in Montana that it
8 couldn't possibly account for much of the
9 35 percent.

10 So the 35 percent would have to come from
11 improved efficiency of the fossil fuels that are
12 burned.

13 **Q. Okay. And what do you base that on?**

14 A. What "that"?

15 **Q. Improved -- the 35 percent would have to
16 come from improved efficiency of the fossil fuels
17 that are burned.**

18 A. The only way you could get reductions
19 in -- sorry -- reductions in the use of fossil
20 fuels is to have them substituted for by
21 alternative energy, wind and solar. That's small.

22 So the other place it could come from is
23 burning less fuel to generate electricity; that
24 would be the efficiency.

25 **Q. How would you go about determining**

1 have some discussions of that, but I -- I can't
2 tell you what those regulations are.

3 But regulations in general have forced
4 power producers to reduce the amount of -- of
5 fossil fuels necessary to produce a kilowatt.

6 **Q. And the report you're talking about,
7 that's the Montana Climate Solutions report?**

8 A. Well, that is -- I can't find the table
9 from which I took these, in that report. So it's
10 something else that's not referenced there.

11 I -- I -- in my mind, I can see the
12 table, but I don't see it here in thumbing through
13 it.

14 **Q. Okay. And then you talk about -- you go
15 on, on page 3, to reference Table 1. So should we
16 go back to Table 1?**

17 A. Yes, that's the table.

18 **Q. Okay.**

19 A. The table that has those numbers.

20 **Q. And, sir, I want to make sure I'm clear.**

21 **You have numbers in here as Montana CO2
22 emissions projections; do you see that?**

23 A. Yes.

24 **Q. And you say that you're using the data
25 for the Intermountain Region; do you see that?**

1 **electrical power production from fossil fuels in
2 Montana?**

3 **MR. STERMITZ:** Object to the form of the
4 question as being vague.

5 Go ahead, Terry, you can answer, if you
6 can.

7 **THE WITNESS:** Repeat it.

8 **BY MR. GREGORY:**

9 **Q. Sure.**

10 A. I'm having trouble -- what --

11 **Q. How would you go about determining
12 electrical power production from fossil fuels in
13 Montana?**

14 A. I would look at the amount of electricity
15 coming out of the Colstrip plant, which is from
16 fossil fuels, and that would be the amount I would
17 contribute -- or attribute to the Colstrip plant.

18 And then I would look at any other plants
19 that did the same thing. I'd add them up.

20 **Q. And then you go on to say on page 3 that
21 "some amount of the decline is due to state
22 regulations that have reduced greenhouse gas
23 emissions."**

24 **What state regulations have done that?**

25 A. Again, the report I took these data from

1 A. Yes.

2 **Q. And is this data that you have on Table 1
3 for the whole Intermountain Region, or is it just
4 for Montana?**

5 A. Just for Montana.

6 **Q. Okay. And how did you get there?**

7 **How did you get to the just-for-Montana
8 data that's on Table 1?**

9 A. The Intermountain Region data are broken
10 down by state.

11 **Q. And so that's -- that's where you got
12 this -- I'm going to call it Table 1 data?**

13 A. Correct.

14 **Q. Okay. Oh, sir, if we turn to Table 1, it
15 goes 2019 and 2030. Was the data available for
16 later in time than 2030? In other words, like
17 2050.**

18 A. The projections were not available, is my
19 recollection.

20 **Q. Okay.**

21 A. I did not cherry-pick 2030.

22 **Q. In -- in other words, the -- you had
23 looked at the data, and there was no data after
24 2030?**

25 A. Correct.

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1 **Q. Now let's go to page 4 of your expert**
 2 **witness report, Exhibit 49.**
 3 **Do you see there's a reference in here**
 4 **about Montana joining the rich countries?**
 5 **Do you want me to point it to you, sir?**
 6 **A. I got it, yeah.**
 7 **Q. Okay. Who are the rich countries, sir?**
 8 **A. Do you want a list of all of them? I**
 9 **don't have that, but it's in -- I can find it in**
 10 **Bjorn's book, I'm sure.**
 11 **Q. It's on pages 41 and 42 of his book, or**
 12 **somewhere around there; is that what you're**
 13 **saying?**
 14 **A. That's what the reference says.**
 15 **Q. Okay. And then, sir --**
 16 **A. Can I ask that you call me "doctor," if**
 17 **you insist on a label? Simply because I'm not an**
 18 **officer and not a sir. I prefer "doctor."**
 19 **Q. Fine.**
 20 **Okay. Dr. Anderson, when you -- on page**
 21 **4, when you discuss "the increase in global**
 22 **temperature associated with zero global GHG**
 23 **emissions," what do you mean by "the increase in**
 24 **global temperature"?**
 25 **A. Global temperatures are predicted to**

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1 increase, rise, by 7.4 degrees Fahrenheit by 2100.
 2 And if the rich countries eliminated fossil fuel
 3 use, then the amount of increase would be reduced
 4 by 0.8 degrees Fahrenheit.
 5 In other words, it would no longer be
 6 7.4, it would be 6.6.
 7 **Q. And then, sir, on page 4, there's a**
 8 **paragraph that begins, "To estimate the**
 9 **difference, I divided Montana's total in 2020,"**
 10 **and then you use the 26.2 million figure.**
 11 **A. Uh-huh.**
 12 **Q. And that's the same figure from the**
 13 **bottom of page 2 of your report, correct?**
 14 **A. Correct.**
 15 **Q. And then, Dr. Anderson, where did you get**
 16 **the U.S. total of 4,592 million metric tons?**
 17 **A. From Footnote 7.**
 18 **Q. Okay. The EIA figure, correct?**
 19 **A. Correct.**
 20 **Q. And then you state "to estimate Montana's**
 21 **share of U.S. emission."**
 22 **A. Yes.**
 23 **Q. And when you are talking about --**
 24 **talking about Montana's share of U.S. emissions,**
 25 **that's what we were earlier discussing as**

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1 **Montana's contribution to global greenhouse gas**
 2 **emissions by in-state emissions?**
 3 **A. Correct. The form -- the latter being**
 4 **global emissions. The former, namely U.S., being**
 5 **U.S. emissions.**
 6 **Q. Dr. Anderson, do you know if the numbers**
 7 **you cite at Footnote 7 are only for power**
 8 **generation?**
 9 **A. I don't know that without looking to the**
 10 **reference, but I can't imagine that they'd be**
 11 **anything other than totals.**
 12 **Q. Then --**
 13 **A. In other words, you -- or if I can ask to**
 14 **be clear, you're saying that there's electric**
 15 **power emissions and there's automobile emissions,**
 16 **and you want to know whether the U.S. emissions**
 17 **include both power and -- and vehicles?**
 18 **Q. Yes.**
 19 **A. The answer has to be yes, but I have to**
 20 **look at it.**
 21 **Q. Let's turn to page 5 of your report. You**
 22 **conclude the Section Roman numeral II, that**
 23 **"Montana's GHG contribution to the global total is**
 24 **trivial."**
 25 **What do you mean by "trivial"?**

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1 **A. Small. Small.**
 2 **Q. And again, sir, what you're talking about**
 3 **when you use the term "Montana's GHG contribution**
 4 **to the global total" is what we've earlier said is**
 5 **the -- Montana's contribution based on in-state**
 6 **emissions to global greenhouse gas emissions,**
 7 **correct?**
 8 **A. Correct.**
 9 **Q. Sir, in your opinion, does Montana have**
 10 **relatively high per capita emissions?**
 11 **A. No opinion. I wouldn't -- I could give**
 12 **you an opinion, but I think data would be better.**
 13 **I don't have data.**
 14 **Q. Okay. Sir, do you have an opinion about**
 15 **how to reduce global average change in**
 16 **temperature?**
 17 **A. Repeat that.**
 18 **Q. Do you have an opinion about how to**
 19 **reduce or bring down the global average change in**
 20 **temperature?**
 21 **A. I'm not a climate scientist; I've said**
 22 **that before.**
 23 **Q. Sir, on page 5 you shift -- just to show**
 24 **you. Do you see on bottom of page 2, there's**
 25 **Roman numeral II, and then on page 5 there's Roman**

1 numeral IV, and there's no, appears to me, Roman
2 numeral III.

3 Was there ever a Roman numeral III?

4 A. I doubt it. I don't have the previous
5 documents, but that...

6 Q. At the -- on page 5, Dr. Anderson, you
7 have the increase in global temperature by 2100
8 discussion; do you see that?

9 A. Uh-huh, yes.

10 Q. And is the support you have for that
11 discussion the False Alarm book by Bjorn Lomborg?

12 A. Yes.

13 Q. Any other support you have cited?

14 A. No.

15 Q. Sir, are you familiar with something I'm
16 going to call the RCP8.5 scenario?

17 A. No. Or at least I'm not familiar with it
18 by that set of letters.

19 Q. On page 5 of your report, it's -- Section
20 Roman numeral IV starts, "The Report's claims," do
21 you see that?

22 A. Yes.

23 Q. Is that the Barrett report that you're
24 referencing?

25 A. Yes, we've established that.

1 that starts "The Report's claims" --

2 A. Yeah.

3 Q. -- and later refers to "the effect of
4 climate change on snowpack, water flows, wildlife
5 populations, et cetera," are you referring here,
6 when you reference "snowpack, water flows,
7 wildlife populations, et cetera," to a discussion
8 in the expert report of Richard Barrett?

9 A. Yes, I assume so.

10 Q. Well, you assume so.

11 A. Well, I don't recall from where it came.
12 You asked that question. I don't recall where in
13 the report, which was your question.

14 And now you're asking a different
15 question, which is: Is it in the report?

16 And I'd have to say it must be or I
17 wouldn't have put it there. But since I can't
18 recall where, possibly not.

19 Q. Sir, is it your opinion that the youth
20 plaintiffs in this case are not being harmed by
21 climate change impacts?

22 A. You asked before if I was a psychologist,
23 and I'm not, so I don't know whether they're being
24 harmed.

25 Q. You have no opinion one way or the other?

1 Q. Do you remember, Dr. Anderson, where in
2 the Barrett report Richard Barrett talks about
3 climate impacts on snowpack, water flows, wildlife
4 populations, which is Cite 2 in the first
5 paragraph under Roman numeral IV?

6 A. I recall that it's there. What do you --
7 repeat the question.

8 Q. Sure.

9 Do you recall where in the expert report
10 of Richard Barrett he discusses the -- excuse
11 me -- the climate impacts on snowpack, water
12 flows, wildlife populations, et cetera, as you --

13 A. I do not recall.

14 Q. But it's your recollection that he does
15 discuss that?

16 A. It can't be my recollection if I don't
17 recall it.

18 Q. Then I'm -- do you know why it's in your
19 expert report as a discussion of the Barrett
20 report's claims?

21 A. You first asked whether I recalled it,
22 and I said -- I answered the recollection part.
23 Now you're asking a different question, which is
24 do I know where it came from in the report?

25 Q. No, sir. I'm asking you, in the sentence

1 A. Not as an expert.

2 Q. On page 6 of your report, Dr. Anderson,
3 you talk about "the general upward trend in life
4 expectancy."

5 Do you see that?

6 A. Yes.

7 Q. And then where in your report, other than
8 the top paragraph, do you discuss how the general
9 upward trend in life expectancy is directly
10 related to rising incomes?

11 A. Sorry. Again, repeat the question.

12 Q. Sure.

13 Do you see here you talk about "the
14 general upward trend in life expectancy is
15 directly related to rising incomes."

16 Do you see that?

17 A. Yeah. I see that, yes.

18 Q. What is the source of that statement?

19 A. The OECD report for one. It's -- it's
20 the general causal -- or a general correlation.
21 If you want references I could certainly -- it
22 would take me seconds on a computer to find, but I
23 -- anyway.

24 Q. What is the support, sir, that you have
25 for the statement in your -- on page 6 of your

1 expert report, "incomes in Montana likely will
2 rise less if the state pursues policies that limit
3 fossil fuel use"?

4 A. Fossil fuel use in Montana contributes to
5 the income -- the GDP of Montana. And without
6 that fossil fuel use, there will be less GDP.

7 Q. That's the basis?

8 A. GDP is X, and it -- included in X is
9 fossil fuel production. Reduce X by whatever that
10 number is for fossil fuel production, and GDP will
11 be less.

12 Q. Sir, you're using a different word.
13 You're using "fossil fuel production." That's not
14 the word you use in your report, is it?

15 MR. STERMITZ: Objection. Argumentative.

16 THE WITNESS: "Limit fossil fuel use."

17 If we limit fossil fuel use, it will limit
18 production of fossil fuels.

19 I'm missing the connection that you're
20 looking for.

21 BY MR. GREGORY:

22 Q. It's your statement, sir. So let's walk
23 through it.

24 Fossil fuel use, is that the same thing,
25 in your mind, as fossil fuel production?

1 A. No, I want to walk through yours first.
2 You asked me a question.

3 Q. Sure.

4 What I'm asking you, sir, is: If fossil
5 fuel use, the term in your report, is limited, is
6 it your opinion that it -- that there will not be
7 a resulting increase in some other source of
8 energy?

9 MR. STERMITZ: Objection. Asked and
10 answered. Well, asked and attempting to be
11 answered, but you interrupted him when he was
12 trying to answer. If you let him answer, maybe
13 we'll get through this a little better.

14 THE WITNESS: Again, you're going to have
15 to repeat it.

16 (Whereupon, a portion of the
17 previous testimony was read
18 back.)

19 THE WITNESS: I have no data. So in my
20 opinion, there's -- no opinion.

21 BY MR. GREGORY:

22 Q. Dr. Anderson, if you turn to the last
23 page of Exhibit 49, there's Appendix Figure 1.

24 A. Uh-huh, yes.

1 A. No.

2 Q. How?

3 A. Because we could get fossil fuel from
4 other places, and we do.

5 Q. So what percentage of Montana's GDP is
6 based on fossil fuel use?

7 A. I don't know that.

8 Q. Do you know if any of it is?

9 A. If any of Montana's GDP is related to
10 Montana's use of fossil fuels?

11 Q. Yes.

12 A. You're asking if any of it is. Yes, some
13 is.

14 Q. What --

15 A. I don't know the percentage.

16 Q. Can you give me a range?

17 A. No.

18 Q. And is it your opinion, Dr. Anderson,
19 that if fossil fuel use is reduced, it won't be
20 replaced by something else that results in an
21 increase in GDP?

22 A. Again, repeat it. It's got ups and downs
23 here.

24 If fossil fuel use -- it results in a --

25 Q. Let's walk through your sentence, sir.

1 Q. Where did you get the data that's in
2 Appendix Figure 1?

3 A. Again, I have to go back to my documents
4 in my computer and get the source. My research
5 assistant got me tables that had them in it and
6 produced this from it.

7 But, sorry, the source is not there.

8 Q. So as you sit here right now, you don't
9 know where the data came from for purposes of
10 Appendix Figure 1?

11 A. I know they came from somewhere. They
12 weren't made up, if that's what your question is.

13 Q. No, sir --

14 A. I can't tell you the source right now.

15 Q. Dr. Anderson, are you familiar with the
16 scientific literature on the adverse health
17 effects of climate change?

18 A. No.

19 Q. Dr. Anderson, are you familiar with the
20 literature documenting an increase in premature
21 deaths due to air pollution and climate change in
22 the United States?

23 A. Again, repeat.

24 Q. Are you familiar with the literature
25 documenting an increase in premature deaths due to

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1 **air pollution and climate change in the**
 2 **United States?**
 3 A. Describe "familiar with."
 4 **Q. Have you read it?**
 5 A. I have read literature on that topic.
 6 "Familiar with," don't know how I'd measure
 7 "familiar." I have read literature about the
 8 relationship.
 9 **Q. Have you reached any opinions on whether**
 10 **an increase in premature deaths has occurred due**
 11 **to air pollution and climate change in the**
 12 **United States?**
 13 A. Again.
 14 (Whereupon, a portion of the
 15 previous testimony was read
 16 back.)
 17 **THE WITNESS:** There are data that would
 18 show a correlation between air pollution and
 19 premature deaths.
 20 **BY MR. GREGORY:**
 21 **Q. On page 6, under the heading Roman**
 22 **numeral V, it starts, "The expert report filed."**
 23 **Is that the expert report of**
 24 **Richard Barrett?**
 25 A. Yes.

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1 **Q. You then state -- or refer to a "question**
 2 **of whether there is a connection between Montana**
 3 **policies regarding greenhouse gas emissions and"**
 4 **a -- "the citizens' constitutional right to a**
 5 **clean and" healthy "environment."**
 6 **In your opinion, sir, is there a**
 7 **connection?**
 8 A. No opinion.
 9 **Q. As part of that same sentence,**
 10 **Dr. Anderson, you refer to "the expert's**
 11 **application."**
 12 **Do you see that?**
 13 A. Yes.
 14 **Q. The expert there is Richard Barrett,**
 15 **correct?**
 16 A. Correct.
 17 **Q. Dr. Anderson, and -- do you have an**
 18 **opinion on what is the correct benefit cost**
 19 **analysis?**
 20 A. A correct benefit cost analysis would
 21 compare the additional or marginal benefits with
 22 the additional or marginal costs associated with
 23 climate change -- or greenhouse gas emissions.
 24 Sorry.
 25 **Q. And would --**

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1 A. I think the latter is a better statement.
 2 **Q. And would the benefits be social and**
 3 **private?**
 4 A. They would be the benefits. I don't
 5 have -- they would be the benefits. I don't --
 6 don't know -- you -- explain to me what you mean
 7 by "social or private."
 8 **Q. Well, sir, right in your heading on**
 9 **page 6, you use the term the "social benefits."**
 10 **Do you see that?**
 11 A. Yes.
 12 **Q. What do you mean in that heading, by**
 13 **"social benefits"?**
 14 A. All benefits -- sorry. The marginal
 15 benefits that accrue from greenhouse gas
 16 emissions.
 17 **Q. In the first sentence under there, you**
 18 **refer to "private benefits."**
 19 A. Correct.
 20 **Q. How are private benefits different from**
 21 **social benefits?**
 22 A. The private benefits are ones that are
 23 captured, as Barrett points out, in the price
 24 received by the producer, period.
 25 **Q. Can you give three examples of social**

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1 **benefits that are not private benefits?**
 2 A. Increased crop yields from more CO2 in the
 3 atmosphere. Those are captured as private
 4 benefits by the landowner, so in that sense they
 5 are captured. But they aren't captured in the
 6 price of coal or whatever, as -- as Barrett
 7 describes it, price of coal, price of oil, and so
 8 on.
 9 They are increases in some wildlife
 10 habitat that might accrue because we have more
 11 forest cover. Again, those might be captured --
 12 those are unlikely to be captured by the landowner
 13 or the forest owner because they aren't something
 14 that are marketed.
 15 How many did you want, three?
 16 **Q. Yes, please.**
 17 A. They are transportation services provided
 18 by the use of private automobiles that are
 19 captured by the person who drives, but aren't
 20 captured in any price.
 21 **Q. Can you give three examples of private**
 22 **benefits that are not social benefits?**
 23 A. Are you saying: Are there social
 24 benefits in excess of private benefits?
 25 Are you asking me that?

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1 Q. No, sir. You use the term, in your
 2 expert report, "private benefits," correct?
 3 A. Right.
 4 Q. And private benefits, in your expert
 5 report, are different than social benefits?
 6 A. Could be.
 7 Q. And give me three examples, please, of
 8 how private benefits are different than social
 9 benefits.
 10 A. The seller of fossil fuels receives
 11 private benefits in the form of the price of the
 12 fuels sold. Increased carbon in the atmosphere
 13 can increase forest cover.
 14 Q. Can increase what?
 15 A. Increase forest cover.
 16 That is not something that the seller of
 17 the fossil fuels captures.
 18 The same private benefits captured in the
 19 price of fossil fuels also -- sorry.
 20 The private benefits captured in the
 21 price of fossil fuels do not include the social
 22 benefits that come from fewer deaths associated
 23 with warm temperatures, as opposed to cold.
 24 So social benefits are fewer deaths. The
 25 private benefits are the price of the fossil fuel,

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1 but the seller of the fossil fuel does not get
 2 paid for the deaths that are reduced by warmer
 3 temperatures.
 4 How many do we have, two? You want a
 5 third.
 6 Again, it's going to be the price of
 7 fossil fuels do not include increased crop yields
 8 that might -- that will occur as a result of more
 9 carbon.
 10 Q. Sir, I thought you used increased crop
 11 yields as a social benefit?
 12 A. I thought that's what I was explaining.
 13 Fewer -- fewer deaths --
 14 Q. What I --
 15 A. -- associated with warmth are a social
 16 benefit.
 17 Q. Let's be clear on the question.
 18 A. Okay.
 19 Q. My question is: What are private
 20 benefits that aren't social benefits?
 21 A. What are private benefits that are not --
 22 all private benefits are part of social benefits,
 23 but some social benefits are not captured in the
 24 private benefits.
 25 Q. Can you give me examples of private

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1 costs?
 2 A. Digging coal, exploring for oil.
 3 Q. Can you give me three examples of social
 4 costs?
 5 A. A connection between the production of
 6 fossil fuels and premature deaths, which is
 7 different than total deaths, is a social cost that
 8 isn't borne by the person who incurs the
 9 production costs.
 10 If, underscored, bolded -- if the private
 11 costs incurred to produce fossil fuels results in
 12 a reduction in the value of a ski resort because
 13 there's less snow, that is a cost that isn't
 14 incorporated into the private cost.
 15 Q. You say that is a cost -- sorry to
 16 interrupt you.
 17 A. The reduction in the value of the ski
 18 resort.
 19 Q. That's a social cost that isn't a private
 20 cost?
 21 A. It's not a private cost to the producer
 22 of fossil fuels. It's a private cost to the
 23 owners of the ski resort.
 24 Q. Do you have a third example of a social
 25 cost that isn't a private cost?

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1 A. Reduced property values. Reduced
 2 beach-front property values is a cost not borne by
 3 the fossil fuel producer. It is borne by the
 4 owner of the property whose value has gone down.
 5 In that sense, it remains a private cost.
 6 Q. Returning back to page 6. You reference
 7 that the Barrett report "does not use standard
 8 economic reasoning based on additional or marginal
 9 benefits and additional or marginal costs."
 10 What -- sorry.
 11 Where in your report do you use standard
 12 economic reasoning based on additional or marginal
 13 benefits or additional or marginal costs?
 14 A. I don't make the calculations that
 15 Barrett makes, so I haven't -- I haven't made the
 16 error that he is -- has.
 17 Q. What do you mean by the term "standard
 18 economic reasoning"?
 19 A. Standard economic reasoning is built on
 20 the comparison of additional costs of doing
 21 something -- I'll give you three examples, if
 22 you'd like -- relative to the additional benefits
 23 of doing that.
 24 Q. Please give me examples.
 25 A. So my decision to engage in the contract

1 with the state for this purpose was based upon my
2 calculation of the additional time I would spend
3 doing this relative to the additional benefits of
4 doing this.

5 Did you say three examples?

6 **Q. You did.**

7 A. You want the three?

8 **Q. Yes, please.**

9 A. Okay. A decision made by an investor as
10 to whether she should move capital from investing
11 in a fossil fuel company to investing in an
12 alternative energy company is based on the
13 additional costs given up by moving the investment
14 from a fossil fuel company to the additional
15 benefits gained by investing in an alternative
16 energy company.

17 A personal decision to decide which box
18 of cereal to buy is based on the additional cost
19 of foregoing the box of Corn Flakes relative to
20 the additional benefits of buying a box of Grape
21 Nuts.

22 All economic analysis is based on that
23 decision calculus.

24 **Q. On page 7 of your report, towards the**
25 **bottom, you reference, "Warmer temperatures are**

1 **grow more crops, that's a net gain?**

2 A. I haven't said anything about that. I've
3 described the calculus that a person would go
4 through in determining whether he or she would
5 adapt cropping patterns, as one type of
6 adaptation.

7 **Q. In your sentence, you talk about warmer**
8 **temperatures "causing cropping patterns to change**
9 **around the world," correct?**

10 A. Correct.

11 **Q. And assuming those cropping patterns mean**
12 **less crops, if Montana farmers and ranchers gain**
13 **from the adaptation, how would that be a net gain**
14 **from a social benefit standpoint?**

15 A. I don't accept this -- the assumptions,
16 so I'm not quite sure how I should answer your
17 question based on what is an assumption I have no
18 basis for.

19 **Q. What's the assumption you don't accept?**

20 A. You said assuming that cropping -- the
21 total crops, or however you phrased it, goes down
22 as a result of warming. I have no basis to assume
23 that.

24 **Q. Do you have any basis to assume it goes**
25 **up?**

1 **causing cropping patterns to change around the**
2 **world, and Montana farmers and ranchers are likely**
3 **to follow and gain from this adaptation," close**
4 **quote.**

5 **Will that be a net gain or a net loss?**

6 A. If they make the change, it's a net gain.
7 If they don't make the change, by the calculus we
8 just described -- sorry. Repeat.

9 If they make the change, it is a net
10 gain, and if they don't make the change, they're
11 saying that the existing distribution of
12 technology used is better than change.

13 **Q. By "net gain," do you mean a net gain to**
14 **Montana or a net gain to the world?**

15 A. We're, in this case, talking about the
16 adaptation in the form of changing cropping
17 patterns or crops, and so that's a personal
18 calculation of the type we just described
19 regarding marginal benefits and marginal costs.

20 So if adaptation occurs, the person
21 adapting is saying, better to adapt than not
22 adapt; hence, a net gain.

23 **Q. And in your opinion, it doesn't matter**
24 **if, as a result of the warmer temperature, there's**
25 **fewer crops globally, if -- as long as Montana can**

1 A. No. I didn't say that it did. And I
2 wouldn't assume that it -- I would assume -- I
3 wouldn't assume.

4 The statement is that cropping patterns
5 are changing and that adaptation is, at least in
6 part, the result of new information about climate,
7 warmer temperatures, less rainfall, whatever you
8 want to put into the changes in climate.

9 **Q. What -- let's go back to the -- to the**
10 **sentence "Montana farmers and ranchers are likely**
11 **to follow and gain."**

12 **What do you mean by "gain" here?**

13 A. I'll start with the movement onto the
14 plains in the -- in the 1800s resulted in more use
15 of Russian grains that were better suited for
16 colder climates.

17 The people who planted those crops gained
18 with that adaptation. Farmers --

19 **Q. Excuse me. So can I just interrupt?**

20 **They gained because there were no crops**
21 **there and then they planted crops?**

22 A. No. There were crops, there were cattle,
23 there were hay to feed cattle, sheep. They were
24 all uses of the land, but they gained by adapting,
25 given the new technology, if I could use that to

1 describe Russian grains.

2 So they gained because now the land could
3 produce wheat, Russian wheat, not owned by the
4 Russians but wheat produced from Russian grains,
5 and shifted away from sheep. So they gained as a
6 result of that.

7 If -- if temperatures warm and, as one of
8 the documents cited, asserts -- or measures, I
9 shouldn't say "asserts."

10 If temperatures warm and Montanans who
11 now produce wheat can shift to wine grapes, they
12 gain. That's an assessment of the marginal
13 benefits, namely producing wine grapes, compared
14 to the marginal costs, namely not producing
15 whatever the other crop is.

16 **Q. And that's the wine study that you cited
17 here?**

18 A. Yes. The -- the -- for that last
19 example. The -- fruits are moving north in
20 Michigan. And as a result, land that wouldn't
21 have produced fruit crops is now producing fruit
22 and not producing something else.

23 The marginal benefits exceed marginal
24 cost, the landowner gains, or the farmer.

25 **MR. GREGORY:** Why don't we take a

1 A. Well, if by "primarily" you mean was
2 50 percent or more generated by fossil fuels, the
3 answer has to be yes.

4 There's no place that's getting -- that
5 would push fossil fuels below 50 percent.

6 **Q. And, again, sir, is that your knowledge
7 or your assumption?**

8 A. Well, it's my -- call it knowledge, if
9 you read -- if -- I mean, the literature --
10 Mark Mills' point -- coming up, I presume, and the
11 work he's done, which is more extensive than just
12 the chapter in the book I edited.

13 But Steve Koonin makes the same point,
14 that we're a long ways from having -- what was the
15 term you used again? The -- a long ways from
16 having 50 percent plus 1 of the energy coming from
17 something other than fossil fuels, predominantly
18 used.

19 **Q. You mean everywhere, like in every state
20 of the United States?**

21 A. I can't even guess what state would have
22 more alternative energy than fossil fuel energy.
23 There may be one, but I -- I don't...

24 **Q. So, for example, that's not Montana?**

25 A. That's not, no.

1 ten-minute break?

2 **VIDEOGRAPHER:** We are off the record.
3 The time is 2:21 p.m.

4 (Whereupon, a break was then taken.)

5 **VIDEOGRAPHER:** We are back on the record.

6 The time is 2:43 p.m.

7 **BY MR. GREGORY:**

8 **Q. Returning to Exhibit 49, your expert
9 report, page 9. In the -- on the top paragraph,
10 it states, "As the people of Texas discovered in
11 the winter of 2022, it was nearly impossible to
12 make up for the loss of fossil fuel used to
13 generate electricity."**

14 **What do you mean there by "the loss of
15 fossil fuel"?**

16 A. The loss of electricity generated by
17 fossil fuel -- does that clarify -- it should --
18 should read.

19 **Q. In Texas, in the winter of 2022, for the
20 region that was affected by the -- what we'll call
21 the -- the freeze or the storm, how was
22 electricity primarily generated?**

23 A. I don't know the answer.

24 **Q. Again, you don't know if it was -- let's
25 use the term renewables, if it was fossil fuels?**

1 **Q. The state that has more electricity
2 generated from non-fossil fuels than fossil fuels?**

3 A. Montana would not be a state that has
4 more generated by non-fossil fuels. There were a
5 lot of notes in there, so I don't know where...

6 **Q. In the next sentence, you reference
7 "rents that are lost."**

8 **What do you mean by "rents"?**

9 A. Rents are returns in excess of what the
10 asset would generate in a different use. The chef
11 at a restaurant who's paid more than she was paid
12 to be a waiter is earning rents as a chef.

13 **Q. Would you agree there is a substantial
14 consensus that climate damages are quite high?**

15 A. I don't know what "quite high" means,
16 so...

17 **Q. Tens of billions.**

18 A. I don't know -- I have no idea what --
19 how -- I -- I don't know.

20 **Q. You don't know about climate damages?**

21 A. I know there are climate damages, I don't
22 know the magnitude of them.

23 **Q. If there are climate damages, why is it
24 beneficial -- climate damages from producing and
25 using more fossil fuels, in your opinion, why is**

1 **it beneficial to produce and use more fossil**
2 **fuels?**

3 A. I'm sorry, but climate damages -- can
4 either you clarify or can I clarify that it's not
5 climate damages but damages of the -- to property
6 that's on an ocean front that now is inundated
7 with tidal floods.

8 **Q. By way of example, yes.**

9 A. So that -- I wouldn't call that a climate
10 damage. I would call it a property damage. But
11 just so we're clear, is that --

12 **Q. That's fine.**

13 A. Okay.

14 **Q. So would you prefer the term damages as a**
15 **result from a climate event?**

16 A. Not a climate event because that's not
17 what climate change is. It's not a climate event.

18 A hurricane is a climate event, doesn't
19 necessarily mean it's climate change.

20 Lots of debate about hurricanes so...

21 **Q. Uh-huh. So what term would you prefer**
22 **using?**

23 A. I'll state a question for -- that I
24 answer; is that okay?

25 **Q. Sure.**

1 **What do you understand the term**
2 **"hydrocarbon era" to mean?**

3 A. Over the past two centuries, the rise in
4 use of fossil fuels is what I would have written,
5 but -- well, I wouldn't have said fossil fuels
6 because it could be burning wood or whatever
7 but -- so I assume that carbon -- hydrocarbon
8 refers to all carbons that we use to create
9 energy.

10 So, for example, I guess as an example,
11 production of fertilizer has greatly -- sorry.

12 The production of fertilizer has led to a
13 reduction in the share of an economy's GDP devoted
14 to requiring fuel and food -- food in this case.

15 **Q. At the bottom of page 9, you've**
16 **highlighted this language, quote, "even if**
17 **Montana's laws allowed policy makers to take**
18 **account of costs and benefits outside the state."**

19 **What do you mean here by "Montana's**
20 **laws"?**

21 A. Under existing law, policy makers are not
22 allowed to take account of costs and benefits that
23 don't accrue within the state.

24 So if we go back to the question of -- of
25 exporting this -- this carbon in the form of that

1 A. The question I will ask myself is: Does
2 the -- do the damages that result from climate
3 change exceed the benefits that we get from -- do
4 the damages that result from burning fossil fuels
5 or -- or emitting carbon -- do the damages caused
6 by emitting carbon exceed the benefits from
7 emitting carbon?

8 Is that a useful question? I don't want
9 to answer if it isn't.

10 **Q. Yeah -- go ahead.**

11 A. Okay. So I don't have the answer to
12 that, per se, but it would require knowing an
13 aggregate for the world, what are the damages.

14 And back to hurricanes, there's lots of
15 debate as to what are the -- what are the damages
16 that are truly due to climate change caused by --
17 by carbon.

18 And then what are -- we could settle that
19 part, what are the values of those damages, and
20 how is that -- how does that balance against the
21 fact that we have fewer deaths from cold.

22 But we'd want to aggregate all those on
23 each side to answer the question.

24 **Q. In -- on page 9, there's a reference to**
25 **the "hydrocarbon era."**

1 lump of coal that we talked about earlier, that
2 results at something taking place out of the
3 state. Whatever that something is, is not
4 something that policies in Montana -- policy
5 makers are supposed to incorporate into their
6 decisions.

7 And speaking of that example, we export a
8 lump -- that lump of coal to Idaho, Idaho burns
9 the coal, they could sequester the coal, as we've
10 talked about, with regard to the coal that the
11 Crow owned.

12 So who's -- who's causing the problem, us
13 by exporting or them by burning? And the policies
14 of Montana say we can't -- can't calculate
15 whatever they're doing with it.

16 So we couldn't -- if they sequestered it,
17 we couldn't say, Ah, look at the wonderful things
18 we did in Montana, because the -- Idaho would get
19 the credit for it, if they burned it similarly.

20 **Q. It's correct, sir, though that you know**
21 **if coal comes out of the ground, it's an**
22 **incredibly high degree of certainty that it's**
23 **going to be burned?**

24 A. Yeah. Yeah. Yeah. But, again, the
25 research that I'm working on with respect to

1 tribes and tribal coal, my passion, if you will, I
2 don't know -- I wouldn't force them to dig it out
3 and then leave it in a pile. But it need not be
4 dug out and burned, is my point.

5 **MR. GREGORY:** I'd like to mark as the
6 next exhibit in order an article by Matt Ridley,
7 R-i-d-l-e-y, on "Why climate change is good for
8 the world."

9 (Whereupon, Exhibit No. 55 was
10 marked for purposes of
11 identification.)

12 **BY MR. GREGORY:**

13 **Q. Is Exhibit 55, the article by**
14 **Matt Ridley, one of the sources you cite for your**
15 **expert report?**

16 A. Yes.

17 **Q. And is it your understanding Matt Ridley**
18 **is a climate scientist?**

19 A. No. He's a scientist, but not a climate
20 scientist.

21 **Q. Have you ever reviewed what his education**
22 **is?**

23 A. Yes.

24 **Q. And in what area or areas of science has**
25 **he degrees or a degree?**

1 A. Yep, yes.

2 **MR. GREGORY:** Next, sir, we're going to
3 mark a cover page and two pages from the book,
4 False Alarm, by Bjorn Lombord.

5 (Whereupon, Exhibit No. 57 was
6 marked for purposes of
7 identification.)

8 **THE WITNESS:** And those pages are? So I
9 can look. No page numbers?

10 **MR. GREGORY:** I'll stipulate to that.
11 That's why when you asked me what the page numbers
12 are, there are no page numbers. I think you're --
13 oh, there you are.

14 **MR. STERMITZ:** What's the exhibit number
15 for this one?

16 **MR. GREGORY:** Fifty-seven.

17 **THE WITNESS:** Forty-one.

18 **BY MR. GREGORY:**

19 **Q. And 42.**

20 A. And 42, I think. Yeah, 41 -- no.

21 **Q. Okay.**

22 A. Yeah, 41 and 42.

23 **Q. Okay. Thank you.**

24 **And those are the pages you cite at**
25 **Footnote 5 on page 4 of your report, correct?**

1 A. A degree, Ph.D. in, I think, biology.
2 I'm sure it's biology. I'm starting to say
3 botany, I know it's not botany.

4 **MR. GREGORY:** We'll mark as the next
5 exhibit in order the blog post you brought today
6 from Matt Ridley.

7 (Whereupon, Exhibit No. 56 was
8 marked for purposes of
9 identification.)

10 **BY MR. GREGORY:**

11 **Q. Is the document we've marked as**
12 **Exhibit 56 a copy of the blog post -- post you**
13 **brought from Matt Ridley?**

14 A. Yes. But not referred to in the report.

15 **Q. Do you -- why did you bring this blog**
16 **post with you today?**

17 A. I brought it because in preparing for
18 today I did a Google search on other -- other
19 publications from Lord Ridley and found it, and if
20 I had found it before, it would have been
21 referenced along with the other -- and also would
22 have been referenced with -- with -- to a book on
23 innovation that came out roughly about the time I
24 was preparing the report.

25 **Q. The book, How Innovation Works?**

1 A. Yes.

2 **Q. And then you also reference the Pindyck**
3 **article, and I'm going to use this copy because it**
4 **has color.**

5 A. That's fine. Was that mine?

6 **Q. No.**

7 **MR. GREGORY:** We'll mark that as
8 Exhibit 58.

9 (Whereupon, Exhibit No. 58 was
10 marked for purposes of
11 identification.)

12 **THE WITNESS:** The color being the
13 highlighting that I did on the electronic version?

14 **MR. GREGORY:** No, the color of the
15 graphs.

16 **THE WITNESS:** Oh, okay. So go ahead.

17 **BY MR. GREGORY:**

18 **Q. Is what we've marked as Exhibit 58 a copy**
19 **of the Pindyck article that you reference in your**
20 **sources?**

21 A. Yes. My copy doesn't have color.

22 **MR. GREGORY:** We're going to mark as
23 Exhibit 59 the copy that you brought that has the
24 highlighting.

25 ///

1 (Whereupon, Exhibit No. 59 was
2 marked for purposes of
3 identification.)

4 **THE WITNESS:** I no longer have that one.
5 So is that mine or -- thank you.

6 **BY MR. GREGORY:**

7 **Q. And is what we've marked as Exhibit 59**
8 **the Social Cost of Carbon Revisited article by**
9 **Robert Pindyck that you brought with you today**
10 **that has your personal highlights?**

11 A. Yes. And it is the same as Exhibit 58.
12 Is that the previous one?

13 **Q. On page 10 of your report, Exhibit 49,**
14 **you state, in part, "The youth plaintiffs aren't**
15 **worried about starvation" -- do you see that at**
16 **the top?**

17 A. Yes.

18 **Q. -- "but pursuing drastic global policies**
19 **to reduce GHG emissions will leave them poorer."**

20 **How do you know none of the youth**
21 **plaintiffs are worried about starvation?**

22 A. I don't know any of the youth plaintiffs,
23 so I don't know whether they're worried about
24 starvation.

25 **Q. Is -- is it your opinion that climate**

1 **page 10, you reference "drastic global policies to**
2 **reduce GHG emissions."**

3 **What drastic global policies are you**
4 **referring to there?**

5 A. Policies that stipulate a date by which
6 we will cease using fossil fuels.

7 **Q. Any other drastic global policies?**

8 A. That one pretty well takes care of it.

9 **Q. Is it your understanding in -- that in**
10 **this case, the Held versus State of Montana case,**
11 **that the youth plaintiffs are pursuing a policy**
12 **for a date by which we will stop using fossil**
13 **fuels?**

14 A. To my knowledge, the case does not argue
15 for such a policy.

16 Was that your question?

17 **Q. Yes, sir.**

18 A. Maybe --

19 **Q. What's your understanding of what the**
20 **youth plaintiffs are seeking as relief in this**
21 **case?**

22 A. I do not know.

23 **Q. In the next sentence, you reference**
24 **"curtailing fossil fuel production in Montana will**
25 **add few environmental benefits to the state's**

1 **change has not been linked to food insecurity?**

2 A. By "food insecurity," you mean --

3 **Q. The scarcity of food, having to get food**
4 **from -- go distances to get food; things along**
5 **those lines?**

6 A. Global food production has consistently
7 been increasing. Caloric intake has consistently
8 been intaking -- increasing.

9 So I'm not quite sure what you mean by
10 having to go farther to get it.

11 **Q. Well, have you read any literature such**
12 **as the -- chapter 5 of the IPCC report on food**
13 **security?**

14 A. I've looked at the IPCC report. I don't
15 know what chapter it is, and I don't recall the
16 chapter.

17 **Q. Do -- so you don't recall -- have you**
18 **read literature on food security as a result of**
19 **climate change?**

20 A. Yes.

21 **Q. And is it your understanding that climate**
22 **change is creating food insecurity around the**
23 **globe?**

24 A. No.

25 **Q. In the same sentence on the top of**

1 **citizens."**

2 **Do you see that language?**

3 A. Yes.

4 **Q. What environmental benefits are you**
5 **referring to?**

6 A. This goes back to the discussion of much
7 earlier, on pages 2 and 3, I believe, regarding
8 Montana's share of carbon emissions globally, and
9 to the point that if Montana were to curtail
10 fossil fuel production, it would not affect
11 climate change.

12 In other words, would not affect the
13 environmental benefits that are the basis -- the
14 loss of which is the basis of this lawsuit.

15 **Q. In your sentence, you state "curtailing**
16 **fossil fuel production in Montana will add few**
17 **environmental benefits to the state's citizens."**

18 **My question again is: What are the few**
19 **environmental benefits?**

20 A. The environmental benefits referred to in
21 this sentence are the improvement in the clean and
22 healthy environment, which -- let me state it --
23 the same sentence hardly any different.

24 That curtailing fossil fuel production in
25 Montana will not increase the -- will not increase

1 the right to a clean and healthful environment.
 2 **Q. You go on, it "will reduce the potential**
 3 **for increasing incomes for the youth who must**
 4 **leave that state in search of better paying jobs."**

5 **Why must youth leave that state in search**
 6 **of better paying jobs?**

7 A. That state, referring to Montana, is what
 8 I probably should have said, the state, or
 9 Montana.

10 Now, restate the question.
 11 (Whereupon, a portion of the
 12 previous testimony was read
 13 back.)

14 **THE WITNESS:** My reference is to the fact
 15 that the youth of the state are leaving in search
 16 of higher paying jobs. I don't have a reference
 17 for that, but they are available, it would say
 18 that.

19 They wouldn't have to. You could choose
 20 to stay in the state and not have higher paying
 21 jobs.

22 **BY MR. GREGORY:**

23 **Q. What does that have to do with fossil**
 24 **fuel production?**

25 A. Back to the discussion we had earlier

1 has to be less.

2 **Q. And so GDP, rather than health and an**
 3 **improved environment, should drive the decision?**

4 A. No. I'm not making any statement about
 5 what it -- what should drive the decisions.

6 If the decision is regarding -- is based
 7 on the marginal benefits of staying in the state
 8 at the current salaries versus the marginal
 9 benefits of leaving the state for a higher salary,
 10 then that would lead one to expect departure.
 11 Doesn't say they should or shouldn't.

12 It's back to how -- how -- how economic
 13 reasoning would deal with reduced GDP.

14 We, as human beings, don't make
 15 calculations entirely based on income or GDP. We
 16 include location relative to families, all manner
 17 of other values that go into our calculus.

18 But on that dimension of the calculus, at
 19 the margin, people would leave.

20 **Q. Where in your report do you discuss how**
 21 **diminished production of fossil fuels will affect**
 22 **the future earnings of Montana's youth?**

23 A. I did not refer to it here purposefully
 24 because I didn't want to get into that quagmire.

25 I consider it a quagmire because the

1 about GDP and the size of GDP, the state's gross
 2 domestic product, that will be reduced if we
 3 curtail fossil fuel production.

4 **Q. What does curtailing fossil fuel**
 5 **production have to do with the potential for**
 6 **increasing incomes for the youth who must leave**
 7 **that state in search of better paying jobs?**

8 A. The increase, the increasing in -- the
 9 increase in incomes will be less, as a result of
 10 curtailing fossil fuel production.

11 And if someone wants a higher income,
 12 they will not be able to get it as readily as they
 13 would if GDP were increasing.

14 **Q. Fossil fuel production is a high-paying**
 15 **job?**

16 A. Well, now we're -- we'd have to define
 17 "high-paying," but this is not referring to fossil
 18 fuel jobs, necessarily, it's referring to the GDP
 19 of the state, which measured then, in per capita
 20 terms, is lower than it would be without fossil
 21 fuel production.

22 **Q. How do you know that?**

23 A. Because GDP is -- because fossil fuel
 24 production is a share of GDP. And if you take
 25 that share away, GDP, by math, arithmetic, rather,

1 question would be: Well, what would be a
 2 sufficient decline in GDP to induce departure?

3 **Q. Is it your opinion, sir, that increasing**
 4 **the use of renewable energy will not result in**
 5 **jobs?**

6 A. Say that again.

7 **Q. Is it your opinion that increasing the**
 8 **use of renewable energy will not result in jobs?**

9 A. Increasing the use of renewable energy,
 10 it will increase jobs in the renewable sector and
 11 increase the share of GDP from the renewable
 12 sector.

13 **Q. Do you have an opinion whether or not**
 14 **increased CO2 emissions will be beneficial for crop**
 15 **production in Montana?**

16 A. I do not have an opinion on that.

17 **Q. Have you studied the types of economic**
 18 **opportunities and job growth that would result**
 19 **from transitioning Montana away from fossil fuel**
 20 **production to energy based on renew- -- what we'll**
 21 **call renewables?**

22 A. No.

23 **Q. On page 10, you talk about the social**
 24 **cost of carbon, page 10 of Exhibit 49.**

25 **First off, briefly, can you define the**

1 "social cost of carbon"?

2 A. The social cost of carbon are the

3 negative effects that climate change will have.

4 **Q. And is the way the social cost of carbon**

5 **depicted, typically, is a price tag on the damages**

6 **created by each metric ton of greenhouse gas**

7 **emissions?**

8 A. In part.

9 **Q. What else?**

10 A. The rate at which future damages are

11 discounted, the probability that there will be

12 future damages, and I'm leaving out one thing that

13 Mr. Barrett correctly points out, go into that

14 calculation.

15 **Q. And you said the rate at which future**

16 **damages are discounted, essentially the discount**

17 **rate?**

18 A. Yes. Well -- yes.

19 **Q. Briefly can you define the discount rate?**

20 A. The discount rate is the measure of the

21 trade off between cost today and cost tomorrow or

22 benefits today and benefits tomorrow. The

23 discount is there because people demonstrate by

24 actions that benefits today are preferred to

25 benefits tomorrow, depending on the size of the

1 of individuals, call it society, prefers that --

2 that option.

3 **Q. Which option?**

4 A. The option of putting a greater value on

5 offspring and -- and the offspring's offspring.

6 But -- but, again, that's -- that doesn't

7 mean that you or some individual might not have

8 such a preference, but...

9 **Q. But the -- for purposes of the discount**

10 **rate, it states that -- well, the future is**

11 **theoretically less valuable than the present?**

12 A. Yes. Again, depending on -- the same

13 value, if you will, dollars, if you use that, now

14 or later, the discount rate says later is not

15 worth as much.

16 But that's -- if -- if the future brings

17 \$10 for every dollar spent, then -- then the

18 question is what's the discount rate on -- on the

19 dollar, given the opportunity.

20 **Q. I touched on this briefly before, but is**

21 **there a reason you didn't cite to any of the IPCC**

22 **assessments in your report?**

23 A. The reason I didn't refer to those is

24 that my assessment was that the economics

25 literature has better reasoning and data behind

1 benefits, and the same with costs.

2 **Q. So --**

3 A. So people discount futures because they

4 prefer the present.

5 **Q. So a higher discount rate, say 5 percent,**

6 **puts a greater value on present benefits than,**

7 **say, a discount rate of 2 percent?**

8 A. Correct.

9 **Q. In calculating the social cost of carbon,**

10 **why is a discount rate used at all?**

11 A. A discount rate is used because that

12 which is -- occurs in the future is worth less.

13 The same return in the future, or cost in the

14 future, is worth less than the cost or return

15 today.

16 **Q. So if one values one's children or**

17 **grandchildren more than one values oneself, would**

18 **the discount rate be zero?**

19 A. Or even negative.

20 **Q. And if one values one's children or one's**

21 **grandchildren less than one values oneself, the**

22 **discount rate would be high?**

23 A. Yes. Other than anomalies, there aren't

24 many cases one can find in human history or today

25 that suggests that -- that individuals or groups

1 the discount rate suggested by people such as

2 Pindyck.

3 **Q. Is it -- I also notice, as I said**

4 **earlier, you don't cite the United States national**

5 **assessment.**

6 **Is there a reason you don't cite the U.S.**

7 **national assessment?**

8 A. Same answer as before.

9 **Q. And Pindyck, which we've marked as**

10 **Exhibits --**

11 A. Fifty-eight.

12 **Q. -- 58 and 59 --**

13 A. Yes.

14 **Q. -- Pindyck references an integrated**

15 **assessment model, correct?**

16 A. Yes.

17 **Q. Briefly can you explain what an**

18 **integrated assessment model is?**

19 A. An integrated assessment model is one

20 that takes into account the variables we've

21 already talked about, the discount rate, the --

22 the probabilities of whatever the occurrence is,

23 benefit or cost, the time in the future when that

24 would occur, and the damages or benefits that

25 would occur.

1 **Q. In writing about the Pindyck article, you**
 2 **state it's "The most recent and best summary of**
 3 **where economics stand on these two modules."**

4 **I'm at the bottom of page 10.**

5 **What two modules are you referring to?**

6 A. The -- the damage module and the discount
 7 modules. As is stated above, the latter two are
 8 of utmost important to economists. No surprise
 9 that economists do not agree, et cetera. Those
 10 two modules, two out of the four.

11 **Q. And in your highlighted version of**
 12 **Pindyck, in the abstract you -- you highlight, I**
 13 **believe, that Pindyck is -- has a social cost of**
 14 **carbon at 80 to 100 and a slash MT.**

15 **Do you see that?**

16 A. Uh-huh.

17 **Q. What's the MT mean?**

18 A. It's not Montana. Metric tons, per
 19 metric tons.

20 **Q. Okay. And then it -- Pindyck goes on to**
 21 **state that the 80 to 100 per metric ton is well**
 22 **above the -- and it's IAM, that's an acronym for**
 23 **integrated assessment model, correct?**

24 A. Uh-huh.

25 **Q. Is that correct?**

1 A. Yes.

2 **Q. -- still above the IAM-based estimates**
 3 **used by the U.S. Government.**

4 **And do you remember in 2019 what the**
 5 **IAM-based estimates for the social cost of carbon**
 6 **was?**

7 A. No.

8 **Q. If you go to the -- Exhibit 59, the third**
 9 **page.**

10 A. Uh-huh, yes.

11 **Q. And there's point 2, about two-thirds of**
 12 **the way down, that talks about climate scientists**
 13 **implying a social cost of carbon around \$300 or**
 14 **more, and economists implying a social cost of**
 15 **carbon of around 170.**

16 **Do you see that?**

17 A. Yes.

18 **Q. Have you ever set forth what you believe**
 19 **to be an appropriate social cost of carbon?**

20 A. No.

21 **Q. Have you -- did you, rather, look to see**
 22 **if there were any studies on where Pindyck got the**
 23 **economists implying a social cost of carbon of**
 24 **around 170? Did you look at those studies?**

25 A. I did not. I believe that that is from

1 the survey he did, but I'd have to refresh my
 2 memory.

3 **Q. Now, if you look at -- are you familiar**
 4 **with the term "negative externalities"?**

5 A. Yes.

6 **Q. Briefly, what's a negative externality?**

7 A. I've written extensively on the term
 8 "externalities" in general. And I don't use the
 9 word, so I have trouble providing an answer to you
 10 as to a definition for a negative externality.

11 Economists would say -- not -- I'm an
 12 economist. Some economists would say a negative
 13 externality is a cost imposed by one person or
 14 group on another, without the person making the
 15 imposition taking account of that cost.

16 **Q. Is it your opinion, using the term**
 17 **"negative externalities," that there are**
 18 **substantial negative externalities associated with**
 19 **the production of fossil fuels?**

20 A. Repeat the question.

21 **Q. In your opinion, are there substantial**
 22 **negative externalities associated with the**
 23 **production of fossil fuels?**

24 A. No, because I don't use the term
 25 "negative externalities."

1 Let me explain in the context of -- of --
 2 of what it means for something like beach-front --
 3 beach-front erosion or -- call it -- just stick
 4 with beach-front erosion.

5 Some economists would say there's a
 6 negative externality in that the value -- the --
 7 the person emitting carbon imposes a cost on the
 8 person at the beach.

9 Ronald Coase, who won the Nobel prize in
 10 economics with one of the most famous of all
 11 econ- -- economics articles explained that one
 12 could not claim an externality until one knows who
 13 has what rights.

14 In other words, does the beach-front
 15 owner have a right to not have his or her beach
 16 eroded, or does the emitter of carbon have a right
 17 to use the atmosphere as a disposal medium for
 18 carbon?

19 Without answering that question, Coase
 20 argued, you can't determine an externality.

21 People on beach fronts bear the cost.
 22 And the fact that they bear the cost suggests they
 23 don't have a right to be free from beach-front
 24 erosion.

25 Hence, it's -- by Coase's logic, it's

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1 impossible to call that a negative externality.
 2 **Q. Sir, at page 11 of your report,**
 3 **Exhibit 49 --**
 4 A. Yes.
 5 **Q. -- at the top, referencing Pindyck, you**
 6 **note he finds -- and, I'm sorry, I should back up.**
 7 **When you use the acronym "SCC," that's**
 8 **the social cost of carbon, correct?**
 9 A. Correct.
 10 **Q. And you note that Pindyck finds the**
 11 **social cost of carbon to be between 80 to 100, and**
 12 **Richard Barrett has a figure of \$125.**
 13 A. Correct.
 14 **Q. Have you done any research on studies**
 15 **concerning the social cost of carbon, after**
 16 **Pindyck?**
 17 A. After. I have read other studies of the
 18 social cost of carbon. I can't recall all dates.
 19 And you asked specifically about after
 20 Pindyck's 2019?
 21 **Q. Yes.**
 22 A. No.
 23 **Q. And you can't remember if they were**
 24 **before or after?**
 25 A. I -- I would have to look into my files

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1 and see.
 2 **Q. Have you seen any -- what I'm going to**
 3 **term "peer-reviewed studies" that have a social**
 4 **cost of carbon above Richard Barrett's \$125**
 5 **that -- where the study was published after 2019?**
 6 A. I don't recall.
 7 **Q. What is the -- when you write on page 11**
 8 **that "coal does not pass benefit-cost muster,**
 9 **mainly because coal is so cheap," what do you mean**
 10 **by that?**
 11 A. As Mr. Barrett correctly notes, the
 12 relevant comparison, assuming we know the social
 13 cost of carbon, and assuming that the price of the
 14 fuel are accurate, the passing muster would
 15 require that the price, the private benefit,
 16 exceeds the social cost of carbon.
 17 Coal, being cheap, has a low price and,
 18 because of that, has a tougher time having the
 19 benefits -- marginal benefits exceed the marginal
 20 cost.
 21 **Q. Well, sir, it's not only a tougher time;**
 22 **it doesn't pass, right?**
 23 A. It doesn't, yep.
 24 **Q. So it flunks?**
 25 A. Say it again.

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1 **Q. It flunks?**
 2 A. Yes.
 3 **Q. Then in your next bullet point on**
 4 **page 11, you end by stating, "oil nearly passes at**
 5 **the upper end of SCC."**
 6 **What are you saying, for purposes of that**
 7 **statement, is the "upper end"?**
 8 A. The upper end being -- taking Pindyck's
 9 number, 100 -- sorry. That's for the social cost
 10 in general.
 11 The social cost of oil is 47.
 12 It should have said oil and gas there.
 13 I -- again, there's a bit -- mistake in the line
 14 there. I'm not sure what the -- the spread of 47
 15 to 37 refers to.
 16 But the -- Barrett's estimate of --
 17 estimate of \$49 -- so taking the price of 45, it
 18 nearly passes in the sense that it passes 37. It
 19 doesn't quite pass 47, and it doesn't pass 59.
 20 **Q. So if Barrett's number of the social cost**
 21 **of carbon at \$125 was used, oil would not pass?**
 22 A. Correct.
 23 Again, though, the social costs of these
 24 various fuels is different, so the -- the \$125
 25 cost is different than the cost -- social cost of

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1 oil or coal or natural gas. Natural gas being the
 2 lowest.
 3 **Q. The then in terms of natural gas, you**
 4 **write, "natural gas passes benefit-cost muster at**
 5 **both the upper and lower ends"?**
 6 A. Yes.
 7 **Q. At what point would it not pass muster?**
 8 A. If the price were less than -- were 605,
 9 or if you take the lower end, 484.
 10 **MR. GREGORY:** Why don't we take a quick
 11 break. I'd like to take a five-minute break so we
 12 finish --
 13 **THE WITNESS:** Okay.
 14 **MR. GREGORY:** -- by the end of our next
 15 break. Thank you.
 16 **VIDEOGRAPHER:** We are going off the
 17 record. The time is 3:41 p.m.
 18 (Whereupon, a break was then taken.)
 19 **VIDEOGRAPHER:** We are back on the record.
 20 The time is 3:56 p.m.
 21 **BY MR. GREGORY:**
 22 **Q. Exhibit 49, at page 11, under the heading**
 23 **Roman numeral VI starts, "The Report asserts."**
 24 **Is that the Richard Barrett report?**
 25 A. Yes.

1 **Q. Is it your recollection that**
 2 **Richard Barrett, in his report, refers to such**
 3 **things as wildfires, air quality, water flows and**
 4 **recreational opportunities?**
 5 A. Yes. We went through this earlier.
 6 **Q. And is it your opinion, sir, if you have**
 7 **one, that greenhouse gas emissions contribute to**
 8 **wildfires?**
 9 A. Contribute via climate change?
 10 **Q. Yes.**
 11 A. Yes, contribute to.
 12 **Q. Yes. And is it your opinion, sir, that**
 13 **greenhouse gas emissions -- again, to use your**
 14 **term, via climate change -- contribute to poor air**
 15 **quality?**
 16 A. Have a negative affect on air quality.
 17 **Q. On page 12 of your report, Exhibit 49, in**
 18 **the paragraph that starts, "The expert scientists**
 19 **claim," and then you have a quote and you cite to**
 20 **"Report, page 8."**
 21 **Is that the Barrett report?**
 22 A. Once again, I have to clarify.
 23 It -- it does refer to the Barrett
 24 report, and I have to clarify for you later
 25 because I can't recall why the parentheses is

1 there.
 2 But I was looking at two different
 3 documents, both of which had the same wording but
 4 had different pagination.
 5 The quote, though, is from Barrett.
 6 **Q. In the -- on -- again, on page 12, in the**
 7 **section Roman numeral VII, you write about the**
 8 **"Environmental Kuznets Curve."**
 9 A. Yes.
 10 **Q. Briefly, what's the Environmental Kuznets**
 11 **Curve?**
 12 A. Simon Kuznets won the Nobel prize for
 13 work he did on the relationship between economic
 14 growth and income distribution, noting that it was
 15 not a continuous relationship.
 16 He then -- sorry.
 17 People then looked at the relationship
 18 between economic growth and environmental quality
 19 and found, like income and income distribution,
 20 that the relationship was not linear, but rather
 21 environmental quality diminished as incomes grew
 22 initially, and then improved as people ultimately
 23 got richer.
 24 And then that relationship, based on
 25 Kuznets' earlier work, was dubbed the

1 Environmental Kuznets Curve.
 2 **Q. Did Kuznets discuss climate change or**
 3 **greenhouse gas emissions in his work on the**
 4 **Environmental Kuznets Curve?**
 5 A. He didn't even do work on the
 6 Environmental Kuznets Curve. It was the other
 7 people who dubbed the relationship the Kuznets --
 8 the Environmental Kuznets Curve.
 9 **Q. To your knowledge, did Kuznets do any**
 10 **work in connection with climate change or**
 11 **greenhouse gas emissions?**
 12 A. Not to my knowledge, and I'm pretty sure
 13 my knowledge is accurate to say no.
 14 **Q. Can you give me some examples of real**
 15 **world situations where the Environmental Kuznets**
 16 **Curve has been shown to be real?**
 17 A. Yes. Air quality follows the
 18 Environmental Kuznets Curve; that is to say people
 19 are willing to sacrifice societies, governments.
 20 Individuals are willing to sacrifice air quality
 21 to see their incomes rise up to a point, after
 22 which they want things, including cleaner air, as
 23 they get richer.
 24 Endangered species are not protected by
 25 low-income countries, are more protected by

1 high-income countries.
 2 Water quality is the same.
 3 **Q. If you go to page 13 of Exhibit 49 --**
 4 A. Uh-huh, yes.
 5 **Q. -- and there's a long paragraph in the**
 6 **middle. And halfway through that paragraph,**
 7 **there's a sentence that begins, "This provides a**
 8 **rationale for why the 2011 Montana legislature**
 9 **specifically amended MEPA to provide that policy**
 10 **makers should not" -- and "not" is bolded -- "take**
 11 **account of costs outside the state's borders."**
 12 **Do you see that sentence?**
 13 A. Yes.
 14 **Q. And are you familiar with why the 2011**
 15 **Montana -- Montana legislature amended MEPA?**
 16 A. No. And I don't say that this is the
 17 reason, I said it provides a rationale. Whether
 18 the legislature used that rationale, I'm not
 19 passing or asserting.
 20 **Q. Okay. So if I may restate it.**
 21 **It provides an abstract rationale --**
 22 A. That's right.
 23 **Q. -- that could have been used, but you**
 24 **don't know whether or not it was, in fact, used.**
 25 **Is that a fair way to put it?**

1 A. Yeah, that's a fair way to put it.
 2 **Q. Next -- in the next sentence, you**
 3 **reference "spillover costs."**
 4 **Briefly, what are spillover costs?**
 5 A. Social costs not accounted for in -- by
 6 the private actors. My carbon emissions affect
 7 sea levels, and that isn't something I take into
 8 account, but does affect -- does -- my actions
 9 spill over onto the people who live on beaches or
 10 near beaches.
 11 It's -- spillover is just a common term
 12 used by economists, and my way of not using a
 13 negative externality.
 14 **Q. Sorry, sir, I'm looking for some language**
 15 **and I can't quite find it.**
 16 **At the top of page 14, you write, in**
 17 **part, "undertaking policies to reduce CO2 emissions**
 18 **in order to slow climate change would not be a**
 19 **rational move for the state because it has costs**
 20 **without benefits."**
 21 **In that sentence, sir, what is "it"?**
 22 A. Reducing climate change has costs --
 23 sorry.
 24 Reducing CO2 emissions has costs without
 25 benefits in Montana.

1 **policies to reduce CO2 emissions in order to slow**
 2 **climate change?**
 3 A. Not that I am aware of or could think of.
 4 **Q. Would it be irrational for the**
 5 **United States, as a federal government, to**
 6 **undertake policies to reduce CO2 emissions in order**
 7 **to slow climate change?**
 8 A. Given that the United States is one of
 9 the larger contributors to greenhouse gas
 10 emissions, it could be rational for the
 11 United States to make those reductions, but
 12 irrational if other countries simply offset our
 13 reductions by increasing theirs, U.S. v China.
 14 **Q. Would it be correct then, sir, for you to**
 15 **believe that -- I'm sorry -- to -- to -- would it**
 16 **be correct to state your opinion that for any**
 17 **individual country it would be irrational for that**
 18 **country to undertake policies to reduce CO2**
 19 **emissions in order to slow climate change, unless**
 20 **there were -- there were -- was global action by**
 21 **all countries --**
 22 A. Yes.
 23 **Q. -- to undertake policies?**
 24 A. Yes. If -- it was a long question, but
 25 if I got it correct that you were saying it might

1 **Q. Is it your position that undertaking**
 2 **policies to reduce CO2 emissions to slow climate**
 3 **change would be an irrational move for the state**
 4 **of Montana?**
 5 A. Did you say "irrational," I-r-r?
 6 **Q. Yes.**
 7 A. Yes.
 8 **Q. Can you give me some examples of what you**
 9 **mean here by "policies to reduce" climate change?**
 10 A. It's "policies to reduce CO2 emissions."
 11 **Q. I'm sorry. "Policies to reduce CO2**
 12 **emissions." Thank you.**
 13 A. Strict regulations on oil and gas
 14 exploration, stricter regulations on power plant
 15 emissions, requiring switching to electric cars.
 16 **Q. Would it be irrational for each of the 50**
 17 **states to undertake policies to reduce CO2**
 18 **emissions in order to slow climate change?**
 19 A. You said "each" not "all"?
 20 **Q. Each.**
 21 A. Each. Yes, because I think each state
 22 would, again, have a very small share in total
 23 greenhouse gas emissions.
 24 **Q. Are there any states where it would make**
 25 **sense for that state or those states to undertake**

1 be rational -- or it would be rational if all
 2 countries undertook those policies.
 3 **MR. STERMITZ:** I'm going to belatedly
 4 object to the question. I couldn't hit my button
 5 fast enough.
 6 That's irrelevant and not designed under
 7 Rule 26 to lead to the discovery of relevant
 8 evidence.
 9 **BY MR. GREGORY:**
 10 **Q. On page 14, under the heading Conclusion**
 11 **at the bottom, you write, in part, the "2011**
 12 **amendments to MEPA and the State Energy Policy may**
 13 **or may not result in net increases in greenhouse**
 14 **gas emissions."**
 15 **It's correct, is it not --**
 16 A. Yeah.
 17 **Q. -- that you have -- don't have an opinion**
 18 **one way or another about whether or not the 2011**
 19 **amendments to MEPA result in net increases to**
 20 **greenhouse gas emissions?**
 21 A. Correct.
 22 **Q. And the same would be true for the State**
 23 **Energy Policy, correct?**
 24 A. Correct.
 25 **Q. Okay. Then at the bottom of page 14, you**

1 write, "Additionally, the economic estimates of
2 the social costs of carbon are trending downward
3 because adaptation to climate change is reducing
4 the likelihood that those costs will be
5 significant."

6 What do you mean by "the economic
7 estimates of the social costs of carbon are
8 trending downward"?

9 A. That the -- the estimations of costs are
10 getting lower. I don't quite know how to rephrase
11 that sentence to answer your question.

12 Q. By trending downward, do you mean that
13 the economic estimates of social costs of carbon
14 are -- hypothetically were \$50 and now they're
15 trending to \$30?

16 A. Correct, hypothetically.

17 Q. Yes. And, sir, you also, on page 15, use
18 the term the "upper-bound estimates" of the social
19 cost of carbon.

20 Is that the \$100 figure? Is that what
21 you mean?

22 A. I would use that, or even the higher one,
23 the 125 that -- that Mr. Barrett uses.

24 Q. And in -- in your expert report, other
25 than the Barrett report -- I may have asked you

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2 * * * * *

1 this, but I just want to make sure I've asked you.

2 Other than the Barrett report, are you
3 addressing the opinions in -- in any other expert
4 report in this case?

5 A. No.

6 Q. So just Barrett?

7 A. Yes.

8 MR. GREGORY: Sir, if you can give me
9 five minutes, I think I'm either done or almost
10 done. So let me just go through my notes.

11 THE WITNESS: Oh, I was -- do I have a
12 choice?

13 VIDEOGRAPHER: We are going off the
14 record. The time is 4:14 p.m.

15 (Whereupon, a break was then taken.)

16 VIDEOGRAPHER: We are back on the record.
17 The time is 4:26 p.m.

18 MR. GREGORY: Dr. Anderson, I have no
19 further questions.

20 MR. STERMITZ: And we'll reserve
21 questions for the time of trial.

22 VIDEOGRAPHER: That concludes the
23 deposition. The time is 4:26 p.m.

24 (Whereupon, the deposition
25 concluded at 4:26 p.m.)

1 DEPONENT'S CERTIFICATE

2
3 I, DR. TERRY ANDERSON, the deponent in the
4 foregoing deposition, DO HEREBY CERTIFY, that I
5 have read the foregoing - 195 - pages of
6 typewritten material and that the same is, with
7 any changes thereon made in ink on the corrections
8 sheet, and signed by me a full, true and correct
9 transcript of my oral deposition given at the time
10 and place hereinbefore mentioned.

11
12
13 _____
14 DR. TERRY ANDERSON

15
16 Subscribed and sworn to before me this _____
17 day of _____, 2023.

18
19
20 _____
21 PRINT NAME:
22 Notary Public, State of Montana
23 Residing at: _____
24 My commission expires: _____

25 KF - Rikki Held, et al vs. State of Montana, et al

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C E R T I F I C A T E

STATE OF MONTANA)
) : Ss
COUNTY OF GALLATIN)

I, Kasey L. Fisher, Registered Professional Reporter and Notary Public for the State of Montana, residing in Bozeman, do hereby certify:

That I was duly authorized to and did swear in the witness and report the deposition of DR. TERRY ANDERSON in the above-entitled cause; that the foregoing pages of this deposition constitute a true and accurate transcription of my stenotype notes of the testimony of said witness, all done to the best of my skill and ability; that the reading and signing of the deposition by the witness have been expressly reserved.

I further certify that I am not an attorney nor counsel of any of the parties, nor a relative or employee of any attorney or counsel connected with the action, nor financially interested in the action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal on this the 12th day of December 2022.

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EXHIBIT 16

*Rikki Held, et al. v
State of Montana, et al.*

*Will Rosquist 30(b)(6)
June 17, 2022*

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Min-U-Script® with Word Index

MONTANA FIRST JUDICIAL DISTRICT COURT
LEWIS AND CLARK COUNTY

RIKKI HELD, et al.,

Plaintiffs,

vs.

Cause No. CDV-2020-307

STATE OF MONTANA, et al.,

Defendants.

30 (b) (6) VIDEO DEPOSITION UPON ORAL EXAMINATION OF
WILL ROSQUIST

BE IT REMEMBERED, that the 30(b)(6) video-recorded deposition upon oral examination of WILL ROSQUIST, appearing at the instance of the Plaintiffs, was taken at the offices of Fisher Court Reporting, 800 North Last Chance Gulch, Suite 101, Helena, Montana, on June 17, 2022, beginning at 9:00 a.m., pursuant to Montana Rules of Civil Procedure, before Robyn Ori English, Court Reporter - Notary Public.

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1 They won't be acting as attorney. I'll be counsel today,
 2 so...
 3 **VIDEO OPERATOR:** All right. The Court Reporter will
 4 now administer the oath.
 5
 6 WHEREUPON, the following proceedings were had and
 7 testimony taken, to wit.
 8
 9
 10 **WILL ROSQUIST,**
 11 called as a witness herein, having been first duly sworn,
 12 was examined and testified as follows:
 13
 14 **EXAMINATION**
 15
 16 **BY MR. SULLIVAN:**
 17 **Q. Good morning, sir.**
 18 **A. Good morning.**
 19 **Q. As you just heard, my name's Roger**
 20 **Sullivan, and I represent the Plaintiffs in this**
 21 **action. I don't believe we've ever met before, have**
 22 **we?**
 23 **A. I don't believe so.**
 24 **Q. Okay. Would you please state your name**
 25 **for the record?**

Page 6

1 **VIDEO OPERATOR:** This is the video-recorded and
 2 video-conferenced deposition of Will Rosquist, 30(b)(6)
 3 representative of the Montana Public Service Commission,
 4 taken in the Montana First Judicial District Court,
 5 Lewis & Clark County, Cause No. CDV-2020-307, Rikki Held,
 6 et al., versus State of Montana, et al.
 7 Today is June 17th, 2022. The time is 9:04 a.m.
 8 We are present at the offices of Fisher Court Reporting at
 9 800 North Last Chance Gulch, No. 101, in Helena, Montana.
 10 The Court Reporter is Robyn Ori English, and the video
 11 operator is Nicole Tomac of Fisher Court Reporting. The
 12 deposition is being taken pursuant to Notice.
 13 I would now ask the attorneys to identify
 14 themselves, who they represent and whoever else is
 15 present. For those appearing remotely, please state from
 16 where you are appearing.
 17 **MR. SULLIVAN:** My name is Roger Sullivan, attorney
 18 for the Plaintiffs.
 19 **MR. OESTREICHER:** Derek Oestreicher, attorney for the
 20 Defendant, State of Montana, representing PSC.
 21 **MR. HARRIS:** Tanner Harris. I'm an attorney for the
 22 Plaintiff.
 23 **MR. Hamilton:** Lucas Hamilton, staff attorney for the
 24 Montana Public Service Commission.
 25 **MR. SULLIVAN:** I think they're just in attendance.

Page 8

1 **A. Will Rosquist.**
 2 **Q. Where do you live?**
 3 **A. In Helena, Montana.**
 4 **Q. What's your work address?**
 5 **A. 1701 Prospect Avenue, Helena, Montana.**
 6 **Q. There's a few deposition rules that I'll**
 7 **review with you, notwithstanding you've probably**
 8 **had your deposition taken before?**
 9 **A. Once before, yes.**
 10 **Q. Okay. Just so that we make a record of**
 11 **it, as you know you're under oath. It would be**
 12 **useful to the Court Reporter when you respond to me**
 13 **if you would do so verbally instead of by gesture,**
 14 **which is normally okay, but not for purposes of the**
 15 **written record.**
 16 **A. Okay.**
 17 **Q. Thank you. If I ask a question,**
 18 **Mr. Rosquist, that's confusing to you, would you let**
 19 **me know and I'll try to rephrase it in a way that's**
 20 **more understandable to you?**
 21 **A. Yes.**
 22 **Q. Okay. And, again, since we're trans --**
 23 **we're taking this down for a written record, let's**
 24 **each one of us try to make an effort to speak one at**
 25 **a time.**

1 A. Okay.

2 **Q. You've given a deposition once**
3 **apparently. In -- in what proceeding was that?**

4 A. It was a Petition for Judicial Review of
5 a commission decision from some time ago, I think
6 sometime around 2002.

7 **Q. Do you offer sworn testimony in other**
8 **capacities other than in depositions?**

9 A. No, I don't.

10 **Q. I see that there's often pre-filed**
11 **testimony in proceedings before the Public Service**
12 **Commission. Have you ever participated in a**
13 **proceeding in that capacity?**

14 A. Can you clarify whether you mean as
15 someone who submits pre-filed testimony?

16 **Q. Yes, that's what I meant, I'm sorry.**

17 A. No, I don't.

18 **Q. Okay. I'd like to, if you would, turn in**
19 **the document notebook to Tab 4, Mr. Rosquist. And**
20 **I'll mark that, for identification purposes, as**
21 **Plaintiffs' Exhibit 1.**

22
23 (Deposition Exhibit No. 1 was marked
24 for identification)
25

1 **Q. (By Mr. Sullivan) What is that?**

2 A. This is my resume.

3 **Q. Are you a member of any professional**
4 **organizations?**

5 A. No, I'm not.

6 **Q. Where are you -- well, before that, let**
7 **me ask you, is the Public Service Commission, to**
8 **your knowledge, a member of any professional**
9 **organizations?**

10 A. I am not aware of any.

11 **Q. Okay. Where are you currently employed?**

12 A. At the Montana Public Service Commission.

13 **Q. How long have you worked for the Public**
14 **Service Commission?**

15 A. Approximately 31 years.

16 **Q. Could you briefly describe your**
17 **employment history with the Public Service**
18 **Commission?**

19 A. I started at the Public Service
20 Commission in 1991 as a utility rate analyst in the
21 economics and rate design bureau. I held that
22 position until approximately 2010 when I moved into
23 the position of bureau chief of the economics and
24 rate design bureau. And then in approximately 2016,
25 I became the administrator of the regulatory

1 division at the Public Service Commission.

2 **Q. I have noticed in some of the documents**
3 **that we'll look at later today a reference to the**
4 **Department of Public Service Regulation. What is**
5 **that?**

6 A. The Department of Public Service
7 Regulation is the State agency, and the Public
8 Service Commission is the head of the Department of
9 Public Service Regulation. We often use the term
10 "Public Service Commission" interchangeably with
11 "Department of Public Service Regulation."

12 **Q. Just to clarify then, the Montana**
13 **Department of Public Service Regulation is an agency**
14 **of the State of Montana?**

15 A. That's correct.

16 **Q. Who is your boss?**

17 A. My boss is the executive director of the
18 agency, Erik -- Erik Wilkerson.

19 **Q. How long has Mr. Wilkerson been employed**
20 **with the Public Service Commission for,**
21 **interchangeably, the Department of Public Service**
22 **Regulation?**

23 A. I am not sure exactly how long he has
24 been there. I believe it's been less than a year.

25 **Q. And what, to your knowledge, did he do**

1 **prior to becoming head of the agency?**

2 A. So just to clarify, Mr. Wilkerson is not
3 the head of the agency, he's the executive director.
4 But before he was the executive director, he, I
5 believe, was a school superintendent.

6 **Q. Do you happen to know where he was a**
7 **school superintendent?**

8 A. Townsend School District, I believe.

9 **Q. To your knowledge, did he have any prior**
10 **experience with utility regulation prior to becoming**
11 **executive director?**

12 A. I don't know.

13 **Q. Mr. Rosquist, what did you do to prepare**
14 **for this deposition?**

15 A. I reviewed the portions of the Complaint
16 that pertained to the Public Service Commission, and
17 I reviewed the Answer to the Complaint with respect
18 to those portions dealing with the Public Service
19 Commission. I reviewed Responses to Discovery that
20 involved responses related to the Public Service
21 Commission. I reviewed several prior commission
22 documents related to decisions on resource planning
23 and several orders related to rate making. I
24 reviewed the State of Montana energy policy. I
25 reviewed the commission's organizational rules and

1 rules on resource planning and held several mock
2 depositions with our attorneys.

3 **Q. Did you bring any of those documents with**
4 **you today?**

5 A. No.

6 **Q. Aside from your attorneys -- and I assume**
7 **that when you reference that, the -- these are the**
8 **attorneys that are present today?**

9 A. That's correct. There were a few
10 attorneys that aren't here today that were with us
11 when we did those preparation sessions.

12 **Q. In addition to your attorneys, were there**
13 **any other individuals who assisted you with**
14 **deposition preparation?**

15 A. No.

16 **Q. So did you indicate in response to my**
17 **earlier question all the documents that you reviewed**
18 **in preparation for your deposition?**

19 A. Sorry, say that again.

20 **Q. Did -- did you indicate in your earlier**
21 **answer all of the documents that you'd reviewed in**
22 **preparation for your deposition today?**

23 A. I believe I covered them all.

24 **Q. Okay. Where are the documents that you**
25 **reviewed kept?**

1 A. At the offices of the PSC. Many of them
2 are available online.

3 **Q. Are there any documents that came to your**
4 **mind that you didn't have a chance to review that**
5 **you would have preferred to have reviewed?**

6 A. Yes.

7 **Q. And what would those be?**

8 A. Portions of the Complaint address
9 commission decisions and subsequent Court rulings
10 regarding a couple of cases, most notably the Vote
11 Solar case and the MTSUN case. And I would have
12 liked to have spent more time reviewing those cases,
13 the commission's orders there, and the subsequent
14 Court decisions, but I didn't have time to do that.

15 **Q. Okay. We'll talk about those later today**
16 **since that's part of the designated -- let's then**
17 **turn, Mr. Rosquist, to Tab 1.**

18 **MR. SULLIVAN:** And we'll mark that as Deposition
19 Exhibit -- Plaintiffs' Deposition Exhibit 2.
20
21 (Deposition Exhibit No. 2 was marked
22 for identification)
23
24 **MR. SULLIVAN:** And if I could, just for a moment, I
25 actually have an extra.

1 **MR. OESTREICHER:** Thank you very much.

2 **MR. SULLIVAN:** You bet. At some point, the court --
3 we'll have one to make sure to get to the Court Reporter,
4 but...

5 **Q. (By Mr. Sullivan) What is that?**

6 A. This is Plaintiffs' Rule 30(b)(6) Notice
7 of Deposition to Defendant Montana Public Service
8 Commission.

9 **Q. Okay. Let's see here. Let's -- are you**
10 **at Tab 1? I'm trying to make sure that we start**
11 **with -- yeah, Tab 1. Good, okay. And is that the**
12 **document that you referenced earlier that -- one of**
13 **the documents that you reviewed in preparing for**
14 **your deposition today?**

15 A. Yes, it is.

16 **Q. Would you agree that you're here on**
17 **behalf of the agency today?**

18 A. Yes.

19 **Q. Are you the person with the most**
20 **knowledge concerning the designated matters in the**
21 **notice of deposition?**

22 A. I have been designated as that person,
23 yes.

24 **Q. Let's turn next to the Complaint, which**
25 **is at Tab 5, Mr. Rosquist. And we'll mark that as**

1 **Plaintiffs' Deposition Exhibit 3.**
2
3 (Deposition Exhibit No. 3 was marked
4 for identification)
5
6 **MR. SULLIVAN:** And while we're at it, let's mark the
7 document that's at Tab 6 as Deposition Exhibit --
8 Plaintiff's Deposition Exhibit 4.
9
10 (Deposition Exhibit No. 4 was marked
11 for identification)
12
13 **Q. (By Mr. Sullivan) And, Mr. Rosquist,**
14 **what is that document?**

15 **MR. OESTREICHER:** And I'm just going to object.
16 Which document are you referring to?

17 **Q. (By Mr. Sullivan) I'm sorry. The**
18 **document at Tab 6, which we're going to mark as**
19 **Plaintiffs' Exhibit 4, what is that document?**

20 A. This is Defendants' Answer in this
21 matter.

22 **Q. And just to clarify for the record, those**
23 **two documents, Plaintiffs' Complaint and Defendants'**
24 **Answer, are some of the documents that you reviewed**
25 **in terms of your preparation for your testimony**

1 today?

2 A. Portions of these two documents are part
3 of what I reviewed, correct.

4 **Q. And specifically, the paragraphs that
5 are -- make allegations as to the Public Service
6 Commission.**

7 A. Yes.

8 **Q. Who was it that designated you to testify
9 on behalf of the Public Service Commission?**

10 A. It was an internal decision of the
11 commission, a consensus I believe of the commission,
12 commissioners, the legal team, executive director.

13 **Q. And why were you the lucky person chosen?**

14 **MR. OESTREICHER:** Objection, calls for speculation.
15 You can answer if you know.

16 **THE WITNESS:** I think part of the reason was my long
17 tenure with the Public Service Commission compared to
18 others -- other -- other folks in leadership positions at
19 the commission.

20 **Q. (By Mr. Sullivan) I'd like to turn now
21 to some questions about the Public Service
22 Commission's organizational structure and mission,
23 if we could. What is the mission of the Public
24 Service Commission?**

25 A. The commission states its mission on its

1 person is designated as the president, and then
2 there is a vice president to do the president's
3 duties when the president isn't available.

4 Below the commission, there's an
5 executive director who oversees all of the staff of
6 the commission. The executive director is also the
7 administrator of our centralized services division,
8 which houses our IT functions and our internal
9 business accounting functions and our external
10 affairs functions.

11 In addition to the centralized services
12 division, there is a regulatory division, which I
13 oversee, and a legal division.

14 **Q. In terms of the regulatory division that
15 you oversee, are there any bureaus or organizational
16 units under you?**

17 A. So in the past, the commission has had
18 formal designated bureaus for what we call the
19 "economics and rate design bureau." As I mentioned,
20 I was the bureau chief at one time of that bureau.
21 And then there was a revenue requirements bureau.
22 The commission -- the current commission no longer
23 maintains those -- those bureau structures, but
24 there are still work units within the regulatory
25 division that correspond to the former bureaus that

1 website as endeavoring to ensure that public utility
2 customers have access to affordable, reliable
3 electricity service that's sustainable for the
4 long-term -- I should say utility services, not just
5 electricity services, and to balance the interests
6 of the utility customers with the interests of the
7 utility.

8 **Q. Who runs the Public Service Commission?**

9 A. The head of the agency is the five
10 elected commissioners acting collectively.

11 **Q. And they in turn hire a staff?**

12 A. Correct.

13 **Q. What is the role of the public service
14 commissioners?**

15 A. The role of the public service
16 commissioners is to vote as a member of the
17 commission on matters that come before it and that
18 require a commission decision.

19 **Q. Are they elected?**

20 A. They are elected.

21 **Q. Could you, at least briefly, summarize
22 the organization of the agency?**

23 A. So as I've said, the head of the agency
24 is the five-person commission. The commission
25 elects from its members a presiding officer. That

1 existed. So there are still staff who focus their
2 work on economics and rate design, and there are
3 other staff that focus their efforts on what we call
4 "revenue requirements."

5 In addition, there are staff who perform
6 pipeline safety inspections and railroad
7 inspections, and then we have a transportation
8 compliance specialist.

9 **Q. Reviewing the statutory framework in a
10 particular Montana Code Annotated 69-3-102, it
11 appears that the Public Service Commission has full
12 power of supervision, regulation, and control of
13 public utilities in the state subject to the
14 provisions of Title 69, Chapter 3; is that correct?**

15 **MR. OESTREICHER:** I'm just going to object to the
16 form of the question. If you're going to ask about the
17 statute, I would prefer that you put it in front of him.

18 **Q. (By Mr. Sullivan) To your knowledge, do
19 you --**

20 **MR. SULLIVAN:** And he can testify to his knowledge if
21 that sounds like an accurate description.

22 **MR. OESTREICHER:** You can answer.

23 **THE WITNESS:** So that sounds like an accurate
24 description. Without looking at the statute, I can't be
25 100 percent sure of your statutory citation.

1 Q. (By Mr. Sullivan) Does the Public
2 Service Commission supervise, regulate, and control
3 all public utilities, or are there certain
4 exceptions?

5 MR. OESTREICHER: I'm just going to object to the
6 form of the question.

7 THE WITNESS: So the statute defines the term "public
8 utility," and the commission regulates those public
9 utilities defined by statute.

10 Q. (By Mr. Sullivan) Does the Public
11 Service Commission play any role with respect to
12 pipelines in Montana that transport oil or gas?

13 A. Can you maybe clarify what you mean by
14 "play a role"?

15 Q. Well, is it possible for a pipeline that
16 transports oil or gas in the state of Montana
17 without involvement of the Public Service
18 Commission?

19 MR. OESTREICHER: Objection to form.

20 THE WITNESS: I'm sorry, can you repeat your
21 question?

22 Q. (By Mr. Sullivan) Can a pipeline that
23 transports oil or gas operate within the state of
24 Montana without involvement of the Public Service
25 Commission?

1 A. In certain instances, yes.

2 Q. What are those instances?

3 A. The commission does not have involvement
4 with interstate oil pipelines, liquid pipelines, or
5 interstate natural gas pipelines.

6 Q. And How do you define "interstate"?

7 A. A pipeline that passes through Montana
8 interconnects with a pipeline on -- outside the
9 borders of Montana.

10 Q. What if a pipeline that passes through
11 the state of Montana also delivers oil or gas to the
12 state of Montana, intrastate delivery of gas?

13 A. When you say, "gas," are you referring to
14 gasoline or natural gas?

15 Q. Natural gas.

16 A. So what I can say is that the commission
17 exercises authority over intrastate natural gas
18 pipeline safety, and we have authority to set rates
19 on intrastate moves of liquids and carbon dioxide in
20 a common carrier -- in a common carrier mode.

21 Q. Mr. Rosquist, could you turn next to
22 Tab 13 which we will mark as Plaintiffs' Deposition
23 Exhibit 5?
24
25

1 (Deposition Exhibit No. 5 was marked
2 for identification)
3

4 Q. (By Mr. Sullivan) Are you familiar with
5 that document?

6 A. I'm somewhat familiar with this document,
7 yes.

8 Q. Is there a more recent version of that
9 document?

10 MR. OESTREICHER: I'm just going to object to the
11 form of that question. I'm not sure what you mean by
12 "more recent version" of the 2017 report or if there's a
13 2018 report. Is that -- I'm not sure what you're getting
14 at.

15 Q. (By Mr. Sullivan) For identification
16 purposes, we'll make sure that the record reflects
17 that this is document -- Plaintiffs' Deposition
18 Exhibit 5 is entitled "Chairman's Report: 2017,
19 Public Service Commission, State of Montana," dated
20 April 1st, 2018, Montana Public Service Commission.

21 Did I read that title page correctly,
22 Mr. Rosquist?

23 A. Yes.

24 Q. And my question is, is there a more
25 recent version of the chairman's report?

1 A. By that, do you mean was there another
2 report similar to this issued in, for example, April
3 of 2019?

4 Q. That would be a starting place. Is this
5 an annual report? Is this something that you see
6 each year?

7 A. No, it's not. This -- the chairman at
8 this time was interested in developing these
9 reports, and he did. I can't be sure without
10 checking our records whether there was another
11 report after this. But there have been several
12 recent years where the commission has -- the
13 chairman has not issued an annual report like this.

14 Q. I'm on what I'll call page 1 of the
15 report. And I'm going to read to you the second
16 sentence from that document. "As one of five
17 elected officials charged with safeguarding
18 Montana's energy future, I strive to embody this
19 principle through deliberate, well-reasoned
20 decisions that place the welfare of all Montanans
21 above private influence and special interests."

22 First, did I read that sentence
23 correctly?

24 A. Yes, you read it correctly.

25 Q. Do you agree that one role of the Public

1 Service Commission is safeguarding Montana's energy
2 future?

3 MR. OESTREICHER: I'll just object to the form of the
4 question.

5 You can answer, if you know.

6 THE WITNESS: The commission exercises authority over
7 the planning of regulated public utilities, specifically
8 electric utilities, pursuant to statute, statutory
9 requirements, but Montana's energy future sounds too broad
10 in terms of our -- the scope of our authority.

11 Q. (By Mr. Sullivan) Could I direct your
12 attention next, Mr. Rosquist, to the fourth
13 paragraph on the first page. And if you would
14 review that, please.

15 A. Starting "This year the commission"?

16 Q. Yes, sir.

17 A. Okay.

18 Q. Can you describe for us the resource
19 planning process that the chairman is describing
20 there, referencing there?

21 A. Yes. So at the time this report was
22 issued, there were two specific resource planning
23 statutes, Title 69, Chapter 3, part 20 and Title 69,
24 Chapter 3, Part 82. Both of those statutes deal
25 with electric utility long-term resource planning.

1 statement of a commissioner, the chairman, but not a
2 statement of the commission, the commission speaks through
3 its orders, I believe that he is referring to the idea
4 that Montana's electricity grid is interconnected to a
5 broader regional grid, and a particular utility that he
6 references there, NorthWestern Energy, purchases
7 electricity in a regional bilateral market.

8 And so the broader regional balance between the
9 capacity to generate electricity and the demand for that
10 electricity affects the price that that utility pays for
11 electricity and can affect the reliability of the broader
12 system. And so I think he's referring to the commission's
13 interest or comments to NorthWestern Energy regarding
14 accounting for those factors in its resource planning
15 process.

16 Q. (By Mr. Sullivan) So would it be fair to
17 say that it's important to consider region-wide
18 impacts when making decisions?

19 MR. OESTREICHER: Objection, form.

20 Go ahead and answer.

21 THE WITNESS: Yes.

22 Q. (By Mr. Sullivan) What is meant by
23 "alternatives" in the commissioner's statement
24 there?

25 MR. OESTREICHER: Objection, form.

1 And that is what the chairman is referring to here.

2 Q. I've seen the acronym used "IRP." What
3 does that acronym refer to?

4 A. Integrated resource planning.

5 Q. How does that relate to the resource
6 planning you were just describing?

7 A. It's another name for the same thing.

8 Q. Okay. And as you understand it, what was
9 the commissioner referring to when he talks about
10 directing the utility to consider regional
11 developments?

12 MR. OESTREICHER: I'll object to the form of the
13 question.

14 You can answer, if you can.

15 THE WITNESS: Could you please repeat the question?

16 Q. (By Mr. Sullivan) I'm trying to
17 understand this reference to the commission
18 apparently, based on the statement in the document,
19 directing the utility to consider regional
20 development while identifying its resource needs as
21 well as a wide range of alternatives to meet those
22 needs.

23 MR. OESTREICHER: Same objection.

24 Go ahead.

25 THE WITNESS: So recognizing that this report is a

1 Answer if you can.

2 THE WITNESS: The statutes require utilities to
3 evaluate the full range of alternatives that could be used
4 to meet the needs of its customers when it plans for the
5 future. And so alternatives includes things like
6 generating plants. It includes things like energy
7 efficiency programs, demand-side management programs. So
8 that's what "alternatives" refers to, all the ways that
9 the utility could meet the needs of its customers.

10 Q. (By Mr. Sullivan) I've seen a reference
11 to the acronym "PURPA" throughout these documents.
12 What does that stand for?

13 A. PURPA is a federal law. PURPA stands for
14 the Public Utility Regulatory Policies Act. It was
15 enacted in 1978.

16 Q. How does that federal act relate to what
17 the Public Service Commission does here in Montana?

18 MR. OESTREICHER: Objection, form.

19 Go ahead and answer.

20 THE WITNESS: PURPA requires certain electric
21 utilities to purchase any energy or capacity made
22 available or delivered by a qualifying small
23 power-production facility or co-generation facility.

24 Q. (By Mr. Sullivan) And what could -- does
25 PURPA speak to this issue of alternatives that we

1 were just speaking of when you mentioned
2 alternatives refer to an array of generation plants
3 and various other things? Does PURPA speak to this
4 issue of the kind of generation that you would be
5 considering?

6 **MR. OESTREICHER:** Objection, form, compound.

7 Go ahead.

8 **THE WITNESS:** Maybe can you clarify what you mean by
9 "speak to"?

10 **Q. (By Mr. Sullivan)** Well, are there
11 requirements within PURPA that have been
12 incorporated into Montana and the Public Service
13 Commission's purview that -- that speak to
14 alternative energy sources?

15 **A.** Well, I guess I would say PURPA is not
16 a -- the -- PURPA is not a planning -- a long-term
17 planning statute. So it doesn't contain language
18 directing the commission to undertake an evaluation
19 of alternatives.

20 **Q.** We'll talk more about PURPA in a minute
21 when we get to the Complaint that you've reviewed
22 and been designated to testify on, but we'll move on
23 for now.

24 **A.** Okay.

25 **Q.** Okay. Let's have you turn, Mr. Rosquist,

1 is that correct?

2 **MR. OESTREICHER:** Objection, form.

3 **THE WITNESS:** Montana admitted the first sentence of
4 paragraph 102.

5 **Q. (By Mr. Sullivan)** Yes. And the answer
6 then states that in response to the second sentence
7 of paragraph 102 that Montana -- Montana admits that
8 the Montana Public Service Commission sets
9 standard-offer contracts for qualifying facility and
10 utility rates. Do you agree with that?

11 **MR. OESTREICHER:** Objection, form.

12 **THE WITNESS:** I'm sorry, I was reading. Can you
13 restate your question?

14 **Q. (By Mr. Sullivan)** I just said that the
15 answer then states that in response to the second
16 sentence of paragraph 102, Montana admits that the
17 Montana Public Service Commission, PSC, sets
18 standard-offer contracts for qualifying facilities
19 and utility rates.

20 **A.** Yes.

21 **Q.** Okay. Do you agree with that?

22 **MR. OESTREICHER:** Objection, form.

23 Go ahead.

24 **THE WITNESS:** Yes, generally I agree with that. I
25 would probably have said Montana Public Service Commission

1 to -- excuse me -- paragraph 102 of the Complaint.

2 **MR. OESTREICHER:** Is that 6, Roger?

3 **Q. (By Mr. Sullivan)** Excuse me. Which for
4 convenient reference is at Tab 5.

5 **MR. SULLIVAN:** And for the Court Reporter's sake,
6 we've marked that as Plaintiffs' Deposition Exhibit 3.

7 **Q. (By Mr. Sullivan)** Have you had a chance
8 to read that, Mr. Rosquist?

9 **A.** Just now or before?

10 **Q.** Both. I -- I have a few questions to ask
11 you about it, so I just wanted to make sure that --

12 **MR. OESTREICHER:** And, Roger, I apologize. Which
13 paragraph?

14 **MR. SULLIVAN:** We're starting with paragraph 102.

15 **MR. OESTREICHER:** Thank you.

16 **MR. SULLIVAN:** Yeah.

17 **THE WITNESS:** Yes, I've had a chance to review it.

18 **Q. (By Mr. Sullivan)** And then,
19 Mr. Rosquist, could you turn to the Defendants'
20 Answer which is the next tab, Tab 6, and just --
21 what I'm doing is just matching up Plaintiffs'
22 allegations in that paragraph with the Defendants'
23 answer.

24 So we don't have any issue in terms of
25 the first sentence of our Complaint, paragraph 102;

1 sets standard-offer contracts rates and terms for
2 qualifying facilities and utility rates, but that's
3 generally correct.

4 **Q. (By Mr. Sullivan)** What would be included
5 within terms? What are terms that would be of
6 significance?

7 **A.** I think I'm just using more precise
8 language. The terms would include -- terms could
9 include the price terms as well as nonprice terms,
10 including the contract length or other aspects of
11 the contract, commercial online date, length of the
12 contract, a number of other legal terms that need to
13 go into a contract.

14 **Q.** Okay. The answer in paragraph 102 then
15 states "Montana denies the remaining allegations in
16 the second sentence of paragraph 102." So could you
17 please clarify for us, Mr. Rosquist, what the Public
18 Service Commission denies in paragraph 102?

19 **MR. OESTREICHER:** Well, I'm going to object to form.
20 I think that may invade the province of attorney-client
21 and our mental impressions.

22 You can answer to the extent you have knowledge.

23 **THE WITNESS:** So you're asking what the commission
24 denies with respect to that last sentence?

25 **Q. (By Mr. Sullivan)** Yes. You have been

1 designated to testify in regards to the Defendants'
2 position on 102, and I'm reading from the
3 Defendants' answer, the last sentence of their
4 answer to paragraph 102, which states, and I'm
5 quoting, "Montana denies the remaining allegations
6 in the second sentence of paragraph 102."

7 And so I'm just asking you as the
8 designated representative to clarify what the Public
9 Service Commission denies in paragraph 102?

10 MR. OESTREICHER: Same objection.

11 Go ahead.

12 THE WITNESS: I'm not sure I can. I've looked at
13 69-3-108, and that statute does discuss prescribing
14 suitable commercial units of the product or service for
15 each kind of public utility. So as a nonattorney, I'm not
16 sure if there's a legal nuance there that I'm missing, but
17 it kind of looks like -- looked to me like that sentence
18 was correct.

19 Q. Could you please turn, Mr. Rosquist, to
20 paragraph 103 of the Complaint and read that. I
21 understand you've already reviewed it, but -- in
22 fact, we can -- to expedite it for all of us, if you
23 would read it aloud, then we'll all have the benefit
24 of that, if that would --

25 A. Sure. "Defendant PSC is specifically

1 authorized to adopt rules, to implement renewable
2 energy resources for utilities, Montana Code
3 Annotated Section 69-3-2006, because 'utilities
4 should support expanded development of these
5 resources to meet the State's electricity demand and
6 stabilize electricity prices,' Montana Code
7 Annotated Section 69-3-2002. However, Defendant PSC
8 continues to certify energy projects and utilities
9 that rely on fossil fuels."

10 Q. I would ask you next to please refer to
11 the State of Montana's answer to the allegations in
12 paragraph 103 on Plaintiffs' Exhibit 3. And for the
13 benefit of those of us present that don't have the
14 document in front of us, could you, once again,
15 Mr. Rosquist, read that into the record?

16 A. "The allegations in the first sentence of
17 paragraph 103 purport to characterize a statute that
18 speaks for itself, is the best evidence of its
19 contents, and no response is required; to the extent
20 a response may be required, Montana denies all
21 allegations. Montana denies the allegations in the
22 second sentence of paragraph 103."

23 Q. Were you consulted, Mr. Rosquist, about
24 the Defendants' answer to paragraph 103?

25 A. I don't remember specifically on 103.

1 Q. Were you consulted in the process of the
2 State of Montana on behalf of the Public Service
3 Commission as one of the defendants answering the
4 allegations in the Plaintiffs' Complaint?

5 MR. OESTREICHER: Object to form.

6 Go ahead.

7 THE WITNESS: Our attorney working on this did send
8 e-mails occasionally asking if I had an opportunity to
9 take a look at what they were drafting to put into the
10 answer. I didn't always have time to review all those
11 e-mails before the answer was submitted. So again, on
12 103, I don't have a specific recollection of reviewing the
13 answer to that one.

14 Q. (By Mr. Sullivan) Who is the Public
15 Service Commission attorney that you were referring
16 to?

17 A. Ben Reed.

18 Q. Does the PSC certify energy projects?

19 A. Title 69 does not refer to certification
20 of energy projects in general. It does refer to
21 certification of eligible renewable resources or did
22 when that statute was -- was still in existence.
23 But I would not say that the commission certifies
24 all energy projects.

25 Q. You mentioned Title 69 and made a

1 reference to when that statute was still in
2 existence. So I take it from your answer that the
3 statute that you're referring to is no longer in
4 existence?

5 A. I'm sorry, I -- within Title 69,
6 Subchapter -- 69-3-2001 through 2006 or 7 was the
7 renewable energy standard, which is referred to in
8 the Complaint paragraph 103. And I meant to refer
9 to that as the specific statute that was repealed,
10 not that all of Title 69 had been repealed.

11 Q. To the extent that the PSC certifies
12 energy projects, how does that occur?

13 MR. OESTREICHER: Object to form.

14 Go ahead.

15 THE WITNESS: So you asked about to the extent that
16 the commission certifies --

17 Q. (By Mr. Sullivan) Yeah, well, if I
18 understood it -- if I understood your answer, there
19 was a certification that had to do with the
20 renewable energy standard?

21 A. Right. So the renewable energy standard
22 statute had specific criteria for what a renewable
23 energy resource would have to meet in order to be an
24 eligible renewable resource, and the commission
25 under that statute would certify that those specific

1 renewable resources met those criteria to become an
2 eligible renewable resource.

3 **Q. And did that standard that was codified**
4 **in 69-3-20 -- 2001 et sequi, did that expire of its**
5 **own terms, or was it repealed, to your knowledge?**

6 **MR. OESTREICHER:** I'll object to form.

7 Answer to the extent that you can.

8 **THE WITNESS:** It was repealed.

9 **Q. (By Mr. Sullivan) To clarify,**
10 **Mr. Rosquist, are there any -- at the present time**
11 **does the Public Service Commission make any**
12 **determinations as to whether to certify energy**
13 **projects?**

14 **MR. OESTREICHER:** Objection, form.

15 Go ahead.

16 **THE WITNESS:** Could you repeat the question for me?

17 **Q. (By Mr. Sullivan) With the repeal of the**
18 **statutes that we were talking about, does the Public**
19 **Service Commission currently have a function for the**
20 **certification of any energy projects?**

21 **MR. OESTREICHER:** Same objection.

22 Go ahead.

23 **THE WITNESS:** As I understand the term
24 "certification," no.

25 **Q. (By Mr. Sullivan) How do you understand**

1 **the term "certification"?**

2 **MR. OESTREICHER:** Objection, form.

3 Go ahead.

4 **THE WITNESS:** So as we had discussed with respect to
5 the renewable energy standard, in order to be eligible to
6 be counted towards that standard, those resources had to
7 meet certain criteria or standards, and the commission was
8 authorized by the statute to make determinations on
9 whether any particular renewable resource met those
10 standards. So by doing that, you are certifying -- or the
11 commission is certifying that the renewable resource is,
12 in fact, eligible to be counted under that standard. So
13 that's how I understand certification. The commission is
14 assessing a resource or a project according to specific
15 statutory criteria to determine eligibility.

16 **MR. OESTREICHER:** Roger, we've been going about an
17 hour, and I drank too much coffee. Do you mind if we take
18 a break?

19 **MR. SULLIVAN:** No problem.

20 **MR. OESTREICHER:** Thank you.

21 **VIDEO OPERATOR:** We are going off the record. The
22 time is 10:01 a.m.

23

24 (Whereupon, a recess was taken)

25

1 **VIDEO OPERATOR:** We are back on the record. The time
2 is 10:10 a.m.

3 **Q. (By Mr. Sullivan) Mr. Rosquist, can I**
4 **ask you to, for the benefit of all of us, to read**
5 **paragraph 104 of the Complaint, and I will then**
6 **follow that up with asking you to read into the**
7 **record the State's response in your answer to**
8 **paragraph 104. Thank you.**

9 A. Paragraph 104 of the Complaint reads,
10 "Defendant PSC is responsible for the safety of
11 interstate pipelines, such as gas pipelines that
12 cross state borders, as well as all liquid lines,
13 including crude oil or petroleum products that
14 originate within or through Montana. Defendant PSC
15 has exercised its authority over pipelines in a
16 manner that perpetuates the use of fossil fuels by
17 locking in infrastructure that will result in
18 greenhouse gas emissions, or GHG emissions, for
19 decades." [as read]

20 **Q. And now the State's answer in**
21 **paragraph 104.**

22 A. "Montana admits the allegations in first
23 sentence of paragraph 104. Montana denies the
24 allegations in the second sentence of paragraph
25 104."

1 **Q. Mr. Rosquist, were you consulted about**
2 **the Defendant's answer to paragraph 104?**

3 A. I don't believe so.

4 **Q. To your knowledge, what materials do the**
5 **pipelines transport through Montana?**

6 **MR. OESTREICHER:** Object to the form.

7 Go ahead.

8 **THE WITNESS:** To my knowledge, pipelines in Montana
9 transport natural gas, crude oil, gasoline, diesel,
10 various refined products.

11 **Q. (By Mr. Sullivan) I don't mean to ask a**
12 **question that's been asked before, but I'm not sure**
13 **in this context we -- it was asked, so I'm going to**
14 **ask the question again. Forgive me if you feel like**
15 **you've entirely answered it.**

16 **Is it possible for a pipeline to**
17 **transport oil or gas through Montana without the**
18 **involvement of the Public Service Commission?**

19 **MR. OESTREICHER:** Objection, form.

20 **THE WITNESS:** Yes, I think that's possible.

21 **Q. (By Mr. Sullivan) The Public Service**
22 **Commission, for instance, doesn't have a regulatory**
23 **obligation regarding safety of pipelines passing**
24 **through Montana?**

25 **MR. OESTREICHER:** Objection, form.

1 Go ahead.

2 **THE WITNESS:** So what I can say is that to my
3 knowledge, pipeline safety is a federally preempted
4 activity. The Montana PSC has an agreement with the
5 Department of Transportation Pipeline Safety and hazardous
6 Materials Administration to engage in enforcement of
7 federal regulations with respect to intrastate natural gas
8 pipeline safety.

9 **Q. Mr. Rosquist, referring once again to the**
10 **Complaint, in paragraph 104 of the Complaint, do you**
11 **see that we have a footnote there?**

12 A. Yes.

13 **Q. That refers to both the United States**
14 **Department of Transportation Pipeline and Hazardous**
15 **Safety -- Materials Safety Administration?**

16 A. Yes.

17 **Q. And a document entitled "Montana Public**
18 **Service Commission, Pipeline Safety," with a**
19 **hyperlink. Do you see that?**

20 A. Yes.

21 **Q. Are you familiar with those documents?**

22 **MR. OESTREICHER:** Objection, form.

23 **THE WITNESS:** You're asking me if I'm familiar with
24 the documents listed in the footnote?

25 **Q. (By Mr. Sullivan) Yes.**

1 and the 'profound consequences' of climate change,
2 Defendants, pursuant to and in furtherance of the
3 State Energy Policy, have taken, and continue to
4 take, affirmative actions to authorize, implement,
5 and promote projects, activities, and plans
6 (hereinafter 'aggregate acts') that cause emissions
7 of dangerous levels of GHG pollution into the
8 atmosphere. For example:

9 "A, Defendants authorize and certify
10 energy projects and facilities within the state of
11 Montana that emit substantial levels of GHG
12 pollution, including, but not limited to, projects
13 that burn and promote the use of fossil fuels.

14 "B, Defendant PSC significantly cut
15 utility contract lengths and rates for North Western
16 Energy in June 2017 demonstrating biased decisions
17 obstructing solar projects. Defendant PSC was found
18 to have violated solar companies' due process rights
19 by making decisions based on bias and policy
20 preferences.

21 "C, Defendant PSC exercises its authority
22 to obstruct solar projects. The Public Service
23 Commissioners have publicly expressed their affinity
24 for coal power and publicly disparaged renewable
25 energy sources. PSC Commissioner Bob Lake admitted

1 **MR. OESTREICHER:** Same objection. And if you're
2 going to ask him about the documents, I assume they're in
3 the -- in the notebook?

4 **MR. SULLIVAN:** Let's do the foundational question
5 first to see if Mr. Rosquist is familiar with the
6 documents. And, yes, if I --

7 **MR. OESTREICHER:** Same objection.

8 **MR. SULLIVAN:** And, yes, if I have a specific
9 question, I'll provide him with the document as a
10 courtesy.

11 **THE WITNESS:** I have not reviewed the first document,
12 the regulatory fact sheet by the U.S. Department of
13 Transportation. The second document appears to be
14 something that is contained on our website describing the
15 pipeline safety program. And I probably reviewed that,
16 but not recently.

17 **Q. (By Mr. Sullivan) Mr. Rosquist, would**
18 **you please turn next to paragraph 118 of the**
19 **Complaint. And following form, would you please**
20 **read that? Now, this may take a while.**

21 A. Yeah. Okay.

22 **Q. Yes.**

23 A. Paragraph 118. "Despite Defendants'
24 knowledge of climate change dangers and Defendants'
25 rhetoric on the importance of reducing GHG emissions

1 that Defendant PSC was setting rates and contract
2 lengths to eliminate small solar projects.

3 "D, Defendant PSC affirmatively acts to
4 promote public utilities reliant on fossil fuels and
5 against the public safety in the face of dangerous
6 climatic changes.

7 "E, Defendants engage in a systemic
8 pattern of practice" -- "and practice of issuing
9 permits, licenses, and leases that result in GHG
10 emissions without considering how the additional GHG
11 emissions will contribute to the climate crisis.

12 "F, Defendants authorize four private
13 coal plants to operate in the state, and these coal
14 plants are responsible for 30 percent of Montana's
15 energy production.

16 "G, Defendants continue to permit surface
17 coal mining and reclamation in Montana, which
18 results in substantial GHG emissions. Defendant DEQ
19 approved the AM4 expansion of the Rosebud Strip Mine
20 in December 2015. Defendant DEQ issued a permit to
21 expand the coal mining operation and reclamation
22 plan at Bull Mountain Mine in July 2016. Pursuant
23 to the climate change exception to MEPA, DEQ refused
24 to analyze how these decisions would aggravate the
25 impacts of climate change.

<p style="text-align: right;">Page 45</p> <p>1 "In 2018, Defendant DEQ, pursuant to the 2 climate change exception to MEPA, refused to analyze 3 or discuss any climate change impacts from the TR3 4 expansion of the Decker Mine, which allowed the coal 5 company to strip-mine 23 million tons of coal, which 6 will lead to nearly 50 million tons of carbon 7 dioxide emissions when burned aggravating the impact 8 of climate change, including negative socioeconomic 9 impacts to Montanans.</p> <p>10 "In 2020, Defendant DEQ is preparing to 11 revise its permit to Spring Creek Mine, the largest 12 coal producer in the state. The proposed revision 13 would add 977 acres of new mining disturbance to 14 recover approximately 72 million tons of coal. In 15 August 2019, Defendant DEQ, pursuant to the climate 16 change exception to MEPA, refused to analyze impacts 17 on the social cost of carbon and the economic 18 impacts from climate change in its draft 19 environmental impact statement for the Spring Creek 20 Mine. Although public comments urged Defendants to 21 consider these impacts in the DEQ analysis, 22 Defendants did not renew how their decision" -- 23 "Defendants did not review how their decision would 24 aggravate impacts of climate change and the 25 substantial socioeconomic impacts on Montanans.</p>	<p style="text-align: right;">Page 47</p> <p>1 Pipeline project in Montana, which would transport 2 Canadian tar sands crude oil, the most greenhouse 3 gas intense source of petroleum in the world. 4 Pursuant to the climate change exception to MEPA, 5 neither DEQ nor DNRC disclosed to the public the 6 health or climate consequences of these decisions. 7 "N, Defendants authorize, through 8 licenses and leases, the exploration and extraction 9 of oil and gas in Montana. 10 "O, Defendants have adopted and enforced 11 GHG emission standards for petroleum refineries that 12 authorize dangerous levels of GHG emissions. 13 Secondary emissions are not considered by Defendants 14 in determining potential to emit. 15 "P, Defendants continue to certify and 16 authorize four petroleum refineries, Exxon/Mobil, 17 Phillips 66, CHS Laurel, and Calumet Refining, in 18 the state of Montana. In 2016, these refineries 19 exported 66.5 million barrels of crude oil. The 20 four refineries combined released 2.0 million metric 21 tons of CO2 equivalent in 2018. Pursuant to the 22 climate change exception to MEPA, Defendants have 23 failed to disclose to the public the health or 24 climate consequences of these decisions. 25 "Q, Defendants have explicitly adopted</p>
<p style="text-align: right;">Page 46</p> <p>1 "J, Defendant DEQ authorized the 2 operation of the Colstrip Steam Electric Station, 3 which produced 13.2 million metric tons of CO2 4 equivalent, 38,015 metric tons of methane, and 5 65,919 metric tons of nitrous oxide in 2018. 6 "K, Defendant DEQ granted the Bull 7 Mountain Mine an air quality permit in January 2016 8 authorizing Bull Mountain Mine to produce 15 million 9 tons of coal during any rolling 12-month period. 10 Pursuant to the climate change exception to MEPA, 11 DEQ refused to analyze how this decision would 12 aggravate the impacts of climate change. 13 "L, Defendant DEQ issued a certificate of 14 compliance for the Keystone XL Pipeline in March 15 2012, which authorized the construction, operation, 16 and maintenance of the Montana portion of the 17 pipeline that would result in substantial GHG 18 emissions. Defendant DNRC leased public land for 19 the easement of the operational right-of-way with 20 the approval of the Land Board and issued a land use 21 license for the construction right-of-way and other 22 activities on state lands and waterways. 23 "Defendants DEQ and DNRC issued permits, 24 licenses, and leases for the construction, 25 operation, and maintenance of the Keystone XL</p>	<p style="text-align: right;">Page 48</p> <p>1 and endorsed fuel and fuel tax requirements for 2 vehicles, commercial carriers, and aviation that 3 lock in dangerous levels of GHG emissions from the 4 transportation sector. 5 "R, Defendants have exempted certain 6 facilities that burn fossil fuels from present and 7 future compliance with GHG emission standards. 8 "S, Defendants continue to finance, 9 incentivize, and subsidize fossil fuel 10 infrastructure and energy and transportation systems 11 that are endangering Youth Plaintiffs while refusing 12 to harness Montana's potential for wind energy. 13 "T, Defendants continue to aggressively 14 pursue expansion of the fossil fuel industry in 15 Montana, particularly the expansion of coal and 16 mining development, as well as oil and gas 17 development. 18 "U, Defendant Bullock has stated that 19 'coal will continue to be a critical part of the 20 nation's energy portfolio for years to come, and 21 increasingly electricity demand will ensure that we 22 will need both carbon-based and renewable sources of 23 energy, and not enough is done in this country to 24 advance clean coal technologies.' 25 "V, Defendant Bullock continues to</p>

1 support policies that incentivize technologies for
2 coal, including, but not limited to: 1, providing
3 favorable tax treatment for investments and carbon
4 capture sequestration and transportation; and, 2,
5 calling for stronger policies and incentives to
6 advance enhanced oil recovery and CO2 capture at
7 power plants and other industrial sources, both of
8 which directly authorize GHG admissions to continue
9 at dangerous levels in Montana.

10 "W, Defendants continue to safeguard
11 existing economic and energy assets. Defendants
12 continue to 'safeguard existing economic and energy
13 assets' by authorizing Montana fossil fuel
14 extraction production, consumption, transportation,
15 and exportation." [as read]

16 **Q. Thank you. Two notes I would note for**
17 **the record that Defendant Bullock by statutory**
18 **provision has been replaced by Defendant Gianforte?**

19 **MR. OESTREICHER:** By election.

20 **MR. SULLIVAN:** Yeah, and in the case, too, we've
21 taken care of that.

22 **Q. (By Mr. Sullivan) Thank you,**
23 **Mr. Rosquist. Fortunately, you'll see that the**
24 **State of Montana's answer is considerably shorter.**
25 **And if you would do us the same task of reading into**

1 by statute. DEQ has regulatory authority over pipelines
2 within the state as prescribed by statute. Some
3 Defendants have regulatory authority over petroleum
4 refineries within the state as prescribed by statute.
5 Some Defendants have regulatory authority over fuel and
6 fuel tax requirements for vehicles, commercial carriers,
7 and aviation within the state as prescribed by statute.
8 Some Defendants have regulatory authority over
9 infrastructure and energy and transportation systems
10 within the state as prescribed by statute. Additionally,
11 these allegations characterize documents, authorities, and
12 statements that speak for themselves, are the best
13 evidence of their contents and for which no response is
14 required. To the extent a response may be required,
15 Montana denies the remaining allegations in
16 paragraph 118."

17 **Q. (By Mr. Sullivan) Thank you,**
18 **Mr. Rosquist. I'd like to next talk more**
19 **specifically about the allegations that are**
20 **contained in paragraphs 118B and C before moving to**
21 **other subsections. So I'm going to ask you if --**
22 **were you consulted in regards to the answer that the**
23 **State gave to the allegations in paragraph 118?**

24 **MR. OESTREICHER:** I'll just object to form.
25 Go ahead.

1 **the record the State's answer to the allegations in**
2 **paragraph 118.**

3 **MR. OESTREICHER:** I mean, I think the complaint and
4 the answer speak for themselves, but if you want him to
5 read it into the record, that's fine.

6 **MR. SULLIVAN:** It's short.

7 **MR. OESTREICHER:** Okay.

8 **MR. SULLIVAN:** And I think that will be the -- the --

9 **MR. OESTREICHER:** That's fine.

10 **MR. SULLIVAN:** -- last paragraph that I'll be asking
11 him about before we turn to other documents, so...

12 **MR. OESTREICHER:** That's fine.

13 **THE WITNESS:** "Montana objects to the form of
14 paragraph 118 because pursuant to Montana Rules of Civil
15 Procedure 10(b), claims must be provided in separate
16 paragraphs. To the extent a response may be required,
17 Montana admits some Defendants authorize and certify
18 energy projects and facilities within the state of Montana
19 as prescribed by statute. The PSC has regulatory
20 authority over contract lengths and rates for qualifying
21 small power production facilities within the state as
22 prescribed by statute. Some Defendants have regulatory
23 authority over coal plants to operate within the state as
24 prescribed by statute. DEQ has regulatory authority over
25 coal mining and reclamation within the state as prescribed

1 **THE WITNESS:** I may have been. I don't have specific
2 recollection of, you know, discussing specifically
3 paragraph 118, but I likely had conversations with
4 Mr. Reed regarding the concepts that are being addressed
5 in paragraph 118.

6 **Q. (By Mr. Sullivan) I'd like to direct**
7 **your attention next to Tab 10 of the notebook, which**
8 **we will mark as Plaintiffs' Exhibit 6.**

9
10 **(Deposition Exhibit No. 6 was marked**
11 **for identification)**

12
13 **Q. (By Mr. Sullivan) And I will just want**
14 **to confirm by way of foundation that you -- if I**
15 **understand correctly, Mr. Rosquist, you indicated**
16 **earlier that the Public Service Commission's**
17 **decisions are made through orders, I believe you**
18 **said?**

19 **MR. OESTREICHER:** Object to the form of the question.
20 I think it misstates his testimony.

21 But go ahead.

22 **THE WITNESS:** The commission, as the head of the
23 agency, speaks through its written orders.

24 **Q. (By Mr. Sullivan) And in our Complaint,**
25 **we actually reference several specific orders that**

1 **there have been decisions rendered on. And in**
 2 **Exhibit 6, Deposition Exhibit 6, we're dealing with**
 3 **two of the Public Service Commission's orders,**
 4 **Nos. 7500 sub c and 7500 sub d. Does that appear to**
 5 **be correct?**

6 A. So if I understand the question, Tab 10
 7 is an order from a District Court, and it pertains
 8 to two Montana PSC orders 7500c and 7500d. That's
 9 correct.

10 **Q. Okay. And this challenge that's**
 11 **referenced in the Complaint that you reviewed, and**
 12 **that we make allegations of, recites that the**
 13 **contention was that the commission acted arbitrarily**
 14 **and unreasonably in these challenged orders in terms**
 15 **of setting contract lengths and standard rates for**
 16 **qualifying facilities; is that correct?**

17 **MR. OESTREICHER:** I'll object to the form of the
 18 question. I don't know which challenge -- are you talking
 19 about this order or something in your Complaint?

20 **MR. SULLIVAN:** We are talking about in the Complaint
 21 that you've reviewed and are testifying on behalf of the
 22 Public Service Commission. We reference this specific
 23 proceeding and this specific order. And so I'm just
 24 confirming that -- which proceeding before the commission
 25 it was challenging.

1 **MR. OESTREICHER:** Same objection. I think the order
 2 in your Complaint speak for themselves.

3 Go ahead and answer, if you can.

4 **Q. (By Mr. Sullivan) You can answer.**

5 A. So I guess I'm confused by whether you're
 6 referring -- when you say, "proceeding" and "order,"
 7 whether you're referring to the proceeding in front
 8 of the District Court or the proceeding in front of
 9 the commission and -- and the respective orders.
 10 I'm not sure which one you're referring to.

11 **Q. Good question. A good example of a**
 12 **question that I should be clearer on.**

13 So I'm just -- what I was trying to do is
 14 to just clarify for the record that this order of
 15 the District Court was dealing with an appeal of
 16 orders that were issued by the commission.

17 **MR. OESTREICHER:** Objection, speaks for itself. I'm
 18 not sure that this is even an appeal.

19 But to the extent you can answer.

20 **THE WITNESS:** Can you state it one more time?

21 **Q. (By Mr. Sullivan) Well, the -- let me**
 22 **just have you turn to page 3 of Exhibit 6, if you**
 23 **would. And under the heading "Legal and Factual**
 24 **Findings," why don't you read that paragraph into**
 25 **the record, and that might help set the context.**

1 A. "Legal and Factual Findings. This case
 2 involves a challenge by Vote Solar, Montana
 3 Environmental Information Center, and Cypress Creek
 4 Renewables, LLC, to the Montana Public Service
 5 Commission's decision in Commission Docket
 6 No. D2016.5.39. The Court heard oral argument on
 7 September 7th, 2018. Based on the administrative
 8 record and arguments of the parties, the Court finds
 9 that the commission acted arbitrarily and
 10 unreasonably in its challenged decision,
 11 Order Nos. 7500c and 7500d, setting contract lengths
 12 and standard rates for qualifying facilities with
 13 generating capacity of 3 megawatts or less. Montana
 14 Code Annotated Sections 2-4-704, 69-3-402."

15 **Q. Does that clarify for you what we're**
 16 **dealing with here?**

17 **MR. OESTREICHER:** Objection to form. Speaks for
 18 itself.

19 **THE WITNESS:** This -- this decision is referred to in
 20 the Complaint.

21 **Q. (By Mr. Sullivan) Yes.**

22 A. Yes, I agree.

23 **Q. Could you turn next, Mr. Rosquist, to the**
 24 **next page of this exhibit. And it states that --**
 25 **and I'm -- and I'm reading now here from this,**

1 paragraph No. 2, "Montana adopted PURPA and the
 2 commission oversees its implementation. See, 18
 3 C.F.R. 292.304(a)(1)(ii); also Section 69-3-603(2)
 4 MCA; Final Order 7500c paragraph 130, Record
 5 Tab 123. PURPA 'requires large utilities to
 6 purchase energy from smaller qualifying utility' --
 7 "'facilities at rates that allow the small
 8 facilities to become and remain viable suppliers of
 9 electricity.'"

10 **Did I read that correctly?**

11 **MR. OESTREICHER:** Objection, form, speaks for itself.

12 **THE WITNESS:** I believe you read it correctly, yes.

13 **Q. (By Mr. Sullivan) Explain to me about**
 14 **this provision that it states "Montana adopted PURPA**
 15 **and the commission oversees its implementation."**

16 **MR. OESTREICHER:** Objection to form, calls for a
 17 legal conclusion, speaks for itself.

18 Go ahead.

19 **THE WITNESS:** So it's my understanding, as I said
 20 before, PURPA is a federal statute, but it is referred to
 21 as a system of cooperative federalism. Subsequent to the
 22 adoption or to the enactment of PURPA at the federal
 23 level, the Montana Legislature adopted a PURPA statute.
 24 And that PURPA statute is within the section of code that
 25 the Montana Public Service Commission implements.

1 **Q. (By Mr. Sullivan) Does PURPA require**
2 **rates and contract terms to be nondiscriminatory?**

3 **MR. OESTREICHER:** Objection, form.

4 **THE WITNESS:** FERC's regulations implementing PURPA
5 require that rates be just and reasonable to consumers in
6 the public interest and not -- and do not discriminate
7 against QFs.

8 **Q. (By Mr. Sullivan) And, in fact, where I**
9 **quoted from PURPA momentarily, I quoted, "PURPA**
10 **'requires large utilities to purchase energy from**
11 **smaller qualifying facilities at rates that allow**
12 **the small facilities to become and remain viable**
13 **suppliers of electricity."**

14 **Is that your understanding of what PURPA**
15 **requires?**

16 **MR. OESTREICHER:** Objection, form, speaks for itself,
17 and it's actually quoting something else.

18 **THE WITNESS:** Well, I would say PURPA and FERC'S
19 regulations speak for themselves. And I don't believe the
20 statement "allow small facilities to become and remain
21 viable suppliers of electricity" is a -- is a requirement
22 of FERC'S regulations.

23 **Q. (By Mr. Sullivan) Is it a requirement of**
24 **Montana statutes or regulations?**

25 **MR. OESTREICHER:** Objection, form.

1 **Q. Yes, sir, please.**

2 **A.** Well, the concept of avoided cost
3 generally under PURPA and FERC's regulations is
4 related to the costs, in this case energy costs,
5 that the utility would have incurred to generate
6 that electricity itself or purchase it from another
7 source if it had not received the energy from the
8 QF.

9 **Q. What is a QF?**

10 **A.** QF -- QF stands for "qualifying
11 facility," and federal regulations contain a number
12 of criteria for how you can become a qualified
13 facility. FERC, the Federal Energy Regulatory
14 Commission, enforces that aspect of PURPA and makes
15 the determination on whether a facility is a
16 qualified facility. Generally speaking, qualifying
17 facilities are renewable power facilities or
18 co-generation facilities.

19 **Q. You have mentioned a number of times**
20 **"under PURPA," but I just want to confirm that when**
21 **you say that, I understand from your prior testimony**
22 **that under our system of cooperative federalism, I**
23 **think you referred to it as, PURPA has been adopted**
24 **by Montana law. Do we have Montana laws and Montana**
25 **regulations that incorporate these provisions --**

1 Go ahead.

2 **THE WITNESS:** I don't think that's a requirement in
3 Montana law.

4 **Q. (By Mr. Sullivan) So you don't agree**
5 **with that statement?**

6 **MR. OESTREICHER:** Objection, form, asked and
7 answered.

8 **THE WITNESS:** I don't -- I don't agree that the law
9 requires rates that allow all small facilities to become
10 and remain viable suppliers of electricity.

11 **Q. (By Mr. Sullivan) I don't see the term**
12 **"all," but I see the term "the small facilities."**
13 **Am I misreading it?**

14 **MR. OESTREICHER:** Objection to form.

15 **THE WITNESS:** The word "all" is not in that quote.
16 So, I mean, the statement will have to stand for itself.
17 I'm trying to -- yeah. The Court said what it said there.

18 **Q. (By Mr. Sullivan) Are you familiar with**
19 **the concept of avoided energy costs, Mr. Rosquist?**

20 **A.** Yes.

21 **Q. Would you explain to us, if you would,**
22 **for us noneconomists? Some of these gentlemen may**
23 **be economists. I'm not.**

24 **A.** Explain the concept of avoided energy
25 costs?

1 **MR. OESTREICHER:** Objection to the form.

2 **Q. (By Mr. Sullivan) -- of which you speak?**

3 **MR. OESTREICHER:** I apologize. Objection to form,
4 compound, asked and answered, misstates the testimony.

5 **THE WITNESS:** Montana has a PURPA specific statute,
6 yes.

7 **Q. (By Mr. Sullivan) So when you say,**
8 **"PURPA," you're referring to a -- a -- you're**
9 **referring to regulatory requirements that apply**
10 **under Montana law as well?**

11 **MR. OESTREICHER:** Same objection.

12 **THE WITNESS:** Yes, that's fair.

13 **Q. (By Mr. Sullivan) Okay. Could I direct**
14 **your attention, Mr. Rosquist, to page 9 of**
15 **Exhibit 6? And -- and specifically, I'm going to --**
16 **to expedite the questions that I'm going to ask,**
17 **I'll read under the heading that's entitled "Avoided**
18 **Energy Costs." Do you see that?**

19 **A.** Yes.

20 **Q. And specifically I'm going to commence at**
21 **paragraph 17 because I have some questions to ask**
22 **you about avoided costs that you've generally**
23 **described to us, which I appreciate. Quoting, "The**
24 **commission's decision to reduce by more than half**
25 **the standard rate that NorthWestern Energy must pay**

1 for QF-generated electricity was also arbitrary and
 2 unreasonable. NorthWestern Energy must pay a rate
 3 for QF power that equals its full 'avoided costs'
 4 from not having to generate that energy itself or
 5 purchase it on the market, 16 U.S.C. Section
 6 824a-3(b),(d); 18 C.F.R. Section 292.101(b)(6);
 7 Administrative Rule Montana 38.5.1901(2)(a)(defining
 8 'avoided costs'). The rates must be 'just and
 9 reasonable to the electric consumers of the electric
 10 utility and in the public interest' and 'shall not
 11 discriminate' against QFs."

12 Did I read that correctly?

13 A. Yes.

14 Q. So are there three separate requirements
 15 that must be met in terms of avoided costs?

16 MR. OESTREICHER: Objection to form, speaks for
 17 itself.

18 THE WITNESS: If by "three requirements" you are
 19 referring to just and reasonable to the electric consumers
 20 in the public interest and shall not discriminate against
 21 QFs --

22 Q. (By Mr. Sullivan) That's what I'm
 23 referring to.

24 MR. OESTREICHER: Same objection.

25 Go ahead.

1 process, which is to follow a contested case process that
 2 involves a utility filing an application, intervention by
 3 interested persons, opportunity for pre-filed testimony by
 4 all the parties, discovery, public hearing, and ultimately
 5 a commission decision. Parties to these PURPA-related
 6 contested cases make their arguments regarding rate
 7 setting and how their rate proposals satisfy the criteria
 8 in PURPA -- FERC's regulations implementing PURPA, Montana
 9 law, and Montana rules implementing Montana law. And
 10 staff assists the commission in evaluating the record
 11 evidence gathered in those proceedings and advises the
 12 commission regarding all of these concepts. So the source
 13 of information for how we make these decisions is
 14 developed through -- through that contested case process.

15 Q. I thought I'd seen a flow chart that you
 16 developed in terms of the steps in such a
 17 proceeding. Do you recall having prepared such a
 18 document?

19 A. A flow chart of the contested case
 20 process?

21 Q. The steps that occur from more or less
 22 the start of the application through the opportunity
 23 to intervene, et cetera?

24 A. You may be referring to a -- a pamphlet
 25 or something that's available on our website that

1 THE WITNESS: And is your question whether those are
 2 the only requirements?

3 Q. (By Mr. Sullivan) If those are three
 4 factors.

5 A. Yes, they are.

6 Q. And what is your understanding,
 7 Mr. Rosquist, in terms of the requirement that the
 8 rates be just and reasonable to the electric
 9 consumers and the electric utility?

10 MR. OESTREICHER: Objection to form.

11 THE WITNESS: Can you please restate that question?

12 Q. (By Mr. Sullivan) If I understand
 13 correctly, you are both at a supervisory capacity
 14 and you're an economist. Have you, in terms of your
 15 work at the commission, looked at rate setting?

16 A. Yes.

17 Q. And in terms of your work in setting
 18 rates and issuing staff reports, have you considered
 19 these factors?

20 A. Yes.

21 Q. How?

22 MR. OESTREICHER: I'll object to the form.

23 But go ahead.

24 THE WITNESS: So I guess I'll say that the way we
 25 consider these factors involves the commission's normal

1 describes the rate-making process. It's not
 2 specific to PURPA rate cases; it would apply to
 3 other cases as well. But I think there is something
 4 like that available on our website, a flow chart of
 5 the contested case process.

6 Q. How do you ensure that the rates do not
 7 discriminate against the QFs?

8 MR. OESTREICHER: Objection, form, asked and
 9 answered.

10 THE WITNESS: So FERC's regulations say that all of
 11 these criteria are met if the rate is equal to the avoided
 12 cost.

13 Q. (By Mr. Sullivan) So you would agree
 14 that in order to make sure that there isn't
 15 discrimination against a qualifying facility, that
 16 the -- it's essential that the rate be fairly
 17 arrived at?

18 MR. OESTREICHER: Objection, form.

19 THE WITNESS: I would say it's important that the
 20 rate reflect avoided cost, and I think the contested case
 21 process is designed to ensure fairness and due process to
 22 the parties.

23 Q. (By Mr. Sullivan) Let's talk then about
 24 avoided costs. In economics, what is cost?

25 MR. OESTREICHER: Objection to form.

1 **Q. (By Mr. Sullivan) Are you an economist?**

2 A. I have an economics degree. I'm not
3 necessarily convinced that that makes me an
4 economist, but I have an economics degree.

5 **Q. What is cost?**

6 **MR. OESTREICHER:** Objection, form.

7 **THE WITNESS:** Cost, broadly speaking, refers to --
8 well, there are multiple ways you could probably define
9 "cost." Do you want me to talk about cost in the sense of
10 avoided cost?

11 **Q. (By Mr. Sullivan) Yeah, I was trying --**
12 **you know, preliminarily to that, I was just trying**
13 **to understand.**

14 **You know, we hear a lot about, for**
15 **instance, what the benefit will be from a particular**
16 **project, let's say a utility project of some sort.**
17 **Let's say that the distribution of some electricity**
18 **to consumers, as an example. But there's also -- in**
19 **terms of that, there's also costs that are inherent**
20 **in that. And I'm just trying to get as a baseline,**
21 **what is a cost when you're -- when you're actually**
22 **doing an economic analysis of a proposal, what is a**
23 **cost so that we can understand then and go to the**
24 **next more detailed level of avoided costs.**

25 **Let's say, for instance, a utility is**

1 **going to take an action, and that action would**
2 **involve some costs. Let's say it's going to try to**
3 **fulfill its obligation to transmit a certain amount**
4 **of energy over its electrical lines, as an example.**
5 **That would -- that would mean that that utility**
6 **would incur certain costs in order to be able to**
7 **sell that electricity and have the benefit of the**
8 **income from the sale of that. Is that**
9 **simplistically accurate?**

10 **MR. OESTREICHER:** I'll just object to the form. I
11 think multiple questions there. I'm not trying to get in
12 your way of asking the question, but for purposes of the
13 record, objection.

14 **THE WITNESS:** So I'm not sure I'm prepared to give an
15 economic seminar on the -- on the concept of cost. What I
16 can say is that in the context of PURPA rate-making cost
17 and the notion of avoided cost will be the cost that the
18 utility would otherwise have incurred. So if that -- if
19 we're talking about energy cost and what would be avoided
20 by QF energy, it may be the cost of generating electricity
21 from an alternative electric power plant, or it may be the
22 cost of purchasing electricity from someone else who
23 generates power from a power plant.

24 **Q. (By Mr. Sullivan) Those examples, I**
25 **understand. What about this idea of -- and**

1 **particularly in regard to the regulatory functions**
2 **that you've been involved in -- what about the costs**
3 **of carbon dioxide emissions?**

4 **MR. OESTREICHER:** Objection to form.

5 **THE WITNESS:** I'm not sure I understand what you're
6 asking. What about the cost?

7 **Q. (By Mr. Sullivan) Well, is that an**
8 **avoided energy cost?**

9 **MR. OESTREICHER:** Objection to form, vague.
10 Go ahead.

11 **THE WITNESS:** If -- if the utility would incur a
12 cost, it would have to make a payment for the carbon
13 emissions that it emits in the process of generating
14 electricity, then it could potentially be avoidable.

15 **Q. (By Mr. Sullivan) So the future**
16 **regulatory costs of carbon dioxide emissions is a**
17 **cost that should be included --**

18 **MR. OESTREICHER:** Objection to form.

19 **Q. (By Mr. Sullivan) -- in avoided cost**
20 **analysis?**

21 **MR. OESTREICHER:** Apologies. Objection to form.
22 Go ahead and answer, if you can.

23 **THE WITNESS:** Can you clarify what you mean by the
24 future regulatory costs?

25 **Q. (By Mr. Sullivan) Oh, is there a present**

1 **regulatory cost of carbon emissions?**

2 A. Not that I'm aware of.

3 **MR. OESTREICHER:** Objection to form.

4 Go ahead.

5 **MR. SULLIVAN:** Pardon?

6 **MR. OESTREICHER:** Objection to the form of the
7 question.

8 Go ahead and answer.

9 **THE WITNESS:** In Montana, there is no statute that
10 imposes a cost on an electric generator for the carbon
11 emissions associated with that generation.

12 **Q. (By Mr. Sullivan) The question is, we're**
13 **dealing now with avoided costs. So let me see if**
14 **I'm understanding it correctly. If I understand**
15 **correctly, avoided cost -- premise of avoided cost**
16 **analysis is to avoid the -- the -- the cost of**
17 **constructing a, for instance, generating plant to**
18 **provide the energy that the utility would need.**
19 **You're avoiding that future cost because of some**
20 **other action, right? You're avoiding that through**
21 **instead the purchase, let's say, for instance, of**
22 **that energy. Is that a correct understanding?**

23 **MR. OESTREICHER:** Same objection.

24 Go ahead.

25 **THE WITNESS:** It's partially correct, but I would say

1 potentially incomplete because avoided energy cost can
2 be the cost of operating an existing generator, not just
3 the cost of operating a -- a yet-to-be-constructed
4 generator.

5 **Q. (By Mr. Sullivan)** Yeah, and it could
6 also include not only the future construction of an
7 additional generation capacity. It could involve,
8 for instance, the retrofitting of it. It could
9 involve many different sources of capacity building;
10 is that right?

11 A. It could.

12 **Q. But the object here is in -- is -- more**
13 **or less, isn't it looking in the crystal ball to try**
14 **to realistically and reasonably project what's in**
15 **the future?**

16 **MR. OESTREICHER:** Objection to form.

17 Go ahead.

18 **THE WITNESS:** Forecasting is definitely an element of
19 estimating for avoided costs.

20 **Q. (By Mr. Sullivan)** And so when you're
21 estimating avoided costs and doing that kind of
22 forecasting, if there is going to be a future
23 regulatory cost of carbon dioxide emissions, then
24 that avoided cost should be included in the
25 calculation, should it not?

1 **MR. OESTREICHER:** Objection to form, calls for a
2 legal conclusion.

3 Go ahead.

4 **THE WITNESS:** Are we talking about a specific
5 commission decision here or --

6 **Q. (By Mr. Sullivan)** We will, but I'm
7 talking about we -- we kind of started at some
8 economic basics you'll remember, and we were dealing
9 with costs, and then we went to avoided costs. And
10 we will go next then to a specific application of
11 avoided cost methodology here momentarily, but I was
12 just trying to -- see if we had a common
13 understanding of the concepts.

14 A. It is -- it is possible and intervenors
15 in commission cases have argued that it's reasonable
16 to incorporate expectations or projections of the
17 possibility that carbon emissions will be regulated
18 in the future, and, therefore, there will be a cost
19 associated with them to account for those in the --
20 in the estimation of avoided energy costs, yes.

21 **Q. And, Mr. Rosquist, I'm going to turn once**
22 **again to this Plaintiffs' Exhibit 6, which is the**
23 **document that we were considering a moment ago. If**
24 **I remember correctly, is that 6?**

25 A. Yes, this is 6.

1 **Q. Okay. And -- and where -- where we left**
2 **a moment ago, we were looking specifically at page 9**
3 **entitled "Avoided Energy Costs"?**

4 A. Uh-huh.

5 **Q. Okay. So I wanted to continue with our**
6 **more detailed discussion of that decision and go to**
7 **the next paragraph. We previously reviewed**
8 **paragraph 17, and now I want to direct our attention**
9 **to paragraph 18 which states, and I'm quoting,**
10 **"First, the commission unreasonably eliminated from**
11 **the rate the future regulatory costs of carbon**
12 **dioxide emissions, which renewable resources such as**
13 **wind and solar facilities allow NorthWestern to**
14 **avoid. In eliminating these costs, the commission**
15 **failed to justify its departure from recent**
16 **commission practice of including avoided carbon**
17 **costs both in QF rates, Order No. 7505b, In the**
18 **Matter of Crazy Mountain Wind, Docket No. D2016.7.56**
19 **(January 5, 2017), and the utility's own resource**
20 **acquisitions. Absent a 'reasoned analysis,' such as**
21 **a" -- "such a departure was arbitrary, (citations**
22 **omitted); see also staff memo re Motions For**
23 **Reconsideration at 18, 19, Tab 141 (observing that**
24 **the commission had not explained how the facts**
25 **differed from Crazy Mountain Wind and, 'absent that**

1 **explanation, the commission's decision ... reduces**
2 **to a case of the commission changing its mind in an**
3 **arbitrary manner)."**

4 **Are you familiar with the commission**
5 **practice in these contested case proceedings?**

6 A. Yes.

7 **MR. OESTREICHER:** Objection -- objection to form,
8 asked and answered, but --

9 **Q. (By Mr. Sullivan)** And do you have a --
10 **supervise -- in other words, are the staff in the**
11 **chain of command under you as such?**

12 A. Not all of the staff are under me. Some
13 of the staff are under me.

14 **Q. And would staff that would be**
15 **participating in a contested case proceeding such as**
16 **this be in your chain of command?**

17 A. Some of them would be.

18 **Q. When it states that the staff memo that**
19 **the Court relies upon observing that the commission**
20 **had not explained how the facts differed and -- and**
21 **that therefore the commission's decision as to**
22 **avoided costs in this proceeding was arbitrary, were**
23 **you -- were you the -- in the chain of command of**
24 **that staff memo?**

25 **MR. OESTREICHER:** Objection to form.

1 Go ahead.

2 **THE WITNESS:** Yes.

3 **Q. (By Mr. Sullivan)** Did you participate in
4 the formulation of that staff memo?

5 **MR. OESTREICHER:** Same objection.

6 **THE WITNESS:** I'm sure I had some involvement in that
7 staff memo.

8 **Q. (By Mr. Sullivan)** Coming on further down
9 on page 10 of Exhibit 6, starting at line 15, it
10 states that "The Commission staff acknowledged that
11 estimates of the value of carbon avoidance already
12 account for uncertainty about future carbon
13 regulation and recommended that the commission
14 'maintain the adjusted carbon cost' adopted in the
15 commission's avoided cost calculation for Crazy
16 Mountain Wind," citing the staff memo.

17 Did you participate also in that
18 recommendation?

19 **MR. OESTREICHER:** Same objection.

20 Go ahead.

21 **THE WITNESS:** I believe so.

22 **Q. (By Mr. Sullivan)** We talked about
23 looking in the crystal ball a moment ago in terms of
24 forecasting, and it seems like forecasting is --
25 inherent in forecasting are degrees of uncertainty;

1 your -- I'm sorry if I confused you. I was
2 continuing in the same paragraph we were reading
3 from. I'm on page 10, Mr. Rosquist, line 20 through
4 line 22.

5 **MR. OESTREICHER:** Same objection, speaks for itself.
6 Go ahead.

7 **THE WITNESS:** I just want to clarify, you're asking
8 me whether I was apprised of the Court's ruling or
9 statement as found here in this sentence?

10 **Q. (By Mr. Sullivan)** Yes.

11 **MR. OESTREICHER:** Same objection.

12 Go ahead.

13 **THE WITNESS:** I read the Court's decision.

14 **Q. (By Mr. Sullivan)** Mr. Rosquist, could I
15 ask you to turn next to page 12 of that document,
16 please? And at the top of page 12, it's -- it's
17 captioned "Avoided Capacity Costs." Do you see
18 that?

19 A. Yes.

20 **Q. Could you, as you've attempted to do**
21 **before, just briefly summarize for us the concept of**
22 **avoided capacity costs?**

23 A. So my understanding is that capacity
24 costs generally reflect the cost of a new capital
25 investment that would be needed to -- to add

1 isn't that correct?

2 **MR. OESTREICHER:** Objection to form.

3 **THE WITNESS:** Forecasting does involve uncertainty.

4 **Q. (By Mr. Sullivan)** And, therefore, when
5 carbon avoidance or so -- or the so-called
6 formulation of a carbon adder is being calculated
7 and determined, the uncertainty about the future of
8 carbon regulation is one of the elements that would
9 go into the determination of the value for that
10 adder; is that correct?

11 **MR. OESTREICHER:** Objection to the form of the
12 question.

13 Go ahead and answer, if you can.

14 **THE WITNESS:** Yes, I think that's fair.

15 **Q. (By Mr. Sullivan)** Are you aware that in
16 this proceeding the District Court ruled, and I'm
17 quoting, "The Commission's contrary finding,
18 disregarding the recommendation of its own technical
19 staff, was arbitrary." Had you been apprised of
20 that determination by the Court on appeal?

21 **MR. OESTREICHER:** Objection to form, speaks for
22 itself.

23 Go ahead.

24 **THE WITNESS:** I --

25 **Q. (By Mr. Sullivan)** I'm -- I'm -- for

1 generating -- add the capability to produce energy.
2 And so avoided capacity cost would be any of those
3 future investments that could be offset as a result
4 of acquiring the energy from the QF.

5 **Q. (By Mr. Sullivan)** So it's an exercise in
6 ascertaining the utility's capacity need on the one
7 hand and determining the ability of the QF to meet
8 that capacity need on the other. Is that a fair
9 characterization?

10 **MR. OESTREICHER:** Object to the form.

11 Go ahead.

12 **THE WITNESS:** Yes, I think that's a fair
13 characterization. Keeping in mind that in a PURPA
14 proceeding the utility's need for capacity may have been
15 determined, or, you know, there may be a plan for capacity
16 that's kind of known, and so then you're looking at the
17 attributes of the QF and whether they're able to avoid
18 the -- the capacity that the utility's already identified
19 that it needs. So it's not necessarily an independent
20 need determination in the QF proceeding.

21 **Q. (By Mr. Sullivan)** In fact, there's a
22 context within which to make this determination; is
23 that correct?

24 **MR. OESTREICHER:** Objection, form.

25 **THE WITNESS:** Can you be more specific?

1 **Q. (By Mr. Sullivan)** Well, you -- you're
2 dealing with this larger context which could be
3 PURPA-centric, but being beyond PURPA-centric, it's
4 also -- it's also important to understand, for
5 instance, are you dealing with a local energy market
6 or a regional demand analysis? Is that fair to say?

7 **MR. OESTREICHER:** Same objection.

8 **THE WITNESS:** I may disagree with that because the
9 source of avoided cost is always the utility's avoided
10 cost.

11 **Q. (By Mr. Sullivan)** But it's the utility's
12 avoided cost, if I understand correctly, in terms of
13 one of the factors is we're talking about their
14 need, and in terms of evaluating their need we would
15 need to understand this concept of peak demand; is
16 that correct?

17 A. The utility --

18 **MR. OESTREICHER:** Objection to form.

19 Go ahead.

20 **Q. (By Mr. Sullivan)** The -- the -- yeah,
21 and if I'm --

22 **MR. SULLIVAN:** He's doing a great job of asking for
23 clarifications.

24 **Q. (By Mr. Sullivan)** I appreciate it,
25 Mr. Rosquist.

1 capacity from an entity outside of its system, but the
2 focus is on the utility's system needs, its loads, its
3 obligations, not -- not the loads in -- within the region,
4 although those loads may drive what's available to the
5 utility.

6 **Q. (By Mr. Sullivan)** Yes. Which gets us
7 back to this issue of availability for -- to meet
8 capacity needs, right? So, in other words, you need
9 to consider not just the utility in isolation but in
10 relationship to the whole system of which it is a
11 part; is that correct?

12 **MR. OESTREICHER:** Objection to form, misstates the
13 testimony.

14 Go ahead.

15 **THE WITNESS:** I'm concerned that you may be
16 conflating needs with available resources, and so that's
17 why I'm -- I'm struggling to agree with you.

18 **Q. (By Mr. Sullivan)** It may be that I'm
19 misconflating it, but I -- I want to make sure that
20 we -- we understand. And in particular, I want to
21 try to get back to this issue of avoided capacity
22 needs, which is also relevant here in terms of QFs,
23 right, in terms of setting pricing for QFs?

24 **MR. OESTREICHER:** Objection to form, compound.

25 **THE WITNESS:** Avoided capacity costs is an -- is an

1 **But, yes, the utility's need and what**
2 **goes into the analysis of the utility's need would**
3 **be the peak demand for that need; is that correct?**

4 A. On that utility system, correct.

5 **Q. (By Mr. Sullivan)** And so in terms of
6 understanding the need, we would need to understand
7 kind of the -- the annual cyclicality to the demand.
8 In other words, summer demand and winter peak
9 demand, is that correct?

10 **MR. OESTREICHER:** Objection to form.

11 Go ahead.

12 **THE WITNESS:** Those factors do go into an assessment
13 of the need for capacity, yes.

14 **Q. (By Mr. Sullivan)** And -- and more
15 specifically, when we're dealing with the need
16 capacity for NorthWestern Energy, it's important
17 then to understand not just this localized need, but
18 doesn't it require a more regional consideration,
19 more regional context?

20 **MR. OESTREICHER:** Objection to form.

21 Go ahead.

22 **THE WITNESS:** I'm not sure I agree with that. The --
23 the utility's -- the utility needs to obtain capacity to
24 satisfy its system needs. Now, the source of the capacity
25 that it uses to do that may -- may involve acquiring

1 element of implementing PURPA.

2 **Q. (By Mr. Sullivan)** And specifically for
3 the QFs?

4 A. Yes, the utility's avoided capacity costs
5 are important to determining the rate that should be
6 paid to the QF.

7 **Q. And in the proceeding that we're looking**
8 **at here in Plaintiffs' Deposition Exhibit 6, the**
9 **particular QF that we're dealing with, the -- and**
10 **I'm reading here, in paragraph 21, Mr. Rosquist, for**
11 **your convenient reference, which is on page 12.**

12 A. Yes.

13 **Q. It states, "The commission's**
14 **determination that solar QFs contribute just 6.1**
15 **percent of their overall generating capacity to**
16 **NorthWestern's capacity needs was also arbitrary**
17 **because it discounts NorthWestern's substantial**
18 **summertime capacity needs in focusing only on a**
19 **handful of peak demand hours, 220 hours over a**
20 **ten-year period, that reflect primarily infrequent**
21 **wintertime spikes, the commission overlooked**
22 **evidence that NorthWestern lacks sufficient capacity**
23 **to meet peak summer demand in both the summer and**
24 **winter." [as read]**

25 **Did I read that correctly?**

1 **MR. OESTREICHER:** Objection to form, speaks for
2 itself.

3 **THE WITNESS:** As far as I can tell, you read it
4 correctly.

5 **Q. (By Mr. Sullivan)** And I'm continuing,
6 "In fact, NorthWestern's 1,084 megawatt of
7 generation capacity, 2015 plan, at 8-2, has been
8 inadequate to meet its summer peak demand in every
9 year since 2011," citation omitted. "Additionally,
10 the evidence demonstrated that NorthWestern's summer
11 peak demand exceeded winter peak demand in nearly
12 half of the years evaluated. The commission further
13 misapprehended the effect of evidence of regional
14 peak demand, which the commission conceded was the
15 most relevant factor for determining NorthWestern's
16 capacity needs."

17 Did I read that correctly?

18 **MR. OESTREICHER:** Objection to form, speaks for
19 itself.

20 **THE WITNESS:** You read it correctly.

21 **Q. (By Mr. Sullivan)** Do you agree that
22 regional peak demand is the most relevant factor for
23 determining NorthWestern's capacity needs?

24 **MR. OESTREICHER:** Objection to form.

25 **THE WITNESS:** So I'm going to have to let this speak

1 for itself. The commission addressed this in its orders
2 in this proceeding, 7500c and 7500d, in terms of its
3 rationale for adopting the 6.1 capacity value, 6.1 percent
4 capacity value, and -- because I am not prepared to say
5 whether I agree or disagree with that statement without
6 going back and reviewing those underlying orders.

7 **Q. (By Mr. Sullivan)** Would it be fair to
8 say, Mr. Rosquist, that the commission staff does
9 not always agree with the commission or vice versa.
10 The commission does not always agree with the
11 commission staff?

12 A. That's true.

13 **Q.** I want to direct our attention next to
14 paragraph 22 there, which kind of brings us to the
15 end of this particular matter of avoided capacity
16 cost in the proceeding at issue. It states, "As
17 Plaintiffs demonstrated based on record evidence,
18 properly calculated for NorthWestern's high demand
19 hours in the summer and winter months, the average
20 capacity contribution of solar resources is
21 36 percent rather than 6.1 percent."

22 Did I read that correctly?

23 **MR. OESTREICHER:** Objection, form, speaks for itself.

24 Go ahead.

25 **THE WITNESS:** Yes, you read it correctly.

1 **Q. (By Mr. Sullivan)** So the -- if I
2 understand the math, the commission underdetermined
3 the qualifying facility's contribution by some
4 600 percent; is that correct?

5 **MR. OESTREICHER:** Objection, form, speaks for itself.

6 **THE WITNESS:** That's what the Court order found.

7 **Q. (By Mr. Sullivan)** Well, the Court order
8 is -- is concerned with the -- both the attitude and
9 the bias of the commission. Are -- you -- you
10 indicated you've seen this order before; is that
11 correct?

12 A. Yes, I've seen it before.

13 **Q.** And the order itself makes note of this
14 concern with the objectivity and attitude of the
15 commission in setting these in these QF proceedings,
16 noting, in fact, not only in this proceeding and in
17 the other proceedings that I'm -- and here we have
18 editorials that were issued by the commissioners,
19 but we also have the so-called "live mic" incident.
20 Are you familiar with that?

21 **MR. OESTREICHER:** Objection, to form. I think it's
22 compound. There's a couple questions in there.

23 **Q. (By Mr. Sullivan)** Okay. Well, let's
24 start with -- let's start with directing your
25 attention, Mr. Rosquist, to page 3 of Exhibit 6.

1 And I'll start at the top of page 3 of Exhibit 6,
2 line 1 from the Court's order.

3 Well, wait a minute. I'm going to go
4 back -- in order to contextualize that, I'm going to
5 go back and start on page 2 of Exhibit 6, line 17,
6 and I'm quoting, "Power transmission lines were
7 historically created by quasi-governmental eminent
8 domain because electricity distribution is, in part,
9 for the general good of the public. To balance the
10 power of a monopolistic system and the public
11 interest, power companies in Montana are regulated
12 by the Public Service Commission, which is to
13 independently and fairly balance the legitimate
14 interest of the power company in a fair profit for
15 its shareholders with the interest of the public.
16 Absent fair balancing by the commission,
17 compensation rates to renewable energy developers
18 could be set in a manner to effectively make such
19 renewable energy development economically unfeasible
20 and thereby eliminate competition. This could
21 happen by either reducing rates or contract lengths.
22 That is what happened here."

23 Continuing at the top of page 3. "The
24 purpose to do that is demonstrated not only by the
25 formal record and result, but also in the words of

1 the commissioners themselves. For example, during
2 an underlying hearing, Commissioner Lake and a staff
3 member were unaware of an open microphone, and the
4 following was recorded:

5 **"(Staff member to Commissioner Lake):**

6 '[the shortened contract length] ... is going to
7 kill development entirely.'

8 **"(Commissioner Lake in response):**

9 '... actually, the ten year might do it if the price
10 doesn't. And honestly, at this low price, I can't
11 imagine how anyone gonna get into it. Just dropping
12 the rate that much probably took care of the whole
13 thing.'

14 "(Commissioner work session transcript,
15 June 22nd, 2017)." [as read]

16 Did I read that correctly?

17 **MR. OESTREICHER:** Objection to form, speaks for
18 itself.

19 **THE WITNESS:** Yes, you read it correctly.

20 **Q. (By Mr. Sullivan) Are you familiar with**
21 **that from your prior work at the commission?**

22 A. Yes.

23 **MR. OESTREICHER:** Objection, form.

24 Go ahead.

25 **Q. (By Mr. Sullivan) Who was the staff**

1 of these QFs.

2 **MR. OESTREICHER:** Objection, form, compound.
3 Go ahead.

4 **THE WITNESS:** Contract length gives a QF a measure of
5 certainty in the sense that when you can combine a known
6 rate with a known contract term, you can estimate a
7 revenue stream that allows you to do your own economic
8 analysis as to whether or not constructing your qualifying
9 facility will be feasible.

10 **Q. (By Mr. Sullivan) And as Commissioner**
11 **Lake so adroitly noted, that's an important factor,**
12 **is it not, in terms of the viability of a QF?**

13 **MR. OESTREICHER:** Objection to the form of the
14 question.

15 **THE WITNESS:** Yes.

16 **Q. (By Mr. Sullivan) I'm going to direct**
17 **our attention next, Mr. Rosquist, to page 8 and**
18 **starting at paragraph 12 of this order of the**
19 **District Court, which is Plaintiffs' Exhibit 6.**

20 It indicates, and I'm reading at
21 paragraph 13, "The Commission admitted that the
22 methodologies adopted in this case cannot be applied
23 without discriminating against QFs, though the
24 commission promises future parity," citations
25 omitted. "The commission staff advised this promise

1 member to whom Commissioner Lake was discussing
2 this?

3 A. I believe it was Neil Templeton.

4 **Q. What is Mr. Templeton's position?**

5 A. One of the staff rate analysts in the
6 economics area.

7 **Q. So as a rate analyst in the economic**
8 **area, it would be -- it would be relevant in terms**
9 **of -- in terms of knowing whether shortening a**
10 **contract length or diminishing the price that those**
11 **factors could, in fact, kill these alternative**
12 **renewable energy proposals, correct?**

13 **MR. OESTREICHER:** Objection to form of the question.

14 Go ahead.

15 **THE WITNESS:** Are you asking whether the staff
16 person's position or the area where they work would have
17 allowed them to understand the effect of reducing the
18 contract length or the rate on the potential for
19 development?

20 **Q. (By Mr. Sullivan) That's a good way to**
21 **rephrase my question.**

22 A. The answer to that question would be yes.

23 **Q. Let's talk next about contract length,**
24 **please. Describe to me the import economically of**
25 **contract length and more specifically in the context**

1 does not ameliorate present day discrimination."
2 Staff memo citation omitted. "The commission's
3 decision to ignore its expert staff and deviate from
4 precedent is reversible error."

5 **First, did I read that correctly?**

6 **MR. OESTREICHER:** Objection, form, speaks for itself.

7 **THE WITNESS:** I think you read it correctly.

8 **Q. (By Mr. Sullivan) And once again, this**
9 **was an instance where the commission ignored the**
10 **commission staff recommendation on this additional**
11 **element, this specifically being the contract**
12 **length; is that correct?**

13 **MR. OESTREICHER:** Same objection.

14 **THE WITNESS:** Sorry, your question -- the -- did the
15 commission on the contract-length issue make a decision
16 that was different than what the staff recommended?

17 **Q. (By Mr. Sullivan) Yes.**

18 A. Yes.

19 **MR. SULLIVAN:** Can we go off the record for just a
20 minute?

21 **VIDEO OPERATOR:** We are going off the record. The
22 time is 11:33 a.m.

23
24 (Whereupon, a recess was taken)
25

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1 **VIDEO OPERATOR:** We are back on the record. The time
 2 is 11:52 a.m.
 3 **Q. (By Mr. Sullivan)** Mr. Rosquist, I'd like
 4 to direct your attention next to Tab 11 in our
 5 notebook, which we will mark for identification
 6 purposes as Plaintiffs' Exhibit 7.
 7
 8 (Deposition Exhibit No. 7 was marked
 9 for identification)
 10
 11 **Q. (By Mr. Sullivan)** I'll represent to you
 12 that this is a companion proceeding with the
 13 Exhibit 6 that we were looking at. It involves some
 14 additional issues. These cases were consolidated as
 15 you'll see at the top, but I wanted to discuss with
 16 you some items that weren't explicitly addressed or
 17 addressed in the same way in the preceding order.
 18 I'd ask you to just take a look at that and as with
 19 the preceding order just ask, in general, are you
 20 familiar with this?
 21 **A. Yes.**
 22 **Q. And just for clarification and foundation**
 23 **purposes, I would recite that -- and I'm on page 3,**
 24 **and I'm not going to read the whole thing, but I'll**
 25 **just recite that this particular case arises out of**

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1 the Montana Sun, LLC's efforts to develop an 80
 2 megawatt solar project located near Billings,
 3 Montana in Yellowstone County.
 4 "MTSUN's solar project is a
 5 self-certified qualifying facility, QF, under the
 6 Public Utility Regulatory Policies Act of 1978,
 7 PURPA, and thus MTSUN has the right to sell
 8 electricity wholesale to NorthWestern Energy."
 9 So there's a distinction between this
 10 proceeding in the sense that we were dealing with a
 11 smaller QF in the previous proceeding. Is that --
 12 am I correct in understanding that a 3 megawatt or
 13 less QF versus this larger 80 megawatt solar
 14 project?
 15 **MR. OESTREICHER:** I'll object to the form of the
 16 question.
 17 **Go ahead.**
 18 **THE WITNESS:** So the prior proceeding dealt with the
 19 commission's decisions regarding standard rates for
 20 qualifying facilities 3 megawatts or less. So that
 21 proceeding wasn't about any one particular QF, but rather
 22 standard rates that would be eligible to any QF that was 3
 23 megawatts or less. With that clarification, you are
 24 correct.
 25 **Q. (By Mr. Sullivan)** Okay. And with that

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1 clarification in mind, would you please turn,
 2 Mr. Rosquist, to page 6. And at the top, there is a
 3 caption that's entitled "Contract Length"; is that
 4 correct?
 5 **A. Yes.**
 6 **Q. And once again, the Court was dealing**
 7 **with the issue of whether the commission's decision**
 8 **to limit MTSUN's contract to a 15-year term was**
 9 **clearly erroneous. Is that your understanding of**
 10 **this proceeding?**
 11 **MR. OESTREICHER:** Objection to form, calls for a
 12 legal conclusion. The order speaks for itself.
 13 **THE WITNESS:** Contract length and the commission's
 14 decision regarding that length was an issue in this
 15 proceeding.
 16 **Q. (By Mr. Sullivan)** And once again, the
 17 Court ruled, did it not, that the commission's
 18 determination to limit Montana Sun's contract to a
 19 15-year term was clearly erroneous based on the
 20 record of the proceeding; is that correct?
 21 **MR. OESTREICHER:** Same objection.
 22 **Go ahead.**
 23 **THE WITNESS:** Paragraph 21 indicates that the Court
 24 finds the commission's decision to limit MTSUN's contract
 25 to a 15-year term is clearly erroneous.

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1 **Q. (By Mr. Sullivan)** And what does the --
 2 well, I'll read the last sentence in the same
 3 paragraph. It states, does it not, "Montana Sun is
 4 entitled to a 25-year contract under commission
 5 precedent and based on testimony in the underlying
 6 Montana Sun docket"; is that correct?
 7 **MR. OESTREICHER:** Same objection.
 8 **Go ahead.**
 9 **THE WITNESS:** That's what the document says.
 10 **Q. (By Mr. Sullivan)** In this case also, in
 11 a -- in a particularized way, addressed the issue of
 12 carbon pricing again, did it not?
 13 **MR. OESTREICHER:** Same objection.
 14 **Go ahead.**
 15 **THE WITNESS:** "In a particularized way" meaning?
 16 **Q. (By Mr. Sullivan)** Well, before you said
 17 that the docket -- it was -- that the preceding case
 18 involved a generalized docket, whereas this was a
 19 particular -- a petition filed by a particular
 20 applicant.
 21 **A. Correct.**
 22 **Q. Okay. And so I was just saying that**
 23 **carbon pricing was not being addressed generically**
 24 **here, but specific to the application at issue,**
 25 **which was Montana Sun's?**

1 A. Yes.

2 Q. And once again, it appears, and I'm
3 quoting, "The commission's own staff advised the
4 commission that there was no record evidence to
5 support the departure from precedent," citing a
6 staff memo of October 3rd, 2017.

7 Do you see that in paragraph 22?

8 MR. OESTREICHER: Objection to form, speaks for
9 itself.

10 Go ahead.

11 THE WITNESS: Yes, I see that.

12 Q. (By Mr. Sullivan) Okay. Are you
13 familiar with the staff memo to which the Court
14 refers?

15 A. I am familiar with it. I haven't read it
16 in some time, but I am familiar with it.

17 Q. (By Mr. Sullivan) The Court determined
18 in paragraph 24, and I'm quoting, "This Court finds
19 that the commission's decision to eliminate carbon
20 pricing for the Montana Sun project is arbitrary,
21 capricious, and characterized by an abuse of
22 discretion. Based on the lack of record evidence,
23 commission precedent, and the applicable standard,
24 Montana Sun is entitled to a carbon adder of \$9.65
25 per megawatt hour as recommended by the staff based

1 on the commission precedent from the Crazy Mountain
2 Wind docket," citation omitted.

3 Did I read that correctly?

4 MR. OESTREICHER: Objection to form, speaks for
5 itself.

6 Go ahead.

7 THE WITNESS: Yes, I think you read it correctly.

8 Q. (By Mr. Sullivan) So once again, that
9 was based on a staff memorandum?

10 MR. OESTREICHER: Objection to form of the question.

11 THE WITNESS: Can you clarify? You're saying that
12 the Court's decision was based on the staff
13 recommendation, or the carbon adder that he ordered was
14 based on the staff recommendation?

15 Q. (By Mr. Sullivan) The Court indicated
16 that the applicant, Montana Sun, and I'm quoting,
17 "Montana Sun is entitled to a carbon adder of \$9.65
18 per megawatt hour as recommended by the staff based
19 on the commission precedent from the Crazy Mountain
20 Wind docket."

21 So my question is, once again, the Court
22 overruled the commission on the basis of the
23 commission staff memo, correct?

24 MR. OESTREICHER: Objection, form, speaks for itself.
25 Calls for a legal conclusion as well.

1 Go ahead.

2 THE WITNESS: I'm going to have to let that statement
3 stand for itself because I don't know whether his decision
4 was solely based on the staff recommendation or his
5 assessment of other evidence in the record.

6 Q. (By Mr. Sullivan) That's fair enough.

7 Would you turn next, Mr. Rosquist, to the next page,
8 paragraph 26. And I'm going to read to you the last
9 sentence in paragraph 26 which states, "Since
10 Montana Sun and NorthWestern were virtually in
11 agreement on the avoided cost of energy on
12 December 23rd, 2016, this Court finds that Montana
13 Sun is entitled to the agreed-upon rate for energy
14 of \$28.68 per megawatt hour as documented in the
15 COMMISSION staff's memo," citation omitted.

16 Did I read that correctly?

17 MR. OESTREICHER: Objection to form, speaks for
18 itself.

19 Go ahead.

20 THE WITNESS: Yes, I think you read it correctly.

21 Q. (By Mr. Sullivan) Could you explain to
22 me how this carbon adder that's referenced in
23 paragraph 24 of \$9.65 for megawatt hour relates to
24 the rate for energy of \$28.68 per megawatt hour in
25 paragraph 26?

1 MR. OESTREICHER: Objection to form, speaks for
2 itself, calls for a legal conclusion.

3 Go ahead.

4 THE WITNESS: I don't know that I can without reading
5 the staff memo in full if your question is whether the
6 9.65 is embedded in this 28.68 figure. I would have to
7 reread the staff memo to make sure --

8 Q. (By Mr. Sullivan) Okay. And that was my
9 question. I was just wondering how they integrated,
10 how they related.

11 MR. OESTREICHER: Same objection.

12 Go ahead.

13 THE WITNESS: That was your question or that --

14 Q. (By Mr. Sullivan) Yeah. Your -- your
15 question -- you understood my question, and -- and
16 your answer is apparently --

17 A. I would have to --

18 Q. -- you'd have to look at the staff memo?

19 A. Yes.

20 Q. Thank you. In paragraph -- directing
21 your attention to paragraph 29, which is at the top
22 of page 9, under "Capacity," the first sentence
23 there reads, "Montana Sun argued that its capacity
24 payment must be based on the next planned generation
25 unit in NorthWestern's 2015 Integrated Resource

1 Plan, which is an internal combustion engine,"
2 et cetera.

3 Explain -- I think you briefly touched on
4 it earlier, but if you would explain what the
5 Integrated Resource Plan is.

6 MR. OESTREICHER: I'll just object to form. I think
7 it's asked and answered.

8 Go ahead.

9 THE WITNESS: So the Integrated Resource Plan is a
10 document that the utility files with the commission
11 pursuant to a statutory requirement for utilities to
12 conduct integrated resource planning. The Integrated
13 Resource Plan assesses -- provides the utilities an
14 assessment of its expectations of future load serving
15 obligations, the performance of its existing generating or
16 other supply resources and the need for new resources, and
17 an evaluation of the costs of alternatives that could be
18 used to fill any -- any future resource needs to -- to
19 meet those load-serving obligations.

20 Q. (By Mr. Sullivan) Thank you.
21 Mr. Rosquist, I'd like to direct your attention next
22 to the document that's at Tab 18, and we'll mark
23 that Tab 18 as Deposition -- Plaintiffs' Deposition
24 Exhibit 8.
25

1 (Deposition Exhibit No. 8 was marked
2 for identification)
3

4 Q: (By Mr. Sullivan) Would you take a
5 minute to review that?

6 A. Okay.

7 Q. Have you had a chance to look at it?

8 A. I have.

9 Q. Okay. Before today, were you familiar
10 with that document?

11 A. Generally, yes.

12 Q. I'll represent for the record that this
13 was nominated as Senate Bill 201 during the course
14 of the 2001 or the 67th legislative session, and
15 it's entitled "An Act Prohibiting Adders and Avoided
16 Cost Rate Making; Amending Section 69-3-604 and
17 69-3-1206, MCA; and Providing an Immediate Effective
18 Date and an Applicability Date."

19 How are you familiar with this
20 legislation?

21 MR. OESTREICHER: Just for purposes of the record,
22 you said 2001. I think it's 2021.

23 MR. SULLIVAN: I'm sorry. Thank you.

24 MR. OESTREICHER: I think you meant to say that.

25 MR. SULLIVAN: Yeah. Time flies.

1 THE WITNESS: So the commission tracks bills
2 introduced during legislative sessions that affect
3 statutes that it oversees. And so when this bill was
4 introduced, it showed up on our radar, so to speak, and we
5 began monitoring its progress through the legislative
6 session.

7 Q. (By Mr. Sullivan) In terms of -- in
8 terms of that, I would direct your attention further
9 back, Mr. Rosquist, in this exhibit is the documents
10 that are public record on this bill, including
11 during the hearing process.

12 A. Could you point me to a tab?

13 Q. I'm sorry, it's part of -- it's part of
14 Tab 18. It's part of the legislative history of
15 Senate Bill 201. If you keep turning the pages,
16 you'll see we have the -- the 2021 session,
17 additional documents on this Senate Bill 201.

18 And what I wanted to direct your
19 particular attention to, if you'll flip back towards
20 the end here, they have the registration log for the
21 House Energy, Technology, and Federal Relations
22 Committee, which was the committee that conducted
23 the hearings in the House on this bill. And we'll
24 make sure we're all on the same page. It would be
25 the seventh sheet in that tab, Mr. Rosquist.

1 A. The seventh sheet or --

2 Q. Yeah, it's -- may I hand this to you?
3 It's -- if you could find that in your notebook.

4 A. Okay, I've got it. Thank you.

5 Q. It -- it -- it appears to be -- I'll
6 represent that this is public record, and it appears
7 that during the hearing process on Wednesday,
8 March 17th, 2021, among the -- those attending
9 were a -- was an individual by the name of Robin --
10 excuse me -- Robin Arnold representing Montana PSC.
11 Do you see that?

12 A. Yes.

13 Q. And do you know who Robin Arnold is?

14 A. Yes. She's a former commission staff
15 person.

16 Q. Do you see that the legislative history
17 indicates that on behalf of the PSC she supported
18 Senate Bill 201?

19 A. Yes.

20 Q. Now, let's turn back to the -- page 1 of
21 Deposition Exhibit 8. And I want to read to you
22 the -- the additional paragraph 5 that states --
23 well, first of all, we can start with the -- the
24 title to it, "An Act Prohibiting Adders and Avoided
25 Cost Rate Making; Amending Section 69-3-604 and

1 69-3-1206, MCA; and Proving an Immediate Effective
2 Date and an Applicability Date."

3 Directing our attention to subsection 5,
4 which is proposed to be added, quoting, "Avoided
5 cost rates may not includes a bonus or adder to
6 provide additional compensation for environmental
7 externalities or other costs above avoided costs
8 except when a bonus or adder is necessary to
9 compensate for a real and actual cost required by
10 existing regulation or existing law."

11 Did I read that correctly?

12 MR. OESTREICHER: I'll just object to form. It
13 speaks for itself.

14 THE WITNESS: I think you read it correctly.

15 Q. (By Mr. Sullivan) And what is your
16 understanding of what this is addressing?

17 MR. OESTREICHER: Objection to the form of the
18 question.

19 THE WITNESS: So what is my understanding of what
20 this new provision is addressing?

21 Q. (By Mr. Sullivan) Yes.

22 MR. OESTREICHER: Same objection. I don't know that
23 he's here to testify as to the legislative prerogative.

24 THE WITNESS: I can say that it is addressing
25 standards for the commission to consider in determining

1 conclusion.

2 THE WITNESS: So to me, unfortunately, the statute
3 refers to adder to provide additional compensation for
4 environmental externalities above avoided cost. So it
5 appears to be talking about an adder to avoided cost. And
6 I think in the discussion we had regarding the prior
7 commission orders, to the extent the term "adder" was
8 used, it was used in the context of estimating avoided
9 costs themselves.

10 Q. (By Mr. Sullivan) It -- it states
11 that -- and I'm going to read this again. This is
12 subsection 5, "Avoided cost rates may not include,"
13 so it seems that they are dealing with avoided cost
14 rates?

15 MR. OESTREICHER: Same objection.

16 Q. (By Mr. Sullivan) Looking at the plain
17 language, I'm saying it looks like that is what
18 we're dealing with, avoided cost rates.

19 MR. OESTREICHER: Same objection, calls for a legal
20 conclusion. I think it's been asked and answered.

21 THE WITNESS: Yeah, I -- I may have to just let it
22 speak for itself so I don't get into trying to interpret a
23 statute.

24 Q. (By Mr. Sullivan) Another question, if I
25 might, Mr. Rosquist. Last page of that exhibit, if

1 avoided cost rates, specifically when it comes to issues
2 pertaining to environmental externalities.

3 Q. (By Mr. Sullivan) And, specifically,
4 we're dealing with purchase of electricity by a
5 utility from a qualifying small power production
6 facility; is that correct?

7 MR. OESTREICHER: Objection to form, speaks for
8 itself.

9 THE WITNESS: It is amending a portion of the statute
10 that deals with rates for qualifying facilities.

11 Q. (By Mr. Sullivan) Does this in any way
12 speak to the issue of adders that we were talking
13 about when we were examining Deposition Exhibits 6
14 and 7 just a short while ago, the two Court orders
15 that spoke to the issue of adders?

16 MR. OESTREICHER: Objection to the form of the
17 question.

18 THE WITNESS: I'm not sure I can answer that without
19 trying to interpret this statute, which may be beyond my
20 qualifications.

21 Q. (By Mr. Sullivan) It uses the term
22 "adder." "An Act Prohibiting Adders in Avoided Cost
23 Rate Making." What do you understand "adder" to be?

24 MR. OESTREICHER: Objection to the form of the
25 question, asked and answered, calls for a legal

1 you would, please, it has another -- apparently
2 another representative of the PSC speaking in
3 support of Senate Bill 201, if I'm not mistaken
4 anyway. It's -- is it Zack Rogala?

5 MR. OESTREICHER: For purposes of the record, this
6 appears to be the sign-in sheet for Senate Bill 213.

7 MR. SULLIVAN: Oh, okay. Maybe you're right. Let's
8 see.

9 Yeah, that's true. Excuse me.

10 Q. (By Mr. Sullivan) But just so I know,
11 who -- who is -- is Mr. Rogala a staff member of the
12 PSC?

13 A. He's also a former staff member.

14 Q. Okay. Thank you.

15 I'm going to ask you a couple of
16 questions about the Montana Energy Policy Act, and
17 maybe the easiest way to -- those are the
18 provisions -- from your review of this,
19 Mr. Rosquist, you're probably aware that we're
20 challenging several of the subsections of that act.
21 And -- and specifically, I think we lay them out in
22 a pretty efficient way on page 35 of Deposition --
23 of the Complaint, which is Plaintiffs' Exhibit 3,
24 but Tab -- excuse me, I'm going to confuse you.
25 It's at Tab 5.

1 And if you turn to page 35 of Tab 5 -- of
2 Exhibit 5, and starting in paragraph 110 are the
3 subsections from the act that we're challenging in
4 this action.

5 A. Okay, I see it.

6 Q. If you could take a moment to familiarize
7 yourself. I think you indicated you'd reviewed
8 that -- the energy policy act before, but take a
9 look if you would.

10 A. So I'm looking at paragraph 110?

11 Q. Yes, but more specifically, we're -- I'm
12 quoting from the statute, which is Montana Code
13 Annotated Section 90-4-1001, subsections C through
14 G.

15 MR. OESTREICHER: Roger, do you have a copy of this
16 statute as one of the tabs?

17 MR. SULLIVAN: I don't think I -- well, I think I do,
18 yeah. I think I actually may.

19 MR. OESTREICHER: I think it's in Tab 14.

20 Q. (By Mr. Sullivan) Yeah, so if it would
21 be easier or clearer, Mr. Rosquist, we can just look
22 at Tab 14, which is the state energy policy.

23 A. Okay.

24 Q. And we'll mark that as Plaintiffs'
25 Deposition Exhibit 9.

1 (Deposition Exhibit No. 9 was marked
2 for identification)

3 THE WITNESS: Okay.

4 Q. (By Mr. Sullivan) Okay. Do you agree
5 that the Public Service Commission has a duty to
6 comply with the state energy policy as set forth in
7 this statute?

8 MR. OESTREICHER: Object to the form of the question,
9 calls for a legal conclusion, misstates the title of the
10 statute.

11 Go ahead.

12 THE WITNESS: So in my experience, the commission is
13 guided in its regulatory activity by -- by Title 69. And
14 to the extent that the regulation of public utilities is
15 guided by the state's energy policy goal statements, we
16 accept that those are reflected in our governing statutes
17 in Title 69.

18 Q. (By Mr. Sullivan) I'm sorry, I don't
19 think I -- I don't think I understand that. In
20 regards to MCA Section 90-4-1001, my question was,
21 does the PSC have a -- have a duty to comply with
22 that statute?

23 MR. OESTREICHER: Same objections.

24 Q. (By Mr. Sullivan) What -- is it your
25

1 understanding that the PSC comply with this statute?

2 MR. OESTREICHER: I'm sorry, I'm not trying to talk
3 over you.

4 Same objections, asked and answered.

5 THE WITNESS: To the extent there was -- there was
6 something specific in -- in this section of the code that
7 the commission is required to do, then we would do it.
8 I -- I think I was saying that our specific statutory
9 duties are in Title 69, and that's generally what we look
10 to for our source of authority and obligations.

11 Q. (By Mr. Sullivan) Is there anything in
12 Title 69 that states that the Public Service
13 Commission does not have to follow the statute?

14 MR. OESTREICHER: Objection to the form of the
15 question, calls for a legal conclusion. I think it's been
16 asked and answered.

17 But go ahead.

18 THE WITNESS: I'm not aware of a statement like that
19 in Title 69.

20 Q. (By Mr. Sullivan) Are there any
21 provisions in Title 69 that the Public Service
22 Commission has to follow, as you indicated that's
23 your -- your -- the statutes you're specifically
24 under, that contradict this statute, MCA Section
25 90-4-1001?

1 MR. OESTREICHER: Same objections.

2 Go ahead and answer, if you can.

3 THE WITNESS: Well, I'm not sure I'm qualified to
4 draw a legal conclusion about whether any of these goal
5 statements contradict the specific obligations that the
6 commission has under Title 69.

7 Q. (By Mr. Sullivan) Mr. Rosquist, is there
8 a difference between long-term energy planning and
9 long-range resource plans? And I don't want to
10 distract you from that, but I'm turning to a new
11 subject.

12 A. Oh, okay. So --

13 Q. The question was, is there a difference
14 between long-term energy planning and long-range
15 resource plans?

16 A. There may be.

17 Q. I'm just -- I -- I thought that as part
18 of your resume that we looked at earlier that
19 long-range resource plans were part of the job
20 duties that you indicated. Does that make -- ring a
21 bell?

22 MR. OESTREICHER: What tab was that, Roger?

23 MR. SULLIVAN: That was -- I think we marked that as
24 Exhibit --

25 MR. OESTREICHER: It might have been 1, huh?

1 **MR. SULLIVAN:** I think we marked that as Exhibit 1,
2 yeah. Let's see.

3 **Q. (By Mr. Sullivan) Am I conflating**
4 **something, or is that something that doesn't have**
5 **any operation of significance?**

6 A. Are you referring -- you're referring to
7 my resume? What tab was that?

8 **Q. Yeah, I think -- I think that's at Tab 4,**
9 **and we marked it as Exhibit -- Plaintiffs'**
10 **Exhibit --**

11 A. 1.

12 **Q. -- 1, yeah.**

13 A. So I'm seeing references to long-range
14 resource plans --

15 **Q. Uh-huh.**

16 A. -- and integrated least-cost resource
17 planning. And you were asking about whether those
18 are the same as long-range energy plans?

19 **Q. Yeah, is -- are long-range resource plans**
20 **any different from long-term energy planning? Is**
21 **it -- or are they basically synonymous? It's a**
22 **distinction without a real difference?**

23 A. I think they could be different.

24 **Q. Okay. In what way?**

25 A. Well, when I think of long-range resource

1 that makes that decision.

2 **Q. Among a range of players, whether persons**
3 **or entities, who would be included in that?**

4 A. Well, obviously electric utilities that
5 the commission oversees make decisions regarding
6 energy planning and resource acquisition, and the
7 commission in its regulatory sphere oversees that.

8 **Q. Others?**

9 A. I'm sure there are others. I don't know
10 if I can be specific of who they are.

11 **Q. Does the Public Service Commission play a**
12 **role in deciding what energy Montanans can use?**

13 **MR. OESTREICHER:** Object to the form of the question.

14 Go ahead.

15 **THE WITNESS:** To some extent, it does.

16 **Q. (By Mr. Sullivan) Does the source of**
17 **energy matter to Montanans?**

18 **MR. OESTREICHER:** Objection, calls for speculation.

19 **THE WITNESS:** I think you'd have to ask Montanans.

20 **Q. (By Mr. Sullivan) Well, does it -- does**
21 **it matter if homes are powered by electricity from**
22 **solar, wind, or coal?**

23 **MR. OESTREICHER:** Objection to the form of the
24 question.

25 **THE WITNESS:** It matters to some people.

1 plans or integrated least-cost resource planning,
2 I'm thinking specifically of the planning that an
3 electric utility does to plan for its electricity
4 load-serving obligations. Whereas long-range energy
5 range may be broader than that, may be a state
6 planning for how to accommodate the broader energy
7 needs of its entire citizen base in terms of energy
8 for transportation, energy beyond electricity
9 resource planning, so...

10 **Q. In terms of that, Mr. Rosquist, does**
11 **Montana have such a state plan?**

12 A. I'm not sure.

13 **Q. Does Montana have an energy strategy?**

14 **MR. OESTREICHER:** Objection to the form of the
15 question.

16 Go ahead.

17 **THE WITNESS:** Well, to the extent that the energy
18 policy can be considered a strategy. Other than that, I'm
19 not aware of one.

20 **Q. (By Mr. Sullivan) Who decides how**
21 **Montana should obtain its energy?**

22 A. I'm not sure there is one single person
23 who makes that decision.

24 **Q. Entity?**

25 A. I'm not sure there's one single entity

1 **Q. (By Mr. Sullivan) If a regulated utility**
2 **wanted a new coal-fired power plant, would it need**
3 **to obtain Public Service Commission approval?**

4 A. No.

5 **Q. Where would it -- where would it need to**
6 **obtain approval?**

7 A. It may need to obtain certain permits,
8 environmental permits or siting permits or land use
9 permits from other regulatory bodies, but it would
10 not need the Public Service Commission's approval to
11 construct a new coal-fired power plant.

12 **Q. When would the Public Service**
13 **Commission's jurisdiction or concern arise with a**
14 **coal-fired power plant?**

15 **MR. OESTREICHER:** Objection to the form of the
16 question.

17 Go ahead.

18 **THE WITNESS:** At the time the utility would seek to
19 recover the cost of that coal plant in its rates.

20 **Q. (By Mr. Sullivan) You mentioned there**
21 **could be environmental permits or concerns. I don't**
22 **want to mischaracterize what you said in answer to**
23 **my question about the -- the hypothetical coal-fired**
24 **power plant, but something to that effect.**

25 **Does the Public Service Commission in**

1 making its -- reviewing proposals and making its
2 decisions, does it conduct a review under the
3 Montana Environmental Policy Act?

4 **MR. OESTREICHER:** Object to the form of the question.
5 Go ahead.

6 **THE WITNESS:** I don't believe so.

7 **Q. (By Mr. Sullivan)** Do you review -- are
8 you familiar with the acronym MEPA for Montana
9 Environmental Policy Act?

10 A. I'm familiar with it, yes.

11 **Q. Okay.** Do you review MEPA documents in
12 terms of commission decision-making and proceedings?

13 **MR. OESTREICHER:** Objection to the form of the
14 question, asked and answered.

15 Go ahead.

16 **THE WITNESS:** In my tenure with the Public Service
17 Commission, I cannot recall reviewing MEPA documents as
18 part our regulatory proceedings.

19 **Q. (By Mr. Sullivan)** Are you aware as to
20 the reason for that?

21 **MR. OESTREICHER:** Objection to the form of the
22 question, calls for speculation.

23 **MR. SULLIVAN:** But I'm just curious, what is the
24 detailed objection to a question like that? It seems
25 pretty straightforward.

1 fuels?

2 A. I am aware that NorthWestern Energy has a
3 goal of becoming net zero carbon emissions by some
4 point in the future. I think it's 2050, but I'm not
5 entirely sure about the date.

6 **Q. Have there been any recommendations, to**
7 **your knowledge, that have been reviewed by the PSC**
8 **regarding transitioning Montana's investor-owned**
9 **utilities away from fossil fuels?**

10 A. Can you be more specific in terms of
11 recommendations by -- by who?

12 **Q. Well, let's see, I think I have -- let me**
13 **see in my notebook of documents here, Mr. Rosquist.**

14 **Would you turn, please, to Tab 15, which**
15 **we'll mark as Plaintiff's Exhibit 10?**

16
17 **(Deposition Exhibit No. 10 was marked**
18 **or identification)**

19
20 **Q. (By Mr. Sullivan)** And for the record, I
21 **will state that the document on its face page is**
22 **entitled "Decarbonization and Montana - Insights**
23 **From the Northwest Deep Decarbonization Pathways**
24 **Study," prepared for Montana Climate Solutions**
25 **Council, July 28th, 2020.**

1 **MR. OESTREICHER:** I think you're getting towards
2 legislative prerogative which drives the PSC's functions,
3 so --

4 **MR. SULLIVAN:** It's his understanding -- I'm trying
5 to really focus in on his understanding, and you have --

6 **MR. OESTREICHER:** That's fine.

7 **MR. SULLIVAN:** -- put him forward as the
8 representative for the PSC. So I appreciate objections,
9 but I'm not sure that an objection to every question is in
10 place, but I understand.

11 **Q. (By Mr. Sullivan)** You're allowed to
12 answer. This was a little quibble. You're allowed
13 to answer.

14 A. Can you please restate the question?

15 **Q. Are you aware of the reason why, to your**
16 **knowledge, the Public Service Commission doesn't**
17 **review MEPA documents in its proceedings and**
18 **decision-making?**

19 **MR. OESTREICHER:** And I'll have the same objection.
20 But you can answer.

21 **THE WITNESS:** Because the Public Service Commission
22 is an economic regulator, not an environmental regulator.

23 **Q. (By Mr. Sullivan)** Mr. Rosquist, are you
24 aware of any plans that -- in terms of transitioning
25 Montana's investor-owned utilities away from fossil

1 **And on page 2 of our exhibit, it**
2 **indicates under "How to Use This Report and**
3 **Information," the first bullet indicates "At the**
4 **request of the Montana Department of Environmental**
5 **Quality, the Clean Energy Transition Institute and**
6 **Evolved Energy Research have provided this summary**
7 **of analysis relevant to Montana from the Institute's**
8 **June 2019 Report: Meeting the Challenge of Our**
9 **Time: Pathways to a Clean Energy Future For the**
10 **Northwest, which describes the results of the**
11 **Northwest Deep Decarbonization Pathways Study,**
12 **(NWDDP) conducted in the winter 2018."**

13 **Did I read that correctly?**

14 A. I think you did.

15 **Q. And it continues with the second bullet,**
16 **"Data specific to Montana is shared here to help**
17 **members of the public understand some of the**
18 **emissions reductions pathways and trade-offs facing**
19 **Montana, as well as the ways in which Montana's**
20 **energy system and unique assets may be able to serve**
21 **regional needs in the future."**

22 **MR. OESTREICHER:** I'm sorry, is there a question
23 there?

24 **MR. SULLIVAN:** I'm asking -- I'm just making sure I
25 stay abreast with Mr. Rosquist.

1 Q. (By Mr. Sullivan) Are you with me there?
2 So my question is, this document is provided at the
3 request of the Montana Department of Environmental
4 Quality. Did you see that?

5 A. I did see that.

6 Q. And are you familiar with this document?

7 A. I'm not familiar with it.

8 Q. It's one -- if the Public Service
9 Commission were to have become familiarized with
10 this, would you have been the staff person that
11 would have been most likely to have been receiving
12 it and reviewing it?

13 MR. OESTREICHER: Objection, calls for speculation.

14 Go ahead.

15 THE WITNESS: I think that depends on in what context
16 you are referring to receiving it and reviewing it. Yeah,
17 I'm not sure.

18 Q. (By Mr. Sullivan) well, I asked -- I --
19 I think the context, Mr. Rosquist, is I had asked
20 earlier if you were aware of any plans that the
21 Public Service had in terms of transitioning
22 Montana's investor-owned utilities away from fossil
23 fuels, and if I remember correctly, you indicated
24 that the NorthWestern Energy had formulated or was
25 in the process of preparing a plan of achieving net

1 zero by 2050. Does that -- do you recall that
2 earlier conversation?

3 A. Yes, so I recall the question being am I
4 aware of any plans, rather than Public Service
5 Commission plans, and so I pointed to NorthWestern's
6 plan to become net zero. So if you -- if you were
7 referring to Public Service Commission plans, I may
8 have given you the wrong answer.

9 Q. Well, I -- I don't mean to confuse you.
10 There were -- inherently confusing as to whether it
11 was, you know, a utility or the PSC. But to
12 clarify, does the PSC -- we can just ask that
13 question. Does the Public Service Commission have
14 any plans or policies in regards to transitioning
15 Montana away from fossil fuels?

16 A. No.

17 Q. Has the Public Service Commission ever
18 done any economic analysis with respect to
19 decarbonizing Montana's energy system?

20 A. No, I don't believe that's a statutory
21 responsibility that we have.

22 Q. Could Montana meet all of its electricity
23 requirements through the use of renewable energy
24 projects?

25 MR. OESTREICHER: Objection, form.

1 Go ahead.

2 THE WITNESS: It may be technically feasible to do
3 that.

4 Q. (By Mr. Sullivan) Would it be
5 environmentally preferable to do that?

6 MR. OESTREICHER: Objection to the form of the
7 question.

8 THE WITNESS: And so just so I'm clear, are you
9 asking whether the Public Service Commission thinks that
10 it would be preferable to do that or whether me personally
11 thinks it would be preferable to do that?

12 Q. (By Mr. Sullivan) Well, in -- in the
13 first instance, the question had to do with as a --
14 as a -- whether it would be feasible, in the first
15 instance, to supply Montana's energy needs with
16 renewable energy. That was the first question.

17 And I think, if I understand correctly,
18 your answer was it would be -- it was -- it would be
19 technically possible. I don't mean to misstate
20 your -- that was my understanding of your answer.

21 A. I think that's fair enough.

22 Q. And then the second question was, would
23 that be an environmentally preferable outcome?
24 Would that be environmentally beneficial?

25 MR. OESTREICHER: Just object to the form of the

1 question. I don't know that that's within the scope of
2 the 30(b)(6), and --

3 But answer if you can.

4 THE WITNESS: As the representative of the Public
5 Service Commission, I'm not sure that it's my or our
6 responsibility or role to say whether that would be
7 preferable.

8 Q. (By Mr. Sullivan) Is it the PSC's
9 position that continuing to rely on fossil fuels is
10 in the public interest?

11 MR. OESTREICHER: Objection to the form of the
12 question.

13 THE WITNESS: That is a decision that the commission
14 makes on an ongoing case-by-case basis. Utilities
15 currently have resources that rely on fossil fuels. And
16 every time the commission makes a decision regarding the
17 recovery of costs regarding those resources, it's -- it's
18 essentially making a public interest determination.

19 Q. (By Mr. Sullivan) How does the Public
20 Service Commission define "public interest"?

21 A. Public interest gets defined in the
22 context of contested case proceedings based on the
23 evidentiary record gathered in those proceedings
24 regarding the cost and the benefit.

25 Q. Is the well-being of children encompassed

1 within the meaning of public interest?

2 **MR. OESTREICHER:** Objection to the form of the
3 question, asked and answered.

4 **THE WITNESS:** I assume it is.

5 **Q. (By Mr. Sullivan) Is the quality of**
6 **Montana's environment included within the public**
7 **interest?**

8 **MR. OESTREICHER:** Same objection.

9 **THE WITNESS:** I assume it is.

10 **Q. (By Mr. Sullivan) Does the Public**
11 **Service Commission consider how its decisions and**
12 **policies affect children?**

13 **MR. OESTREICHER:** Same objection.

14 **THE WITNESS:** The Montana Consumer Counsel is
15 constitutionally charged with representing consumers, and
16 in all commission rate proceedings, they advocate on
17 behalf of the consuming public, which I assume includes
18 the children of NorthWestern Energy's or any other
19 utility's customers, and, therefore, their interests are
20 considered in commission proceedings.

21 **Q. (By Mr. Sullivan) So I take it,**
22 **Mr. Rosquist, that on behalf of the PSC, you would**
23 **agree that the Public Service Commission has an**
24 **obligation to comply with the Montana Constitution?**

25 A. We have an obligation to implement the

1 statutes that we're charged with implementing, and
2 we take as a given that those statutes are
3 constitutional.

4 **Q. I think you mentioned that the**
5 **constitution is kind of the basis to what the Public**
6 **Service Commission was doing, or I could have**
7 **misunderstood your answer a minute ago.**

8 A. I was referring to the Montana Consumer
9 Counsel which was a constitutionally created state
10 agency.

11 **Q. The Consumer --**

12 A. Counsel.

13 **Q. Yes, the Consumer Counsel. But what**
14 **about -- does the Public Service Commission have a**
15 **duty to comply with the Montana Constitution's right**
16 **to a clean and healthy environment?**

17 **MR. OESTREICHER:** Objection, asked and answered.

18 **THE WITNESS:** The Montana Public Service Commission
19 assumes that the statutes that it's required to implement
20 account for the constitution's requirement regarding a
21 clean and healthful environment.

22 **Q. (By Mr. Sullivan) If a Court told the**
23 **Public Service Commission that its conduct was**
24 **unconstitutional, would the Public Service**
25 **Commission be obligated to respect the Court's**

1 **ruling?**

2 **MR. OESTREICHER:** Objection to the form of the
3 question.

4 Go ahead and answer.

5 **THE WITNESS:** Unless there were some opportunity to
6 appeal that Court's decision to a higher authority.

7 **Q. (By Mr. Sullivan) Was the predicate to**
8 **that, yes, unless it was under appeal? Is that fair**
9 **to characterize your answer?**

10 **MR. OESTREICHER:** Just to be clear, I mean, the
11 question was that the PSC would follow a Court order?

12 **MR. SULLIVAN:** Uh-huh.

13 **Q. (By Mr. Sullivan) And specifically --**
14 **the specific question was, if a Court told the PSC**
15 **that its conduct was unconstitutional, would the PSC**
16 **be obligated to respect the Court's ruling?**

17 **MR. OESTREICHER:** I mean, same objection.

18 But go ahead.

19 **THE WITNESS:** Again, assuming that there were no
20 opportunity to appeal that ruling to a higher authority,
21 the commission would respect the decision.

22 **Q. (By Mr. Sullivan) And I think there's a**
23 **recent example of -- of -- involving the PSC as to**
24 **an unconstitutional. Let's see that. Let's turn to**
25 **the notebook, Tab 20. And we'll mark that as**

1 **Deposition Exhibit 11.**

2

3 **(Deposition Exhibit No. 11 was marked**
4 **for identification)**

5

6 **Q. (By Mr. Sullivan) Which is entitled**
7 **"Brown v. Jacobsen," and I'll represent to you that**
8 **it's a decision from March 8th of 2022 from the**
9 **Federal District Court, which Court held**
10 **unconstitutional Montana Code Section 69-1-104. Do**
11 **you see that, Mr. Rosquist?**

12 **MR. OESTREICHER:** Just before we get going, the PSC
13 was not a party to this action, and to the extent that
14 Mr. Rosquist has any knowledge of this case, I mean, on
15 behalf of the PSC, he can certainly answer your questions,
16 but this doesn't involve the PSC as a party.

17 **Q. (By Mr. Sullivan) Does -- does the --**
18 **are you --**

19 **MR. SULLIVAN:** I'm sorry, Counsel, are you finished?

20 **MR. OESTREICHER:** I'm done.

21 **Q. (By Mr. Sullivan) Okay. Mr. Rosquist,**
22 **does the code sections here at -- at issue in this**
23 **case, was MCA 69-1-104, does that involve the PSC?**
24 **I thought you had said earlier that Title 69 was the**
25 **title under which the PSC operated?**

1 A. Yes. This looks like it relates to the
2 districts from which the Public Service
3 Commissioners are elected.

4 Q. Yes. And have you seen this decision
5 before?

6 A. I have not.

7 Q. Okay. Thank you.

8 MR. SULLIVAN: If I understand correctly, Counsel,
9 in -- in our discussion before we started, you were
10 withholding testimony today from Mr. Rosquist in terms of
11 his expert or so-called hybrid fact expert testimony?

12 MR. OESTREICHER: My understanding is today's
13 deposition is the 30(b)(6) for the Public Service
14 Commission. So to the extent that we want to have
15 Mr. Rosquist come back and testify in his personal
16 capacity or in his hybrid capacity, I think we need to
17 notice up a separate deposition for that. He prepared for
18 the 30(b)(6) deposition on behalf of the agency, the PSC,
19 so --

20 MR. SULLIVAN: Would you object if I asked a few
21 foundational questions as to what he's done in regards to
22 his hybrid or -- but not yet asking him any opinion
23 testimony. I just want to find out what --

24 MR. OESTREICHER: You want to find out what he's done
25 in his hybrid capacity?

1 MR. SULLIVAN: Yeah.

2 MR. OESTREICHER: I -- and at this point, I would
3 object. I think we need to -- we need -- you know,
4 obviously we were under the gun until a couple days ago
5 with this case, both sides. With that in mind, the
6 preparation that he's done has been related to the
7 30(b)(6) deposition and that alone. So I would object. I
8 think we can notice up a separate deposition and conduct
9 that at that time.

10 MR. SULLIVAN: Mr. Rosquist, we'll -- we'll take heed
11 on your counsel's objection. And if you just give me a
12 minute, I'd like to review my notes to see if I have any
13 further questions.

14 VIDEO OPERATOR: We are going off the record. The
15 time is 12:57 p.m.

16
17 (Whereupon, a recess was taken)

18
19 VIDEO OPERATOR: We are back on the record. The time
20 is 1:07 p.m.

21 MR. SULLIVAN: Thank you, Mr. Rosquist. I have no
22 further questions.

23 THE WITNESS: Thank you.
24
25

1 EXAMINATION

2
3 BY MR. OESTREICHER

4 Q. Mr. Rosquist, just really quickly,
5 earlier today you were asked about your preparations
6 for this 30(b)(6) deposition, correct?

7 A. Correct.

8 Q. And in your answer, you stated that other
9 than attorneys you had not discussed this deposition
10 with anyone, correct?

11 A. Correct.

12 Q. Would you like to clarify that testimony?

13 A. Yes, I would. In addition to the
14 attorneys, I did speak with our pipeline safety
15 program manager to become more familiar with the
16 scope of our authority with respect to the pipeline
17 safety area.

18 Q. Anything specific with respect to
19 pipeline safety?

20 A. We specifically talked about the scope of
21 our authority with respect to intrastate versus
22 interstate and the scope of our authority with
23 respect to rate setting on common carrier pipelines.

24 Q. Anything further you wish to clarify?

25 A. No.

1 MR. OESTREICHER: Thank you. No further questions.

2 MR. SULLIVAN: No further questions. Thank you.

3 MR. OESTREICHER: Thank you.

4 VIDEO OPERATOR: That concludes this deposition. The
5 time is 1:08 p.m.

6
7 (Whereupon, the deposition concluded at
8 1:08 p.m. for the day)

9
10 (Signature reserved)
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DEPONENT'S CERTIFICATE

I, Will Rosquist, Deponent in the foregoing deposition, DO HEREBY CERTIFY, that I have read the foregoing pages of typewritten material and that the same is, with any changes thereon made in ink on the correction sheet and signed by me, a full, true and correct transcript of my oral deposition given at the time and place hereinbefore mentioned.

Will Rosquist, Witness

SUBSCRIBED AND SWORN to before me this day of , 20__.

NOTARY PUBLIC
Residing at
My Commission Expires

ROE - Held, et al. v. State of Montana, et al.

C E R T I F I C A T E

STATE OF MONTANA)

:ss

COUNTY OF BEAVERHEAD)

I, Robyn Ori English, Freelance Court Reporter and Notary Public for the State of Montana, residing in Dillon, do hereby certify:

That I was duly authorized to and did swear in the witness and report the deposition of Will Rosquist, in the above-entitled cause; that the foregoing pages of this deposition constitute a true and accurate transcription of my stenotype notes of the testimony of said witness, all done to the best of my skill and ability; that the reading and signing of the deposition by the witness has been expressly reserved.

I further certify that I am not an attorney nor counsel of any of the parties, nor a relative or employee of any attorney or counsel connected with the action, nor financially interested in the action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed by notarial seal on this, the 28th day of June, 2022.

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MONTANA FIRST JUDICIAL DISTRICT
LEWIS AND CLARK COUNTY

RIKKI HELD, ET AL.,)	
)	
Plaintiffs,)	
)	
v.)	Case No. CDV-2020-307
)	
STATE OF MONTANA, ET AL.,)	
)	
Defendants.)	
)	

30(B)(6) DEPOSITION OF SHAWN THOMAS

On the 27th of October, 2022, beginning at
 5:00 a.m., the 30(B)(6) Deposition of SHAWN THOMAS was
 heard at Lesofski Court Reporting, 7 West Sixth Avenue,
 Suite 2C, Helena, Montana, before Holly E. Fox, Court
 Reporter and Notary Public.

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I N D E X

EXAMINATION
By Ms. Rodgers

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1 The following proceedings were had and testimony
2 taken:
3 *****
4
5
6 SHAWN THOMAS,
7 having been first duly sworn by the Court Reporter, was
8 examined and testified as follows:
9

10 **EXAMINATION**
11 **BY MS. RODGERS:**

12 Q. Good morning, Mr. Thomas. My name is Andrea
13 Rodgers, and I'm one of the attorneys representing the
14 plaintiffs in this matter. Thank you for coming this
15 morning for your deposition. I also appreciate your
16 willingness to do it over Zoom. I know it's sort of a
17 new -- a new part of our world these days, so hopefully
18 we'll have no technical problems.
19 But could you please state and spell your name for
20 the record?
21 A. Yes. It's Shawn Thomas. That's S-h-a-w-n,
22 T-h-o-m-a-s.
23 Q. And do you go by any other names?
24 A. No.
25 Q. What city do you live in?

1 Q. And, then, also if you could provide, just as
2 you're doing -- have done so far, is oral answers as
3 opposed to nodding of heads and shaking of heads. That's
4 also something that is impossible for the court reporter to
5 pick up today; okay?
6 A. Okay.
7 Q. Have you ever testified under oath before today?
8 A. Yes.
9 Q. And in what situations did that occur?
10 A. I was deposed in another legal matter with DNRC.
11 Q. What did that legal matter concern?
12 A. It was a contract dispute.
13 Q. What was the contract regarding?
14 A. It was a fire-related contract for a contractor's
15 wash station.
16 Q. And when was the date of that proceeding?
17 A. I can't recall exactly. It was quite a number of
18 years ago. I would -- it must have been around -- it
19 was -- the fire was in 2007, so it was probably somewhere
20 in 2008 or '09.
21 Q. Uh-huh. And was that when you were employed at
22 DNRC?
23 A. Yes.
24 Q. And was your prior testimony transcribed?
25 A. Yes, I believe so.

1 A. I live in Helena.
2 Q. And what is your work address?
3 A. The physical address? 1639 11th Street in Helena.
4 Q. Okay. Thank you. And I just want to go over a
5 few ground rules for our deposition today.
6 You understand that your testimony is under oath?
7 A. Yes.
8 Q. And is there any reason you're not able to give
9 truthful testimony this morning?
10 A. No.
11 Q. One thing I would appreciate is, when I ask a
12 question, if you don't understand what I'm asking, please
13 tell me, and I'll try to rephrase the question so that it
14 makes sense.
15 Is that a fair -- fair agreement for us to do
16 today?
17 A. Understood.
18 Q. Okay. And also, for the court reporter's sake, if
19 one of us could speak at the same time, that would be
20 great. I know sometimes it's hard -- when we're having a
21 conversation, it's easy to pick up on each other's
22 thoughts, but it makes it difficult for the court reporter.
23 So if one of us could speak at a time, I think she'll
24 appreciate that; okay?
25 A. Okay.

1 Q. And was that a deposition that you're referring
2 to?
3 A. Yes.
4 Q. And did you also provide testimony at trial?
5 A. No, I did not.
6 Q. Okay. Are there any other instances that you can
7 remember when you've given testimony under oath?
8 A. No, I don't believe so.
9 Q. And, to your knowledge, have you ever submitted
10 written testimony, like in the form of a declaration or
11 anything like that?
12 A. I'm -- can you restate the question? I'm --
13 Q. Sure. Yeah. Sometimes you can submit testimony
14 in writing. Oftentimes in court proceedings not only can
15 you give oral testimony, but you can write your testimony
16 in the form of a written declaration. And I'm just
17 wondering if you've ever done that kind of written
18 testimony before.
19 A. No, I've never submitted written testimony.
20 Q. Okay. And have you ever provided testimony before
21 a political body, like the legislature?
22 A. Yes.
23 Q. And can you describe when you've done that before?
24 A. As the division administrator, I frequently
25 testify before legislative committees and have since 2011.

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1 Q. And when you say "frequently," is that several
2 times a year or a couple times a year? How would you
3 define "frequently"?

4 A. Our legislative process is every other year, so in
5 those every-other-year legislative sessions, you know,
6 multiple times during the 90-day legislative session.
7 Sometimes multiple times per day. At least multiple times
8 per week.

9 Q. And what do you typically testify about?

10 MR. OESTREICHER: I'm just going to object at this
11 point -- and just for the record, Derek Oestreicher on
12 behalf of the State of Montana.

13 You know, if we wanted to notice up his personal
14 deposition and get this information, I think you can.
15 When are we going to get to the topics on
16 the 30(b)(6)?

17 So I think it's outside the scope here, Andrea.

18 MS. RODGERS: Yeah, and I just disagree. These
19 are just general background questions about his previous
20 experience testifying, which is standard in every
21 deposition. I'm not going to spend much more time on it.
22 I have maybe on other question, and we'll move on.

23 Q. (By Mr. Rodgers) So, Mr. Thomas, my question is,
24 can you just describe generally the topics of the testimony
25 that you've given before the legislature?

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1 A. The topics range but generally have something
2 directly to do with my work as the division administrator
3 for the trust lands division. Most frequently it's related
4 to budget or sharing of information, answering questions
5 when asked.

6 Q. Okay. Thank you. And starting with high school,
7 could you please describe your educational background?

8 A. Yes. I graduated from high school in Columbia
9 Falls, Montana in 1989. I went to the University of
10 Montana and had multiple separate courses of study
11 between 19 -- late 1989 and 1996. I graduated from U of M
12 with a bachelor's degree in forest resource management from
13 the forestry school.

14 Q. Okay. And are you a member of any professional
15 organizations?

16 A. No, not at this time.

17 Q. Okay. And are you aware, is DNRC a member of any
18 professional organizations?

19 A. DNRC is a member of, I would guess, several
20 organizations. The ones that I'm familiar with are the
21 National Association of State Foresters, the National
22 Association of State Trust Lands.

23 Q. Okay. Thank you. And where are you currently
24 employed?

25 A. I'm employed at the DNRC.

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1 Q. And how long have you worked for DNRC?

2 A. I started with DNRC in February of 2003 in the
3 Plains unit in Plains, Montana. I've been in my current
4 capacity as the trust lands division administrator since
5 November of 2011.

6 Q. Okay. And starting with 2003, can you describe
7 your employment history with DNRC? So you started at the
8 Plains division, and then where did you go from there?

9 A. I was the forest management supervisor in Plains
10 from 2003 until 2007. I was the forest management bureau
11 chief based in Missoula from 2007 to 2011. And then
12 in 2011, came here to Helena.

13 Q. Okay. And can you generally describe your current
14 job duties?

15 A. So I have the responsibility -- I have two current
16 job duties. I'm the division administrator for the Trust
17 Land Management Division. My primary job -- I'm also
18 serving as the acting state forester and forestry division
19 administrator. That's been going on for the last -- since
20 August. In my job as the DNRC's trust lands division
21 administrator, I oversee the functional resource management
22 areas that we perform on state trust lands across the
23 state, managing the lands that were given to the state at
24 statehood for the benefit of public education and other
25 endowed institutions. We do that through several programs.

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1 I oversee the bureau chiefs that run those programs, and I
2 oversee the six area managers that implement our two
3 divisions' programs on the ground.

4 Q. Okay. And who is your direct supervisor?

5 A. Kerry Davant.

6 Q. Okay. And you said you supervise the -- the
7 chiefs -- I'm sorry. How many chiefs did you say?

8 A. So there's four bureau chiefs in the trust lands
9 division.

10 Q. Uh-huh. Okay. And you directly supervise those
11 chiefs; correct?

12 A. Correct.

13 Q. Okay. Can you tell me -- I'm going to ask you a
14 few questions about what you did today to prepare for your
15 deposition, and I just want to make it clear that I'm not
16 asking for any privileged communications that you've had
17 with your attorneys. So I'll start with that caveat; okay?

18 And can you just share with me what you did to
19 prepare for this deposition today?

20 A. Well, I reviewed the -- I guess it's called the
21 order and the Attachment A of the things that I would be
22 talking about during the deposition. And then late
23 yesterday afternoon I received, I don't know, 200 megabytes
24 of attachments that may be used today. I tried to review
25 those as much as possible in three or four hours.

1 Q. Okay. Yeah. So about how many hours did you
 2 spend preparing for the deposition, approximately?
 3 A. Six.
 4 Q. Okay. Did anyone from DNRC help you prepare for
 5 today?
 6 A. I visited with our attorney, Brian Bramblett.
 7 Q. Did you visit with anyone at DNRC other than
 8 attorneys?
 9 A. I talked to a couple of bureau chiefs as I was
 10 looking at the Attachment A to see if there was anything
 11 that they could shed light on there, but nobody really had
 12 anything to share.
 13 Q. And other than the order that you mentioned and
 14 Attachment A and then the documents that were sent
 15 yesterday afternoon, was there anything else that -- that
 16 you reviewed to prepare for today?
 17 A. No.
 18 Q. Were there any documents that you would have liked
 19 to have reviewed but didn't have an opportunity to do so?
 20 A. No, I don't believe so.
 21 Q. Okay. Do you know, does the DNRC have a document
 22 retention policy?
 23 A. Yes.
 24 Q. And can you describe what that is?
 25 A. We have a records manager in the director's office

1 We just have the electronic copies.
 2 MR. OESTREICHER: Okay. And this would be
 3 Number 1 in your electronic copies?
 4 MS. RODGERS: I am assuming so, but I am actually
 5 not aware of the order.
 6 MR. OESTREICHER: All right. Thank you.
 7 MS. RODGERS: Yeah.
 8 THE DEPONENT: I'm sorry. Could you repeat your
 9 question?
 10 Q. (By Ms. Rodgers) Yes. I'm sorry. No worries.
 11 Can you please identify the document in front of
 12 you?
 13 A. Yes. I believe this is the document I referred to
 14 earlier as the order that has to do with what we're here to
 15 talk about today.
 16 Q. All right. And this is one of the documents that
 17 you reviewed in advance of the deposition today?
 18 A. Yes.
 19 Q. And when did you review this document?
 20 A. Yesterday afternoon.
 21 Q. And is it your understanding that you're here
 22 today on behalf of the DNRC and not on behalf of yourself
 23 as an individual?
 24 A. Yes.
 25 Q. Okay. I'd like to take another look at the next

1 at the DNRC that's responsible to oversee our retention
 2 policy, and we have policy that outlines what that is.
 3 Different documents require different retention schedules.
 4 Q. And is that a written policy?
 5 A. Yes, I believe it is.
 6 Q. Okay. Today I'm going to be showing you a number
 7 of documents, and my colleague Barbara will be handing them
 8 to you. It's one of the difficult things with doing this
 9 over Zoom. So we'll start with that, and hopefully we'll
 10 be talking about the same thing. But I'd like to show you
 11 first the amended Rule 30(b)(6) notice of deposition, which
 12 I believe we are going to mark today as Exhibit 25.
 13 MS. CHILLCOTT: And actually, I'll just interrupt.
 14 It will be 26, Andrea.
 15 (Exhibit 26 marked for identification.)
 16 Q. (By Ms. Rodgers) And, Mr. Thomas, can you identify
 17 this document that's in front of you today?
 18 MR. OESTREICHER: One sec for the record here,
 19 Andrea. I just want to make sure that I'm getting exact
 20 copies of what he's getting.
 21 Do you have a copy for me?
 22 MS. CHILLCOTT: Andrea, so these were emailed last
 23 night; correct?
 24 MS. RODGERS: Correct, yes. We -- as I mentioned
 25 in the email yesterday, we don't have a hard copy for you.

1 document that I'd like to mark as Exhibit 27.
 2 (Exhibit 27 marked for identification.)
 3 Q. (By Ms. Rodgers) And this is Montana Department of
 4 Natural Resources and Conservation's Amended Designees and
 5 Objections to Plaintiffs' Montana Rules of Civil Procedure
 6 30(b)(6) Notice of Deposition.
 7 Do you have that document in front of you?
 8 A. Yes.
 9 Q. And can you identify -- have you reviewed this
 10 document before?
 11 A. If I have, I don't recall seeing this document
 12 before.
 13 Q. Okay. Do you see your name anywhere in this
 14 document?
 15 A. Yeah. My name appears on Page 3, and Page 4
 16 multiple times. Page 5. And Page 6.
 17 Q. Okay. And am I correct that you are the person
 18 who has been designated by the agency to speak on its
 19 behalf with respect to the topic areas that are -- it looks
 20 like Topic Areas 1 through 10?
 21 A. Yes, that's correct.
 22 Q. Okay. And who designated you to speak on behalf
 23 of DNRC today?
 24 A. We discussed it with Brian Bramblett, our chief
 25 legal counsel. And I presume Brian had conversations with

1 others.

2 Q. And do you recall when that was?

3 A. **I can't recall exactly. Sometime over the summer.**

4 Q. Okay. And do you have an understanding of why

5 you're here today as opposed to somebody else?

6 A. **Yes, I believe so.**

7 Q. And why is that?

8 A. **I believe I'm the person that can talk about these**

9 **designated subjects that has the most experience and**

10 **expertise in these areas --**

11 Q. Thank you.

12 A. **-- for the agency.**

13 Q. Sorry.

14 A. **Just on behalf of the agency.**

15 Q. Thank you. And do you have full authority to

16 speak on behalf of the agency with respect to the topics

17 listed in the deposition notice today?

18 **MR. OESTREICHER:** Objection to the form of the

19 question. I believe that calls for a legal conclusion.

20 Go ahead and answer.

21 **THE DEPONENT:** Yes, I believe so.

22 Q. (By Ms. Rodgers) And do you understand that the

23 answers you will give to our questions will be on behalf of

24 the DNRC?

25 A. **Yes.**

1 **oversees the daily operations of the agency.**

2 Q. Does the director set policy for the DNRC?

3 A. **No, I don't believe so. Policy is set by the**

4 **legislature, primarily.**

5 Q. And who is the director's boss?

6 A. **The director's boss is the Governor.**

7 Q. Okay.

8 A. **Actually -- I guess, a correction. I think the**

9 **director's direct supervisor is the Governor's chief of**

10 **staff, but ultimately the Governor.**

11 Q. Okay. And does the Governor appoint the director?

12 A. **Yes.**

13 Q. I'd like to mark Exhibit 28, which is the web page

14 of the director's office is in the title of that.

15 (Exhibit 28 marked for identification.)

16 **THE DEPONENT:** Yes, I have that.

17 Q. (By Ms. Rodgers) Okay. Are you familiar with this

18 document?

19 A. **Yes.**

20 Q. And what is this?

21 A. **It's the director's office -- a screen capture of**

22 **the director's office description on our website.**

23 Q. Okay. And what is the role of the director's

24 office?

25 A. **The director's office, according to the document**

1 Q. And do you understand that the answers you give

2 today will represent all of the information available to

3 the DNRC about these subject areas?

4 A. **I'm sorry. I'm not sure I understand the**

5 **question. All of the information?**

6 Q. Yeah, certainly. It's our understanding that you

7 have been designated to speak on behalf of DNRC about these

8 subject areas.

9 Is it your understanding that you're knowledgeable

10 with respect to all of the subject areas identified?

11 A. **Yes.**

12 Q. And are you fully prepared to speak today about

13 the subject areas identified?

14 A. **Yes.**

15 Q. Thank you. Can you describe to me what the

16 mission of the DNRC is?

17 A. **The mission, word for word, is probably published**

18 **on the website, but it's to -- I may be paraphrasing a bit**

19 **here -- but to manage Montana's natural resources for**

20 **present and future generations.**

21 Q. Okay. And who runs the agency?

22 A. **The agency is ran by the director.**

23 Q. And what is the role of the director?

24 A. **The director serves as a member of the Governor's**

25 **cabinet. The director is an appointed position that**

1 **here, carries out the department's mission and statutory**

2 **responsibilities.**

3 Q. Okay. And what is the role of the Trust Lands

4 Management Division?

5 A. **In this document, the Trust Land Management**

6 **Division is described as overseeing 5.2 million acres of**

7 **state trust land through the following -- through several**

8 **programs.**

9 Q. Okay. And it says there -- it says:

10 Through programs including sustainable forestry,

11 agriculture, grazing, and energy leasing, we generate

12 millions of dollars annually for K through 12 public

13 education, including schools, facilities, and classroom

14 technology?

15 Did I read that correctly?

16 A. **Yes.**

17 Q. In that sentence there, what kind of energy

18 leasing programs are referenced there?

19 A. **Trust lands leases -- does energy leases for oil**

20 **and gas. We have leases for hydrological power. We have**

21 **leases for wind energy.**

22 Q. Are there leases for coal as well?

23 A. **Yes, there are coal leases as well.**

24 Q. Okay. And can you describe what the DNRC does

25 generally with respect to energy leasing on state lands?

1 A. I'm not sure I understand your question. By
 2 "generally speaking," what are you looking for?
 3 Q. Well, what is the role of the agency? Does the
 4 agency issue the leases? Can you describe what their
 5 general responsibilities are with respect to energy leasing
 6 specifically?
 7 MR. OESTREICHER: Objection to form, compound,
 8 vague.
 9 Go ahead.
 10 THE DEPONENT: So the DNRC issues leases under
 11 the -- as described in state legislative -- by law in
 12 the -- that the legislature has passed, and under the
 13 direction of the state land board, who's the constitutional
 14 decision-making authority for uses of state trust land.
 15 Q. (By Ms. Rodgers) And who decides what form of
 16 energy can be used on state lands?
 17 A. I'm not sure that there's anyone who decides what
 18 form of energy can be used. We are -- trust lands is
 19 obligated to put uses on the ground or to go through the
 20 procedural processes in order to allow for uses on the
 21 ground under the direction of the land board and the
 22 legislature. And we're -- we -- no one decides what
 23 uses -- as long as they're legal uses by, you know, state
 24 law, any uses of trust land are things that we would
 25 consider putting on the ground.

1 Division.
 2 "Based in Missoula, the Forestry Division," do you
 3 see that there in the middle of the page?
 4 A. Yes. That paragraph accurately describes
 5 generally what the Forestry Division does.
 6 Q. Okay. And does the Forestry Division play a role
 7 with respect to wildfires on state lands?
 8 A. The Forestry Division plays a role with respect to
 9 wildfires on many ownerships of land across the state of
 10 Montana, including state lands.
 11 Q. And what is that role?
 12 A. The Forestry Division has a combination of direct
 13 protection for wildland fire in some parts of the state, or
 14 we assist counties in wildland fire response in much of the
 15 state.
 16 Q. Uh-huh. Does the Forestry Division do any kind of
 17 projects with respect to carbon sequestration?
 18 A. I don't believe the Forestry Division has any
 19 carbon sequestration projects under their purview.
 20 Q. Do you know if any of the other divisions at DNRC
 21 do?
 22 A. The Trust Land Management Division is actively
 23 working on a significant carbon sequestration project in
 24 conjunction with the BLM currently. We don't have any
 25 carbon sequestration projects yet authorized and operating.

1 Q. Uh-huh. Okay. What is the role of the Water
 2 Resources Division?
 3 A. So the Water Resources Division is described in
 4 Exhibit 28. I could read it for you, if you'd like. But
 5 they're responsible to manage Montana's water for the
 6 present and future needs of its people. They primarily
 7 manage water quantity.
 8 Q. Okay. Is it -- is it -- you mentioned -- one of
 9 the energy leasing forms you mentioned was hydroelectric
 10 projects.
 11 Is that managed by the trust lands division or the
 12 Water Resources Division?
 13 A. In different ways, both. Trust lands has
 14 ground -- we lease space for hydroelectric facilities to
 15 occupy. Water Resources Division actually operates a
 16 hydroelectric facility.
 17 Q. Okay. And does this paragraph here -- maybe we'll
 18 go quicker this way. Does this paragraph here accurately
 19 describe the role of the Forestry Division, to your
 20 understanding?
 21 MR. OESTREICHER: Objection to form.
 22 Which paragraph?
 23 Q. (By Ms. Rodgers) Oh, I'm sorry. One of the perils
 24 of being on Zoom.
 25 The paragraph that describes the Forestry

1 Q. Can you describe that project that you just
 2 mentioned with the BLM? What is that project about?
 3 A. The project -- I believe it's called the Snowy
 4 River CO2 Sequestration Project. It's in the southeast
 5 part of Montana. It would sequester a significant amount
 6 of carbon dioxide permanently into the pore space over many
 7 thousands of acres. It's a project that's being proposed
 8 by -- Denbury is the name of the company that's proposing
 9 the project.
 10 Q. And when you say -- did you say "core space"?
 11 A. Pore space. P-o-r-e.
 12 Q. Okay. What is that?
 13 A. Pore space is the -- it's a part of the surface
 14 estate of the real estate title. So it's the surface --
 15 it's a surface estate right. And what pore space is are
 16 the microscopic air space, as I guess you could describe
 17 it, within certain formations, geological formations, that
 18 you can store gas in.
 19 Q. Uh-huh. Okay. And that's the first project of
 20 its kind on -- that the DNRC is working on?
 21 A. Yes.
 22 Q. Okay. In the next paragraph on the web page, it
 23 describes the Montana Board of Oil and Gas Conservation?
 24 A. Yes.
 25 Q. And how is the Board of Oil and Gas

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1 Conservation -- is that just another division, or how is
 2 that related to DNRC?
 3 **A. The Board of Oil and Gas Conservation is listed as**
 4 **a division. It's administratively attached to the DNRC.**
 5 **So they operate under their own board, and the DNRC helps**
 6 **them with administrative functions such as HR assistance,**
 7 **accounting assistance, sort of just the day-to-day running**
 8 **of the operation through our director's office. But**
 9 **they're an administratively attached organization with**
 10 **their own board of -- you know, governing board.**
 11 Q. Uh-huh. And are the board members appointed?
 12 **A. Yes, the board members are appointed.**
 13 Q. And who appoints the board members?
 14 **A. I don't know the exact way that the Board of Oil**
 15 **and Gas Conservation board members are appointed. I know**
 16 **they serve a term, and the terms are staggered. The**
 17 **governor's office has a role in that appointment process.**
 18 **But I don't know anything beyond that.**
 19 Q. Uh-huh. So they wouldn't be -- they don't report
 20 to the director of the DNRC then?
 21 **A. They -- yeah, my understanding is they report to**
 22 **their own board.**
 23 Q. Uh-huh. Uh-huh. Okay. Are you familiar with the
 24 activities of the Board of Oil and Gas Conservation?
 25 **MR. OESTREICHER: Objection to form, vague.**

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1 Go ahead.
 2 **THE DEPONENT: Generally.**
 3 Q. (By Ms. Rodgers) And in this paragraph that I --
 4 that talks about the Montana Board of Oil and Gas
 5 Conservation, it says:
 6 Through regulation and remediation, the Montana
 7 Board of Oil and Gas Conservation protects citizens and the
 8 environment from the impacts of oil and gas activities.
 9 Do you see that there?
 10 **A. Yes.**
 11 Q. Can you describe how they go about doing that?
 12 **MR. OESTREICHER: Objection to form, speaks for**
 13 **itself.**
 14 Go ahead.
 15 Q. (By Ms. Rodgers) I can rephrase my question.
 16 What do they mean "through regulation and
 17 remediation" here? What does that mean?
 18 **A. So the Board of Oil and Gas Conservation is the**
 19 **regulatory body that oversees oil and gas activities in the**
 20 **state of Montana for state and private landowners. So the**
 21 **board has a responsibility to ensure that all of the**
 22 **regulatory aspects of drilling wells, plugging and**
 23 **abandoning wells, and managing the spacing so that the**
 24 **ownership of the oil and gas resources are equitably**
 25 **distributed amongst various mineral owners, those sorts of**

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1 **things.**
 2 Q. Does the Board of Oil and Gas Conservation, do
 3 they issue permits for oil and gas activities?
 4 **A. Yes, they do.**
 5 Q. And does the DNRC, the trust lands division, what
 6 is their role with respect to oil and gas permits?
 7 **MR. OESTREICHER: Objection to form, vague.**
 8 Go ahead.
 9 **THE DEPONENT: So the Trust Land Management**
 10 **Division can be viewed just like any other landowner or**
 11 **mineral owner in the state. We are subject to the Board of**
 12 **Oil and Gas permitting processes and regulations, just like**
 13 **a private mineral owner would be. So we go to the board**
 14 **with an -- or our lessees will go to the board for**
 15 **applications and go through the board's processes in order**
 16 **to get permission to move forward with oil and gas well**
 17 **drilling. The board will set spacing units,**
 18 **communitization agreements, those sorts of things that talk**
 19 **about the equitable distribution of the oil and gas to the**
 20 **various mineral owners. They bring those things. They --**
 21 **they create the regulatory environment around those**
 22 **agreements. And then we take those agreements to get**
 23 **approved by the state land board.**
 24 Q. Uh-huh. Okay. And in that sentence that I read
 25 to you, it talks about impacts of oil and gas activity --

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1 protect citizens and the environment from the impacts of
 2 oil and gas activity.
 3 Do you know what's being referred to there when it
 4 talks about impacts of oil and gas activity?
 5 **MR. OESTREICHER: Objection to form, calls for**
 6 **speculation, speaks for itself.**
 7 Go ahead.
 8 **THE DEPONENT: Whatever the state legislature has**
 9 **prescribed that the board's responsibilities entail. So a**
 10 **whole number of things, but wellbore, safety, spills. A**
 11 **number of things that I'm not -- because the Board of Oil**
 12 **and Gas is administratively attached to the DNRC, the**
 13 **detailed questions for them, I think, would have to go to**
 14 **them.**
 15 Q. (By Ms. Rodgers) Are you not able to speak on
 16 behalf of the board then?
 17 **A. No, I'm not.**
 18 Q. Okay. You were talking about the difference
 19 between what the trust land division does and the board
 20 does.
 21 Does the trust land division do the environmental
 22 analyses with respect to oil and gas leasing, or is that
 23 done by the board?
 24 **A. With respect to the leasing activity, there's no**
 25 **environmental analysis on the leasing action itself. The**

1 environmental analysis comes from the board for the
 2 drilling and the stuff that's down-hole, as they describe.
 3 And we do an environmental analysis on the surface
 4 disturbance component.
 5 Q. Uh-huh. Can you tell me how many active oil and
 6 gas wells there are on state lands in Montana?
 7 **MR. OESTREICHER:** Objection to form, calls for
 8 speculation.
 9 Go ahead and answer, if you can.
 10 **THE DEPONENT:** I could come up with the exact
 11 number for you, but I don't have anything in front of me.
 12 I believe it's somewhere in the neighborhood of -- in
 13 the 600s. 600 to 700.
 14 Q. (By Ms. Rodgers) And where would that information
 15 be?
 16 **A. It changes all the time as things change out on**
 17 **the landscape. But we keep track of that through a**
 18 **database called the Trust Land Management System, TLMS.**
 19 Q. And is that available -- publicly available?
 20 **A. No. I don't believe there's a publicly**
 21 **available -- there's nowhere publicly available to go look**
 22 **at what is in the trust land database. It's a secure**
 23 **financial system.**
 24 Q. Okay. And is that also where information would be
 25 with respect to how many abandoned oil and gas wells there

1 landowner would. If there was an abandoned well on trust
 2 land, the Board of Oil and Gas would be the ones that would
 3 be regulatorily responsible for that, and we would work
 4 with them to do whatever needed to be done, I suppose, to
 5 take care of that situation.
 6 Q. Uh-huh. I'd like to show you another exhibit that
 7 we'll mark as Exhibit 29.
 8 (Exhibit 29 marked for identification.)
 9 Q. (By Ms. Rodgers) And this is the Department of
 10 Natural Resources and Conservation 2021 Biennium Goals and
 11 Objectives.
 12 **A. I have it.**
 13 Q. Okay. And what is this document?
 14 **A. The 2021 biennial goals and objectives.**
 15 Q. And are you familiar with this document?
 16 **A. Yes.**
 17 Q. And do you know how this document was created?
 18 **A. Yes.**
 19 Q. And how was this document created?
 20 **A. This document is created as part of the biennial**
 21 **legislative preparation process. Each division would be**
 22 **asked to review and update this document from one**
 23 **legislative session to the next, and then the document is**
 24 **compiled and it's put into the -- I believe this probably**
 25 **is a document that went into the governor's budget.**

1 are on state lands?
 2 **A. The Board of Oil and Gas tracks abandoned wells**
 3 **across the state on all ownerships, so they have**
 4 **information. We may have separate information for**
 5 **abandoned wells on trust lands. I do not believe it's**
 6 **contained within the TLMS system.**
 7 Q. Okay. How about the number of coal mines on state
 8 lands? Do you know that information?
 9 **MR. OESTREICHER:** Objection to form, vague.
 10 Go ahead.
 11 **THE DEPONENT:** Active coal leases is a -- it's
 12 similar to the oil and gas lease information. I could come
 13 up with an exact number. I believe it's somewhere in
 14 the 10 to 20 range of separate lease agreements for --
 15 excuse me -- for coal.
 16 Q. (By Ms. Rodgers) Uh-Huh. Is that information also
 17 maintained in the Trust Land Management System that you
 18 mentioned?
 19 **A. Yes, that would be correct.**
 20 Q. Does the DNRC play any role with respect to
 21 abandoned oil and gas wells on state lands?
 22 **MR. OESTREICHER:** Objection to form, vague.
 23 Go ahead.
 24 **THE DEPONENT:** Yes. The Trust Land Management
 25 Division would have a role in the same way a private

1 Q. And do you know when that was -- the document was
 2 created?
 3 **A. For 2021, it would have been created sometime in**
 4 **the prior -- the year prior to the beginning of the**
 5 **biennium, so 2020. Probably summer of 2020.**
 6 Q. Uh-huh. And was this -- is this the kind of
 7 document that's made and kept in the course of DNRC's
 8 regularly conducted business activity?
 9 **A. Yeah. As I described, this document is prepared**
 10 **every other year. And as long as I've been here, we've**
 11 **been doing some version of this document for every**
 12 **legislative session.**
 13 Q. Uh-huh. And these documents are publicly
 14 available; correct?
 15 **A. Yes.**
 16 Q. Could you just take a look at it and let me know,
 17 if -- do you believe this is a complete version of the
 18 biennial goals and objectives?
 19 **MR. OESTREICHER:** Objection to the form of the
 20 question, but go ahead.
 21 **THE DEPONENT:** Yeah, this appears to be the
 22 complete version of the document as it would have been
 23 submitted for each division.
 24 Q. (By Ms. Rodgers) Okay. And the first page, it
 25 starts with the oil and gas conservation division; right?

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1 A. Yes, that's correct.
 2 Q. And who created the goals and the objectives?
 3 A. I can assume that the Board of Oil and Gas
 4 Conservation did it the same way that Trust Land Management
 5 and Forestry Division would have done it, and the
 6 non-administratively attached agencies, I can't speak to
 7 exactly how they would have done it.
 8 Q. Uh-huh. Uh-huh. Can you describe what your
 9 responsibility was with respect to this document?
 10 A. Yes. So as I said, every two years we work on
 11 this document. Largely, we pull the document forward from
 12 the prior years and see what things would be changed or add
 13 different goals. Maybe we've accomplished some of the
 14 goals; they would leave and come off. So what I would have
 15 done with this is take this document, share it with our
 16 bureau chiefs in the four primary programs in the trust
 17 lands division, and ask them to review, update, change it,
 18 and then compile the document and send it forward.
 19 Q. Uh-huh. And how would you say these goals inform
 20 the activities of the particular divisions?
 21 MR. OESTREICHER: Objection to form.
 22 Go ahead.
 23 THE DEPONENT: I think the goals as outlined in
 24 this document are high level, intended to portray within
 25 the governor's budget and the legislative process generally

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1 what the divisions are trying to get accomplished in a
 2 biennium.
 3 Q. (By Ms. Rodgers) Would you say that they're
 4 priorities then?
 5 MR. OESTREICHER: Objection to form --
 6 THE DEPONENT: I would --
 7 MR. OESTREICHER: I'm sorry. Speaks for itself.
 8 But go ahead.
 9 THE DEPONENT: Yeah. I think priorities come from
 10 these goals, but priorities change as time goes forward. I
 11 don't know that these are the priorities for the divisions.
 12 Q. (By Ms. Rodgers) Uh-huh. If they're not here,
 13 where would those priorities for the divisions be?
 14 A. I don't believe the divisions come up with written
 15 priorities.
 16 Q. Uh-huh. Okay. Are there -- is there any other
 17 document that lists goals for the different divisions, or
 18 is this the only document that does that?
 19 MR. OESTREICHER: Objection to form.
 20 Go ahead.
 21 THE DEPONENT: Several of the divisions have a
 22 variety of different sort of strategic planning documents
 23 that they've worked on through time, so they -- other
 24 goals, objectives, priorities -- I don't know that we call
 25 them priorities -- but, you know, work tasks would be

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1 listed in potentially several different documents.
 2 Q. Uh-huh. And are those used to inform this
 3 document, which is sent to the governor's office?
 4 A. Yes.
 5 Q. And can you turn to Page 7, please, of the Trust
 6 Land Management Division?
 7 A. Okay.
 8 Q. And this is the one that you created; correct?
 9 A. Yes. Correct.
 10 Q. Are there any goals for the Trust Land Management
 11 Division that are not -- that you are aware of that are not
 12 listed here?
 13 A. No. I think that goal is reflective of the
 14 division's primary goal.
 15 Q. Can you describe -- maybe it would be helpful to
 16 look back at the previous exhibit, 28, that talked about --
 17 it was the web page from the director's office.
 18 A. Okay.
 19 Q. I just wanted to ask you about the role of the --
 20 what -- Reserved Water Rights Compact Commission. Is that
 21 accurately stated there at the bottom of that first page?
 22 MR. OESTREICHER: Objection to the form of the
 23 question. Not sure what that question was.
 24 But if you understand, go ahead.
 25 THE DEPONENT: Yes. I think that describes the

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1 Reserved Water Rights Compact Commission.
 2 Q. (By Ms. Rodgers) And earlier on you referenced the
 3 Board of Land Commissioners?
 4 A. Correct.
 5 Q. Okay.
 6 A. Also -- I'm sorry. Also, we refer to it as the
 7 "Land Board."
 8 Q. Land Board. Okay. All right. And I don't see it
 9 here, so I'm assuming it's not considered a separate
 10 division; right?
 11 MR. OESTREICHER: Objection to form.
 12 Go ahead.
 13 THE DEPONENT: No. The Trust Land Management
 14 Division is the administrative arm, I would say, of the
 15 state Land Board. The state Land Board is the
 16 constitutional authority decision-maker for activities
 17 involving the state trust land.
 18 Q. (By Ms. Rodgers) Uh-huh. And who makes up the
 19 Land Board?
 20 A. It's the top five statewide elected officials. So
 21 the Governor is the chair, the attorney general, secretary
 22 of state, the state auditor, and the superintendent of
 23 public instruction.
 24 Q. Okay. And so does the DNRC play any role with
 25 respect to pipelines that transport oil and gas, either

1 over state land or water?
2 **A. Yes. In the Trust Land Management Division,**
3 **the -- oftentimes people come to us for authorizations to**
4 **move things across state lands, whether there's private**
5 **driveways, pipelines, power lines. And so there's a**
6 **process to apply for easements for those uses, and**
7 **ultimately those are presented to and approved by the Land**
8 **Board.**
9 Q. Okay. And could a pipeline cross state lands or
10 state waters without the approval of DNRC?
11 **MR. OESTREICHER: Objection to form.**
12 Go ahead.
13 **THE DEPONENT: Without the approval of the Land**
14 **Board, it's a little bit of a complex question. The**
15 **department has authority that's been delegated to them by**
16 **the Land Board for certain administrative tasks. So for**
17 **things like flow lines that are captured within our oil and**
18 **gas leases, as an authority under the lease, they can move**
19 **oil from a wellhead to a storage tank. For large**
20 **transmission pipelines, those require Land Board approval.**
21 Q. (By Ms. Rodgers) For that -- for that first
22 example you gave me, that would be covered within their
23 existing lease; is that what you are saying?
24 **A. Yes. They -- certain activities for transporting**
25 **the oil are contained within the leases themselves. Others**

1 **A. Yes, it is.**
2 Q. All right. And can you identify this document I
3 just handed to you?
4 **A. This document appears to be a right-of-way deed**
5 **granted to Cenex Pipeline, LLC, for a 30-year right-of-way**
6 **across state lands for a buried 8-inch inert pipeline and**
7 **a 10-inch active refined petroleum products pipeline under**
8 **the Tongue River.**
9 Q. And are you familiar with this document?
10 **A. This was contained in the stuff I received**
11 **yesterday. So from, like, my personal familiarity with**
12 **this particular easement document, I saw it yesterday.**
13 Q. Okay. Are these -- are you familiar with these --
14 generally these kinds of right-of-way easement documents?
15 **A. Yes.**
16 Q. And who -- who creates these kinds of document?
17 **MR. OESTREICHER: Objection to form.**
18 Go ahead.
19 **THE DEPONENT: So these documents are created by**
20 **our rights of way staff in the Real Estate Management**
21 **Bureau of the trust lands division.**
22 Q. (By Ms. Rodgers) Okay. And is that a part of
23 their regular duties, the -- that part of the trust lands
24 division?
25 **A. Yes.**

1 **require either a separate license from the department, or**
2 **in certain cases, a larger transmission pipeline would**
3 **require an easement from the state land board.**
4 Q. Okay. I understand. Thank you.
5 Do you know how many pipelines that transport oil
6 and gas cross state lands and waters?
7 **A. I do not know that number off the top of my head.**
8 **It's -- it's not uncommon, I guess I would say. But we**
9 **could find out how many that is.**
10 Q. Yeah. Do you know where that information would
11 be?
12 **A. That data would be contained within the Trust Land**
13 **Management System, the database, as well. All existing**
14 **easements are captured in the database.**
15 Q. Uh-huh. And I understand that that's not publicly
16 available, but do DNRC staff have access to that database?
17 **A. Yes.**
18 Q. All right. I'd like to turn to our next exhibit,
19 please, which is exhibit -- this will be Exhibit 30. And
20 this -- on the top of it, it says "right of way deed."
21 **A. Yes, I have that.**
22 **(Exhibit 30 marked for identification.)**
23 Q. (By Ms. Rodgers) And one I'm looking at says at
24 the top "Easement Number D-3674A."
25 Is that one that's in front of you?

1 Q. So is this -- would you say this serves as an
2 example of the kinds of right of way deeds that the trust
3 lands division issues for pipelines?
4 **MR. OESTREICHER: Objection to form, document**
5 **speaks for itself.**
6 Go ahead.
7 **THE DEPONENT: Each individual right-of-way**
8 **pipeline or right-of-way for anything is its own case by**
9 **case, so I would say no. I guess it depends on your**
10 **question and how -- how generally.**
11 **Generally, we have a right-of-way deed. It describes**
12 **the legal description of where the easement is and**
13 **conditions that apply to that particular right-of-way. So**
14 **from that standpoint, yes. But the specifics of what's**
15 **contained in this document, not necessarily.**
16 Q. (By Ms. Rodgers) Yeah. Sure. I understand.
17 Thank you.
18 And where is this document kept at DNRC?
19 **A. These documents are all maintained in the Trust**
20 **Land Management System in a PDF. So an electronic file of**
21 **this deed would exist in the TLMS, as well as in some paper**
22 **files that we maintain.**
23 Q. Uh-huh. Now, would this document be publicly
24 available?
25 **A. If somebody asked for it, yes. But not -- there**

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1 is nowhere where you can just go get it.
 2 Q. It's not online?
 3 A. Correct.
 4 Q. And can you look at the signature page of the
 5 document?
 6 A. Okay.
 7 (Complies.)
 8 Q. And who signed this document?
 9 A. This document was signed by the Governor, the
 10 secretary of state, and the department's director, and then
 11 accepted by the representative of the applicant.
 12 Q. And those three signatures on behalf of the state,
 13 those are all members of the Land Board; right?
 14 A. No, they're not.
 15 Q. Oh, they're not? Okay.
 16 Why did they sign this document?
 17 MR. OESTREICHER: Objection to the form of the
 18 question.
 19 THE DEPONENT: The Governor, as chair of the Land
 20 Board, signs the document. I don't know what legal
 21 underpinnings there are for who signs rights of way deeds
 22 on behalf of the Land Board or the state. And the reason
 23 that not all three of them are Land Board members is one is
 24 the director of the department, who is not a member of the
 25 Land Board.

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1 Q. (By Ms. Rodgers) Okay. Who is not a member of the
 2 Land Board. Okay.
 3 So can you tell me the process that these
 4 right-of-way deeds are created? How does this start? How
 5 does it come to the trust land division, and then walk me
 6 through the process.
 7 MR. OESTREICHER: Objection to form, compound,
 8 vague.
 9 Go ahead.
 10 THE DEPONENT: So an applicant would fill out a
 11 right-of-way application form, submit it to -- most usually
 12 it would be submitted to our local field office. So that's
 13 how the process starts.
 14 Q. (By Ms. Rodgers) And then what does the local
 15 field office do with the application?
 16 A. So our staff would look at the proposal -- and
 17 there's a number of things that come into play for
 18 different types of rights-of-way -- but look at the
 19 proposal, go look at the location that's being proposed out
 20 on the ground, see if there's any problems with the
 21 location -- conflicts or resource-related impact things
 22 that they would want to modify. They would write that up.
 23 They would do a MEPA analysis of that right-of-way request.
 24 Eventually that would move to the Real Estate Management
 25 Bureau and the rights-of-way staff there that would further

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1 process and prepare that for the Land Board's agenda. It
 2 would get on the Land Board's agenda, and every month the
 3 Land Board meets, so every month these items are voted on
 4 by the board. If the board approved them as-is, we would
 5 move forward with processing the creation of the deeds and
 6 documents and go through the process of gaining signatures
 7 and getting them back to the proponents.
 8 Q. What is the package of information that's sent to
 9 the Land Board after you've done what you just described?
 10 What are the paper documents that get sent to the Land
 11 Board?
 12 A. The Land Board primarily -- we put together a
 13 monthly agenda that contains specific information about
 14 each project the board is approving. So for easements,
 15 it's usually all of the easements put together in one
 16 agenda item, and they would have a map depiction of the
 17 right-of-way that's being requested, the monetary
 18 compensation that's -- that's attached to it, the legal
 19 description, who the proponents are, et cetera.
 20 Q. Uh-huh. Does that -- would that include the MEPA
 21 analysis that you referenced?
 22 A. No. The board doesn't -- doesn't get in the Land
 23 Board agenda packet, the MEPA analysis. Land Board staff
 24 will often review MEPA analyses, and they're available --
 25 publicly available documents that are on our website.

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1 Q. Uh-huh. But they're not in the package of
 2 information that's delivered to the Land Board with the
 3 easements?
 4 A. No.
 5 Q. You mentioned too that there's monetary
 6 compensation.
 7 Is that set by the legislature?
 8 A. So the legislature has some general statutes about
 9 the trust receiving full market value, but the actual value
 10 is established through an appraisal process or a fee
 11 schedule that the department maintains and updates through
 12 time.
 13 Q. Uh-huh. And who -- who does that? Who's
 14 responsible for that?
 15 A. For the setting of the -- the final setting of the
 16 amount?
 17 Q. Correct.
 18 A. So for rights-of-way, generally we have what we --
 19 we have an appraisal product that we contract for on a
 20 periodic basis that creates land values by type and that's
 21 geographically oriented. We call it base map values. So
 22 we'll refer to that. We will also -- our field office will
 23 also ask around to see what kind of values other people may
 24 be getting. If we have a large pipeline that's going
 25 through a large geographical area, oftentimes they will

1 have a certain amount that they're offering to private
 2 landowners. We have an obligation to get the full and
 3 highest value that we can, so we look at our fee schedules,
 4 we look at -- in some cases we can require an actual
 5 appraisal to be done, and we'll look at market evidence
 6 that we see in a neighborhood, and pick the highest of
 7 those numbers. So it's a combination of our local field
 8 office and the bureau staff in the rights-of-way program.
 9 Q. Does the real estate division have anything to do
 10 with that?
 11 A. Real estate is a bureau within the trust lands
 12 division, so, yes, that's the right-of-way -- right-of-way
 13 section within the real estate bureau is primarily where
 14 that gets done.
 15 Q. Okay. Thank you.
 16 MR. OESTREICHER: Listen, Andrea, we've been going
 17 for about an hour, and I had too much water.
 18 Can we take a break?
 19 MS. RODGERS: Yeah. Can I just ask a couple of
 20 questions, and then we'll be at a good stopping point?
 21 MR. OESTREICHER: Okay. You've got about two more
 22 minutes?
 23 MS. RODGERS: Yeah. Definitely.
 24 MR. OESTREICHER: Okay.
 25 Q. (By Ms. Rodgers) Do you know, does the state

1 (Break taken from 9:58 a.m. until 10:11 a.m.)
 2 Q. (By Ms. Rodgers) I'd like to show you the next
 3 exhibit, which would be Exhibit 31, and this is another
 4 right-of-way deed.
 5 (Exhibit 31 marked for identification.)
 6 THE DEPONENT: All right. I have that.
 7 Q. (By Ms. Rodgers) mine says "Easement Number
 8 D-14257."
 9 Is that the same one you're looking at?
 10 A. Yes, it is.
 11 Q. Okay. And can you please identify this document
 12 that Barbara just handed to you?
 13 A. So this is a right-of-way deed granted to Cenex
 14 Pipeline for a 10-inch diameter underground liquid
 15 petroleum pipeline. And then it has a legal description of
 16 where it's located.
 17 Q. And are you familiar with this document?
 18 A. In the same way I was the last one. I saw it
 19 yesterday in the exhibit stuff that I received. But other
 20 than that, not specifically.
 21 Q. And staff from which division of DNRC would have
 22 prepared this right-of-way deed?
 23 A. Same staff -- or I guess a combination of the
 24 field staff in the location, wherever this was, and the
 25 Real Estate Management Bureau right-of-way section staff.

1 retain the authority to terminate a right-of-way deed?
 2 MR. OESTREICHER: Objection to form, calls for a
 3 legal conclusion.
 4 Go ahead.
 5 THE DEPONENT: Yes, I believe it would -- it's
 6 probably -- I'll look at the one that's in front of me.
 7 There might be language for termination within the document
 8 itself, but sometimes we do, for sure.
 9 Q. (By Ms. Rodgers) Does the DNRC have any policies
 10 with respect to when termination is appropriate?
 11 MR. OESTREICHER: Objection to form, vague.
 12 Go ahead.
 13 THE DEPONENT: No written policy for terminating
 14 easements.
 15 Q. (By Ms. Rodgers) Have you seen that happen before?
 16 A. So an easement could be -- it's similar to a
 17 contract, and I think could be terminated for cause. So if
 18 somebody is violating the terms of their easement, it could
 19 be terminated for that purpose. I -- off the top of my
 20 head, I'm not thinking of any, but I'm sure that that has
 21 occurred.
 22 Q. (By Ms. Rodgers) Okay. Thank you. That's a good
 23 stopping point, so why don't we take a break.
 24 MR. OESTREICHER: Thank you.
 25 MS. RODGERS: Yeah. Of course.

1 Q. Okay. And are these the kinds of right-of-way
 2 easements that are prepared by DNRC?
 3 A. Generally, yes.
 4 Q. Turning back to the last page -- so it says at the
 5 bottom "000745" -- do you see that there?
 6 A. Yes.
 7 Q. The signatories?
 8 A. Yep.
 9 Q. Early -- for the earlier exhibit that we were
 10 looking at, you noticed that it was the director who
 11 signed, who's not a member of the Land Board, and it looks
 12 like the director signed here as well; right?
 13 A. Correct.
 14 Q. And do you know why the director signs these?
 15 MR. OESTREICHER: Objection; form, calls for
 16 speculation, calls for a legal conclusion.
 17 Go ahead.
 18 THE DEPONENT: So the director has a role as the
 19 formal secretary of the state land board, so the director
 20 ultimately is responsible to carry out the direction of the
 21 Land Board. So I presume, as an administrative signatory
 22 to -- for DNRC on Land Board-Related matters, the director
 23 would sign these.
 24 Q. (By Ms. Rodgers) Okay. And is it always -- to
 25 your knowledge, is it typically these individuals who sign

1 right of way deeds like this?
 2 **MR. OESTREICHER:** Objection to the form of the
 3 question, vague.
 4 **THE DEPONENT:** I don't know how many rights-of-way
 5 deeds there are that have been issued across state lands,
 6 but it's hundreds, if not thousands. And this is the way
 7 that they have been processed and signed in the time that
 8 I've been with DNRC. But I can't speak to, you know, going
 9 back 100 years.
 10 Q. (By Ms. Rodgers) Yeah. No. Thank you.
 11 All right. I'd like to take a look at what has
 12 already been marked as Exhibit 3, which is the complaint in
 13 this case.
 14 A. I have that.
 15 Q. And have you reviewed this before?
 16 A. I've seen it before. I haven't studied it.
 17 Q. Okay. I'd like to also provide you a copy of
 18 Exhibit 4, which is the defendant's answers.
 19 A. Okay. I have that.
 20 Q. It just, I think, would be helpful for this next
 21 round of questions just to have both of those in front of
 22 you.
 23 A. Okay.
 24 Q. All right. And turning back to Exhibit Number 27,
 25 which was the Department of Natural Resources and

1 construction and operation of interstate pipelines, which
 2 are used to transport fossil fuels. In approving such
 3 activities, DNRC has repeatedly failed to disclose the
 4 significant harms to human health and the environment from
 5 its decisions.
 6 Did I read that correctly?
 7 A. Yes.
 8 Q. And are you the person at DNRC who's most
 9 knowledgeable with the respect the allegations contained in
 10 Paragraph 96?
 11 **MR. OESTREICHER:** Objection to the form of the
 12 question.
 13 Go ahead.
 14 **THE DEPONENT:** Yes.
 15 Q. (By Ms. Rodgers) All right. Could you then turn
 16 to the answer and read the defendant's answer to
 17 Paragraph 96, please? That is on Page 7 of the answer.
 18 A. Yes.
 19 **MR. OESTREICHER:** Do you want him to read it
 20 aloud?
 21 **MS. RODGERS:** I'm just asking for him to turn to
 22 it.
 23 **THE DEPONENT:** Okay. Yeah. I'm there.
 24 Q. (By Ms. Rodgers) Okay. Were you consulted about
 25 defendant's answer to Paragraph 96?

1 Conservation's Amended Designees and Objections -- that was
 2 the document that identified the various subject areas of
 3 today's deposition?
 4 A. All right.
 5 Q. And that says that -- on the top of Page 4, it
 6 says that you were designated to talk about the allegations
 7 in Paragraph 96 of the complaint; correct?
 8 A. Correct.
 9 Q. So I'd like to go ahead and do that, if we can
 10 turn to Paragraph 96 in the complaint, which is on Page 30.
 11 A. Okay.
 12 Q. And Paragraph 96 reads:
 13 Defendant DNRC issues leases, permits, and
 14 licenses for all uses of state lands. Pursuant to the
 15 state's energy policy, defendant DNRC has authority to
 16 pursue energy development on state lands. DNRC issues
 17 licenses for exploration and leases for production and
 18 extraction of oil and gas in Montana and permits for
 19 drilling in Montana, which results in dangerous levels of
 20 GHG emissions and contributes to the climate crisis.
 21 Defendant DNRC has exercised its authority to grant
 22 easements for the operational right-of-way for interstate
 23 pipelines with the approval of the Land Board and issue
 24 land use licenses for the construction right-of-way and
 25 other activities on state lands and waterways for the

1 **MR. OESTREICHER:** Objection to form.
 2 Go ahead.
 3 **THE DEPONENT:** I talked to Brian about the answers
 4 to these. Our chief legal counsel, Brian Bramblett. I
 5 talked to him about it.
 6 Q. (By Ms. Rodgers) Okay. And here it says in the
 7 answer, it says:
 8 Montana admits the allegations in the first
 9 sentence of Paragraph 96.
 10 Right?
 11 A. That's what it says, yes.
 12 Q. And that first paragraph -- first sentence is:
 13 Defendant DNRC issues leases, permits, and
 14 licenses for all uses of state land.
 15 Correct?
 16 A. Yes. That's what it says.
 17 Q. And do you agree with that statement?
 18 **MR. OESTREICHER:** Objection to form.
 19 **THE DEPONENT:** I have a slight disagreement in
 20 that we don't have any responsibility for lands owned by
 21 the Department of Fish, Wildlife, and Parks, Montana
 22 Department of Transportation -- other state agencies own
 23 land. But other than that, yes, I agree with that
 24 statement.
 25 Q. (By Ms. Rodgers) Okay. If it were to say "state

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1 trust land," would --
 2 **A. Yeah. That fixes it.**
 3 **Q.** Okay. And I'd like to talk about the second
 4 sentence there. And the answer says that Montana denies
 5 the allegations in the second and fourth paragraph --
 6 sentences of Paragraph 96.
 7 The second sentence says:
 8 Pursuant to the state energy policy, defendant
 9 DNRC has authority to pursue energy development on state
 10 land.
 11 What do you disagree with in that second sentence?
 12 **MR. OESTREICHER:** Objection to the form of the
 13 question, calls for a legal conclusion, vague.
 14 **THE DEPONENT:** So primarily I think the energy
 15 policy itself doesn't -- isn't the -- the main -- it's not
 16 what's driving the department's decisions. Our
 17 constitutional obligation, our statutes around leasing, et
 18 cetera, are the main things that grant us authority and the
 19 state's land board's authority to lease state lands.
 20 **Q.** (By Ms. Rodgers) Okay. Do you disagree with the
 21 statement that DNRC has authority to pursue energy
 22 development on state land?
 23 **A. I don't disagree with that. The DNRC has that**
 24 **authority, under the direction of the Land Board, to pursue**
 25 **energy development on state land. On state trust land.**

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1 **Q.** State trust land. Thank you.
 2 Okay. I'm going to skip the third sentence for a
 3 second and go to the fourth sentence, which the complaint
 4 also denies, which is:
 5 Defendant DNRC has exercised its authority to
 6 grant easements for the operational rights-of-way for
 7 interstate pipelines with the approval of the Land Board
 8 and issue land-use licenses for the construction
 9 right-of-way and other activities on state lands and
 10 waterways for the construction and operation of interstate
 11 pipelines, which are used to transport fossil fuels.
 12 Can you tell me what you disagree with in that
 13 sentence?
 14 **MR. OESTREICHER:** Objection to the form of the
 15 question, calls for a legal conclusion, vague.
 16 Go ahead.
 17 **THE DEPONENT:** Yeah. I'm not an attorney, so I
 18 don't know what the underpinnings are. My -- my
 19 perspective here is that the authority for these things is
 20 the state land board, so they're exercising their
 21 authority. DNRC is acting as their agent.
 22 **Q.** (By Ms. Rodgers) Would you agree that the Land
 23 Board has authority to grant easements for the operational
 24 right-of-way of interstate pipelines?
 25 **MR. OESTREICHER:** Objection to form.

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1 Go ahead.
 2 **THE DEPONENT:** The Land Board has authority to
 3 grant rights-of-way for a variety of activities, including
 4 interstate pipelines.
 5 **Q.** (By Ms. Rodgers) Okay. And do you agree that some
 6 of the pipelines that the Land Board has granted
 7 rights-of-way for are used to transport fossil fuels?
 8 **MR. OESTREICHER:** Objection to form.
 9 Go ahead.
 10 **THE DEPONENT:** Yes.
 11 **Q.** (By Ms. Rodgers) Turning back to the answer, with
 12 respect to the third sentence, it says:
 13 Montana admits that the Montana Department of
 14 Natural Resources and Conservation issues licenses for
 15 exploration and leases for production and extraction of oil
 16 and gas in Montana and permits for drilling, but denies all
 17 other allegations of Paragraph 96.
 18 Do you see that there?
 19 **A. Yes.**
 20 **Q.** Okay. Do you agree that DNRC issues licenses for
 21 exploration and leases for production of oil -- for
 22 production and extraction of oil and gas in Montana, and
 23 permits for drilling in Montana?
 24 **MR. OESTREICHER:** Objection to the form of the
 25 question.

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1 Go ahead.
 2 **THE DEPONENT:** Yes.
 3 **Q.** (By Ms. Rodgers) Do you agree that those
 4 activities result in dangerous levels of greenhouse gas
 5 emissions and contribute to the climate crisis?
 6 **MR. OESTREICHER:** Objection to form, speaks for
 7 itself.
 8 Go ahead.
 9 **THE DEPONENT:** No, I don't agree with that.
 10 **Q.** (By Ms. Rodgers) Okay. And what's the basis for
 11 your disagreement?
 12 **MR. OESTREICHER:** Objection to the form of the
 13 question.
 14 Go ahead.
 15 **THE DEPONENT:** I think the word "dangerous" is
 16 subjective. And our role in participating in the markets
 17 is a small one. Trust --
 18 **Q.** (By Ms. Rodgers) What do you mean by "the
 19 markets"?
 20 **MR. OESTREICHER:** I think he was still talking
 21 there. I don't know if you guys were talking over each
 22 other, but if you wanted to finish.
 23 **THE DEPONENT:** Yeah. So the oil and gas market --
 24 we're not -- we're price-takers, as our economist has
 25 described it, in many of these larger commodity markets.

1 We're a small role across the general oil and gas market,
 2 the -- the general agricultural markets, whatever you may
 3 be. These are commodities, and we have a small role in
 4 those. So we participate in monetizing those resources as
 5 opportunities in markets present themselves.
 6 Q. (By Ms. Rodgers) Okay. Does DNRC have any
 7 policies with respect to greenhouse gas emissions?
 8 **MR. OESTREICHER:** Objection to form.
 9 Go ahead.
 10 **THE DEPONENT:** I don't believe there's any
 11 policies, formal policies, on greenhouse gas emissions at
 12 the DNRC.
 13 Q. (By Ms. Rodgers) Does DNRC play any role with
 14 respect to greenhouse gas emissions from activities on
 15 state trust land?
 16 **MR. OESTREICHER:** Objection to the form of the
 17 question, vague.
 18 Go ahead.
 19 **THE DEPONENT:** Certainly greenhouse gas emissions
 20 are generated from all kinds of activities every day from
 21 all people, so, yes, there's some role.
 22 Q. (By Ms. Rodgers) What -- can you describe what the
 23 role of DNRC is with respect to the activities that you
 24 permit on state trust lands?
 25 **MR. OESTREICHER:** Objection to form, asked and

1 Q. (By Ms. Rodgers) Would you agree that DNRC's
 2 permitting of oil and gas activities on state trust lands
 3 results in greenhouse gas emissions?
 4 **MR. OESTREICHER:** Objection to form, calls for
 5 speculation.
 6 **THE DEPONENT:** Yes. I would agree that
 7 activities -- drilling and all activities result in
 8 greenhouse gas emissions.
 9 Q. (By Ms. Rodgers) And then it looks like there's a
 10 fifth sentence in here that the answer does not address
 11 that says:
 12 In approving such activities, DNRC has repeatedly
 13 failed to disclose the significant harms to human health
 14 and the environment from its decisions.
 15 Do you see that last sentence there?
 16 **A. Yes.**
 17 Q. And am I correct that the answer doesn't mention a
 18 fifth sentence?
 19 **MR. OESTREICHER:** Objection to form, calls for a
 20 legal conclusion.
 21 **THE DEPONENT:** I don't see a response to that in
 22 the answer myself.
 23 Q. (By Ms. Rodgers) Do you agree or disagree with
 24 that fifth sentence there?
 25 **MR. OESTREICHER:** Objection to form, calls for a

1 answered.
 2 Go ahead.
 3 **THE DEPONENT:** Yeah, I'm not sure I understand
 4 your question about what you mean by "role."
 5 Q. (By Ms. Rodgers) Do you quantify the greenhouse
 6 gas emissions from the activities that you license on state
 7 trust lands?
 8 **MR. OESTREICHER:** Objection to form.
 9 Go ahead.
 10 **THE DEPONENT:** Not -- no, not usually.
 11 Q. (By Ms. Rodgers) Earlier you -- I believe you
 12 testified that the term "dangerous" was subjective.
 13 Is that what you said?
 14 **A. Yes, I believe that's the word I used.**
 15 Q. Does DNRC have any policies in place with respect
 16 to the term "dangerous" greenhouse gas emissions?
 17 **MR. OESTREICHER:** Objection to the form of the
 18 question and asked and answered.
 19 Go ahead.
 20 **THE DEPONENT:** No.
 21 Q. (By Ms. Rodgers) How would you define the term
 22 "dangerous"?
 23 **MR. OESTREICHER:** Objection to form.
 24 **THE DEPONENT:** On behalf of the agency, like I
 25 said, there's no definition of "dangerous."

1 legal conclusion.
 2 **THE DEPONENT:** No, I disagree with that statement.
 3 Q. (By Ms. Rodgers) Okay. Can you describe to me how
 4 the DNRC discloses harms to human health and the
 5 environment from its decisions?
 6 **A. DNRC is to comply with the Montana Environmental**
 7 **Policy Act, which specifies that we -- as defined in the**
 8 **state law, what we disclose as far as harmful impacts to**
 9 **the environment.**
 10 Q. And does the DNRC do MEPA analysis for every
 11 license and permit it issues?
 12 **MR. OESTREICHER:** Objection to form, asked and
 13 answered.
 14 Go ahead.
 15 **THE DEPONENT:** No, not for every license.
 16 Q. (By Ms. Rodgers) Which ones don't require MEPA
 17 analysis?
 18 **MR. OESTREICHER:** Objection to form, vague.
 19 Go ahead.
 20 **THE DEPONENT:** So licenses that are -- releases
 21 that are issued under the Minerals Management Bureau for
 22 oil and gas, coal, we do not do MEPA on the issuance of the
 23 leases themselves. The MEPA gets done at the time that a
 24 development activity was -- were to be proposed.
 25 Q. (By Ms. Rodgers) So that's after the leases are

1 issued?
 2 **A. That's correct.**
 3 **Q.** And then who makes the decision on the development
 4 activities? Is that also a DNRC decision?
 5 **MR. OESTREICHER:** Objection to form, vague.
 6 **THE DEPONENT:** The answer is it depends on the --
 7 on the -- what's being analyzed for in terms of the
 8 development. So in the case of oil and gas, like I said
 9 earlier today, the down-hole regulatory stuff from the
 10 drilling activity itself below the surface is the Board of
 11 Oil and Gas Conservation. For mining permits, it's the
 12 Department of Environmental Quality does the regulatory
 13 mine plan development and MEPA analysis for that.
 14 Sometimes it's a -- we do it in conjunction with them, so
 15 we would be, like, a joint MEPA between the two agencies.
 16 Sometimes we do a separate MEPA for certain surface impacts
 17 to the surface estate from development.
 18 **Q.** (By Ms. Rodgers) Uh-huh. But am I correct that
 19 with respect to those right-of-way easements that we talked
 20 about earlier, that is something that the DNRC does the
 21 MEPA analysis for; correct?
 22 **A. Yes. For rights-of-way easements, we do the MEPA**
 23 **analysis for that.**
 24 **Q.** Okay. Thank you. And I believe from the -- I
 25 don't want to have to keep going back here, but the exhibit

1 **Q.** (By Ms. Rodgers) What's the basis for your
 2 disagreement?
 3 **A. We manage those because it's our obligation to**
 4 **manage the navigable rivers in the state of Montana per the**
 5 **legislative authority to do so.**
 6 **Q.** Are any of those riverbeds or island tracts leased
 7 for oil and gas development?
 8 **A. Yes, some of them are.**
 9 **Q.** And do you agree or disagree with the second
 10 sentence that says the leased tracts provided the State of
 11 Montana with \$914,373 in oil and gas revenues in 2018,
 12 which is less than 1 percent of the amount of money the
 13 state spent fighting wildfires in 2018, which
 14 was \$95 million?
 15 **MR. OESTREICHER:** Objection to form.
 16 Answer if you can.
 17 **THE DEPONENT:** So I can't answer the exact --
 18 whether the \$914,000 is the exact number from specifically
 19 leased river beds and island tracts in 2018. I do know
 20 that the amount of money the state spent fighting fires
 21 in 2018 was not \$95 million. It was less than that. But
 22 other than those specific details, we -- we lease oil and
 23 gas and navigable rivers. It generates revenue.
 24 **Q.** (By Ms. Rodgers) Uh-huh. And where would the most
 25 current revenue figures be?

1 that -- I think it's exhibit -- it has the subject areas of
 2 your testimony, Exhibit 27, Topic 4 is paragraph -- the
 3 allegations in Paragraph 98 of the complaint; is that
 4 correct?
 5 **A. Okay. Yep.**
 6 **Q.** All right. Could you please turn to Page 98 -- or
 7 Paragraph 98 of the complaint? It's on Page 31.
 8 **A. Okay.**
 9 **(Complies.)**
 10 **Q.** And are you the person at DNRC who's most
 11 knowledgeable with respect to the allegations contained in
 12 Paragraph 98?
 13 **A. Yes.**
 14 **Q.** Do you agree with the first sentence there, that
 15 as of 2018, defendant DNRC managed 9,714 acres of leased
 16 river bed and island tracts in part to facilitate the
 17 development of oil and gas resources?
 18 **MR. OESTREICHER:** Objection to form. The answer
 19 speaks for itself.
 20 **THE DEPONENT:** So in 2018, I don't know exactly
 21 how many acres of navigable rivers that we claimed, but
 22 that is probably correct, presuming that it was sourced as
 23 described in the notation. I disagree that -- that we
 24 manage those to facilitate the development of oil and gas
 25 resources.

1 **A. We publish annual revenue numbers in an annual**
 2 **report that gets put together, and it's publicly available**
 3 **on our website every year.**
 4 **Q.** Okay. I'd like to mark the next exhibit, which I
 5 believe is Exhibit 32, the Great Falls Tribune article.
 6 **(Exhibit 32 marked for identification.)**
 7 **Q.** (By Ms. Rodgers) Do you have that in front of you,
 8 Mr. Thomas?
 9 **A. I do.**
 10 **Q.** Have you seen this article before?
 11 **A. I saw it in the materials I was given yesterday**
 12 **afternoon.**
 13 **Q.** Okay. And do you disagree with the statement in
 14 this article that wildfires cost more than \$95 million
 15 in 2018?
 16 **MR. OESTREICHER:** Objection to form, asked and
 17 answered.
 18 **THE DEPONENT:** Yes, I disagree that the state's
 19 share was \$95 million. There's another exhibit that I was
 20 given from you yesterday that shows that, what the actual
 21 number was in 2018.
 22 **Q.** (By Ms. Rodgers) Okay. Do you recall what that --
 23 what that actual total was for 2018?
 24 **A. I believe the state's expenditure in 2018 was**
 25 **somewhere in the neighborhood of 65 million.**

1 Q. And does DNRC maintain information on how much
 2 money is spent fighting wildfires?
 3 A. Yes.
 4 Q. And where is that information maintained?
 5 A. It's the other exhibit in the packet of stuff that
 6 you sent to me yesterday. I don't know which number it is.
 7 There's a chart --
 8 Q. Would that be the fire management division or --
 9 A. The Forestry Division is where our fire program --
 10 fire bureau sits within the Forestry Division.
 11 Q. Okay. I'd like to mark the next exhibit,
 12 Exhibit 33.
 13 (Exhibit 33 marked for identification.)
 14 Q. (By Ms. Rodgers) It's Defendant's Second
 15 Supplemental Responses to Plaintiff's First Discovery
 16 Requests.
 17 Do you have that in front of you?
 18 A. Not yet.
 19 Q. And have you seen this document before?
 20 A. Yes.
 21 Q. And did you play a role in responding to these
 22 discovery requests?
 23 A. I may have had a conversation with our chief legal
 24 counsel about the response, but I wouldn't say that I
 25 played a role in them.

1 A. Reimbursements are payments back to the -- so the
 2 state expends money on the fire. Some fires have eligible
 3 expenses that can be reimbursed from the federal government
 4 under FEMA. So that's primarily probably FEMA
 5 reimbursements which apply to fires that meet certain
 6 criteria.
 7 Q. Okay. Thank you. I'd like to mark the next
 8 exhibit as Exhibit 34.
 9 (Exhibit 34 marked for identification.)
 10 Q. (By Ms. Rodgers) This is an annual report, fiscal
 11 year 2021.
 12 A. I have it.
 13 Q. And can you please identify the document I just
 14 handed -- I just did -- I did not hand it to you; Barbara
 15 handed it to you. Sorry.
 16 A. Yes. This is the Trust Land Management Division's
 17 annual report for fiscal year 2021.
 18 Q. All right. And have you reviewed this document
 19 before?
 20 A. Yep.
 21 Q. And can you tell me how this document was created?
 22 A. This document is created every year at the
 23 conclusion of the closing of the state books in July. We
 24 work on pulling information together for the annual report
 25 that just details out some of the things that the division

1 Q. Okay. Would you please turn to Interrogatory
 2 Number 22, which is on Page 6 -- Page 5? I'm sorry.
 3 A. Okay.
 4 Q. And that's asking to identify how much money the
 5 State of Montana has spent fighting wildfires each year
 6 since 1993; correct?
 7 A. Yes, that's what it says.
 8 Q. Okay. And could you please read the defendant's
 9 answer? There's two answers; one for May 20th and one for
 10 July 22nd.
 11 A. Yep.
 12 Q. And did you play a role in assembling this
 13 information that's on Page 6 in the table?
 14 A. The table that's on Page 6 is what I was referring
 15 to. This is familiar to me as a product of the Forestry
 16 Division, although I wasn't overseeing the Forestry
 17 Division in July, so I didn't play a role in pulling this
 18 together. But this is a table that I've seen from that
 19 division, so I presume that came from there.
 20 Q. Okay. And to your knowledge does this data
 21 accurately reflect the amount of money the State of Montana
 22 has spent fighting wildfires since 2000?
 23 A. Yes, I believe this is accurate.
 24 Q. Okay. And there's a column for reimbursement.
 25 What does that refer to?

1 has been working on over the course of the year and the
 2 revenues associated with activities.
 3 Q. Okay. And do you know who's involved in creating
 4 this document?
 5 A. Yeah. It's a group effort from a variety of trust
 6 land staff. Ultimately, it is primarily in the bureaus and
 7 in my staff at the administrative level.
 8 Q. Uh-huh. And is this document publicly available?
 9 A. Yes, it is.
 10 Q. And if you turn the page, it's, I believe, on
 11 Page 1 where it identifies the executive team?
 12 A. Yes.
 13 Q. You are on the executive team; correct?
 14 A. That's correct.
 15 Q. And what is the role of the executive team with
 16 respect to this document?
 17 A. So the executive team is the key leadership within
 18 the DNRC Trust Land Management Division. And as I
 19 described, these are folks -- primarily the bureaus; to a
 20 lesser degree, the area managers -- that provide the
 21 verbiage that is contained within this document.
 22 Q. Uh-huh. And does this look to be a correct copy
 23 of the report?
 24 A. Yes, I believe it is.
 25 Q. And is this the most current version of the annual

1 report that's available?
 2 **A. It is. We're finalizing the 2022 report now,**
 3 **which should be available in another month or so.**
 4 Q. Okay. And can you turn to Page 3 where it says
 5 "Quick Facts"?
 6 **A. (Complies.)**
 7 **Okay. Got it.**
 8 Q. And there on the -- it says 6.2 million total
 9 mineral acres.
 10 Do you see that there?
 11 **A. Yes.**
 12 Q. And what minerals are encompassed in those acres?
 13 **A. It depends. The state generally was granted upon**
 14 **statehood the surface and the full mineral estate. There**
 15 **are situations where certain parts of the mineral estate**
 16 **may have been reserved by the federal government or some**
 17 **other entity. So we don't always own all of the mineral**
 18 **estate, and the mineral estate is not always all-inclusive.**
 19 Q. Okay. Are these just -- so what does this total
 20 number encompass then?
 21 **A. That total number is the total number of acres**
 22 **that we are responsible to manage that have some mineral**
 23 **ownership component.**
 24 Q. But they're not the total number of acres that
 25 have been leased?

1 year 2021, that was the number --
 2 Q. That was the number.
 3 **A. -- and it's probably slightly different than that**
 4 **today.**
 5 Q. Okay. And you mentioned that the leases terminate
 6 after 10 years if there's no production; is that what you
 7 said?
 8 **A. Correct.**
 9 Q. Okay. Are there any other reasons why a lease
 10 could be terminated?
 11 **A. A lease is a contract, so much like in the**
 12 **termination clause in the easements that we talked about**
 13 **earlier, if somebody violates their lease terms, that could**
 14 **be grounds for termination of a lease.**
 15 Q. Okay. Do you know the amount of greenhouse gas
 16 emissions that results from these 1,126 leases?
 17 **MR. OESTREICHER: Objection to the form of the**
 18 **question.**
 19 **THE DEPONENT: I do not.**
 20 Q. (By Ms. Rodgers) How could you find that
 21 information out?
 22 **MR. OESTREICHER: Objection to the form of the**
 23 **question.**
 24 Answer if you can.
 25 **THE DEPONENT: I would presume that you could**

1 **A. No.**
 2 Q. Okay.
 3 **A. This is the ownership itself.**
 4 Q. Ownership itself. Thank you.
 5 And it also says there's 1,126 oil and gas leases;
 6 correct?
 7 **A. Correct.**
 8 Q. And are those leases issued by DNRC?
 9 **A. Yes.**
 10 Q. And do you know what the timeframe is with respect
 11 to when those leases were issued?
 12 **A. It's kind of a complicated answer. Leases are**
 13 **issued for a 10-year term unless held by production. So I**
 14 **believe there is many more -- and I don't know what the**
 15 **exact number is; it may be somewhere in this document --**
 16 **but there are many fewer active leases. Once a lease is**
 17 **active, it's held by production. So of the 1,126, a subset**
 18 **of those are active. They may be quite old. But the**
 19 **majority of our leases, people lease the ground for**
 20 **a 10-year primary term. If they don't develop or produce**
 21 **from that lease in that primary 10-year term, then the**
 22 **lease terminates.**
 23 Q. Okay. Okay. So in terms of -- this is a snapshot
 24 in time in terms of how many leases there are today.
 25 **A. That's correct. At the conclusion of fiscal**

1 figure out what the total production is. We can provide
 2 information of how productive each single lease is in terms
 3 of the number of barrels. And I presume there's some way
 4 to calculate greenhouse gas emissions based on oil
 5 production. But we don't do that, so I don't have that
 6 answer.
 7 Q. (By Ms. Rodgers) Okay. It says here -- three --
 8 I'm not good with math this morning. I'm sorry.
 9 363,739 tree seedlings planted; correct? Do you
 10 see that there?
 11 **A. Yes.**
 12 Q. Over what period of time were those seedlings
 13 planted?
 14 **A. That would have been in the fiscal year that the**
 15 **report is based on, so between July 1st of 2019 and -- or**
 16 **2020 and June 31st of 2021.**
 17 Q. Okay. And it says there's 31 coal leases;
 18 correct?
 19 **A. Yes. I see that there.**
 20 Q. And those are leases that are issued by DNRC;
 21 right?
 22 **A. Correct.**
 23 Q. And is that the same with respect to the oil and
 24 gas leases? This is just a snapshot in time of how many
 25 leases exist when the report was produced?

1 A. That's correct, it is. Although it's much
 2 different than the oil and gas in that we don't issue coal
 3 leases very often. It's unusual to have a new coal lease.
 4 Q. And are the coal leases for a certain period of
 5 time as well?
 6 A. Yes. They're in the same 10-year primary term
 7 unless held by production. And there's some statutory
 8 allowances for ongoing legal challenges. So if somebody
 9 receives a coal lease -- and this is true of oil and gas
 10 leases as well -- and there's some challenge to the
 11 development of that lease, they can get an extension of
 12 time commensurate with the time the challenge took.
 13 Q. Uh-huh.
 14 A. But generally it's a 10-year primary term unless
 15 held by production.
 16 Q. What do you mean by "unless held by production"?
 17 A. So if they have -- in the terms of a coal lease,
 18 if they have an active mine permit that's approved and a
 19 mining plan in operation, then that would be a producing
 20 lease that's generating royalty revenue for the
 21 beneficiaries. That -- then that is held by production
 22 throughout the term of that production.
 23 Q. Okay. Do you know the amount of greenhouse gas
 24 emissions that result from the operations that occur on the
 25 these 31 coal -- from these 31 coal leases?

1 used for renewable energy projects?
 2 A. Yes.
 3 Q. I don't see a quick fact for renewable energy
 4 projects. Am I -- is that right?
 5 A. That's correct. We don't have a quick fact for
 6 renewables in the report.
 7 Q. Do you know the amount of acreage that's leased
 8 for renewable energy on state lands?
 9 A. For the period of time of this annual report or
 10 currently?
 11 Q. Currently.
 12 A. So I don't know the exact acres. What I can tell
 13 you about renewable energy is that we have two active wind
 14 farms that have been developed that involve school trust
 15 land; one at Judith Gap, which would have been operational
 16 before the period of time in this report that we're
 17 currently talking about, and then more recently we've got
 18 Clearwater Wind in the Miles City area that is about to
 19 become operational. And it has quite a few turbines. It's
 20 part of a much larger project. Again, we have a few
 21 sections of state land amongst a lot of private land that
 22 the wind farm is built on, and several of those tracts have
 23 turbines on school trust land.
 24 Q. Uh-huh. Are there any other renewable energy
 25 projects on state trust lands?

1 MR. OESTREICHER: Objection to form, asked and
 2 answered.
 3 THE DEPONENT: I do not.
 4 Q. (By Ms. Rodgers) How could one find that
 5 information out?
 6 MR. OESTREICHER: Same objection.
 7 THE DEPONENT: I think my answer is the same as
 8 before. You'd have to figure out what the production is
 9 from the state lease in any given period of time, and
 10 however you calculate greenhouse gas emissions from the
 11 mining of coal in that period of time.
 12 Q. (By Ms. Rodgers) Was a MEPA analysis done before
 13 issuance of the coal lease itself?
 14 MR. OESTREICHER: Objection to form, asked and
 15 answered.
 16 THE DEPONENT: The leasing activities themselves
 17 on the most recent coal leases, no. Many of these coal
 18 leases have been held by production for a very long time,
 19 and I can't speak to what the process was. Some of them
 20 probably predate MEPA, frankly. But currently, any
 21 issuance of coal leases in my tenure here, the issuance of
 22 the lease does not have a MEPA document associated with it.
 23 That comes at the development of the mine plan in
 24 conjunction with the Department of Environmental Quality.
 25 Q. (By Ms. Rodgers) Okay. Are any state trust lands

1 A. Several proposals that could involve state trust
 2 lands. Those are the only two projects so far that are
 3 actually built on state trust land, with the exception of
 4 hydroelectric.
 5 Q. Yeah. And that would be on state waters?
 6 A. Right. Navigable waters.
 7 Q. Yeah.
 8 A. And getting a little bit into the weeds, we have
 9 one micro hydro project that I'm familiar with that was
 10 actually part of an irrigation system. So somebody
 11 developed a small hydroelectric project using irrigation.
 12 That so that would be on trust surface ownership, not
 13 navigable waters.
 14 Q. Okay. Thank you.
 15 Can you please turn to Page 19, rights-of-way
 16 easements?
 17 A. Okay.
 18 Q. The two rights-of-way that we discussed earlier
 19 today, are those examples of what is being talked about
 20 here on that page?
 21 A. Yes. I don't know that the annual report talks
 22 specifically in this instance about pipeline easements,
 23 but, yes, they would be included in the figures, in the
 24 revenue, and the number of approvals as indicated on this
 25 report.

1 Q. Does DNRC do a breakdown of how much revenue it
 2 receives from pipelines that transport oil and gas?
 3 A. No.
 4 Q. Okay. Can you turn to Page 27? And I believe
 5 that's the mission of the Trust Lands Management Division?
 6 A. Yes.
 7 Q. And who are the trust beneficiaries that are
 8 mentioned there?
 9 A. The trust beneficiaries are primarily K through L
 10 education, but they involve a whole variety of other
 11 endowed institutions, such as the School for the Deaf and
 12 Blind, the university system, public buildings, and they're
 13 all listed somewhere in this report.
 14 Q. Okay. And that comes from law, correct, who the
 15 trust beneficiaries are?
 16 A. Yes. It comes from the enabling act that created
 17 Montana and several other states in 1889.
 18 Q. Yep. And it says:
 19 Manage the state of Montana's trust land resources
 20 to produce revenues for the trust beneficiaries while
 21 considering environmental factors and protecting the future
 22 income generating capacity of the land.
 23 What is meant by "protecting future income
 24 generating capacity of land"?
 25 MR. OESTREICHER: Objection to form, speaks for

1 Q. (By Ms. Rodgers) Is there anything in this
 2 document that I just showed you, the annual report -- is
 3 there anything in here about renewable -- royalties from
 4 renewable energy development? So I think at the time you
 5 said that would have been the Judith Gap project, the wind
 6 project.
 7 A. So if you look at Page 24 under the Real Estate
 8 Management Bureau, the wind farm would be part of
 9 commercial leasing. And then we have a line item for hydro
 10 leases for navigable rivers.
 11 Q. Does the DNRC break down that information with
 12 respect to what the royalties are from the wind project
 13 itself?
 14 A. We can -- we can certainly gather that
 15 information. We've not broken it down and published it
 16 separately. Judith Gap has 16 turbines. It's a relatively
 17 small part of the overall revenue generating portfolio.
 18 With Clearwater Wind coming online, that portfolio is
 19 getting larger. So it could be determined separately, but
 20 we have not published it separately.
 21 Q. And who in the agency would have that information?
 22 A. That information would be ultimately contained
 23 with the Trust Land Management System, which would be
 24 accessible by folks in the trust lands division and other
 25 folks in the director's office.

1 itself.
 2 Go ahead.
 3 THE DEPONENT: Yeah. I think, from the agency's
 4 perspective, it speaks for itself. Future income
 5 generating activities can be anything. They're the things
 6 we currently do. There are things that we don't know
 7 about. And we're trying to manage the portfolio of assets
 8 in order to, you know, keep open all kinds of things now
 9 and into the future. But it generally speaks to the
 10 concept of substantially, and, you know, we could -- we
 11 manage our timber in a sustainable way. We don't cut it
 12 all now and wait 100 years for it to grow back. We manage
 13 our ag and grazing programs in such a way that they are
 14 going to be sustainable over time.
 15 Q. (By Ms. Rodgers) Is it within DNRC's mission that
 16 if there were a threat of some kind to the income
 17 generating capacity of the land, does DNRC have an
 18 obligation to do something about that threat?
 19 MR. OESTREICHER: Objection to form, calls for
 20 speculation, vague.
 21 Answer if you can.
 22 THE DEPONENT: I think if we have a specific
 23 threat that we can identify and do something about, we
 24 would have an obligation to protect the beneficiaries'
 25 long-term interest.

1 Q. I'd like to show you the next exhibit, please,
 2 which we'll mark as Exhibit 35.
 3 (Exhibit 35 marked for identification.)
 4 Q. (By Ms. Rodgers) And this document says "wildfire
 5 suppression" at the top; is that when you're seeing?
 6 A. Yep.
 7 Q. What is this document?
 8 A. I have not seen this document before. I didn't --
 9 I didn't have time to review this if it was in the package
 10 of stuff I was sent yesterday. But it appears to be a
 11 product of legislative fiscal --
 12 MR. OESTREICHER: Andrea, we don't have a copy of
 13 this document.
 14 MS. RODGERS: Barbara, do we not have a copy of
 15 it?
 16 MS. CHILLCOTT: No, Andrea, I have copy, and it
 17 looks like it's in the folder, the share file, but it's not
 18 numbered. So it's the very last document in that share
 19 file. But I don't know if it was part of the share file
 20 that was sent last night.
 21 MS. RODGERS: Okay. Is that what -- I'm sorry.
 22 Is that what you're saying, that you don't -- it's not in
 23 the share file? Is that --
 24 MS. CHILLCOTT: It doesn't appear that DNRC -- or
 25 that the State got a copy of that in the share file --

1 **MR. OESTREICHER:** We don't have --
2 **MS. CHILLCOTT:** -- so the copy we have is the one
3 copy that I have.
4 **MS. RODGERS:** Okay. All right.
5 Q. (By Ms. Rodgers) Can you tell me who the Montana
6 legislative fiscal division is?
7 **MR. OESTREICHER:** Andrea, I'd like to take a look
8 at it for a second, because I don't have a copy.
9 **MS. RODGERS:** Okay. All right. Well, why don't
10 we -- it's 10:00 o'clock, so why don't we take a break, and
11 maybe during the break can you take a look at it? I don't
12 have many questions about it.
13 **MS. CHILLCOTT:** It's 11:00 o'clock Montana time.
14 **MS. RODGERS:** Sorry. 11:00 o'clock.
15 **MR. OESTREICHER:** Yeah. I mean, this is prepared
16 by the fiscal division of the legislative branch, so not
17 really within the scope of the 30(b)(6) and the documents
18 that we prepared -- the deponent prepared to review and
19 answer questions about.
20 **MS. RODGERS:** Okay. Okay. We don't have to list
21 it as an exhibit. I'll just ask you a few questions,
22 Mr. Thomas.
23 Q. (By Ms. Rodgers) What is the fire suppression
24 fund?
25 **MR. OESTREICHER:** I'm going to object. I think

1 please?
2 Q. (By Ms. Rodgers) Sure. Can you tell me what the
3 fire suppression fund is? Do you know what that is?
4 **A. Yes. So the wildfire suppression fund is one of**
5 **the funds that exists within the state legislative**
6 **budgeting process for the purpose of fire suppression in**
7 **Montana.**
8 Q. Is the fund managed by the DNRC?
9 **A. The DNRC's fire suppression activities spend money**
10 **from the fund. I'm not an accountant. I don't know who**
11 **sort of -- if that lives in the -- I don't know who has**
12 **ownership of that fund, necessarily. But, yeah, generally**
13 **speaking, that's money DNRC accesses to fight wildland**
14 **fire.**
15 Q. Okay. Does the forestry management division, do
16 they do any projections or estimates about the amount of
17 money that's going to be spent for wildfires? Is that part
18 of the budgeting?
19 **A. The Forestry Division has -- are you asking, are**
20 **they -- can they -- are they predicting fire expenditures?**
21 **I'm not sure I understand the question.**
22 Q. More from a budgetary standpoint. Do they project
23 what they anticipate they're going to spend? Is that part
24 of your budgeting work?
25 **A. No. The wildfire suppression fund contains a**

1 it's still outside the scope of the 30(b)(6), and we
2 didn't --
3 **MS. RODGERS:** It's not outside the scope. We're
4 talking about wildfire expenditure, and we've been talking
5 about wildfires a lot this morning, so that's clearly
6 within the scope.
7 **MR. OESTREICHER:** This document --
8 Q. (By Ms. Rodgers) Can you tell me what the fire
9 suppression fund is? Do you know what that is, Mr. Thomas?
10 **MR. OESTREICHER:** Andrea, if you -- were you going
11 to extend that break to us so that we can actually review
12 this document so he could have a chance to take a look at
13 it and then answer questions?
14 **MS. RODGERS:** Yeah. If you want to. Like I said,
15 I'm happy to just ask the questions. The document really
16 isn't necessary for me to ask the questions. But if you
17 want to go ahead and take a break and look at that
18 document, that's fine.
19 **MR. OESTREICHER:** Well, if you want to ask him
20 questions about the document, then he needs an opportunity
21 to review it. And I would like --
22 **MS. RODGERS:** Yeah. No, I -- I would withdraw the
23 document, and I can just ask another line of questions.
24 **MR. OESTREICHER:** Okay.
25 **THE DEPONENT:** Can you repeat the question,

1 **certain amount of money every biennium. It's impossible to**
2 **predict how much money fires will cost from one year to the**
3 **next.**
4 Q. Uh-huh. Okay. Does DNRC see wildfires as a
5 threat to state trust lands?
6 **A. Wildfires, yes, they can threaten state trust**
7 **land.**
8 Q. Okay. I'm actually at a good stopping point, so
9 do you want to take another break now?
10 **MR. OESTREICHER:** Yes.
11 **MS. RODGERS:** Okay.
12 (Break taken from 11:05 a.m. until 11:17 a.m.)
13 Q. (By Ms. Rodgers) Mr. Thomas, will you look at
14 Paragraph 99, which is on Page 32 of the complaint?
15 **A. Okay.**
16 Q. And I'm going to ask you a few questions about
17 that paragraph, as this is one of the subject areas you
18 were designated to talk about today.
19 Can you please read that paragraph?
20 **A. Yep. I've read it.**
21 Q. Okay. And are you the person at DNRC who's most
22 knowledgeable with respect to these allegations?
23 **A. I'm not. This would be the Board of Oil and Gas**
24 **Conservation, the administratively attached part of the**
25 **DNRC. Somebody there would be much more well-versed to**

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1 talk about this than I.
2 Q. Okay. What in this paragraph do you have
3 knowledge about?
4 A. I generally understand what the Board of Oil and
5 Gas does as it pertains to trust land management, so I --
6 they administer the laws and licenses and -- and do
7 permitting. So I can say that's a true statement.
8 Q. Okay. What in this paragraph do you -- or in this
9 allegation do you disagree with?
10 MR. OESTREICHER: Objection; calls for a legal
11 conclusion, answer speaks for itself.
12 Go ahead.
13 THE DEPONENT: Again, as I reviewed the state
14 energy policy as outlined in statute, I don't know that
15 what they're doing is -- whether it's in furtherance of
16 that or not. They have their mission and their
17 responsibilities that exist in a whole different variety of
18 authorities that they are -- that's what they're doing for
19 their work every day.
20 Q. Okay. So you disagree with that part that says
21 "pursuant to and in furtherance of the state energy
22 policy"?
23 A. Yeah. I'm not an attorney, but I think we would
24 disagree with that.
25 Q. Okay. I'd like to turn to the next exhibit,

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1 please, which would be 35.
2 (Exhibit 35 marked for identification.)
3 THE DEPONENT: Yes, I have it.
4 Q. (By Ms. Rodgers) And that would be Montana code
5 section 90-4-1001?
6 A. Correct.
7 Q. Okay. And is that the statute that's referenced
8 in Paragraph 99 of the complaint?
9 A. Yes, I believe it is.
10 Q. Okay. And do you agree that DNRC has a duty to
11 comply with laws passed by the legislature, assuming that
12 they're constitutional?
13 MR. OESTREICHER: Objection to the form of the
14 question.
15 Go ahead.
16 THE DEPONENT: Yes, I believe we have to comply
17 with the laws passed by the legislature.
18 Q. (By Ms. Rodgers) Do you agree that DNRC has a duty
19 to comply with the law that you're looking at, which is
20 Section 90-4-1001?
21 MR. OESTREICHER: Objection to the form of the
22 question, calls for a legal conclusion, vague.
23 Go ahead.
24 THE DEPONENT: I don't know that I agree that -- I
25 mean, we have to comply with the law, but what our role is

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1 in relation to these various pieces and parts can be quite
2 different from one state agency to the next.
3 Q. (By Ms. Rodgers) Okay. And is this law in front
4 of you, is that called the state energy policy goal
5 statements?
6 MR. OESTREICHER: Objection to the form of the
7 question. The statute speaks for itself.
8 THE DEPONENT: Yes. Energy Policy Goal
9 Statements. I -- that's what it's titled.
10 Q. (By Ms. Rodgers) Okay. And do you understand that
11 the plaintiffs in this lawsuit are challenging the
12 constitutionality of Subparts C through G in this statute?
13 A. I'm not really well-versed on exactly what the
14 plaintiffs are challenging in this lawsuit, but I -- I'll
15 take your word for C through G is what you're talking
16 about.
17 Q. Okay. Subsection C reads:
18 It is the policy of the State of Montana to
19 promote development of projects using advanced technologies
20 that convert coal into electricity, synthetic petroleum
21 products, hydrogen, methane, natural gas, and chemical
22 feedstocks.
23 Did I read that correctly?
24 A. Yes.
25 Q. Now, does DNRC play any role in those activities

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1 that are described in Subsection C?
2 MR. OESTREICHER: Objection to the form of the
3 question, speaks for itself.
4 Go ahead.
5 THE DEPONENT: I believe DNRC's role in
6 promoting -- DNRC doesn't really have a role in promoting
7 development of things. The Department of Commerce may
8 promote the development, and various different businesses,
9 that sort of thing. We don't do that at DNRC.
10 Q. (By Ms. Rodgers) And how are you using the term
11 "promote" there?
12 MR. OESTREICHER: Objection to the form of the
13 question. It speaks for itself.
14 THE DEPONENT: I guess "promote" would be to
15 advocate for or somehow encourage the development of
16 something. You know, in this case, something new. We have
17 a fiduciary obligation for our beneficiaries. So I could
18 read -- if we had a different mission, you could say DNRC
19 could promote something by requiring a cheap land lease.
20 Our constitutional obligation to get full market value
21 doesn't allow us to do that. We can only participate in
22 the markets just like any other private landowner would, if
23 that -- does that answer the question?
24 Q. (By Ms. Rodgers) Okay. Yeah. Subsection D reads:
25 It is the policy of the State of Montana to

1 increase utilization of Montana's vast coal reserves in an
2 environmentally sound manner that includes the mitigation
3 of greenhouse gas and other emissions.

4 Does DNRC play a role with respect to those
5 activities described in Subsection D?

6 **MR. OESTREICHER:** Objection to the form of the
7 question, asked and answered.

8 Go ahead.

9 **THE DEPONENT:** DNRC does not have a role in
10 increasing the utilization. I think our role and
11 obligation is to simply generate revenue through the
12 leasing activity if somebody wants to lease that coal.

13 Q. (By Ms. Rodgers) And DNRC issues coal leases;
14 correct?

15 A. Correct, through the Land Board. With Land Board
16 approval.

17 Q. What role, if any, does DNRC play with respect to
18 the mitigation of greenhouse gas and other emissions?

19 **MR. OESTREICHER:** Objection to the form of the
20 question, asked and answered.

21 Go ahead.

22 **THE DEPONENT:** Again, DNRC is a coal owner in this
23 case. And other larger, you know, legislative policies or
24 requirements of other agencies that are implementing things
25 like the Clean Air Act and whatnot would predicate how that

1 would -- you know, those regulations are not ours to create
2 or enforce. We're subject to the regulatory authority of
3 other entities.

4 Q. (By Ms. Rodgers) Subsection E reads:

5 It is the policy of the State of Montana to
6 increase local oil and gas exploration and development to
7 provide high-paying jobs and to strengthen Montana's
8 economy.

9 Do you see that there?

10 A. Yes.

11 Q. And what role does the DNRC play in the activities
12 described in Subsection E?

13 **MR. OESTREICHER:** Objection to the form of the
14 question, same -- continuing objection to -- you know, to
15 the extent you're going to ask the same question for each
16 one of these subparts, just object on the form of the
17 question, calls -- you know, asked and answered, and the
18 statute speaks for itself.

19 **THE DEPONENT:** So DNRC's role is not -- I don't
20 believe it's increase to exploration. We are, as I said a
21 little bit earlier, DNRC is one landowner in a larger
22 landscape. Oil and gas development doesn't occur on an
23 individual section. An oil and gas development or a coal
24 mine occurs across usually multiple sections of land. So
25 we happen to have coal or oil and gas that is within that

1 larger area, then we have an obligation to generate revenue
2 for our beneficiaries from the leasing of it. But we don't
3 have a role in going out and increasing that development.

4 Q. (By Ms. Rodgers) Uh-huh. With respect to
5 Subsection F, it says:

6 It is the policy of the State of Montana to expand
7 exploration and technological innovation, including using
8 carbon dioxide for enhanced oil recovery in declining oil
9 fields to increase output.

10 On any state lands, is DNRC involved in activity
11 with respect to using carbon dioxide for enhanced oil
12 recovery in declining oil fields?

13 A. Yes.

14 Q. And can you describe what that entails?

15 A. What that entails is -- is piping carbon dioxide
16 from some source to an oil field, and carbon dioxide, when
17 pumped into an oil field, acts as a solvent and creates
18 different pressures in the reservoir that can expand and
19 enhance the amount of oil that's recoverable.

20 Q. So what is the role that DNRC plays in that?

21 A. We have two, sort of, major project areas in
22 southeastern Montana; one at Bell Creek and one at the
23 Cedar Creek anticline where old oil fields exist, and a
24 company has come in there with a carbon dioxide pipeline
25 and is doing EOR, enhanced oil recovery, in those two

1 areas. They were existing leases held by production, so we
2 don't necessarily have a role in that. That was some --
3 again, the developer brought that proposal to the DNRC, and
4 it -- it just changes how the oil is being extracted. It
5 wasn't something that we necessarily went out and promoted.
6 It just occurred.

7 Q. Uh-huh. So was that -- did you do, like, a change
8 in the lease terms or something to accommodate that, or how
9 did that happen?

10 **MR. OESTREICHER:** Objection to the form of the
11 question, compound, vague.

12 Go ahead.

13 **THE DEPONENT:** No change that I'm aware of to the
14 lease terms themselves. It's just oil -- it's still oil
15 production in an oil lease. There were some changes to the
16 surface infrastructure that exist in those fields. They
17 went through a process with a variety of different
18 landowners and other permitting agencies to change some of
19 the infrastructure that exists to reduce the surface
20 impacts. So there's -- wells are located in different
21 areas. They've removed a lot of wells, they've removed a
22 lot of the pipeline and road infrastructure in order to --
23 very complex engineering feat to do this, and it's across a
24 large landscape. So we authorized changes for those types
25 of surface improvement requests.

1 Q. (By Ms. Rodgers) For those that were on state
 2 trust lands?
 3 A. Correct.
 4 Q. Okay. Reading Subsection G, it says:
 5 It's the policy of the State of Montana to expand
 6 Montana's petroleum refining industry as a significant
 7 contributor to Montana's manufacturing sector in supplying
 8 the transportation and the energy needs of Montana and the
 9 region.
 10 Does DNRC play any role with respect to
 11 refineries?
 12 MR. OESTREICHER: Same continuing objection.
 13 Go ahead.
 14 THE DEPONENT: No, we do not.
 15 Q. (By Ms. Rodgers) Are you aware of any internal
 16 DNRC policies that contradict this law?
 17 MR. OESTREICHER: Objection to the form of the
 18 question, calls for a legal conclusion, vague.
 19 Answer --
 20 MS. RODGERS: I'm asking about policy -- internal
 21 policies of DNRC, not laws.
 22 MR. OESTREICHER: You're asking about
 23 contradiction of law, so objection to the form of the
 24 question, calls for a legal conclusion, vague.
 25 Answer if you can.

1 Q. It says in the third paragraph there:
 2 The 1991 Montana legislature responded by
 3 approving HJR 31, see Appendix A, requiring the
 4 Environmental Quality Council to develop recommendations to
 5 the legislature for a comprehensive state energy policy and
 6 options for implementation. HJR 31 instructed the EQC, in
 7 cooperation with the Department of Natural Resources and
 8 Conservation and the Consumer Counsel, to develop the
 9 framework for a proposed state energy policy.
 10 Do you see that there?
 11 A. I do.
 12 Q. Are you -- do you have any knowledge with respect
 13 to the DNRC's work on a proposed state energy policy?
 14 A. I do not. And I believe that DNRC in 1991 and the
 15 Department of State Lands -- there was an executive
 16 reorganization that changed. So this DNRC in this era
 17 would have been part of the DEQ currently. So this
 18 wouldn't -- this DNRC I don't think is reflective of the
 19 organization that DNRC is today.
 20 Q. Okay. Thank you. And do you know who the -- what
 21 the Environmental Quality Council is that's referred to
 22 there?
 23 A. Yes, I do.
 24 Q. And what is that?
 25 A. The Environmental Quality Council is an interim

1 THE DEPONENT: I'm not aware of any internal
 2 policies that would be contradictory to this statute.
 3 Q. (By Ms. Rodgers) Are you aware of any DNRC
 4 internal policy with respect to implementing the statute
 5 that's in front of you?
 6 MR. OESTREICHER: Same objection.
 7 THE DEPONENT: No, I am not.
 8 Q. (By Ms. Rodgers) Can we turn to the next exhibit,
 9 which would be Exhibit 36.
 10 (Exhibit 36 marked for identification.)
 11 Q. (By Ms. Rodgers) And on the top it says "HJR 31
 12 Energy Setting Summary Report."
 13 A. I'm looking at it.
 14 Q. And are you familiar with this document?
 15 A. I think that was in the package of stuff that we
 16 received yesterday. I did not have time to familiarize
 17 myself with the entirety of this document.
 18 Q. Okay. And this document is dated December 1992;
 19 correct?
 20 A. That is correct.
 21 Q. And that would have predated your time at DNRC?
 22 A. Correct.
 23 Q. Can you turn to Page 5 of this document?
 24 A. Okay.
 25 (Complies.)

1 legislative committee that has legislative oversight for
 2 natural resource agencies in state government.
 3 Q. And does it still exist today?
 4 A. Yes, it does.
 5 Q. And have you ever testified -- is that one of the
 6 committees that you've testified before?
 7 A. Yes, I have.
 8 Q. What is DNRC's current responsibility with respect
 9 to state energy policy?
 10 MR. OESTREICHER: Object to the form of the
 11 question, calls for a legal conclusion, vague, asked and
 12 answered.
 13 THE DEPONENT: I think DNRC's responsibility in
 14 the state energy policy is to implement to the best of our
 15 ability the relevant statutes and rules as directed by the
 16 legislature and the Land Board.
 17 Q. (By Ms. Rodgers) Okay. I'd like to show you the
 18 next document, which we'll mark Exhibit 37.
 19 A. Yep. I have it.
 20 Q. And it says Senate Bill Number 305, introduced by
 21 V. Jackson.
 22 Do you see that? Is that --
 23 MR. OESTREICHER: Andrea, before we start asking
 24 questions about this, we're working with Barbara to try and
 25 locate it.

1 **MS. RODGERS:** Okay. Thank you. Sorry. I can't
 2 see.
 3 **MR. OESTREICHER:** You're okay. We're figuring it
 4 out.
 5 **MS. CHILLCOTT:** Andrea, I'm not sure that Senate
 6 Bill 305 ended up in the share file?
 7 **MS. RODGERS:** I'm sorry?
 8 **MS. CHILLCOTT:** I'm not sure that Senate Bill 305
 9 was in the share file shared with the State.
 10 **MS. RODGERS:** Okay. Well, I won't introduce this
 11 as an exhibit then, so withdraw Exhibit 37.
 12 **MR. OESTREICHER:** Are you going to ask him
 13 questions about it?
 14 **MS. RODGERS:** I'm not going to ask him questions
 15 about this specific proposed piece of legislation. I'm
 16 going to ask more general questions.
 17 Q. (By Ms. Rodgers) Does DNRC comment on proposed
 18 legislation?
 19 A. Yes.
 20 Q. And how does the agency do that?
 21 A. So during the legislative session, we review
 22 bills. If we see a bill that potentially has impacts
 23 positively or negatively to our programs, we contribute our
 24 thoughts through a meeting of the division administrators
 25 and the department's leadership, which are carried forward

1 A. It's a product that was prepared by the DNRC at
 2 the time. And, again, this would have been a different
 3 DNRC organizational structure than what currently exists
 4 today, so it -- it -- it was presented to The Environmental
 5 Quality Council. And my -- I view this document as an
 6 informational document that was presented to the EQC.
 7 Q. Uh-huh. And this predated your time at the
 8 agency; correct?
 9 A. Correct. And it predated the current DNRC
 10 structure. This -- I think today this would be a document
 11 that would have come from the Department of Environmental
 12 Quality, but I'm not positive on that.
 13 Q. Okay. Do you know, are state lands used for solar
 14 power? State trust lands?
 15 A. So we had a proposal for a utility-scale solar
 16 lease near Dillon a few years ago, and ultimately the
 17 proponent abandoned that project and moved it to private
 18 land due to, sort of, complaints from the neighborhood and
 19 the requirements under MEPA that they didn't have on the
 20 private land. So we have entertained prospects for solar.
 21 We have not had a successful solar project completed on
 22 state trust lands yet.
 23 Q. So if there were problems under MEPA, at what
 24 stage, then, did that get in the DNRC approval process?
 25 A. That particular project -- it was called Apex --

1 to the executive. And positions may be assigned, and then
 2 we can testify based on those in the committee hearings
 3 that occur during the legislative process.
 4 Q. So in terms of creating the agency's position,
 5 that would be a collaborative decision, would you say,
 6 between the agency heads and the director?
 7 A. Yes.
 8 Q. And would those communications to the executive be
 9 public records?
 10 **MR. OESTREICHER:** Objection to the form of the
 11 question, calls for a legal conclusion.
 12 **THE DEPONENT:** I don't -- I don't have any
 13 firsthand knowledge of how those discussions are
 14 communicated to the executive, so I can't answer that.
 15 Q. (By Ms. Rodgers) Okay. I'd like to show the next
 16 document, which we'll mark as Exhibit 37.
 17 (Exhibit 37 marked for identification.)
 18 **THE DEPONENT:** I have it.
 19 Q. (By Ms. Rodgers) Okay. It says at the top "Energy
 20 in Montana: An Overview"?
 21 A. That's correct.
 22 Q. And are you familiar with this document?
 23 A. Yes. I reviewed this document as it was outlined
 24 in the Attachment A.
 25 Q. And what is this document?

1 we issued a request for proposals and received, evaluated,
 2 scored a proposal, awarded it to the proponent, at which
 3 time then they have to pursue the development plan and the
 4 MEPA document, do the public involvement that's required
 5 under MEPA. That's -- it got about that far, and
 6 eventually they -- they walked away from the lease.
 7 Q. Uh-huh.
 8 A. There was a second project that we had similarly
 9 near Billings, kind of the same story. They -- the local
 10 neighborhood protested the issuance of that lease on the
 11 basis of noncompliance with county zoning, and they moved
 12 it across the road onto private land. We do have and have
 13 authorized a lease for a substation that is required in
 14 order for that facility to operate. So we -- we have kind
 15 of a tangential solar lease-related accessory, but no
 16 panels themselves on the school trust land.
 17 Q. Okay. And you mentioned an RFP. Who issued the
 18 RFP?
 19 A. RFPs are requests for proposals, and under our
 20 commercial leasing statute, that's the process that we
 21 utilize in order to solicit interest in commercial leases.
 22 And renewable energy projects are commercial leases.
 23 Q. Okay. And when you issue an RFP, it is clear to
 24 the public that that's for a renewable energy project, or
 25 is it just general commercial?

1 **A. It can be both. We -- usually we'll have interest**
 2 **in a renewable project, so we will issue an RFP that**
 3 **advertises that there's interest in this area for renewable**
 4 **energy projects. Ultimately somebody could propose any --**
 5 **any alternative commercial lease use. We would evaluate**
 6 **and score those proposals accordingly. And we're looking**
 7 **for, you know, the highest financial return to the trust**
 8 **beneficiaries. So in most cases where renewable energy**
 9 **projects are, are not places where there's competition for**
 10 **other commercial uses necessarily.**
 11 Q. Uh-huh. And does DNRC do any kind of evaluation
 12 with respect to what state trust lands would be suitable
 13 for renewable energy purposes?
 14 **A. DNRC has a couple of folks who have some level of**
 15 **expertise in renewables. They would have done perhaps some**
 16 **research. They've looked at wind maps. They've looked at**
 17 **properties that are identified as potentially being close**
 18 **to transmission capacity, which is a major issue for**
 19 **renewable projects. But we wouldn't be doing any of**
 20 **that -- that research or coming up with those things as an**
 21 **agency ourselves. The -- other state agencies have sort of**
 22 **a broader perspective to go out and do that kind of work.**
 23 Q. And the work that you just mentioned DNRC does do,
 24 is that within a particular division?
 25 **A. It would be under the Trust Land Management**

1 things. We do authorize, permit, and license them.
 2 Q. (By Ms. Rodgers) Okay. And so you agree that DNRC
 3 authorizes, permits, and licenses fossil fuel exploitation,
 4 extraction, and production?
 5 **A. I would agree that we authorize, permit, and**
 6 **license fossil fuel extraction and production.**
 7 Q. Okay. Not -- exploitation, you take issue with?
 8 **A. Yeah.**
 9 Q. Okay. Do you agree that DNRC has forestry
 10 practices and activities? Is that part of the Forest
 11 Division?
 12 **A. The Trust Land Management Division actually**
 13 **manages the state trust lands that are forested, but, yes,**
 14 **we -- we do forestry practices and activities on school**
 15 **trust lands that are forested.**
 16 Q. Uh-huh.
 17 **A. I disagree with the rest of that sentence, that**
 18 **those activities have caused and contributed to dangerous**
 19 **concentrations of atmospheric greenhouse gas and the**
 20 **climate crisis which harm the youth plaintiffs.**
 21 Q. Okay. And what's the basis for your disagreement
 22 with that part of the allegation?
 23 **MR. OESTREICHER: Objection to form, vague, calls**
 24 **for speculation.**
 25 But go ahead.

1 **Division primarily, yeah.**
 2 Q. Okay. Could you turn to Paragraph 100 in the
 3 complaint?
 4 **A. Okay.**
 5 **(Complies.)**
 6 Q. And it says:
 7 DNRC -- defendant DNRC has authorized, permitted,
 8 licensed, and encouraged fossil fuel exploitation,
 9 extraction, and production, and forestry practices and
 10 activities that have caused and contributed to dangerous
 11 concentrations of atmospheric GHGs in the climate crisis
 12 and harmed youth plaintiffs.
 13 Have I read that correctly?
 14 **A. Yes.**
 15 Q. Are you the person at DNRC who's most
 16 knowledgeable with the respect to the allegations in this
 17 paragraph?
 18 **A. Yes.**
 19 Q. Okay. Can you identify for me what in this
 20 paragraph you disagree with?
 21 **MR. OESTREICHER: Objection to form, calls for a**
 22 **legal conclusion.**
 23 Go ahead.
 24 **THE DEPONENT: I think, as I've stated earlier, I**
 25 **don't believe DNRC's role is to encourage these various**

1 **THE DEPONENT: DNRC's trust land forest management**
 2 **program is a very robust, very regulated program for**
 3 **sustainable, long-term forest management that encourages**
 4 **healthy forests. And I fundamentally object that managing**
 5 **for healthy forests is dangerous to the youth plaintiffs,**
 6 **especially when we're managing those forests to generate**
 7 **revenue to help fund primarily education for K through 12**
 8 **children in Montana.**
 9 Q. (By Ms. Rodgers) Uh-Huh. Do you disagree that the
 10 authorization and permitting and licensing of fossil fuel
 11 extraction and production results in greenhouse gas
 12 emissions?
 13 **MR. OESTREICHER: Objection to form. Same**
 14 **objections.**
 15 But go ahead.
 16 **THE DEPONENT: No. They -- I think authorizing**
 17 **and permitting those things does contribute to greenhouse**
 18 **gas emissions.**
 19 Q. (By Ms. Rodgers) Okay. Have you read the
 20 paragraphs in the complaint describing the plaintiffs in
 21 this case?
 22 **A. Yes, I believe I have. Not recently. Page 1?**
 23 Q. Do you disagree that the youth plaintiffs are
 24 harmed by climate change?
 25 **MR. OESTREICHER: Objection to the form of the**

1 question, vague.
2 **THE DEPONENT:** I have a -- I can't answer that on
3 behalf of DNRC as an agency.
4 Q. (By Ms. Rodgers) Okay. Can you take a look at
5 Paragraph 118 of the complaint?
6 **A. All right.**
7 Q. And Topic 7 says you're here to testify about
8 Subsections E, M, and N.
9 Is that your recollection as well?
10 **MR. OESTREICHER:** Andrea, what document are you
11 referencing?
12 **MS. RODGERS:** I'm referencing the complaint. But
13 if you want to look back at the subject areas, that was
14 Exhibit 27, and it's Topic 7.
15 **MR. OESTREICHER:** Exhibit 27?
16 **MS. RODGERS:** Yeah. It was the objections and
17 designees to the 30(b)(6) deposition notice.
18 **MR. OESTREICHER:** Okay. And you're talking about
19 Topic 7 on Page 4?
20 **MS. RODGERS:** Correct. I just wanted to show why
21 I'm asking him about Paragraph 118.
22 **THE DEPONENT:** Okay. Yes. That's --
23 **MR. OESTREICHER:** Yep.
24 **MS. RODGERS:** Okay.
25 Q. (By Ms. Rodgers) Can you tell me, does DNRC work

1 look at Subsection E of the complaint of Paragraph 118?
2 **A. Okay.**
3 Q. And it says:
4 Defendants engage in a systematic pattern and
5 practice of issuing permits, licenses, and leases that
6 result in greenhouse gas emissions without considering how
7 the additional GHG emissions will contribute to the climate
8 crisis.
9 Do you see that there?
10 **A. Yes.**
11 Q. Is there anything in that statement that you
12 disagree with?
13 **MR. OESTREICHER:** Objection to form, vague, calls
14 for a legal conclusion.
15 Go ahead.
16 **THE DEPONENT:** So DNRC does engage in a pattern
17 of -- and practice of issuing permits, licenses, and
18 leases. Those do result in greenhouse gas emissions.
19 There's considerations for climate that come into play from
20 time to time on certain actions -- agency actions, so those
21 permits are oftentimes subject to other permitting
22 regulatory entities, such as federal regulation, other
23 regulation, that dictate what and how an analysis would be
24 done that might or might not determine or contribute to the
25 climate crisis.

1 on climate change issues?
2 **MR. OESTREICHER:** Objection; form, vague.
3 **THE DEPONENT:** Can you expand on what you mean by
4 "work on"?
5 Q. (By Ms. Rodgers) Does DNRC do any research with
6 respect to climate change?
7 **MR. OESTREICHER:** Same objection.
8 **THE DEPONENT:** DNRC is not a research agency in
9 terms of doing, like, academic research. If that's what
10 you mean, no.
11 Q. (By Ms. Rodgers) Okay.
12 **A. Certainly people in various positions might**
13 **research climate change as part of their analysis of the**
14 **state's water supply, which is a different expert witness**
15 **than myself, or a different 30(b)(6) deponent than myself.**
16 Q. Uh-huh. Uh-huh. Are there activities within your
17 division, within the Trust Lands Management Division, is
18 there -- what does the trust lands management do, if
19 anything, with respect to climate change?
20 **MR. OESTREICHER:** Objection to the form of the
21 question, vague, calls for speculation.
22 **THE DEPONENT:** The Trust Land Management Division
23 doesn't do any work specifically oriented to climate
24 change.
25 Q. (By Ms. Rodgers) Uh-huh. Okay. Can you take a

1 Q. (By Ms. Rodgers) Uh-huh. And I'm curious though
2 as to what DNRC's role is with respect to considering how
3 the additional greenhouse gas emissions will contribute to
4 the climate crisis.
5 **MR. OESTREICHER:** Objection to form.
6 **THE DEPONENT:** Yeah. I believe, generally
7 speaking, our role in that is subject to the regulatory
8 agencies that are regulating these types of things. We're
9 not a regulatory agency when it comes to land management
10 activities.
11 Q. (By Ms. Rodgers) Uh-huh. But do you consider the
12 emissions that result from issuing permits, licenses, and
13 leases? Is that part of your decision-making process?
14 **MR. OESTREICHER:** Objection to form, compound,
15 asked and answered, vague.
16 **THE DEPONENT:** Yes. I believe DNRC does consider
17 greenhouse gas emissions on some projects.
18 Q. (By Ms. Rodgers) In what way?
19 **MR. OESTREICHER:** Objection to form, asked and
20 answered, vague.
21 **THE DEPONENT:** Through the analyses that are done
22 and, you know, the MEPA that's done by the agencies that
23 are approving the regulatory aspects of those projects.
24 Q. (By Ms. Rodgers) Is there any other analysis of
25 greenhouse gas emissions that's outside of the MEPA

1 process?

2 **MR. OESTREICHER:** Objection to form, calls for

3 speculation.

4 **THE DEPONENT:** No. The DNRC does not do a

5 separate climate analysis related to projects outside of

6 what would be done under MEPA.

7 Q. (By Ms. Rodgers) Okay. Has DNRC ever denied a

8 permit for a coal lease?

9 A. **DNRC, in the time I've been here, has never denied**

10 **a permit for a coal lease. I can't speak to most of the**

11 **coal leases that existed prior to my tenure here, if any of**

12 **them would have been denied by the board or the department**

13 **as throughout history. The most recent -- one of the most**

14 **recent, one of the couple of coal leases that I have some**

15 **direct knowledge of, ultimately those leases expired**

16 **because they couldn't get a mine permit accomplished. But**

17 **we didn't -- they just expired. We didn't deny them. DEQ**

18 **had a process that was unfolding that was going to be cost**

19 **prohibitive.**

20 Q. (By Ms. Rodgers) Uh-huh. Okay. Has DNRC ever

21 denied an application for oil and gas activity on state

22 trust lands?

23 A. **Yes.**

24 Q. And under what circumstances?

25 A. **So there may be a whole variety of circumstances**

1 Did I read that correctly?

2 A. **Yes, you did.**

3 Q. Okay. Has DNRC issued a permit or license for the

4 Keystone XL pipeline project?

5 A. **We have issued permits and leases.**

6 Q. What kinds of permits?

7 A. **Actually it would be licenses and leases. Sorry.**

8 **Correct me.**

9 Q. Okay.

10 A. **I believe licenses for construction workspace, and**

11 **we had a commercial lease for a pumping station.**

12 Q. Did any of the pipeline cross state trust lands?

13 A. **Yes.**

14 Q. And did you issue a right-of-way or easement for

15 that?

16 A. **Yes.**

17 Q. Do you agree that the Keystone XL pipeline was

18 constructed to transport Canadian tar sands crude oil?

19 A. **My general understanding is that tar sands crude**

20 **oil was part of the Keystone XL pipeline. There was also,**

21 **I know, within the state of Montana, a, quote/unquote**

22 **on-ramp for Bakken crude oil to use the Keystone pipeline**

23 **as well.**

24 Q. And do you know -- or do you disagree that

25 Canadian tar sands crude oil is the most greenhouse

1 where somebody could apply for an oil and gas lease on a

2 tract, and we would deny it. Usually though, the mechanism

3 to -- so if somebody applies for oil and gas lease, say on

4 a navigable river tract, there's no surface occupancy

5 allowed there. So what we may do is do the lease, but not

6 allow surface development in a place where it's not

7 environmentally sound to do so. But in certain cases,

8 there may be a place where a lease would be proposed, and

9 we would decide, for some reason or another, not to allow

10 that one to move forward into the lease sale.

11 Q. Can you think of any examples of when that's

12 happened?

13 A. **I cannot. I'd have to go back and look at old**

14 **sales. But I can't think of any specific ones off the top**

15 **of my head.**

16 Q. Uh-huh. Can you take a look at Subparagraph M,

17 which is on Page 41 of the complaint? And this says:

18 Defendants DEQ and DNRC issue permits, licenses,

19 and leases for the construction, operation, and maintenance

20 of the Keystone XL pipeline project in Montana, which would

21 transport Canadian tar sands crude oil, the most greenhouse

22 gas-intense source of petroleum in the world. Pursuant to

23 the climate change exception of MEPA -- to MEPA, neither

24 DEQ nor DNRC disclosed to the public the health or climate

25 consequences of these decisions.

1 gas-intense source of petroleum in the world?

2 **MR. OESTREICHER:** Objection to the form of the

3 question, calls for speculation.

4 **THE DEPONENT:** I do not know -- I am not an expert

5 on greenhouse gas type -- what types of crude oil are more

6 or less greenhouse gas intensive than another, so I can't

7 speak to that question.

8 Q. (By Ms. Rodgers) Okay. For the licenses that DNRC

9 issued for the Keystone pipeline, did DNRC undertake a MEPA

10 analysis?

11 **MR. OESTREICHER:** Objection to the form of the

12 question, asked and answered.

13 **THE DEPONENT:** Yes. There was -- the -- primarily

14 this was permitted through the DEQ and the Major Facility

15 Citing Act, so there was a large EIS associated with the

16 project that we -- DNRC was part of that effort.

17 Q. (By Ms. Rodgers) Okay. And was that the only E --

18 there was one EIS done for the project?

19 **MR. OESTREICHER:** Objection to the form of the

20 question.

21 **THE DEPONENT:** Again, that's a DEQ thing, so I

22 presume it was one EIS, but I'm not positive. We would

23 have done some -- we potentially could have done some other

24 environmental assessment for other ancillary uses, like

25 licenses for man camps or some of those things, if they

1 weren't included in the original EIS.
 2 Q. (By Ms. Rodgers) Uh-huh. Do you recall, sitting
 3 here today, whether that was done?
 4 A. I -- it's not uncommon in large projects for other
 5 licenses to be done, but I can't recall if -- Keystone
 6 never -- it barely got started, so a lot of the things that
 7 would have been constructed-related activities never
 8 occurred.
 9 Q. Uh-huh. Okay. And did you review the EIS that
 10 was prepared for project that you referenced?
 11 A. Yes. I was aware of and had looked at the EIS.
 12 Q. Do you recall if it discussed climate change in
 13 the EIS?
 14 MR. OESTREICHER: Objection to form.
 15 Go ahead.
 16 THE DEPONENT: I do not recall. It's been many
 17 years since I've looked at it, so I can't tell you if it
 18 did or not.
 19 Q. (By Ms. Rodgers) Okay. Could the Keystone
 20 pipeline have been authorized to operate without DNRC
 21 licenses and leases?
 22 MR. OESTREICHER: Objection to form, calls for
 23 speculation, calls for a legal conclusion.
 24 Go ahead.
 25 THE DEPONENT: Yes, it could have.

1 necessary, yes.
 2 Q. (By Ms. Rodgers) Uh-huh. When you say "under the
 3 direction," what do you mean by that?
 4 A. The Land Board is the constitutional body that has
 5 the decision-making functions for the DNRC, so...
 6 Q. Okay. You mean they're the final decision-maker;
 7 is that what you mean?
 8 A. Yes.
 9 Q. Okay. I'd like to show you another exhibit,
 10 please, which we'll label Exhibit 38.
 11 Is that right?
 12 MS. CHILLCOTT: Yes.
 13 (Exhibit 38 marked for identification.)
 14 Q. (By Ms. Rodgers) This is the Montana state water
 15 plan?
 16 MS. CHILLCOTT: Oh, nope. Hold on.
 17 MR. OESTREICHER: And, Andrea, I think we've come
 18 to a point in the deposition where we have to make a
 19 decision as to whether we break for lunch or power through.
 20 Can you give me an idea how much more you have?
 21 MS. RODGERS: Yeah. I probably have less
 22 than 30 minutes, so I'll -- I really will let you make the
 23 call on what your preference is.
 24 MR. OESTREICHER: Well, as long as Shawn is not
 25 going to get hangry...

1 Q. (By Ms. Rodgers) And how could that have occurred?
 2 A. I suppose they could have gone around state trust
 3 land ownership. It may have been necessary for them to
 4 cross the navigable rivers, no matter what the route was,
 5 but I don't know if that would have had to have occurred in
 6 Montana or not.
 7 Q. Oh, I see what you're saying. They could have
 8 proposed a path that didn't cross state lands?
 9 A. Correct.
 10 Q. Okay. But if it crossed state lands, they would
 11 have needed a license or a lease from DNRC; right?
 12 A. Or an easement. And approved by the Land Board.
 13 Yes.
 14 Q. Okay. Can you take a look at Subparagraph N? And
 15 that reads:
 16 Defendants authorized, through licenses and
 17 leases, the exploration and extraction of oil and gas in
 18 Montana.
 19 Do you see that there?
 20 A. Yes.
 21 Q. And is that activity that DNRC does?
 22 MR. OESTREICHER: Objection to the form of the
 23 question, asked and answered.
 24 THE DEPONENT: Yes. I believe through -- under
 25 the direction of the Land Board and with their approval as

1 THE DEPONENT: 30 minutes, I can power through.
 2 MS. RODGERS: Okay. I'll let you -- if something
 3 changes, I'll flag that, but that's my best estimate.
 4 THE DEPONENT: And I have the state water plan
 5 now.
 6 MS. RODGERS: Is 38 the right number?
 7 MR. OESTREICHER: Yes.
 8 Q. (By Ms. Rodgers) And can you identify this
 9 document?
 10 A. Yeah. This is the state water plan. And I
 11 believe we have another DNRC person that's supposed to
 12 respond to specifics about the state water plan, but...
 13 MR. OESTREICHER: DNRC has designated another
 14 individual to serve as the 30(b)(6) for questions related
 15 to the state water plan.
 16 MS. RODGERS: Okay.
 17 Q. (By Ms. Rodgers) So you don't have any knowledge
 18 about the state water plan to talk about today?
 19 A. No. I mean, I know it exists, but not much more
 20 than that.
 21 Q. Okay. Does your -- does the trust lands division
 22 play any role in the development of the state water plan?
 23 MR. OESTREICHER: Objection to form.
 24 Go ahead.
 25 THE DEPONENT: I can't recall exactly. Oftentimes

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1 these sorts of efforts, we'll have somebody that
 2 participates or at least pays attention to what's going on
 3 as these are developed. As a landowner, land manager,
 4 of 5 million surface acres, we often have people
 5 participate in these kinds of efforts, whether it's another
 6 DNRC division or some other state agency or federal plan.
 7 So I don't know exactly who or what we may have had in this
 8 one, but it wouldn't be unusual to have somebody paying
 9 attention to that development of that plan.
 10 Q. (By Ms. Rodgers) Okay. Can we take a look --
 11 **MS. RODGERS:** Barbara, I'm skipping to
 12 environmental documents. It's a web page, which will be
 13 Exhibit 39.
 14 **MS. CHILLCOTT:** Yep. All right.
 15 (Exhibit 39 marked for identification.)
 16 **THE DEPONENT:** All right. I have it.
 17 Q. (By Ms. Rodgers) And can you tell me what this
 18 document is?
 19 **A. This document represents -- looks like a**
 20 **screenshot capture of the environmental documents component**
 21 **of the DNRC's web page.**
 22 Q. And can you look at the section "Oil and Gas"?
 23 **A. Yep.**
 24 Q. And listed here, are these permits that are issued
 25 by the DNRC?

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1 **MR. OESTREICHER:** And just for purposes of the
 2 record, this is at the bottom of Page 1 of this exhibit,
 3 Andrea? Spilling over onto Page 2 and 3?
 4 **MS. RODGERS:** Yeah. It says "Oil and Gas," and
 5 then it lists -- there's a list of things under it.
 6 **THE DEPONENT:** The ones under "Oil and Gas" are, I
 7 think, exclusively MEPA documents. I can't obviously click
 8 on them, but I believe, if you clicked on them and opened
 9 them, it would open a MEPA document related to permitting
 10 activities from the Board of Oil and Gas.
 11 Q. (By Ms. Rodgers) Okay. Okay. You answered my
 12 question. From -- the Board of Oil and Gas then are the
 13 ones who prepare those environmental documents?
 14 **A. That's correct. The one exception being the**
 15 **seismic permit at the bottom of Page 2 of 10.**
 16 Q. Uh-huh.
 17 **A. That one is state trust land -- that's a state**
 18 **trust land project. And I would believe our staff would**
 19 **have prepared that one.**
 20 Q. Okay. And at the top of the document it says,
 21 "this web page contains all DNRC environmental documents
 22 posted in the last 30 days"; is that right?
 23 **A. That's what it says, yes.**
 24 Q. Okay. Can you turn to the next exhibit, please,
 25 which will be Exhibit 40. And it says "Checklist:

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1 Environmental Assessment."
 2 (Exhibit 40 marked for identification.)
 3 **THE DEPONENT:** All right. I have that.
 4 Q. (By Ms. Rodgers) And can you identify this
 5 document, please?
 6 **A. This appears to be a checklist, environmental**
 7 **assessment, for a drilling permit, which would be a Board**
 8 **of Oil and Gas Conservation document.**
 9 Q. Is this the type of document that was on the list
 10 that we just discussed on the web page?
 11 **A. Yes. I believe if you clicked on things on the**
 12 **web page, they would have come up with a similar document**
 13 **as to this.**
 14 Q. And it's staff within the board that prepared
 15 these environmental assessments?
 16 **A. Yes, that -- I believe that's correct.**
 17 Q. Does anyone not affiliated with the board -- so,
 18 for example, someone within your division -- do they play
 19 any role in the development of this environmental
 20 assessment?
 21 **A. No. I mean, I have a petroleum engineer who may**
 22 **be aware that these are occurring, but we don't have any --**
 23 **we don't have any responsibility in the regulatory**
 24 **down-hole stuff, so we don't weigh into that environmental**
 25 **document. We may review them and know of their existence.**

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1 Q. Okay. Now, for this drilling permit, would there
 2 be a lease that the DNRC issued that accompanies this
 3 project?
 4 **A. I --**
 5 **MR. OESTREICHER:** Objection to form, calls for
 6 speculation.
 7 **THE DEPONENT:** If this were a state trust land
 8 mineral ownership, yes. But I can't verify in this
 9 specific case whether the state trust lands owns the south
 10 half of the northeast quarter of Section 27, 35 North, 20
 11 East.
 12 Q. (By Ms. Rodgers) That information is not in the
 13 EA?
 14 **MR. OESTREICHER:** Objection to form, the document
 15 speaks for itself.
 16 **THE DEPONENT:** Yeah. I don't see who the mineral
 17 owner is in this EA, but --
 18 Q. (By Ms. Rodgers) But the board -- does the board
 19 have authority to issue permits on non-state trust lands?
 20 **A. Yes.**
 21 Q. Okay. So it could be trust land and it could not
 22 be?
 23 **A. Yes.**
 24 Q. Okay. Could you take a look at the next document,
 25 which we'll title Exhibit 41, which is another

1 environmental assessment checklist?
 2 (Exhibit 41 marked for identification.)
 3 **THE DEPONENT:** Yep. I'm looking at it.
 4 Q. (By Ms. Rodgers) Okay. Is this also a document
 5 that was prepared by the board?
 6 A. No. This is for a pipeline, and this -- the trust
 7 is listed as the common school, so this would have been
 8 prepared by trust land management staff.
 9 Q. Okay. And it looks like it was signed by -- well,
 10 there's a couple of signatures on Page 8. It's signed by a
 11 Michaela Hanson?
 12 A. Yep. Michaela Hanson is a land use specialist
 13 that works for us in Conrad. She prepared the document.
 14 And the decision-maker who signed off on it was our unit
 15 manager, Erik Eneboe.
 16 Q. Are you their supervisor?
 17 A. They work within my chain of command, but
 18 Michaela's direct supervisor is Erik. Erik's direct
 19 supervisor is Hoyt Richards, one of the area managers that
 20 I co-supervise with the Forestry Division. Or -- yeah.
 21 Q. Okay. Okay. And is this the kind of
 22 environmental assessment checklist that would be prepared
 23 for pipelines that cross state trust lands?
 24 **MR. OESTREICHER:** Objection to form, calls for
 25 speculation.

1 A. So we do kind of a couple of different kinds of
 2 environmental assessments. A checklist is one where
 3 there's not a lot of issues that have been raised or
 4 identified. We have environmental assessment -- a
 5 checklist with attachments. So sometimes we'll have a
 6 particular concern related to, say, any particular issue
 7 that might be raises. Say somebody brings up a concern
 8 over big game winter range. We may have an attachment to
 9 this document that would a more robust analysis about
 10 impacts to whitetail deer winter range.
 11 And then we have multiple alternative
 12 environmental assessments, so kind of moving up the level
 13 of complexity where you'd have several different
 14 alternatives. And then, you know, ultimately if there's a
 15 significant amount of impacts, then it moves to an
 16 environmental impact statement.
 17 Q. And who makes the decision sort of what level you
 18 go to?
 19 A. It's all driven by the process that's outlined in
 20 the MEPA statute based on the issues that are identified.
 21 The decision-maker -- there's a quote/unquote formal
 22 decision-maker as part of our identification -- project
 23 identification teams that have that responsibility to
 24 implement the decision -- the formal role of the MEPA
 25 decision-maker.

1 Go ahead.
 2 **THE DEPONENT:** The type of environmental -- you
 3 know, environmental document required under MEPA is
 4 predicated by following MEPA and the issues that arise
 5 during the MEPA process. So this is a checklist
 6 environmental assessment. Given the level of issues that
 7 arose during this, this is the appropriate document to be
 8 used.
 9 Q. Okay.
 10 A. But it depends.
 11 Q. It depends on if there's initial impacts or
 12 something? What does it depend on?
 13 **MR. OESTREICHER:** Objection to form, asked and
 14 answered.
 15 **THE DEPONENT:** Yeah. I mean, per MEPA, there's
 16 all kinds of consideration that need to be taken into
 17 consideration, public -- you know, issues that arise from
 18 public comment, environmental social concerns, all of those
 19 things, as they come through the MEPA scoping process, then
 20 dictate whether you, you know, move from this to a more
 21 complex EA or an EIS, depending on the levels of impacts
 22 and the issues identified.
 23 Q. (By Ms. Rodgers) Uh-huh. For environmental
 24 assessments, this checklist, is this the kind of
 25 information that's typical for an environmental assessment?

1 In this case for this document, it was Erik
 2 Eneboe.
 3 Q. Okay. And does DNRC have any policies in place
 4 with respect to how it implements MEPA?
 5 **MR. OESTREICHER:** Objection to form, vague.
 6 **THE DEPONENT:** So MEPA implementation is outlined
 7 in statute. The Legislative Services Division does
 8 statewide coordination and training on MEPA implementation.
 9 We do a number of internal MEPA trainings and have a person
 10 that coordinates our MEPA activities.
 11 Does that answer your question?
 12 Q. (By Ms. Rodgers) Yeah. Who coordinates your MEPA
 13 activities?
 14 A. Well, within each bureau, you know, there's a
 15 responsibility to coordinate MEPA. We have a MEPA expert
 16 that sits in our Forest Management Bureau. Her name is
 17 Emilia Grzesik.
 18 Q. Okay. On -- under such -- on Page 1 where it says
 19 "type and purpose of action" --
 20 A. Uh-huh.
 21 Q. -- it says D&H Energy, LLC -- D&H proposes the
 22 installation of oil and gas pipeline to oil wells Celsius
 23 State 32-1 located on state land referred to herein as "the
 24 project." The oil and gas pipeline will connect the 32-1
 25 well of Lease Number OG-20298-79 to an existing oil and gas

1 pipeline and result in approximately 3,960 square feet of
 2 disturbance. See Attachment A, project location map. The
 3 installation of the oil and gas pipeline will serve as a
 4 winter heat source for the 32-1 well, which will result in
 5 an increase in production of the well and result in a
 6 longer production life for Lease Number OG-20298-79.
 7 Did I read that correctly?
 8 **A. Yes.**
 9 Q. Does DNRC have any policies in place with respect
 10 to which level of MEPA analysis is done for a project that
 11 results in increase in production?
 12 **MR. OESTREICHER:** Objection to form, vague.
 13 **THE DEPONENT:** No, I don't believe so.
 14 Q. (By Ms. Rodgers) Is that a decision then that
 15 would be made by the -- by Erik Eneboe?
 16 **MR. OESTREICHER:** Objection to form, vague, calls
 17 for speculation.
 18 **MS. RODGERS:** I'll rephrase my question.
 19 Q. (By Ms. Rodgers) Never mind. It's asked and --
 20 I've asked -- never mind. I don't need to ask you that
 21 question. I'll withdraw. Sorry.
 22 **A. Okay.**
 23 Q. Can you turn to Page 7, and at the bottom there it
 24 repeats largely what was in the first paragraph we read.
 25 And I'm just curious about the annual rental fees that are

1 a policy or a separate document? How does is done at the
 2 Land Board?
 3 **A. I believe it's through --**
 4 **MR. OESTREICHER:** Objection -- hold on one second.
 5 Just objection to form, vague.
 6 Now you can...
 7 **THE DEPONENT:** Yeah, I believe that is through an
 8 administrative rule process.
 9 Q. (By Ms. Rodgers) Okay. I'd like to show you the
 10 next document, which is Exhibit 42.
 11 (Exhibit 42 marked for identification.)
 12 **THE DEPONENT:** I have it.
 13 Q. (By Ms. Rodgers) This is another environmental
 14 assessment checklist?
 15 **A. Yes.**
 16 Q. Can you tell me if this -- I'm assuming this was
 17 done by the DNRC as opposed to the board; is that correct?
 18 **A. The DNRC, yes. They would have done the EA**
 19 **checklist.**
 20 Q. Okay. And under "Project Development" it says:
 21 The Eastern Land Office staff has been working
 22 with land agent Kinder Morgan, Incorporated, since 2018 in
 23 an effort to migrate pipelines held under license to
 24 right-of-way easements.
 25 Do you see that there?

1 described there.
 2 **MR. OESTREICHER:** Andrea, can you can you point me
 3 to where you're talking about?
 4 **MS. RODGERS:** Yeah. On the bottom of Page 7.
 5 **MR. OESTREICHER:** Under the Heading 24 --
 6 **MS. RODGERS:** Other appropriate social and
 7 economic circumstances.
 8 **MR. OESTREICHER:** Okay.
 9 Q. (By Ms. Rodgers) Do you see that it says the
 10 annual rental fee for these -- Number OG-20298-79
 11 is 150 acre feet a year on 160 acres?
 12 **A. Yes. That's correct.**
 13 Q. Okay. And we talked a little bit earlier about,
 14 you know, how those rental fees are established, so I want
 15 to ask about the next sentence, which is talking about
 16 royalty rates.
 17 **A. Okay.**
 18 Q. Who sets the royalty rates?
 19 **A. The royalty rate is specified in the lease**
 20 **document and is set at the time the issuance of the lease**
 21 **under the policy that the Land Board has approved. So the**
 22 **Land Board approves a royalty rate periodically. We**
 23 **implement that royalty rate in the lease contracts until it**
 24 **changes.**
 25 Q. And is that approval of the royalty rate, is that

1 **A. Yes.**
 2 Q. And what it the purpose of migrating pipelines
 3 held under license to right-of-way easements?
 4 **A. So historically the department has had the ability**
 5 **to authorize pipelines -- particularly smaller pipelines,**
 6 **flowlines -- under licenses, so we could issue a license on**
 7 **a 10-term to somebody. The Land Board has evolved policy**
 8 **related to pipelines over time, and the current direction**
 9 **from the board through the Land Board's easement policy is**
 10 **to have pipelines under 30-year term easements. So where**
 11 **we have these historical land use licenses, as those**
 12 **expire, we are converting those into the 30-year term**
 13 **easement to be consistent with the current direction from**
 14 **the board.**
 15 Q. And when was that easement policy enacted?
 16 **A. I would have to check to be sure. 2012 or '13, if**
 17 **I had to take a guess. But I'd have to go back and find**
 18 **out for certain.**
 19 Q. Okay. And was that done through administrative
 20 rule as well?
 21 **A. No. That was just a Land Board adopted and**
 22 **approved policy by the board.**
 23 Q. Uh-huh. And it's a written policy?
 24 **A. I believe so, yes.**
 25 Q. Uh-huh. Can you turn to Page 5, the bottom where

1 it says "significance of potential impacts"?

2 **A. Yes.**

3 **Q.** There's a sentence near the bottom that says:

4 The proposed action satisfies the trust's

5 fiduciary mandate and ensures the long-term productivity of

6 the land.

7 Do you see that there?

8 **A. Yes.**

9 **Q.** What is meant by "the long-term productivity of

10 the land"?

11 **MR. OESTREICHER:** Objection to form. The document

12 speaks for itself.

13 **THE DEPONENT:** So I -- I can only -- yeah, I don't

14 know what the -- I didn't write this document. I don't

15 know exactly what the author intended there, but allowing

16 the pipeline to remain in the ground under a different

17 authorization as opposed to the license expiring and them

18 having to come and apply for a new easement, which would

19 cause a whole other surface disturbance. Obviously not

20 disturbing the land is better for the long-term

21 productivity of that range or ag land than disturbing the

22 surface would be.

23 **Q.** Okay. And the next exhibit, which is Exhibit 43?

24 (Exhibit 43 marked for identification.)

25 **Q.** (By Ms. Rodgers) Does it say "minerals management"

1 times already, but when -- when a project is moving to a

2 development phase, there's MEPA that's going on from the

3 regulatory agency, the Board of Oil and Gas or the

4 Department of Environmental Quality. And our folks will

5 often do another MEPA document or combine efforts with

6 those agencies or those organizations to do a joint

7 environmental document for the disturbance to the surface

8 and impacts related.

9 **Q.** Okay. On Page 2 under that first picture, it says

10 the program is responsible for the leasing and monitoring

11 of 1,298 oil and gas leases.

12 Can you describe what monitoring activities are

13 done?

14 **A. Yeah. So the minerals bureau, through our field**

15 **land use specialist, will do on-the-ground monitoring for a**

16 **variety of things. There is an on-the-ground monitoring**

17 **component for the Board of Oil and Gas on oil and gas**

18 **leases as well, so they have a regulatory -- as outlined in**

19 **statute, they have obligations to regulate certain acts or**

20 **certain parts of the process. Our folks have on-the-ground**

21 **monitoring of the lease document itself. A lot of the**

22 **monitoring of the lease document is accounting and auditing**

23 **of the royalties and the lease document requirements. So**

24 **it's a combination of both monitoring internally the lease**

25 **document itself and on-the-ground monitoring of**

1 at the top?

2 **A. Yes.**

3 **Q.** And what is this document?

4 **A. This document appears to be a screen capture of**

5 **our Minerals Management Bureau page in the DNRC web page.**

6 **Q.** And there it says:

7 The Minerals Management Bureau is responsible for

8 leasing, permitting, and managing approximately 1,414 oil

9 and gas metalliferous and non-metalliferous -- did I say

10 that right -- coal and sand and gravel agreements

11 on 557,000 acres of the available 6.2 million acres of

12 school trust land, and approximately 5,632 acres of other

13 state-owned land through Montana.

14 Did I read that correctly?

15 **A. Yes.**

16 **Q.** Okay. And is the Minerals Management Bureau --

17 what division does that fall under at DNRC?

18 **A. The Trust Land Management Division.**

19 **Q.** Does the minerals leasing program engage in any

20 environmental analysis with respect to the work that it

21 does?

22 **A. Yes.**

23 **Q.** And when do they do that? Under what

24 circumstances?

25 **A. Sort of -- I think we've answered this a couple of**

1 requirements in lease like disturbance, reclamation, et

2 cetera.

3 **Q.** Uh-huh. Okay. And it's my understanding that --

4 is it the minerals leasing program -- or minerals

5 management program, excuse me, that participates in the

6 auctions for oil and gas leases?

7 **A. Yes, that's correct.**

8 **Q.** And who decides what is put up for -- what parcels

9 are put up for auction?

10 **A. So the -- the front of that web page, on Page 1 of**

11 **the handout you gave us, there's, under "mineral lease**

12 **search," "oil and gas vacant lease tracts." So we do**

13 **quarterly lease sales, and we move forward with a**

14 **nominations process every quarter. So a proponent that**

15 **wants to lease a section can nominate that section for**

16 **lease. There's four cycles of that that happen throughout**

17 **the year. They can look at this tool here to find out**

18 **what's already leased, what is not, what's available. They**

19 **nominate the process. We evaluate those -- those**

20 **nominations, and then that -- you asked if we had ever**

21 **rejected a lease process, that would be the place where**

22 **things might get filtered out. And we establish**

23 **stipulations to those leases. So if a lease is near a body**

24 **of water, we might put a stipulation for offsetting from**

25 **that. There's a whole variety of stipulations that get**

1 placed on the lease by the bureau staff as they evaluate
2 those parcel-by-parcel leases. That eventually gets put
3 into a package that gets put out for bid.
4 Q. And do -- do you ever include parcels up for
5 auction that are not nominated? Or are they exclusively
6 the nominations?
7 A. There's nothing that -- I don't believe there's
8 anything that prohibits us from including non-nominated
9 parcels. We rarely do so.
10 Q. Uh-huh. Okay. Turn to the next exhibit, which is
11 Exhibit 44. It says at the top "Fiscal Year 2019."
12 (Exhibit 44 marked for identification.)
13 **THE DEPONENT:** Okay.
14 Q. (By Ms. Rodgers) And what is this document?
15 A. So this is a separate report that the Minerals
16 Management Bureau puts out every fiscal year just as a sort
17 of annual report for that bureau's program.
18 Q. Uh-huh. To your knowledge, is there a more recent
19 report than this?
20 A. I am not aware if they did one more recently than
21 this or not. I believe -- I know they're working on a
22 current one. Somebody asked me that the other day, so --
23 and I presume that there would be one in '20 and '21, but I
24 can't confirm that 100 percent.
25 Q. Okay. On Page 1, in the second paragraph of the

1 **THE DEPONENT:** All right.
2 Q. (By Ms. Rodgers) And what is this document?
3 A. So I saw this yesterday briefly. This is a
4 document that DNRC doesn't have any authorship in. I
5 believe this is a document that is done by the Department
6 of Environmental Quality.
7 Q. Did you not review this document before yesterday?
8 A. No.
9 Q. Okay. One of the topic areas that we identified,
10 and then you were designated to speak about, is Montana's
11 oil, gas, and coal reserves.
12 Do you recall that? That would be in that
13 designees and objections document.
14 **MR. OESTREICHER:** Do you want to point him to a
15 specific topic number, Andrea?
16 **MS. RODGERS:** I believe it's Topic 12.
17 **MR. OESTREICHER:** Okay.
18 **THE DEPONENT:** Okay.
19 **MR. BRAMBLETT:** There were 10 topics.
20 **MR. OESTREICHER:** Page 6 of Exhibit 28? That's
21 what you're referencing here?
22 **MS. RODGERS:** Is that where the topic area is?
23 It's Topic Area 12.
24 **MR. OESTREICHER:** No, I'm asking you. Is that
25 Exhibit 28?

1 introduction, it says:
2 Oil and gas production was compiled using
3 information reported on the State of Montana Form 5,
4 Royalty Report, each month.
5 Do you see that?
6 A. I do.
7 Q. Are those royalty reports -- are those publicly
8 available?
9 A. I do not know the answer to that question.
10 Q. Okay. And then on the next page, there's a table
11 that has mineral type and revenue source?
12 A. Yes.
13 Q. And there's -- looks like there's a line item for
14 seismic. What does that refer to, if you know?
15 A. So seismic is an exploration process where they
16 are doing a study of the subsurface geological formations,
17 potentially oil reservoirs, et cetera, by using seismic
18 waves that echo through the Earth's crust and then are
19 captured by various instruments and analyzed to try to
20 figure out what the geology is.
21 Q. Okay.
22 **MS. RODGERS:** Barbara, I'm skipping again to the
23 Office of Surface Mining Reclamation and Enforcement
24 report, and that will be Exhibit 45.
25 (Exhibit 45 marked for identification.)

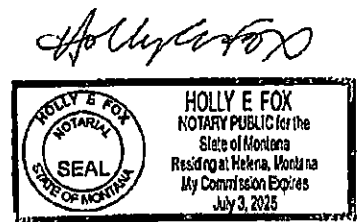
1 **MS. RODGERS:** I didn't have it open.
2 That looks like it's on Page 6.
3 **MR. OESTREICHER:** Okay.
4 **THE DEPONENT:** Okay. Yeah. I see it there.
5 **MS. CHILLCOTT:** It's Number 27.
6 Q. (By Ms. Rodgers) Okay. Does the DNRC track
7 Montana's oil, gas, and coal reserves?
8 A. No.
9 Q. Do you have any knowledge about Montana's oil,
10 coal, and gas reserves?
11 A. No.
12 Q. Okay, then I won't ask you any questions about it.
13 **MS. RODGERS:** I will note for the record that you
14 were designated to speak on that topic area.
15 **MR. OESTREICHER:** Andrea, I think -- for the
16 record we're not talking about -- we're not reading from
17 the same sheet of music here. We talked about 10 topics
18 when we started this deposition. Now you're talking about
19 Topic 12.
20 **MS. RODGERS:** Yeah, but there's -- because we
21 didn't talk about Topic -- he wasn't designated to talk
22 about Topics 10 and -- or 11 and -- 11. But he was
23 designated to talk about Topic 12. Am I wrong on that?
24 **MR. OESTREICHER:** There's no 12 in the amended
25 notice.

1 MS. CHILLCOTT: This is the state's --
 2 MR. BRAMBLETT: I think that's probably in
 3 response to the original notice. The amended notice --
 4 Yeah, let's go off the record.
 5 (Break taken from 12:42 p.m. until 12:42 p.m.)
 6 MS. RODGERS: I just want to correct for the
 7 record that the Topic Area 12 from Exhibit 27 is actually
 8 not listed as a topic area in Exhibit Number 26, so we are
 9 not asking any questions to Mr. Thomas about Montana's oil,
 10 coal, and gas reserves today.
 11 MR. OESTREICHER: Thank you.
 12 MS. RODGERS: Yes. And if I could take just a
 13 brief five minutes just to caucus with my colleagues, I
 14 think we're about done.
 15 MR. OESTREICHER: Great.
 16 (Break taken from 12:43 p.m. until 12:55 p.m.)
 17 MS. RODGERS: Thank you, Mr. Thomas. We have no
 18 further questions today. Thank you.
 19 MR. OESTREICHER: No questions.
 20 (Deposition concluded at 12:55 p.m.)
 21 (Signature reserved.)
 22 -----
 23
 24
 25

1 CERTIFICATE OF WITNESS
 2 PAGE LINE CORRECTION
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 17
 18 I, SHAWN THOMAS, have read the foregoing
 19 transcript of my testimony and believe the same to be true,
 20 except for the corrections noted above.
 21 DATED this day of , 2022.
 22
 23 WITNESS
 24
 25

C E R T I F I C A T E

1
 2
 3 STATE OF MONTANA)
 4 COUNTY OF LEWIS AND CLARK)
 5
 6 I, HOLLY FOX, Freelance Court Reporter and a
 7 Notary Public for the State of Montana, do hereby
 8 certify:
 9 That I did report the foregoing sworn deposition
 10 after having duly sworn the deponent.
 11 IN WITNESS WHEREOF, I have set my hand and seal
 12 on this 9th day of October, 2022.
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EXHIBIT 18

*Rikki Held v
State of Montana, et al.*

*Chris Dorrington 30(b)(6)
December 8, 2022*

*Charles Fisher Court Reporting
442 East Mendenhall
Bozeman, MT 59715
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Min-U-Script® with Word Index

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1 MONTANA FIRST JUDICIAL DISTRICT COURT
2 LEWIS AND CLARK COUNTY

3
4 RIKKI HELD, et al.,
5 Plaintiffs,
6 Cause Number
7 v. CDV-2020-307
8 STATE OF MONTANA, et al.,
9 Defendants.

10
11 VIDEORECORDED AND VIDEOCONFERENCED 30(b)(6)
12 DEPOSITION UPON ORAL EXAMINATION OF
13 MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
14 CHRIS DORRINGTON

15
16 BE IT REMEMBERED, that the Videorecorded
17 and videoconferenced 30(b)(6) deposition upon oral
18 examination of MONTANA DEPARTMENT OF ENVIRONMENTAL
19 QUALITY, CHRIS DORRINGTON, appearing at the instance
20 of Plaintiffs, was taken at the offices of Fisher
21 Court Reporting, 800 North Last Chance Gulch, Suite
22 101, Great Falls, Montana, on Thursday, December 8th,
23 2022, beginning at the hour of 9:00 a.m., pursuant to
24 the Montana Rules of Civil Procedure, before Deborah
25 L. Fabritz, Court Reporter - Notary Public.

Page 2

1 APPEARANCES
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16
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22 and

23
24
25

Page 3

1 ATTORNEY APPEARING FOR THE DEFENDANT,
2 STATE OF MONTANA, et al.:

3 Mr. Michael Russell, Esq.
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5 215 North Sanders
6 PO Box 201401
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8 and

9 Ms. Emily Jones, Esq. (via Zoom)
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14 and

15 ATTORNEY APPEARING IN A LIMITED PURPOSE
16 CAPACITY ON BEHALF OF THE MONTANA DEPARTMENT
17 OF ENVIRONMENTAL QUALITY:

18 Ms. Lee M. McKenna, Esq.
19 Department of Environmental Quality
20 Legal Unit, Metcalf Building
21 1520 East Sixth Avenue
22 Helena, MT 59620-0901

23 ALSO PRESENT:
24 Nate Trejo, videographer; Catherine
25 Armstrong; and Tara Robinson (via Zoom)

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1 DEQ.

2 **MR. RUSSELL:** Michael Russell on behalf of
3 defendants.

4 **MS. ARMSTRONG:** Catherine Armstrong,
5 paralegal for DEQ.

6 **MS. CHILLCOTT:** Barbara Chillcott,
7 attorney for plaintiffs.

8 **THE VIDEOGRAPHER:** The court reporter will
9 now administer the oath.

10 **CHRIS DORRINGTON,**
11 called as a witness, having been first duly sworn,
12 was examined and testified as follows:

13 **EXAMINATION**

14 **BY MR. SULLIVAN:**

15 **Q.** Would you please state your name for the
16 record, sir.

17 **A.** Yeah. Chris Dorrington.

18 **Q.** What city do you live in?

19 **A.** Helena, Montana.

20 **Q.** What's your work address?

21 **A.** 1520 East 6th Avenue, Helena, Montana
22 59601.

23 **Q.** Mr. Dorrington, I'd like to go over some
24 deposition ground rules for us today. Do you
25 understand that your testimony is under oath?

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1 WHEREUPON, the following proceedings were had
2 and testimony taken, to-wit:
3 * * * * *

4 **THE VIDEOGRAPHER:** This is the
5 videorecorded and videoconferenced deposition of
6 Chris Dorrington, taken in the Montana First Judicial
7 District Court, Lewis and Clark County. Cause Number
8 CDV-2020-307. Rikki Held, et al., versus the State
9 of Montana, et al.

10 Today is December 7th, 2022 --
11 December 8th, 2022. The time is 9:06 a.m. We are
12 present with the witness at the offices of Fisher
13 Court Reporting, 800 North Last Chance Gulch, Suite
14 101, Helena, Montana.

15 The court reporter is Deb Fabritz, and the
16 video operator is Nate Trejo of Fisher Court
17 Reporting. The deposition is being taken pursuant to
18 notice.

19 I would now ask the attorneys to identify
20 themselves, who they represent, and whoever else is
21 present. For those attending remotely, please note
22 from where you are appearing.

23 **MR. SULLIVAN:** Roger Sullivan, attorney
24 for plaintiffs in Kalispell, Montana.

25 **MS. McKENNA:** Lee McKenna, attorney for

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1 **A.** Yes, sir.

2 **Q.** If you don't understand a question that I
3 ask, would you please say so, and I will try to
4 rephrase it?

5 **A.** Yes.

6 **Q.** So for the court reporter's sake, only one
7 of us will be speaking at a time. Does that make
8 sense?

9 **A.** Yes.

10 **Q.** And I would appreciate it if you would
11 provide oral answers as opposed to nodding your head
12 so that the court reporter is able to write down your
13 answer. Does that sound agreeable?

14 **A.** Yes. For sure.

15 **Q.** Mr. Dorrington, have you testified under
16 oath before today?

17 **A.** Not that I can recall, no.

18 **Q.** So to the best of your recollection, you
19 haven't given a deposition before?

20 **A.** Oh, correct. Yes.

21 **Q.** Have you ever submitted written testimony,
22 for instance a declaration, in a proceeding?

23 **A.** Not that I recall. I -- I can't think of
24 an instance.

25 **Q.** Have you ever provided testimony before a

1 political body?

2 A. Oh, yes. Every session.

3 Q. And could you please explain what sessions
4 and what proceedings? Are you talking about the
5 Montana legislature or Congress, or what particular
6 legislative body?

7 A. Yeah. Montana state legislative bodies,
8 probably for sure 2017 session, 2019 session, 2021,
9 and then preparing for 2023.

10 Q. And did your testimony to legislative
11 bodies ever involve climate change?

12 A. Not specifically, no.

13 Q. One of the things that we'll be doing
14 today, Mr. Dorrington, is I'll be asking my
15 co-counsel Barbara Chillcott, who is there in the
16 deposition room with you, to be handing you
17 deposition exhibits since I'm here in Kalispell,
18 Montana, and you're over there in Helena. So we're
19 going to try to provide -- instead -- instead of
20 playing with traditional catch that the attorney and
21 the deponent can usually do, we're going to have to
22 have the assistance of Attorney Barbara Chillcott.

23 So I hope that you will bear with me. And
24 just to give you a heads-up, so what I'll do is I'll
25 advise Barbara as to what document in my notebook

1 MS. CHILLCOTT: Yes. I think that's how
2 we've been doing it.

3 MS. McKENNA: No.

4 MS. CHILLCOTT: No? No.

5 MS. McKENNA: We have been having the
6 master book to look at the exhibits at the same time
7 that the deponent has looked at the original. I
8 think it's really difficult to try to share the
9 document.

10 MS. CHILLCOTT: Roger, what do you advise?

11 MR. SULLIVAN: Well, I would just suggest
12 that they can -- if they're next to each other, they
13 can look at the same document. We were able to get a
14 set over there.

15 MS. McKENNA: So, Roger, I'm going to
16 object to this because we agreed to an in-person
17 deposition with Director Dorrington, and we confirmed
18 with you last week when Emily Jones sent you an
19 e-mail asking you if you intended to go forward on
20 December 8th and offering you the opportunity to
21 reschedule the deposition if need be.

22 And you came back with an e-mail late
23 Monday night, I believe, and confirmed that it was
24 your intent to depose Director Dorrington in person.
25 And then apparently sometime on Tuesday afternoon we

1 that I have given to her, and then we'll mark that as
2 the deposition exhibit.

3 And just to keep our numbering straight,
4 if I understand correctly -- and my co-counsel can
5 correct me if I'm wrong -- but I think we're picking
6 up with Exhibit 62.

7 MR. SULLIVAN: Is that -- is that correct
8 to the best of anyone's recollection?

9 MS. CHILLCOTT: That's my understanding,
10 Roger.

11 MR. SULLIVAN: We'll assume that's --
12 that's the case.

13 So, Barbara, would you please hand to
14 Mr. Dorrington the document that is in tab 1 of the
15 notebook.

16 MS. McKENNA: Do you have a copy for
17 counsel?

18 MS. CHILLCOTT: That's the copy.

19 MS. McKENNA: Okay.

20 MS. CHILLCOTT: Yeah.

21 MS. McKENNA: For both of us?

22 MS. CHILLCOTT: Yeah.

23 MS. McKENNA: I really would prefer to
24 have my own copy. Is that how it's going to go for
25 the rest of the deposition?

1 got -- I -- I got an e-mail forwarded from Emily
2 saying that you had some sort of emergency and wanted
3 to postpone the deposition, and we said no. You
4 know, now the director's schedule is set. And I
5 didn't get any notice that this would be a Zoom
6 deposition conducted in this matter.

7 I don't necessarily object to this format,
8 but I do -- would like a separate copy for counsel.
9 That is the customary practice, and we need exhibits
10 to take back to the office.

11 MR. SULLIVAN: Well, the documents can
12 certainly be duplicated immediately following this,
13 if -- if you -- you can look at the same document. I
14 don't think that there's a requirement that we have
15 multiple documents.

16 MS. McKENNA: Roger, it's exceptionally
17 unusual not to provide counsel with a separate
18 document when a deponent is being deposed. I have
19 never attended a deposition -- and I have attended
20 many -- that I have not been given the courtesy of
21 having a courtesy copy for counsel.

22 You may proceed, but, I mean, this is a
23 document that I recognize, so I'm not going to object
24 to this document, but I may object to some documents
25 later on in this deposition.

1 MR. SULLIVAN: Thank you.
2 (Whereupon, Exhibit 62 was
3 marked for identification.)

4 BY MR. SULLIVAN:

5 Q. Let's -- let's proceed.

6 A. Okay.

7 Q. We've marked that as -- as Exhibit 62, and
8 it's a document entitled Defendants' Expert Witness
9 Disclosure. Is that correct, Mr. Dorrington?

10 A. Defendants' Expert Witness Disclosure.
11 Yes.

12 Q. Are you familiar with this document?

13 A. Yes, I am.

14 Q. Would you please turn to page 3. And
15 under hybrid witnesses, I will read in -- into the
16 record as follows: "Defendants note that the below
17 individuals are employees of the Montana Department
18 of Environmental Quality who possess knowledge
19 regarding the facts alleged in this case, as well as
20 specialized training that allows them to formulate
21 opinions regarding those factual allegations."

22 Did I read that sentence correctly,
23 Mr. Dorrington?

24 A. Yes.

25 MS. McKENNA: Roger, point of

1 and expert witnesses and a summary of their proposed
2 testimony so as to prevent unfair surprise or
3 prejudice."

4 Did I read that sentence correctly, sir?

5 A. Yes.

6 Q. Sir, do you see where under number three
7 it says Chris Dorrington, DEQ Director?

8 A. Yes.

9 Q. Would you please read into the record,
10 sir, what it is that the State has indicated will be
11 your proposed testimony.

12 A. Under item three, "Chris Dorrington,
13 Director of the Montana Department of Environmental
14 Quality, DEQ, will give fact and expert testimony
15 regarding topics raised in plaintiffs' complaint at
16 reference."

17 MS. McKENNA: And, again, I'm renewing my
18 objection because this is not the most -- this is not
19 DEQ's expert witness disclosure. This is a previous
20 expert witness disclosure, and, therefore, statements
21 that were made in this disclosure are not current and
22 accurate for this deposition.

23 MR. SULLIVAN: Is there anything, Counsel,
24 in the disclosure for Mr. Dorrington that has
25 changed?

1 clarification. This is Lee McKenna from DEQ. Are
2 you intending this to be introduced as an exhibit of
3 -- of the State's current expert witness disclosure,
4 because this is not the State's current expert
5 witness disclosure?

6 MR. SULLIVAN: The date I have is
7 October 31st, 2022.

8 MS. McKENNA: This is not the State's
9 current expert witness disclosure. The DEQ's
10 defendant -- excuse me. DEQ's witnesses are
11 Christopher Dorrington, the Director; Sonja
12 Nowakowski, the Air, Energy, and Mining division
13 administrator; and Dave Klemp. But Julie Merkel, Dan
14 Lloyd, Ed Warner, Craig Henrikson, none of these --
15 and everyone else who follows, none of those other
16 people are the State's witnesses -- are DEQ's
17 witnesses. And they were withdrawn, and so this is
18 not -- this is not an accurate document.

19 MR. SULLIVAN: Let's -- let's see if it's
20 accurate as to Director Dorrington.

21 BY MR. SULLIVAN:

22 Q. So directing your attention to the last
23 sentence in that paragraph that we just reviewed,
24 Mr. Dorrington, and I am reading from it. It states:
25 "Defendants disclose the identity of these mixed fact

1 MS. McKENNA: I can't speak to that. I
2 did not file the final expert witness disclosure. I
3 only know who the final expert witnesses are for DEQ,
4 and they are the director; Sonja Nowakowski, Air,
5 Energy, and Mining administrator; and Dave Klemp.

6 BY MR. SULLIVAN:

7 Q. So you could continue, Mr. Dorrington, if
8 you would, please.

9 A. Continue reading, sir? Is that --

10 Q. Yes, sir.

11 A. -- what you asked? Okay.

12 Q. With that -- excuse me, Mr. Dorrington.

13 For continuity sake, why don't you start again with
14 Chris Dorrington, Director.

15 A. Sure. "Chris Dorrington, Director for the
16 Montana Department of Environmental Quality, DEQ,
17 will give fact and expert testimony regarding topics
18 raised in plaintiffs' complaint at reference.
19 Director's -- Director Dorrington's professional CV
20 is attached in Exhibit D, and he may testify to any
21 of the experiences or opine on the subjects contained
22 therein. As a result of his positions at and before
23 DEQ, his education, and his professional experience,
24 Director Dorrington may have factual knowledge and
25 expertise in a number of subject areas, including but

1 not limited to public policy, DEQ's internal
2 functioning, permitting generally, and past permits
3 issued, air, energy, mining, past legislation, some
4 of the panels/councils/studies discussed by
5 plaintiffs, fossil fuels, DEQ's authority to regulate
6 or analyze climate change, what climate change
7 analysis would require for DEQ, DEQ's budget and
8 staff. Because discovery is ongoing in this matter,
9 defendants reserve the right to amend or update this
10 list of subjects."

11 **Q. And, sir, in particular to that paragraph**
12 **where it states expert testimony regarding topics**
13 **raised in plaintiffs' complaints at paragraph**
14 **paragraph 87-89, 92-93, 118 (g) through (i), and (k).**
15 **Is -- is that correct?**

16 A. Yes.

17 **Q. Mr. Dorrington, what did you do to prepare**
18 **for your deposition today?**

19 A. I spoke with my counsel Lee McKenna and
20 counsel Emily Jones.

21 **Q. How many hours did you spend preparing for**
22 **your deposition?**

23 A. Probably in the neighborhood of 30 hours.

24 **Q. I'm sorry, sir. I couldn't hear that.**

25 A. Oh, 3-0, 30 hours.

1 **Q. Other than your attorneys, did anyone else**
2 **help up prepare for your testimony?**

3 A. I had conversations with the other two as
4 amended and discussed by counsel, the other two
5 defendants --

6 **MS. McKENNA:** Proponents.

7 **THE WITNESS:** -- proponents. Sorry. So
8 Sonja Nowakowski and Dave Klemp, number four and
9 number five.

10 **BY MR. SULLIVAN:**

11 **Q. Did you review any documents in**
12 **preparation for your testimony?**

13 A. The exhibits, yes.

14 **Q. And which exhibits?**

15 A. I don't know how to reference that
16 appropriately. There's -- the list of exhibits
17 provided me by counsel.

18 **Q. Mr. Dorrington, who asked you to serve as**
19 **a hybrid expert in this case?**

20 A. Counsel previously referenced.

21 **MR. SULLIVAN:** Barbara, I would like next
22 to go to tab 2 of the notebook, and hand
23 Mr. Dorrington a -- the document that's entitled
24 Montana Department of Environmental Quality's amended
25 designees and objections to plaintiffs' amended

1 Montana R.CIV.P. 30(b)(6) notice of deposition which
2 is dated November 22nd, 2022.

3 Let's mark that as deposition -- let's
4 mark that as Exhibit 63.

5 (Whereupon, Exhibit 63 was
6 marked for identification.)

7 **MS. McKENNA:** So I'm going to object to
8 not getting a copy of this document. I didn't file
9 this document. I am not familiar with the contents
10 of this document, and I would very much like to take
11 a break so that you folks can make copies for counsel
12 so that I can review them as the deponent is being
13 questioned.

14 **MR. SULLIVAN:** Well, why don't we take a
15 break so that we can discuss that among ourselves and
16 -- and see. So why don't we go off the record for,
17 say, 10 minutes, and we'll reconvene at 9:30. Is
18 that agreeable, Counsel?

19 **MS. McKENNA:** Yes. Thank you.

20 **THE VIDEOGRAPHER:** We are going off the
21 record. The time is 9:24 a.m.

22 (Whereupon, a break was then
23 taken.)

24 **THE VIDEOGRAPHER:** We are back on the
25 record. The time is 10:30 a.m.

1 **MS. McKENNA:** Before we begin, I just want
2 to object to what's been labeled Exhibit 63 because
3 it's not the current notice of 30(b)(6) deposition.
4 It's a previous incarnation.

5 (Whereupon, Exhibit 63-1 was
6 marked for identification.)

7 **BY MR. SULLIVAN:**

8 **Q. And is exhibit -- what we've now marked**
9 **for identification purposes as Exhibit 63-1,**
10 **Mr. Dorrington, is that documented entitled Montana**
11 **Department of Environmental Quality's amended**
12 **designees and objections to plaintiffs' amended**
13 **Montana R.CIV.P 30(b)(6) notice of deposition which**
14 **is dated November 30th, 2022?**

15 A. Respectfully, I have Exhibit 63 dated
16 November 22nd, 2022. I don't -- I don't have 63-1
17 dated November 30th.

18 **MS. CHILLCOTT:** Roger, that's the next --
19 that's the next exhibit. The 63-1 will be the next
20 one. And that will be Plaintiff's Amended Rule
21 30(b)(6) Notice of Deposition to Defendant Montana
22 DEQ, dated November 30th.

23 **BY MR. SULLIVAN:**

24 **Q. So we are back on the record. Is that the**
25 **case?**

1 A. Correct.
 2 **Q. And I also do want to clarify for the**
 3 **record that notwithstanding Ms. McKenna's**
 4 **representations that the defendants in this case have**
 5 **not provided copies -- dual copies of exhibits for**
 6 **their depositions. So there is a practice, in fact,**
 7 **in this case that hasn't been in accordance with**
 8 **Ms. McKenna's representations, at least as to**
 9 **defendants.**

10 **I want to direct your attention next --**

11 **MS. McKENNA:** Ms. McKenna is representing
 12 DEQ -- just to respond to your point, Mr. Sullivan, I
 13 am representing DEQ in my capacity as an attorney for
 14 DEQ, and I filed a limited notice of appearance to
 15 represent DEQ witnesses. The State of Montana is
 16 being represented by the Attorney General's Office.
 17 I have not been a party to any of those depositions,
 18 nor have I defended any of those individuals who have
 19 been deposed. So thank you for your note, but I
 20 cannot speak for the practices in other depositions.
 21 I'm only representing DEQ defendants.

22 **BY MR. SULLIVAN:**

23 **Q. Why don't you direct your attention next,**
 24 **Mr. Dorrington, to -- and via Barbara's assistance**
 25 **to --**

1 **MR. SULLIVAN:** What we'll -- what is that,
 2 Barbara, tab 3, which is -- if you would hand that to
 3 Mr. Dorrington.

4 **BY MR. SULLIVAN:**

5 **Q. What is that document, Mr. Dorrington?**

6 **MS. McKENNA:** What is this? What exhibit
 7 number is this?

8 **MS. CHILLCOTT:** Roger, are you going to
 9 refer to this as Exhibit 64?

10 **BY MR. SULLIVAN:**

11 **Q. Is Exhibit 64 a copy of your CV, sir?**

12 A. Just one moment. Barbara is numbering it.
 13 (Whereupon, Exhibit 64 was
 14 marked for identification.)

15 **THE WITNESS:** And then can you repeat the
 16 question?

17 **BY MR. SULLIVAN:**

18 **Q. Is Exhibit 64 a copy of your CV, sir?**

19 A. Yes, sir.

20 **Q. Would you briefly summarize your**
 21 **educational background after high school?**

22 A. Yes. So following high school, I attended
 23 Gonzaga University and completed my Bachelor of
 24 Science in Mechanical Engineering in May of 1998.
 25 Went to work for a bit. Went back to school for my

1 master's in Transportation Policy, Operations and
 2 Logistics at George Mason University and completed
 3 that program in May of 2010.

4 **Q. What types of science courses did you take**
 5 **in terms of earning your mechanical engineering**
 6 **degree?**

7 A. Predominantly physics-oriented sciences,
 8 so physics, vibrations, statics and dynamics, more
 9 math than I care for, and -- and anything related to
 10 machine design -- to machine design courses, an
 11 operations management course.

12 **Q. Mr. Dorrington, do you hold any**
 13 **professional licenses or certifications?**

14 A. I have a -- I successfully passed my EIT,
 15 engineer-in-training test.

16 **Q. Any other certifications?**

17 A. No, sir.

18 **Q. Are you a member of any professional**
 19 **organizations?**

20 A. No.

21 **Q. How long have you worked for DEQ?**

22 A. I joined Montana's Department of
 23 Environmental Quality in June 2016.

24 **Q. And in what position?**

25 A. I was the -- I was hired as the division

1 administrator for air, energy, and mining at that
 2 time.

3 **Q. And I'm looking at your CV in reference to**
 4 **that period of time, and you have -- under your**
 5 **tenure with DEQ from June 2016 to January 2021, you**
 6 **have what appears to me to be five bullets. Do you**
 7 **see that, sir?**

8 A. Yes.

9 **Q. And what does the fifth bullet state?**

10 A. "Provide information and support for
 11 Montana's energy policy, production, transportation,
 12 conservation, and efficiency, including renewable
 13 energy evaluation, development, and deployment."

14 **Q. And could you describe for us what the**
 15 **provision of information and support for Montana's**
 16 **energy policy entailed.**

17 A. Montana DEQ is given statutory authority
 18 to implement the legislative provisions for Montana's
 19 energy policy.

20 **Q. The third bullet, sir, indicates there**
 21 **development, implement legislation and testify during**
 22 **session on matters including statewide policy and**
 23 **fiscal impacts. Did I read that correctly?**

24 A. Yes.

25 **Q. Could you describe for us what that**

Page 25

1 **entailed.**

2 A. As a state agency and administrator, one
3 of my roles was to identify areas where state statute
4 was -- or modifications are necessary in order to --
5 to implement our work efficiently and effectively
6 during session. Legislation requires testimony, and
7 I provided testimony in support of legislative
8 efforts to accomplish that end.

9 Q. You also then have been the division
10 administrator. Is that -- excuse me -- the director
11 of the Department of Environmental Quality. Is that
12 correct?

13 A. Yes.

14 Q. And could you summarize your
15 responsibilities in that position.

16 A. Yes. As a director I lead a competent
17 workforce of 400 environmental science engineering
18 and operations professionals in -- in the Department
19 of Environmental Quality. I implement state statute
20 given the agency authority to do so, maintain
21 relationships both internally and externally in order
22 to efficiently and effectively accomplish those
23 tasks. On the budgeting side, I'm responsible for
24 our agency budget ultimately. Yeah.

25 Q. Okay. In your work as division

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1 Q. And it's a document that is MCA 90-4-101
2 entitled state energy policy goal statements. Do you
3 see that, sir?

4 MS. McKENNA: Point of clarification, it
5 is MCA 90-4-1001.

6 BY MR. SULLIVAN:

7 Q. 1001, yes.

8 A. Yes. I see that before me. Exhibit --

9 Q. Are you familiar with -- excuse me, sir.
10 I interrupted?

11 A. Just Exhibit 65 for clarification.

12 Q. Are you familiar with this statute?

13 A. Yes.

14 Q. You agree that Montana has a state energy
15 policy that's codified in MCA 90-4-1001?

16 A. Yes.

17 Q. Do you agree that defendant DEQ has a duty
18 to comply with MCA 90-4-1001 of Montana state energy
19 policy?

20 MS. McKENNA: Objection. Calls for a
21 legal conclusion.

22 You can answer.

23 THE WITNESS: Yes.

24 BY MR. SULLIVAN:

25 Q. You may still answer.

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1 administrator of Air, Energy, and Mining at DEQ, did
2 you work on any climate-change-related issues?

3 A. Yes.

4 Q. Could you explain?

5 MS. McKENNA: Objection. Vague.

6 THE WITNESS: Yeah.

7 BY MR. SULLIVAN:

8 Q. What did you do in regards to working on
9 climate-change-related issues in your role as
10 division administrator of Air, Energy, and Mining at
11 DEQ?

12 A. Participant in conversation, dialogue
13 around topics related to climate change. And then as
14 questions arose regarding agency work as it impacted
15 permits and compliance, in addition energy policy,
16 participated in those dialogues and led the
17 professionals that execute state law around those --
18 those statutes.

19 Q. Mr. Dorrington, I would like to direct
20 your attention through Barbara to the document that
21 is at tab 4 of our notebook. It has been previously
22 identified for identification purposes as Exhibit 9.

23 (Whereupon, Exhibit 65 was
24 marked for identification.)

25 BY MR. SULLIVAN:

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1 A. So in reference to 90-4-1001, in -- under
2 definitions of this title, the department would be
3 referenced as Montana DEQ.

4 Q. To confirm, do you agree that DEQ has a
5 duty to comply with MCA 90-4-101 [sic]?

6 MS. McKENNA: Objection. Calls for a
7 legal conclusion.

8 THE WITNESS: As with any other state law,
9 the agency must follow that which is given, yes.

10 BY MR. SULLIVAN:

11 Q. Mr. Dorrington, do you have an
12 understanding about what this lawsuit is about?

13 A. You called for me to speculate, but yes.
14 I mean, I understand generally what that would be,
15 yeah. Yeah. I mean, it's related to climate change
16 and --

17 Q. Is it your understanding that among other
18 things the plaintiffs are challenging the
19 constitutionality of MCA 90-4-1001 subparts 3 (c)
20 through (g)?

21 MS. McKENNA: Objection. Complaint speaks
22 for itself.

23 THE WITNESS: Respectfully, I don't see
24 item 3 (c) through (g). I don't --

25 BY MR. SULLIVAN:

1 **Q. On the first page of the exhibit,**
 2 **Mr. Dorrington, do you see subsections C?**
 3 A. Yes. Under item 1, yes.
 4 **Q. Yes.**
 5 A. Not 3, but 1, yes, I do.
 6 **Q. Excuse me. I -- I probably muddled my**
 7 **enunciation, but subsection 1 (c) through (g)?**
 8 A. Yes, sir.
 9 **Q. Would you explain to us how DEQ implements**
 10 **the policy set forth in MCA 90-4-1001?**
 11 **MS. McKENNA:** Objection. Overbroad and
 12 vague.
 13 **THE WITNESS:** Would you like me to
 14 proceed?
 15 **MS. McKENNA:** If you understand the
 16 question.
 17 **THE WITNESS:** I can speak to how the state
 18 energy office housed within the Montana Department of
 19 Environmental Quality operates and the -- some of the
 20 programs. I'll probably limit my answer and then
 21 seek clarification.
 22 So within the Department of Environmental
 23 Quality, we house the state energy office, which is
 24 responsible for -- for work related to energy policy.
 25 This -- it's -- in practice it's -- it's referenced

1 you're asking.
 2 **THE WITNESS:** I would just go back to the
 3 opening statement that you had me read which include
 4 -- included the term "opine," so --
 5 **BY MR. SULLIVAN:**
 6 **Q. So is it -- is it fair to say -- I'm just**
 7 **trying to understand, Mr. Dorrington, if based on the**
 8 **disclosures that we have received, whether it's**
 9 **anticipated that you're going to provide any opinions**
 10 **during the course of the trial about the Montana**
 11 **state energy policy as set forth in this statute.**
 12 **MS. McKENNA:** Objection. Vague and
 13 overbroad.
 14 **MR. SULLIVAN:**
 15 **Q. You may answer the question, sir.**
 16 A. Not knowing the line of question to come,
 17 I -- I would say I -- I -- I may, yes.
 18 **Q. And what would those opinions be?**
 19 **MS. McKENNA:** Objection. Vague and
 20 overbroad.
 21 **THE WITNESS:** I don't know. Without
 22 hearing any specific question, I'd probably seek
 23 clarification. I don't know what I will opine on.
 24 **BY MR. SULLIVAN:**
 25 **Q. Mr. Dorrington, do you have familiarity**

1 that the energy bureau -- the energy bureaus is led
 2 by a professional and then bureau chief and section
 3 two provides our staff that then implement energy
 4 programs in the state that enact state policy. So --
 5 and there are a handful of those. I'll let you lead
 6 where you want to go from there, I suppose.
 7 **BY MR. SULLIVAN:**
 8 **Q. Okay. Mr. Dorrington, are you aware of**
 9 **any policies that -- that -- or laws that indicate**
 10 **that DEQ does not have to follow MCA 90-4-1001?**
 11 **MS. McKENNA:** Objection. Calls for a
 12 legal conclusion.
 13 **THE WITNESS:** I'm not aware of any
 14 authority not to follow state law, no.
 15 **BY MR. SULLIVAN:**
 16 **Q. Sir, have you been asked in this lawsuit**
 17 **in your anticipated testimony at trial to provide any**
 18 **opinions about the Montana state energy policy set**
 19 **forth in MCA 90-4-1001?**
 20 **MS. McKENNA:** Objection. The director has
 21 been disclosed as a hybrid expert witness by nature
 22 of his work as the former Air, Energy, and Mining
 23 administrator and the director, and, therefore,
 24 there's been no separate provision of -- of opinion
 25 or a report to counsel, if that's the question that

1 **with the Montana Environmental Policy Act?**
 2 A. Could you restate the question?
 3 **Q. Do you have familiarity with the Montana**
 4 **Environmental Policy Act?**
 5 A. Yes.
 6 **Q. What is the basis for your familiarity?**
 7 A. So the department is responsible for state
 8 actions, whereby the Montana Environmental Policy Act
 9 is then enacted and which a state action engages that
 10 -- that provision.
 11 **Q. Are you familiar -- and for ease here, may**
 12 **we refer to the Montana Environmental Policy Act as**
 13 **MEPA? Would that be agreeable to you?**
 14 A. Yes. As -- as long as we don't with the
 15 audio confuse at all NEPA, with an N. As long as we
 16 refer to MEPA, and if there's a distinction, that you
 17 clearly make that distinction. They're not the same.
 18 So thank you. Yes.
 19 **Q. Okay. Mr. Dorrington, are you familiar**
 20 **with the MEPA analysis that DEQ undertakes for fossil**
 21 **fuel activities in Montana?**
 22 **MS. McKENNA:** Objection. Vague and
 23 overbroad.
 24 **THE WITNESS:** What I'm familiar with is
 25 when the State takes an action on a permitting

1 decision in which MEPA would be enacted. I -- I
2 would be familiar with permit -- State actions
3 regarding permitting that -- that whereby MEPA is
4 necessary. So there are permits for mines in Montana
5 that then require a MEPA analysis and an appropriate
6 level therein.

7 **BY MR. SULLIVAN:**

8 **Q. Mr. Dorrington, do you know whether in**
9 **that MEPA analysis DEQ considers the impacts of**
10 **greenhouse gas emissions?**

11 **MS. McKENNA:** Objection. Vague and
12 overbroad.

13 **THE WITNESS:** So with regard to an
14 environmental analysis, an EA, if I may call it that,
15 under MEPA, we do evaluate emissions from sources and
16 seek to clarify the impact of those emissions an
17 attainment of an emitter, based on standards of
18 limits in either state or federal law.

19 **BY MR. SULLIVAN:**

20 **Q. And does that analysis of emissions from**
21 **sources based on state or federal law include an**
22 **analysis of greenhouse gas emissions on human health?**

23 **A.** There would be an assessment on
24 constituents from any source, including the
25 combustion or -- combustion of -- of fossil fuels,

1 carbon related. And then also in the mining sense
2 any emissions from an operation to conduct mining.
3 Some of those constituents may be considered
4 greenhouse gas emissions.

5 **Q. Which would those constituents be?**

6 **A.** I wouldn't have the full list for sure.
7 So my -- carbon and others, nox, sox.

8 **Q. When you say carbon are you speaking of**
9 **carbon dioxide?**

10 **A.** Sure. Yes.

11 **Q. I'd like to direct your attention next to**
12 **what we have in our notebook at tab 5, which is**
13 **Montana Code Annotated 75-1-2001. And which we'll**
14 **mark for sequential identification purposes as 65?**

15 **MR. SULLIVAN:** Is that it? Am I right?

16 **THE WITNESS:** 66.

17 **BY MR. SULLIVAN:**

18 **Q. 66. Okay.**

19 (Whereupon, Exhibit 66 was
20 marked for identification.)

21 **BY MR. SULLIVAN:**

22 **Q. In particular, Mr. Dorrington, I would**
23 **like to --**

24 **MS. McKENNA:** So this one is not coming up
25 for me. Sorry.

1 **MR. SULLIVAN:** I'm sorry.

2 **MS. McKENNA:** Just -- I don't have this on
3 my screen. It didn't scan in correctly, I guess.

4 **THE WITNESS:** So the number is listed, but
5 there's nothing there?

6 **MS. CHILLCOTT:** Uh-huh.

7 **MS. McKENNA:** Do you have that too,
8 Catherine?

9 **MS. ARMSTRONG:** Yes.

10 **MS. McKENNA:** I mean, I'll look up the
11 statute to follow along, but --

12 **MS. CHILLCOTT:** I may suggest refreshing.

13 **MS. McKENNA:** It's the only one that is
14 not working for them, but okay.

15 I can look that up now. That's fine. You
16 can proceed. I can access that one online.

17 **BY MR. SULLIVAN:**

18 **Q. Mr. Dorrington, I'd like to direct your**
19 **attention on page 3 of that statute to subsection 2**
20 **small A, which reads as follows: Except as provided**
21 **in subsection (2)(b), an environmental review**
22 **conducted pursuant to subsection (1) may not include**
23 **a review of actual or potential impacts beyond**
24 **Montana's borders. It may not include actual or**
25 **potential impacts that are regional, national, or**

1 **global in nature, end quote.**

2 **Did I read that correctly, sir?**

3 **A.** Yes.

4 **MS. McKENNA:** The statute speaks for
5 itself.

6 **BY MR. SULLIVAN:**

7 **Q. Are you familiar with this provision in**
8 **MEPA?**

9 **A.** Yes.

10 **Q. Do you have any knowledge under what**
11 **circumstances this provision is used by defendant**
12 **DEQ?**

13 **A.** The agency by -- by permitting and
14 compliance activities, permitting primarily, would --
15 would be subject to this provision and is. So we do
16 not look at -- in quote, actual or potential impacts
17 beyond Montana's border, end quote.

18 **Q. You indicated that you use these statutory**
19 **provisions in permitting and could you give more**
20 **description of what permitting activities DEQ**
21 **conducts that you apply this provision?**

22 **A.** Yeah. So primarily in the permitting of
23 natural resource extraction and the permitting
24 activities related to power generation.

25 **Q. That would be, sir, fair to understand as**

1 **the combustion of fossil fuels?**

2 A. If -- yes, sir. If -- if a power
3 generating facility consumes a fossil fuel, yes.
4 We'll evaluate the combustion of those fuels and the
5 emissions related. If I may amend, we also use MEPA
6 as it applies to any other permitting action within
7 our purview. There are other statutes that solid
8 waste or waste facilities also require. Because
9 there's a state action related, we conduct MEPA on
10 far more than just those two, albeit I think those
11 are the two that are focus -- the focus of your
12 conversation today.

13 **Q. And in terms of the focus of our**
14 **conversation today, sir, that has to do with -- my**
15 **question was related to the permitting of fossil fuel**
16 **extraction and fossil fuel combustion. Is that what**
17 **you understood when you responded?**

18 A. Yes. So at the beginning -- I apologize.
19 I provided you a compound answer. Yes. We conduct a
20 MEPA analysis subject to (2)(a) for natural resource
21 extraction and power generating facilities.

22 **Q. And so that analysis does not include a**
23 **review of actual or potential impacts beyond**
24 **Montana's borders, and it does not include actual or**
25 **potential impacts that are regional, national, or**

1 an analysis that the agency would then -- agency
2 professionals would then review and having been
3 through this a number of times on a -- on a general
4 permitting action, probably identify deficiencies and
5 seek for the best and rational outcome of that
6 analysis as per state law.

7 **Q. And so the analysis in MEPA is intended as**
8 **a disclosure, is it not?**

9 A. Correct.

10 **Q. MEPA is intended as a disclosure document,**
11 **is it not?**

12 A. Yes. Correct. Yep. I think there was an
13 audio miss there, sir.

14 **Q. Are you aware if prior to the enactment of**
15 **this law in 2011 DEQ did such an analysis of**
16 **greenhouse gases that were attendant to the**
17 **permitting of fossil fuel extraction and combustion?**

18 A. I'm not aware. I -- just because I -- as
19 a normal -- as a part of practices, I -- I joined in
20 June of 2016, so I'm not certain what the full
21 activity would have been in 2011 or prior to.

22 **Q. Mr. Dorrington, since you have been**
23 **designated as what's been referred to in the**
24 **documents as a hybrid expert, could you indicate what**
25 **field you are an expert in?**

1 **global in nature?**

2 A. The department follows state law, yes.

3 **Q. Sir, in your experience, knowledge, and**
4 **opinion, how would DEQ's MEPA analysis for fossil**
5 **fuel projects of extraction and combustion be**
6 **different if this restriction did not exist?**

7 A. Again, it would call for me to speculate.
8 But if -- if the Montana State legislature were to
9 pass a law that eliminated or edited (2)(a), then we
10 would follow state law as we do now and include an
11 analysis of potential -- actual or potential impacts
12 beyond the border of the state.

13 **Q. Would that include, sir, an analysis of**
14 **climate impacts from the extraction and combustion of**
15 **fossil fuels in Montana?**

16 A. Again, you're asking me to speculate on
17 what the law would be amended or changed to, but we
18 would follow state law. If it included an amendment
19 of the actual or potential impacts that are regional,
20 national, or global, then yes.

21 Likely what we would do, as we do with
22 other permits, is require an applicant through either
23 their own resources or the resources that they --
24 they would employ, consultants primarily, because
25 this area is a specialty, use consultants to develop

1 **MS. McKENNA:** Objection. The director was
2 designated as a hybrid expert witness by nature of
3 his work at the Department of Environmental Quality
4 in his capacity as the former Air, Energy, and Mining
5 administrator and currently as the director. So for
6 the --

7 **BY MR. SULLIVAN:**

8 **Q. So do you consider yourself an expert in**
9 **any specific area?**

10 A. I would -- I would -- you're asking me to
11 opine on my own capabilities, but yes. I think I'm
12 an expert in running an agency, an efficient agency,
13 an agency in which we execute state law. I would say
14 I'm an expert in -- in those areas. I would say I am
15 an expert in public policy overall.

16 **Q. Do you consider yourself to be an expert**
17 **on energy policy?**

18 A. I think I'm aware of much energy policy
19 and the interrelationship of power demand which
20 includes generation connection, distribution,
21 consumption. I would consider myself highly aware of
22 the policy impacts of power generation, distribution,
23 and consumption within Montana and some of the widely
24 variable impacts on Montana generation from the
25 Pacific northwest demand over the course of time.

1 **Q. Do you consider yourself to be an expert**
2 **on greenhouse gas emissions?**

3 A. No.

4 **Q. Yes?**

5 A. No.

6 **Q. No. Okay. Mr. Dorrington, have you read**
7 **any of the expert reports submitted by the**
8 **plaintiffs' experts in this case?**

9 A. I have -- I have made it through the
10 complaint and exhibits. If -- if you have a
11 particular question, I'd surely appreciate the
12 exhibit you're referencing.

13 **Q. Well, I appreciate that you have reviewed**
14 **the complaint, but actually the question I was asking**
15 **is whether you have reviewed any of the reports that**
16 **have been filed of record by our -- by the**
17 **plaintiffs' experts in this case?**

18 A. If they were a part of the preparation
19 materials, I definitely skimmed everything. I don't
20 -- again, if you have something in particular, I'd
21 certainly take a look at it and see if I -- I'm aware
22 of it. The preparation for just this day included
23 three very large binders of material, so I would be
24 happy to take a look.

25 **Q. Okay. Thank you, sir. Let's look next at**

1 how do I proceed on that?

2 **MS. McKENNA:** You'd have to see another
3 document in order to be able to answer that question.

4 **THE WITNESS:** I'm -- I'm -- I'm looking at
5 paragraph 87 on page 28 of Exhibit 67. And I -- I do
6 -- if I understand the interrelationship of -- of
7 what we talked about earlier, yeah. I do -- I -- I'm
8 aware that this is what you would ask me to speak to,
9 yes.

10 **BY MR. SULLIVAN:**

11 **Q. And, sir, just for the record, what I'll**
12 **do is I will read what paragraph 87 states and then**
13 **ask you some questions about it. Quoting paragraph**
14 **87.**

15 "Defendant DEQ has a constitutional duty
16 to maintain and improve a clean and healthful
17 environment for present and future generations.
18 Defendant DEQ also has broad statutory authority to
19 protect, sustain, and improve a clean and healthful
20 environment to benefit present and future generations
21 but has used its authority in a manner that has
22 resulted in dangerous levels of GHG emissions."

23 **Did I read that correctly, Mr. Dorrington?**

24 A. I read your statement correctly -- or I
25 heard your statement read correctly, yes.

1 tab 6, which contains what's already been marked as
2 Exhibit 1.

3 **MS. CHILLCOTT:** Roger, we're going to call
4 this Exhibit 67.

5 **MR. SULLIVAN:** Okay.

6 (Whereupon, Exhibit 67 was
7 marked for identification.)

8 **BY MR. SULLIVAN:**

9 **Q. And if I understand correctly,**
10 **Mr. Dorrington, this is one of the documents that you**
11 **have reviewed before today. Is that correct, sir?**

12 A. If you give me just a moment, yes, I'll --
13 I'll answer that. If this is a complete and accurate
14 representation of what was submitted prior to, yes.
15 This is the complaint that I have reviewed.

16 **Q. If you would direct your attention, sir,**
17 **to paragraph number 87, which is on page 28.**

18 A. Yes, sir. I'm there.

19 **Q. Are you there? Okay.**

20 A. Yes.

21 **Q. And that, Mr. Dorrington, is one of the**
22 **paragraphs that the defendants in this case have**
23 **indicated that you will be offering testimony on at**
24 **the time of trial. Is that correct?**

25 **THE WITNESS:** Do you want to -- I don't --

1 **Q. Mr. Dorrington, do you agree that**
2 **defendant DEQ has a constitutional duty to maintain**
3 **and improve a clean and healthful environment for**
4 **present and future generations?**

5 **MS. McKENNA:** Objection. Compound.
6 There's multiple statements within that sentence.

7 **THE WITNESS:** DEQ has an authority to
8 enact all provisions of state law, which include the
9 State Constitution. Contained within this sentence
10 and in the paragraph are former elements of the
11 agency mission statement, I believe, in addition to
12 the clean and healthful provision of Article IX of
13 the Constitution.

14 **BY MR. SULLIVAN:**

15 **Q. Is there anything in paragraph 87 that you**
16 **disagree with?**

17 A. Well, respectfully, I would probably
18 rewrite parts of all of it, but I -- I don't feel
19 sentence number two, defendant DEQ has broad
20 authority to protect, sustain, and improve a clean
21 and healthful environment, is a very -- using your
22 own term, very broad statement.

23 We have statutory authority as outlined in
24 -- in state law and enacted by Montana state
25 legislature. Activities include those that would

1 generically protect, sustain, and improve to achieve
2 Article IX of the -- of the State Constitution.

3 The end of that sentence, I -- I don't --
4 I wouldn't agree with, after quote -- quoting benefit
5 present and future generations, the but to the end of
6 the sentence and period reading, but has used its
7 authority in a manner that has resulted in dangerous
8 levels of GHG emissions is an opinion that I would
9 not agree with. And I think that satisfies the
10 answer to your question.

11 **Q. Thank you, Mr. Dorrington.**

12 **Mr. Dorrington, does DEQ analyze the greenhouse gas
13 emissions that result from fossil fuel combustion and
14 fossil fuel extraction activities that it permits?**

15 A. So for any permit application, we would
16 then -- we would review the designed and planned
17 emissions, any control strategies, including the --
18 the use of technology in order to control emissions,
19 then only permit a facility that contained and
20 controlled emissions below limits set forth in state
21 and federal law. Some of those emissions as per
22 prior answer include what would be categorized as
23 greenhouse gas or GHG emissions, including CO2.

24 **Q. How does the Department of Environmental
25 Quality conduct such an analysis if it is complying**

1 So there would be activities of removal of overburden
2 down to the resource and then removal of the
3 resource, transportation of that resource to a
4 logistics hub or consumption point, so the primary
5 analysis for extraction is actually under fugitive
6 dust provisions, which would -- are non-GHG, the use
7 of generators or combustible engines, not to include
8 mobile sources because it's not statutorily allowed,
9 and any -- so the combustion of diesel fuel on-site
10 for a mine is very common. And stationary
11 generators, we would evaluate any of those sources,
12 period.

13 When you look at the permitting and
14 compliance activities related to power generation and
15 combustion of fossil fuels, we would look at stack
16 emissions from the combustion of fossil fuels. Those
17 emissions and the protective standard for those
18 emissions include those emissions that would be
19 categorized as GHGs, exclusionary to some.

20 And to be honest, I -- I'm not a
21 permitter, so I would -- I'd probably -- I'm
22 cautiously approaching the line in which you should
23 speak to a -- a permitter on permit limits. But
24 generally, that's where we're at.

25 **Q. Mr. Dorrington, let's go back to your coal**

1 with the MEPA provision that we just discussed, which
2 was MCA 75-201, subsection (2), subsection (a), which
3 indicated that it may not include actual or potential
4 impacts that are regional, national, or global in
5 nature?

6 **MS. McKENNA:** Point of clarification, the
7 subsection is 75-1-201 Montana Code Annotated.

8 **THE WITNESS:** Fit to your own sentence in
9 -- in the broad statutory authority would -- I would
10 say that DEQ enacts within its authority to review
11 applications of permits. Then conduct compliance
12 activities in order to sustain a facility that has
13 emissions under the limits and standards set forth in
14 state and federal law.

15 **BY MR. SULLIVAN:**

16 **Q. So my question is you do -- so to clarify
17 you're saying that DEQ in permitting of fossil fuel
18 extraction and combustion analyze greenhouse gas
19 emissions?**

20 A. The agency staff and experts that they --
21 they do review application materials for any permit.
22 If I may clarify, so for fossil fuel extraction, so
23 let's just say coal mining, the activity conducted
24 therein by practice loosely referenced as mining, has
25 a very -- has a very discrete operational pattern.

1 mining example where you indicated that there's a
2 series of processes involved in coal mining and coal
3 mining permitting analysis which included removal of
4 the overburden, the extraction of the resource, the
5 transportation of the resource, and the combustion of
6 the resource. Is that a fair summary?

7 A. The combustion of the resource wouldn't be
8 a part of the mining permit but the overall
9 permitting activity. So that -- that's where the
10 line would be drawn where that -- then the combustion
11 of that -- that resource would be part of the air
12 quality permit and the power generation facility.
13 That was the second part of my answer.

14 **Q. Well, then in terms of the coal mining
15 permitting that DEQ does, is it true then that it
16 does not analyze the greenhouse gas emissions that
17 are attendant to the combustion of the coal that's
18 mined?**

19 A. That's correct.

20 **Q. I would like to direct your attention,
21 Mr. Dorrington, to the document that's at tab 7. It
22 will be marked for identification purposes as Exhibit
23 68.**

24 (Whereupon, Exhibit 68 was
25 marked for identification.)

1 **BY MR. SULLIVAN:**

2 **Q. And that indicates it's the mission**
3 **statement and guiding principles of DEQ?**

4 A. Exhibit 68 is not current or accurate, no.

5 **Q. So let's just take a moment, and let's go**
6 **online and get an updated statement of that.**

7 **MR. SULLIVAN:** We'll just -- let's take
8 just a two -- can you call that up on the computer,
9 Ms. McKenna and Barbara?

10 **MS. CHILLCOTT:** Yes.

11 **MS. McKENNA:** Well, I mean, can you send
12 us a link to what you're discussing?

13 **MS. CHILLCOTT:** I have it here.

14 **MR. SULLIVAN:** This is the Montana
15 Department of Environmental Quality mission statement
16 and guiding principles.

17 **MS. McKENNA:** No. I understand. I just
18 want to make sure we're all looking at the same page.
19 So just send me whatever you're looking at, and I'd
20 be happy to review it as well.

21 **MR. SULLIVAN:** And, Barbara, can you make
22 sure that you send to Ms. McKenna and myself the
23 current mission statement?

24 **MS. CHILLCOTT:** Yes.

25 **THE WITNESS:** On the -- I'm seeking to be

1 **Q. Can I see this, please? And as a part**
2 **of --**

3 **MS. McKENNA:** So I still don't have --
4 this is Lee McKenna. I still don't have a copy of
5 the document that you are questioning the deponent
6 on. So if someone could send me a link, that would
7 be great.

8 **MS. CHILLCOTT:** That should be coming
9 through, a web page link. I'm going to send it to
10 you too.

11 **MS. ARMSTRONG:** Is it in the share file?

12 **MS. CHILLCOTT:** No.

13 **THE WITNESS:** And then just point of
14 clarification for me, as you address questions, will
15 you no longer reference Exhibit 68 or -- I just want
16 to be really clear which question I'm answering.

17 **BY MR. SULLIVAN:**

18 **Q. Yeah. So we won't be referencing Exhibit**
19 **68. Instead we'll reference what you have read as**
20 **Montana's DEQ mission statement is to champion a**
21 **healthy environment for a thriving Montana?**

22 A. Correct.

23 **MS. McKENNA:** So at this point, Roger, I'm
24 going to have to object because you're asking the
25 deponent questions about the DEQ's mission statement

1 helpful. Right under on our mobile page, it's the
2 first thing that comes up.

3 **MR. SULLIVAN:** Okay. Okay. Mission
4 statement, yeah.

5 **MS. CHILLCOTT:** I'll e-mail it to you once
6 I get a link here.

7 **THE WITNESS:** Deq.mt.gov. You can go to
8 "about," forward slash "about." Again, seeking to be
9 helpful.

10 **MS. CHILLCOTT:** Yeah. Okay. Just this
11 page.

12 **THE WITNESS:** Under "about" does it begin
13 "Welcome to Montana"? And then the second paragraph
14 in bold, Montana DEQ's mission is to.

15 **MS. CHILLCOTT:** So that's the current
16 mission statement?

17 **THE WITNESS:** Uh-huh.

18 **MS. CHILLCOTT:** Oh, okay.

19 **THE WITNESS:** Yeah. Since 2021.

20 **MS. CHILLCOTT:** Got it. I'm e-mailing
21 everyone.

22 **BY MR. SULLIVAN:**

23 **Q. And what is the DEQ mission statement?**

24 A. To champion a healthy environment for a
25 thriving Montana.

1 which you pulled an old version off the website, and
2 he does not have the correct version in front of him.
3 So I would like for him to have a copy of the current
4 version of the DEQ website if you intend to ask him
5 questions about it. If you want to take a break,
6 we'd be happy to do that, and you can send a copy to
7 the printer and someone can pull it off and bring it
8 in.

9 **MR. SULLIVAN:** Well, I thought that
10 Mr. Dorrington pulled it up on his cell phone.

11 **BY MR. SULLIVAN:**

12 **Q. Did you not, Mr. Dorrington?**

13 **MS. McKENNA:** No. I'm going to object to
14 that. I -- I want the proceedings to have a document
15 of record that's labeled with an exhibit sticker and
16 given to the court reporter as procedure.

17 **MR. SULLIVAN:** We'll just keep moving.
18 That's fine.

19 **BY MR. SULLIVAN:**

20 **Q. Are you familiar with the term, Mr.**
21 **Dorrington, "climate change"?**

22 A. I -- I am familiar with the term "climate
23 change."

24 **Q. In your own words, can you describe what**
25 **climate change is?**

1 A. A sustained change to the climate and
2 climatological impacts on our --

3 Q. You --

4 A. -- on our -- on our globe, I would say but
5 for certain within the spirit of what we're
6 influencing that's in Montana.

7 MR. SULLIVAN: I'm sorry. Could the court
8 reporter read back the answer for me?

9 And one other thing, Mr. Dorrington, we're
10 back to the muffled effect. I'm -- I'm sorry, but if
11 you could pull that mic just another inch or two
12 closer, on my end I'm getting a muffled audio.

13 If the court reporter could read back the
14 last answer, I would appreciate it.

15 (Whereupon, the requested
16 record was read.)

17 BY MR. SULLIVAN:

18 Q. Mr. Dorrington, what do you mean in terms
19 of your reference to "in Montana"?

20 A. As you referenced under Exhibit 6,
21 75-1-201 -- I don't know if that's right or not.
22 Yeah, it is. Yeah. Under (2)(a) the agency right
23 now is -- is limited by the borders of the state for
24 their climate impacts analysis.

25 MS. McKENNA: For clarification, what

1 exhibit number is that?

2 THE WITNESS: Sorry. 66. Did I say 6?

3 MS. McKENNA: (Nodded head up and down.)

4 THE WITNESS: My bad.

5 BY MR. SULLIVAN:

6 Q. How does DEQ analyze those impacts limited
7 to the state of Montana?

8 A. Could you rephrase that. I -- I feel like
9 we covered it, but I'm happy to readdress under
10 something more specific.

11 Q. How does DEQ analyze those impacts in
12 relationship to the state of Montana?

13 MS. McKENNA: Objection. Asked and
14 answered. And objection. Vague and overbroad.

15 THE WITNESS: So within our statutory
16 authority we would analyze application materials
17 subject to issuance of a permit that met provisions
18 within statute, both federal and state, to -- to
19 allow any applicable business or operation a permit
20 to operate within the State. Subject to that, we --
21 we look at emissions under the air quality program
22 and mine permitting programs and assess environmental
23 impacts within the borders of the state.

24 BY MR. SULLIVAN:

25 Q. In terms of the next line of questions,

1 I'm going to direct your attention back to the
2 complaint.

3 A. Exhibit 67, if I could clarify?

4 Q. Yes. And we'll move on to paragraph 88.

5 A. I'm there. Page 28, paragraph 88.

6 Q. Yes. And for the record, that paragraph
7 reads -- and I'll quote -- Defendant DEQ, as the
8 primary administrator of Montana's environmental
9 regulatory, environmental cleanup, environmental
10 monitoring, pollution prevention, and energy
11 conservation laws, has implemented its authority in a
12 manner that has contributed to the constitutional
13 violations described herein. Defendant DEQ's
14 actions, pursuant to and in furtherance of the state
15 energy policy, have contributed to dangerous levels
16 of GHG emissions, end quote.

17 Did I read that correctly, Mr. Dorrington?

18 A. I read your statement as you read
19 paragraph 88, and the words are the same, yes.

20 MS. McKENNA: Objection. The complaint
21 speaks for itself.

22 THE REPORTER: Could you not write on the
23 exhibit.

24 THE WITNESS: Yeah. I apologize. You're
25 right. I guess I did. I apologize. I did that yes.

1 BY MR. SULLIVAN:

2 Q. In your opinion, Mr. Dorrington, what are
3 greenhouse gases?

4 A. Gases emitted through -- well, through the
5 -- some sort of activity, including combustion, gases
6 that are emitted that are attributed to greenhouse
7 gas -- a greenhouse effect, yeah. That -- that's
8 what I would say.

9 Q. Does the amount of greenhouse gases
10 emitted into the atmosphere have any effect on the
11 mission of the Department of Environmental Quality?

12 A. Yes. I would say -- so going back to the
13 mission, a healthy environment for a thriving Montana
14 is subject to emitters achieving and sustaining
15 levels of emissions under state and federal statutory
16 limits, so yes.

17 Q. Are you familiar with the term dangerous
18 levels of greenhouse gas emissions?

19 A. Yes. I -- I -- at the end and close of
20 your paragraph 88, I understand what the words mean,
21 yes.

22 Q. And could you explain what your
23 understanding of those words "dangerous levels of
24 greenhouse emissions" means?

25 A. Well, first, I wouldn't agree with the

1 sentence in any way. I don't believe DEQ's actions
2 have contributed to dangerous levels of -- levels of
3 GHG. And the department conducts activities outside
4 of -- for sure outside of permitting alone that
5 actually counter and improve upon renewable sources
6 of energy in the state and take actually quite a
7 positive role, none of which are reflected in the
8 sentence.

9 So do I understand what you believe to be
10 a dangerous level? There is no emission limit. I do
11 see a reference to Montana administrative record. I
12 have not looked at that record, and I don't know what
13 you would consider a dangerous level.

14 **Q. Do you have an opinion as to what would
15 constitute a dangerous level?**

16 A. I don't.

17 **Q. I'm sorry, Mr. Dorrington. I didn't hear
18 an answer if you gave one.**

19 A. I do not have a personal level where I
20 would consider something dangerous. But I -- I do
21 understand quite clearly the black-and-white
22 standards and limits for emissions within a permit
23 are subject to a program that limits emissions.

24 **Q. Mr. Dorrington, is there anything that you
25 haven't explained in response to my reading to you of**

1 electric vehicles, and that those activities counter
2 the assertion that the agency is conducting
3 activities to harm the defendant's position, that --
4 the -- the -- the statement in -- in paragraph 88 and
5 87. Not defendant's --

6 **MS. McKENNA:** Oh, sorry.

7 **THE WITNESS:** Yeah, no, I'm good. Thank
8 you.

9 **MS. McKENNA:** We've been going for about
10 an hour now. Would you mind if we took a break?

11 **MR. SULLIVAN:** No. That's fine.

12 And so then, Mr. Dorrington, does ten
13 minutes work? Is that a good break?

14 **THE WITNESS:** You bet. Thank you.

15 **MR. SULLIVAN:** Shall we reconvene at
16 quarter till?

17 **THE VIDEOGRAPHER:** We are going off the
18 record. The time is 11:36 a.m.

19 (Whereupon, a break was then
20 taken.)

21 **THE VIDEOGRAPHER:** We are back on the
22 record. The time is 11:56 a.m.

23 **MS. McKENNA:** This is Lee McKenna,
24 attorney for DEQ, and I am asking for a point of
25 clarification for the director's depositions today.

1 **paragraph 88 that you expect to testify to at the
2 time of trial regarding paragraph 88?**

3 A. Do you mind -- if I may, I would like to
4 read the full paragraph again. I -- I -- that's a
5 wide open question so let me answer it clearly.

6 I suppose in the middle of the paragraph
7 sentence -- middle -- middle fragment sentence
8 beginning "has implemented its authority in a manner
9 that has contributed constitutional violations
10 described herein", I would -- I would disagree with,
11 I would testify to that effect. I don't believe
12 that's true.

13 The closing sentence, as I said, I also
14 don't agree with and don't believe it's true. I
15 would probably testify to the fact that the state
16 energy policy and the convolution and use of the
17 state energy policy as a hook into state permitting
18 activities under Title 75 and 82 are not -- are not
19 related as described in -- in the paragraphs
20 submitted.

21 And I would testify to the fact that the
22 agency in -- in contradiction to this statement
23 conducts extensive activities in order to both inform
24 and improve upon alternative energy sources,
25 alternative energy programs, the promotion of

1 He was noticed for a 30(b)(6) deposition starting at
2 9:00 today. The director was here and did appear at
3 that time. And it is now almost noon, and there
4 appear to be a number of exhibits that the plaintiffs
5 intend to question the deponent about.

6 The director also has a notice of
7 deposition in his individual capacity starting at
8 1:00. So I am wondering how the plaintiffs intend to
9 use the director's time today and also to clarify
10 that it is DEQ's understanding that the 30(b)(6)
11 depositions will be split among three deponents for
12 DEQ and that we have already used three hours. The
13 total amount of time under the Montana Rules of Civil
14 Procedure for any one deposition is seven hours. So
15 it's not seven hours each for a 30(b)(6) deposition.
16 It is seven hours in total split among the three DEQ
17 deponents.

18 **MR. SULLIVAN:** So to respond, we have thus
19 far been examining Mr. Dorrington on his hybrid
20 expert disclosure. We have been going through the
21 paragraphs that the State of Montana indicated that
22 he would be a hybrid expert. We will be turning to
23 his 30(b)(6) deposition I would say relatively
24 shortly once we finish with the expert testimony you
25 indicated he'll be offering.

1 Second, I don't agree with your
2 construction of the 30(b)(6) limitations, and I would
3 suggest that that would require a motions practice
4 before the court. And you would need to be looking
5 for a protective order if that's going to be your --
6 your position.

7 **BY MR. SULLIVAN:**

8 **Q. With that, Mr. Dorrington, are you**
9 **prepared to proceed?**

10 A. I am. I would -- I would note that I
11 prepared for the morning to be 30(b)(6) and was
12 offering under that understanding, but I don't feel
13 anything I answered would be a conflict or contrary
14 to what I've already said.

15 **Q. Thank you, sir. You've also been**
16 **designated in the expert witness disclosure of the**
17 **state of Montana that you'll be testifying in regards**
18 **to paragraph 89 of the complaint, Mr. Dorrington.**
19 **And as you're aware, that has been marked this**
20 **morning as Exhibit 67.**

21 **Would you turn to the complaint, paragraph**
22 **89, and we'll do turn about is fair play. Why don't**
23 **you read into the record what paragraph 89 states,**
24 **and then I'll ask you about the expert opinions that**
25 **you'll be offering on that paragraph.**

1 A. First, can I just verify with my counsel
2 that 89 was mine? I -- I don't -- I know -- I have
3 no problem reading it. I just want to make certain
4 that it's an accurate depiction of the record that we
5 had submitted.

6 **Q. Yes.**

7 **MS. McKENNA:** So, again, the 30(b)(6)
8 designations divide up the topics or the paragraphs
9 and the documents.

10 **THE WITNESS:** Uh-huh.

11 **MS. McKENNA:** And so, I mean, again, I
12 must object, because if you were proceeding with this
13 -- we were proceeding with this deposition under the
14 understanding that it was the director's 30(b)(6)
15 deposition as noticed in your November 30th, 2022,
16 plaintiffs' second amended notice of 30(b)(6)
17 deposition. So that's what we thought we were doing
18 for the past three hours, and we've just learned a
19 few minutes ago that apparently you have been
20 proceeding with the director's deposition for the
21 deposition that we believed was noticed for 1:00 p.m.
22 today.

23 So as I said, we divided up the paragraphs
24 for -- amongst Director Dorrington; the Air, Energy,
25 and Mining administrator, Sonja Nowakowski; and Dave

1 Klemm for the 30(b)(6) depositions, but we did not do
2 that for the individual depositions.

3 **THE WITNESS:** Okay. So proceed? I'm --
4 I'm comfortable reading and then answering questions
5 from here. I -- I want to make certain we're on the
6 same page.

7 So, Roger -- Mr. Sullivan, number 89 on
8 page 28 reads: "Defendant DEQ is mandated to ensure
9 that all projects and activities for which it issues
10 permits, licenses, authorizations, or other approvals
11 comply with the Montana -- with Montana's
12 environmental laws and rules, parenthetical reference
13 including the MEPA, to protect the quality of
14 Montana's natural environment. Defendant DEQ is
15 responsible for enforcing compliance with its
16 permitting requirements."

17 **BY MR. SULLIVAN:**

18 **Q. Thank you, Mr. Dorrington. Do you agree**
19 **with the allegations contained in paragraph 89?**

20 A. I -- I believe so. DEQ's role is
21 definitely mandated to ensure that projects and
22 activities as it issues permits, licenses,
23 authorizations. I don't know what other approvals
24 would be, and so I not include that. Comply with
25 Montana's environmental laws and rules, yes. We are

1 also responsible for enforcing compliance with our
2 permits, yes.

3 **Q. Mr. Dorrington, let's move on, then, to**
4 **paragraph 92, which is on page 29. And I think it**
5 **works well if you read that into the record, please.**

6 A. Sure. Thank you. On page 29, paragraph
7 92: "Defendant DEQ has permitted strip and
8 underground coal mining operations and mining and
9 prospecting activities that are causing dangerous
10 amounts of GHG emissions. DEQ has issued permits for
11 surface coal mining in Montana on state and federal
12 land. Defendant DEQ actively works with coal mining
13 companies in Montana to implement a state energy
14 policy. In approving such activities, DEQ has
15 repeatedly refused to disclose the significant harms
16 to human health and the environment from its
17 decisions."

18 **Q. Mr. Dorrington, do you agree that**
19 **defendant DEQ has permitted strip and underground**
20 **coal mining operations and mining and prospecting**
21 **activities that are causing dangerous amounts of**
22 **greenhouse gas emissions?**

23 A. I do not.

24 **Q. And what's the basis for your**
25 **disagreement?**

1 A. I believe, as the sentence reads, the
2 factual portion of that sentence is DEQ has permitted
3 strip and underground mining -- coal mining
4 operations and mining and prospecting activities,
5 period. I don't believe we have permitted such
6 operations and activities causing dangerous amounts
7 of GHG emissions.

8 **Q. You do not?**

9 A. I'm sorry. I didn't understand that.

10 **Q. How do you know?**

11 A. The current permits and compliance of
12 strip and underground mining operations have been
13 reviewed for air quality permits and limits
14 established in state and federal law. They are
15 complying. For anything outside of our scope, I -- I
16 don't know what you would be -- you would reference
17 outside of our scope other than we follow the law. I
18 don't believe those operations are causing dangerous
19 amounts of GHG emissions as you've stated.

20 **Q. If I'm understanding correctly,**
21 **Mr. Dorrington, DEQ doesn't analyze the greenhouse**
22 **gas emissions that impact regional or -- regional or**
23 **global nature pursuant to the provisions of the MEPA**
24 **subsection (2)(a) that we discussed earlier. Is that**
25 **correct?**

1 A. DEQ does follow 75-1-201, and it analyzed
2 climate impacts within the border of the state. What
3 paragraph 92 is attempting to is convolute the coal
4 permitting activities, coal mining compliance with --
5 with GHG emissions and the statutory provisions under
6 MEPA and the state energy policy. Those are not
7 linear ties.

8 And within -- so within the coal mining
9 permit and compliance, there's a discrete set of
10 activities related to that. Within MEPA and a state
11 action, there's a discrete line of activities, and
12 then within the state energy policy, which is an
13 aspirational policy set forth by the state
14 legislature, there is a discrete and enumerated set
15 of activities, all of which the department complies
16 with.

17 **Q. Well, we've established already through**
18 **your earlier testimony that in analyzing --**
19 **conducting your analysis for a coal mining permit, a**
20 **part of that permitting process as to whether to**
21 **approve a permit for a coal mine or the expansion of**
22 **a coal mine, you don't consider in your analysis the**
23 **combustion of the coal that's mined. Is that**
24 **correct?**

25 A. Your statement is correct. Under a coal

1 mining permit, the permitting activities which
2 include, as I had already stated, removal --
3 generically removal of overburden, removal of
4 resource, transportation of resource, those items are
5 evaluated.

6 **Q. Yes. As you earlier indicated.**

7 A. I don't know if I answered completely your
8 question, so there are more sentences I would comment
9 on.

10 **Q. Yeah. Well, let's continue. You said**
11 **there was -- there were more than -- go ahead?**

12 A. Yes, sir. So second sentence: "DEQ has
13 issued permits for surface coal mining in Montana on
14 state and federal land," that is factual and
15 accurate. I would agree with that.

16 **Q. In regards to that, what permitting**
17 **activity does DEQ conduct for surface mining on**
18 **nonfederal state land?**

19 A. So this is a matter of practicality. The
20 geology is irrespective of surface land ownership.
21 So when a mine and ownership is -- is obtained, an
22 operator can checkerboard state, federal, and private
23 land, not referenced, and mineral resource underneath
24 surface land ownership, and that operator must
25 consider under their own operation what surface land

1 designates or authorizes them to complete. We are
2 the permitter for the mining activity, whether on the
3 surface or subsurface.

4 **Q. And is it the same for federal land as**
5 **well as for nonfederal land in Montana?**

6 A. Actually, the designation is for federal
7 mineral. So you'd have state and federal mineral
8 land. You're interrelating land ownership with
9 mineral, which isn't always the case.

10 You could have the process by which the
11 two -- if you go back to -- and I understand your
12 question, and I'm helping you out. If -- if you're
13 saying is the evaluation of GHG emissions for a
14 surface coal mine on state or federal land the same,
15 no, it is not.

16 **Q. Were there -- are there any -- or you**
17 **indicated and directed my attention to the second**
18 **paragraph -- the second sentence in paragraph 92.**
19 **Were there any other comments that you had in regards**
20 **to what you might anticipate your testimony will be**
21 **at the time of trial for paragraph 92?**

22 A. Yes, sir. Defendant DEQ actively works
23 with coal mining companies in Montana to implement
24 the state energy policy is not -- is not true. In
25 terms of the state energy's aspirational policy

1 toward energy and renewables, it would actually be
2 the exact opposite of that.

3 So the state energy office does not
4 actively work to permit coal mining companies. The
5 mining bureau, including leadership and staff, work
6 on coal mining permits. The air quality bureau
7 within the agency work on air quality permits related
8 to mining and power generating facilities. The
9 energy office does not actively work with coal mining
10 companies in the manner alluded to.

11 In the closing sentence, in approving such
12 activities DEQ had repeatedly refused to disclose
13 these significant harms to human health and
14 environment from this decision, I don't agree with
15 that at all.

16 **Q. In terms of directing your attention back**
17 **to the state energy policies, MCA 90-4-1001,**
18 **subsection (1), subsection (d) states: "Increase**
19 **utilization of Montana's vast coal reserves in an**
20 **environmentally sound manner that includes the**
21 **mitigation of greenhouse gas and other emissions."**
22 **How does DEQ do that?**

23 **MS. McKENNA:** Objection. Calls for a
24 legal conclusion.

25 **THE WITNESS:** Uh-huh. Within the

1 construct of the state energy policy goal statements,
2 which again is an aspirational policy, the energy
3 program is aware of -- is -- is probably interacting
4 with the mining programs and the air quality program,
5 but I would -- the statement in, I believe, sentence
6 three going back, actively works with coal mining
7 companies to implement the state energy policy, it --
8 it is very common that among the host of all state
9 law applicable to any one agency, you balance the
10 total hours per staff person. And I'm -- and -- and
11 you conduct activities. You may not conduct all
12 activities at all times to satisfy all provisions.

13 And the energy bureau leadership and staff
14 do not actively work with coal mining companies to
15 implement them as the state energy policy. They may
16 be aware of, they may conduct meetings or -- or have
17 conversations, but the bulk of their work -- as you
18 allocate 40 hours per staff person, the bulk of their
19 work is actually in renewables, in energy
20 conservation, in energy policy, in assessing and
21 understanding integrative resource plans for public
22 utilities, all of -- all of which also engage that
23 program.

24 **BY MR. SULLIVAN:**

25 **Q. Is there anything else in regards to**

1 **paragraph 92 of the complaint that you anticipate you**
2 **may be testifying to as an expert at the time of**
3 **trial?**

4 **A.** Probably just reiterating my prior point,
5 that 90 -- paragraph 92 is a convoluted way
6 in which a permit relates to the state energy policy
7 and the activities that govern Montana Environmental
8 Policy Act.

9 **Q. In terms of the coal mining permits that**
10 **DEQ issues, does DEQ undertake a MEPA analysis for**
11 **the applied-for permits?**

12 **A.** Yes. Can you clarify what you mean by a
13 permit?

14 **Q. If there is an application pursuant to the**
15 **Montana surface mining and underground, we call it**
16 **MSUMRA as an exhibit, but the Surface Mining Act,**
17 **where DEQ undertake a MEPA analysis for a permit that**
18 **was applied for under MSUMRA?**

19 **A.** If a state action is taken and MEPA is
20 triggered, then the agency would definitely conduct a
21 -- a MEPA analysis, yes.

22 **Q. And, likewise, would it conduct a MEPA**
23 **analysis for an amendment to a permit to expand a --**
24 **a surface mine?**

25 **A.** It's a good question. I -- I apologize

1 for not knowing the limit. In -- in -- under Title
2 82 in mining, there are some programs that whereby
3 you'd have a -- an amendment or a modification in
4 which it would not trigger a state action. And I
5 apologize. I'm not trying to be unclear. I just
6 want to make certain I don't misanswer this. There
7 -- there are some provisions in some code for
8 different mining between open cut, hard rock, and
9 coal in which you would not trigger a state action
10 and a MEPA is not required.

11 **Q. To your knowledge, Mr. Dorrington, has DEQ**
12 **ever denied a permit for coal mining because of**
13 **impacts to human health?**

14 **A.** We have -- so as a normal course of -- of
15 business, an application will come into the agency
16 whereby we'll do a review, and a deficiency review
17 process will -- will be undertaken. That deficiency
18 then requires -- in order for a permit to be issued,
19 all deficiencies must be remedied, rectified,
20 corrected. Excuse me. I think -- I know that
21 application submittals to the agency have not all
22 made it through to a permit issuance.

23 **Q. And the applicant, then, is invited to**
24 **correct any deficiencies noted?**

25 **A.** Correct. Yes.

1 **Q. And during your tenure as DEQ director, to**
2 **your knowledge, has DEQ denied a permit for coal**
3 **mining?**

4 A. We have applications in that are yet in a
5 deficiency review cycle. I don't -- I know you're
6 trying to get at a point. There isn't a -- there
7 isn't a denial per se. There's a deficiency review
8 process, and no permit will be issued until all
9 deficiencies are answered. And I believe there are
10 permitting actions within the mining programs, within
11 the air quality programs that -- that have
12 applications submitted but deficiencies not resolved,
13 yes.

14 **Q. There's not been a denial as such, but**
15 **they're in a deficiency status, if I understand your**
16 **testimony correctly?**

17 A. I -- I believe that's a correct
18 characterization, yes. One thing, Mr. Sullivan, we
19 have not spoken of that I would probably address in
20 your last sentence is the relationship and
21 requirement for MAPA provisions, in a public
22 disclosure and public involvement process, that
23 Montana DEQ also follows MAPA. There is a -- a
24 public notice of activities, a public comment
25 process, a response to public comment by -- by

1 program, whereby citizens and all stakeholders that
2 have an interest in any state action have the ability
3 to comment the state agency to accept and -- and
4 understand, hear those comments, then respond to
5 comment. Those public comments do alter and have in
6 the past altered provisions or stipulations within
7 any one permit, not -- not limited to mining but also
8 within mining.

9 **Q. Let's look next at paragraph 93 of the**
10 **complaint, Mr. Dorrington. If you would, would you**
11 **please read that into the record.**

12 A. Yes. On page 30, number 93, "DEQ has
13 authorized, permitted, and encouraged fossil fuel
14 extraction, transportation, and combustion, which
15 activities generate dangerous levels of GHG
16 emissions, contribute to the climate crisis, and harm
17 youth plaintiffs.

18 **Q. So let's break that down, Mr. Dorrington.**
19 **Do you agree that DEQ has authorized, permitted, and**
20 **encouraged fossil fuel extraction?**

21 A. No.

22 **Q. And what's the basis for that**
23 **disagreement?**

24 A. The last portion of the sentence
25 exaggerates the department's role of encouraging

1 fossil fuel extraction.

2 **Q. And you disagree that the department does**
3 **that in any manner?**

4 A. I do.

5 **Q. What about in regards to the**
6 **transportation of fossil fuels?**

7 A. With respect, the -- the agency has
8 literally no encouragement of the transportation of
9 fossil fuels. There is no -- there's no benefit or
10 detriment. It's a logistics piece for any one
11 operation to move a mineral resource from the point
12 in which geology has deposited it to the point at
13 which it logistically needs to be moved or consumed.
14 We have no encouragement of transportation.

15 **Q. So you -- you would testify that DEQ**
16 **authorizes or permits the transportation of fossil**
17 **fuels?**

18 A. As a portion of any one mining permit,
19 transportation logistics -- whether in boundary or
20 external to the boundary of a permit, transportation
21 is considered. Encouraged is an exaggeration.

22 **Q. And in terms of transport, that would --**
23 **are you including within your understanding of**
24 **transport would be pipeline transport of oil and gas?**

25 A. Sure. Yes, sir.

1 **Q. Do you agree that fossil fuel extraction,**
2 **the transportation of fossil fuels, and the**
3 **combustion of fossil fuels generate greenhouse gas**
4 **emissions?**

5 A. Can you restate that? I just want to make
6 sure I get your terms correct.

7 **Q. Do you agree that fossil fuel extraction,**
8 **transportation of fossil fuels, and combustion of**
9 **fossil fuels generate greenhouse gas emissions?**

10 MS. McKENNA: Objection. Compound. Can
11 you break that down, please?

12 THE WITNESS: The -- so I will do that.
13 The extraction of any mineral resource requires
14 energy and the release of -- of that energy, subject
15 to provisions of the law regarding energy.

16 Transport requires energy. And the
17 combustion of fossil fuels necessarily requires
18 emission as a result of the combustion process, yes.
19 Those three may generate GHGs.

20 BY MR. SULLIVAN:

21 **Q. Mr. Dorrington, in regards to paragraph**
22 **93, what do you expect to testify in regards to that**
23 **paragraph at the time you're called as a hybrid**
24 **expert at the time of trial?**

25 A. Paragraph 93 I would agree to and testify

1 that DEQ has authorized and permitted and evaluated
2 transportation of fossil fuels in the case of and not
3 to convolute permitting with state energy policy
4 and/or air quality permitting. We also evaluate
5 transportation and combustion in separate activities.

6 The next portion of your sentence, which
7 activities generate dangerous levels of GHG and
8 contribute to the climate crisis and harm youth
9 plaintiffs I do not agree to. Yeah.

10 **Q. I would direct your attention next to the**
11 **document that is at tab 17 in the exhibit notebook,**
12 **Barbara.**

13 **MS. CHILLCOTT:** Yes.

14 **MR. SULLIVAN:** And it starts with the
15 defendants' Bates stamp number D-000590.

16 **MS. CHILLCOTT:** Yes.

17 **MR. SULLIVAN:** And we will mark that for
18 identification purposes as --

19 **MS. CHILLCOTT:** 78.

20 (Whereupon, Exhibit 78 was
21 marked for identification.)

22 **MR. SULLIVAN:** What -- what number are we
23 on now?

24 **MS. CHILLCOTT:** Exhibit 78.

25 **MR. SULLIVAN:** I'm sorry. I can't hear

1 A. Subject to my position, I wouldn't really
2 know -- I don't think this is an accurate complete
3 record of all the way in which we track a permit.
4 But yes. This is a -- this is a -- this looks like a
5 data dump of permits issued, application tracking
6 process, yes.

7 **Q. And was this document made and kept in the**
8 **course of DEQ's regularly conducted business**
9 **activity?**

10 A. I don't know -- I don't know that answer.

11 **Q. To the best of your knowledge, would this**
12 **have been an agency document that would reflect DEQ's**
13 **conducted business?**

14 **MS. McKENNA:** Objection. Asked and
15 answered.

16 **THE WITNESS:** Yes. I believe so.

17 **MR. SULLIVAN:** I would ask Barbara if you
18 could hand Mr. Dorrington our next exhibit, which is
19 at tab 20. It will be -- which we'll mark as Exhibit
20 81.

21 **MS. CHILLCOTT:** Okay.

22 (Whereupon, Exhibit 81 was
23 marked for identification.)

24 **THE WITNESS:** I have Exhibit 81 in front
25 of me.

1 that.

2 **MS. CHILLCOTT:** Exhibit 78.

3 **THE WITNESS:** 78.

4 **MR. SULLIVAN:** 78.

5 **BY MR. SULLIVAN:**

6 **Q. Have you had a chance, Mr. Dorrington, to**
7 **take a look at that document?**

8 A. I have not.

9 **MS. McKENNA:** We're having some technical
10 difficulties.

11 **THE WITNESS:** I don't want to mess with
12 your exhibits. You already made sure I don't write
13 on stuff. Clean record.

14 If you'd give me just a moment,
15 Mr. Sullivan, I'll -- I'll review it real quick.

16 **BY MR. SULLIVAN:**

17 **Q. Yeah. You take your time.**

18 A. Yes, sir. I'm aware.

19 **Q. So are you familiar with how DEQ prepares**
20 **documents such as this?**

21 A. Generally, yeah. I mean, if you asked me
22 to generate them, no, I couldn't. But yes, I
23 understand that they're generated within the agency.

24 **Q. Is this document an example of how DEQ**
25 **tracks permits that it issues?**

1 **BY MR. SULLIVAN:**

2 **Q. And what is that document?**

3 A. It's a date stamped screenshot of the DEQ
4 website dated 5/26/22. And it appears that it is a
5 table of air quality permits, by permit number and
6 permittee, issue date, and permit type.

7 **Q. And is this a publicly available document?**

8 A. I believe so, yes.

9 **Q. And was this document made in the course**
10 **of DEQ's regularly conducted business?**

11 A. I don't believe the document was made at
12 all. I mean, it's an upload of what our permitting
13 process is and that, a list of permits. It's
14 probably a correlation to the database underlying
15 both of your exhibits.

16 **Q. Well, does the database manifestation**
17 **there would reflect DEQ regularly conducted business**
18 **activity?**

19 A. To the best of my knowledge, yes.

20 **Q. To your knowledge, did DEQ analyze the**
21 **greenhouse gas emissions that would result from the**
22 **projects authorized by these permits?**

23 A. The department would have conducted its
24 individual permitting activities for each of the
25 individual permittees within the provision and

1 timeliness required by law, yes.

2 **Q. It's your testimony that, yes, DEQ did**

3 **analyze the greenhouse gas emissions?**

4 A. It's my testimony that we have evaluated

5 emissions for each of these that obtained a permit --

6 a permit for air quality emissions. Some of those

7 emissions may have included and likely do include

8 those categorized as GHGs.

9 I think to clarify, Mr. Sullivan, in --

10 I'm not a permitter. So I am aware of permit

11 activity. I understand what the programs are doing.

12 We -- and I know for an air quality permit that

13 they're looking at emissions, and some of those

14 emissions would include what others -- and would be

15 traditionally categorized as GHG emissions.

16 **Q. To your knowledge, is there a discrete**

17 **analysis of what would be characterized as greenhouse**

18 **gas emissions pertaining to those permits?**

19 A. To my knowledge, anything that would have

20 a limit requirement, a standard, we would evaluate

21 those emissions according to the limit or standard,

22 assess and require control equipment to achieve

23 something less than the limit or standard in order

24 for any one individual permittee to operate and

25 sustain operations.

1 **MR. SULLIVAN:** I'm going to flip to

2 another book, so another volume, and I think the

3 volume is in the other room there. So I'll be -- if

4 we could take a break for just a couple of minutes,

5 get off five minutes, that would be great, and I will

6 get my next volume of exhibits.

7 **THE WITNESS:** Thank you.

8 **THE VIDEOGRAPHER:** We are going off the

9 record. The time is 12:38.

10 (Whereupon, a break was then

11 taken.)

12 **THE VIDEOGRAPHER:** We are back on the

13 record. The time is 12:54.

14 **MS. McKENNA:** This is Lee McKenna,

15 attorney for DEQ. And I am going to discontinue

16 these -- this deposition because the 30(b)(6)

17 deposition was noticed for 9:00 this morning at 800

18 North Last Chance Gulch, and the director showed up

19 prepared to answer questions as a 30(b)(6) deponent.

20 And we learned in the middle of this deposition about

21 an hour ago that apparently Mr. Sullivan has been

22 proceeding to ask the deponent questions under the

23 notice of deposition for Mr. Dorrington at 1:00,

24 which was the notice for him in his individual

25 capacity.

1 And because Mr. Dorrington has been

2 answering questions in this deposition under the

3 30(b)(6) notice as a 30(b)(6) deponent, which is not

4 the deposition that Mr. Sullivan has been conducting,

5 I -- I believe that this entire transcript needs to

6 be stricken. I will make a motion to the court to do

7 that if we don't agree. And I believe that

8 Mr. Dorrington needs to be renoticed for his 30(b) --

9 not for his 30(b)(6) deposition, for his -- for his

10 deposition in his individual capacity.

11 But our position is that we showed up at

12 9:00 for the 30(b)(6) deposition, and you have not

13 been doing a 30(b)(6) deposition. And that is

14 completely against the rules of civil procedure.

15 **MR. SULLIVAN:** Our response is is that we

16 noticed both of these depositions up for the same day

17 to accommodate the convenience of the director, and

18 we proceeded to ask him questions about his -- the

19 expert hybrid to begin with, and that was to be

20 followed by the 30(b)(6). I don't think that that

21 technical distinction is -- is of -- of legal

22 consequence. We proceeded in good faith. I don't

23 think there's been any confusion as to the questions

24 asked or for that matter the answers given. I think

25 it makes the most sense to proceed, and we could

1 finish this whole process today, which in my

2 estimation would be not only efficient, but it would

3 be the most practical way to proceed.

4 **MS. McKENNA:** So, again, the director has

5 been answering questions under the assumption that

6 this was the 30(b)(6) deposition, and you have not

7 been proceeding under a 30(b)(6) deposition, which

8 was -- this 30(b)(6) deposition was noticed for 9:00

9 this morning, and we showed up for a 30(b)(6)

10 deposition. And the director expected the -- the

11 deposition in his individual capacity to be at 1:00

12 this afternoon. And apparently, you've been

13 conducting that deposition during his 30(b)(6)

14 deposition, which is not what he was noticed for.

15 So the director has fundamentally not been

16 given proper notice for his deposition and does not

17 believe that, you know, this has been fair. This is

18 not how he would have answered questions, you know,

19 if he knew that this was his individual capacity, not

20 that he would have answered, you know, in any way

21 that was -- was not the truth but just was not the --

22 the hat that he was wearing when he was -- you know,

23 not the assumptions that -- that, you know, he had

24 going into this deposition for the notice that was

25 given.

1 So I mean, frankly, I'm just astounded.
2 I've never had this happen before, and I just don't
3 think it's fair to the director at all or to DEQ. So
4 our position is that, you know, we showed up for a
5 30(b)(6) deposition, that this was the time and place
6 that was noticed to do that. And, you know, I just
7 -- honestly, I don't know what to do other than to,
8 you know, strike this transcript.

9 And if you want to proceed with the notice
10 of deposition for the director in his individual
11 capacity, we'd be happy to show up this afternoon at
12 1:00 in order for you to take his deposition in his
13 individual capacity as the notice that was dated
14 November 30th, 2022, signed by Nathan Bellinger and
15 which was given to us indicated that you intended to
16 do.

17 **MR. SULLIVAN:** Well, quite frankly,
18 Counsel, I think that is a very inefficient way, and
19 I don't think it's in any way prejudicial to proceed
20 with the 30(b)(6) deposition which we could do
21 efficiently. And I -- I would really imagine that,
22 as you indicated, there's nothing that the -- that
23 Mr. Dorrington has testified to that isn't honest and
24 isn't straightforward. And there seems to me to be
25 no reason why we couldn't finish this whole thing up

1 very efficiently right now.

2 **MS. McKENNA:** Yeah. As I said, the
3 director is very uncomfortable because he feels like
4 he was misled and was -- and has been in a deposition
5 in his individual capacity for a deposition that he
6 thought was a 30(b)(6) deposition. And so I think
7 that that is grounds for -- for striking this
8 deposition. And I am perfectly open to calling the
9 judge right now and getting her opinion.

10 **MR. SULLIVAN:** Yeah. We could attempt to
11 do that.

12 So maybe, Barbara, can -- can you attempt
13 to get the judge on the line?

14 **MS. CHILLCOTT:** Sure. Do you have the
15 number?

16 (Whereupon, the judge was
17 called.)

18 **MS. LOONEY:** Hi, you've reached the
19 voicemail of Farrah Looney, deputy clerk with
20 district court and scheduling clerk for Judge Seeley.
21 I'm either away from my desk or in a hearing. You
22 can contact me via e-mail at F --

23 **MS. McKENNA:** Hey, Mary, can you transfer
24 me to Judge Seeley's law clerk?

25 **MALE VOICE:** Please leave a message. I'll

1 get back to you as soon as I can.

2 **DIGITAL VOICE:** Record your message at the
3 tone. When you are finished hang up or press pound
4 for more options.

5 **MS. McKENNA:** Hey, Keagan, this is Lee
6 McKenna from the Montana Department of Environmental
7 Quality. We're in depositions for Rikki Held versus
8 State of Montana case, and we have an issue that we
9 would like the judge to rule on. I don't know if
10 it's possible to get ahold of the judge on such short
11 notice. My number is (406) 444-6559, (406) 444-6559.

12 If you -- it's about 1:00 now. If you get
13 this message in the next few minutes, thanks.

14 I mean, I -- I just am -- I know the
15 director is uncomfortable with the notice given and
16 the deposition that he thought that he was giving.
17 So I think that it's just best to --

18 **MR. SULLIVAN:** Counsel, I think that one
19 option that you have would be to proceed with the
20 afternoon deposition as the 30(b)(6) deposition with
21 your pending motion to strike. In other words, you
22 can present that to the court. The remedy that
23 you're going to seek is to strike it.

24 From our position we opened with going
25 over the defendants' expert witness disclosure and in

1 particular reviewed with Mr. Dorrington his hybrid
2 expert witness provisions, including what he was
3 going to -- it was represented to us he would testify
4 regarding. And that was the first exhibit that we
5 reviewed this morning.

6 So I don't think that it's fair to say
7 that this was in any sense a -- a surprise. I think
8 that your proposed remedy of striking it should be
9 presented to the court. But I think that if we
10 finish up today, you have the option of that as
11 presenting it to a remedy we can argue with to the
12 judge, and she can rule and we don't have to
13 otherwise inconvenience Mr. Dorrington at a future
14 date.

15 And so I would propose that we proceed, we
16 finish up, and that you -- you preserve your option
17 to make the motion to strike. We argue it to the
18 judge and let the judge decide.

19 **MS. McKENNA:** I can present that option to
20 Mr. Dorrington. I mean, I still object because we
21 didn't get proper notice. I can present that option
22 to Mr. Dorrington and see what he says. And yeah.
23 We will be proceeding with some sort of motion on the
24 deposition today.

25 So are we -- are we discontinuing this

1 deposition and then starting the 30(b)(6) deposition,
2 which was noticed for one -- excuse me -- starting
3 the -- starting a new deposition at 1:00, which would
4 be the 30(b)(6) deposition?

5 **MR. SULLIVAN:** Yes. That would be -- that
6 would be agreeable to us.

7 **MS. McKENNA:** Okay. I mean, my position
8 is that we have already given you the 30(b)(6)
9 deposition, and frankly, things have been so
10 disorganized that we gave you wide latitude to ask
11 all sorts of questions without objecting, because
12 honestly, I -- I -- you know, there's been a lot of
13 time wasted today.

14 So it's not like we knew where you were
15 going, and it's not my job to -- to say, hey, wait a
16 minute. You're -- you're talking about being a
17 hybrid witness during your 30(b)(6) noticed
18 deposition. You know, that's -- that's not -- you
19 know, that's your prerogative what to ask during --
20 during his deposition, and it's not my job to keep
21 you on task.

22 So I will -- I will ask the director what
23 he wants to do as far as -- but I -- I -- on the
24 record, my position is that we've already given the
25 30(b)(6) deposition this morning, which was noticed

1 attorney for DEQ. I have spoken with Emily Jones and
2 with the director of DEQ. Our position, as
3 previously stated, is that the deposition that was
4 noticed this morning at 9:00 was a 30(b)(6)
5 deposition, and in the middle of this -- well,
6 actually, more towards the end of this deposition, we
7 learned that the plaintiffs have been conducting THE
8 deposition of the director in his individual capacity
9 and not as a 30(b)(6) deposition as noticed.

10 For those reasons, we intend to file a
11 motion to strike. The director is very uncomfortable
12 because he believes that his testimony was given
13 under the assumption that he was testifying in his
14 30(b)(6) capacity and not in his capacity as
15 director.

16 We preserve all objections as previously
17 noted in the record before we went off the record a
18 few minutes ago.

19 That said, the director is graciously
20 willing to be deposed on a 30(b)(6) deposition as
21 noticed, which was supposed to be at 9:00 this
22 morning, but he's willing to come back at 2:00 this
23 afternoon. He does need to get a little bit of a
24 break so that he can get something to eat. But he is
25 willing to come back and be a deponent for the

1 at 9:00. And so I -- I -- you know, his deposition
2 in his individual capacity is -- is noticed for this
3 afternoon.

4 But I will ask him what he wants to do.
5 And I'm not counsel of record, and I'm just here to
6 defend the DEQ deponents. And I tried to get in
7 touch with Ms. Jones, and she's not available because
8 she's doing something -- covering something else
9 right now.

10 So I guess I'm -- I'm uncomfortable when I
11 spotted what I believe is a significant procedural
12 error to waive -- you know, to waive any grounds for
13 objection that the State may have. But I'll talk to
14 the director and see what he says.

15 **MS. CHILLCOTT:** Roger, should we go off
16 the record? Roger, would you like to go off the
17 record?

18 **MR. SULLIVAN:** Yes.

19 **THE VIDEOGRAPHER:** We are going off the
20 record. The time is 1:07 p.m.

21 (Whereupon, a break was then
22 taken.)

23 (Whereupon, the deposition
24 continued at 1:23 p.m.)

25 **MS. McKENNA:** This is Lee McKenna,

1 30(b)(6) deposition that was supposed to be at 9:00
2 but it was improperly noticed.

3 **MR. SULLIVAN:** We shall reconvene at 2:00.
4 We -- our -- our position, for the record, is that
5 the subjects that were addressed this morning are
6 within the gambit of the 30(b)(6) deposition. The --
7 there's a distinction being made here, but we are
8 perfectly willing to accept his testimony this
9 morning as his 30(b)(6) testimony. So to be clear,
10 we -- we are fine with that. We can live with that.

11 And in terms of the continuation of the
12 deposition, he testified as to paragraphs that he was
13 indicated he would be representing the department.
14 If I remember correctly here on my outline, there's
15 one paragraph left, which is paragraph 118, and I
16 think we could expedite this afternoon's continuation
17 because we are perfectly happy to consider that
18 testimony on the basis of it being his 30(b)(6)
19 deposition testimony, as counsel for DEQ indicated
20 that was their assumption, that was the director's
21 assumption, and we can live with that.

22 And with that having been stated, we can
23 wrap up the 30(b)(6) deposition with a short --
24 relatively short line of questions on the one
25 paragraph of his 30(b)(6) disclosure that we haven't

1 discussed yet in the complaint. Thank you, Counsel.

2 **MS. McKENNA:** So then what will happen at
3 2:00? You're proceeding with his deposition in his
4 individual capacity?

5 **MR. SULLIVAN:** No. We're going to --
6 we're going to continue with his deposition as a
7 30(b)(6) deponent as was -- you indicated that was
8 his assumption, and we can live with it. All of his
9 testimony was given on the assumption, as you've
10 stated, that it was a 30(b)(6) deposition.

11 **MS. McKENNA:** Yes.

12 **MR. SULLIVAN:** And we will live with it.

13 **MS. McKENNA:** I understand that.

14 **MR. SULLIVAN:** And -- and in light of
15 that, we have one final section of his 30(b)(6)
16 denomination which was one last paragraph of the
17 complaint, and we'll be done. So we're able -- we're
18 willing to accept your representation that that was
19 his understanding. We'll live with it. And we'll
20 complete it with a short line of questions when he
21 returns at 2:00.

22 **MS. McKENNA:** And so is it -- is what
23 you're saying that you are withdrawing any notice of
24 -- I don't even know how to properly phrase this.
25 But basically, I'm trying to confirm that he is not

1 going to be deposed in his individual capacity.
2 You're just going to have one 30(b)(6) deposition for
3 the director, and that's it?

4 **MR. SULLIVAN:** You're right. That's
5 correct.

6 **MS. McKENNA:** Okay. Yes. We're fine with
7 that.

8 **MR. SULLIVAN:** Okay. So we'll let the
9 director get some lunch.

10 **MS. McKENNA:** Well, I can ask him if -- so
11 how much longer are you going to go? You're just
12 going to go on the paragraph 118?

13 **MR. SULLIVAN:** Paragraph 118.

14 **MS. McKENNA:** And that's it?

15 **MR. SULLIVAN:** His -- that's it. And in
16 particular the paragraph -- the provisions of
17 paragraph 118 that are relevant to DEQ.

18 **MS. McKENNA:** And so approximately how
19 long do you think that line of questioning is going
20 to take? Because I'm just going to ask him if he --
21 if he needs a break, that's great. We'll take the
22 break and come back at 2:00. If he -- if you're only
23 going to be an hour or so, he may not need a break.

24 **MR. SULLIVAN:** I would say, Ms. McKenna,
25 that we can finish in an hour.

1 **MS. McKENNA:** Okay. Let me -- let me talk
2 to him. Let's go off the record, and I'll be right
3 back.

4 **MR. SULLIVAN:** And -- and we can go either
5 way. If he would prefer a lunch break, we can do
6 that, Counsel, or we can finish now, at his option.

7 **MS. McKENNA:** I'll ask him.

8 **THE VIDEOGRAPHER:** We are going off the
9 record. The time 1:28 p.m.

10 (Whereupon, a break was then
11 taken.)

12 **THE VIDEOGRAPHER:** We are back on the
13 record. The time is 1:32 p.m.

14 **BY MR. SULLIVAN:**

15 **Q. Mr. Dorrington, I'm going to direct your
16 attention next to paragraph 118 of the complaint. Do
17 you have that in front of you, sir?**

18 **A. I do. Just one moment.**

19 **Q. Yes.**

20 **A. I'll be ready. It's a long one. Yes, I
21 do.**

22 **Q. Okay. And in particular I'm going to ask
23 you some questions about some of the subsections of
24 paragraph 118, sir. Do you see that it's broken down
25 into subparagraphs that are denominated A through W?**

1 **A. Yes, sir.**

2 **Q. And so what I'll do is I will direct your
3 attention to portions of paragraph 118 that I'd like
4 to ask your knowledge of. And what I'd like to do,
5 Mr. Dorrington, is start with paragraph 118(g), which
6 is on page 39 of the complaint, sir.**

7 **A. Yep. I see it.**

8 **Q. Could you read that into the record for
9 us, please.**

10 **A. Yes. Page 39, paragraph 118, item (g),
11 "Defendants continue to permit surface coal mining
12 and reclamation in Montana, which results in
13 substantial GHG emissions. Defendant DEQ approved
14 the AM4 expansion of the Rosebud Strip Mine in
15 December 2015. Defendant DEQ issued a permit to
16 expand the coal mining operation and reclamation plan
17 at Bull Mountain Mine in July 2016. Pursuant to the
18 climate change exception to MEPA, DEQ refused to
19 analyze how these decisions would aggravate the
20 impacts of climate change."**

21 **Q. And let's take a look, if you would, at
22 tab 39, which we will denominate at Exhibit 100.**

23 (Whereupon, Exhibit 100 was
24 marked for identification.)

25 **MS. McKENNA:** Are we not going in order?

1 **THE WITNESS:** Huh-uh.
 2 **MS. McKENNA:** Oh, but --
 3 **THE WITNESS:** We haven't been technically,
 4 so --
 5 **MS. McKENNA:** Okay.
 6 **THE WITNESS:** We're like 89, 92, 78, 81.
 7 Now we're at 100. I have it in front of me, Exhibit
 8 100.
 9 **BY MR. SULLIVAN:**
 10 **Q.** Yes. And that is the written findings
 11 prepared by the Montana Department of Environmental
 12 Quality for the AM4 addition to the Rosebud Coal Mine
 13 Area B, dated December 4th, 2015. Mr. Dorrington, is
 14 that the document you have in front of you?
 15 A. Yes.
 16 **Q.** Mr. Dorrington, to the best of your
 17 knowledge, did DEQ, pursuant to the climate change
 18 exception to MEPA, refuse to analyze how that permit
 19 decision would aggravate the impacts of climate
 20 change?
 21 **MS. McKENNA:** Objection. Calls for a
 22 legal conclusion.
 23 **THE WITNESS:** The agency and program at
 24 the time would have -- would have evaluated subject
 25 to the exception the -- the effect of mining and the

1 postmine land use, postmine topography, and the
 2 operations -- operations characteristics. The air
 3 quality portion of this same permit would have
 4 evaluated emissions subject to limits and standards
 5 of state and federal law.
 6 **BY MR. SULLIVAN:**
 7 **Q.** All right. I'm going to ask you the full
 8 question, Mr. Dorrington, in regard -- and direct
 9 your attention first to or the -- the Bull Mountain.
 10 Ask you the same question.
 11 **MR. SULLIVAN:** And if you would turn,
 12 Barbara, please, to tab 43, which begins with
 13 defendants' Bates number D-000050, and we'll mark
 14 that as Deposition Exhibit --
 15 **MS. CHILLCOTT:** 104.
 16 **MR. SULLIVAN:** -- 104.
 17 (Whereupon, Exhibit 104 was
 18 marked for identification.)
 19 **THE WITNESS:** I have 104 in front of me.
 20 **BY MR. SULLIVAN:**
 21 **Q.** Okay. And my question, sir, is the same
 22 question that I asked in regards to the AM4 expansion
 23 to area -- the Area B of the Rosebud Mine, which is
 24 pursuant to the -- to the climate change exception to
 25 MEPA that we've discussed today: Did DEQ refuse to

1 analyze how these decisions would aggravate the
 2 impact of climate change?
 3 A. The agency subject to mining and air
 4 quality permitting would have permitted this mine
 5 subject to limits and standards of the same federal
 6 law. I will note, however, these -- these aren't the
 7 same mining operations and really in any shape or
 8 form to the -- Bull Mountain Mine is an underground
 9 coal mine. Evaluation of mining and the evaluation
 10 of air quality sources that has resulted from mining
 11 are not the same, under your stipulation, so an
 12 evaluation of climate change impacts. I'd say we
 13 followed state law at the time. But the two mines
 14 are very different.
 15 **Q.** I appreciate, sir, that the two mines are
 16 very different, but my question is actually focused
 17 on the issue of pursuant to your department's --
 18 DEQ's MEPA review --
 19 A. Uh-huh.
 20 **Q.** -- for this written findings and permit
 21 issue in July of 2016, did the department apply the
 22 MEPA exclusion that we've discussed earlier that's in
 23 subsection (2)(a) of the MEPA statute?
 24 A. Since we've referenced all sorts of stuff
 25 today, let me just look for (2)(a) really quick,

1 which I believe is accurate. I just want to make
 2 sure. Yeah.
 3 **Q.** Yes.
 4 A. Yes. That is true. So we would have --
 5 we would have evaluated impacts within the borders of
 6 the state.
 7 **Q.** I'm sorry, sir. I -- it was muddled and I
 8 couldn't hear on this end. You would have evaluated
 9 it?
 10 A. We would have evaluated impacts subject to
 11 the borders of the state.
 12 **Q.** Okay. In compliance with the statutory
 13 provisions in subsection (2)(a)?
 14 A. Correct. Yes.
 15 **Q.** Mr. Dorrington, could we go next to
 16 paragraph 118 H, please?
 17 A. I reserve the right to come back to G
 18 then. That is --
 19 **Q.** Yes. No. Let's -- let's not move forward
 20 to H, but if you have additional testimony or
 21 comments on G, please proceed with that.
 22 A. Okay. Thank you. So I wouldn't agree
 23 with the first sentence. We do continue to permit
 24 surface coal mining and reclamation. The way the
 25 sentence is written is again a convolution.

1 Reclamation does not result in substantial
2 GHG emissions. That -- and it's -- it's interesting,
3 probably fitting at this point to identify that all
4 of the mining laws are reclamation oriented. So
5 while the -- while we go through paragraph 118 and --
6 and previous paragraphs, we discussed how mining
7 results in X. The result -- the -- the operation --
8 the operational permitting of the mine is a permit to
9 extract a resource and reclaim pursuant to the
10 reclamation statute standard.

11 Second sentence, DEQ approved the AM4
12 expansion. I believe that's true. Third sentence,
13 defendant DEQ issued a mine -- a permit to expand the
14 coal mining operation reclamation plan. I believe
15 that is true.

16 Last and closing sentence, pursuant to
17 climate change exception of MEPA, DEQ refused to
18 analyze how these decisions would aggregate -- or
19 aggravate the impacts of climate change. Those
20 aren't -- that is not how I would characterize that.
21 The DEQ followed state law and implemented its
22 analysis subject to MEPA and (2)(a) as we've
23 discussed.

24 **Q. And as we've discussed, you followed the**
25 **limitations that are set forth in (2)(a). Is that**

1 **correct, Mr. Dorrington?**

2 A. We do, yes. Yes.

3 **Q. Sir, do you have anything else to say in**
4 **regards to paragraph 118 G, or are we ready to**
5 **proceed to the next subparagraph H?**

6 A. I'm ready for H. Thank you.

7 **Q. Would you please read it into the record,**
8 **sir?**

9 A. Sure. Page 39, item H, "In 2018,
10 defendant DEQ, pursuant to the climate change
11 exception to MEPA, refused to analyze or discuss any
12 climate change impacts to the TR3 expansion of the
13 Decker Mine which allowed the coal mine to strip mine
14 23 million tons of coal, which will lead to nearly 50
15 million tons of carbon dioxide emissions when burned,
16 aggravating the impacts of climate change, including
17 causing negative socioeconomic impacts to Montanans."

18 **Q. And I'd like to direct your attention, if**
19 **I could, to a document that's at tab 44.**

20 **MR. SULLIVAN:** And we'll mark that for
21 identification purposes as 105.

22 It commences with defendants' Bates stamp
23 number D 000204.

24 **THE WITNESS:** I have 105 in front of me.
25 (Whereupon, Exhibit 105 was

1 marked for identification.)

2 **BY MR. SULLIVAN:**

3 **Q. What is that document, sir?**

4 A. It is titled written findings, major
5 revision TR3 for East Decker Coal Mine.

6 **Q. And in regards to that document, is that**
7 **the TR3 expansion of the Decker Mine that's being**
8 **referred to in subparagraph H?**

9 A. To the best of my knowledge, yes. Item 3
10 of the subject document indicates TR3 proposes to add
11 cuts 21 through 35 extending pit 15, so adding pit
12 20, which would be an expansion, yes.

13 **Q. Okay. And I believe that the -- the**
14 **document that we're looking at there, which is**
15 **Exhibit 105, indicates that the proposal is to add an**
16 **additional 23 million tons of coal. Is that a**
17 **correct understanding?**

18 A. Yes. On page 1 item 3, it reads:
19 Resulting in an additional 23 million tons of coal.

20 **Q. Would you agree, sir, that pursuant to the**
21 **climate change exception to MEPA that we've discussed**
22 **today, subsection (2)(a), that DEQ refused to analyze**
23 **or discuss any climate change impacts from the TR3**
24 **expansion of the Decker Mine?**

25 A. No. I would not agree to that

1 characterization.

2 **Q. And could you explain your disagreement**
3 **with the characterization.**

4 A. I believe that it would be more correctly
5 stated that for the MEPA analysis and evaluation of
6 emissions within the air quality permit, their --
7 they evaluated emissions subject to the limitations
8 of the borders of the state in (2)(a).

9 **Q. And, Mr. Dorrington, just to be clear,**
10 **when you're talking about analyze the emissions,**
11 **you're talking about, if I understand correctly, the**
12 **emissions from the -- the operating equipment that**
13 **would have removed the overburden to access the coal.**
14 **I'm just trying to understand that -- what your**
15 **emissions analysis entailed, but it did not entail an**
16 **analysis of the combustion of the mined coal. Is**
17 **that correct?**

18 A. The last portion of your statement is
19 correct, yes. I -- I'm not an expert in air quality
20 permitting, but I do believe mobile source emissions
21 are excluded, so not even the equipment used to
22 extract coal would be evaluated in -- in the air
23 quality permit. That's -- mobile sources are not
24 included.

25 **Q. Okay.**

1 A. Yeah. But the -- but the portion --

2 **Q. Go ahead, sir. I'm sorry.**

3 A. To -- to your point, though, in closing,
4 yes, we limited any analysis to the border of the
5 state, and any emissions would have been evaluated
6 just within Montana.

7 **Q. And how did DEQ do that?**

8 A. Please clarify the "that." What -- what
9 do you mean by "that"?

10 **Q. Well, my question was, is it true that DEQ
11 did not analyze the greenhouse gas emissions that
12 resulted from the combustion of the coal?**

13 A. Yes. That's true.

14 **Q. Okay. And then in answer to that, you
15 also added that we did analyze the greenhouse gas
16 emissions within the state of Montana. Is that
17 correct, sir?**

18 A. No. What I'm clarifying is that any
19 emission from the activity from the mining operation
20 would have been evaluated in the air quality permit
21 subject to applicable emissions, some of which would
22 -- may be characterized as GHG. We issued a permit
23 that the operator could sustain a compliance with so
24 that --

25 **Q. So -- excuse me, sir. I'm sorry. I**

1 interrupted you.

2 A. That's all right. Go ahead.

3 **Q. So what would be an example of greenhouse
4 gas emissions that the DEQ would have evaluated in
5 regards to this expansion of the East Decker Coal
6 Mine?**

7 A. So, again, I'm not a permitter, but I
8 would -- I would indicate an assessment of sox, nox,
9 and CO2 would be at the top.

10 **Q. From what source?**

11 A. From any attributable source that -- that
12 may have -- well, the other part is fugitive dust,
13 any source that would create those within the
14 applicable standards and laws. Again, I'm speaking
15 on the very fringe because I'm not a permitter, but I
16 believe mobile source emissions are excluded.

17 **Q. And so because of that, if I understand
18 correctly, you're not including greenhouse gas
19 emissions for the ultimate combustion of the coal
20 that's mined there?**

21 A. That's correct.

22 **Q. And we're not -- is that correct, sir?**

23 A. Yes.

24 **Q. Yes. And we're not including the
25 greenhouse gas emissions for the operation of the**

1 mobile equipment. So my question is, then what does
2 that leave in terms of the inclusion of greenhouse
3 gas emissions at the TR3 expansion?

4 A. I believe at this point you'd have --
5 you'd have stationary sources and you would have
6 fugitive emissions.

7 **Q. So the fugitive emissions, would that
8 include, sir, dust that was -- particulate matter
9 that was rendered airborne by virtue of the heavy
10 equipment operating in the pits?**

11 A. Pits and haul roads primarily, yes.

12 **Q. So that would be one element. Anything
13 else that comes to your mind that would be included
14 in DEQ's analysis?**

15 A. Nothing comes to mind at this time.

16 **Q. Okay. Let's take a look next,
17 Mr. Dorrington, to the next subparagraph, which is
18 paragraph 118, sub I.**

19 A. I have that, yes.

20 **Q. And would you do us the favor of reading
21 that into the record, sir.**

22 A. Yes. Page 40, item I, "In 2020, defendant
23 DEQ is preparing to revise its permit to Spring Creek
24 Mine, the largest coal producer in the state. The
25 proposed revision would add 977 acres of new mining

1 disturbance to recover approximately 72 million tons
2 of coal. In August 2019, defendant DEQ, pursuant to
3 the climate change exception to MEPA, refused to
4 analyze impacts on the social cost of carbon and the
5 economic impacts from climate change in its draft
6 environmental impact statement from the Spring Creek
7 Mine. Although public comments urged defendants to
8 consider those impacts in the analysis, defendants
9 did not review how their decision would aggravate
10 impacts of climate change and the substantial
11 socioeconomic impacts on Montanans."

12 **Q. Thank you, sir. I would like to direct
13 your attention next to a document that's at tab 46 of
14 the notebook, which we will mark as Exhibit 107.**

15 **(Whereupon, Exhibit 107 was
16 marked for identification.)**

17 **BY MR. SULLIVAN:**

18 **Q. And it's a document entitled DEQ record of
19 decision and written findings for Spring Creek Coal
20 Mine, Big Horn County, Montana, dated March 27, 2020.**

21 A. I have it in front of me, yes. And I
22 agree that's what it reads.

23 **Q. Okay. And, sir, to the best of your
24 knowledge, is it accurate that the proposed revision
25 to the Spring Creek Coal Mine would add 977 acres of**

1 new mining disturbance?

2 A. Correct. On page 1, paragraph 2, it says
3 additional tons of coal and disturb -- 72 million
4 additional tons of coal and disturb an additional 977
5 acres within the existing permit boundary.

6 Q. Is it also your understanding,
7 Mr. Dorrington, that DEQ -- pursuant to the climate
8 change exception to MEPA that we've discussed today,
9 subsection (2)(a), that DEQ failed to analyze impacts
10 on the social cost of carbon and the impacts from
11 climate change in its draft environmental impact
12 statement for the Spring Creek Mine?

13 MS. McKENNA: Objection. Calls for a
14 legal conclusion.

15 THE WITNESS: The -- the program and the
16 agency did -- did follow MEPA provisions, including
17 limiting subject to (2)(a), its analysis of climate
18 change the impacts to the border of the state.

19 BY MR. SULLIVAN:

20 Q. To your knowledge, did DEQ eventually
21 issue the revised permit to the Spring Creek Mine as
22 requested?

23 A. I -- to the best of my knowledge, I
24 believe so. I don't know anything different, so I --
25 I would say yes.

1 Q. Could Spring Creek Coal have begun
2 extracting this additional 72 million tons of coal
3 without DEQ's mine expansion approval?

4 A. Oh, no. The mine operator -- a mine
5 operator would have -- would not operate a mine
6 without a permit and approve disturbance and
7 extraction subject to a -- subject to DEQ's
8 permitting -- issuance of a permit.

9 Q. Sir, I'll give you the opportunity to add
10 anything in terms of testimony about the allegations
11 in paragraph 118, subparagraph I, if there is
12 anything that you wish to add.

13 A. Uh-huh. Just looking at I and sentences
14 included, the beginning is factual. In -- in -- in
15 the middle third sentence, in August, pursuant to
16 climate change exception to MEPA, refused to analyze
17 impacts on the social cost of carbon and economic
18 impacts from climate change in its draft EIS, that's
19 -- I believe that's true.

20 Although public comments urged defendants
21 to consider these impacts, defendants did not review
22 how their decision would aggravate impacts of climate
23 change, that is an overstatement. The substantial
24 socioeconomic impacts on Montanans, I believe that's
25 also an overstatement.

1 Socioeconomics within the MEPA analysis
2 are a portion of that. The impact on the local labor
3 force, the local communities, and the region as a
4 whole is -- is a part of some portion of
5 socioeconomic impacts.

6 To clarify and to -- to be -- to add to, I
7 don't believe that our -- the only requirement for
8 socioeconomic analysis should be that cost of -- of
9 climate change, but also upon labor, the generation
10 of jobs and taxes as a result of mineral extraction
11 and subsequent taxation as -- as an employer of the
12 state. So the last sentence is not true.

13 Q. And, Mr. Dorrington, if I could, if I
14 understand correctly, you did not agree with the
15 portion of that last statement that states defendants
16 did not review how their decision would aggravate
17 impacts of climate change. Is that correct?

18 A. We would have -- we would have analyzed
19 any provision for an emission subject to the state
20 and federal law and issued an air quality permit that
21 -- that met and then was able to be sustained by the
22 applicant and operator. So I think you're making a
23 statement we did not review how the decision would
24 aggravate impacts of climate change. My
25 clarification is we acted within the state law to

1 assess any emission and standard and limit and -- and
2 then issue -- issued a permit subject to those
3 provisions. We would have not analyzed climate
4 change impacts outside the border of the state.

5 Q. What if the coal is combusted inside of
6 the state?

7 A. Please clarify. What do you mean "what
8 if"?

9 Q. Well, let's -- let's assume that coal is
10 mined inside of the state, and when you're issuing
11 your permit to decide whether or not to issue the
12 coal mining permit, do you consider whether that coal
13 is going to be combusted inside the state of Montana
14 or outside the state of Montana?

15 A. A consideration of combustion of any
16 fossil fuel would be considered under the permit for
17 that combuster, not within the -- the mining statute.
18 So, again, the mining statutes are reclamation
19 statutes. They seek to return mining operations to a
20 productive postmine land use and seek -- well, I'll
21 just leave it at that.

22 So there are two -- were two mine mouth
23 operations. The first is Rosebud Mine feeding CSES
24 at Colstrip. The second is the Savage Mine that was
25 -- used to feed the Lewis and Clark generating

1 station which is no longer operating in that
2 capacity.

3 For each of those mining operations, the
4 Savage and Rosebud, the department and the air
5 quality program, the mining program, the MEPA unit
6 would not have evaluated climate change impacts from
7 the mine operation itself unless there were an
8 emission that -- that was noted in -- in typical --
9 typical operation of a mine subject to provisions of
10 state and federal law. It would not consider the
11 combustion.

12 **Q. We just discussed that point that you made
13 in regards, for instance, to the AM4 amendment to
14 Area B of the Rosebud Mine.**

15 A. Correct.

16 **Q. Let's -- let me see -- check my list here,
17 Mr. Dorrington. Excuse me.**

18 I'd like to direct your attention next to
19 the document that's at tab 47, Mr. Dorrington, and
20 that will be marked as Deposition Exhibit 108.

21 (Whereupon, Exhibit 108 was
22 marked for identification.)

23 BY MR. SULLIVAN:

24 **Q. And it is a document from DEQ, dated
25 January 6, 2016. It has to do with the coal mining**

1 **conducted in the review of this permit would have
2 been subject to the same MEPA limitations set forth
3 in subject (2)(a) that we discussed earlier?**

4 A. Yes. Again, I'm not a permitter, so there
5 may be nuances or subtleties within an air quality
6 program that they don't conflict with MEPA. But they
7 may be -- they may be either different or more
8 stringent operationally and -- and be conducted in a
9 different form or fashion.

10 I know you have -- you have another
11 witness coming up, Mr. Dave Klemp, who could answer
12 that probably better than I. However, I think the
13 answer to your question is this. Air quality permit
14 would be subject to the operating conditions and any
15 limitation on production, then applying best
16 available control technology for any emission that
17 would be noted and, such as under the ambient air
18 monitoring plan, they have to have a monitoring plan
19 to conduct their business associated with that.

20 **Q. Thank you, sir.**

21 A. Yes.

22 **Q. Mr. Dorrington, I'm -- I'm finished asking
23 questions about the plaintiffs' complaint and the
24 enumerated paragraphs, but I have a question in
25 regards to the topic 13, which is --**

1 **air -- Montana air quality permit issued to Signal
2 Peak Energy. Are you with me, sir?**

3 A. Yes, sir. I have 108 in front of me.

4 **Q. Okay. Will you describe for us what
5 facility that permit applies to?**

6 A. Signal Peak Energy. This is the
7 underground coal mine in the Bull Mountains southeast
8 of Roundup.

9 **Q. Okay. Well, once again, is this a -- the
10 type of document that's kept in the ordinary course
11 of business conducted by DEQ?**

12 A. Yes.

13 **Q. And what does this permit authorize Signal
14 Peak Energy to do?**

15 A. Operate their coal mining operation
16 subject to limitations of total production and
17 discharge into the atmosphere of any limited source
18 conveyed in the permit. You Have assumptions --
19 generally, you have assumptions on operation and the
20 generation of -- of emissions. This permit would
21 have evaluated that production, those emissions, and
22 then subject it to state and federal law and any
23 standard thereby.

24 **Q. And, sir, would I be correct in
25 understanding that the analysis that DEQ would have**

1 **THE REPORTER:** Wait. I'm sorry. You said
2 question in regards to the what? I didn't hear you.

3 **MR. SULLIVAN:** Question in regards to the
4 topic 13.

5 **THE REPORTER:** Okay. Okay. Sorry.

6 **MS. McKENNA:** Can -- can you please hand
7 the director the second amended designees and
8 objections to plaintiffs' amended notice of
9 deposition? I believe it's Exhibit 63-1 that was
10 marked, just so that he can -- he doesn't have topic
11 13 in front of him.

12 **THE WITNESS:** Yeah. That's the only
13 reason. Oh, you never gave me 63-1, that's why.

14 **MS. McKENNA:** Just to see what topic 13
15 is.

16 **THE WITNESS:** I have 63-1 in front of me.

17 BY MR. SULLIVAN:

18 **Q. Okay. Mr. Dorrington, take your time to
19 read that if you would, please.**

20 **MS. McKENNA:** Do you want him to read the
21 entire thing or just topic 13?

22 **MR. SULLIVAN:** Just -- just topic 13. So
23 I -- I have him on the same -- same page.

24 **THE WITNESS:** I'll get there. Topic 13,
25 page 6. Knowledge of how DEQ incorporates compliance

1 with Montana's constitutional provisions into its
2 environmental review and permitting process.

3 **BY MR. SULLIVAN:**

4 **Q. And, sir, could you please explain to you
5 what that knowledge is?**

6 A. Sure. So overarching the Article IX is
7 the clean and healthful provision of the
8 Constitution, and then within our statutory
9 responsibility, we have responsibility over
10 protecting Montana's resources from activities
11 ranging from mining or an industry, subdivision
12 housing development, activities related to or
13 impacting surface water and groundwater, waste and
14 hazardous materials handling, the remediation and
15 reclamation of -- of activities.

16 And then the state energy office has
17 responsibility over energy policy and promotion of
18 renewables and -- and work associated with renewable
19 energy of which it conducts quite a lot of activity.
20 So we have several divisions within the agency -- the
21 water division, the waste management remediation
22 division, and the air, energy, and mining division,
23 and then an operations group.

24 The way in which we incorporate compliance
25 with the constitutional provision is by understanding

1 There's pending legislation in concept
2 only regarding meth use and -- and cleanup within
3 residential properties. There is a placeholder for
4 asbestos, and there's a placeholder for water quality
5 standards for selenium.

6 There are laws -- or legislative concepts
7 associated with the timing of the environmental
8 permitting process, all generically referenced, but
9 they're -- not everyone loves how fast or slow we do
10 something, so there are laws related to our timing
11 and timeliness of -- of our activities. That, I
12 would say, is a -- as much as I can give you
13 regarding my awareness of anything regarding laws.

14 On the constitutionality, I have heard it
15 only rumored that constitutional challenges due to
16 the super majority of legislature in 2023 are on the
17 table. I don't know of anything in particular.

18 **MR. SULLIVAN:** Mr. Dorrington, I
19 appreciate your assistance today. I think I'm -- I'm
20 done. I wanted to get done by 2:30, but would you
21 mind if we just took a couple-minute break so I could
22 confer with my co-counsel? And then we'll come back
23 on the record.

24 **THE WITNESS:** I'm just fine with that,
25 yes. Thanks.

1 what the Constitution says by understanding the law,
2 then implementing those laws through when they're
3 discrete and separate, the law, or when we're given
4 rule making authority, we then are subject to those
5 rules and may amend.

6 Given all of that, we then permit and --
7 and require compliance with and in some cases --
8 those permits for industry or housing or waste
9 facilities generically. The review process includes
10 when a state action is taken, a -- an appropriate
11 MEPA review, which could include various versions of
12 an environmental assessment up to and including
13 environmental impact statement, EIS.

14 **Q. And, Mr. Dorrington, are you aware as to
15 whether there is any effort afoot to amend Montana's
16 constitutional provisions related to the environment?**

17 A. I'm aware of 3,500 legislative concepts
18 coming at us in 2023, some of which will include
19 revisions to environmental permitting and compliance
20 efforts. Discreetly, I know there legislative
21 concepts aimed as water and resource management,
22 subdivisions and housing, water quality standards,
23 taxation of equipment which may impact air quality
24 equipment. I don't -- I don't really know because
25 there's a language to it.

1 **MR. SULLIVAN:** Thank you.

2 **THE VIDEOGRAPHER:** We're going off the
3 record. The time is 2:15 p.m.

4 (Whereupon, a break was then
5 taken.)

6 **THE VIDEOGRAPHER:** We are back on the
7 record. The time is 2:18 p.m.

8 **MR. SULLIVAN:** Mr. Dorrington, I have no
9 further questions. Thank you for your attendance at
10 the deposition today.

11 **MS. McKENNA:** I have two follow-up
12 questions to topic 13.

13 **EXAMINATION**

14 **BY MS. McKENNA:**

15 **Q. Director Dorrington, would you agree that
16 DEQ incorporates compliance with Montana's
17 constitutional provisions through the legislative --
18 legislative enactment of the Montana Environmental
19 Policy Act?**

20 A. Yes.

21 **Q. Would you agree that DEQ incorporates
22 compliance with Montana's constitutional provisions
23 into its permitting processes through Montana Code
24 Annotated, Title 75?**

25 A. Yes.

1 Q. And 82?
 2 A. Yes to both.
 3 MS. McKENNA: No further questions.
 4 MR. SULLIVAN: Thank up, sir.
 5 THE WITNESS: Thank you.
 6 THE VIDEOGRAPHER: That concludes this
 7 deposition. The time is 2:19 p.m.
 8 (Whereupon, the deposition
 9 concluded at 2:19 p.m.)
 10 SIGNATURE RESERVED.
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1 C E R T I F I C A T E
 2 STATE OF MONTANA)
 3 COUNTY OF GALLATIN) : ss
 4
 5 I, Deborah L. Fabritz, Registered Professional
 6 Reporter and Notary Public for the State of Montana,
 7 residing in Bozeman, do hereby certify:
 8
 9 That I was duly authorized to and did swear in
 10 the witness and report the deposition of CHRIS
 11 DORRINGTON, in the above-entitled cause; that the
 12 foregoing pages of this deposition constitute a true
 13 and accurate transcription of my stenotype notes of
 14 the testimony of said witness, all done to the best
 15 of my skill and ability; that the reading and signing
 16 of the deposition by the witness have been expressly
 17 RESERVED.
 18
 19 I further certify that I am not an attorney nor
 20 counsel of any of the parties, nor relative or
 21 employee of any attorney or counsel connected with
 22 the action, nor financially interested in the action.
 23
 24 IN WITNESS WHEREOF, I have hereunto set my hand
 25 and affixed my notarial seal on this 1st day of
 January, 2023.

1 DEPONENT'S CERTIFICATE
 2
 3 I, CHRIS DORRINGTON, 30(b)(6), the
 4 deponent in the foregoing deposition, DO HEREBY
 5 CERTIFY, that I have read the foregoing - 121 - pages
 6 of typewritten material and that the same is, with
 7 any changes thereon made in ink on the corrections
 8 sheet, and signed by me a full, true and correct
 9 transcript of my oral deposition given at the time
 10 and place hereinbefore mentioned.
 11
 12
 13
 14 _____
 CHRIS DORRINGTON
 15
 16 Subscribed and sworn to before me this
 17 _____ day of _____, 2023.
 18
 19
 20
 21 PRINT NAME: _____
 22 Notary Public, State of Montana
 23 Residing at: _____
 24 My commission expires: _____
 25 DF - HELD VS. STATE OF MT

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EXHIBIT 19

*Rikki Held, et al. v
State of Montana, et al.*

*David Klemp 30(b)(6)
December 15, 2022*

*Charles Fisher Court Reporting
442 East Mendenhall
Bozeman, MT 59715
(406) 587-9016
maindesk@fishercourtreporting.com*

Min-U-Script® with Word Index

MONTANA FIRST JUDICIAL DISTRICT COURT
LEWIS AND CLARK COUNTY

RIKKI HELD, et al.,
Plaintiffs,
v.
STATE OF MONTANA, et al.,
Defendants.

Cause Number
CDV-2020-307

VIDEORECORDED 30(b)(6) DEPOSITION UPON ORAL
EXAMINATION OF
MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
DAVID KLEMP

BE IT REMEMBERED, that the videorecorded
30(b)(6) deposition upon oral examination of MONTANA
DEPARTMENT OF ENVIRONMENTAL QUALITY, DAVID KLEMP,
appearing at the instance of Plaintiffs, was taken at
the offices of Fisher Court Reporting, 800 North Last
Chance Gulch, Suite 101, Great Falls, Montana, on
Wednesday, December 15th, 2022, beginning at the hour
of 9:00 a.m., pursuant to the Montana Rules of Civil
Procedure, before Deborah L. Fabritz, Court Reporter
- Notary Public.

ATTORNEY APPEARING VIA ZOOM IN A LIMITED
PURPOSE CAPACITY ON BEHALF OF THE MONTANA
DEPARTMENT OF ENVIRONMENTAL QUALITY:
Ms. Lee M. McKenna, Esq.
Department of Environmental Quality
Legal Unit, Metcalf Building
1520 East Sixth Avenue
Helena, MT 59620-0901

ALSO PRESENT:

Nate Trejo, videographer; Catherine
Armstrong; and Tara Robinson (via Zoom)

APPEARANCES

ATTORNEYS APPEARING ON BEHALF OF
THE PLAINTIFFS, RIKKI HELD, ET AL.:
Ms. Melissa Hornbein, Esq. and
Ms. Barbara Chillcott, Esq.
Western Environmental Law Center
103 Reeder's Alley
Helena, MT 59601
and
Mr. Nathan Bellinger, Esq. (via Zoom)
Mr. David Schwartz, Esq. (via Zoom)
Our Children's Trust
1216 Lincoln Street
Eugene, OR 97401
and
ATTORNEY APPEARING FOR THE DEFENDANT,
STATE OF MONTANA, et al.:
Mr. Michael Russell, Esq.
Assistant Attorney General
215 North Sanders
PO Box 201401
Helena, MT 59620-1401
and

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24 NorthWestern Energy, Belfry
25 Compressor Station - 6/26/20.106

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1 WHEREUPON, the following proceedings were had
2 and testimony taken, to-wit:
3 * * * * *

4 **THE VIDEOGRAPHER:** This is the
5 videorecorded deposition of 30(b)(6) representative
6 Dave Klemp, taken in the Montana First Judicial
7 District Court, Lewis & Clark County. Cause Number
8 CDV-2020-307, Rikki Held, et al., versus State of
9 Montana, et al.

10 Today is December 15th, 2022. The time is
11 9:11 a.m. We are present at the offices of Fisher
12 Court Reporting, 800 North Last Chance Gulch, Suite
13 101, Helena, Montana.

14 The court reporter is Deb Fabritz, and the
15 video operator is Nate Trejo of Fisher Court
16 Reporting. The deposition is being taken pursuant to
17 notice.

18 I would now ask the attorneys to identify
19 themselves, who they represent, and whoever else is
20 present.

21 **MS. HORNBEIN:** Melissa Hornbein for
22 plaintiffs.

23 **MS. CHILLCOTT:** Barbara Chillcott for
24 plaintiffs.

25 **MS. McKENNA:** Sorry. Are you waiting for

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1 (Exhibits continued)

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4 Mainline #1 Compressor
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1 me? I thought someone else was starting to speak.
2 **MR. RUSSELL:** Go ahead, Lee.
3 **MS. McKENNA:** Lee McKenna, attorney for
4 DEQ.

5 **MR. RUSSELL:** Michael Russell for
6 defendants.

7 **MS. ARMSTRONG:** Catherine Armstrong,
8 paralegal for DEQ.

9 **THE VIDEOGRAPHER:** The court reporter will
10 now administer the oath.

11 **DAVID KLEMP,**
12 called as a witness, having been first duly sworn,
13 was examined and testified as follows:
14 **EXAMINATION**

15 **BY MS. HORNBEIN:**

16 **Q.** Mr. Klemp, my name is Melissa Hornbein.
17 I'm an attorney representing the plaintiffs in this
18 case. Could I please ask you to state and spell your
19 name for the record.

20 **A.** Yes. My name is David, D-A-V-I-D, Klemp,
21 K-L-E-M-P.

22 **Q.** And what -- how would you prefer that I
23 refer to you during the course of this deposition?

24 **A.** Dave is just fine.

25 **Q.** Great.

1 A. Yeah.
 2 **Q. Do you go by any other names?**
 3 A. No, I do not.
 4 **Q. Okay. And what city do you live in?**
 5 A. I live in Helena.
 6 **Q. And do you have a work address?**
 7 A. No, I do not.
 8 **Q. Okay.**
 9 A. I am retired.
 10 **Q. Understood. Could you please give your**
 11 **home address for the record?**
 12 A. My home address is 3815 Cedar Valley Road,
 13 Helena, Montana 59602.
 14 **Q. Great. Just to get us started, I want to**
 15 **go over a few ground rules. As you can see, the**
 16 **court reporter is here taking down everything we're**
 17 **saying. My job is going to be to try not to talk too**
 18 **fast because that's something I have a tendency to**
 19 **do. And either you or she are welcome to tell me to**
 20 **slow down.**
 21 **Do you understand that you're under oath**
 22 **today?**
 23 A. Yes, I do.
 24 **Q. Do you understand the capacity of your**
 25 **testimony as a 30(b)(6) witness? Do you understand**

1 previous employment with the Department of
 2 Environmental Quality. I testified both as the
 3 bureau chief, as well as the air quality permitting
 4 section supervisor within the same bureau.
 5 **Q. Do you happen to know the dates of those**
 6 **prior depositions generally?**
 7 A. No, I do not. I know the most recent
 8 one --
 9 **Q. Uh-huh.**
 10 A. -- was in, I believe -- I retired in 2021.
 11 It was roughly 2020. Prior to that, a good many
 12 years had gone by as I was the bureau chief, and most
 13 of my depositions were testimony wherein -- when I
 14 was the air permitting section supervisor.
 15 **Q. Got it. Do you have an estimate for how**
 16 **many times you've testified under oath in either of**
 17 **those prior capacities?**
 18 A. Approximately six -- five or six times.
 19 **Q. Any other instances of testimony aside**
 20 **from what you've just described?**
 21 A. No. Not that I can recall.
 22 **Q. Okay. Do you know if your prior testimony**
 23 **in either of your roles at DEQ was transcribed or**
 24 **recorded?**
 25 A. I believe all of the testimony I provided

1 that you're in your 30(b)(6) deposition right now and
 2 what that means?
 3 A. Yes. I -- I believe I do.
 4 **Q. Okay. Do you understand that your**
 5 **testimony today is binding on the agency?**
 6 A. Yes, I do.
 7 **Q. Is there any reason that you're not able**
 8 **to give a truthful answer today to any of the**
 9 **questions I may ask?**
 10 A. No.
 11 **Q. If you don't understand a question or want**
 12 **me to rephrase, please just tell me, and I'd be happy**
 13 **to do that. For the court reporter's sake, it's best**
 14 **if just one of us speaks at a time. I'll do my best**
 15 **not to interrupt you, and if you can do your best not**
 16 **to interrupt me, that will make her life easier.**
 17 **Often in conversation we do things like**
 18 **nod our heads or say uh-huh. That doesn't come**
 19 **across very well in a transcript. So if you can give**
 20 **a verbal answer to my questions, that will also be**
 21 **helpful.**
 22 **And have you testified under oath before?**
 23 A. Yes, I have.
 24 **Q. In what capacity?**
 25 A. A couple different capacities in my

1 was at least transcribed, and some of it was
 2 transcribed as well as recorded.
 3 **Q. Do you know who might have a copy of that**
 4 **testimony?**
 5 A. I believe the agency would have a copy --
 6 **Q. Okay --**
 7 A. -- of -- of that testimony or should still
 8 have a copy of that testimony. I also believe the --
 9 the attorneys -- and there were various law firms on
 10 both sides of the issues -- could have copies of that
 11 testimony.
 12 **Q. Sure. Have you ever testified in a trial**
 13 **setting before?**
 14 A. I did not testify. I was present in a
 15 trial setting, but I did not testify.
 16 **Q. Okay. And was that in your capacity with**
 17 **the department as well?**
 18 A. Yes, it was, as the air quality permitting
 19 section supervisor.
 20 **Q. Got it. Can you tell me a little bit**
 21 **about what that situation was?**
 22 A. Yes. It was with regard to the Roundup
 23 power project which happened roughly 20 years ago.
 24 And some of the issues were in front of the Board of
 25 Environmental Review.

1 Q. Uh-huh.

2 A. And some of them were in front of -- in --
3 in a court setting. And so if I -- I did testify in
4 front of the Board of Environmental Review, which is
5 a quasi judicial board -- excuse me -- quasi judicial
6 entity, not necessarily the same as -- as a
7 courtroom.

8 Q. Got it. Have you ever submitted written
9 testimony, for example, a declaration or affidavit
10 for a court proceeding?

11 A. Yes, I have.

12 Q. And in what capacity would you do that and
13 how many times if you remember?

14 A. It was probably more than once, but I can
15 recall one certain time. It was when I was the
16 bureau chief of the air quality bureau. There was a
17 case in front of the Ninth Circuit in San Francisco,
18 and my declaration was used as part of that case.

19 Q. Got it. Do you know for what purpose your
20 declaration was used in that case?

21 A. Yes. It was generally to describe the new
22 source review permitting program and how it was
23 implemented by the state of Montana.

24 Q. Got it. Have you ever provided testimony
25 before a political body?

1 A. Yes, I have.

2 Q. Can you describe to me the setting for
3 that and approximately how many times? I'm guessing
4 it's probably more than you remember.

5 A. I have participated with the legislature
6 of Montana in every session since 1995.

7 Q. Got it. And always in your capacity
8 within your employment for DEQ. Correct?

9 A. That is correct.

10 Q. Got it. Dave, I'm going to ask you a
11 little bit now about how you prepared for this
12 deposition, and I don't want you to share with me any
13 confidential attorney-client privileged information
14 that you may have discussed either with the State's
15 attorneys or with former colleagues at DEQ. I just
16 want you to provide sort of nonconfidential
17 information about how you prepared, if that works for
18 you.

19 A. Yes, it does.

20 Q. Got it. What did you do to prepare for
21 this deposition?

22 A. I have reviewed the complaint. I have
23 reviewed a lot of the attachments, specifically for
24 some of the areas that I have been asked to talk
25 about. I have also met with agency attorneys as well

1 as other agency staff.

2 Q. Have you met with any DOJ attorneys or
3 staff, state DOJ?

4 A. I believe one of the attorneys is on
5 contract with the Department of Justice, if I'm not
6 mistaken.

7 Q. Is that Ms. Jones?

8 A. Yes.

9 Q. Okay. Any other Department of Justice
10 attorneys?

11 A. Not that I'm -- no. Not that I'm aware
12 of.

13 Q. Okay. Approximately how many hours did
14 you spend preparing for this deposition?

15 A. About 20.

16 Q. Okay. And I guess I should qualify that
17 since you're here for two depositions. Did that
18 cover both the 30(b)(6) and your hybrid deposition?

19 A. That covers everything.

20 Q. Okay. Other than attorneys and some of
21 the DEQ staff who I'm assuming are your former
22 colleagues, did anyone else help you prepare for this
23 deposition?

24 A. I watched a deposition prep video to
25 refresh my memory on depositions.

1 Q. Okay. And going forward if I say in sort
2 of this general context for this deposition, I think
3 you can safely assume I'm referring to today's
4 depositions if that makes sense to you. If you have
5 a question, please ask.

6 A. I will. Thank you.

7 Q. Anyone else that you spoke with in
8 preparation?

9 A. No.

10 Q. Okay.

11 A. No.

12 Q. Did you receive any directions from former
13 colleagues or current employees at DEQ?

14 A. No. I don't believe I've received any
15 direction from them.

16 Q. Okay. Did you receive any directions from
17 anyone else, DOJ attorneys, anyone else in terms of
18 the format or content of your testimony today?

19 A. When you say direction, I take that to
20 mean that somebody has asked me to do something
21 specifically.

22 Q. Yes.

23 A. Other than just come here and be honest
24 and prepare, that's the general direction I received
25 for this.

1 **Q. Perfect. And you already mentioned that**
 2 **it sounds like you reviewed a number of documents in**
 3 **addition to the complaint in this case in preparation**
 4 **for your testimony today?**

5 A. Yes. At least a very cursory level, yes.

6 **Q. Would it be fair to describe those**
 7 **documents as things that you either worked on or**
 8 **might have worked on in the ordinary course of**
 9 **business in any of your roles at DEQ?**

10 A. Yes. I believe that is a fair statement.

11 **Q. Okay. Do you remember specifically what**
 12 **any of those documents were?**

13 A. Most of the documents that I reviewed
 14 aside from the complaint were air quality permits
 15 that were issued by the air quality bureau during my
 16 time of employment there.

17 **Q. Got it. So I am going to hand you what**
 18 **will be -- I believe Exhibit 152 is where we're**
 19 **starting today, to the court reporter to mark if you**
 20 **would, and then she can hand it to you for your**
 21 **review.**

22 A. Uh-huh.

23 **Q. And this document is a copy of your CV.**

24 **MS. HORNBEIN:** And I'm happy to mark them
 25 if that's --

1 **THE REPORTER:** Okay. That's fine too.

2 **MS. HORNBEIN:** Okay.

3 (Whereupon, Exhibit 152 was
 4 marked for identification.)

5 **BY MS. HORNBEIN:**

6 **Q. There you go.**

7 A. Thank you.

8 **Q. Dave, have you seen this document before?**
 9 **And take all the time you need to review it.**

10 A. Yes, I have.

11 **Q. What is it?**

12 A. This is a resume prepared by me.

13 **Q. And is it up-to-date?**

14 A. Pretty much. I didn't put that I
 15 currently am a basketball referee and substitute
 16 teacher --

17 **Q. All right.**

18 A. -- since I retired.

19 **Q. Fair enough. Can you briefly tell me**
 20 **about your educational background after high school?**

21 A. After high school I went to college at
 22 what's called Montana Tech. It's Montana College of
 23 Mineral Science and Technology back then. I pursued
 24 a degree in engineering science and graduated with
 25 that degree with a systems control option. I then

1 entered the master's program and received a master's
 2 in environmental engineering in 1994.

3 **Q. Okay. Going back to your Bachelor of**
 4 **Science, what did that degree in engineering science**
 5 **entail and could you just tell me a little bit about**
 6 **what the systems control option is?**

7 A. Yes. Engineering science is a general
 8 engineering degree. The particular option I was in
 9 was more in the electrical engineering side. Systems
 10 controls are things that are -- they're program logic
 11 controllers used to control various things. A
 12 stoplight used to use a program logic control.

13 **Q. All right. And what types of courses did**
 14 **you study in college?**

15 A. Lots of science-based courses.

16 **Q. Uh-huh.**

17 A. Strengths of materials, lots of mechanics
 18 of engineering, thermodynamics, physics, chemistry,
 19 lots of math, typical, I would say, engineering
 20 course requirements.

21 **Q. Got it. And same questions for your MS**
 22 **degree, what course of study did that entail? What**
 23 **types of classes did you take?**

24 A. Because I graduated with a bachelor's in
 25 the engineering science, I had to take some of the

1 lower level classes in the environmental engineering
 2 program. And then the graduate level classes
 3 primarily focused -- if I had a choice I would take
 4 air quality classes as opposed to water quality
 5 classes. I also had to prepare, complete, and defend
 6 a thesis in order to graduate with a master's degree.

7 **Q. Got it. And both of those degrees were at**
 8 **Montana Tech. Is that --**

9 A. Correct.

10 **Q. Okay. And you mentioned that it sounded**
 11 **like you had a preference from early on for air**
 12 **quality topics rather than water quality. Is that a**
 13 **correct characterization?**

14 A. That is correct.

15 **Q. And have you spent your whole career since**
 16 **then focusing on air quality issues?**

17 A. There was a time that I worked for
 18 consulting -- a consulting firm, and that was water
 19 quality type issues, measuring stream flows, sampling
 20 wells. But most of my time has been spent with air
 21 quality.

22 **Q. Got it. Do you hold any other**
 23 **professional degrees?**

24 A. No, I do not.

25 **Q. Do you hold any professional licenses or**

1 **certifications?**

2 A. I'm certified with the Montana officials
3 association and that is all.

4 **Q. What does that mean?**

5 A. That means I -- I'm a master official and
6 I am -- completed the appropriate tests and the
7 prerequisite number of games, and I am -- I am an
8 official official for basketball.

9 **Q. Got it. Are you or were you during your
10 career a member of any professional organizations?**

11 A. Not that I can recall.

12 **Q. Okay. When did you retire?**

13 A. July 2nd, 2021.

14 **Q. Congratulations.**

15 A. Thank you.

16 **Q. How's it going?**

17 A. Wonderful.

18 **Q. Good. How long did you work for the DEQ
19 before you retired?**

20 A. I started in December of 1992 with -- the
21 agency that existed prior to DEQ was Department of
22 Health and Environmental Sciences. DEQ was formed
23 through legislation in 1995, and -- and so I worked
24 from 1992 until my retirement in 2021.

25 **Q. And it sounds like during the course of**

1 **air quality bureau chief, or was that a position that
2 you applied for?**

3 A. That was an applied-for and hired
4 position.

5 **Q. Got it. Who was your boss or direct
6 supervisor when you were air quality bureau chief?**

7 A. When I first became the air quality bureau
8 chief, it was Judy Hanson.

9 **Q. And later?**

10 A. There was -- I'm trying to recall. Judy
11 Hanson retired. Then there was John D'Arment for a
12 time. Chris Dorrington was my final administrator.
13 And I just can't recall if there was somebody between
14 John D'Arment and Chris Dorrington.

15 **Q. Okay. That's fine. Did you supervise
16 employees in your capacity in that role?**

17 A. In the bureau chief as well as the air
18 permitting section supervisor role as well as the
19 lead worker, there were some supervisory duties in
20 all of those.

21 **Q. Got it. And as bureau chief approximately
22 how many employees did you supervise and who -- what
23 -- what were their roles?**

24 A. It varied according to funding. The
25 largest the bureau ever was was about 51 full-time

1 **your tenure with DEQ and its predecessor agency, you
2 held at least a couple of different positions. Is
3 that correct?**

4 A. That is correct.

5 **Q. And what positions were those?**

6 A. I started in the permitting section as an
7 air quality scientist. Also occupied an engineering
8 position within the same section, an air quality
9 engineer. I was the lead engineer in the air quality
10 permit section for a time. I was then the section
11 supervisor in the air permitting section. I was
12 later an air program manager which oversaw the
13 permitting and compliance sections of the air quality
14 bureau and then was the bureau chief from 2007 on --
15 late 2007 on in my final capacity.

16 **Q. Okay. And that was your capacity when you
17 retired in July of 2021?**

18 A. Yes, it was. I -- I should mention I was
19 also acting division administrator when the division
20 administrator was promoted to the director for
21 several months in 2021.

22 **Q. Okay. So that's current Director
23 Dorrington?**

24 A. That is correct.

25 **Q. Got it. Were you appointed to the role of**

1 employees. It is less than that now.

2 And so the various roles would be -- there
3 was air quality monitoring, air quality planning, air
4 quality permitting, air quality compliance. There's
5 also an air quality registration section, and I
6 believe there's administrative support. I believe
7 that pretty much encompasses the different folks that
8 I supervised.

9 **Q. Great. In your role as air quality bureau
10 chief, did you play a role in permitting decisions at
11 DEQ?**

12 A. I played a role in air quality permitting
13 decisions and some other permitting decisions that
14 might have air quality permitting implications that
15 were not within the bureau that may have been in
16 another program.

17 **Q. Could you give me an example of that type
18 of situation?**

19 A. If a landfill was required to get a
20 license, it's not necessarily a permit, but it is a
21 license. There might be some blowing dust, and so we
22 may be consulted as part of that decision. There are
23 other decisions across the agency as well that might
24 have permitting implications -- or excuse me -- air
25 quality implications that we would be called in to --

1 in to consult on.

2 **Q. Okay. And your CV states that your**
3 **experience involves senior level review of air**
4 **quality permit applications for facilities in**
5 **Montana. Can you describe briefly what that process**
6 **involves.**

7 A. Can I ask you what particular line you --
8 you are looking at so I can read it in full context?

9 **Q. I think under --**

10 A. Is it the air quality engineer, first
11 bullet?

12 **Q. Yeah. First bullet and also second,**
13 **third, fourth bullet, I think, as well would cover**
14 **some of those issues.**

15 A. Okay. What I intended to convey with this
16 statement was that there are various air quality
17 permitting decisions that are made. Some of them are
18 pretty straightforward, pretty simple. And there are
19 some other more complex permitting decisions for some
20 of the larger industrial facilities, that some of our
21 decisions as an agency may go multimedia. And so as
22 the air quality engineer as well as the lead
23 engineer, I was involved in a lot of those and
24 oftentimes directed staff, trained staff as to how to
25 issue the appropriate permits appropriately.

1 **Q. Got it. So is it a fair characterization**
2 **that for some of those more complex permitting**
3 **process, there -- processes there are additional**
4 **levels of review relative to perhaps a simpler**
5 **permitting process?**

6 A. It is fair to say that not all air quality
7 permits are created equal.

8 **Q. Got it. Your CV indicates that you had**
9 **some involvement with policy initiatives either**
10 **through the legislature and various governors'**
11 **offices. Can you describe to me briefly what those**
12 **might have been?**

13 A. I will do my best to be brief. I didn't
14 work much with Governor Stan Stephens. That's when I
15 started. Then every governor since, whether it was
16 Governor Roscoe, Governor Martz, Governor Schweitzer,
17 Governor Bullock, or in very briefly with Governor
18 Gianforte, air quality issues would oftentimes come
19 up, and we would -- I would specifically go to the
20 governor's office and explain either our processes or
21 certain decisions that were made on permits or some
22 of the plans that we were -- we were developing.

23 **Q. Okay. Prior to your role as bureau chief,**
24 **in your role as air quality permitting section**
25 **supervisor, what were -- what was that role or what**

1 **were the responsibilities under that role?**

2 A. So prior to becoming a bureau chief, in --
3 in an engineer position, I remember specifically
4 conveying to Governor Roscoe why we made a -- a
5 decision on a permit in the Libby area in a certain
6 way. It was after a fire. So that is an example of
7 explaining to the governor why they needed -- the
8 company needed an air quality permit before they
9 could bring a new boiler on-site and just start
10 operation.

11 **Q. Okay. Did you work on any energy**
12 **policy-related issues in your role as air quality**
13 **permitting section supervisor?**

14 A. Can you be more specific? Energy policy
15 is very broad.

16 **Q. Yeah. So, for example -- well, let me**
17 **just start with a question. Is it fair -- is it a**
18 **fair characterization to say that the legislature**
19 **sets energy policy for the state?**

20 A. I believe that is generally a fair
21 characterization.

22 **Q. So in that context did you work on any,**
23 **for example, legislation working with either**
24 **legislators or perhaps the governor's office on any**
25 **specific initiatives related to energy policy in**

1 **Montana? Does that help?**

2 A. It does. And working on legislation, do
3 you mean crafted by someone else that we were talking
4 -- that we -- that I was talked to regarding its
5 impact, or are you referring to the bureau
6 specifically crafting energy legislation, both or --

7 **Q. Probably both, more the latter.**

8 A. Yes. There were times that some of the
9 Clean Air Act statutes would influence energy policy.
10 And so there were times when we needed statutory
11 authority to run different programs than what we had
12 before, such as the registration program. That is
13 something that I worked on with my supervisor and
14 various legislators to -- to get that legislation
15 passed.

16 **Q. And would that be a situation where**
17 **federal legislation in the form of the Clean Air Act**
18 **required something of states and you needed authority**
19 **from the state legislature in order to carry out**
20 **those federal duties?**

21 A. No. That wouldn't be an accurate
22 characterization.

23 **Q. Okay. Can you -- can you more accurately**
24 **characterize what that role would have been?**

25 A. That specific role that I was referring to

1 is the Clean Air Act of Montana. Did not
2 specifically contain language that allowed or
3 authorized a registration program. So we needed to
4 ensure the Clean Air Act of Montana had that program.

5 **Q. Got it.**

6 A. So that we as an agency, we the air
7 quality bureau, could move forward with some
8 rulemaking to implement that program.

9 **Q. Okay. And just taking that situation as
10 an example, who decided that a registration program
11 was needed? Did that come from the agency or the
12 legislature or -- I'm just curious. What would start
13 that policy engagement and legislative process?**

14 A. The air quality bureau, since the early
15 '90s, has and I believe currently still has a very
16 robust stakeholder process. It's called the Clean
17 Air Act Advisory Committee.

18 And so through the Clean Air Act Advisory
19 Committee, many of the legislative or other policy
20 initiatives came from that committee. I do believe
21 that it might be the brainchild of somebody within
22 the air quality bureau that brings it through that
23 stakeholder process before we would ever approach
24 either a board for rulemaking or the legislature for
25 statutory changes. We would want to have support for

1 what we were trying to accomplish.

2 **Q. Got it. We're almost done with your CV
3 here. But prior to your role as air quality
4 permitting section supervisor, you were an air
5 quality engineer. Is that correct?**

6 A. That is correct.

7 **Q. And what did that job entail?**

8 A. It was kind of a dual job. It's in that
9 capacity that I was also assigned to be the lead
10 engineer. The lead engineer would ensure consistency
11 in the issuance of permits. When you have multiple
12 engineers and specialists issuing permits to
13 different companies for the same operation, we need
14 to try to be as consistent as possible in the
15 application of whatever discretion or rules that we
16 were required to implement.

17 Also as an engineer I would also issue air
18 quality permits. Generally engineers were assigned
19 to some of the more complex operations. We had a
20 petroleum engineer who would do much of the refining
21 -- refinery engineer air quality permits. We had
22 another engineer assigned to power plants. Some
23 would be assigned to wood products facilities, as an
24 example. So it was kind of work of that nature.

25 **Q. Got it. In your work at DEQ in any of**

1 **your prior capacities, have you ever worked on issues
2 related to the Montana Environmental Policy Act or
3 MEPA?**

4 A. Please just tell me what you mean by
5 issues.

6 **Q. Was your work influenced by MEPA?**

7 A. Yes. We were required -- one of the
8 statutes that we administer as -- as a bureau and as
9 a section was the Montana Environmental Policy Act
10 associated with certain permit decisions.

11 **Q. Got it. Are you familiar with the statute
12 the Montana State Energy Policy?**

13 A. Generally.

14 **Q. Can you describe your understanding of
15 that statute?**

16 A. My general understanding is that the
17 legislature sets some goals for energy in Montana. I
18 have not participated -- or excuse me. I have not
19 spent a lot of time reviewing that because the work
20 that I was in was governed by the Clean Act of
21 Montana and the Montana Environmental Policy Act and
22 maybe some other statutes, records management, those
23 types of things.

24 **Q. Got it. So moving on to your former
25 affiliation with the agency, I am going to show you**

1 **what has been previously marked as Exhibit 63. Let
2 me know when you've had a chance to take a look at
3 it.**

4 A. I don't recall seeing this, so if you
5 don't mind, I just need to take just a few moments to
6 read this.

7 **Q. Absolutely.**

8 A. Okay. I have seen this, so -- yes, I
9 have. Thank you.

10 **Q. Can you identify this document, please?**

11 A. Exhibit 63, it is the Montana Department
12 of Environmental Quality's Amended Designees and
13 Objections to Plaintiffs' Amended Notice, Notice of
14 Deposition.

15 **Q. I know. It's kind of a mouthful. Thank
16 you.**

17 A. It is. I skipped some 30(b)(6). I -- I'm
18 sorry. I skipped some.

19 **Q. That's all right. And you said after
20 having taken a look at it, you have reviewed this
21 document before. Is that correct?**

22 A. I believe I have.

23 **Q. Okay. And then do you see your name in
24 this?**

25 A. Yes, I do. I believe the first time,

1 unless I missed it, is page 3 bottom.

2 **Q. Okay. You can go on from there if you**
3 **would.**

4 A. Sorry. Page 4 under topic 3, documents.

5 **Q. Uh-huh.**

6 A. Page 5 under response. I believe that is
7 referring to topic 6.

8 **Q. Okay.**

9 A. Same page under topic 8 response.

10 **Q. Uh-huh.**

11 A. I believe that's it. And I will apologize
12 -- I'm getting used to my progressive lenses, and so
13 sometimes I don't always get my eyes going the right
14 way. I believe that's it.

15 **Q. Okay. I apologize the print on this is**
16 **rather small as well.**

17 **You are the person who has been designated**
18 **by the agency to speak on its behalf with respect to**
19 **the topics identified in this document, Defendant**
20 **DEQ's Amended Notice of Designations and Objections**
21 **to Plaintiffs' 30(b)(6) Notice of Deposition for**
22 **topic numbers 3, 6, and 8. Is that correct?**

23 A. That is my understanding, yes.

24 **Q. Okay. Who designated you to speak --**

25 **MS. McKENNA: I'm going to object to that.**

1 The topic 3 was divided between Director Dorrington
2 and Sonja Nowakowski and Mr. Klemp. So Mr. Klemp is
3 only partially designated for topic 3.

4 **MS. HORNBEIN: Correct. Noted.**

5 **BY MS. HORNBEIN:**

6 **Q. Who designated you to speak to these three**
7 **topics, if you remember?**

8 A. I was asked, I believe, for the first and
9 probably only time by Director Dorrington.

10 **Q. And do you recollect when that was?**

11 A. Late summer --

12 **Q. Uh-huh.**

13 A. -- of this year, 2022, is my recollection.
14 I could not tell you if it was August or September.

15 **Q. Okay. And do you know why Director**
16 **Dorrington designated you to speak for these topics?**

17 A. He called, started talking through the
18 various issues and said, Dave, you are in the best
19 position to represent the agency. And he asked me if
20 I would mind doing that, and I told him I would.

21 **Q. And is there a reason that -- what was the**
22 **reason that you were in the best position to speak to**
23 **those issues on behalf of the agency?**

24 A. I believe it was because of my experience
25 and capacity in which I served the agency.

1 **Q. Understood. Do you have full authority to**
2 **speak on behalf of the agency with respect to those**
3 **three topics listed in this document?**

4 **MS. McKENNA: I'm going to object to that.**
5 It calls for a legal conclusion. Mr. Klemp has been
6 designated as the 30(b)(6) designee to answer certain
7 questions, but I believe that the word "authority"
8 implies some sort of legal interpretation which
9 Mr. Klemp is not prepared to answer.

10 **BY MS. HORNBEIN:**

11 **Q. You can go ahead and answer the question.**
12 **The deposition -- or the objection is on the record.**

13 A. Okay. Can you just briefly restate your
14 question?

15 **Q. In your understanding do you have**
16 **authority to speak for the agency on these topics?**

17 A. I -- in my understanding I -- I am here to
18 represent what the agency did. The authority to
19 speak on behalf of the agency is -- is a little
20 confusing to me because I am retired and I'm no
21 longer employed by the agency.

22 **Q. Fair enough.**

23 A. Okay.

24 **Q. I think we already covered this at the**
25 **beginning of your deposition, but I do just want to**

1 **make sure. Do you understand that the answers you**
2 **give in this deposition as opposed to the next one**
3 **will be on behalf of the agency rather than on behalf**
4 **of yourself as a former employee of the agency?**

5 A. Yes. I understand that.

6 **Q. Okay. And are you fully prepared to speak**
7 **to the topics identified in the exhibit that I just**
8 **gave you to review?**

9 A. I have prepared. I believe I am. It will
10 depend on your questions.

11 **Q. Okay. Fair enough. So if you could look**
12 **at page 4 of that document and under, I believe,**
13 **topic 3, there's a list of documents. And so this**
14 **next series of questions I'm going to ask you is**
15 **going to pertain to that list of documents. Would**
16 **you mind reading me that list if it's not too much**
17 **trouble, and please let me know if it is and I can do**
18 **it for you?**

19 A. Yes. I -- I can read this. Topic 3
20 documents, Dave Klemp, paren, 17: Roundup Power
21 Project, Highwood Generating Station, Climate Change
22 Advisory Council, items 3 through 6. Highwood
23 Generating Station, items 7 and 8. Montana
24 Greenhouse Gas Inventory; Signal Peak Air Quality
25 Permit; Rosebud Coal Area A Air Quality Permit;

1 Express Pipeline Air Quality Permit; Malteurop
2 Malting Air Permit; Talen Title V Operating Permit;
3 NWE, which stands for NorthWestern Energy, Belfry
4 Compressor Station Air Quality Permit; TruNorth Steel
5 AQB Permit; Talen Air Quality Permit 0513-14.

6 **Q. I think the --**

7 **A. That looks like a typo.**

8 **Q. Yes.**

9 **A. It says CHIS. It should be CHS, I**
10 **believe, Laurel Refinery Air Quality Permit. I was**
11 **wondering if my glasses were playing tricks on me.**

12 **Q. No. Not you.**

13 **A. CELP, which stands for Colstrip Energy**
14 **Limited Partnership, Title V permit; Calumet Refining**
15 **Title V permit; NWE Mainline Compressor Station Title**
16 **V.**

17 **Q. Perfect. Thank you. So it's Malteurop?**
18 **I was wondering how to pronounce that.**

19 **A. It is Malteurop.**

20 **Q. Okay.**

21 **A. Yes.**

22 **Q. So I'm going to introduce a series of**
23 **exhibits related to a number of these documents and**
24 **because -- I won't be preceding precisely in the**
25 **order that the documents were listed. I tried to**

1 group things by type and facility just to make things
2 flow a little bit better, but let me know if you have
3 questions.

4 **So I am going to hand you what I believe**
5 **has been previously marked as Exhibit 153 -- no.**
6 **Sorry. We're trying to avoid duplicating exhibit**
7 **numbers where possible. Okay. All right.**

8 **So I'm going to hand you what I will mark**
9 **as Exhibit 153.**

10 **(Whereupon, Exhibit 153 was**
11 **marked for identification.)**

12 **BY MS. HORNBEIN:**

13 **Q. That makes more sense. Let me know when**
14 **you've had a chance to take a look at that.**

15 **A. Okay. I have reviewed it.**

16 **Q. What is this document?**

17 **A. This is the Montana Climate Change**
18 **Advisory Committee meeting direction notes, format,**
19 **and agenda for at least one of the meetings.**

20 **Q. Okay. And what is the Montana Climate**
21 **Change Advisory Committee, if you know?**

22 **A. This was a committee formed in response to**
23 **a directive by then Governor Brian Schweitzer that**
24 **was led by the department's then Director Richard**
25 **Opper to look at climate options.**

1 **Q. And have you seen this particular document**
2 **before that you recollect?**

3 **A. Yes. Both -- I've reviewed this prior to**
4 **coming today.**

5 **Q. Okay.**

6 **A. And I do believe I saw it back in the day.**

7 **Q. Okay. Is it fair to say that the climate**
8 **change advisory committee was operating in 2006?**

9 **A. Yes. It was at least formed and began**
10 **some of its initial operations in -- in 2006, yes.**

11 **Q. And it sounds like from your description**
12 **of former Director Opper's role that DEQ was aware**
13 **that it was formed and operating and was**
14 **participating at that point. Is that correct?**

15 **A. I can't speak for the entire agency.**
16 **There were at least portions of DEQ that were aware**
17 **that it was formed and operating.**

18 **Q. Got it. What was DEQ's role with the**
19 **advisory committee?**

20 **A. If I could go back to page 3.**

21 **Q. Uh-huh.**

22 **A. DEQ's specific role, I think, was**
23 **identified to oversee and coordinate that process.**

24 **Q. Okay. Can you please turn to page 1 of**
25 **this document, which doesn't actually have a page**

1 **number, but it's the one before page 2 which is**
2 **marked, where -- and if you look about midway down**
3 **the page it says "The goals of this process include,"**
4 **and then number 1 is "the development of a current**
5 **and comprehensive inventory and forecast of GHG**
6 **emissions in Montana from 1990 to 2020." Is that**
7 **correct? Did I read that correctly?**

8 **A. Yes. I believe you did.**

9 **Q. Would you agree that at the time of this**
10 **document in 2006, DEQ was aware of a need to reduce**
11 **greenhouse gas emissions to address climate change?**

12 **A. I can't say that DEQ and those portions**
13 **that were involved were aware of the need to reduce**
14 **greenhouse gas emissions.**

15 **Q. Could you -- can you characterize what**
16 **DEQ's -- strike that.**

17 **Do you know what DEQ's position was with**
18 **respect to climate change at the time that this**
19 **committee was formed?**

20 **A. I don't believe I can -- in my capacity in**
21 **the air quality bureau, at the time I was the air**
22 **quality permitting supervisor in 2006, I can't speak**
23 **to what the department thought specifically about**
24 **climate change. I can speak to the roles that I**
25 **support -- that I had or the bureau had and that we**

1 supported.

2 **Q. Could you speak to those roles?**

3 A. Specifically with the development of the
4 current inventory?

5 **Q. Uh-huh.**

6 A. Goal number one, we did understand and I
7 did understand there was a need to assess what the
8 emissions were currently as well as project what they
9 might be into the future.

10 **Q. Okay. And if you look below goal number
11 one at goal number two, it is "The development of a
12 comprehensive set of individual policy
13 recommendations to the governor to reduce GHG
14 emissions in Montana." Did I read that correctly?**

15 A. Yes. I believe you did.

16 **Q. Did you or to your knowledge anyone else
17 at DEQ have a role in implementing this second goal?**

18 A. When you are referring to reduced GHG
19 emissions in Montana, are you referring to overall or
20 with regard to a specific sector?

21 **Q. I don't know. I'm curious what -- what
22 I'm trying to get at here is what the agency's
23 understanding was of whether there was a problem and
24 whether there was a need for a solution and what the
25 agency's involvement in either of those questions**

1 were.

2 A. Okay. With that as a -- I am aware that
3 the agency -- there were some policy recommendations
4 to reduce the carbon footprint, if you will, of state
5 agencies. And so there was a direction to reduce --
6 to set thermostats differently in the winter as well
7 as in the summer to reduce the state footprint.

8 Now beyond that, I know there was a list
9 of recommendations. And so specifically to the
10 sources that were regulated by the air quality
11 bureau, I can't recall specific conversations about
12 whether or not we were going to mandate reductions
13 from the sectors that were regulated by the air
14 quality bureau.

15 **Q. Okay. So you just spoke to what sounded
16 like a -- an internal state effort to -- I think you
17 used the term to "reduce the footprint." Is that --
18 am I characterizing what you said correctly?**

19 A. Governor Schweitzer's 20 percent reduction
20 by 2010 initiative.

21 **Q. And what was the need for that reduction
22 as you understood it?**

23 A. As I understood it, it was to reduce some
24 of the greenhouse gas emissions from at least a
25 portion of a sector.

1 **Q. And was that in response to climate
2 change?**

3 A. I believe -- yes. At some level, yes.
4 Yes.

5 **Q. Okay. Would you agree that DEQ was aware
6 of the existence of climate change at the time of
7 this meeting?**

8 A. I would say DEQ was certainly aware of the
9 argument surrounding climate change.

10 **Q. Okay. Would you agree that DEQ was aware
11 of the need to reduce greenhouse gas emissions from
12 Montana's electric power sector at the time of this
13 meeting?**

14 A. I don't think -- no. I don't think I can
15 fully agree with that.

16 **Q. Why not?**

17 A. Because as I mentioned earlier, I cannot
18 recall specific discussions that the air quality
19 bureau was a part of that called on any reductions
20 from greenhouse gases from the electrical facilities.

21 **Q. Got it. What knowledge of DEQ's authority
22 and ability to regulate or analyze climate change do
23 you expect to testify about in court in this case if
24 you're called to testify?**

25 **MS. McKENNA: Objection. That's a**

1 compound question. Please ask one topic sentence at
2 a time.

3 **BY MS. HORNBEIN:**

4 **Q. Okay. If you are asked to testify in this
5 proceeding in court, how will you testify about DEQ's
6 authority to regulate climate change?**

7 A. Thank you for unpacking that because that
8 was a long sentence.

9 **Q. Sure.**

10 A. With specific -- specifically to DEQ I
11 believe it would be associated with the air quality
12 bureau, that portion of DEQ, and its authority or not
13 depending on which time period we're talking about --

14 **Q. Uh-huh.**

15 A. -- to regulate greenhouse gas emissions.

16 **Q. Do you expect to testify on the topic of
17 DEQ's ability to analyze climate change?**

18 A. I don't know precisely what I would be
19 asked to testify on. But with regard to climate
20 change, I don't know what I would testify on. Again,
21 specifically what the air quality bureau deals with
22 is emissions and potentially the ambient air quality
23 impact of those emissions.

24 **Q. Okay. Going back to your prior answer
25 which was in response to my question about DEQ's**

1 authority in these areas -- strike -- oh, I know.
 2 You mentioned that you might testify -- and forgive
 3 me if I misstate this. Please correct me. You might
 4 testify about variations in DEQ's authority,
 5 depending on the time period. Did I get that
 6 correctly?

7 A. Portions of it I would say. I don't -- I
 8 don't know about the word "variations."

9 Q. Sure. Can you explain what you meant?

10 A. Yes. And I'll try to do it as -- as
 11 briefly as possible and as succinctly as possible.
 12 There was a time that greenhouse gas emissions were
 13 not pollutants that were subject to regulation at the
 14 federal and/or the state level. And then there was a
 15 time that some greenhouse gas emissions were subject
 16 to regulation at certain levels.

17 Q. And at the time -- at the time that
 18 certain emissions became subject to regulation at
 19 either the federal or state level, was what happened
 20 at DEQ influenced by what was happening at the
 21 federal level, the state level, or both?

22 A. Specifically the air quality bureau's
 23 operations are influenced by the federal Clean Air
 24 Act, changes to that act, and its implementing rules
 25 as well as the Clean Air Act of Montana and changes

1 to those implemented rules. So I believe it would be
 2 both.

3 Q. And do those changes tend to occur in
 4 tandem in your experience?

5 A. Sometimes, but not always.

6 Q. Got it.

7 A. It depends.

8 Q. What does it depend on?

9 A. Depends on the specific change.

10 Q. Okay. If you are called to testify at
 11 trial, what knowledge of climate change analysis
 12 would you expect to testify to on behalf of the air
 13 quality bureau?

14 A. What knowledge of climate change analysis.
 15 That is very, very broad. I think a little more
 16 specifically would be air quality.

17 Q. Uh-huh.

18 A. There may also be some adaptation to
 19 climate change that is involved with air quality or
 20 impacted by air quality. There may be others that
 21 I'm really not thinking of right now, but I -- I
 22 don't know what they would be.

23 Q. Okay. When you say air quality prior to
 24 saying adaptation, did you mean in the regulatory
 25 context, regulation of air quality?

1 A. Primarily, yes. That's regulation.

2 Q. Okay. And what would that adaptation
 3 context refer to?

4 A. Adapting, specifically adapting --
 5 adapting Montana's air quality program to account for
 6 maybe changes that are occurring.

7 Q. Do you have an example of that that may
 8 have happened while you were with the -- with the
 9 department?

10 A. Yes, I do. An example would be the use of
 11 prescribed fire -- fire as a means of reducing
 12 overall fire emissions.

13 Q. And is the air quality bureau involved in
 14 permitting or other decisions about the use of
 15 prescribed fire?

16 A. In some instances, yes. If they are a
 17 major open burner, such as the US -- United States
 18 Forest Service, they would have an air quality permit
 19 specifically from the air quality bureau.

20 Q. Okay.

21 MS. McKENNA: We've been going for about
 22 an hour now. Can we take a break?

23 MS. HORNBEIN: Absolutely. You want to
 24 say five minutes? Ten minutes? What's your
 25 preference, Lee?

1 MS. McKENNA: Ten minutes would be good.
 2 Thanks.

3 MS. HORNBEIN: Okay. Sounds good.

4 THE VIDEOGRAPHER: We are going off the
 5 record. The time is 10:10 a.m.

6 (Whereupon, a break was then
 7 taken.)

8 THE VIDEOGRAPHER: We are back on the
 9 record. The time is 10:23 a.m.

10 BY MS. HORNBEIN:

11 Q. Dave, I'm going to hand you what I have
 12 just marked as Exhibit 154.

13 (Whereupon, Exhibit 154 was
 14 marked for identification.)

15 BY MS. HORNBEIN:

16 Q. Could you tell me what that document is?

17 A. This document appears to be the
 18 presentation for the Montana Climate Change Advisory
 19 Committee meeting number one, July 13th, 2006.

20 Q. And would that have been the first meeting
 21 of the climate change advisory committee?

22 A. I believe so.

23 Q. Okay. Have you seen this document before?

24 A. Yes, I have.

25 Q. Was that in preparation for your

1 deposition today or in the ordinary course of your
2 business at DEQ, if you recollect?

3 A. I know it was in preparation for the
4 deposition today, and I believe some of these are --
5 are vaguely familiar to me.

6 Q. Sure.

7 A. So I believe I've seen it before.

8 Q. Could you please turn to page 38 of the
9 document. Are you there?

10 A. I am there.

11 Q. Great. So for the top slide which reads
12 categories of electricity generation actions, can you
13 tell me what -- actually just looking at the whole
14 page, do you know what these slides are referring to?

15 A. Specifically these two slides I would just
16 go by their title. I mean, they're talking about
17 categories of electrical generation actions as well
18 as categories of residential, commercial, industrial
19 actions. And then obviously there's some bullets
20 underneath.

21 Q. Are these related to recommendations
22 developed by the climate change advisory committee?
23 Do you know?

24 A. I don't know if they're related to the
25 recommendations.

1 Q. Well, let's start with the entire agency.

2 A. I don't recall.

3 Q. What about the air quality bureau?

4 A. I don't recall the air quality bureau
5 doing anything for those specific to these
6 recommendations.

7 Q. Okay. So I am going to hand you what I
8 will mark as Exhibit 155.

9 (Whereupon, Exhibit 155 was
10 marked for identification.)

11 BY MS. HORNBEIN:

12 Q. And could you just identify that document
13 for me. If you can do it from the cover page, that's
14 great.

15 A. Yes. This document is a draft meeting
16 summary of the Montana Climate Change Advisory
17 Committee, meeting number three, in Billings,
18 Montana, December 14th, 2006.

19 Q. Okay. Can you look at the bottom of page
20 3 of that document where it says review and approval
21 for draft priorities for analysis of mitigation
22 actions. Do you see that?

23 A. I see that it's highlighted.

24 Q. Okay. I apologize. I may have given you
25 my copy of the exhibit, and they don't want the

1 Q. Do you know if the committee did develop
2 recommendations?

3 A. I do believe the committee did develop
4 recommendations.

5 Q. What was DEQ's role or at least the air
6 quality bureau's role in implementing those
7 recommendations?

8 A. In terms of the implementation of the
9 recommendations, I don't recall much of an air
10 quality bureau role.

11 Q. Okay. With respect to that top slide on
12 page 38, categories of electricity generation
13 actions, it has a number of bullet points, including
14 "Expand low emitting and renewable sources, reduce
15 fossil fuel extraction, and process emissions, reduce
16 delivery-related emission, capture and store carbon,
17 parentheses, sequestration, remove particulates,
18 parenthesis, black carbon." Did I read that
19 correctly?

20 A. I believe so, yes.

21 Q. Did DEQ have any role in implementing
22 policies or programs designed to achieve those types
23 of actions?

24 A. I don't recall if DEQ -- and by DEQ, you
25 mean the entire agency. Is that correct?

1 highlighted -- sorry. I gave you both copies.

2 (Whereupon, a discussion was
3 held outside the record.)

4 BY MS. HORNBEIN:

5 Q. So at the bottom of page 3 where it says
6 review and approval of draft priorities for analysis
7 mitigation actions, was DEQ familiar with the
8 mitigation actions that the committee evaluated?

9 A. Specific mitigation actions you were
10 referring to are --

11 Q. Do you recollect what they might have
12 been?

13 A. Not off the top of my head, no.

14 Q. Okay. Do you know off the top of your
15 head if DEQ was involved with the implementation of
16 any mitigation actions developed by the committee?

17 A. Yes. I believe so.

18 Q. Do you know what those might have been?

19 A. The ones that I can recall off the top of
20 my head were switching to more efficient lights
21 within the agency as a mitigation plan.

22 Q. So mitigation actions were -- at least to
23 the extent DEQ was involved were actions taken within
24 the state to, going back to your earlier term, reduce
25 its footprint?

1 A. Those were the ones I referred. There may
2 have been more, but I just can't recall.

3 Q. Okay. And referencing that example you
4 just gave of replacing light bulbs, did DEQ follow
5 through with that and implement that mitigation
6 action?

7 A. At least that portion of it. I -- I don't
8 recall if that was a partial mitigation or full
9 mitigation, but there were some actions taken.

10 Q. Got it. I'm going to hand you what I
11 believe was marked yesterday as Exhibit 149. Let me
12 find it.

13 I'm going to hand you what was previously
14 marked as Exhibit 149, and if you could identify that
15 document for me, that would be great.

16 A. This is the Montana greenhouse gas
17 inventory and reference case projections 1990 through
18 2020.

19 Q. Have you seen this document before?

20 A. Yes, I have.

21 Q. In what capacity?

22 A. In preparation for today.

23 Q. Uh-huh.

24 A. As well as I -- I do recall seeing at
25 least portions of this document in my capacity in the

1 where it says fossil fuel industry in the left-hand
2 column?

3 A. Yes. The highlighted fossil fuel -- or
4 the bolded -- excuse me -- fossil fuel industry.

5 Q. Correct. And then the header for that
6 column is -- or the title of this table, table E-4,
7 is GHG emissions and referenced case projections for
8 the fossil fuel industry in Montana. Do I have that
9 correct?

10 A. I believe so, yes.

11 Q. And those emissions are recorded in
12 million metric tons of CO2-E, which I believe stands
13 for CO2 equivalent. Is that correct?

14 A. That is my understanding as well.

15 Q. Okay. And then under the column 1990, do
16 you see the number for the fossil fuel industry top
17 row 3.5?

18 A. Yes, I do.

19 Q. So would that be 3.5 million metric tons
20 of CO2 equivalent?

21 A. I believe that's what they were attempting
22 to do, yes.

23 Q. Okay. And then in the middle column or
24 two columns over, 2005, do you see 5.0, which would
25 be 5 million metric tons of CO2 equivalent?

1 air quality bureau.

2 Q. Okay. Do you agree that Montana's
3 greenhouse gas emissions were inventoried in 2007?

4 A. I believe this document represents an
5 inventory of greenhouse gases for Montana in 2007.

6 Q. Okay. And is Exhibit 149 that document
7 that you just described that contains greenhouse gas
8 emissions inventoried in 2007?

9 A. I believe so, yes.

10 Q. Okay. Can you please turn to page 50 of
11 that document?

12 A. I'm on page 50.

13 Q. Okay. And in the only paragraph on that
14 page, if you look at the second sentence, it reads:
15 "Emissions from this sector" -- and I believe it's
16 talking about the fossil fuel industry. "Emissions
17 from this sector grew by 40 percent from 1990 to
18 2005." Did I read that correctly?

19 A. You read that correctly. It was referring
20 to the estimated methane emissions from the fossil
21 fuel industry.

22 Q. Okay. And then can you turn to the next
23 page, page 51?

24 A. I am there.

25 Q. Okay. And on the top line do you see

1 A. Yes. I see that.

2 Q. Okay. Are you -- would you agree that
3 that represents a 40 percent increase in greenhouse
4 gas emissions between the year 1990 and the year
5 2005?

6 MS. McKENNA: Objection. The table
7 clearly states projections.

8 BY MS. HORNBEIN:

9 Q. You can go ahead and answer.

10 A. I believe the percentage is correct. This
11 is referencing CO2 equivalent, and in your question
12 you mentioned greenhouse gas emissions.

13 Q. Okay.

14 A. Which may or may not be the same.

15 Q. Can you explain how those two may or may
16 not be the same?

17 A. I don't know what they referred to here
18 with this table of what they used for CO2 equivalent.

19 Q. Okay. Is it your understanding that CO2
20 equivalent emissions include other greenhouse gases
21 -- and I will just give the example of methane --
22 framed in such a way that they are equivalent to a
23 certain amount of CO2? Do I have that correct?

24 A. It is close.

25 Q. How would you describe it more correctly?

1 A. CO2 equivalent would be the mass emissions
2 from the greenhouse gases that were used in that
3 calculation multiplied by the global warming
4 potential and then added up.

5 **Q. Okay. Do you know if DEQ has done a
6 greenhouse gas emissions inventory since 2007?**

7 A. Can you be more specific about the
8 greenhouse gas emission inventory that you're
9 referring to?

10 **Q. Well, going back to the cover page of this
11 document, it's titled Montana greenhouse gas
12 inventory reference case projections 1990 to 2020, as
13 you previously read. And it is dated September 2007.
14 Do you know if DEQ conducted a similar or equivalent
15 inventory since the year 2007?**

16 A. Similar or equivalent, probably something
17 similar to a portion of this.

18 **Q. And what portion would that have been?**

19 A. Various sectors.

20 **Q. Okay. So is it your understanding that
21 this document looks at emissions from all sectors
22 within the state of Montana?**

23 A. I could not say that it works for all
24 sectors in Montana. It -- for the sectors that are
25 described here, yes.

1 **Q. Okay. And if DEQ subsequently did an
2 emissions inventory for some subset, would it have
3 been some subset of those sectors described in this
4 report?**

5 A. Yes. I believe it would fit with that.

6 **Q. And off the top of your head, do you know
7 what those sectors or some of those sectors might be?**

8 A. I -- specifically are you referring to
9 activities by the State of Montana?

10 **Q. Okay.**

11 A. Is that -- is that what you were referring
12 to?

13 **Q. I am -- I don't know. And the reason --
14 I'll -- I'll give you the source of my confusion or
15 lack of knowledge. I don't know if the inventory
16 that DEQ would have done subsequently would have just
17 looked at -- at greenhouse gases produced by the
18 state or, for example, this inventory looks at fossil
19 fuel production -- or greenhouse gas production from
20 the fossil fuel sector, for example, which I assume
21 includes private actors as well engaged in the fossil
22 fuel sector. Does that make sense?**

23 **MS. McKENNA:** I'm going to object because
24 the table clearly says projections and not
25 production, and counsel has continually tried to ask

1 questions based on production. So I want the record
2 to be very clear what this table on page 63 of 92 --
3 well, the pdf. It's Page 51, actually, states.

4 **MS. HORNBEIN:** I stand corrected.

5 **BY MS. HORNBEIN:**

6 **Q. Projections.**

7 A. It would be very helpful if you could ask
8 a specific question. You have asked a very general
9 question that may depend on the circumstances. And
10 -- and so it's -- it's challenging for me to respond
11 one way or another without a specific question.

12 **Q. Okay. When I asked the question as to
13 whether DEQ had done a greenhouse gas inventory since
14 the year 2007, I believe you answered that you
15 thought the agency had done so with respect to some
16 sectors or some subset of sectors. I'm just curious
17 what greenhouse gas emissions inventory or
18 inventories that you are aware of that DEQ conducted
19 since the year 2007 would have been.**

20 A. Specifically related to electrical
21 generating units.

22 **Q. Okay. Anything else?**

23 A. Not that DEQ specifically conducted an
24 inventory for.

25 **Q. Okay. Are you aware of any inventories**

1 **that DEQ participated in for sectors other than
2 electrical generating units?**

3 A. By participated in, what --

4 **Q. Contributed to.**

5 A. Yes. I am aware.

6 **Q. And what would those have been?**

7 A. There are requirements both that -- that
8 previously and -- and still currently exist in the
9 Federal Clean Air Act that the agency is the lead in
10 implementing that require reporting of specifically
11 carbon dioxide as a result of the acid rain program.
12 And there are other source sectors like the oil and
13 gas industry that is required to report some of their
14 -- I believe their methane emissions to the federal
15 government, and we ensure that some of that
16 information is given to the federal government.

17 **Q. Okay. Would you know what years those
18 inventories either that DEQ contributed to or
19 authored on its own would have been issued?**

20 A. Specifically for electrical generating
21 units, it was in regards to the clean power plan,
22 2014, 2015, 2016 time frame.

23 **Q. Okay. Any others?**

24 A. No. The other ones that I referred to are
25 ongoing. There's -- there's an obligation to report

1 on a frequency into the federal database on the
2 companies.

3 **Q. Okay. Do you know what agencies are**
4 **primarily responsible for those reporting programs?**
5 **I assume for oil and gas it would be DNRC. Is that**
6 **correct?**

7 A. I believe those are on the industries
8 themselves.

9 **Q. Oh, okay.**
10 **Okay. So I am going to hand you what has**
11 **previously been marked as Exhibit 137. Here we go.**
12 **Can you identify that document for me, Dave?**

13 A. Yes. This is the Roundup power project
14 final environmental impact statement.

15 **Q. Okay. Was this document produced by DEQ?**

16 A. Yes. I believe it was.

17 **Q. And do you know if this document would**
18 **have been publicly available?**

19 A. Yes. I know that it was.

20 **Q. Okay. And how does DEQ prepare this type**
21 **of document?**

22 A. This particular document was prepared
23 using an environmental impact statement coordinator
24 within DEQ that contracted to receive a lot of the
25 information, and also DE -- other DEQ programs also

1 **this final EIS, if DEQ ever evaluated or calculated**
2 **the greenhouse gas emissions that would result from**
3 **the Roundup power project?**

4 A. I believe there was an estimation of
5 emissions somewhere in the application process that
6 would have occurred prior to the development of the
7 emission inventory -- or excuse me -- environmental
8 impact statement. I'm sorry.

9 **Q. Okay. And would that information have**
10 **appeared in the EIS? Do you know?**

11 A. Potentially.

12 **Q. Okay. Do you recollect what the**
13 **greenhouse gas emissions from this project were?**

14 A. Not off the top of my head.

15 **Q. Fair enough. Did DEQ ever evaluate the**
16 **emissions that would result from the operation of**
17 **this power plant?**

18 A. When you say evaluate and emissions, can
19 you please be more specific?

20 **Q. Did DEQ ever quantify and record the**
21 **projected greenhouse gas emissions that would have**
22 **occurred as a result of this project being developed?**

23 A. I can't recall off the top of my head. I
24 thought we had.

25 **Q. Okay. Is that something that DEQ would**

1 assisted in the preparation of this.

2 **Q. Okay. And you said this particular EIS.**
3 **Does that process follow for other EISs that DEQ**
4 **would conduct, or is it situation dependent?**

5 A. I can't speak for all of DEQ. The ones
6 that I have seen it's situation dependent.

7 **Q. And what triggers the particular course of**
8 **operations that was followed here?**

9 A. It really depends upon the application
10 that we receive, the company, and DEQ's organization
11 at the time.

12 **Q. Okay. Prior to issuance -- strike that.**
13 **Was this EIS for the Roundup power project**
14 **issued while you were at DEQ?**

15 A. Yes, it was.

16 **Q. And was it when you were in your capacity**
17 **as bureau chief?**

18 A. No, it was not.

19 **Q. And what was your role at the time that**
20 **this document was issued?**

21 A. Air quality permit supervisor.

22 **Q. Okay. Were you involved with working on**
23 **this EIS?**

24 A. Yes, I was.

25 **Q. And do you know if prior to issuance of**

1 **typically have done for a power project of this**
2 **nature?**

3 A. Typically, yes.

4 **Q. Okay. Do you know if DEQ ever analyzed**
5 **how this Roundup power project would affect human**
6 **health when it was operational?**

7 A. I believe we did analyze certain aspects
8 of it for its impact of -- on human health.

9 **Q. And is that also something that would**
10 **typically have been done for a project of this**
11 **nature?**

12 A. Yes.

13 **Q. Okay. Prior to issuing this final EIS,**
14 **did DEQ ever analyze how the Roundup power project**
15 **would contribute to climate change?**

16 A. I would have to review -- I cannot recall.
17 I'd have to review the record.

18 **Q. Okay. Do you recollect if the**
19 **contribution of a project being permitted to climate**
20 **change was something that DEQ considered?**

21 A. Can you rephrase -- can you say that
22 again, please? That was --

23 **Q. It was inartfully phrased. In making a**
24 **decision whether to issue a permit or when conducting**
25 **an environmental impact analysis either through an EA**

1 or an EIS, did DEQ analyze climate change impacts
2 during your tenure?

3 A. I can't recall all of the instances that
4 documents were prepared under MEPA and the extent of
5 all the different analyses without looking at the
6 specific project and that analyses.

7 Q. Do you recollect if climate change impacts
8 were something that were ever looked at on projects
9 you worked on?

10 A. I don't recall.

11 Q. Okay. Prior to issuing its approval for
12 this project, did DEQ ever analyze the percentage of
13 state, national, and global greenhouse gas emissions
14 that this project would have represented?

15 A. I believe we did for this particular
16 project try to compare the emissions from this to the
17 emissions elsewhere.

18 Q. Okay. Do you agree that this EIS and
19 DEQ's approval of this project effectively allowed
20 the Roundup power project to burn approximately
21 2.7 million tons of coal per year?

22 A. I would need to look at the specific
23 analysis or the permit that authorized -- or -- or
24 that we issued for that facility to see the numbers.

25 Q. Can I ask you to turn to page 2-2, which

1 is -- I don't know -- six or seven pages into the
2 document?

3 A. 2-2. I'm on 2-2.

4 Q. Okay. So if you look at the top of the
5 page 2.2, proposed action, and then the second
6 sentence: "To meet its coal supply needs, the
7 project proponent has entered into contractual
8 agreements with the mine to purchase approximately
9 2.7 million tons of coal per year." Did I read that
10 correctly?

11 A. Yes, you did.

12 Q. Okay. And with that hopefully memory
13 refresher, do you agree that this EIS effectively
14 allowed this project to burn that much coal per year,
15 2.7 million tons?

16 A. No. I do not agree that the EIS allowed.

17 Q. Okay. What's the basis of your
18 disagreement?

19 A. The MEPA document is generally attached to
20 a permitting decision and is -- it is the permit that
21 contains the allowable emission or limitations, the
22 -- the allowances for a specific company, not the
23 EIS.

24 Q. Got it. Do you know if a permit was
25 issued for this project that allowed 2.7 million tons

1 of coal to be burned per year?

2 A. I would need to look at that specific
3 permit.

4 Q. Okay. Fair enough. Was DEQ aware that in
5 analyzing this project -- and I'm not going to
6 hypothesize about its approval without the permit in
7 front of us -- combustion of 2.7 million tons of coal
8 or any amount of coal would lead to the emission of
9 carbon dioxide and other greenhouse gases?

10 A. I do agree that when you combust coal,
11 there are those emissions associated with it.

12 Q. Okay. And was DEQ aware that those
13 emissions would contribute to climate change?

14 A. When you say contribute, can you define
15 what you mean by contribute?

16 Q. Well, let's back up. How do you -- let's
17 see. What's the best way to phrase this? My
18 understanding of climate change is that it is a
19 problem of -- or it -- it's a process created by the
20 cumulative emission of greenhouse gases all over the
21 world. Do you agree with that basic proposition?

22 A. I've heard that argument before.

23 Q. Okay.

24 A. Yes.

25 Q. Do you agree with it?

1 A. I don't know whether I agree with it's
2 just anthropogenic or natural or combinations
3 thereof.

4 Q. Okay. Do you agree with the notion that
5 any emission of greenhouse gases, large or small,
6 from anthropogenic or natural sources contributes to
7 climate change?

8 A. I would not agree with that.

9 Q. Okay. Why do you not agree with that?

10 A. Because you used the word "any."

11 Q. Okay. Would you agree that the emission
12 of some greenhouse gases contributes to the
13 phenomenon of climate change?

14 A. I would agree that some do, yes.

15 Q. Okay. So would DEQ have been aware that
16 the burning of 2.7 million tons of coal would lead to
17 greenhouse gas emissions that would contribute to
18 climate change?

19 A. I do believe that DEQ would believe that
20 combusting that amount of coal would lead to
21 greenhouse gas emissions. Whether or not it
22 contributed to climate change would be in the
23 relative percentages and how the word "contribute" is
24 defined.

25 Q. Okay. So I'm just trying to get a -- kind

1 of the source of uncertainty here. Does the
2 percentage, let's say the percentage of this project,
3 for example, to, for example, global greenhouse gas
4 emissions, matter in terms of whether or not it
5 contributes to climate change? And I am not talking
6 about quantifying how much it contributes, just does
7 it contribute or not if it's small versus big?

8 A. In the air quality regulatory scheme, the
9 percentage does matter. You're also talking about
10 emissions versus the resulting ambient
11 concentrations. And that's why it's very difficult
12 to say the emissions are contributing to climate
13 change, because it is the ambient concentration, the
14 parts per million in the atmosphere.

15 Q. So would the emission of greenhouse gases
16 by nature increase the concentration of those gases
17 in the atmosphere?

18 A. It depends.

19 Q. What does it depend on?

20 A. It depends on the location, the
21 meteorology.

22 Q. Okay. Did DEQ know at the time that it
23 prepared this EIS how much carbon dioxide would be
24 emitted if the 2.7 million tons of coal projected to
25 be burned were, in fact, burned?

1 A. I would really need to look at the -- all
2 the correspondence in the permit application, again
3 the record, to -- to answer that question as to what
4 DEQ knew.

5 Q. Okay. Could the Roundup power project
6 have begun operation without DEQ's -- well, in this
7 instant, without issuance of a final EIS?

8 A. They could not have begun operation
9 legally without the issuance of a final air quality
10 permit.

11 Q. And is a final air quality permit
12 contingent on issuance of a final EIS or other MEPA
13 analysis?

14 A. The agency needs to ensure compliance with
15 MEPA when issuing the documents. Sometimes when
16 permits are issued versus when final EISs or records
17 of decisions are issued, they're not the same days,
18 not the same dates.

19 Q. Does -- but it sounds like -- let me know
20 if I have this correct -- that in order to issue a
21 permit, MEPA needs to have been complied with?

22 A. For this particular permit, yes.

23 Q. Okay. All right. We are done with that
24 exhibit.

25 Okay. So I hate to do this to you, but

1 I'm going to hand you this rather massive binder, and
2 this contains, I believe, Exhibits 136 and 137.

3 A. Okay.

4 Q. And it's just -- I'll have you identify --
5 go ahead and identify that document for me, first
6 off.

7 A. This entire document?

8 Q. Yes, please.

9 A. Held v. State of Montana, cause number
10 CDV --

11 Q. Oh, I'm sorry. Not the -- not the front
12 of the binder.

13 A. Okay.

14 Q. If you would open it and look at the
15 document inside.

16 A. All right.

17 Q. Thank you.

18 A. The first document is Exhibit 135, is the
19 final environmental impact statement Volume 1 main
20 report Highwood Generating Station.

21 Q. Thank you. And if you just -- if you do
22 look on the front of the binder, do you see a
23 reference to FEIS Volumes 1 and 2?

24 A. Yes, I do.

25 Q. And I believe that the way these exhibits

1 have been divided between Exhibit 136 and 137 is 136
2 is Volume 1, 137 is Volume 2.

3 A. Okay.

4 Q. What facility does this permit -- does
5 this EIS -- excuse me -- pertain to?

6 A. It pertains to the Southern Montana
7 Electric Generation and Transmission Cooperative
8 application that was submitted for a power plant.

9 Q. And is that power plant the Highwood
10 Generating Station?

11 A. Yes. I believe it is.

12 Q. Okay. Was this -- strike that.

13 Was the preparation of this EIS similar to
14 the process that you described for the prior EIS we
15 were just discussing?

16 A. My recollection was I think -- I think it
17 was pretty similar, yes.

18 Q. Okay. And were those similarities -- in
19 -- in other words, is the process that DEQ goes
20 through in preparing an EIS for a power generating
21 project like this determined by the size of the
22 project, the nature of the project? What -- what
23 goes into determining that EIS production process and
24 the permit issuance thereafter?

25 A. All of which you mentioned and more. For

1 this particular one what is different than the
2 Roundup Power project is I believe they were seeking
3 funding through the Department of Agricultural, Rural
4 Utility Service.

5 **Q. Uh-huh.**

6 **A.** And so I believe RUS, as they were
7 referred to, were there partnering if not
8 facilitating a lot of the environmental document
9 preparation versus Roundup Power did not have those
10 same times of activities.

11 **Q. Do you know if a similar analysis was done
12 under -- was this -- excuse me. Was this the
13 analysis that was done under MEPA?**

14 **A.** This analysis was to fulfill the
15 obligations both under Montana's Environmental Policy
16 Act and NEPA, the National Environmental Policy Act.

17 **Q. Okay. And prior to issuance of this final
18 EIS, did DEQ ever evaluate the greenhouse gas
19 emissions that would result from the operation of the
20 Highwood Generating Station?**

21 **A.** I would really have to look at the, again,
22 extensive record that was compiled in accordance with
23 this permit application and then MEPA, slash, NEPA
24 documents to fully answer that.

25 **Q. Okay. Were you involved in the**

1 **approximately 2.8 million tons of greenhouse gases
2 per year?**

3 **A.** This document has an estimate of the total
4 greenhouse gas emissions at roughly -- at 2.8 million
5 tons per year.

6 **Q. Okay. Does looking at this document
7 refresh your memory at all as to whether and to what
8 extent DEQ conducted a greenhouse gas analysis?**

9 **A.** Yes, it does.

10 **Q. Okay. And what is your response to that
11 question?**

12 **A.** During this time, we did assess
13 particularly from this particular plant an analysis,
14 the amount of emissions that would be associated with
15 this plant.

16 **Q. Okay. Did DEQ, if you remember, ever
17 evaluate the impact of the annual emissions projected
18 from approval of this plant on climate change?**

19 **A.** When you say impact, that is also
20 something that has regulatory meaning -- meaning to
21 me as well as nonregulatory meaning. Can you --

22 **Q. Okay. In the regulatory context what does
23 it mean to you?**

24 **A.** Whether or not something has an impact
25 depends upon the relevant ambient standard and the

1 **preparation of this EIS?**

2 **A.** Yes. At some level.

3 **Q. Okay. And do you -- you don't recollect
4 whether any greenhouse gas analysis was involved?**

5 **A.** I believe we analyzed the greenhouse gas
6 emissions. I --

7 **Q. Okay.**

8 **A.** -- just can't specifically say yes.

9 **Q. All right. Did DEQ ever analyze how the
10 operation of Highwood Generating Station would impact
11 human health?**

12 **A.** Yes. I believe we did.

13 **Q. Okay. Did DEQ ever analyze how approval
14 of the Highwood Generating Station would impact
15 climate change?**

16 **A.** I would again need to review the record in
17 order to answer that one way or the other. I simply
18 cannot recall all of the analysis or the extent of
19 the analysis off the top of my head.

20 **Q. Okay. I'm going to turn to page 4-53.
21 And your document should be tabbed to that page. I
22 believe it's probably the central tab.**

23 **A.** Okay.

24 **Q. Are you there? Okay. Do you agree that
25 the plant as proposed would have emitted**

1 amount of potential contribution that facility has to
2 a standard.

3 **Q. Okay. Is there an ambient standard that
4 you're aware of for measuring climate change?**

5 **A.** Not that I'm aware of.

6 **Q. Okay. In the nonregulatory context what
7 does that question mean to you?**

8 **A.** Is there an impact on climate change from
9 those emissions?

10 **Q. Do you know if DEQ analyzed that question?**

11 **A.** Specifically I -- I don't know without
12 reading further on or more of the record.

13 **Q. Okay. Do you know if DEQ evaluated the
14 impact of the Highwood Generating Station's projected
15 annual emissions on the state's natural resources?**

16 **A.** I would have to -- same -- same. I would
17 have to look at this further.

18 **Q. Okay. Do you know if DEQ evaluated the
19 impact of those projected annual emissions on human
20 health?**

21 **A.** When you say those annual emissions --

22 **Q. The projected annual emissions that are
23 listed here on page 4-53 of the final EIS.**

24 **A.** Of greenhouse gas emissions?

25 **Q.** Of greenhouse gas emissions, yes.

1 A. On human health?
 2 Q. Yes.
 3 A. I -- I am not aware of that. I don't -- I
 4 don't know.
 5 Q. Okay. Would you agree that this document,
 6 this document being the Highwood Generating Station
 7 final EIS, demonstrates that DEQ had knowledge of the
 8 reality and existence of climate change?
 9 MS. McKENNA: Objection. Compound
 10 question.
 11 BY MS. HORNBEIN:
 12 Q. Okay. Let me try and rephrase that. As
 13 we do that, I'll direct you to page 3-25, and you
 14 should have a tab for that one as well.
 15 A. Okay.
 16 Q. Do you agree that this EIS demonstrates
 17 that DEQ had knowledge of the existence of climate
 18 change?
 19 A. Is there a particular section that you're
 20 referring to here?
 21 Q. For example -- and I'm referring to the
 22 EIS generally, but in particular on page 3-25,
 23 there's -- do you see the -- the box on the
 24 right-hand side of the page?
 25 A. Yes, I do.

1 what has, I believe, previously -- actually, I'm not
 2 sure if this one has been previously marked. I don't
 3 have a number for it, so I'm going to go ahead and
 4 mark it. Give me just a minute.
 5 I'm going to hand you a copy of what I
 6 just marked as Exhibit 156.
 7 (Whereupon, Exhibit 156 was
 8 marked for identification.)
 9 BY MS. HORNBEIN:
 10 Q. If you could take a look at it and
 11 identify that document for me, that would be great.
 12 A. This is the Montana air quality permit
 13 number 3179-12, issued final on January 6, 2016, to
 14 Signal Peak Energy, LLC.
 15 Q. And is this the permit for the Bull
 16 Mountain's mine number 1?
 17 A. When you say number 1, I'm not familiar
 18 with the number 1, but it is --
 19 Q. It's the --
 20 A. It's located in the Bull Mountains.
 21 Q. Okay. This is the permit for the Bull
 22 Mountain Mine?
 23 A. Yes.
 24 Q. Was this -- let's see. Was this document
 25 made and kept in the course of DEQ's regularly

1 Q. And under carbon dioxide CO2 it says
 2 "Burning fossil fuels releases carbon that has been
 3 stored underground for tens of millions of years into
 4 the atmosphere in the form of carbon -- carbon
 5 dioxide, the dominant gas contributing to an enhanced
 6 greenhouse effect. Equilibrium in the natural carbon
 7 cycle is disrupted when large amounts of carbon
 8 dioxide are released into the atmosphere by human
 9 activities such as the burning of fossil fuels,
 10 citing EPA 2003 D." Did I read that correctly?
 11 A. Yes.
 12 Q. Do you believe that -- do you understand
 13 that DEQ had knowledge of what I just read in that
 14 statement?
 15 A. I believe DEQ had knowledge of what was in
 16 this statement, yes.
 17 Q. Okay. Do you agree that DEQ had knowledge
 18 of the physical processes that this statement is
 19 talking about?
 20 A. Yes. I believe that to be true.
 21 Q. Okay. All right. Dave, I'm next going to
 22 hand you -- and if you want to hand that back, I can
 23 get it out of your way. Thank you.
 24 A. Uh-huh.
 25 Q. All right. I'm next going to hand you

1 conducted business activity?
 2 A. To the extent we received an application
 3 or a request and act on it, yes.
 4 Q. Okay. How does DEQ prepare permits of
 5 this type?
 6 A. This type is a permit amendment --
 7 Q. Okay.
 8 A. -- which is requested by the company, and
 9 it is for various changes; generally speaking,
 10 operational changes that don't increase emissions or
 11 if they increase emissions, they're less than de
 12 minimis levels.
 13 THE REPORTER: Less than --
 14 THE WITNESS: De minimis levels.
 15 THE REPORTER: Thank you.
 16 THE WITNESS: I apologize. And so the
 17 preparation of this is different than some of the
 18 other types of permits. We issue a department
 19 decision that then goes for an appeal period to the
 20 company only before it goes final.
 21 BY MS. HORNBEIN:
 22 Q. Okay. So when you say it goes to an
 23 appeal period for the company only, it is not put out
 24 for public comment, for example?
 25 A. That is correct.

1 **Q. If this had been a permit rather than a**
2 **permit amendment, would it have gone through a**
3 **different process?**

4 A. You need to be more specific as to which
5 type of permit.

6 **Q. Okay.**

7 A. Some permits would, some permits would
8 not.

9 **Q. Okay. What determines that?**

10 A. The proposed -- the -- whether or not it's
11 a new or changed facility.

12 **Q. Okay.**

13 A. And the extent of those changes determines
14 whether or not it would be a permit amendment for a
15 Montana air quality permit or a permit modification
16 for a Montana air quality permit.

17 **Q. Is a permit modification a more involved**
18 **process than a permit amendment?**

19 A. Depending upon the application.
20 Generally, yes.

21 **Q. Okay. Is the permit amendment that this**
22 **document refers to different from the permit that was**
23 **-- in terms of the process required, is it different**
24 **from the permit that was originally issued to this**
25 **facility when it opened?**

1 **Q. Okay. Can you please turn to the last**
2 **page of this document. So under section 8**
3 **environmental assessment, it reads: "This permit**
4 **action is an administrative permit action.**
5 **Therefore, an environmental assessment is not**
6 **required." Does that -- did I read that correctly,**
7 **first of all?**

8 A. Yes, you did.

9 **Q. Okay. Did that go to the permit amendment**
10 **process that you were discussing earlier?**

11 A. Yes.

12 **Q. Is that --**

13 A. I believe it does.

14 **Q. Is that why environmental -- an**
15 **environmental assessment was not required?**

16 A. Because it is a permit amendment.

17 **Q. Okay. And you referenced earlier that**
18 **depending on the size, changes in emissions, what**
19 **other things would determine whether an environmental**
20 **assessment was required or not?**

21 A. We would look to see whether or not it
22 says it's a state action as specified under MEPA.

23 **Q. And is this not considered to be a state**
24 **action as specified under MEPA?**

25 A. Not according to our review as -- as well

1 A. Yes. It would have been different.

2 **Q. How would it have been different?**

3 A. For a new facility that does not have an
4 air quality permit that is proposing to locate or
5 operate in the state, there is a -- there is a more
6 involved application and regulatory review process as
7 well as public comment. Appeal periods might be
8 different, and also the Montana Environmental Policy
9 Act compliance would be different.

10 **Q. Would the Montana Environmental Policy Act**
11 **compliance for this permit amendment have required**
12 **MEPA review?**

13 A. Permit amendments are administrative or
14 ministerial actions and, therefore, exempt from
15 further review under MEPA.

16 **Q. Okay. What does this document authorize**
17 **Signal Peak Energy to do?**

18 A. When I'm reading from page 1 --

19 **Q. Okay.**

20 A. -- the action proposes to increase the
21 fill area, depth and capacity for WDA-1,
22 reconfiguration of the soil stockpiles at WDA-1 and
23 WDA-2, which leads to a reduction in total footprint
24 and a reduction in total disturbed area at any given
25 time.

1 as the agency's operations.

2 **Q. Okay. Did DEQ ever evaluate the**
3 **greenhouse gas emissions that result from the**
4 **operation of the Bull Mountain Mine beyond the scope**
5 **of this permit modification -- sorry, not**
6 **modification. What was the term?**

7 A. Permit amendment.

8 **Q. Permit amendment.**

9 A. I would need to look at the entire record
10 to determine that -- to answer that question.

11 **Q. Okay. Do you know if DEQ ever evaluated**
12 **the greenhouse gas emissions that result from the**
13 **burning of coal extracted from this mine?**

14 A. Same response. I would need to look
15 specifically at the -- at the record for this as well
16 as wherever they sell their coal to. If there is
17 something in Montana, I would have to look at that
18 record as well.

19 **Q. Okay. And would your answer be the same**
20 **if I asked you whether DEQ knows the greenhouse gas**
21 **emissions from the Bull Mountain -- produced by the**
22 **Bull Mountain Mine?**

23 A. I would need to look, yeah.

24 **Q. Okay. What does -- the permit that this**
25 **document amends, what -- do you know what that permit**

1 allows the Bull Mountain Mine to do?

2 A. When you say allows specifically, the
3 permit conditions that the -- that this company is
4 required to follow begin on page 1.

5 Q. Uh-huh.

6 A. Section 2, conditions and limitations,
7 there are emission limitations as well as some other
8 production limitations, several pages of them.

9 Q. Are these limitations -- and, for example,
10 the emissions limitations you referenced, are these
11 in addition to what is already required under the
12 existing permit that this permit amends -- that this
13 document amends?

14 A. So this is the final permit.

15 Q. Okay.

16 A. The complete Montana air quality permit
17 for Signal Peak unless it has prior -- after this
18 been modified or further amended, which I -- I'm not
19 aware --

20 Q. Okay.

21 A. -- or don't know. But this specific
22 action was for what we referenced, and all of the
23 other previous requirements go along with it.
24 They're just -- they're not open for comment or
25 review.

1 the Bull Mountain Mine authorizes the mine to produce
2 15 million tons of coal during any rolling 12-month
3 period. Does that help?

4 A. I believe this permit allows the company
5 to do that without being out of compliance with this
6 specific permit condition.

7 Q. Got it.

8 MS. HORNBEIN: How is every one doing? Do
9 you want to take a break? Ten minutes?

10 MS. McKENNA: That sounds good.

11 THE VIDEOGRAPHER: We are going off the
12 record. The time is 11:24 a.m.

13 (Whereupon, a break was then
14 taken.)

15 THE VIDEOGRAPHER: We are back on the
16 record. The time is 1 -- 11:39 a.m.

17 MS. HORNBEIN: Okay. Before we proceed, I
18 need to correct myself. I was referring to Exhibits
19 135 and 136, which are the Volume 1 and Volume 2, of
20 the Highwood Generating Station final EIS. I was
21 mistakenly referring them -- referring to them as
22 Exhibit 136 and 137. They are, in fact, Exhibits 135
23 and 136, respectively.

24 BY MS. HORNBEIN:

25 Q. And with that, Dave, I am going to hand

1 Q. Got it. So all of the requirements of the
2 permit for the Bull Mountain Mine are listed here.
3 It was just that the action being taken with respect
4 to that permit was the amendment process?

5 A. Provided that it has not been modified or
6 amended since --

7 Q. Understood.

8 A. -- since this version.

9 Q. Okay. If you were called to testify at
10 trial about DEQ's granting of this permit amendment,
11 what would you expect to testify?

12 A. I don't know. It would depend on the
13 question.

14 Q. Okay. Do you agree with the allegation
15 that the 2016 air quality permit DEQ issued to the
16 Bull Mountain Mine authorizes it to produce 15
17 million tons of coal during any rolling 12-month
18 period? And I'm referring here to page 1 under
19 section 2.

20 A. Can you -- that is a very long one.
21 Right?

22 Q. Sure.

23 A. And there's the term "authorizes." Can
24 you please reread at least that first part of that?

25 Q. Yes. Would you agree that this permit for

1 you what I have just marked as Exhibit 157.
2 (Whereupon, Exhibit 157 was
3 marked for identification.)

4 BY MS. HORNBEIN:

5 Q. And if you could identify that for me,
6 that would be great.

7 A. This is the final operating permit,
8 OP0513-16 for Talen Montana, LLC, Colstrip Steam
9 Electric Station.

10 Q. How does DEQ prepare operating permits
11 such as this?

12 A. This is a renewal --

13 Q. Uh-huh.

14 A. -- of an operating permit. They're issued
15 for a period of five years.

16 Q. Uh-huh.

17 A. The applicant is required to apply for and
18 receive a new operating permit in accordance with our
19 procedures, which are different than the Montana air
20 quality permit process.

21 Q. Okay. This is an air quality permit,
22 though. It's just the renewal of that existing
23 permit. Is that right?

24 A. This is a renewal of the final operating
25 permit.

1 Q. Okay.

2 A. For Talen.

3 Q. Okay. And how is -- how is the process
4 for this document different from the issuance of an
5 air quality permit?

6 A. I'll -- I'll try to be pretty high level.

7 Q. Okay.

8 A. The Montana air quality permit, which is
9 the permit that is issued that authorizes the
10 construction and subsequent operation according to
11 the conditions, establishes the applicable
12 requirements. The operating permit program is
13 essentially an umbrella document where all applicable
14 requirements are pulled into that document. It does
15 not establish substantive new requirements and
16 generally ensures the appropriate monitoring,
17 recordkeeping, and reporting compliance for that
18 facility.

19 Q. And does the renewal process happen every
20 five years?

21 A. The company is required to apply.
22 Sometimes it takes the agency longer to process the
23 application. So you won't see the permits issued,
24 generally speaking, five years apart.

25 Q. Does the renewal process entail MEPA

1 Title V requirements that requires that they submit a
2 timely and complete renewal for application.

3 Q. And what happens at that point?

4 A. It -- it depends on -- on what the
5 situation is. It -- it could be that they were
6 operating without a -- without a permit.

7 Q. Okay. Did DEQ ever evaluate the
8 greenhouse gas emissions that result from the
9 operation of the Colstrip Steam Electric Station?

10 A. Yes. The DEQ -- we did analyze greenhouse
11 gas emissions associated with Colstrip.

12 Q. How did DEQ conduct that analysis?

13 A. As I referred earlier, they were part of
14 the clean power plan.

15 Q. Uh-huh.

16 A. At that time there were four units. There
17 may have been others as well. I haven't reviewed the
18 rather extensive record on Colstrip.

19 Q. When you say there may have been others,
20 do you mean there may have been other greenhouse gas
21 analyses?

22 A. Yes. I -- that's what I'm referring to.

23 Q. Okay. And would that encompass greenhouse
24 gas analyses conducted since the one done under the
25 clean power plan you were just referencing?

1 analysis?

2 A. No, it does not.

3 Q. Okay. What does this document authorize
4 Talen Montana to do?

5 A. This document is essential for Talen to
6 continue with the operation of their facility.

7 Q. So it allows them to continue operating
8 the Colstrip Generating Station -- Steam Electric
9 Station?

10 A. Presuming they applied for the operating
11 permit in a timely fashion, they're allowed to
12 continue operating while the permit is developed.
13 There's an operating shield. And then this is the
14 final step that -- that finalizes that document.

15 Q. And is that the five-year window that you
16 referenced previously?

17 A. Yes.

18 Q. Okay. What happens if they submitted
19 their -- is it a renewal application? Is that how
20 you refer to it?

21 A. Yes. That's generally how it's referred
22 to.

23 Q. Okay. What happens if they submit that
24 application beyond five years?

25 A. They would be out of compliance with the

1 A. I -- I would have to really look at that
2 record to ensure that I was speaking accurately.

3 Q. Okay. Did DEQ ever evaluate the
4 greenhouse gas emissions that result from the
5 combustion of the coal used to power the Colstrip
6 Steam Electric Station?

7 A. I would have to look at the record
8 associated with the company that supplies the coal
9 and see what specifically has or has not been done to
10 answer that.

11 Q. Okay. Does DEQ know the amount of
12 greenhouse gas emissions that come from Colstrip,
13 including the burning of coal used to power the
14 plant?

15 A. At least partially. I believe they --
16 they are required to report to the acid rain database
17 which -- which has C -- carbon dioxide emissions. In
18 terms of greenhouse gas emissions, I would have to
19 further look to see whether or not we had that
20 information.

21 Q. If you had that information, do you know
22 under what statutory authority that would be
23 supplied?

24 A. No. I don't believe there is a federal
25 requirement to report other greenhouse gas emissions.

1 Q. What about a state requirement?

2 A. Not aware of any at this time.

3 Q. Okay.

4 (Whereupon, Exhibit 158 was
5 marked for identification.)

6 BY MS. HORNBEIN:

7 Q. Dave, I'm handing you what I have just
8 marked as Exhibit Number 158, if you can identify
9 that for me.

10 A. This is the final Montana air quality
11 permit number 0513-14 issued to Talen Montana on
12 September 26th, 2020.

13 Q. Can you tell me what the difference is
14 between this permit and the one that I was just
15 asking you about?

16 A. This is the Montana air quality permit.

17 Q. Uh-huh.

18 A. Which is issued in accordance with Montana
19 air quality permit requirements versus the Title V
20 operating permit that is issued in accordance with
21 the Title V operating permit requirements for that
22 facility.

23 Q. And is that latter under the Federal Clean
24 Air Act?

25 A. Title V came apart -- came about as a part

1 extensive review, that was before the final operating
2 permit was issued in the first instance. Is that
3 right?

4 A. That is a very confusing --

5 Q. Okay.

6 A. I can tell that's very confusing.

7 Q. I'm sorry. When you are referring to the
8 more extensive review for the final operating permit,
9 do I have that right?

10 A. Yes.

11 Q. Is that like at the time that the steam
12 electric station was built? I'm just curious as to
13 when that more extensive review happens.

14 A. Okay. So these permits very quickly are
15 -- the operating permits are issued every five years.

16 Q. Okay.

17 A. When the initial permit was issued, there
18 was a very rigorous review to ensure that all
19 applicable requirements and requirements otherwise
20 applicable to the facility are included in that
21 document as well as the appropriate compliance
22 demonstrations. As it's renewed, the main focus is
23 to ensure all applicable requirements remain as well
24 as any new ones -- new applicable requirements that
25 may have been developed through the course of the

1 of the 1990 amendments. It has been delegated in
2 final authority to the state of Montana.

3 Q. Okay. As opposed from -- to the Title V
4 process that we were just discussing, how does DEQ
5 prepare a Montana air quality permit such as this?

6 A. Again, it depends upon the application
7 that -- that we receive. The preparation may be
8 different, depending on what it is.

9 Q. Okay. Can you use this facility as an
10 example? How would the preparation be different for
11 the Title V permit we were just discussing versus the
12 Montana air quality permit we are looking at right
13 now?

14 A. Okay. Again, this Montana air quality
15 permit 0513-14 is an administrative amendment --

16 Q. Okay.

17 A. -- to their Montana air quality permit and
18 is processed according to the amendment procedures
19 that we discussed earlier.

20 Q. Uh-huh.

21 A. The final operating permit that was issued
22 for a renewal will have a more extensive review to
23 ensure that all applicable requirements are in that
24 particular document before it's issued.

25 Q. Okay. So when you say it will have a more

1 intervening five-year period.

2 Q. Okay. And when the renewal happens, is
3 that process subject to MEPA review?

4 A. Title V is not subject to MEPA review.

5 Q. What about the Montana air quality permit?

6 A. Certain Montana air quality permits, as we
7 discussed earlier, are subject to MEPA.

8 Q. Okay. Was this one?

9 A. This is a permit amendment. It was not --
10 it's considered an administrative action.

11 Q. Okay. So not subject to MEPA?

12 A. Not subject to MEPA.

13 Q. Okay. Could an electric generating
14 station such as the Colstrip Steam Electric Station
15 operate in Montana without an air quality permit from
16 DEQ?

17 A. Could. Not legally.

18 Q. Okay. Did DEQ ever evaluate the
19 greenhouse gas emissions that result from the
20 operation of the Colstrip Steam Electric Station?

21 A. As I mentioned before, I believe we did
22 analyze greenhouse gas emissions from the Colstrip
23 station.

24 Q. Okay. And would that analysis have been
25 as a part of the issuance of the initial Title V

1 permit, the initial Montana air quality permit, or
2 both, if you know?

3 A. I would need to look at the record for the
4 issuance of the Montana air quality permit which goes
5 back decades --

6 Q. Uh-huh.

7 A. -- and the final operating permit. What I
8 was referring to, I -- I know we did analyze those in
9 accordance with the clean power plan when we were
10 working on that.

11 Q. Okay. But that analysis does not occur
12 during the course of a renewal such as the one that
13 you were just looking at?

14 A. The renewal for the operating permit would
15 generally not have any analysis of emissions.

16 Q. Okay. We're making progress.
17 (Whereupon, Exhibit 159 was
18 marked for identification.)

19 BY MS. HORNBEIN:

20 Q. I am going to hand you what I have just
21 marked as Exhibit 159, if you could tell me what that
22 is.

23 A. This is Montana air quality permit number
24 1483-09 in its final form issued to Westmoreland
25 Rosebud Mining, June 19th, 2019.

1 see what happened when the -- when the mine was
2 opened, how -- how old it was. But it would be
3 different than for a new facility.

4 Q. Okay. How would it be different, then,
5 for a new facility?

6 A. As we've discussed, when you have a new
7 facility, it's a more extensive permitting process in
8 the air quality regulatory scheme than a permit
9 amendment is.

10 Q. Okay. And being an amendment, did this
11 permit also -- or did this permit amendment -- excuse
12 me -- also not go through MEPA review?

13 A. An environmental assessment is not
14 required for this because it's an administrative
15 action, so it did not go through.

16 Q. Okay. What does this document authorize
17 Westmoreland Rosebud Mining to do?

18 A. Again, authorization -- it -- what this
19 permit action did was transfer ownership of the
20 permit from Western Energy Company to Westmoreland
21 Rosebud Mining, LLC.

22 Q. Okay. So was this -- do Montana air
23 quality permits have a periodic renewal process that
24 has to occur?

25 A. No, they do not.

1 Q. And is this the permit for the Rosebud
2 Coal Mine near Colstrip?

3 A. I believe this is the Montana air quality
4 permit for the Rosebud Mine, yes.

5 Q. Okay. Is there anything different about
6 -- strike that.

7 How does DEQ prepare permits such as this?

8 A. This particular permit is again an
9 administrative amendment, and so it would be similar
10 to the procedures I described in the -- in the
11 previous two.

12 Q. Okay. And presumably significantly
13 different from the original operating permit for the
14 Rosebud coal mine. Is that correct?

15 A. I don't believe that to be correct.

16 Q. Okay. Can you correct me?

17 A. You mentioned operating permit for the
18 Rosebud Mine, and so I don't know that the Rosebud
19 Mine has a Title V operating permit. This is the
20 Montana air quality permit.

21 Q. Got it. Okay. Let me rephrase that.
22 Would this be a significantly different process to
23 issue this Montana air quality permit than was
24 conducted, for example, when the mine opened?

25 A. Again, not knowing -- I'd have to look to

1 Q. Okay. So this only happened because of
2 the transfer of ownership?

3 A. This -- yes. This particular amendment
4 was because of that transfer of owner --

5 Q. Okay.

6 A. -- ownership.

7 Q. Okay. What other events might trigger a
8 renewal of a Montana air quality permit as opposed to
9 a Title V permit?

10 A. There would be nothing that would trigger
11 the renewal of an air quality -- of a Montana air
12 quality permit.

13 Q. Okay.

14 A. Those are not renewed.

15 Q. Okay. Excuse me. What else would trigger
16 an amendment to a Montana air quality permit?

17 A. Generally speaking, is a changed condition
18 of operation that does not result in an increase in
19 emissions. Could fix errors in permits. Also there
20 could be an increase as long as it's less than de
21 minimis thresholds.

22 Q. How are de minimis thresholds defined?

23 A. They are defined by rule.

24 Q. Do you know what they are off the top of
25 your head?

1 A. Five tons per year.
 2 **Q. Okay. Could Westmoreland Rosebud Mining**
 3 **operated the Rosebud Mine without an air quality**
 4 **permit from DEQ?**
 5 A. They would need -- at their threshold they
 6 would need an air quality permit to legally operate
 7 it.
 8 **Q. Okay.**
 9 A. And I don't know what other permits.
 10 **Q. Did the DEQ ever evaluate the greenhouse**
 11 **gas emissions that result from the operation of the**
 12 **Rosebud Mine?**
 13 A. I would need to look at the record on
 14 Westmoreland.
 15 **Q. Okay. Did DEQ ever evaluate the**
 16 **greenhouse gas emissions that result from the burning**
 17 **of the coal extracted from the mine?**
 18 A. I would need to look at that particular
 19 record.
 20 **Q. Okay. Same question with respect to mine**
 21 **operation, did DEQ evaluate those greenhouse gas**
 22 **emissions that result from the operation of the mine?**
 23 A. Of the Westmoreland mine -- of the Rosebud
 24 Mine?
 25 **Q. Yes.**

1 A. I -- I would need to look at -- at all of
 2 the correspondence associated with that.
 3 **Q. Sorry. I know. I just have to go through**
 4 **the questions.**
 5 **Okay. I am handing you what I have marked**
 6 **as Exhibit 160, if you could tell me what that is.**
 7 A. This is the Montana air quality permit
 8 1483-09 issued to Westmoreland Rosebud Mining on
 9 June 19th, 2019.
 10 **Q. And what facility does this permit apply**
 11 **to?**
 12 A. The Westmoreland Rosebud Mine.
 13 **Q. I may have just handed you the wrong**
 14 **document. I apologize. I apologize. I mismarked**
 15 **that. Can we just strike this? Sorry about that.**
 16 **Is it okay if I just use 160 again.**
 17 **(Whereupon, Exhibit 160 was**
 18 **marked for identification.)**
 19 **BY MS. HORNBEIN:**
 20 **Q. All right. For real this time. I'm**
 21 **handing you what I have just marked as Exhibit 160,**
 22 **if you could identify that for me.**
 23 A. This is the final Title V operating permit
 24 renewal number OP2035-04 for the Colstrip Energy
 25 Limited Partnership.

1 **Q. Okay. What facility did this permit apply**
 2 **to?**
 3 A. This applies to the Colstrip Energy
 4 Limited Partnership facility that is located six
 5 miles north of Colstrip.
 6 **Q. Okay. And is that also known as the**
 7 **Rosebud power plant?**
 8 A. Yes. It is right in the description,
 9 Rosebud power plant, yes.
 10 **Q. Okay. Are you familiar with this**
 11 **document?**
 12 A. Generally, yes.
 13 **Q. Okay. Is the preparation process for this**
 14 **document, the Title V permit, similar to other Title**
 15 **V processes that you've described?**
 16 A. In that this is another renewal?
 17 **Q. Uh-huh.**
 18 A. It is similar to the other renewals for
 19 the Title V operating permits.
 20 **Q. Okay. Was it required to go through MEPA**
 21 **analysis?**
 22 A. No, it is not.
 23 **Q. Okay. And going back to the Title V**
 24 **renewal process, is this one of those renewals**
 25 **conducted every five years pursuant to Title V?**

1 A. Yes. I believe it is.
 2 **Q. Okay. What does this document authorize**
 3 **Colstrip Energy Limited Partnership to do?**
 4 A. As we discussed earlier, to continue
 5 operating in compliance with the air quality
 6 requirements.
 7 **Q. Okay. Did DEQ ever evaluate the**
 8 **greenhouse gas emissions that result from the**
 9 **operation of the Rosebud power plant?**
 10 A. I would have to look at the record.
 11 **Q. Okay. Did DEQ ever evaluate the**
 12 **greenhouse gas emissions that result from the burning**
 13 **of coal used to power the Rosebud power plant?**
 14 A. I would have to look at the record.
 15 **Q. Okay. Does DEQ know the amount of**
 16 **greenhouse gas emissions that come from the power**
 17 **plant, including the burning of coal used to operate**
 18 **it?**
 19 A. I would have to look at the record.
 20 **Q. Okay.**
 21 A. Yeah.
 22 **Q. Dave, I'm sorry. Could I take a look at**
 23 **that exhibit? I think I may have handed you my index**
 24 **with it.**
 25 A. This one?

1 Q. Yeah. Thank you.
 2 A. Uh-huh.
 3 Q. Another binder down.
 4 (Whereupon, Exhibit 161 was
 5 marked for identification.)
 6 BY MS. HORNBEIN:
 7 Q. I'm going to hand you what I have marked
 8 as Exhibit Number 161, if you could identify that for
 9 me.
 10 A. This is the final operating permit number
 11 OP1821-18, for CHS Inc.'s Laurel Refinery.
 12 Q. Okay. Are you familiar with this
 13 document?
 14 A. Yes.
 15 Q. Okay. What does this document authorize
 16 Calumet Montana Refining to do?
 17 A. Again, same thing with -- this is a
 18 permit. This is a renewal of their Title V operating
 19 permit --
 20 Q. Okay.
 21 A. -- that allows them to continue operating
 22 in compliance with the permit.
 23 Q. Same series of questions. Did DEQ ever
 24 evaluate the greenhouse gas emissions that result
 25 from the operation of the petroleum refinery?

1 A. I'd have to look at the record.
 2 Q. Okay. Did DEQ ever evaluate the
 3 greenhouse gas emissions that result from the burning
 4 of the petroleum products produced by the refinery?
 5 A. I would have to look at the record.
 6 Q. All right. And does DEQ know the amount
 7 of greenhouse gas emissions that come from the
 8 refinery?
 9 A. I would have to look at the record.
 10 Q. All right.
 11 (Whereupon, Exhibit 162 was
 12 marked for identification.)
 13 BY MS. HORNBEIN:
 14 Q. All right. I'm handing you what I have
 15 just marked as Exhibit Number 162, if you could
 16 identify that for me, please.
 17 A. This is Montana air quality permit number
 18 5245-00, which is final as of June 26th, 2020, issued
 19 to NorthWestern Energy Corporation.
 20 Q. And are you familiar with this document?
 21 A. Yes, I am.
 22 Q. What facility does this permit apply to?
 23 A. This applies to the facility east of the
 24 community of Belfry, which is a compressor station.
 25 Q. Okay. And how does DEQ prepare a permit

1 such as this?
 2 A. This is a new permit.
 3 Q. Uh-huh.
 4 A. So a new Montana air quality permit would
 5 follow the requirements for a new Montana air quality
 6 permit.
 7 Q. And what would those requirements be
 8 generally speaking?
 9 A. Generally speaking, application, public
 10 participation, permit condition development, draft
 11 permit issued for public consumption, appeal period
 12 associated with the issuance of that permit as well
 13 as the corresponding MEPA review.
 14 Q. Okay. And what type of MEPA review would
 15 this permit -- or would this application undergo?
 16 A. An environmental assessment was issued
 17 along with this permit, if that answers your
 18 question.
 19 Q. Yeah, it does. What does this permit
 20 authorize NorthWestern Energy to do?
 21 A. Again, you know, I -- instead of
 22 authorizing, this allows the company to do certain
 23 activities in compliance with the Clean Air Act of
 24 Montana.
 25 Q. What are those activities?

1 A. Construct and operate a compressor station
 2 and the associated equipment that are identified in
 3 this permit.
 4 Q. Okay. Could Northwestern Energy operate
 5 the Belfry compressor station without an air quality
 6 permit from DEQ?
 7 A. Not legally.
 8 Q. Okay. Did DEQ ever evaluate the
 9 greenhouse gas emissions that result from the
 10 operation of the Belfry compressor station?
 11 A. I would need to get into this record.
 12 Q. Okay. Did DEQ ever evaluate the
 13 greenhouse gas emissions that result from the burning
 14 of the natural gas that passes through the Belfry
 15 compressor station?
 16 A. I would need to review this record.
 17 Q. Okay. Does DEQ know the amount of
 18 greenhouse gas emissions that come from the Belfry
 19 compressor station?
 20 A. I would need to review the record.
 21 Q. All right.
 22 (Whereupon, Exhibit 163 was
 23 marked for identification.)
 24 BY MS. HORNBEIN:
 25 Q. I am handing you what I have just marked

1 as Exhibit Number 163, if you could identify that for
2 me, please.

3 A. This is the final operating permit number
4 OP2428-15 for NorthWestern Energy's mainline number 1
5 compressor station.

6 **Q. And what is the facility this permit
7 applies to?**

8 A. Generally speaking, it is a compressor
9 station that has engines and other associated
10 equipment.

11 **Q. Okay. What does a compressor station do?**

12 A. Again, generally speaking --

13 **Q. Uh-huh.**

14 A. -- it takes the gas, compresses it to a
15 certain pressure so it can go down the pipeline.

16 **Q. Okay. Do you know whether the person who
17 created this document had knowledge of the facility
18 being permitted?**

19 A. Julie Ackerman prepared this document.

20 **Q. Uh-huh.**

21 A. I believe she had knowledge of the
22 facility --

23 **Q. Okay.**

24 A. -- that she permitted.

25 **Q. What does this document authorize**

1 tracking across the facilities we issue permits to.

2 **Q. Okay. In issuing permits rather than
3 issuing a renewal, like for a new facility, for
4 example, does DEQ evaluate the greenhouse gas
5 emissions associated with the construction and
6 operation of that facility?**

7 A. It would depend.

8 **Q. Okay. What would it depend on?**

9 A. The type of permit, the type of
10 application, the type of facility, the type of
11 analysis that was required.

12 **Q. Okay. We're tearing right through these.
13 (Whereupon, Exhibit 164 was
14 marked for identification.)**

15 **BY MS. HORNBEIN:**

16 **Q. Handing you what I have marked as
17 Deposition Exhibit Number 164, if you could identify
18 that please?**

19 A. This is Montana air quality permit number
20 5121-02, which was final as of December 3rd, 2019,
21 issued to Express Pipeline LLC.

22 **Q. Okay. And what facility does this permit
23 apply to?**

24 A. It is called the Buffalo Terminal, which
25 is in Fergus County, Montana.

1 **NorthWestern to do?**

2 A. Once again, this is a renewal --

3 **Q. Okay.**

4 A. -- of a -- of an operating permit, I
5 believe, and so it allows them to continue operating
6 under the Clean Air Act.

7 **Q. Does that renewal require MEPA review?**

8 A. No, it does not.

9 **Q. Okay. Did DEQ ever evaluate the
10 greenhouse gas emissions that result from the
11 operation of the mainline number 1 compressor
12 station?**

13 A. I would have to review the record.

14 **Q. Okay. Did DEQ ever evaluate the
15 greenhouse gas emissions that result from the burning
16 of the natural gas that passes through the mainline
17 number 1 compressor station?**

18 A. I would have to review the record.

19 **Q. And does DEQ know the amount of greenhouse
20 gas emissions that come from the compressor station?**

21 A. I would have to review the record.

22 **Q. Okay. Does DEQ track or keep track of the
23 amount of greenhouse gas emissions that come from the
24 facilities that it issues permits to?**

25 A. I'm not aware of any greenhouse gas

1 **Q. And what is the Buffalo Terminal?**

2 A. Generally speaking, it's a tank facility.
3 There are oil tanks.

4 **Q. Okay. And what happens at the Buffalo
5 Terminal or a similar type of facility, a tank
6 facility?**

7 A. Generally terminals such as this store oil
8 or oil products on-site for a period of time before
9 they are either moved by truck, rail, something like
10 that.

11 **Q. Okay. So these aren't necessarily
12 facilities that are on a pipeline and take gas from a
13 pipeline and put it back into the pipeline?**

14 A. They may or may not. It depends.

15 **Q. Okay. Yeah. How does DEQ prepare permits
16 such as this?**

17 A. This particular permit is a -- is an MAQP
18 modification, so it would follow procedures similar
19 to those for a new permit.

20 **Q. Okay. So did it go through a MEPA
21 analysis?**

22 A. Yes, it did.

23 **Q. And what does this permit modification
24 authorize Express Pipeline to do?**

25 A. In their application Express Pipeline

1 proposed an expansion of the crude oil pipeline such
2 that through-put capacity at the terminal would
3 increase from 280,000 barrels per day to 342,800
4 barrels per day. It -- this expansion required the
5 installation of piping and utilities that would
6 increase fugitive emissions throughout the facility.

7 **Q. Did -- what type of MEPA analysis did this**
8 **permit modification go through?**

9 A. An environmental assessment.

10 **Q. And did DEQ analyze the greenhouse gas**
11 **emissions that would result from the activities**
12 **allowed under this permit modification?**

13 A. I would have to look at that record for
14 that.

15 **Q. Okay. Can a storage -- I'm sorry. What**
16 **did you call it, a tank facility?**

17 A. A tank storage -- yes, a tank facility.

18 **Q. Can a tank facility operate in Montana**
19 **without a Montana air quality permit?**

20 A. Some can and do because their thresholds
21 are below our permitting thresholds.

22 **Q. Okay. So when you say the threshold, is**
23 **that the amount of emissions associated with it?**

24 A. It is based -- permitting thresholds are
25 based on a facility's potential to emit.

1 quality permit.

2 **Q. Does that mean that this is a new**
3 **business? Do you know or --**

4 A. Not necessarily.

5 **Q. What would require it to apply for a new**
6 **permit?**

7 A. It could be a new green fill facility that
8 exceeded our -- the Montana air quality permitting
9 thresholds.

10 **Q. Uh-huh.**

11 A. It could be an existing facility that has
12 recently changed such that their emissions are now
13 above the permitting threshold.

14 **Q. And what does this document authorize**
15 **TrueNorth Steel to do?**

16 A. To construct and operate their pipe and
17 structural steel manufacturing facility in accordance
18 with the limitations and requirements contained in
19 the air quality permit.

20 **Q. Okay. What are the types of limitations**
21 **and qualifications contained in that air quality**
22 **permit?**

23 A. This specific one has emission limitations
24 in the form of annual emission rates that the company
25 is allowed. It also has some hourly restrictions as

1 **Q. Okay. And is that based on the size of**
2 **the facility, the storage capacity?**

3 A. The amount of emissions associated with
4 that facility.

5 **Q. Okay.**

6 (Whereupon, Exhibit 165 was
7 marked for identification.)

8 **BY MS. HORNBEIN:**

9 **Q. Handing you what I've marked as Exhibit**
10 **165, if you could identify that.**

11 A. This is Montana air quality permit number
12 5249-00, which is issued final as of September 24th,
13 2020, to TrueNorth Steel in Billings, Montana.

14 **Q. And what type of facility is TrueNorth**
15 **Steel?**

16 A. It's a corrugated steel pipe and
17 structural -- structural steel manufacturing
18 facility.

19 **Q. Okay. Are you familiar with this**
20 **document?**

21 A. Yes, I am.

22 **Q. And how does DEQ prepare permits like this**
23 **one?**

24 A. This is a new Montana air quality permit,
25 so we follow the procedures for a new Montana air

1 well as some operational requirements.

2 **Q. Who ensures that TrueNorth Steel is**
3 **complying with the terms of its permit?**

4 A. There are multiple entities that ensure
5 compliance with air quality permits.

6 **Q. What are some examples of those entities?**

7 A. The primary is Montana DEQ.

8 **Q. Uh-huh.**

9 A. We also use the assistance of local
10 programs to the extent where we can. Our -- that
11 permitting program is federally enforceable; that is,
12 EPA could enforce the terms, or citizens or other
13 third parties could enforce the terms of these
14 permits.

15 **Q. Okay. So these permits have provisions**
16 **that allow for third-party enforcement?**

17 A. These permits do not have those
18 provisions.

19 **Q. What allows for that type of enforcement?**

20 A. These permitting provisions are contained
21 in Montana's state implementation plan, and by virtue
22 of that, those are -- those permits that are issued
23 in accordance with those requirements are federally
24 enforceable.

25 **Q. Okay. And is it the federal**

1 enforceability that allows for third-party monitoring
2 and enforcement?

3 A. Yes, it is.

4 Q. Okay. Did DEQ ever evaluate the
5 greenhouse gas emissions that result from the
6 operation of TrueNorth Steel?

7 A. I would have to review this record.

8 Q. Okay. Did DEQ ever evaluate the
9 greenhouse gas emissions that result from the burning
10 of the natural gas and propane at TrueNorth Steel?

11 A. I would have to review this record.

12 Q. And does DEQ know the amount of greenhouse
13 gas emissions that come from operations at TrueNorth
14 Steel, including from the burning of natural gas and
15 propane?

16 A. I would have to review this record.

17 (Whereupon, Exhibit 166 was
18 marked for identification.)

19 BY MS. HORNBEIN:

20 Q. Okay. We're getting to my favorite one.
21 Handing you what I have marked as Exhibit Number 166,
22 if you can tell me what that is.

23 A. All right. This is the Montana air
24 quality permit number 3238-08, which was deemed final
25 as of April 17th, 2020, and issued to Malteurop North

1 America, for the Great Falls malting plant.

2 Q. Okay. What does this document authorize
3 Malteurop North America to do?

4 A. This particular document is an air quality
5 permit modification, and it was for the
6 decommissioning of a heater and installing in its
7 place a new natural gas-fired heater at the facility.

8 Q. Okay. Could a barley malt manufacturing
9 plant such as Malteurop North America operate in
10 Montana without an air quality permit from DEQ?

11 A. A facility of this size would need an air
12 quality permit.

13 Q. Okay. Did DEQ ever evaluate the
14 greenhouse gas emissions that result from the
15 operation of the Malteurop North America's plant?

16 A. I would have to look at the record.

17 Q. Okay. You said this is a permit
18 modification. Is that correct?

19 A. This one was, yes.

20 Q. And did this undergo MEPA review?

21 A. Yes, it did.

22 Q. And what type of MEPA review did it
23 undergo?

24 A. An environmental assessment was completed
25 for this.

1 Q. Okay. And could you please turn to page
2 20 of that document.

3 A. Of the permit or the analysis?

4 Q. I think --

5 A. That would be --

6 Q. -- that would be the analysis maybe.

7 A. That would be the analysis.

8 Q. Yeah.

9 A. Okay.

10 Q. So under Roman numeral IV, emission
11 inventory, there's a table. And let's see. Is that
12 -- is how I characterized that correct?

13 A. Yes. Table 4 is emission inventory of the
14 potential to emit of this facility.

15 Q. Okay. Does that refresh your memory as to
16 whether DEQ evaluated the greenhouse gas emissions
17 from the operation of this facility?

18 A. DEQ at least quantified the emissions of
19 CO2 from this facility.

20 Q. But you wouldn't opine on whether they
21 evaluated that --

22 A. I would have to look at the record.

23 Q. Okay. On the furthest column to the right
24 of that table, it indicates that the facility's
25 potential to emit was 145,038 tons per year. Is that

1 correct?

2 A. That talks about the Title V applicability
3 threshold which excludes fugitive emissions as the
4 potential to emit.

5 Q. Can you explain what that means to me?

6 A. Fugitive emissions are those emissions
7 that can generally not pass through a stack or some
8 other functioning equivalent opening. They are not
9 used in determining applicability of Title V.

10 Q. Okay. So these potential emissions of the
11 145,038 tons per year does not include fugitive
12 emissions. Do I have that right?

13 A. It -- according to the -- fugitives are
14 excluded from that number.

15 Q. Okay. Did DEQ ever evaluate the effect of
16 the greenhouse gas emissions that result from the
17 operation of the Malteurop North America plant?

18 A. I would have to look at the record.

19 Q. Okay. We're getting close to being done
20 with your 30(b)(6). We can plow through and finish
21 it or take a break.

22 MS. HORNBEIN: What do you think, Lee?

23 MS. McKENNA: I'll leave it up to Dave.

24 THE WITNESS: I'm good finishing the
25 30(b)(6), especially if we're close.

1 BY MS. HORNBEIN:

2 Q. Okay. We are on -- let me just see how
3 many more exhibits we have. If you're okay with it,
4 let's go for another half an hour and see how close
5 we are.

6 A. I'm fine.

7 Q. Okay.

8 A. Up -- up to you all.

9 MS. HORNBEIN: If that works for everyone
10 else. Okay. Sounds good. You guys doing okay?

11 MR. RUSSELL: Yeah. I won't be here this
12 afternoon.

13 MS. HORNBEIN: Oh.

14 BY MS. HORNBEIN:

15 Q. So I'm handing you what has previously
16 been marked as Exhibit 1, if you can identify that
17 for me.

18 A. This is the complaint for declaratory and
19 injunctive relief.

20 Q. Is this the complaint as far as you can
21 tell that you indicated you reviewed in your
22 preparation for your deposition today?

23 A. I believe so, yes.

24 Q. Okay. Could you please turn to paragraph
25 93, and I believe that is -- I'll give you the page

1 number for that -- on page 30, top of page 30. Are
2 you there?

3 A. Yes.

4 Q. Okay. Paragraph 93 reads: "DEQ has
5 authorized, permitted, and encouraged fossil fuel
6 extraction, transportation, and combustion, which
7 activities generate dangerous levels of greenhouse
8 gas emissions, contribute to the climate crisis and
9 harm youth plaintiffs." Have I read that correctly?

10 A. Yes. I believe you have.

11 Q. Okay. Does DEQ agree that it has
12 authorized, permitted, and encouraged fossil fuel
13 extraction?

14 A. No, I do not.

15 Q. Do you agree -- does DEQ agree that it has
16 authorized, permitted, and encouraged transportation
17 of fossil fuels?

18 A. No, I do not.

19 Q. And does DEQ agree that it has authorized,
20 permitted, and encouraged the combustion of fossil
21 fuels?

22 A. No, I do not.

23 Q. What is the source of your disagreement?

24 A. Starting with the -- the first term, the
25 -- the term "authorization" is challenging for me.

1 Q. Uh-huh.

2 A. Issuing air quality permit allows certain
3 activities provided compliance is demonstrated with
4 those activities.

5 Q. So are you stating that your understanding
6 of authorization is different from allowance subject
7 to certain requirements?

8 A. Yes. And I'm speaking specifically for
9 the air quality permit. There may be other programs
10 there --

11 Q. Sure.

12 A. -- use different terms.

13 Q. Okay.

14 A. Yes.

15 Q. Any other sources of disagreement with
16 those statements?

17 A. I would agree that, you know, we permit
18 fossil fuel extraction and combustion. I don't agree
19 with the word "encouraged."

20 Q. Okay. Going back to the word "permit," do
21 you agree that DEQ permits transportation of fossil
22 fuels?

23 A. Not necessarily.

24 Q. Are there occasions when it does?

25 A. There could be, depending on the facility

1 and the configuration of the facility.

2 Q. Okay. Does DEQ agree that these
3 activities -- fossil fuel extraction, transportation,
4 and combustion -- generate greenhouse gas emissions?

5 A. I believe these activities could generate
6 greenhouse gas emissions.

7 Q. Okay. Does DEQ agree that these
8 activities -- fossil fuel generation or -- excuse me
9 -- fossil fuel extraction, transportation, and
10 combustion -- by producing greenhouse gas emissions
11 contribute to climate change?

12 A. I can't say that, no.

13 MS. McKENNA: I'll object to that as a
14 compound question, if you could break it down,
15 please.

16 BY MS. HORNBEIN:

17 Q. Okay. Does DEQ agree that fossil fuel
18 extraction produces greenhouse gas emissions?

19 A. Fossil fuel extraction could produce
20 greenhouse gas emissions.

21 Q. Does DEQ agree that fossil fuel extraction
22 -- excuse me. Does DEQ agree that producing
23 greenhouse gas emissions contributes to climate
24 change?

25 A. I -- I don't agree with that.

1 **Q. What's the source of your disagreement**
2 **with that?**

3 A. Again, the discussion of contribute and
4 the -- and climate crisis, we're talking about
5 emissions contributing, not necessarily the
6 concentration that results from those emissions.

7 **Q. So do increasing emissions result in**
8 **increasing concentrations of greenhouse gases?**

9 A. It depends.

10 **Q. What does it depend on?**

11 A. The source of those emissions, the
12 meteorology, some of the things we talked about
13 earlier in the deposition.

14 **Q. Okay. Does DEQ agree that these**
15 **activities -- and at the risk of another compound**
16 **question objection, I'll just proceed and see if we**
17 **can get it done, and if I have to break it up, I will**
18 **-- fossil fuel extraction, transportation, and**
19 **combustion -- harm youth plaintiffs?**

20 MS. McKENNA: Objection. Compound and
21 vague.

22 BY MS. HORNBEIN:

23 **Q. Okay. Does DEQ agree that fossil fuel**
24 **extraction harms youth plaintiffs?**

25 A. No. I don't agree.

1 **Q. Does DEQ agree that transportation of**
2 **fossil fuels harms youth plaintiffs?**

3 A. No. I don't agree.

4 **Q. Does DEQ agree that the combustion of**
5 **fossil fuels harms youth plaintiffs?**

6 A. No. I don't agree.

7 **Q. What's the source of the disagreement?**

8 A. Harming youth --

9 MS. McKENNA: Which question are you
10 referring to?

11 MS. HORNBEIN: Can I refer to them
12 collectively, or would you like me to go through them
13 individually? The answer was the same for --

14 MS. McKENNA: Well, he -- you've asked
15 three questions in a row, and now you're asking a
16 more general question. So I think the record needs
17 to be clear what question you're asking.

18 BY MS. HORNBEIN:

19 **Q. Okay. What is the basis for your**
20 **disagreement -- let's start with combustion just to**
21 **mix it up. What's the basis for your disagreement**
22 **that fossil fuel combustion harms youth plaintiffs?**

23 A. I can't say one way or the other whether
24 it does or does not. Without knowing the youth
25 plaintiffs, knowing their lifestyles, everything they

1 do on a daily basis, I have -- I -- I can't answer
2 that question.

3 **Q. Okay. Is your answer the same for fossil**
4 **fuel transportation?**

5 A. Yes. It would be very similar, yeah.

6 **Q. Okay. And how about extraction?**

7 A. I believe it would be very similar.

8 **Q. All right. What are DEQ's general**
9 **responsibilities with respect to its authorization of**
10 **fossil fuel extraction?**

11 A. I can only speak to the air quality
12 bureau --

13 **Q. Uh-huh.**

14 A. -- in terms of our obligations are to
15 follow our statutory requirements as well as the
16 implementing requirements that may be in a rule
17 regarding these facilities.

18 **Q. And what are DEQ's general**
19 **responsibilities with respect to its -- to the extent**
20 **that it authorizes the transportation of fossil**
21 **fuels, what are its responsibilities with respect to**
22 **such authorization or permitting, if you prefer that**
23 **term?**

24 A. It would be the same. It would be to
25 follow all the statutes appropriately and the

1 implementing ones appropriately before we issued a
2 permit for those facilities.

3 **Q. Okay. And same thing for combustion?**

4 A. Yes.

5 **Q. Okay. What do you expect to testify about**
6 **plaintiffs' allegation, which I read in paragraph 93**
7 **-- I can read it again if you want -- that DEQ has**
8 **authorized, permitted, and encouraged fossil fuel**
9 **extraction, transportation, and combustion?**

10 A. It would depend upon the question.

11 **Q. Okay. Have you read the paragraphs in the**
12 **complaint describing how the youth plaintiffs have**
13 **been injured?**

14 A. Yes. Generally, I have.

15 **Q. Okay. Do you intend to testify if you're**
16 **called at trial that the youth plaintiffs are not**
17 **being injured?**

18 A. It depends upon the question. I don't
19 know.

20 **Q. Okay. What do you expect to testify about**
21 **the allegations in paragraph 93 which I read to you?**

22 A. It would depend upon the question.

23 **Q. Okay. I am handing you what has**
24 **previously been marked as Exhibit Number 78. You may**
25 **want to just keep that one handy because we'll be**

1 coming back to it.

2 A. Oh, okay. Thank you.

3 Q. Can you tell me what that is?

4 A. This appears to be a document tracking
5 applications for various facilities.

6 Q. Okay. Is that -- is it a list of permits
7 that have been issued, or is it applications?

8 A. I'm going by the title. It says
9 application tracking. They're tracking an
10 application. They're generally assigned a permit
11 number. Sometimes applications result in a permit
12 being issued. Sometimes they do not.

13 Q. Okay. If there's a permit number
14 assigned, does that mean that a permit was issued?

15 A. Not necessarily. It means an application
16 was received that was assigned that permit number.

17 Q. Okay. So there -- is there anything on
18 that document that tells you whether a permit has
19 been issued for any of those applications?

20 A. No.

21 Q. Okay.

22 A. Oh, excuse me. Hold on. I apologize.
23 The very last one, which was covered by the exhibit,
24 it says permit issued, and there is a date associated
25 with that.

1 A. It appears to be, yes.

2 Q. Okay. Are you familiar with how DEQ
3 prepares documents like this?

4 A. When you say "this," are you referring to
5 the documents contained within --

6 Q. Yes. I -- when I say "this," I'm
7 referring to the tracking document, not the
8 individual documents that are recorded in it, if that
9 makes sense.

10 A. Yes. Can you restate your question then,
11 please?

12 Q. Yeah. Is this document an example of how
13 DEQ tracks permits that it issues?

14 A. Yes.

15 Q. Okay. Are you familiar with how DEQ
16 prepares a tracking document such as this?

17 A. Yes. Generally.

18 Q. Okay. And how do they prepare that type
19 of a document?

20 A. Well, it's taken a couple of different
21 forms. Sometimes it was done on paper.

22 Q. Uh-huh.

23 A. Other times it's electronic, and it's --
24 it's nothing more than an Excel spreadsheet that has
25 these various fields. And from that, we can -- the

1 Q. Okay.

2 A. So that would tell me that a permit was
3 issued.

4 Q. Okay. In taking a quick glance at that,
5 have all of those applications resulted in the
6 issuance of permits?

7 MS. McKENNA: Before we get any further in
8 this, I'm going to object to foundation. The witness
9 has not established that he has seen this document or
10 has identified this document as something that he has
11 worked with before.

12 BY MS. HORNBEIN:

13 Q. Okay. Let's take a step back. Are you
14 familiar with this document, Dave?

15 A. I'm familiar with the tracking of
16 applications.

17 Q. Okay.

18 A. This specific document, I don't know that
19 I have seen it before, but we -- the air quality
20 bureau does track applications to ensure conformance
21 with the statutory deadlines.

22 Q. Okay. As far as you can tell, was this
23 document made and kept in the course of DEQ's
24 regularly scheduled -- regularly conducted business
25 activity?

1 air quality bureau can glean whether or not the
2 permit was issued and whether or not it was issued in
3 conformance with statutory deadlines.

4 Q. Okay. Is this document publicly
5 available?

6 A. I don't know if it's on the website or
7 not. It's certainly available upon request.

8 Q. Okay. Do you have any reason to believe
9 that this document is not a true and correct copy?

10 A. Not as I sit here reading it today.

11 Q. Okay. Let me just see if I can find this
12 one. I think it's been marked already.

13 Okay. I am going to hand you -- Dave, I'm
14 going to hand you what has previously been marked as
15 Exhibit Number 133, if you could identify that for
16 me.

17 A. 133 appears to be a copy of permitting and
18 operator assistance and other information on DEQ's
19 website.

20 Q. Okay. Have you seen this document before?

21 A. I don't know if I've reviewed this
22 specific document. If it was in the binder that I
23 had, then yes, but I'm just not sure.

24 Q. Have you seen documents that look like
25 this before?

1 A. Yes, I have.

2 Q. Okay. Was this document made in the

3 course of DEQ's regularly conducted business

4 activity?

5 A. To the extent that it has the permits that

6 were issued, yes.

7 Q. Okay. And is this a list of air quality

8 permits DEQ has issued as of May 21, 2022?

9 A. It appears to be.

10 Q. Okay. And is this document publicly

11 available?

12 A. Yes. This would be on -- on the website.

13 Q. Okay. Do you have any reason to believe

14 that this document is not a true and correct copy?

15 A. No. Other than clearly there have been

16 issued -- permits issued since then, but --

17 Q. Sure. Do you know how many of the permits

18 recorded here authorize activities related to fossil

19 fuels?

20 A. Not without looking at the specific permit

21 applications and -- and the record associated with

22 each one.

23 Q. Okay. Do you know if DEQ had analyzed the

24 greenhouse gas emissions that would result from the

25 projects authorized by the permits that are listed

1 here?

2 A. I would have to look at the record --

3 Q. Okay.

4 A. -- of each.

5 Q. All right. I'm handing you what has

6 previously been marked as Exhibit Number 140, if you

7 could identify that for me, please.

8 A. This is a document that has Montana

9 Department of Environmental Quality in the heading.

10 It's in the matter of the application of TransCanada

11 Keystone Pipeline for a certificate of compliance

12 under the Major Facility Siting Act.

13 Q. Okay. Have you seen this document before?

14 A. I'm not sure. I -- I -- if it was in the

15 materials that I read, then I would have -- in

16 preparation for this, I would have read it, but I --

17 I'd have to read it.

18 Q. And you don't --

19 A. I don't --

20 Q. -- as you sit here recall seeing it in the

21 course of your duties with DEQ?

22 A. I don't recall.

23 Q. Okay. Do you know if this is a true and

24 correct copy of the findings necessary for

25 certification and determination of the Keystone XL

1 Pipeline in Montana?

2 A. The only thing I have is what it states,

3 so I don't know for sure.

4 Q. Okay. Do you know what facility this

5 document relates to?

6 A. Keystone Pipeline.

7 Q. Okay. Do you know what this document

8 authorizes?

9 A. Not necessarily, because it is under the

10 Major Facility Siting Act, so I don't --

11 Q. Okay.

12 A. -- know.

13 Q. Do you know if it was made and kept in the

14 ordinary course of DEQ's regularly conducted business

15 activity?

16 A. I can't answer that.

17 Q. Okay.

18 (Whereupon, Exhibit 167 was

19 marked for identification.)

20 BY MS. HORNBEIN:

21 Q. I'm handing you what I have marked as

22 Deposition Exhibit 167, if you could identify that

23 for me.

24 A. Okay. This is Montana air quality permit

25 number 1821-32, which was deemed final as of

1 December 31st, 2013, for the CHS Incorporated Laurel

2 Refinery.

3 Q. And what -- let's see. Do you know if

4 this document was made in the course of DEQ's

5 regularly conducted business activity?

6 A. As it relates to permitting this facility,

7 yes, it was.

8 Q. Are you familiar with this document?

9 A. Yes. I believe I am.

10 Q. Okay. Are these -- is this representative

11 of the kinds of air quality permits that DEQ issues

12 for oil refineries?

13 A. Yes. It's -- it's indicative. Every

14 refinery is different, but --

15 Q. Sure.

16 A. -- it's indicative.

17 Q. Okay. Is this document publicly

18 available?

19 A. Certainly upon request. I don't know if

20 it's on our website.

21 Q. Okay. Do you have any reason to believe

22 that this document is not a true and correct copy of

23 what it purports to be?

24 A. No, I do not.

25 Q. Okay. Could an oil refinery operate in

1 **Montana without an air quality permit from DEQ?**

2 A. Some could, yes.

3 **Q. And how could they?**

4 A. Depends upon the amount of emissions that
5 they have potentially coming from that facility.

6 **Q. Okay. Could this facility operate without
7 an air quality permit?**

8 A. Not legally.

9 **Q. Okay. Why does it need one?**

10 A. Because its potential emissions exceed the
11 permitting threshold.

12 **Q. Okay. Do you know if there are any permit
13 conditions associated with this permit with respect
14 to carbon dioxide emissions?**

15 A. I would have to look through the permit
16 itself.

17 **Q. Okay. Do you know if this facility is on
18 private land?**

19 A. Land ownership I -- I -- I could not speak
20 to off the top of my head.

21 **Q. Okay. Do you know if DEQ ever evaluated
22 the greenhouse gas emissions that result from the
23 operation of the Laurel Refinery?**

24 A. I would have to review the record for this
25 facility.

1 **generally?**

2 A. When you say "that information,"
3 specifically what do you mean?

4 **Q. Greenhouse gas emissions related to --
5 resulting from refinery operations?**

6 A. I would have to review the requirements to
7 see whether they're required to submit any greenhouse
8 gas emissions.

9 **Q. Okay. Where could DEQ find that
10 information out?**

11 A. The requirement of the tracking would most
12 likely be in a federal program, so it could be a
13 review of the federal program. I'm not aware of any,
14 but I don't know -- we would have to look -- DEQ
15 would have to look at all of those requirements.

16 **Q. Are you aware of any state programs that
17 require such tracking?**

18 A. I can't -- I don't -- I can't identify any
19 right now.

20 **Q. Okay. So it's 12:53 and I have just -- I
21 think just two exhibits left in this -- in your
22 30(b)(6). Do you want to keep going?**

23 A. I'm good.

24 **MS. HORNBEIN:** Lee, are you good?

25 **MS. McKENNA:** (Nodded head up and down.)

1 **Q. If such an evaluation had occurred, do you
2 know at what stage of the permitting process that
3 would have happened?**

4 A. I couldn't speak -- it could be at various
5 stages, so I -- I would to review the record again --

6 **Q. Okay.**

7 A. -- to see what was done.

8 **Q. Do you know if this facility would also
9 need a hazardous waste permit in addition to their
10 air quality permit?**

11 A. I cannot speak to hazardous waste
12 requirements.

13 **Q. Okay. What about an MPES permit?**

14 A. Same. I can't speak to what their
15 requirements are.

16 **Q. Okay. Do you know if DEQ ever evaluated
17 the greenhouse gas emissions that result from the
18 burning of the oil refined at the refinery?**

19 A. I would need to review the record for this
20 facility.

21 **Q. Does DEQ know the amount of greenhouse gas
22 emissions that result from the burning of oil refined
23 at the Laurel Refinery?**

24 A. I'd have to look at the record.

25 **Q. Do you know if DEQ tracks that information**

1 **MS. HORNBEIN:** Okay.

2 **BY MS. HORNBEIN:**

3 **Q. All right. I'm going to hand you what has
4 previously been marked as Exhibit 134. Can you tell
5 me what this document is?**

6 A. This appears to be a press release off of
7 Montana's website entitled DEQ issues air quality
8 permit for proposed Laurel Generating Station in
9 Yellowstone County.

10 **Q. Have you reviewed this document before?**

11 A. No. I don't believe I've reviewed this
12 one.

13 **Q. Okay. Do you know if this document was
14 made in the course of DEQ's regularly conducted
15 business activity?**

16 A. I can't speak to that.

17 **Q. Okay. Could you please read the first
18 paragraph starting with "today."**

19 A. "Today the Montana Department of
20 Environmental Quality released the air quality permit
21 for NorthWestern Energy's proposed generating station
22 in Laurel, Montana, located in Yellowstone County.
23 The air quality permit analyzed the potential
24 emissions from 18 9.7 megawatt electrical
25 reciprocating internal combustion engines, an

1 emergency backup diesel-fired engine generator set, a
2 fire pump engine, natural gas line heater, and road
3 dust at the proposed site to ensure the facility
4 complies with the Clean Air Act of Montana."

5 **Q. Are you familiar with the permitting
6 process that this document refers to?**

7 A. Yes.

8 **Q. Okay. Why did this project need an air
9 quality permit?**

10 A. The -- this happened after I left.

11 **Q. Okay.**

12 A. So if it needs an air quality permit, it
13 would exceed the permitting thresholds.

14 **Q. Were you involved at all with this permit
15 prior to its issuance before you retired?**

16 A. Initial discussions with staff, company
17 representatives, management, those types of things.

18 **Q. Okay. Do you know if DEQ analyzed how
19 much greenhouse gas emissions would result from the
20 project in issuing this permit?**

21 A. I do not know.

22 **Q. Okay. Do you know if the permit issued
23 would restrict the amount of greenhouse gas emissions
24 that the plant could emit?**

25 A. I would need to see the permit and review

1 the record.

2 **Q. Okay. I'm going to hand you what has
3 previously been marked as Exhibit Number 21. Could
4 you tell me what that is, please?**

5 A. 21 is Montana Code Annotated 2021, Title
6 75 Environmental Protection, Chapter 2, air quality,
7 part 1, general provisions and administration.

8 **Q. Have you reviewed this document before?**

9 A. I've seen this section before, yes.

10 **Q. Okay. Are you familiar with this section
11 in your capacity -- in your former capacity with DEQ?**

12 A. Yes, I am.

13 **Q. Okay. And this document is section
14 75-2-102. Correct?**

15 A. Correct.

16 **Q. Do you have any reason to believe this
17 document is not a true and correct copy of section
18 75-2-102 of the Montana Code Annotated?**

19 A. Not as I sit here now, no.

20 **Q. Looking to part 1 of the statute, it
21 reads: "The legislature, mindful of its
22 constitutional obligations under Article 2, Section 3
23 and Article 9 of the Montana Constitution, has
24 enacted the Clean Air Act of Montana. It is the
25 legislature's intent that the requirements of parts 1**

1 **through 4 of this chapter provide adequate remedies
2 for the protection of the environmental life support
3 system from degradation and provide adequate remedies
4 to prevent unreasonable depletion and degradation of
5 natural resources." Did I read that correctly?**

6 A. Yes. I believe you did.

7 **Q. What is DEQ's understanding of that
8 section that I just read you?**

9 A. My understanding of this particular
10 section is that implementation of the Clean Air Act
11 of Montana helps, I guess, satisfy our constitutional
12 obligations under the Montana Constitution.

13 **Q. Okay. Does the section that I just read
14 to you, subsection 1, apply to DEQ?**

15 A. It is part of -- it is the intent of the
16 Clean Air Act of Montana, so there are some things in
17 there that apply maybe to the department. So it
18 could.

19 **Q. Okay. I think you were kind of getting at
20 this, but in what circumstances does it apply to DEQ
21 or within your experience to the air quality bureau?**

22 A. Prior to the last session, there were some
23 obligations on the department, and there were
24 obligations on the Board of Environmental Review.
25 There were also obligations on folks or facilities

1 that wanted to construct an air contaminant source.

2 **Q. When you say prior to the last session,
3 has that changed? Have those conditions changed?**

4 A. There are things that are no longer under
5 the Board of Environmental Review purviews -- purview
6 that are now under the department's purview.

7 **Q. And is that by way of Senate Bill 233?**

8 A. I believe that was the number. I don't
9 know.

10 **Q. Okay. I won't ask you to -- we'll get to
11 that one --**

12 A. Okay.

13 **Q. -- later. And based on your understanding
14 of what happened in the last session, is it correct
15 to say that some of the authority that was originally
16 vested in the Board of Environmental Review was
17 transferred to DEQ?**

18 A. Yes.

19 **Q. Okay. Does the Montana Constitution apply
20 to DEQ decisions made under the Montana Clean Air
21 Act?**

22 **MS. McKENNA:** Objection. Calls for a
23 legal conclusion.

24 **BY MS. HORNBEIN:**

25 **Q. You can go ahead and answer if you can.**

1 A. My answer would be the Clean Air Act is
2 the statute -- one of the statutes that guides our
3 actions to comply with the Montana Constitution.

4 **Q. Okay. Do Article 2, Section 3 and Article**
5 **9 of Montana's Constitution apply to DEQ decisions**
6 **made under the Montana Clean Air Act?**

7 **MS. McKENNA:** Objection. Calls for a
8 legal conclusion.

9 **THE WITNESS:** I would phrase it very
10 similarly in that the decision -- the Clean Air Act
11 of Montana and its implemented rules as well as some
12 other statutes guide our decision-making to comply
13 with the Montana Constitution.

14 **BY MS. HORNBEIN:**

15 **Q. Got it. Do Article 2, Section 3 and**
16 **Article 9 of Montana's Constitution apply to DEQ**
17 **decisions made under MEPA?**

18 **MS. McKENNA:** Objection. Calls for a
19 legal conclusion.

20 **THE WITNESS:** I believe MEPA has a very
21 similar intent and policy purpose written in front of
22 that section of code. So I believe it would be the
23 same answer, that in implementing our -- the MEPA
24 obligations, under a certain action is one of the
25 statutes that we follow to comply with the Montana

1 A. No.

2 **Q. What did I get wrong?**

3 A. Instead of the word "practicable" --

4 **Q. Yeah.**

5 A. -- you used "possible."

6 **Q. Oh, thank you for catching that. If I**
7 **change the word "possible" to the word "practicable,"**
8 **did I read that correctly?**

9 A. I believe so.

10 **Q. I'm glad you're paying attention. The**
11 **statute sets forth a state policy to, quote, achieve**
12 **and maintain levels of air quality that will protect**
13 **human health and safety, unquote. Is that correct?**

14 A. That's -- that's that first part, yes.

15 **Q. Okay. Does the section I just read you**
16 **apply to the DEQ?**

17 **MS. McKENNA:** Objection. Calls for a
18 legal conclusion.

19 **THE WITNESS:** To the same extent as you
20 asked prior, there are certain obligations on the
21 Board of Environmental Review prior to the last
22 session and the department as well as those who want
23 to construct and operate an air contaminant source.

24 **BY MS. HORNBEIN:**

25 **Q. Okay. Post the 2021 session, under what**

1 Constitution.

2 **BY MS. HORNBEIN:**

3 **Q. And when you say a very similar policy and**
4 **purpose, do you mean to the policy and purpose**
5 **articulated under subsection 1 of Section 75-2-102 of**
6 **the Montana Code?**

7 A. Yes. It's -- it's -- I believe it's
8 similar to this.

9 **Q. Okay. Can you please look to part 2 of**
10 **the statute which states: "It is the public policy**
11 **of this state and the purpose of this chapter to**
12 **achieve and maintain levels of air quality that will**
13 **protect human health and safety and to the greatest**
14 **degree possible prevent injury to plant and animal**
15 **life and property, foster the comfort and convenience**
16 **of the people, promote the economic and social**
17 **development of the state, and facilitate the**
18 **enjoyment of the natural attractions of the state.**
19 **This policy must be balanced by the legislature with**
20 **the policy of protecting the ability of the people to**
21 **pursue life's basic necessities and to acquire**
22 **property and to use that property in all lawful**
23 **ways." Did I read that correctly?**

24 A. No, you did not.

25 **Q. I didn't?**

1 circumstances would you say that that section applies
2 to DEQ?

3 A. Post 2021 session, the rulemaking
4 authority, I believe, was transferred to the
5 department.

6 **Q. From the board of --**

7 A. From the Board of Environmental Review.

8 **Q. Okay. What is DEQ's understanding of the**
9 **phrase, quote, achieve and maintain levels of air**
10 **quality that will protect human health and safety,**
11 **end quote?**

12 A. I believe the meaning of this is that they
13 want the state of Montana to be in compliance with
14 the ambient air quality standards.

15 **Q. Okay. Has DEQ established pollution**
16 **control limits for air pollutants to, quote, achieve**
17 **and maintain levels of air quality that will protect**
18 **human health and safety?**

19 A. Yes.

20 **Q. Which pollutants?**

21 A. There are multiple pollutants.

22 **Q. Uh-huh.**

23 A. Generally speaking, they are the -- what
24 are called the criteria pollutants.

25 **Q. Uh-huh.**

1 A. There are other pollutants as well that
2 are noncriteria pollutants, where there are standards
3 that were developed.

4 **Q. Okay.**

5 A. And -- and those are the -- those are
6 pollutants for which there's an ambient standard.
7 There are also some specific requirements in
8 administrative rule --

9 **Q. Uh-huh.**

10 A. -- that would apply to either pollutants
11 or facilities or both.

12 **Q. Okay. Has DEQ established pollution
13 control limits for carbon dioxide to, quote, achieve
14 and maintain levels of air quality that will protect
15 human health and safety, end quote?**

16 **MS. McKENNA:** Objection. Compound.

17 **BY MS. HORNBEIN:**

18 **Q. Has DEQ established pollution control
19 limits for carbon dioxide?**

20 A. I would need -- did -- guy, sorry -- I saw
21 her light buzz.

22 **MS. McKENNA:** It's okay.

23 **BY MS. HORNBEIN:**

24 **Q. It's okay.**

25 A. It's okay to go ahead? While there is

1 there are different reviews. Could be a modeling
2 review. It could also be a control technology review
3 to see if there are any economically practical or
4 technically achievable requirements -- or excuse me
5 -- pieces of equipment that could limit emissions.

6 **Q. Okay. Has DEQ established pollution
7 control limits for methane?**

8 **THE REPORTER:** For what?

9 **MS. HORNBEIN:** Methane.

10 **THE REPORTER:** Thank you.

11 **THE WITNESS:** The DEQ does have rules that
12 require the control of methane and a certain amount
13 of reduction of -- of the pollutants that are being
14 controlled.

15 **BY MS. HORNBEIN:**

16 **Q. Okay.**

17 A. A specific numeric limit, I -- I don't
18 believe so unless there's something embodied in a
19 specific permit.

20 **Q. Okay. Do you know if those rules that
21 provide for the control of methane were promulgated
22 under subsection 2 of the statute that I just read
23 you?**

24 A. They follow the process outlined in the
25 Clean Air Act which at the time was -- the board had

1 nothing to my knowledge in statute or rule, I would
2 need to look at all of the permit decisions to see
3 whether or not there was a GHG emission limitation or
4 some other production limit that would also serve as
5 a surrogate to limiting greenhouse gas emissions.

6 **Q. Okay. But as far as you know, there are
7 no regulatory provisions that set limits on carbon
8 dioxide?**

9 A. Are you referring to setting a specific
10 limit or a process by which a limit is established?

11 **Q. Either way. Either one.**

12 A. Yes. The latter there is.

13 **Q. The latter there is but not a specific
14 limit?**

15 A. I'm not aware of a specific limit that is
16 required again by rule or statute, but there may be a
17 limitation that is in a permit.

18 **Q. Sure.**

19 A. I would have to look for a -- some other
20 limitation that would serve as a surrogate to limit
21 greenhouse gas emissions.

22 **Q. Okay. What is the process that has been
23 established?**

24 A. There is a regulatory process that if
25 pollutants achieve a certain level, then there is --

1 the prerogative, I guess, to approve those rules.

2 **Q. Okay. Has DEQ established pollution
3 control limits for any greenhouse gas pursuant to
4 subsection 1 or 2 of 75-2-102?**

5 **MS. McKENNA:** Objection. Compound
6 question.

7 **BY MS. HORNBEIN:**

8 **Q. Has DEQ established pollution control
9 limits for any greenhouse gas subject to section
10 75-2-102 of the Montana Code Annotated?**

11 A. The program that I just referred to --

12 **Q. Uh-huh.**

13 A. -- which is the oil and gas registration
14 program, does control greenhouse gas emissions, and
15 it went through the Board of Environmental Review.

16 **Q. Okay. Is it correct that those controls
17 do not place numeric limits on greenhouse gas
18 emissions?**

19 A. I would have to look at the rules again.
20 My specific recollection is it requires a certain
21 percent reduction. I believe it's 95 percent
22 reduction in those emissions.

23 **Q. Okay. Does DEQ consider climate change to
24 be something that impacts or affects DEQ's ability to
25 meet its statutory obligations under Section**

1 75-2-102?

2 A. Can I take the -- can you say the first
3 part of that, please, because there was an "and" in
4 there, and I --

5 Q. Yeah. Does DEQ consider climate change to
6 be something that -- let's just stick with impact. I
7 think I added an "or."

8 Does DEQ consider climate change to be
9 something that impacts DEQ's ability to satisfy a
10 statutory obligations under 75-2-102?

11 A. I believe we're -- the agency is still in
12 compliance with that particular section.

13 Q. Does the agency consider climate change to
14 be something that influences its compliance with that
15 section?

16 A. I believe it's factored in at various
17 levels, but, again, the Clean Air Act generally looks
18 at emissions and the ambient air quality impact of
19 those.

20 Q. Okay. Can you give me any examples of how
21 DEQ considers climate change in its implementation of
22 75-2-102?

23 A. As I mentioned earlier, the prescribed
24 fire permitting program is -- is an example.

25 Q. Okay. Can you think of any -- that goes

1 to -- that example that you gave, the prescribed fire
2 program -- I can't remember the terminology you used,
3 but it goes to what I would call climate change
4 response. Is that fair?

5 A. Yes. I used a different term that is
6 escaping me right now.

7 Q. Yeah.

8 A. Not necessarily resilience. Adaptation.

9 Q. Adaptation. Can you give me any examples
10 of how DEQ considers climate change in its
11 implementation of 75-2-102 in a preventative manner?

12 A. I would need to look at the record of all
13 of the permits that were issued to determine what, if
14 any, greenhouse gas emissions were quantified and
15 what sort of analysis was given as to how much -- how
16 much they compared to other areas or whether or not
17 it's economically or technically practical to control
18 those emissions.

19 Q. Okay. In what ways does Montana's
20 Constitution inform or guide DEQ's statutory
21 obligations under 75-2-102?

22 A. Well, I -- I believe the --

23 MS. McKENNA: Objection. Compound.
24 There's two different words in there, inform and
25 guide.

1 BY MS. HORNBEIN:

2 Q. Okay. In what ways does Montana's
3 Constitution inform DEQ's statutory obligation --
4 obligations under 75-2-102?

5 A. I believe that, again, the Clean Air Act
6 of Montana was enacted to satisfy the Montana
7 Constitution, and, number two, is along those same
8 veins. It is talking more specifically about
9 achieving and maintaining levels -- levels of air
10 quality that would protect human health. It is very
11 similar.

12 Q. Okay. Does DEQ believe that climate
13 change affects human health?

14 A. That is very broad. Can you be more
15 specific as to what part of human health?

16 Q. Okay. Let's use an example. Does DEQ
17 believe that climate change has impacts to public
18 health that result in costs borne by the government,
19 the state government in this case?

20 A. I don't think I can answer that question.

21 Q. Okay. Is there anything else that you
22 expect to testify about regarding how DEQ implements
23 the direction of the legislature and the Montana
24 Clean Air Act to, quote, achieve and maintain levels
25 of air quality that will protect human health and

1 safety, end quote?

2 A. It will depend upon what the question I'm
3 asked.

4 Q. Okay. Is there anything else that you
5 plan to testify about at trial that we have not
6 discussed today?

7 A. Really depend upon the questions that are
8 asked. I don't know.

9 Q. Okay.

10 MS. HORNBEIN: Thank you, Dave. I have no
11 further questions in your 30(b)(6) deposition. I
12 appreciate you sticking with it.

13 THE WITNESS: Got through one.

14 MS. HORNBEIN: I think the next one should
15 be less painful.

16 THE WITNESS: Okay.

17 MR. RUSSELL: Lee might have some.

18 MS. McKENNA: I don't have any questions.

19 MR. RUSSELL: Cool.

20 MS. HORNBEIN: What time do you all want
21 to come back?

22 THE WITNESS: I have a PB&J in the car so
23 I'm -- it's up to you all.

24 THE VIDEOGRAPHER: That concludes this
25 deposition. The time is 1:15 p.m.

(Whereupon, the deposition concluded at 1:15 p.m.)
SIGNATURE RESERVED.

C E R T I F I C A T E

STATE OF MONTANA)
COUNTY OF GALLATIN) : ss

I, Deborah L. Fabritz, Registered Professional Reporter and Notary Public for the State of Montana, residing in Bozeman, do hereby certify:

That I was duly authorized to and did swear in the witness and report the deposition of DAVID KLEMP, in the above-entitled cause; that the foregoing pages of this deposition constitute a true and accurate transcription of my stenotype notes of the testimony of said witness, all done to the best of my skill and ability; that the reading and signing of the deposition by the witness have been expressly RESERVED.

I further certify that I am not an attorney nor counsel of any of the parties, nor relative or employee of any attorney or counsel connected with the action, nor financially interested in the action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal on this 7th day of January 2023.

DEPONENT'S CERTIFICATE

I, DAVID KLEMP, 30(b)(6), the deponent in the foregoing deposition, DO HEREBY CERTIFY, that I have read the foregoing - 156 - pages of typewritten material and that the same is, with any changes thereon made in ink on the corrections sheet, and signed by me a full, true and correct transcript of my oral deposition given at the time and place hereinbefore mentioned.

DAVID KLEMP

Subscribed and sworn to before me this ____ day of _____, 2023.

PRINT NAME:

Notary Public, State of Montana

Residing at: _____

My commission expires: _____

DF - HELD VS. STATE OF MONTANA

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EXHIBIT 20

*Rikki Held, et al. v
State of Montana, et al.*

*Sonja Nowakowski 30(b)(6)
December 14, 2022*

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1 MONTANA FIRST JUDICIAL DISTRICT COURT
 2 LEWIS AND CLARK COUNTY

3 RIKKI HELD, et al.,
 4 Plaintiffs,
 5 v. Cause Number
 6 STATE OF MONTANA, et al., CDV-2020-307
 7 Defendants.
 8

9 VIDEORECORDED 30(b) (6) DEPOSITION UPON ORAL
 10 EXAMINATION OF
 11 MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
 12 SONJA NOWAKOWSKI
 13

14 BE IT REMEMBERED, that the videorecorded
 15 30(b) (6) deposition upon oral examination of MONTANA
 16 DEPARTMENT OF ENVIRONMENTAL QUALITY, SONJA
 17 NOWAKOWSKI, appearing at the instance of Plaintiffs,
 18 was taken at the offices of Fisher Court Reporting,
 19 800 North Last Chance Gulch, Suite 101, Great Falls,
 20 Montana, on Wednesday, December 14th, 2022, beginning
 21 at the hour of 9:00 a.m., pursuant to the Montana
 22 Rules of Civil Procedure, before Deborah L. Fabritz,
 23 Court Reporter - Notary Public.
 24 *****
 25

Page 3

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 14 OF ENVIRONMENTAL QUALITY:
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 16 Department of Environmental Quality
 17 Legal Unit, Metcalf Building
 18 1520 East Sixth Avenue
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20
 21 **ALSO PRESENT:**
 22 Nate Trejo, videographer; Catherine
 23 Armstrong; and Tara Robinson (via Zoom)
 24
 25

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1 paralegal for DEQ.

2 **MS. CHILLCOTT:** Barbara Chillcott,

3 attorney for plaintiffs.

4 **THE VIDEOGRAPHER:** The court reporter will

5 now administer the oath.

6 **SONJA NOWAKOWSKI,**

7 called as a witness, having been first duly sworn,

8 was examined and testified as follows:

9 **EXAMINATION**

10 **BY MS. CHILLCOTT:**

11 **Q.** Good morning, Ms. Nowakowski. My name is

12 Barbara Chillcott, and I am representing the

13 plaintiffs in this case today.

14 **I just wanted to go over a couple of**

15 **ground rules. Actually, first, I want to get your**

16 **name for the record.**

17 **A.** Sonja Nowakowski.

18 **Q.** And could you spell your –

19 **A.** Sure.

20 **Q.** – last name, please.

21 **A.** S -- S-O-N-J-A, and then

22 N-O-W-A-K-O-W-S-K-I.

23 **Q.** Okay. And do you go by any other names?

24 **A.** I do not.

25 **Q.** Okay. And question: How would you like

Page 6

1 WHEREUPON, the following proceedings were had

2 and testimony taken, to-wit:

3 *****

4 **THE VIDEOGRAPHER:** This is the

5 videorecorded deposition of 30(b)(6) representative

6 Sonja Nowakowski, taken in the Montana First Judicial

7 District Court, Lewis & Clark County. Cause Number

8 CDV-2020-307. Rikki Held, et al., versus State of

9 Montana, et al.

10 Today is December 14th, 2022. The time is

11 9:08 a.m. We are present at the offices of Fisher

12 Court Reporting, 800 North Last Chance Gulch, Suite

13 101, Helena, Montana.

14 The court reporter is Deb Fabritz, and the

15 video operator is Nate Trejo of Fisher Court

16 Reporting. The deposition is being taken pursuant to

17 notice.

18 I would now ask the attorneys to identify

19 themselves, who they represent, and whoever else is

20 present.

21 **MS. McKENNA:** Lee McKenna, attorney for

22 the Department of Environmental Quality.

23 **MR. RUSSELL:** Michael Russell for

24 defendants.

25 **MS. ARMSTRONG:** Catherine Armstrong,

Page 8

1 me to address you during this deposition?

2 **A.** Sonja is fine.

3 **Q.** Is it okay?

4 **A.** Sure.

5 **Q.** Okay. Great. Thanks. So do you live

6 here in Helena?

7 **A.** I do.

8 **Q.** And what is your work address?

9 **A.** I'm at 15 -- 1502 6th Avenue --

10 **MS. McKENNA:** 1520.

11 **THE WITNESS:** 1520 6th Avenue, Helena,

12 Montana.

13 **BY MS. CHILLCOTT:**

14 **Q.** All right. And you work for the Montana

15 Department of Environmental Quality. Correct?

16 **A.** Yes, I do.

17 **Q.** And how long have you been in that role?

18 **A.** I have been in that role since April of

19 2021.

20 **Q.** Okay. Have you held any other positions

21 at DEQ?

22 **A.** I have not.

23 **Q.** And prior to DEQ, I understand you were

24 with the Montana Legislative Services. Correct?

25 **A.** That's correct.

Page 9

1 Q. Thanks. So we'll talk more about your
 2 professional background during your deposition, your
 3 hybrid expert testimony deposition --
 4 A. Okay.
 5 Q. -- this afternoon. And for the record, I
 6 want to state that we're here this morning for your
 7 Rule 30(b)(6) deposition. This afternoon we have a
 8 second deposition scheduled to begin at 1:00 or after
 9 the conclusion of this deposition.
 10 A. Uh-huh.
 11 Q. That one will be in your capacity as the
 12 -- a hybrid expert for -- witness for DEQ?
 13 A. Uh-huh.
 14 Q. Do you understand which hat you're wearing
 15 for this one?
 16 A. Yes, I do.
 17 Q. Okay. Great. So I'm going to go over
 18 just a couple of ground rules for today. You
 19 understand your testimony is under oath?
 20 A. Yes.
 21 Q. Is there a reason you are not able to give
 22 truthful testimony today?
 23 A. No.
 24 Q. If you don't understand a question, please
 25 say so, and I'll try to either rephrase or repeat it.

Page 10

1 A. Okay.
 2 Q. I have a tendency to talk fast, and I am
 3 probably overcaffeinated.
 4 A. Good to know.
 5 Q. So if you need me to slow down, please let
 6 me know. It won't be the first time someone has
 7 asked me to slow down.
 8 And then for the court reporter's sake,
 9 only one of us can speak at a time so she can keep
 10 up.
 11 A. Okay.
 12 Q. All right. And then please provide oral
 13 answers as opposed to like nodding your head, or you
 14 can do both, but make sure you have an oral answer so
 15 the court reporter can write everything down.
 16 A. Okay.
 17 Q. And if you need a break, please let me
 18 know, and I will wrap up where I am, and then we'll
 19 go off the record and take a break. And I'll just
 20 let you know, today we have quite a number of
 21 documents to go through, and I am going to be as
 22 efficient as possible. And so I just want you to
 23 just let me know if you need a break, and I'll
 24 promise to move as quickly through this as painlessly
 25 as possible.

Page 11

1 A. Okay.
 2 Q. Thanks. Great. So, Sonja, have you
 3 testified under oath before?
 4 A. I have not.
 5 Q. Have you given -- so you haven't given a
 6 deposition before?
 7 A. I have not.
 8 Q. And you haven't testified at trial?
 9 A. No.
 10 Q. Okay. Have you ever submitted like
 11 written testimony or like a declaration or something
 12 like that in a case or a proceeding?
 13 A. I have submitted a letter in a child
 14 custody case on behalf of a family member.
 15 Q. Okay. And have you ever provided
 16 testimony before a political body?
 17 A. Yes.
 18 Q. And under what circumstances?
 19 A. I have testified before the Montana
 20 legislature.
 21 Q. And was that in your capacity at DEQ?
 22 A. I have testified before legislative
 23 interim committees in my capacity at DEQ.
 24 Q. Okay. And how about in your prior work
 25 with the Montana Legislative Services? Did you

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1 testify before the legislature then?
 2 A. I provided testimony strictly as a
 3 nonpartisan or informational staff.
 4 Q. Okay. So I'm going to ask you a question
 5 -- or a couple questions about how you prepared for
 6 this deposition. I just want to make sure that
 7 you're aware that I don't want you to provide any
 8 kind of privileged information or anything that, you
 9 know, you talked with your attorney about.
 10 A. Okay.
 11 Q. So just be careful there. But I would
 12 like to know what did you do to prepare for this
 13 deposition?
 14 A. Sure. I spoke with my attorney, and I
 15 reviewed the documents that were provided and that
 16 I'm responsible for understanding under the 30(6)(b)
 17 [sic].
 18 Q. Okay. Which documents were you provided?
 19 A. I was provided the exhibits and the
 20 assignment of the specific exhibits that I needed to
 21 have knowledge of, as well as the overview of -- of
 22 the plaintiffs' case and the folks you have lined up
 23 to testify.
 24 Q. Okay. How many hours did you spend
 25 preparing roughly?

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1 A. I'd say roughly eight to ten.
 2 Q. Okay. Without revealing what you
 3 discussed, did you meet with the attorneys for the
 4 defendants? So in addition to your DEQ counsel, did
 5 you meet with attorneys for the State?
 6 A. Yes.
 7 Q. Other than the defense attorneys, did
 8 anyone else help you prepare for your testimony?
 9 A. No.
 10 Q. Did you receive any direction from any of
 11 your colleagues at DEQ?
 12 A. I had asked a few questions of our energy
 13 bureau chief about some of the work they do, to
 14 clarify some of the information to prepare for the
 15 30(6)(b).
 16 Q. Okay. And what is the name of your energy
 17 bureau chief?
 18 A. Dan Lloyd.
 19 Q. Any – did you have any other
 20 conversations or discussions with other staff or
 21 colleagues at DEQ about your deposition testimony
 22 today?
 23 A. I did have some conversations with Dave
 24 Klemp, the former air quality bureau chief who will
 25 be testifying tomorrow.

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1 Q. Great. Okay. So I'm going to hand you a
 2 copy, Sonja, of what has been marked already as
 3 Exhibit 63.
 4 A. Uh-huh.
 5 MS. CHILLCOTT: And, Lee, just making sure
 6 you're able to access all of the sharefile
 7 documents --
 8 MS. McKENNA: Yeah, I'm having actually a
 9 little bit of technical issue, but I'm familiar with
 10 that document.
 11 MS. CHILLCOTT: Okay.
 12 MS. McKENNA: So I'm okay.
 13 MS. CHILLCOTT: Great. And here's the
 14 Wi-Fi if you need it again.
 15 MS. ARMSTRONG: You can kind of switch
 16 between Fisher and BKBH.
 17 MS. CHILLCOTT: Oh, okay. And so that
 18 Wi-Fi is for Fisher with the five 0s and the five A's
 19 password.
 20 BY MS. CHILLCOTT:
 21 Q. So, Sonja, can you identify that document
 22 for me, the name?
 23 A. Sure. This is the objections.
 24 Q. So is it the Montana Department of
 25 Environmental Quality's Amended Designees and

Page 15

1 Objections to Plaintiffs' Amended Montana Rule of
 2 Civil Procedure 30(b)(6) Notice of Deposition?
 3 A. Yes.
 4 Q. Thanks. That's a mouthful on there.
 5 Have you reviewed this document before?
 6 A. Yes.
 7 Q. Okay. And your name appears a number --
 8 in a number of places on this document. Correct?
 9 A. Yes.
 10 Q. So I'm going to pass you another document
 11 to review.
 12 MS. McKENNA: So point of clarification, I
 13 just want to clarify that this is not the current
 14 notice of 30(b)(6) deposition. This notice of
 15 deposition is dated November 22nd, 2022. So it's
 16 been superseded by the 30(b)(6) notice dated
 17 November 30th, 2022. I just want to make that clear
 18 on the record.
 19 MS. CHILLCOTT: Yeah. And we'll get to
 20 that.
 21 MS. McKENNA: Okay.
 22 BY MS. CHILLCOTT:
 23 Q. So I'm handing you another document,
 24 Sonja, that I have marked Exhibit Number 117, which
 25 is where we'll start today.

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1 (Whereupon, Exhibit 117 was
 2 marked for identification.)
 3 BY MS. CHILLCOTT:
 4 Q. Can you identify that document for me?
 5 A. This is the plaintiffs' second amended
 6 Rule 30(b)(6) notice of deposition to defendant
 7 Montana Department of Environmental Quality.
 8 Q. Okay. Have you reviewed that document
 9 before?
 10 A. Yes.
 11 Q. Okay.
 12 MS. McKENNA: Could we just put the date
 13 of that Exhibit 117 on the record just so that we're
 14 all clear on what -- which date it is?
 15 MS. CHILLCOTT: Yeah.
 16 BY MS. CHILLCOTT:
 17 Q. That exhibit is dated November 30th, 2022.
 18 Correct?
 19 A. This exhibit is dated November 30th, 2022.
 20 Correct.
 21 Q. Okay. So your name appears on this
 22 document on pages 2 and 3. Correct?
 23 A. Yes.
 24 Q. Okay. And you are the person who has been
 25 designated by DEQ to speak on its behalf with respect

Page 17

1 to topics 3, 4, 9, 10, 11, 12, and 14, which are
 2 identified on plaintiffs' second amended Rule
 3 30(b)(6) notice of deposition which you have in your
 4 hand there. Correct?
 5 A. That's correct under topic 3, however, I
 6 only have the list of those items that I am prepared
 7 to address.
 8 Q. Understood. Who designated you to speak
 9 about these topics on behalf of DEQ?
 10 A. I worked with my attorney to designate
 11 myself.
 12 Q. When did that happen?
 13 A. Over the course of the last month.
 14 Q. Okay. And why -- why you?
 15 A. I'm the division administrator for the
 16 Air, Energy and Mining Division of DEQ, so I have
 17 knowledge of these items.
 18 Q. Okay. Do you have full authority to speak
 19 on behalf of DEQ with respect to the topics listed in
 20 the deposition notice?
 21 A. Yes.
 22 Q. Do you understand that the answers you
 23 give will -- that you will give to our questions will
 24 be on behalf of the DEQ?
 25 A. Yes.

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1 Q. Are you aware the answers you will give to
 2 our questions will be binding upon the DEQ?
 3 MS. McKENNA: Objection. That calls for a
 4 legal conclusion.
 5 THE WITNESS: I would need to have legal
 6 clarification of what binding means.
 7 BY MS. CHILLCOTT:
 8 Q. Sure. Are you -- so today are you fully
 9 prepared to speak with respect to the subject areas
 10 assigned to you listed in the notice of deposition?
 11 A. Yes.
 12 Q. Okay. Can you turn back to that Exhibit
 13 63 right there?
 14 A. Uh-huh.
 15 Q. And turn to page 4.
 16 A. Okay.
 17 Q. And looking towards the bottom of page 4,
 18 it looks like you've been designated for seven topics
 19 for -- seven documents -- I'm sorry -- for topic 3.
 20 Correct?
 21 A. Correct.
 22 Q. Okay. Can you please read the documents
 23 you were assigned?
 24 A. CHS Title V, Exxon Title V, Northwest
 25 Energy Laurel Generating Station Air Permit, Phillips

Page 19

1 66 Title V, Westmoreland Rosebud Area A, Signal Peak
 2 MR 281, and Understanding Energy in Montana as the
 3 author of this document in my capacity as a
 4 Legislative Research Analyst, not in my capacity at
 5 DEQ.
 6 Q. Thank you. I'm going to hand you a copy
 7 of a document marked Exhibit 118.
 8 (Whereupon, Exhibit 118 was
 9 marked for identification.)
 10 THE WITNESS: Okay.
 11 BY MS. CHILLCOTT:
 12 Q. Can you please identify the document I
 13 just handed to you?
 14 A. Sure. This is the Final Title V Operating
 15 Permit for the CHS Laurel Refinery.
 16 Q. Thank you. And what does this document
 17 authorize CHS to do?
 18 A. This is their air quality permit. This
 19 allows them to operate and emit certain regulated
 20 pollutants under the circumstances and requirements
 21 in this permit.
 22 Q. Okay. Could a company operate an oil
 23 refinery in Montana without an air quality permit
 24 from DEQ?
 25 A. They could operate. They would be subject

Page 20

1 to violations of the law, however.
 2 Q. Could CHS, Inc., operate the Laurel
 3 Refinery without an air quality permit from DEQ?
 4 A. Again, they could operate without an air
 5 quality permit. However, they would be subject to
 6 violations of the law.
 7 Q. Before issuing Title V permits like this
 8 one, does DEQ evaluate the greenhouse gas emissions
 9 that result from the operation of the project?
 10 A. No. Not -- in this permit we do not have
 11 the authority under Title V to review or --
 12 greenhouse gas emissions.
 13 Q. So then in this case DEQ never evaluated
 14 the greenhouse gas emissions from the Laurel
 15 Refinery. Correct?
 16 A. Under this permit, DEQ does not -- this is
 17 a Title V operating permit, and I believe this is a
 18 renewal permit. And DEQ does not have the authority
 19 to analyze greenhouse gas for a Title V permit under
 20 our primacy from the Environmental Protection Agency.
 21 Q. So in that case would you say the
 22 authority rests with the Environmental Protection
 23 Agency?
 24 A. It could rest with either DEQ or with the
 25 Environmental Protection Agency. However, in this

Page 21

1 instance this is a federal Title V operating permit,
 2 and that authority does rest with the EPA.
 3 **Q. Okay. Does DEQ know the amount of**
 4 **greenhouse gas emissions that come from the Laurel**
 5 **Refinery?**
 6 A. I don't know.
 7 **Q. Do you know if anyone else at DEQ would**
 8 **know?**
 9 A. I suspect air quality permitters would
 10 know.
 11 **Q. Did DEQ ever evaluate the greenhouse gas**
 12 **emissions that result from the burning of the**
 13 **petroleum products at the Laurel Refinery in this**
 14 **permit review?**
 15 A. Again, under the Title V operating permit
 16 review, DEQ does not have the authority to review the
 17 greenhouse gas emissions.
 18 **Q. Did DEQ consider the impacts of climate**
 19 **change in Montana when determining whether to issue**
 20 **this Title V permit to the Laurel Refinery?**
 21 A. Can you define -- are you asking about the
 22 air quality permit?
 23 **Q. Yes. Exactly. For the Title V.**
 24 A. Under the Title V permit, DEQ does not
 25 evaluate greenhouse gas emissions.

Page 22

1 **Q. Does DEQ evaluate any other impacts on**
 2 **climate change?**
 3 A. DEQ, under the Title V operating permit
 4 authorization and -- and application process, does
 5 not.
 6 **Q. Okay. Prior to issuing a Title V permit**
 7 **like this one, does DEQ have to go through the**
 8 **Montana Environmental Policy Act or MEPA process?**
 9 A. Yes.
 10 **Q. Do you know for this permit what that**
 11 **process entailed?**
 12 A. For this -- for this permit it would have
 13 been an environmental assessment.
 14 **Q. And during that environmental assessment**
 15 **process, did DEQ consider greenhouse gas emissions**
 16 **that would result from the project?**
 17 A. Because I believe this permit is a
 18 renewal, no, we did not.
 19 **Q. Did DEQ consider impacts on climate change**
 20 **on the project --**
 21 A. This --
 22 **Q. -- in the MEPA analysis?**
 23 A. Again, this is a renewal, and no, they did
 24 not.
 25 **Q. So for renewals of permits, DEQ doesn't**

Page 23

1 **engage in -- strike that.**
 2 I guess I'm trying to understand when --
 3 when it's a renewal, how does that change how DEQ
 4 implements MEPA for these types of permits?
 5 A. In terms of a renewal, it's -- it's a
 6 smaller -- it's a -- it's a more limited scope and
 7 process for the MEPA review.
 8 **Q. Okay. Does DEQ have administrative rules**
 9 **that lay out that process for renewals?**
 10 A. Lays out -- the DEQ has rules that lays
 11 out the process for an environmental assessment.
 12 **Q. Okay. Okay. So next I'm going to hand**
 13 **you a document marked Exhibit 119.**
 14 **(Whereupon, Exhibit 119 was**
 15 **marked for identification.)**
 16 **BY MS. CHILLCOTT:**
 17 **Q. Can you identify that document?**
 18 A. Yes. This is the Montana air quality
 19 permit for the NorthWestern Energy Laurel generating
 20 station proposal.
 21 **Q. And what does this document authorize**
 22 **NorthWestern Energy to do?**
 23 A. This is for the construction of an energy
 24 project. This authorizes them to begin construction
 25 of the Laurel generating station.

Page 24

1 **Q. And so similar question as before, could**
 2 **the Laurel generating station operate in Montana**
 3 **without an air quality permit from DEQ?**
 4 A. It could operate. It would be, again, in
 5 violation of Montana law.
 6 **Q. In issuing air quality permits like this**
 7 **one, does DEQ evaluate the greenhouse gas emissions**
 8 **that result from the operation of the proposed**
 9 **project?**
 10 A. These are for the -- what we call MAQPs,
 11 Montana Air Quality Permit, which is different from a
 12 Title V permit. And so under this it would depend on
 13 the amount of regulated pollutant that was being
 14 emitted. And in this case the potential emissions of
 15 the greenhouse gases as outlined do not trigger what
 16 we call a B-A-C-T or a BACT analysis. So no, we did
 17 not.
 18 **Q. And what level of emissions does trigger a**
 19 **BACT?**
 20 A. I won't be able to speak to that.
 21 **Q. Okay. Who would at DEQ?**
 22 A. Dave Klemp.
 23 **Q. And we'll talk with him tomorrow.**
 24 A. Yes.
 25 **Q. Okay. Great. As part of this process for**

Page 25

1 issuing this air quality permit to NorthWestern
 2 Energy for the Laurel generating station, did DEQ
 3 evaluate greenhouse gas emissions that would result
 4 from burning of a natural gas at the station?
 5 A. No. Again, DEQ didn't have the authority
 6 under this to -- to do that analysis.
 7 Q. And is that because of the level of
 8 pollutants or emissions?
 9 A. In part it's because of the level of
 10 pollutants. It's also again because it doesn't --
 11 carbon is not a regulated pollutant.
 12 Q. Okay. And so last question on this, did
 13 DEQ consider the impacts of climate change in Montana
 14 when determining whether to grant that air quality
 15 permit for the Laurel generating station?
 16 A. When issuing the Montana air quality
 17 permit, DEQ does not have the authority to analyze
 18 greenhouse gas emissions.
 19 Q. And, again, the reason for that lack of
 20 authority?
 21 A. For this, we don't have the authority
 22 because there are no rules or statutes granting us
 23 that authority.
 24 Q. Okay.
 25 (Whereupon, Exhibit 120 was

Page 26

1 marked for identification.)
 2 BY MS. CHILLCOTT:
 3 Q. Next exhibit is marked Exhibit Number 120.
 4 A. Uh-huh.
 5 Q. And can you please identify the document I
 6 just handed to you?
 7 A. Sure. This is an application for a minor
 8 revision for Signal Peak Energy.
 9 Q. And do you know what facility the permit
 10 applies to?
 11 A. This applies to an underground coal mine
 12 located in Musselshell and Yellowstone Counties.
 13 Q. Would that be the Bull Mountains Mine
 14 Number 1?
 15 A. Yes.
 16 Q. And what does this document authorize
 17 Signal Energy to do?
 18 A. This allows them to -- to build an
 19 as-built -- a pond for storage on-site.
 20 Q. Okay. Could Signal Peak have proceeded
 21 with building this pond without DEQ's approval?
 22 A. Yes. Again, they would have been
 23 violating the Montana Underground and Surface Coal
 24 Mine Reclamation Act, however.
 25 Q. Just curious, if it came to DEQ's

Page 27

1 attention that an entity had conducted an operation
 2 or a project like this building a pond without
 3 approval --
 4 A. Uh-huh.
 5 Q. -- does DEQ pursue an enforcement action
 6 for that violation?
 7 A. It's a -- under that we would issue a
 8 violation and ask for resolution of that, and then
 9 depending on if it was resolved, it could move to
 10 enforcement.
 11 Q. Okay. So DEQ does not evaluate the
 12 greenhouse gas emissions from the operation of the
 13 Signal Peak or the -- excuse me -- the Bull Mountains
 14 Mine when it approved this permit?
 15 A. In an application for a minor revision,
 16 DEQ does not have the authority to evaluate
 17 greenhouse gas emissions from a coal mine.
 18 Q. To your knowledge, did DEQ ever evaluate
 19 the greenhouse gas emissions that result from the
 20 burning of coal at the Bull Mountain Mine?
 21 A. I can't speak to that. I would -- it
 22 would depend on the different permit. You would need
 23 to -- to -- I'd need to know which permit, which
 24 application to speak to that.
 25 Q. Sure. We'll have some more to show you

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1 soon.
 2 A. Okay.
 3 (Whereupon, Exhibit 121 was
 4 marked for identification.)
 5 BY MS. CHILLCOTT:
 6 Q. I'm handing you the next exhibit, which is
 7 marked number 121.
 8 A. Oh, sorry.
 9 Q. It's kind of crowded in here, so no
 10 worries if things fall over.
 11 So can you please identify the document I
 12 just handed to you?
 13 A. Sure. This is the Understanding Energy in
 14 Montana handbook produced in 2018.
 15 Q. Okay. And how is this information
 16 included in that handbook used by DEQ?
 17 A. The information included in this handbook
 18 is in part compiled by DEQ.
 19 Q. Okay. So in addition to compiling the
 20 information for this report, can you describe, I
 21 guess, more broadly DEQ's role with respect to
 22 setting energy policy in Montana?
 23 A. DEQ does not have a role in setting energy
 24 policy in Montana.
 25 Q. Does DEQ have a role in implementing

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1 energy policy in Montana?
 2 A. DEQ only has so much authority as it is
 3 granted specifically in other statutes or rules.
 4 Q. So would you say the legislature is the
 5 entity who sets energy policy in Montana?
 6 A. Yes.
 7 Q. Do you know when DEQ started providing the
 8 information in that handbook to the environmental
 9 quality council?
 10 A. I don't remember.
 11 Q. Do you think it was during your tenure?
 12 MS. McKENNA: Objection. Calls for
 13 speculation.
 14 BY MS. CHILLCOTT:
 15 Q. Was it during your tenure at the
 16 Montana Legislative --
 17 A. It looks at the time -- it was originally
 18 produced in 2001, 2002, and so it was updated every
 19 four years thereafter.
 20 Q. Is DEQ still updating this document?
 21 A. Yes.
 22 Q. Okay. Is there a more up-to-date copy of
 23 this document that you're aware of?
 24 A. There is currently a 2022 under
 25 development.

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1 Q. Okay.
 2 A. It has not yet been published.
 3 Q. Do you know when it might be published?
 4 A. That is overseen -- it is the
 5 legislature's responsibility in the legislature's
 6 handbook.
 7 Q. Okay. Thanks. So before we started, I
 8 shared with you a copy of what has already been
 9 marked as Exhibit 1 --
 10 A. Uh-huh.
 11 Q. -- which is the complaint filed by the
 12 plaintiffs in this case, and you have that in front
 13 of you right now?
 14 A. Yes.
 15 Q. Okay. Great. So you were designated by
 16 DEQ to testify regarding topic 4 in plaintiffs'
 17 30(b)(6) deposition notice --
 18 A. Uh-huh.
 19 Q. -- which is knowledge of allegations in
 20 paragraph 90 of the complaint --
 21 A. Uh-huh.
 22 Q. -- and any factual bases upon which DEQ
 23 denies those allegations. Correct?
 24 A. Correct.
 25 Q. So could you -- did you turn to paragraph

Page 31

1 90?
 2 A. Yes.
 3 Q. Great. So I'll read the paragraph 90,
 4 which says -- let me pause for a moment to get my
 5 copy. Bear with me.
 6 "Defendant DEQ issues air -- issues air
 7 quality permits to facilities that emit greenhouse
 8 gas emissions, including but not limited to coal
 9 mining operations, energy power plants, and oil and
 10 gas refineries. Through its Board of Environmental
 11 Review which adopts rules and determines appeals
 12 under regulatory statutes, defendant DEQ has broad
 13 statutory authority to set and enforce a quantitative
 14 limit for emissions as necessary to prevent or
 15 control air pollution."
 16 Have I read that paragraph correctly?
 17 A. You have read it correctly.
 18 Q. Do you agree that DEQ issues air quality
 19 permits to facilities that emit greenhouse gas
 20 emissions in Montana?
 21 A. Yes.
 22 Q. And that would include facilities like
 23 coal mining operations?
 24 A. I would need to clarify. DEQ issues air
 25 quality permits to coal mining operations. However,

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1 we are limited in statute. We don't have the
 2 authority to over -- review or discuss the emission
 3 of greenhouse gas emissions in those applications.
 4 Q. And even though -- is DEQ aware that those
 5 types of operations emit greenhouse gas emissions?
 6 A. Yes.
 7 Q. And does DEQ issue air quality permits for
 8 energy power plants?
 9 A. DEQ issues air quality permits for certain
 10 energy power plants.
 11 Q. Can you specify?
 12 A. Sure. For example, the Northwest Energy
 13 Laurel generating station was issued an air quality
 14 permit.
 15 Q. And then which -- are there energy power
 16 plants for which DEQ does not issue air quality
 17 permits?
 18 A. Sure. Air quality permits aren't required
 19 for wind power facilities. They aren't required for
 20 geothermal facilities.
 21 Q. Okay. Thanks. And so -- and then DEQ
 22 also issues air quality permits for oil and gas
 23 refineries. Correct?
 24 A. Yes.
 25 Q. And is DEQ -- sorry. Strike that.

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1 I understand that your testimony is that
 2 DEQ doesn't have the authority to analyze greenhouse
 3 gas emissions. But DEQ is aware that those oil and
 4 gas refineries do emit greenhouse gases. Correct?
 5 A. Yes.
 6 Q. So are you familiar, Sonja, with Senate
 7 Bill 233 which was passed in the Montana legislature
 8 last session in 2021?
 9 A. Yes.
 10 Q. And I'm going to pass you a copy of an
 11 exhibit marked Exhibit 122.
 12 A. Okay.
 13 Q. Is that Senate Bill 233?
 14 A. Yes.
 15 (Whereupon, Exhibit 122 was
 16 marked for identification.)
 17 BY MS. CHILLCOTT:
 18 Q. Do you agree that Senate Bill 233
 19 transferred statutory authority from the Board of
 20 Environmental Review to DEQ?
 21 A. Senate Bill 233 transferred rulemaking
 22 authority from the BER to the DEQ.
 23 Q. Okay. So turning back to paragraph 90 of
 24 the complaint, the second sentence states: "Through
 25 its Board of Environmental Review which adopts rules

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1 and determines appeals under regulatory statutes,
 2 defendant DEQ has broad statutory authority to set
 3 and enforce a qualitative -- quantitative -- excuse
 4 me -- limit for emissions as necessary to prevent or
 5 control air pollution." Did I read that correctly?
 6 A. You did read it correctly.
 7 Q. So after the statutory changes made by
 8 Senate Bill 233, is it fair to say that as of the
 9 effective date of that legislation that now DEQ is
 10 responsible for adopting rules, not BER?
 11 A. DEQ has broad statutory authority to adopt
 12 the rules, yes.
 13 Q. And after Senate Bill 233 BER retained
 14 some authority to hear certain appeals but not the
 15 rulemaking authority --
 16 A. Yes.
 17 Q. -- that it once had. Correct?
 18 A. Yes.
 19 Q. So after Senate Bill 233, how would you
 20 describe the different roles of DEQ versus the BER?
 21 MS. McKENNA: Objection. Vague and
 22 overbroad.
 23 BY MS. CHILLCOTT:
 24 Q. How do you think Senate Bill 233 changed
 25 DEQ's authority?

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1 A. I think Senate Bill 233 transferred
 2 rulemaking authority from the Board of Environmental
 3 Review to the department.
 4 Q. Okay. Do you agree that DEQ has the
 5 statutory authority to control air pollution?
 6 A. Yes.
 7 Q. Does that include greenhouse gas
 8 emissions?
 9 A. No.
 10 Q. And can DEQ use the permits it issues as a
 11 means to control air pollution?
 12 A. Yes.
 13 Q. So turning back to paragraph 90, what do
 14 you expect to testify to at trial about the
 15 allegations in paragraph 90?
 16 A. That DEQ has the authority to issue air
 17 quality permits and the process by which we issue
 18 those air quality permits.
 19 Q. And can you please clarify what, if
 20 anything, in paragraph 90 DEQ denies?
 21 A. Sure. So through the -- the Board of
 22 Environmental Review, obviously with the change in
 23 Senate Bill 233, the Board of Environmental Review
 24 does not have the authority to adopt rules. That
 25 would be -- DEQ has that authority.

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1 Q. Right. Thanks. And then anything else
 2 that DEQ would deny in that paragraph?
 3 A. I would put some limitations on DEQ's
 4 authority to set and enforce or adopt rules for
 5 emissions as necessary to prevent or control air
 6 pollution. There are checks and balances in place.
 7 Our rulemaking authority must in the interim, for
 8 example, be approved or go through the environmental
 9 quality council for review and oversight. So it's
 10 not an unchecked authority.
 11 Q. Okay. So the quibble then would be with
 12 DEQ having the broad statutory authority?
 13 A. Correct.
 14 Q. Okay. And I don't want to put words in
 15 your mouth, but would it be correct to say you're --
 16 you would put -- tweak that language to say DEQ has
 17 authority subject to, you know, oversight by the
 18 environmental quality council?
 19 A. Yes.
 20 Q. So I'm going to hand you a document that
 21 has actually previously been marked as Exhibit 9.
 22 A. Okay.
 23 Q. You were just designated by DEQ to testify
 24 regarding topics 9 and 10 in plaintiffs' deposition
 25 notice. Correct?

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1 A. Yes.
 2 **Q. And those topics relate to the state's**
 3 **energy policy. Correct?**
 4 A. Yes.
 5 **Q. Is the statute I just handed to you the**
 6 **Montana state energy policy statute?**
 7 A. Yes.
 8 **Q. So do you agree that Montana has a state**
 9 **energy policy that is codified at Montana Code**
 10 **Annotated Section 90-4 -- 90-4-1001?**
 11 A. Yes.
 12 **Q. Do you agree that DEQ has a duty to comply**
 13 **with that statute?**
 14 A. No.
 15 **Q. And what is your basis for disagreement**
 16 **with that?**
 17 A. Nowhere in the statute does it direct the
 18 DEQ has the authority to -- to enforce or enact any
 19 of these broad-reaching goal statements.
 20 **Q. So when the legislature sets policy**
 21 **through legislation such as the state energy policy,**
 22 **do state agencies implement that policy?**
 23 A. State agencies implement that policy when
 24 directed to implement that policy.
 25 **Q. And in what way would DEQ need to be**

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1 **directed in order to have that responsibility?**
 2 A. It would need to see "DEQ shall." It
 3 would -- the statutes would need to say the
 4 Department of Environmental Quality shall take steps
 5 to expand, promote, increase these various items that
 6 are outlined here.
 7 **Q. So your testimony is that without seeing**
 8 **the words "DEQ shall" in this legislation, that DEQ**
 9 **has no responsibility to implement or follow this**
 10 **statute?**
 11 A. Correct.
 12 **Q. Does DEQ have any internal policies with**
 13 **respect to implementing the energy policy act?**
 14 A. No.
 15 **Q. So if DEQ doesn't kind of turn to this**
 16 **statute to implement energy policy for the state, how**
 17 **else does DEQ implement energy policy?**
 18 A. DEQ implements energy policy as it's
 19 directed throughout other statutes. For example, in
 20 Title 75 we're directed to implement an alternative
 21 energy revolving loan program. In Title 50 we have
 22 some responsibility related to residential energy
 23 efficiency codes. Also in Title 90 there's a state
 24 energy building conservation program.
 25 **Q. Any other places in state law that directs**

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1 **DEQ to implement state energy policy?**
 2 A. There are other -- other places in state
 3 law.
 4 **Q. So who would you say sets state energy**
 5 **policy in Montana?**
 6 A. The legislature.
 7 **Q. And does DEQ have a role at all in setting**
 8 **the policy?**
 9 A. No. Senate Bill 290 in 2009 explicitly
 10 removed the DEQ from assisting in that process.
 11 **Q. Does the governor have a role in**
 12 **implementing the state -- or setting the state energy**
 13 **policy?**
 14 A. I can't speak for the governor.
 15 **Q. So do you understand that plaintiffs in**
 16 **this case are challenging the constitutionality of**
 17 **the statute Section 90-4-101 -- 1001 subparts 1C**
 18 **through G?**
 19 A. Yes.
 20 **Q. In subpart 1D there's a phrase about**
 21 **increasing utilization of Montana's vast coal**
 22 **reserves. Can you describe what, if anything, DEQ**
 23 **does to increase utilization of Montana's vast coal**
 24 **reserves?**
 25 A. DEQ is responsible for the permitting of

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1 coal mine applications -- permit applications that
 2 allow for additional mining, and they do so under the
 3 Underground and Surface Coal Mine Reclamation Act in
 4 Title 82.
 5 **Q. Okay. So would you agree that issuing a**
 6 **permit allowing a coal mine to operate would increase**
 7 **utilization of Montana's coal reserves?**
 8 A. Yes.
 9 **Q. Are there any other ways that DEQ**
 10 **increases utilization of Montana's coal reserves?**
 11 A. Not that I'm aware of.
 12 **Q. Can you describe what DEQ does to mitigate**
 13 **greenhouse gases and other emissions while increasing**
 14 **the utilization of Montana's vast coal reserves?**
 15 A. DEQ doesn't have any statutory authority
 16 in Title 82 to mitigate greenhouse gases.
 17 **Q. Does DEQ have a position on whether**
 18 **Montana's coal reserves can be utilized while also**
 19 **mitigating greenhouse gas emissions?**
 20 A. I don't believe DEQ has a position on
 21 that.
 22 **Q. Can you describe what DEQ does to increase**
 23 **local oil and gas exploration and development?**
 24 A. DEQ permits or provides air quality
 25 permits for oil and gas.

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1 Q. Does DEQ issue permits for oil and gas –
 2 strike that.
 3 So your testimony is that DEQ issues
 4 permits for oil and gas exploration and development?
 5 A. No. DEQ only issues air quality permits
 6 that could allow for some oil and gas exploration.
 7 Q. I see.
 8 A. Or that are necessary for oil and gas
 9 exploration.
 10 Q. Does DEQ have any other permitting
 11 authority over oil and gas exploration in Montana?
 12 A. Not that I'm aware of.
 13 Q. Okay. Does DEQ have any other authority
 14 over oil and gas development in Montana?
 15 A. Not that I'm aware of.
 16 Q. Can you describe what DEQ does to expand
 17 exploration and technological innovation, including
 18 using carbon dioxide for enhanced oil recovery in
 19 declining oil fields to increase output?
 20 A. DEQ does not have a role in expanding
 21 exploration and technology innovation.
 22 Q. Do you know if another state agency does?
 23 A. I do not.
 24 Q. Can you describe what DEQ does to expand
 25 Montana's petroleum refining industry?

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1 A. Montana does not take -- DEQ does not take
 2 specific actions to expand Montana's petroleum
 3 refining industry. Again, DEQ's role is in issuing
 4 air quality permits that allow petroleum refiners to
 5 operate in the state of Montana in compliance with
 6 the Air Quality Act.
 7 Q. Okay. And so you'd agree that petroleum
 8 refining industry needs permits from DEQ to operate?
 9 A. They are required to have permits to
 10 operate. They could operate without them and, again,
 11 be subject to violation.
 12 Q. Right. And in addition to air quality
 13 permits, doesn't DEQ issue like other permits, like
 14 water discharge permits under the Montana Water
 15 Quality Act?
 16 A. Yes.
 17 Q. For oil refineries?
 18 A. Yes.
 19 Q. And if -- if DEQ were to deny a permit for
 20 a petroleum refinery, that refinery would be unable
 21 to operate lawfully. Correct?
 22 A. Yes.
 23 Q. Are you familiar with the term carbon
 24 sequestration?
 25 A. Yes.

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1 Q. Does DEQ do any work on carbon
 2 sequestration?
 3 A. Not currently.
 4 Q. Has DEQ in the past?
 5 A. I think in the energy program I would need
 6 to go back through some of our records to find out if
 7 we were -- and that was prior to my time. I should
 8 not speak to that, so --
 9 Q. Sure. Do you know who would be the person
 10 at DEQ who would have knowledge about that?
 11 A. I don't.
 12 Q. Okay. I'm handing you another exhibit
 13 marked 123.
 14 A. Okay.
 15 (Whereupon, Exhibit 123 was
 16 marked for identification.)
 17 BY MS. CHILLCOTT:
 18 Q. Are you familiar with this document?
 19 MS. McKENNA: Is this a document that was
 20 noticed on the 30(b)(6) deposition notice?
 21 MS. CHILLCOTT: No.
 22 MS. McKENNA: Then I'm going to object to
 23 it being discussed in this deposition.
 24 MS. CHILLCOTT: This document relates to
 25 topics 9 and 10, which the deposition notice

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1 indicated Ms. Nowakowski has authority to speak on
 2 behalf of the agency regarding.
 3 THE WITNESS: I would want to refer to the
 4 website to make sure this is the most up-to-date
 5 version of this.
 6 BY MS. CHILLCOTT:
 7 Q. That makes sense. So based on -- but what
 8 you have in front of you is something that you've
 9 seen on DEQ's website?
 10 A. I have, yes.
 11 Q. Okay.
 12 MS. McKENNA: So my objection is lack of
 13 foundation. There's no way to verify that this is
 14 accurate.
 15 MS. CHILLCOTT: Okay. That's fine.
 16 BY MS. CHILLCOTT:
 17 Q. What is -- can you tell me what the
 18 Montana energy office is?
 19 A. Sure. The Montana energy office is a
 20 bureau within the division of Air, Energy and Mining.
 21 Q. What are the responsibilities of that
 22 bureau?
 23 A. The responsibility of that bureau are
 24 multifaceted. They are the state energy office or
 25 the state energy program, so they receive federal

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1 funding. For example, they implement the alternative
 2 energy revolving loan program that I spoke to. They
 3 oversee the state building energy conservation
 4 program. They have some other energy security
 5 responsibilities.
 6 **Q. Okay. Does the Montana energy office have**
 7 **any -- does the Montana energy office have any role**
 8 **in advising DEQ on the permits it issues for fossil**
 9 **fuel projects?**
 10 A. No.
 11 **Q. Would you say the Montana energy office**
 12 **has a regulatory role at all?**
 13 A. I would say they have a -- their
 14 regulatory role is largely related to they're
 15 required to do some bonding for wind and solar
 16 facilities.
 17 **Q. Okay. So you mentioned that the Montana**
 18 **energy office and the energy bureau works on**
 19 **renewable energy projects. Is that -- did I hear you**
 20 **correctly?**
 21 A. They have some role to be involved in some
 22 -- some specifics. For example under the alternative
 23 energy revolving loan program, they issue low
 24 interest loans to residents and small businesses for
 25 the installation of -- of solar PV projects.

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1 **Q. Okay. And you mentioned that the bureau**
 2 **has a role in -- on state energy security?**
 3 A. They have --
 4 **Q. What is that role?**
 5 A. Sure. That role is in terms of -- I can
 6 provide more of an example. For in times of, you
 7 know, a fuel shortage or something is it's kind of
 8 advising the state working in collaboration with the
 9 Department of Emergency Services.
 10 **Q. Okay. Does the -- excuse me. Does the**
 11 **energy bureau do any work with like analyzing trends**
 12 **and issues with regard to energy in Montana?**
 13 A. As far as analysis of trends, the most
 14 they do is they compile the federal EIA, Energy
 15 Information Agency, information that then is compiled
 16 and used in the development of the -- that
 17 Understanding Energy handbook for the legislature.
 18 **Q. Okay. Does DEQ use that information**
 19 **compiled by the energy bureau to inform permitting**
 20 **decisions?**
 21 A. No.
 22 **Q. And does the energy bureau provide**
 23 **technical assistance to the public?**
 24 A. Yes.
 25 **Q. What does that assistance entail?**

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1 A. For example, anyone who reaches out --
 2 we've had geothermal developers reach out and ask
 3 some questions about what information we might have
 4 about geothermal resources available, who we might
 5 direct them to for information about tax incentives.
 6 **Q. Okay. How about financial assistance?**
 7 **Does the energy bureau provide financial assistance?**
 8 A. Only inasmuch as, for example, those two
 9 programs I've mentioned. The alternative energy
 10 revolving loan program, we offer low interest loans,
 11 and then the state building energy conservation
 12 program, which is also a revolving loan program that
 13 we do in conjunction with the department of
 14 administration for energy projects on state
 15 buildings.
 16 **Q. Okay. In addition to those programs, does**
 17 **the energy bureau provide financial assistance like**
 18 **fossil fuel development projects?**
 19 A. No.
 20 **Q. So I'm handing you a document now that has**
 21 **previously been marked as Exhibit 66, and this is the**
 22 **statute the Montana Code Annotated 75-1-201.**
 23 A. Correct.
 24 **Q. And what is that statute?**
 25 A. This is the general direction for the

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1 development of environmental impact statements and
 2 the Montana Environmental Policy Act.
 3 **Q. Okay. And can you turn the page? I think**
 4 **it's the third page, to Section 75-1-201, 2A. It**
 5 **should be at the top of the third page.**
 6 A. Yes.
 7 **Q. And that section reads: "Except as**
 8 **provided in subsection 2B, an environmental review**
 9 **conducted pursuant to subsection 1 may not include a**
 10 **review of actual or potential impacts beyond**
 11 **Montana's borders. It may not include actual or**
 12 **potential impacts that are regional, national, or**
 13 **global in nature." Did I read that correctly?**
 14 A. Yes.
 15 **Q. What does this provision require DEQ to do**
 16 **when conducting environmental reviews pursuant to**
 17 **MEPA?**
 18 A. This precludes the DEQ from reviewing
 19 actual or potential impacts beyond Montana's borders.
 20 **Q. Does climate change have impacts that are**
 21 **regional in nature?**
 22 A. Yes.
 23 **Q. Does climate change have impacts that are**
 24 **national in nature?**
 25 A. Yes.

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1 Q. How about global in nature?
 2 A. Yes.
 3 Q. Are you aware of anyone at DEQ, including
 4 yourself, who has relied on this provision when
 5 conducting an environmental review proposed -- of a
 6 proposed project subject to MEPA?
 7 A. Yes. I believe the agency does review
 8 this and -- and rely on it throughout in multiple
 9 permitting decision-making processes.
 10 Q. Do you have any examples of where
 11 subsection 2A specifically was used by the agency?
 12 A. Not that I can think of offhand. Sorry.
 13 Q. Okay. Does DEQ use that provision or
 14 reference that provision in MEPA when analyzing
 15 environmental impacts from fossil fuel activities
 16 that it has authority to permit?
 17 A. It -- it references this if the question
 18 arises if these are actual or potential impacts that
 19 are beyond Montana's borders.
 20 Q. In what circumstances would that question
 21 arise?
 22 A. I would need a specific example.
 23 Q. Sure. Could it arise if a member of the
 24 public provided a comment asking DEQ to look at
 25 climate change impacts?

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1 MS. McKENNA: Objection. Calls for
 2 speculation.
 3 THE WITNESS: I would need to review the
 4 comment.
 5 BY MS. CHILLCOTT:
 6 Q. That's fair. Does DEQ have any internal
 7 policies with respect to how to analyze climate
 8 change impacts under MEPA?
 9 A. Not that I'm aware of.
 10 Q. Okay. Does DEQ have internal policies
 11 with regard to implementing MEPA?
 12 A. Yes.
 13 Q. And are those found in rule?
 14 A. Yes.
 15 Q. Anywhere else?
 16 A. I'm not sure. I would need to -- that
 17 would be a question for our MEPA folks if there's
 18 internal policies.
 19 Q. Sure.
 20 (Whereupon, Exhibit 125 was
 21 marked for identification.)
 22 BY MS. CHILLCOTT:
 23 Q. I'm passing you an exhibit marked 125.
 24 Can you -- have you seen this document before?
 25 A. I have not.

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1 Q. Can you -- from the title of the document,
 2 can you tell me what it is?
 3 A. It says it's the Montana Department of
 4 Environmental Quality permitting and compliance
 5 division record of decision for the Silver Bow
 6 generation project.
 7 Q. Do you know what kind of project the
 8 Silver Bow generation project is?
 9 A. I do not.
 10 Q. Okay. Quickly move to topic 14. So you
 11 were designated by DEQ regarding topic 14 in the
 12 deposition notice. Correct?
 13 A. Uh-huh.
 14 Q. And we talked just now about DEQ's
 15 financing -- or specifically the -- the energy
 16 bureau's --
 17 A. Uh-huh.
 18 Q. -- financing of energy projects in
 19 Montana, and you talked to me about the alternative
 20 energy revolving loan program. And then did you
 21 mention the small business environmental assistance
 22 program?
 23 A. I did not, but we do have a small business
 24 environmental ombudsman who -- who assists largely in
 25 compliance issues.

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1 Q. So that ombudsman -- fun word -- it --
 2 that person assists like, I guess, small businesses
 3 with environmental compliance issues?
 4 A. Yes.
 5 Q. In what ways?
 6 A. For example, more of just a communicator
 7 mediator, putting them in touch with the appropriate
 8 folks who they need to talk to about their permit or
 9 talk to about their compliance or violation.
 10 Q. Okay. And did you mention before the low
 11 income energy assistance program?
 12 A. I did not. The LIEAP program.
 13 Q. Is the LIEAP program another program
 14 that's administered by the energy bureau?
 15 A. That is a program administered through the
 16 Department of Public Health and Human Services.
 17 Q. Okay. Does DEQ have a role in that
 18 program?
 19 A. They may have a very minimal advisory
 20 role.
 21 Q. Okay. Is there anything else, Sonja, that
 22 you plan to testify about at trial in your capacity
 23 as DEQ's 30(b)(6) designee that we have not discussed
 24 yet this morning?
 25 A. I would need to review the topics that I

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1 was assigned and make sure that we -- we covered them
 2 thoroughly through your question.
 3 **Q. Sure. Let's do that. Okay. So if you**
 4 **can turn to that Exhibit 117, it would be like the**
 5 **second one in your stack.**
 6 **A. Okay.**
 7 **Q. So you were assigned to discuss those**
 8 **seven documents --**
 9 **A. Uh-huh.**
 10 **Q. -- in topic 3. Correct?**
 11 **A. Correct.**
 12 **Q. Okay. Anything that we have -- have not**
 13 **talked about today with regard to those documents**
 14 **that you intend to testify on at trial?**
 15 **A. I can't -- I can't speculate. It would**
 16 **depend on the question I was asked.**
 17 **Q. Sure. Okay. And we talked about topic 4,**
 18 **which is the knowledge of allegations in paragraph 90**
 19 **of the complaint.**
 20 **A. Uh-huh.**
 21 **Q. And anything else there that you intend to**
 22 **testify on at trial that we didn't talk about?**
 23 **A. I would again state it would depend on the**
 24 **additional questions that were asked. That's a --**
 25 **paragraph 90 is quite broad.**

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1 **Q. True. Okay. Topic 9, knowledge of DEQ's**
 2 **role in implementing legislative policy. Is your**
 3 **answer the same there?**
 4 **A. Yes.**
 5 **Q. And how about for topic 10? Same answer?**
 6 **A. Yes.**
 7 **Q. And topic 11?**
 8 **A. Yes. Same answer.**
 9 **Q. Okay. And topic 12 same answer?**
 10 **A. Yes.**
 11 **Q. And topic 14 same answer?**
 12 **A. Yes.**
 13 **Q. Okay.**
 14 **MS. CHILLCOTT: Can I just take a**
 15 **five-minute break to make sure I don't have other**
 16 **questions. We're about to wrap this one up.**
 17 **THE WITNESS: Sounds good.**
 18 **THE VIDEOGRAPHER: We are going off the**
 19 **record. The time is 10:06 a.m.**
 20 **(Whereupon, a break was then**
 21 **taken.)**
 22 **THE VIDEOGRAPHER: We are back on the**
 23 **record. The time is 10:18 a.m.**
 24 **MS. CHILLCOTT: Thank you, Ms. Nowakowski.**
 25 **I have no further questions for this deposition.**

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1 **THE WITNESS: Thank you.**
 2 **EXAMINATION**
 3 **BY MS. McKENNA:**
 4 **Q. This is Lee McKenna, attorney for DEQ. I**
 5 **have one question.**
 6 **Ms. Nowakowski, in answering**
 7 **Ms. Chillcott's question as to, under 90-4-1001 MCA,**
 8 **whether DEQ increases coal -- I -- I just want to**
 9 **refer to the statute, so just give me one second.**
 10 **So subsection 1(d), whether DEQ increases**
 11 **utilization of Montana's vast coal reserves in an**
 12 **environmentally sound manner that includes mitigation**
 13 **of greenhouse gas and other emissions, does DEQ**
 14 **increase utilization of Montana's vast coal reserves**
 15 **intentionally?**
 16 **A. No. DEQ's responsibility, as outlined in**
 17 **Title 82, is upon submission of an application for a**
 18 **coal mine expansion or additional coal mining, that**
 19 **DEQ is responsible for reviewing that application and**
 20 **then moving forward and authorizing that with**
 21 **conditions that meet the requirements of Title 82.**
 22 **Q. And are the coal mining -- so I'm -- I'm**
 23 **assuming you're talking about Montana Surface and**
 24 **Underground Mining Act, MSUMRA.**
 25 **A. Yes.**

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1 **Q. Is that correct?**
 2 **And what type of statute is that? What is**
 3 **the goal of MSUMRA?**
 4 **A. Title 82 MSUMRA is a reclamation act.**
 5 **MS. McKENNA: Thank you. No further**
 6 **questions.**
 7 **THE VIDEOGRAPHER: That concludes this**
 8 **deposition. The time is 10:20 a.m.**
 9 **(Whereupon, the deposition**
 10 **concluded at 10:20 a.m.)**
 11 **SIGNATURE RESERVED.**
 12 *********
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DEPONENT'S CERTIFICATE

I, SONJA NOWAKOWSKI, 30(b)(6), the deponent in the foregoing deposition, DO HEREBY CERTIFY, that I have read the foregoing - 58 - pages of typewritten material and that the same is, with any changes thereon made in ink on the corrections sheet, and signed by me a full, true and correct transcript of my oral deposition given at the time and place hereinbefore mentioned.

SONJA NOWAKOWSKI

Subscribed and sworn to before me this _____ day of _____, 2023.

PRINT NAME:

Notary Public, State of Montana

Residing at: _____

My commission expires: _____

DF - HELD VS. STATE OF MT

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C E R T I F I C A T E

STATE OF MONTANA)
COUNTY OF GALLATIN) : ss

I, Deborah L. Fabritz, Registered Professional Reporter and Notary Public for the State of Montana, residing in Bozeman, do hereby certify:

That I was duly authorized to and did swear in the witness and report the deposition of SONJA NOWAKOWSKI, in the above-entitled cause; that the foregoing pages of this deposition constitute a true and accurate transcription of my stenotype notes of the testimony of said witness, all done to the best of my skill and ability; that the reading and signing of the deposition by the witness have been expressly RESERVED.

I further certify that I am not an attorney nor counsel of any of the parties, nor relative or employee of any attorney or counsel connected with the action, nor financially interested in the action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal on this 3rd day of January, 2023.

[Agency (8) 20:20,23,25;41:22; 44:2;46:15;49:7,11	approved (2) 27:14;36:8	Avenue (3) 3:18;8:9,11	Bow (2) 51:5,8
[sic] (1) 12:17	agree (7) 31:18;33:18;35:4; 37:8,12;40:5;42:7	April (1) 8:18	aware (10) 12:7;18:1;29:23; 32:4;33:3;40:11;41:12, 15;49:3;50:9	break (5) 10:17,19,23;54:15, 20
A	air (39) 13:24;17:16;18:25; 19:18,23;20:3,4;21:9, 22;23:18;24:3,6,11; 25:1,14,16;31:6,6,15, 18,24;32:7,9,13,16,18, 22;34:5;35:5,11,16,18; 36:5;40:24;41:5;42:4, 6,12;44:20	areas (1) 18:9	B	broad (5) 31:12;34:2,11;36:12; 53:25
able (3) 9:21;14:6;24:20	al (2) 6:8,9	arise (2) 49:21,23	back (5) 18:12;33:23;35:13; 43:6;54:22	broadly (1) 28:21
access (1) 14:6	allegations (4) 30:19,23;35:15; 53:18	arises (1) 49:18	background (1) 9:2	broad-reaching (1) 37:19
accurate (1) 44:14	allow (3) 40:2;41:6;42:4	Armstrong (4) 3:23;6:25,25;14:15	BACT (2) 24:16,19	Broadway (1) 3:4
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EXHIBIT 21

*Rikki Held, et al. v
State of Montana, et al.*

*Lander B.
December 29, 2022*

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Min-U-Script® with Word Index

1 A. Mm-hmm.
 2 **Q. -- you mentioned air quality.**
 3 A. Mm-hmm.
 4 **Q. But also have you canceled any fishing**
 5 **trips because the --**
 6 A. Water levels?
 7 **Q. -- because of water -- water levels?**
 8 A. Yeah, yeah, we have, but usually, I mean,
 9 we fish however -- we fish according to, like, the
 10 conditions of the river. So we usually have
 11 annual trips that we'll take that have been
 12 interrupted because of those conditions just
 13 because of that year. I can think of a couple
 14 instances where we -- we want to go, like, in the
 15 spring and we haven't gotten enough runoff to be
 16 able to -- yeah, to be able to even get on the
 17 river. Were usually not able to raft until about
 18 July or June, but even just to fish the river
 19 we've had, yeah, unaccessible conditions before.
 20 **Q. Sure.**
 21 A. Mm-hmm.
 22 **Q. And on what rivers were those -- was that**
 23 **on?**
 24 A. I can't -- I don't know, off the top of
 25 my head. I know the lower Flathead, in

1 particular. That's as opposed to the Flathead,
 2 but the Milk River, Blackfeet. Yeah. We -- I
 3 don't remember them all --
 4 **Q. Okay.**
 5 A. -- off the top of my head.
 6 **Q. Yeah.**
 7 A. Mm-hmm.
 8 **Q. And do you go to the Blackfeet --**
 9 **Blackfoot a lot?**
 10 A. Yeah. It's been a pretty -- that's an
 11 annual trip we do every year to camp on the
 12 Blackfoot, fish up and down the river. We don't
 13 usually take a boat there, it's not -- it's not
 14 wide enough, but, yeah, we do fish the Blackfoot,
 15 mm-hmm.
 16 **Q. Okay. And so with regard to the**
 17 **text -- Let's see. I don't know -- I can't**
 18 **remember, did I have you read all of paragraph 22**
 19 **yet?**
 20 A. You had me at "Climate disruption." The
 21 rest of 22? Yep.
 22 **Q. Yeah.**
 23 A. So I'm on line 14. "Their ability to
 24 raft on rivers, including the Flathead, Blackfoot,
 25 and Smith Rivers, has also been restricted, and in

1 some cases made impossible, due to low instream
 2 water levels."
 3 **Q. Okay.**
 4 A. Mm-hmm.
 5 **Q. So what does that mean, "restricted"?**
 6 A. We -- There's certain stretches of river
 7 in most cases that will just flow naturally deeper
 8 than other parts of the river, and if there are
 9 mostly on these rivers, in particular, except the
 10 Blackfoot, where you're able to get a raft in, and
 11 that's that access point. And so in the past
 12 we've had points where we've canceled because
 13 where we want to put in a raft or something like
 14 that we can't because of the low water levels.
 15 **Q. Sure.**
 16 A. Mm-hmm.
 17 **Q. How about on the Smith River? Do you**
 18 **remember any time in particular you were**
 19 **restricted from floating that river?**
 20 A. The Smith River is difficult because you
 21 have to put in for a permit. It's one of the few
 22 rivers you have to put in for -- you have you to
 23 apply for, and then it's, like, a raffle drawing
 24 and then you can get in, but we've -- I've only
 25 been on it one time. There's not a whole lot of

1 opportunity. It's considered a pretty big
 2 opportunity if you get to go on the Smith, so,
 3 yeah, I can't think of any one time myself, but,
 4 yeah, it's a pretty exclusive opportunity to be
 5 able to float on the Smith anyway.
 6 **Q. Okay. And you have had that opportunity?**
 7 A. Yes, I have. Not even when I drew it,
 8 but when you draw, I think you're able to take,
 9 like, a couple -- like, two parties, like, two
 10 families with you, and one of our family friends
 11 invited us.
 12 **Q. Okay. Sorry. Just give me a minute.**
 13 A. You're all right.
 14 **Q. I'm sorry.**
 15 **So how was the fishing this last year in**
 16 **2022?**
 17 A. It was good. I didn't do as much this
 18 last summer just because I'm getting in the mix of
 19 college applications, everything, touring,
 20 whatnot, but, yeah, with the -- on the times I got
 21 to go, it was good fishing.
 22 **Q. Do you remember, when was the last season**
 23 **that you kind of think in your mind was not good?**
 24 A. Like, the last year?
 25 **Q. Yeah.**

1 A. Definitely, I'd say, even last year we
2 saw -- we had to cancel a couple trips because of
3 air quality. But, I mean, yeah, that's just the
4 last instance I can think of.

5 **Q. Okay.**

6 A. Mm-hmm.

7 **Q. Do you -- Do you think that the state of**
8 **Montana should take any blame for the fishing --**
9 **for the poor fishing conditions when they -- when**
10 **they do happen?**

11 A. They should -- Like, that they should be
12 blamed? Can -- Can you explain that again?

13 **Q. Yeah.**

14 A. Mm-hmm.

15 **Q. Do you blame the state of Montana for --**

16 A. Well, when -- if it's in relation to the
17 climate crisis, like, something as we're talking
18 about here, like, low water levels or if we can't
19 have access because of air quality, I do think if
20 the state has something that they can do about
21 improving those conditions, that part of the
22 burden does fall on them for sure.

23 **Q. Okay. Okay. Well, let's talk about**
24 **hunting a little bit more.**

25 A. All right.

1 **Q. I know we discussed it a bit.**

2 **Seems like you and your brother, your**
3 **entire family are pretty accomplished hunters.**

4 A. Mm-hmm.

5 **Q. And I asked if you hunted with a rifle.**
6 **And you said yes. Correct?**

7 A. Yes, I do.

8 **Q. And we kind of talked about what you**
9 **hunt, and I know you hunt for big game.**

10 A. Mm-hmm.

11 **Q. And what other type of animals do you**
12 **hunt for?**

13 A. I only hunt anything that I can eat.
14 I've hunt squirrels. See. Yeah. Squirrels,
15 deer, antelope, elk. That's about it. No -- No
16 bears. They're not great eating, and it's
17 just -- our family kind of thinks of it a little
18 more immoral to kill, you know, bears like that or
19 wolves or anything, mm-hmm.

20 **Q. Okay. Do you hunt birds?**

21 A. Yeah. Birds as well, mm-hmm.

22 **Q. Okay.**

23 A. Mm-hmm.

24 **Q. What type of birds do you hunt?**

25 A. Sage grouse. All kinds -- All kinds of

1 grouse. Hungarian partridge is a big one,
2 pheasants. Yeah.

3 **Q. Are those upland?**

4 A. And turkeys --

5 **Q. Are those --**

6 A. -- yeah.

7 **Q. -- upland?**

8 A. Those are upland. I also do waterfowl,
9 like, mallards and -- and turkeys as well. Those
10 aren't waterfowl, but, yeah.

11 **Q. Okay. What -- I'm gonna kind of run**
12 **through this just in case you --**

13 A. Mm-hmm.

14 **Q. -- ask you a couple...**

15 **Curious about the hunting seasons for**
16 **these. So I kind of know big -- the big game.**
17 **Squirrels don't have a hunting season. Correct?**

18 A. No. No, no, no.

19 **Q. Are squirrels good to eat?**

20 A. If you cook them right, yeah. I've made
21 a squirrel stew before, I've just cooked a
22 squirrel over the fire, and then, yeah, just,
23 like, seasoned it. Yeah, you never know. They're
24 good to eat, mm-hmm.

25 **Q. What do -- As far as the upland birds,**

1 **what -- when is their hunting season?**

2 A. It closes this week. It's a very long
3 season. I think it opens, I want to say, first
4 week of October. You -- You'd have to ask one of
5 our experts about that, but --

6 **Q. Yeah.**

7 A. -- it's a long season--

8 **Q. Okay.**

9 A. -- comparatively.

10 **Q. Oh. You guys have a bird expert?**

11 A. Oh, not -- I -- I mean, just, like, you'd
12 have to look it up. I don't know --

13 **Q. Okay.**

14 A. -- if we have --

15 **Q. Okay.**

16 A. -- bird expert.

17 **Q. I was, like --**

18 A. Yeah, yeah.

19 **Q. -- didn't know you had one of those.**
20 **And then the waterfowl. Do you know what**
21 **their hunting season is?**

22 A. No, not exactly. I'm not a huge
23 waterfowl hunter. I just have hunted ducks in the
24 past.

25 **Q. What time of year do you hunt them?**