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UNITED STATES DISTRICT COURT

DISTRICT OF OREGON

KELSEY CASCADIA ROSE JULIANA;
XIUHTEZCATL TONATIUH M., through his
Guardian Tamara Roske-Martinez; et al.,

Plaintiffs,

v.

The UNITED STATES OF AMERICA;
DONALD TRUMP, in his official capacity as
President of the United States; et al.,

Defendants.

Case No.: 6:15-cv-01517-TC

DECLARATION OF JAMES GUSTAVE
“Gus” SPETH in Support of Plaintiffs’
Response in Opposition to Defendants’
Motion for Summary Judgment

I, James Gustave “Gus” Speth, hereby declare and if called upon would testify as follows:

1. I make and offer this declaration in my capacity as an expert, retained by Plaintiffs, on issues relating to this matter.

MY BACKGROUND

2. I am a U.S. citizen, and am a retired Professor of Law at the Vermont Law School and a senior fellow at Vermont Law School, the Democracy Collaborative, and the Tellus Institute.
3. During the Carter Administration, I served as chairman of the Council on Environmental Quality within the Executive Office of the President. After leaving government, I founded and for a decade was president of the World Resources Institute. I also taught environmental and Constitutional law at Georgetown University Law Center. I was the Dean of Yale School of Forestry and Environmental Studies from 1999-2009. From 1993 to 1999, I was Administrator of the United Nations Development Programme and, for a period, chair of the UN Development Group.
4. I graduated summa cum laude from Yale University in 1964 with a BA in Political Science, and subsequently earned an MLitt in Economics from Oxford University in 1966 as a Rhodes Scholar. I earned my JD from the Yale Law School in 1969. After law school, I served as law clerk to Supreme Court Justice Hugo L. Black. I hold honorary degrees from Clark University, the College of the Atlantic, Vermont Law School, Middlebury College, the University of South Carolina, Green Mountain College, the University of Massachusetts/Boston, and Unity College.
5. I am the author, co-author, or editor of seven books, including the American Crisis series published by Yale University Press: *Red Sky at Morning: America and the Crisis of the Global Environment* (2004); *The Bridge at the Edge of the World: Capitalism, the*

Environment, and Crossing from Crisis to Sustainability (2008); and America the Possible: Manifesto for a New Economy (2012). In 2014, I published a memoir, Angels by the River. I have received numerous awards in recognition of my work including a Lifetime Achievement Awards from the Environmental Law Institute. I attach my curriculum vitae as **Exhibit 1** to my declaration.

6. I am qualified to testify as an historical expert on government knowledge and conduct in this matter because of my unique and extensive experience during the relevant time frames both within government and outside government, my decades-long work and study in climate change and government action, as well as my expertise in historical research developed in the course of my tenure as a professor and through the research and writing of numerous books and publications.

MY WORK AS AN EXPERT IN THIS CASE

7. I am still completing the final version of my expert report in this matter, pro bono for Plaintiffs. I have completed the majority of my historical analysis and have developed key findings and reached expert opinions, which I describe in this Declaration. I have used my training, experience, research, and hundreds of historical resources to develop and execute an analysis of over 40 years of history regarding government, energy, and climate change. I relied principally on primary sources in my analysis, most of which were created by reliable government sources and maintained in a manner that would preserve their authenticity through federal agency archives, Presidential libraries, and Congressional records. I also reviewed reliable secondary sources, such as newspapers of record, that offered accounts of the knowledge of the individual and institutional actors involved and/or provided the historical context of the events in question.

PRINCIPAL FINDINGS AND EXPERT OPINION

8. After review of the historical record, including my own personal history working on these issues, it is my expert opinion that the U.S. government, including Federal Defendants¹ and the highest levels of the Executive Branch and Congress, knew by the late 1970s, with enough certainty to act, that the ongoing reliance on fossil fuels posed a serious threat to earth's climate system, the nation, and future generations. It is also my opinion that Federal Defendants were well informed and advised about alternative energy pathways for the nation that were within their authority to pursue, which would have minimized or avoided the increasing threat of climate change caused by greenhouse gas emissions and met the energy and security needs of the nation. Instead, year by year, and Administration by Administration, Federal Defendants knowingly pursued and enacted national fossil fuel-based energy programs and policies that would increase or sustain at high levels climate change-inducing greenhouse gas emissions, and therefore endanger Plaintiffs in this case.² Taken together, Federal Defendants' conduct with respect to young people, our nation's energy system, and climate change is more shocking than any other government conduct I have witnessed in my 45 year career because the resulting consequences are irreversible, catastrophic, avoidable, and will eventually adversely affect all living people and other species in our country and on the planet. Federal Defendants collective systemic conduct is

¹ When I refer to "Federal Defendants," I am also referring to their predecessors since at least the time of the Carter Administration because Plaintiffs' injuries and constitutional infringements are not just the result of the Trump Administration, but all prior culpable predecessors and indeed the United States federal government itself.

² I leave a description of the full extent of those dangers to the able opinions of other renowned experts in this case, though I am also well-versed in the scientific literature on climate change.

harming these young Plaintiffs, other children, and all future generations more and for longer than any other living generation.

9. From the beginning of the Carter Administration to 2016 at the beginning of the Trump Administration, primary energy consumption in the United States grew by over a third. Total fossil fuel energy consumption in the United States grew by 8.7 percent over the same time period.³ At the beginning of Carter's term, slightly over 90 percent of U.S. energy consumption was fossil fuels. Forty years later, fossil fuels still unnecessarily make up about 80 percent of our national energy use.
10. The Carter Administration early on planted seeds that, if implemented, could have yielded a smooth transition toward renewable energy and greater efficiency and away from fossil fuels. Instead, Federal Defendants took only negligible action to reduce overall U.S. emissions, and federal action catalyzed further U.S. commitments to fossil energy, even under President Carter.
11. Overall, the Federal Defendants' actions managing the national energy system constitute, in my view, the greatest dereliction of civic responsibility in the history of the Republic. And it is worse today than ever. This shocking historical conduct, government malfeasance on a grand scale, summarized below, has left Plaintiffs and future generations enormously vulnerable to huge danger.
12. The United States government's understanding of the threat of climate change was both broad and deep across federal agencies, especially these Federal Defendants. They contemplated climate change impacts to specific regions and to specific groups of people,

³ EIA data from *Primary energy consumption estimates by source* shows total U.S. fossil fuel consumption at 71.85 quadrillion Btu in 1978 and 78.11 quadrillion Btu in 2017. <https://www.eia.gov/totalenergy/data/annual/#summary>.

especially children, and found over and over that the impacts would be adverse, even dangerous if the crisis was not averted.

13. It is clear the federal government knew about the cause, effect, and solution to the climate change dilemma that threatens the livelihood, health, and overall survival of people like these Plaintiffs. The U.S. government not only failed to take obvious and recommended steps to prevent harm to Plaintiffs, it took actions to promote and expand the extraction and use of fossil fuels, the principal cause of harm. The activities that Federal Defendants engaged in (and continue to engage in with renewed vigor) which enhanced the danger to youth Plaintiffs and future generations include, but are not limited to: providing subsidies, permits, and leases aimed at expanding oil, gas, and coal development in the United States; contributing tax dollars to research and development for both enhanced exploration and continued reliance on fossil fuels; creating and implementing national and other energy plans that guided national energy development and encouraged domestic fossil fuel energy production and fossil fuel dependency; leasing federally controlled fossil resources for private development; and permitting and otherwise authorizing fossil energy system facilities, activities, and transport infrastructure. These measures were pursued with remarkable consistency across administrations and Congresses for the past four decades. Moreover, in certain administrations, steps have been taken to cultivate climate denial and complete disregard for the scientific findings that continued to be reported within and outside the federal government on the dangers of climate change.
14. Some examples of historical facts that support my principal findings and expert opinions are provided below and are organized by U.S. Presidential Administrations for ease of

presentation. These examples are by no means an exhaustive representation of the historical evidence supporting my principal findings.

15. Federal Defendants' position in their Answer and in the pleadings in this case that they are not a substantial cause of climate change and the injuries to Plaintiffs is belied by the historical record. In my expert opinion, Federal Defendants have engaged in a systemic pattern of conduct in exercising control over the nation's energy system for over four decades in a manner that knowingly caused climate change, and exacerbated the dangerous conditions these young people now face and will increasingly suffer from.

16. Figure 1 below, produced from NOAA and EIA data, shows the trends across Administrations in both the growing concentrations of atmospheric CO₂ and the rise in U.S. CO₂ emissions through the Clinton and George W. Bush Administrations, with modest declines during the Obama Administration, but leaving us today with CO₂ emissions still significantly higher than during the Carter Administration.

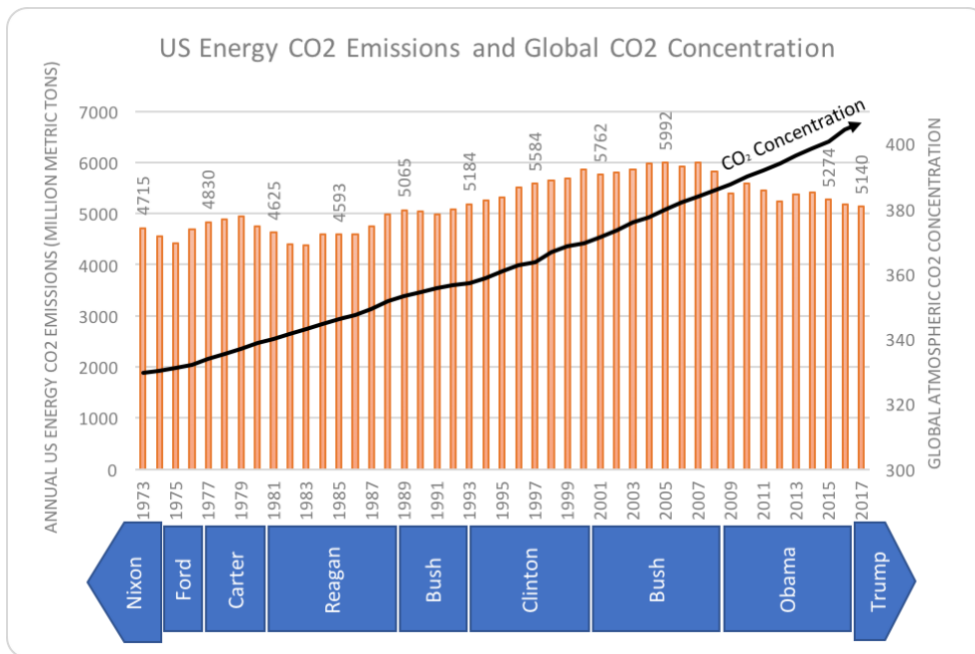


Figure 1: Figure 1: Annual Average CO₂ Concentrations (Source: NOAA ftp://aftp.cmdl.noaa.gov/products/trends/co2/co2_annmean_mlo.txt) and U.S. Annual Energy CO₂ emissions (Source: U.S. EIA <https://www.eia.gov/totalenergy/data/monthly/#environment>)

THE JOHNSON AND NIXON YEARS: SETTING THE STAGE FOR CHANGE

17. In 1965, in an early recognition of the climate threat, President Johnson's Science Advisory Committee released the report "Restoring the Quality of the Environment." This important White House report included an entire section on the carbon dioxide problem, based on science conducted from the turn of the 20th century, through the 1940s, 1950s, and early 1960s, including research by renowned scientist Roger Revelle. Declaration of Julia A. Olson in Support of Motion in Limine ("Olson Decl."), Ex. 1. Revelle famously testified in 1957 to Congress about climate research sponsored by the Department of Defense. *Id.* The 1965 White House report found that:

Through his worldwide industrial civilization, Man is unwittingly conducting a vast geophysical experiment. Within a few generations he is burning the fossil fuels that slowly accumulated in the earth over the past 500 million years. The CO₂ produced by this combustion is being injected into the atmosphere; about half of it remains there. The estimated recoverable reserves of fossil fuels are sufficient to produce nearly a 200% increase in the carbon dioxide content of the atmosphere. By the year 2000 the increase in atmospheric CO₂ will be close to 25%. This may be sufficient to produce measurable and perhaps marked, changes in climate, and will almost certainly cause significant changes in the temperature and other properties of the stratosphere.

Id. at 126-127.

18. A White House memorandum dated September 17, 1969, from Daniel Moynihan, counselor to the President, to John Ehrlichman, President Nixon's Assistant for Domestic Affairs, summarized the emerging understanding of the climate problem and solutions:

The process is a simple one. Carbon dioxide in the atmosphere has the effect of a pane of glass in a greenhouse. The CO₂ content is normally in a stable cycle, but recently man has begun to introduce instability through the burning of fossil fuels. At the turn of the century several persons raised the question whether this would change the temperature of the atmosphere. Over the years the hypothesis has been refined, and more evidence has come along to support it. It is now pretty clearly agreed that the CO₂ content will rise 25% by 2000. This could increase the average

temperature near the earth's surface by 7 degrees Fahrenheit. This in turn could raise the level of the sea by 10 feet. Goodbye New York. Goodbye Washington, for that matter.

Olson Decl., Ex. 2.

19. In 1975, during the Ford Administration, the National Academy of Sciences issued a report acknowledging the central importance of a stable climate to our nation's welfare, recognizing that the climate system was already being altered, urging the federal government not to be unprepared in the face of climate catastrophe, and encouraging a study of the paleoclimate record to be able to better understand how the climate system would respond to increased levels of CO₂. Olson Decl., Ex. 3, at 2, 43, 129.

20. While actual scientific observations and climate modeling, including advancement in understanding the paleoclimate record, have led to greater understanding of climate change and improvements in climate science, the projections of the Johnson White House and the Nixon White House foreshadowed what was to come.

THE CARTER YEARS (1977-1981)

21. The President's science advisor during the Carter Administration was Frank Press, who early on briefed the President about climate change. Press wrote President Carter about the climate threat on July 7, 1977, and copied James Schlesinger, who would soon become the first Secretary of Energy:

Fossil fuel combustion has increased at an exponential rate over the last 100 years. As a result, the atmospheric concentration of CO₂ is now 12 percent above the pre-industrial revolution level and may grow 1.5 to 2.0 times that level within 60 years. Because of the greenhouse effect of atmospheric CO₂, the increased concentration will induce a global climatic warming of anywhere from 0.5° to 5° C. . . . A rapid climatic change may result in large scale crop failures at a time when an increased world population taxes agricultural to the limits of productivity. The urgency of the problem derives from our inability to shift rapidly to non-fossil fuel sources once the climatic effects become evident not

long after the year 2000; the situation could grow out of control before alternate energy sources and other remedial actions become effective.

[W]e should emphasize targeted basic research which could lead to breakthroughs for solar electric, biomass conversion or other renewable energy sources.

Olson Decl., Ex. 4.

22. In May 1979, Frank Press asked the National Academy of Sciences (“NAS”) to further investigate climate change. As a result, the NAS convened a panel in July 1979 under the chair of MIT Professor Jule Charney. The famous Charney Report was made widely available at the time both within and outside the Administration.⁴ Olson Decl., Ex. 5. The well-known technical finding of the Charney Report was as follows: “We believe, therefore, that the equilibrium surface global warming due to a doubled CO₂ will be in the range 1.5° to 4.5° C with the most probable value near 3° C.” This warming, the Charney Report concluded, “will be accompanied by significant changes in regional climatic patterns.”⁵
23. The preface of the Charney Report provided stark warnings that the basic science was not in dispute; and waiting to have complete scientific certainty about every component of the foreseeable climate changes that were already occurring would risk waiting until it was too late to prevent the dangers:

The conclusions of this brief but intense investigation may be comforting to scientists but disturbing to policymakers. If carbon dioxide continues to increase, the study group finds no reason to doubt that climate changes will result and no reason to believe that these changes will be negligible. The conclusions of prior studies have been generally reaffirmed. However, the study group points out that the ocean, the great and ponderous flywheel of the global climate system, may be

⁴ See Philip Shabecoff, “Scientists Warn U.S. of Carbon Dioxide Peril,” *The New York Times*, July 10, 1979, <https://www.nytimes.com/1979/07/11/archives/scientists-warn-us-of-carbon-dioxide-peril-advice-on-energy.html>.

⁵ Olson Decl., Ex. 5, Climate Research Board, National Research Council, *Carbon Dioxide and Climate: A Scientific Assessment* (Washington, D.C.: 1979), at 16-17.

expected to slow the course of observable climate change. *A wait-and-see policy may mean waiting until it is too late.* (Emphasis added).

Olson Decl., Ex. 5, at viii.

24. The agency I led in the Executive Office of the President, the Council on Environmental Quality (“CEQ”), prepared Congressionally mandated annual reports. Each annual CEQ Report was widely distributed across the federal government and included contributions from other agencies, such as the Office of Naval Research. The 1977 CEQ Report stated in pertinent part:

If we use up the world’s stores of fossil fuels at a rapid rate, the predicted CO₂ level will double by 2025 and reach a maximum of seven to eight times today’s level by the year 2100. A doubling of CO₂ level could cause a 2-3° C increase in average atmospheric temperatures A possible 2-3° C average temperature increase must be looked upon as a major global environmental threat – global temperatures over the past several thousand years have never fluctuated by more than 1° C

Olson Decl., Ex. 6, at 190.

25. The 1980 CEQ Report described additional information:

There is a growing realization that the earth’s atmosphere could be permanently and disastrously altered by human actions. The burning of fossil fuels and perhaps the cutting of forests without compensatory replanting are causing a steady, measurable buildup of carbon dioxide in the atmosphere that threatens widespread climate change. Olson Decl., Ex. 7, at 12.

Possible climatic effects include changes in wind direction and speed, in ocean currents, and in precipitation patterns. If these large-scale climatic changes occurred, the socioeconomic impacts would be significant. If the warming continued long enough, polar ice could melt and sea levels would rise, forcing a gradual evacuation of heavily populated coastal areas. Agricultural patterns would change as well. In some regions existing agricultural infrastructure could become obsolete. Olson Decl., Ex. 7, at 265-266.

26. During the Carter Administration, Federal Defendants were well aware of the need to shift U.S. energy policy away from fossil fuels to renewables, efficiency gains, and conservation.

In April 1978, we completed a widely circulated report called Solar Energy: Progress and

Promise. Olson Decl., Ex. 8. CEQ found that solar could meet a quarter of U.S. energy needs by the year 2000 and, unlike coal, “solar poses little risk to climate and creates little direct air pollution.” Olson Decl., Ex. 8, at 2.

27. On May 3, 1978, partially in response to the CEQ Reports, President Carter proclaimed:

“America’s hope for energy to sustain economic growth beyond the year 2000 rests in large measure on the development of renewable and essentially inexhaustible sources of energy.”

Olson Decl., Ex. 9. He then announced a goal of powering the nation’s energy system with 20% renewable energy by the year 2000.

28. By the end of President Carter’s term, Federal Defendants had even clearer recommendations regarding energy and climate policy. In CEQ’s 1981 Global Energy Futures and the Carbon Dioxide Problem report, we presented rigorously developed computer models of alternative energy futures and the climate risks associated with them. Based on this analysis, our recommendations to the federal government were to incorporate climate change into U.S. energy policy planning, to increase energy conservation and renewable energy sources, and to expand cooperative efforts to address climate change issues. I summarized these conclusions in my foreword to the CEQ’s 1981 report:

The CO₂ problem should be taken seriously in new ways: it should become a factor in making energy policy and not simply be the subject of scientific investigation. Every effort should be made to ensure that nations are not compelled to choose between the risks of energy shortages and the risks of CO₂. This goal requires making a priority commitment here and abroad to energy efficiency and to renewable energy resources; it also requires avoiding a commitment to fossil fuels that would preclude holding CO₂ to tolerable levels.

Olson Decl., Ex. 10, at vi.

29. Notwithstanding President Carter’s early goals of encouraging renewable energy and efficiency, and despite repeated warnings about the climate risks of fossil fuels, the Carter

Administration vigorously supported and continued the United States' deep reliance on fossil fuels with a greater emphasis on coal in particular. Olson Decl., Ex. 11.

30. Although each Administration that followed President Carter was, in some ways, different, they all showed an historical pattern of systemic conduct that accounts for the current climate crisis and the harms these Plaintiffs suffer. Over a forty-year period, the federal government:
- a. was knowledgeable of the best and most current climate science and the role of fossil fuels in climate change;
 - b. was aware of but did not give priority to alternative policy pathways towards renewable energy development and energy efficiency that would have made the nation more secure and slowed or stopped climate change; and
 - c. enacted and implemented national energy programs, policies and practices that promoted and supported the development and combustion of fossil fuels, thereby increasing carbon dioxide emissions and exacerbating the global warming crisis.

THE REAGAN YEARS (1981-1989)

31. In June 1981, less than six months after President Reagan took office, DOE convened a “Workshop on First Detection of Carbon Dioxide Effects” through its Carbon Dioxide Effects Research and Assessment Program. The preeminent climatologists and meteorologists who attended and presented were described in DOE’s report on the workshop as “the best available scientists.” Olson Decl., Ex. 12, vii. The purpose of the workshop was “to develop a research strategy that would provide the basis for early identification of the expected CO₂-induced response so that model projections of a warmer climate and of impacts on the biosphere can either be confirmed, rejected, or modified.” *Id.* at 3. In its report on the workshop, DOE noted the history of climate science awareness in the federal

government, citing the 1965 Report of the Environmental Pollution Panel of the President's Science Advisory Committee (the 1965 White House Report), and the 1977 Energy and Climate report by the National Research Council that refined estimates of expected global temperature increases. Olson Decl., Ex. 13.

32. In 1983, President Reagan's EPA issued two seminal reports. In the first, *Can We Delay a Greenhouse Warming?*, EPA projected an increase in temperatures of 9 degrees F by the next century, leading to disastrous flooding and other impacts. EPA also projected an increase in temperatures by 2 degrees C by 2040, a temperature increase that, in EPA's assessment, was guaranteed to produce substantial climatic consequences. Olson Decl., Ex. 342, at 1-16 to 1-17. EPA thus recommended eliminating coal combustion and banning shale oil as the best policy options for delaying a 2 degrees C temperature increase. EPA made clear that the risks are high with a "wait and see" policy. *Id.* at i.
33. The second EPA report, *Projecting Future Sea Level Rise: Methodology, Estimates to the Year 2100, and Research Needs*, predicted 7 feet of sea level rise by 2100, but said 11 feet could not be ruled out. Olson Decl., Ex. 331, vi. It conclusively found that CO₂ emissions were primarily caused by the combustion of oil, gas, and coal and that those emissions were consistently increasing. *Id.* at 8. EPA found that "[f]uture energy use and fuel selection will thus be the primary determinants of the rate of CO₂ emissions." *Id.* at 8. EPA also rejected a "wait and see" approach and found that "forthcoming decisions cannot be postponed the several decades" that a transition away from fossil fuels would require. *Id.* at 51.
34. DOE's CO₂ research was hampered by President Reagan's budget cuts, but continued to progress. In 1985, two scientists at DOE's Lawrence Livermore National Laboratory edited and published a major five-volume series for the Carbon Dioxide Research Division on the

current state of carbon dioxide research. This series included volumes on Projecting the Climatic Effects of Increasing Carbon Dioxide (DOE/ER-0237), Detecting the Climatic Effects of Increasing Carbon Dioxide (DOE/ER-0235), and Atmospheric Carbon Dioxide and Global Carbon Cycle (DOE/ER-0239). Olson Decl., Exs. 14-16. In the last cited report, DOE reported that the “[h]uman effects on atmospheric composition and the size and operations of the terrestrial ecosystems represent major excursions that may yet overwhelm the life-support system crafted in nature of billions of years.” Olson Decl., Ex. 16, at 300.

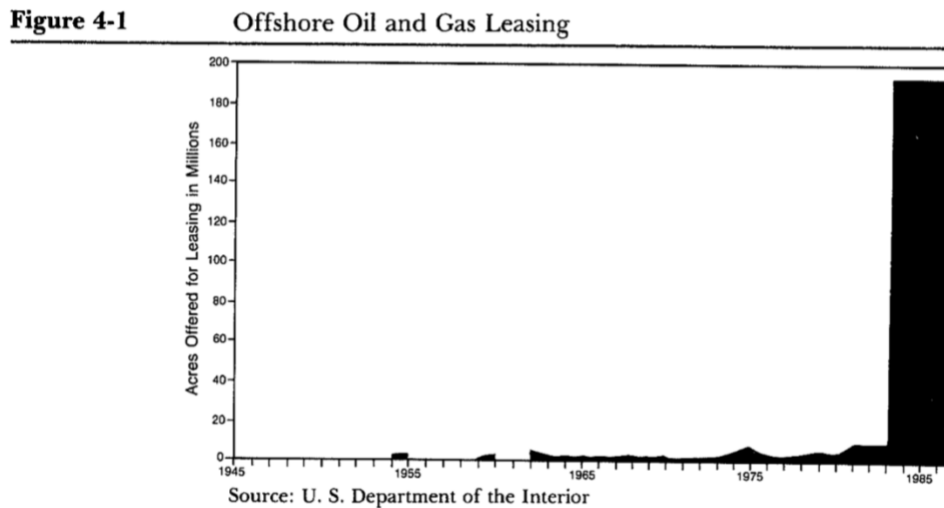
35. After his 1982 and 1986 testimony to Congress about sea level rise that could be projected from the melting of the West Antarctic ice sheet⁶ and the overwhelming evidence of global warming, Dr. James Hansen, then head of NASA’s Goddard Institute for Space Studies (“GISS”), testified again in the summer of 1988, making three primary conclusions:

Number one, the earth is warmer in 1988 than at any time in the history of instrumental measurements. Number two, the global warming is now large enough that we can ascribe with a high degree of confidence a cause and effect relationship to the greenhouse effect. And number three, our computer climate simulations indicate that the greenhouse effect is already large enough to begin to effect the probability of extreme events such as summer heat waves. Olson Decl., Ex. 17, at 39.

36. In spite of climate warnings and recommendations from EPA, DOE, and the head of NASA’s GISS, the Reagan Administration opened up more federal lands for oil and gas development and sped up the sale of offshore oil and gas leases. The Reagan CEQ reported on the

⁶ According to a recent article based on 5 years of data, West Antarctic ice sheet is shrinking at an accelerating rate. <http://www.businessinsider.com/antarctica-ice-melt-glaciers-ice-shelf-collapse-2018-6>. Dr. Hansen has a scientific record of being accurate in his projections and conclusions. If only Federal Defendants would have long heeded their top climatologist’s advice, he would not now have needed to become the guardian of future generations and of his granddaughter in this constitutional lawsuit. Notably, I know of no government record indicating that Dr. Hansen’s scientific findings or testimony on climate change were not reliable at the time of his testimony or over the course of his leadership at NASA’s GISS.

increases in offshore and onshore leases: “In 1981, BLM [Bureau of Land Management] leased 150 percent more onshore acres than were leased in 1980. In 1982, leased acreage nearly doubled again, thus equaling in 1982 alone the number of acres leased for the entire period of 1977-1980.” Olson Decl., Ex. 18, at 160. The Reagan Administration also boasted increases in offshore leases in the same report as shown in this graph:



Olson Decl., Ex. 18, at 156.

37. The Reagan Administration also increased national auto emissions by undoing the fuel economy standards that had been put in place by prior administrations. For instance, his Department of Transportation reduced the Corporate Average Fuel Economy (CAFE) standard from 27.5 mpg to 26 mpg for 1986.⁷

THE GEORGE H.W. BUSH YEARS (1989-1993)

38. In 1988 during his presidential campaign, George H.W. Bush famously acknowledged the threat of global warming and promised action: “[T]hose who think we are powerless to do

⁷ PEW, Driving to 54.5 mpg: A History of Fuel Efficiency in the United States, 2 (Sept. 2012) available at <http://www.pewtrusts.org/-/media/assets/2014/06/02/factsheet-graphic-fuel-efficiency-timeline-finalsept-2012.pdf>.

anything about the greenhouse effect forget about the ‘White House effect’; as President, I intend to do something about it.”⁸

39. Shortly thereafter, however, the first Bush Administration opposed international agreements that would have created specific greenhouse gas emission reduction targets, even when the majority of the world’s nations, including Europe, favored binding targets.⁹ Due in large part to the U.S. posture against binding emission reduction targets, none was agreed to internationally.

40. Notably, during the first Bush Administration, federal agencies and Congress seriously considered specific policies for mitigating greenhouse gas emissions and reducing the risk of climate change. Federal Defendants deeply understood the risks and yet, when presented with pathways to decarbonization, continued to promote fossil fuel development and consumption through policies such as the National Energy Strategy. Olson Decl., Ex. 20.

41. A 1990 GAO Report made clear that, notwithstanding campaign promises or the looming crisis, President Bush would not coordinate federal action on energy and climate policy to stop climate change:

The President announced in February 1989 that he would issue an executive order on global climate change that would clearly define responsibility of federal departments and agencies, as well as establishing effective coordination mechanisms. However, as of November 1989, the order had not been issued and its status was uncertain. Agency officials told us that they had not received clear guidance to direct the course of climate change activity. Olson Decl., Ex. 21, at 17.

⁸ See “The Whitehouse and the Greenhouse,” *The New York Times*, May 9, 1989.

⁹ In U.S. Dep’t of State Memorandum entitled *PRD-12/Global Climate Change Policy Decision Paper*, the Department of State made the following statements: “While many nations sought to set firm ‘targets and timetables’ for reducing greenhouse gas emissions, U.S. objection to firm commitments resulted in an agreement that sets a non-binding goal for developed countries to return emissions to 1990 levels by the end of the decade.” Olson Decl., Ex. 19.

42. The EPA's "Policy Options for Stabilizing Global Climate" report, released in December 1990, recommended to stabilize CO₂ levels at 350 ppm in response to Congressional directive, "present possible future scenarios of greenhouse gas emissions to the year 2100 . . .," ultimately finding that "[t]he results demonstrate that greenhouse gas emissions can be effectively reduced" and that "aggressive policies to reduce emissions would be necessary to ensure that total warming is less than 2°C." Olson Decl., Ex. 351 at xxiii, VI-I.
43. The 1991 Congressional Office of Technology Assessment, Changing By Degrees: Steps to Reduce Greenhouse Gases report, also a result of Congressional directive, similarly set forth policy pathways toward steep decarbonization, which were ignored by the first Bush Administration and subsequently by other Administrations. Olson Decl., Ex. 22.
44. In contrast to these alternate energy and emission pathways that could have helped protect the climate system, Bush's February 1991 National Energy Strategy explicitly supported increases in domestic production of oil, gas, and coal. Olson Decl., Ex. 20, at 1-7. Specifically, it called for opening the Arctic National Wildlife Refuge ("ANWR") and other areas of the Outer Continental Shelf ("OCS") to oil production, to "implement oil and gas incentives," to "deregulate pipelines," and to "increase production of California Heavy Oil." *Id.* at 10-11. The Bush National Energy Strategy openly acknowledged the risks of global warming, even claiming that the plan would reduce greenhouse gas emissions. However, as implemented, emissions continued at high levels, and the plan encouraged such a build-out of infrastructure for oil and gas that it ensured a longer future of greenhouse gas pollution. Ironically, also in 1992, President Bush signed the United Nations Framework Convention on Climate Change ("UNFCCC"), which the Senate later ratified. The import of the 1992 climate convention is unmistakable, as is its meaning for U.S. government action. The United

States' ratification of the UNFCCC portended to be a signal that the Federal Defendants would begin to follow the recommended energy pathways of EPA and OTA, and many recommendations within the federal government for at least two decades. The treaty was signed by the Bush Administration in June of 1992 at the Earth Summit in Rio de Janeiro. Olson Decl., Ex. 23. I was there, saw it happen, and recall being quite proud with a feeling of hope for the future. The treaty was then ratified by the U.S. Senate later in October of that year.

45. The preamble to the UNFCCC states that the parties to the Convention are: "*Determined to protect the climate system for present and future generations.*" *Id.* at Preamble. The parties, including now every nation on earth (such as Defendant the United States), stated their concern:

that human activities have been substantially increasing the atmospheric concentrations of greenhouse gases, that these increases enhance the natural greenhouse effect, and that this will result on average in an additional warming of the Earth's surface and atmosphere and may adversely affect natural ecosystems and humankind.

46. The parties, including Federal Defendant the United States, went on to state:

The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, *stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.* Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

Id. at Art. 2. (Emphasis added).

47. The UNFCCC calls for the parties' actions to be guided by these first three principles:

1. *The Parties should protect the climate system for the benefit of present and future generations of humankind*, on the basis of equity and in accordance with their common but differentiated responsibilities and

respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.

2. The specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear a disproportionate or abnormal burden under the Convention, should be given full consideration.

3. The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. *Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures*, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost. To achieve this, such policies and measures should take into account different socio-economic contexts, be comprehensive, cover all relevant sources, sinks and reservoirs of greenhouse gases and adaptation, and comprise all economic sectors. Efforts to address climate change may be carried out cooperatively by interested Parties.

Id. at Art. 3 (Emphasis added).

48. When the international community turned its attention in the 1980s to the climate change threat, the Federal Defendants had long been fully aware of the climate threat, its causes, and the need for remedial action. A full awareness of these points is plainly reflected in the final language of the convention, a document the United States helped to negotiate. The full adoption of the climate convention should have signaled the beginning of ongoing federal leadership at home and abroad, for the treaty language endorsed by the Executive Branch and the Congress was strong indeed. But the commitments the federal government made in 1992 in fact were not honored, and the treaty's great potential was squandered.

49. Just four months after signing the framework convention on climate change and promising the world at the Rio Earth Summit "forceful action" on climate change and international cooperation, on October 24, 1992, President Bush signed the Energy Policy Act beneath an oil derrick in Maurice, LA, ushering in "a new era in which government acts not as a master,

but as a partner and a servant” to the fossil fuel energy industry.¹⁰ The Energy Policy Act of 1992 would further dependence on fossil fuels and a continuation of high greenhouse gas emissions.

THE CLINTON YEARS (1993-2001)

50. As reflected in the chart at the beginning of my Declaration, the Clinton years were a period of robust growth in U.S. carbon dioxide emissions.

51. The Clinton Administration, including the President, acknowledged the dangers of climate change, the cause and the impacts including impacts to future generations, prompting Timothy Wirth, Undersecretary of State, to explain that by “increasing the concentration of greenhouse gases in the atmosphere at a rate unknown in all of human history, we are rolling the dice -- gambling with our children’s and grandchildren’s future.”¹¹ Olson Decl., Ex. 24.

52. Vice President Gore delivered remarks at the Conference on Human Health and Global Climate Change in September 1995, which was organized by the White House and EPA. His remarks illustrate Federal Defendants’ keen understanding of climate science, particularly the projected effects of atmospheric CO₂ increases:

How will global warming affect us? There are clearly profound implications at the regional level for food security, water supplies, natural ecosystems, loss of land due to sea level rise, and human health. A temperature increase of 2 to 8 degrees Fahrenheit is projected to double heat-related deaths in New York City, and triple the number of deaths in Chicago, L.A. and Montreal. And an increase of 8 degrees Fahrenheit may be correlated with an increase in the heat/humidity index of 12 to 15 degrees. The very young, the elderly, and the poor will be the ones most at risk. So will those with chronic cardiovascular and respiratory diseases... Changing temperatures and rainfall patterns are predicted to also increase

¹⁰ President George H.W. Bush, Remarks on Signing the Energy Policy Act of 1992 in Maurice, Louisiana (Oct. 24, 1992) *available at* <http://www.presidency.ucsb.edu/ws/?pid=21652>.

¹¹ Timothy E. Wirth, Undersecretary of State, Remarks at COP, April 5, 1995.

the spread of infectious diseases. Insects that carry disease organisms may now move to areas that were once too cold for them to survive. These new breeding sites and higher temperatures may also speed reproduction. Diseases we had hoped were just a memory in this country are suddenly a renewed threat.¹²

53. During the Clinton Administration, CEQ also resumed reporting on the threat of climate change. In its 1996 report (issued in 1997), CEQ reported: “[t]he average global temperature is projected to rise 2 to 6 degrees over the next century . . . the longer we wait to reduce our emissions, the more difficult the job, and the greater the risks.” Olson Decl., Ex. 25, at xi (The 1997 Report of the Council on Environmental Quality). In its 1997 annual report (issued in 1998), CEQ recognized: “[s]ince 1860, it is estimated that global CO₂ concentrations have increased from about 280 parts per million to about 360 parts per million today, or about 30 percent. Roughly half of that increase has occurred since 1970.” Olson Decl., Ex. 26 (CEQ, The 1997 Report of the Council on Environmental Quality, at 194).
54. The Kyoto Protocol is the first major agreement aimed at implementing the UNFCCC and achieving its “ultimate objective” to “stabiliz[e] greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.” Adopted in Kyoto, Japan in December of 1997, the protocol was signed by roughly 190 countries that are parties to the convention, including the United States. In pertinent part, the Kyoto Protocol provided that the developed country parties (what the protocol called “Annex I” parties), but not the developing (i.e. non-Annex I) countries, agreed to reduce their greenhouse gas emissions 6-8 percent below their 1990 levels by the

¹² The Interplay of Climate Change, Ozone Depletion, and Human Health, excerpts from Vice President Al Gore’s remarks at the Conference on Human Health and Global Climate Change, September 11, 1995.

2008-2012 period. The United States' non-binding¹³ goal was 7 percent. Olson Decl., Ex. 27.

55. As the Kyoto Protocol was being negotiated in June 1997, Senator Robert Byrd, representing coal interests in his home state of West Virginia, and his colleague, Senator Chuck Hagel, introduced Senate Resolution 98, and it passed the Senate 95-0.¹⁴ The Resolution expressed the sense of the Senate that no protocol was acceptable unless it included the developing countries and would not harm the United States' economy. Sensing certain defeat, the Clinton Administration never submitted the Kyoto Protocol to the Senate for ratification. In the end, the United States never joined the Protocol, thus doing serious damage to the overall international process aimed at protecting the climate system. In ratifying the climate convention, the federal government assumed commitments in consort with other nations to act to prevent dangerous climate change. In rejecting the Kyoto Protocol, the federal government failed to live up to those commitments and its pledges to the international community.

56. While engaging in international discussions to address climate change, President Clinton's Climate Action Plan revealed a strategy to promote natural gas, directing "DOE to work with the Federal Energy Regulatory Agency (FERC) to continue to facilitate the implementation of reforms that will increase the availability and use of natural gas." Olson Decl., Ex. 28, at 20. The Clinton Climate Action Plan contained the non-binding commitment to reduce GHG

¹³ The non-binding nature of United States' "commitments" to address climate change is a persistent theme across Administrations. I believe this illustrates the indifference with which Federal Defendants pursued fossil fuel-based energy policies while simultaneously producing information about the scientific nature and urgency of climate change.

¹⁴ S.Res.98 - A resolution expressing the sense of the Senate regarding the conditions for the United States becoming a signatory to any international agreement on greenhouse gas emissions under the United Nations Framework Convention on Climate Change.

levels to 1990 levels by 2000. However, a Q&A document on the Plan cautioned: “This plan by itself is unlikely to stabilize emissions at 1990 levels under reasonable assumptions regarding economic growth, the diffusion of existing technologies, and new technology development.” Olson Decl., Ex. 29.

57. In a 1997 DOE report on scenarios of U.S. carbon reductions-potential impacts of energy technologies by 2010 and beyond, Defendant DOE made clear that the marketplace alone was not enough to facilitate new green technologies and that government policies were required to support clean energy technology. Olson Decl., Ex. 30.

58. The Clinton Administration also provided continued support through research and development funding that would take fossil fuel exploration to new places including the Arctic. Olson Decl., Ex. 31.

THE GEORGE W. BUSH YEARS (2001-2009)

59. The Administration of George W. Bush enacted policies favoring fossil fuels and failed to adequately address the worsening problem of climate change. Despite clear scientific evidence, including two more reports from the Intergovernmental Panel on Climate Change (“IPCC”), the Bush Administration continued to encourage the nation’s reliance on fossil fuels and, according to numerous reports, attempted to undermine climate science.

60. The Bush Administration described its plan to reduce greenhouse gas emissions on February 14, 2002: “My administration is committed to cutting our Nation’s greenhouse gas intensity . . . by 18 percent over the next 10 years. This will set America on a path to slow the growth of our greenhouse gas emissions and, as science justifies, to stop and then reverse the

growth of emissions.”¹⁵ Olson Decl., Ex. 32. It should be noted that reducing GHG *intensity* – the amount of GHG emitted per dollar of GDP – which President Bush claimed “science justifies,” does not actually reduce total emissions unless intensity is declining faster than the economy is growing. President Bush’s proposal called for an intensity decline of 2 percent a year, so that, even if achieved, his proposal would not have reduced emissions and prevented harm to Plaintiffs and future generations.

61. Federal Defendants’ plans to increase fossil fuel production throughout the Bush

Administration were begun in his first year in office through the work of the National Energy Development Group. Soon after taking office in 2001, President Bush created an energy task force headed by Vice President Dick Cheney to help develop a national energy policy. The task force’s report, released in May 2001, did mention renewable energy but mostly emphasized enhancing fossil fuel production, reporting: “the U.S. has enough coal to last for another 250 years.”¹⁶ Olson Decl., Ex. 33, at xiii. According to multiple reports, the task force’s policy recommendations were largely influenced by industry groups and petroleum lobbyists.¹⁷ President Bush summarized his energy plan in a speech on May 17, 2001:

New technology makes drilling for oil far more productive My administration’s energy plan anticipates that most new electric plants will be fueled by the cleanest of all fossil fuels, natural gas. . . . I will call on Congress to pass legislation to bring more gas to market¹⁸

¹⁵ Remarks by the President on Climate Change and Clean Air, National Oceanic and Atmospheric Administration, Silver Spring, Maryland, February 14, 2002.

¹⁶ National Energy Policy, Report of the National Energy Policy Development Group, May 2001, at xiii.

¹⁷ “Papers Detail Industry’s Role in Cheney’s Energy Report,” *Washington Post*, July 18, 2007, http://www.washingtonpost.com/wp-dyn/content/article/2007/07/17/AR2007071701987.html?nav=rss_politi%20cs.

¹⁸ Remarks Announcing the Energy Plan in St. Paul, Minnesota, George W. Bush, May 17, 2001, <http://www.presidency.ucsb.edu/ws/index.php?pid=45617&st=national+e%20energy&st1=>

62. President Bush also confirmed his Administration’s commitment to coal: “[i]ncreasing our energy security begins with a firm commitment to America’s most abundant energy sources—source, and that is coal. Our Nation is blessed with enough coal to last another 250 years Clean coal technology advances—will advance, and when it does, our society will be better off.”¹⁹
63. In May 2001, the IPCC Third Assessment Report was released. According to NOAA testimony to Congress, “[t]here is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities.”²⁰ An EPA report, U.S. Climate Action Report – 2002, was in line with the IPCC’s findings. That report stated: “Greenhouse gases are accumulating in Earth’s atmosphere as a result of human activities Carbon dioxide from fossil fuel combustion was the dominant contributor. Emissions from this source category grew by 13 percent between 1990 and 1999.”²¹
64. In 2007, the IPCC finalized its Fourth Assessment Report. Later that year, President Bush referenced the 2007 IPCC Report in remarks during a meeting on energy security and climate change: “A report issued earlier this year by the U.N. Intergovernmental Panel on Climate Change concluded both that global temperatures are rising and that this is caused largely by human activities.” President Bush continued: “[w]hen we burn fossil fuels, we release

¹⁹ President George W. Bush Remarks on Energy Policy in Columbus, Ohio (March 9, 2005) *available at*

<http://www.presidency.ucsb.edu/ws/index.php?pid=64741&st=national%20+energy&st1>

²⁰ U.S. Senate, Committee on Commerce, Science, and Transportation NOAA testimony, at 12, Intergovernmental Panel on Climate Change (IPCC) Third Assessment Report, May 2001.

²¹ “U.S. Climate Action Report – 2002,” Third National Communication of the United States of America Under the United Nations Framework Convention on Climate Change, May 2002, at 4-5.

greenhouse gases into the atmosphere, and the concentration of greenhouse gases has increased substantially.”²²

65. In spite of this recognition of the general scientific principles at play, according to a December 2007 report from the House of Representatives Committee on Oversight and Government Reform, “the Bush Administration has engaged in a systematic effort to manipulate climate change science and mislead policymakers and the public about the dangers of global warming.” Olson Decl., Ex. 34, at i. Federal Defendants resorted to altering scientific findings on climate change in order to minimize their significance. The December 2007 House report found, “CEQ Chief of Staff Phil Cooney and other CEQ officials made at least 294 edits to the Administration’s Strategic Plan of the Climate Change Science Program to exaggerate or emphasize scientific uncertainties or to deemphasize or diminish the importance of the human role in global warming.”²³ *Id.* at ii. The December 2007 House report concluded:

The Committee’s 16-month investigation reveals a systematic White House effort to censor climate scientists by controlling their access to the press and editing testimony to Congress. The White House was particularly active in stifling discussions of the link between increased hurricane intensity and global warming. The White House also sought to minimize the significance and certainty of climate change by extensively editing government climate change reports. Other actions taken by the White House involved editing EPA legal opinions and op-eds on climate change.

Id.

²² Remarks During a Meeting on Energy Security and Climate Change, George W. Bush, September 28, 2007, <http://www.presidency.ucsb.edu/ws/index.php?pid=75839&st=climate+change&s%20t1=global+warming>.

²³ “Political Interference with Climate Change Science Under the Bush Administration,” U.S. House of Representatives Committee on Oversight and Government Reform, December 2007, at ii. When Cooney’s line-by-line edits became public, the ensuing scandal was big enough that it forced his resignation. Revkin, Andrew C. “Editor of Climate Reports Resigns,” *New York Times*, June 10, 2005, *available at* <https://www.nytimes.com/2005/06/10/politics/editor-of-climate-reports-resigns.html>.

66. Then in 2008, twenty years after his landmark testimony to Congress, NASA’s GISS Director, Dr. Hansen, published a paper suggesting that stabilizing the climate system means limiting atmospheric CO₂ concentrations to a maximum of 350 parts per million – a concentration that had already been exceeded. “If humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted, paleoclimate evidence and ongoing climate change suggest that CO₂ will need to be reduced from its current 385 ppm to at most 350 ppm.”²⁴ Once again, Federal Defendants’ national fossil fuel energy programs and policies did not shift to respond to this scientific reality.

THE OBAMA YEARS (2009-2017)

67. President Obama appeared to take the threat of climate change seriously and attempted to do more than any other President to address it, but fossil fuels remained an entrenched engine of our economy and political commitment of our federal government, and thus, the dominant fuel of America’s energy system. President Obama is known for being the “all of the above” energy president, but this approach effectively continued the fossil fuel promotion practices of his predecessors. Under the Obama Administration, petroleum products and natural gas liquid exports increased, as did domestic oil and gas production, including unconventional fuel production. This locked in further greenhouse gas warming at a time when the climate science alarm sirens were blaring and we were already in the danger zone, according the federal government scientists and the international scientific community.

68. In June 2009, the U.S. Global Change Research Program released its Second National Climate Assessment detailing climate change impacts in the United States. The Second

²⁴ James Hansen et al. “Target Atmospheric CO₂: Where Should Humanity Aim?” 2 Open Atmospheric Science Journal (2008), at 217.

National Climate Assessment explained the expected impacts across a variety of areas including public health and social costs. As the Second National Climate Assessment noted, “[c]limate change is likely to exacerbate these challenges as changes in temperature, precipitation, sea levels, and extreme weather events increasingly affect homes, communities, water supplies, land resources, transportation, urban infrastructure, and regional characteristics that people have come to value and depend on.” Olson Decl., Ex. 35, 100

69. By the end of 2009, EPA issued its most sweeping declaration of the threat of climate change to date, officially publishing an endangerment finding under Sec. 202(a) of the Clean Air Act. Olson Decl., Ex. 36. As EPA stated in its finding, “the evidence provides compelling support for finding that greenhouse gas air pollution endangers the public welfare of both current and future generations.”²⁵ This finding was not made because of executive leadership; instead, the finding was the result of EPA being ordered to do so by the United States Supreme Court in *Massachusetts v. EPA*.

70. In 2014, the third edition report of “Climate Change Indicators” came out, finding climate change contributes to an increase in heat-related deaths, as well an increase in Lyme disease, allergies, and asthma-related problems. Climate change also threatens human health by exacerbating the risk of wildfires and hurricanes, the loss of coastal land, the loss of glacial water storage, and the loss of ice in the Arctic. Olson Decl., Ex. 37.

71. The U.S. Global Change Research Program continued to be a leading authority on climate science, issuing two additional reports in 2014 and 2016. The 2014 Third National Climate Assessment notably stated: “Climate change, once considered an issue for a distant future,

²⁵ *Id.* at 66498-66499.

has moved firmly into the present.”²⁶ Olson Decl., Ex. 38 at 1. According to the findings of the Third National Climate Assessment, “[t]he global warming of the past 50 years is primarily due to human activities, predominantly the burning of fossil fuelsU.S. average temperature has increased by 1.3°F to 1.9°F since record keeping began in 1895; most of this increase has occurred since about 1970,” at the start of the Nixon Administration. *Id.* at 15.

72. As in prior Administrations, the Obama Administration had a clear understanding that children and future generations would be especially harmed. Olson Decl., Ex. 376 (EPA circular on Children). During his Second Inaugural Address in January 2013, President Obama made an important reference to children and future generations in the context of climate change: “We will respond to the threat of climate change, knowing that the failure to do so would betray our children and future generations”²⁷

73. Toward the end of his Administration, EPA followed President Obama’s Climate Action Plan to create power plant emissions standards. The resulting regulations were called the Clean Power Plan (“CPP”).²⁸ The CPP was the centerpiece of America’s climate policy under President Obama. When the U.S. officially pledged to reduce carbon emissions by 26 to 28 percent below 2005 levels by 2025 – its “intended nationally determined contribution”

²⁶ Climate Change Impacts in the United States: Third National Climate Assessment, U.S. Global Change Research Program, 2014, at 1.

²⁷ Inaugural Address by President Barack Obama, January 21, 2013, <https://obamawhitehouse.archives.gov/the-press-office/2013/01/21/inaugural-address-president-barack-obama>)

²⁸ “The President’s Clean Power Plan,” available at <https://obamawhitehouse.archives.gov/node/279886#section-clean-power-plan>

offered ahead of the Paris climate talks in 2015²⁹ – the Clean Power Plan was central to that goal.

74. Yet, President Obama showed that it was Federal Defendants’ policy to continue to support expansion of fossil fuel development and exploitation of the country’s supply of oil and natural gas. In his 2012 State of the Union Address, President Obama continued the folly of the past:

Over the last three years, we’ve opened millions of new acres for oil and gas exploration, and tonight, I’m directing my administration to open more than 75 percent of our potential offshore oil and gas resources. Right now -- right now -- American oil production is the highest that it’s been in eight years... We have a supply of natural gas that can last America nearly 100 years. And my administration will take every possible action to safely develop this energy.

Olson Decl., Ex. 377. (Remarks by the President in State of the Union Address, January 24, 2012, <https://obamawhitehouse.archives.gov/the-press-office/2012/01/24/remarks-president-state-union-address>).

75. A few months later, speaking at TransCanada Pipe Yard near Cushing, Oklahoma, President Obama touted increased oil and gas production under his leadership: “Over the last three years, I’ve directed my administration to open up millions of acres for gas and oil exploration across 23 different states. We’re opening up more than 75 percent of our potential oil resources offshore. We’ve quadrupled the number of operating rigs to a record high. We’ve added enough new oil and gas pipeline to encircle the Earth, and then some.” His conclusion was remarkable: “In fact, the problem...is that we’re actually producing so much oil and gas...that we don’t have enough pipeline capacity to transport all of it where it needs to go.”

Olson Decl., Ex. 378 (Remarks by the President on American-Made Energy, March 22,

²⁹ FACT SHEET: U.S. Reports its 2025 Emissions Target to the UNFCCC, March 31, 2015, <https://obamawhitehouse.archives.gov/the-press-office/2015/03/31/fact-sheet-us-reports-its-2025-emissions-target-unfccc>

2012, <https://obamawhitehouse.archives.gov/the-press-office/2012/03/22/remarks-president-american-made-energy>).

THE TRUMP YEARS SO FAR (2017-)

76. In August 2017, the U.S. Global Research Program completed the final version of the Fifth National Climate Assessment. The findings in the Fifth National Climate Assessment show that reversing course on climate, as expected with the passage of time, is more urgent than ever.

77. Yet, the Trump Administration, less than two years into the present term, has demonstrated unprecedented hostility towards climate science and a deep dedication to fossil fuel development.³⁰ Olson Decl., Ex. 379 (America First Energy Plan).

78. In a short time, the Trump Administration has taken action on automobile emission standards and expansion of offshore drilling. Olson Decl., Ex. 380; Olson Decl., Ex. 112.

79. President Trump campaigned in 2016 urging a revitalization of the coal industry and abandonment of the Paris Accords. His Administration has effected those campaign promises. He also has claimed that climate change is based on a hoax designed to help China. President Trump has sought to undo the Clean Power Plan adopted under President Obama. The grave risk of his presidency is that, just when time is of the essence, President Trump will set any potential U.S. climate recovery effort back by precious years, condemning Plaintiffs and future generations to a world more perilous than when this case was commenced.

³⁰ Union of Concerned Scientists, Center for Science and Democracy, *Sidelining Science Since Day One (July 2017)* available at <https://www.ucsusa.org/sites/default/files/attach/2017/07/sidelining-science-report-ucs-7-20-2017.pdf>.

CONCLUSION

80. Focusing on this history, no matter how extensive its scope, we have to see this period of half a century as an instant in time, for that is indeed what it is on earth's time scale and in the lives of today's children and all those who must long live with its consequences. And in this snapshot of decades, we find a federal government planning for, guiding, supporting, and encouraging massive fossil fuel use despite tragic consequences easily foreseen and avoided.
81. After analyzing the last four decades of actions and inactions by each Administration, a clear pattern of historical government conduct relating to the nation's energy system and climate change emerges. For decades,
- a. Federal Defendants have understood both that the dangers of climate change are real and present and intensifying and that they are caused predominantly by burning fossil fuels.
 - b. Federal Defendants have understood and understand how climate change will harm the nation and especially youth Plaintiffs and future generations.
 - c. Federal Defendants have understood there are alternative national energy system pathway that would provide greater protection and safety for the nation.
82. Notwithstanding these understandings, Federal Defendants have acted routinely, consistently, and continue to act systemically to promote fossil fuels and thus to cause irreversible climate danger, a pattern reflecting deliberate indifference to the severe impacts that will be endured predominantly by youth Plaintiffs and future generations.
83. Objectively, I believe it was unreasonable for these Administrations purposefully and knowingly to act in ways that inflict ongoing and future harms on Plaintiffs. These harms are described in the other expert reports submitted in this case. Also, after knowingly causing

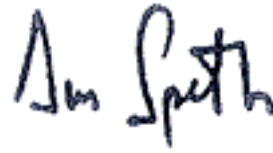
these harms, both prior and current Administrations have failed to take the necessary steps to protect Plaintiffs and future generations from the dangers they helped create.

84. Most importantly, Federal Defendants made and are still making critical decisions with respect to the climate conditions under which youth Plaintiffs and future generations will live. Those conditions put Plaintiffs and future generations at substantial risk of suffering serious, immediate, and continuing harm. Federal Defendants have not and are not now taking available measures to abate the risks. By not taking such measures, and by having acted and continuing to act systemically to promote fossil fuels and thus to bring about irreversible climate danger, Federal Defendants have caused and are causing severe, irreparable harm to the health and safety of Plaintiffs and future generations.
85. Each Administration since Carter has caused the present harms to Plaintiffs by taking a series of actions and by knowingly refusing to terminate actions which Federal Defendants knew or reasonably should have known would inflict injury. Because Federal Defendants were warned of the specific dangers facing Plaintiffs and knew of the climate science from which a conclusion could be drawn that a substantial risk of harm exists, the current actions of Federal Defendants are being taken in conscious disregard of the perilous world and its shrinking freedoms and opportunities being created for the Plaintiffs and future generations.

In accordance with 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

DATED this 27th day of June, 2018.

Respectfully submitted,

A handwritten signature in black ink that reads "Jim Speth". The signature is written in a cursive, slightly slanted style.

James Gustave Speth