No. 18-36082

United States Court of Appeals

FOR THE

Ninth Circuit

KELSEY CASCADIA ROSE JULIANA; *et al.*,
Plaintiffs-Appellees,

v.

UNITED STATES OF AMERICA; *et al.*
Defendants-Appellants.

On Appeal from the United States District Court for the District of Oregon
(No. 6:15-cv-01517-AA)

BRIEF OF *AMICUS CURIAE* SIERRA CLUB IN SUPPORT OF PLAINTIFFS-APPELLEES

Joanne Spalding
CA Bar No. 169560
Sierra Club
2101 Webster Street Suite 1300
Oakland California 94612
Phone: (415) 977-5725
Joanne.Spalding@sierraclub.org

Alejandra Núñez
CA Bar No. 268958
Andres Restrepo
DC Bar No. 999544
Sierra Club
50 F Street NW, Eighth Floor
Washington, DC 20001
Phone: (215) 298-0335
alejandra.nunez@sierraclub.org
andres.restrepo@sierraclub.org

CORPORATE DISCLOSURE STATEMENT

Pursuant to Rule 26.1 of the Federal Rules of Appellate Procedure, *amicus curiae* Sierra Club respectfully submits the following disclosures:

Sierra Club, a corporation organized and existing under the laws of the State of California, is a national nonprofit organization dedicated to the protection and enjoyment of the environment. Sierra Club has no parent companies and no publicly held company has a 10% or greater ownership interest in Sierra Club.

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STATEMENT OF INTEREST

Founded in 1892, Sierra Club is the nation's oldest and largest grassroots environmental organization, with over 3.5 million members and supporters. For decades, Sierra Club has used the traditional tools of advocacy—organizing, lobbying, litigation, and public outreach—to support policies that limit our nation's dependence on fossil fuels and promote clean, renewable energy.[1] Sierra Club first created a Global Warming Program in 1989 and has greatly expanded that work since then, using every means at its disposal at the federal, state, and local levels to protect the climate through such policies.[2]

All the while, the United States government has contributed to climate change by authorizing, encouraging, and sponsoring activities resulting in the combustion of greenhouse gases. The government has advanced these policies fully aware of the harm that fossil fuel combustion poses to the climate.

This brief describes the key aspects of the federal government's history of causing climate change and explains how that history supports Plaintiffs' constitutional claims.

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[1] *See, e.g.*, Tom Turner, *Sierra Club: 100 Years of Protecting Nature* 204-07 (1991) (describing Sierra Club efforts to promote energy efficiency and renewable energy and curtail U.S reliance on fossil fuels during the Nixon, Ford, and Carter administrations).

[2] *See, e.g.*, Sierra Club, *Climate & Energy*, https://www.sierraclub.org/climate-and-energy (last visited Feb. 26, 2019).

INTRODUCTION

Sierra Club supports Plaintiffs' positions in this case and submits this amicus brief[3] to explain why the district court was correct in denying summary judgment on two of Plaintiffs' constitutional claims: a due process right to a sustainable climate and a due process right to be protected against a state-created climate danger. In actively encouraging the extraction of fossil fuels from their vast landholdings for eventual combustion and extensively subsidizing fossil fuel development, while failing to fulfill their obligations to reduce greenhouse gas emissions, Defendants have affirmatively endangered Plaintiffs' health, safety, and wellbeing. They have thus violated their Fifth Amendment due process rights, and the district court was correct to deny Defendants' motion for summary judgment on these issues.

While state and local governments can implement certain measures to address climate change, only the federal government is equipped to develop comprehensive nationwide and international solutions to this crisis. As one of the two highest-emitting nations on Earth, the United States must demonstrate strong leadership and a commitment to action to combat climate change to ensure that the planet remains habitable for today's youth and future generations. Instead,

[3] All parties have consented to the filing of this brief. No party or person other than *amicus curiae* and its counsel has authored this brief or made a monetary contribution towards the preparation or submission of this brief.

Defendants have maximized fossil fuel production and abdicated their responsibility to rein in climate pollution. Despite decades of vigorous advocacy from environmental groups and state and local governments;[4] despite reports from both the government's own scientists[5] and the world's foremost experts[6] emphasizing the increasingly urgent need for deep and immediate emission reductions; and despite the intensifying devastation that climate change is inflicting on our planet *now*, Defendants' response has been grossly inadequate. Even though Defendants' activities are a primary cause of climate change, the few federal actions designed to address this crisis have been far too modest in scope, and most have easily been undone by later administrations. Indeed, in the last two years, Defendants have taken forceful steps to withdraw or weaken nascent climate-focused actions of the prior administration and have aggressively ramped up fossil fuel extraction on federal lands. These actions constitute a plain dereliction of duty

[4] Much of this advocacy has included (and will continue to include) claims brought under the Administrative Procedure Act ("APA"). While Defendants fault Plaintiffs for not bringing their claims in this case under the APA, App. Br. 16 at 27-35, the government's ongoing failure to address climate change despite decades of litigation under the APA demonstrates the insufficiency of that approach and the need to enforce Plaintiffs' fundamental rights through direct, systemic constitutional action.

[5] U.S. Global Change Research Prog., *Fourth National Climate Assessment: Volume II—Impacts, Risks, and Adaptation in the United States* (Nov. 2018), *available at* https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf.

[6] *See* Intergovernmental Panel on Climate Change, *Global Warming of 1.5 °C: an IPCC Special Report—Summary for Policymakers* (Oct. 8, 2018), *available at* http://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf .

and violate the constitution. Below, we explain how both the law of substantive due process and Defendants' long history of causing climate change support Plaintiffs' constitutional claims.[7]

ARGUMENT

I. The District Court Correctly Applied the Law, in Light of Defendants' Affirmative Contribution to, and Failure to Address, Climate Change.

A. The District Court Properly Recognized a Fundamental Climate Right.

The district court properly denied Defendants' summary judgment motion as to Plaintiffs' claims based on a fundamental right to "a climate system capable of sustaining human life." Dist. Ct. Dkt. 369 at 48-49. Rather than adduce facts to support their motion, Defendants argued on purely legal grounds that the Constitution does not recognize such a right. Having rejected this same argument in Defendants' motion to dismiss, the district court again rejected it at summary judgment, holding that the Fifth Amendment's guarantee of substantive due process recognizes the right to a life-sustaining climate.

The court's holding is fully consonant with constitutional precepts. Because the rights to life, liberty, and property depend on a habitable climate, that right is necessarily both "fundamental to our scheme of ordered liberty" and "deeply rooted in this Nation's history and tradition." *McDonald v. City of Chicago, Ill.*,

[7] This brief focuses on Plaintiffs' substantive due process claims addressed by the district court, but Sierra Club also supports Plaintiffs' other claims.

561 U.S. 742, 767 (2010) (internal quotations and emphasis omitted); *see* App. Ct. Dkt. 14 at 35-39. Courts have not previously had occasion to identify a fundamental right to a life-sustaining climate system, but "new insight" now points to a new threat to our liberty. *See Obergefell v. Hodges*, 135 S. Ct. 2584, 2598 (2015). It is "now manifest," *id.* at 2602, that burning fossil fuels causes a dramatic increase in atmospheric greenhouse gas concentrations and entails life-threatening consequences.[8] *See Rocky Mountain Farmers Union v. Corey,* 913 F.3d 940, 945 (9th Cir. 2019) (describing "crumbling or swamped coastlines, rising water [and] more intense forest fires caused by higher temperatures and related droughts" and citing and attaching the Intergovernmental Panel on Climate Change's special report *Global Warming of 1.5 °C* (Oct. 8, 2018), *available at* http://www.ipcc.ch/report/sr15/).

Defendants' argument that there is no due process right to "particular climate conditions," App. Ct. Dkt. 16 at 40, diminishes the gravity of Plaintiffs' claims and ignores the district court's "careful description of the asserted right," *Reno v. Flores*, 507 U.S. 292, 302 (1993). In its order denying summary judgment, the district court reiterated its earlier holding that

> where a complaint alleges governmental action is affirmatively and substantially damaging the climate system in a way that will cause human deaths, shorten human lifespans, result in widespread damage

[8] *See, e.g.*, U.S. Research Prog. on Global Change, *supra* n. 5, at 34-40; *see also* Dist. Ct. Dkt. 98 ¶¶ 5,7,8,10.

> to property, threaten human food sources, and dramatically alter the planet's ecosystem, it states a claim for a due process violation.

Dist. Ct. Dkt. 369 at 48 (quoting *Juliana v. United States*, 217 F. Supp. 3d 1224, 1250 (D. Or. 2016)). Plaintiffs seek to preserve a habitable climate; they are not frivolously demanding that the federal sovereign, like King Arthur in Camelot, idyllically decree: "The climate must be perfect all the year."[9]

B. The District Court Properly Denied Summary Judgment on the State-Created Danger Claim.

The district court also correctly denied summary judgment as to Plaintiffs' state-created danger claim. Dist. Ct. Dkt. 369 at 49-54. This Court has long recognized that a governmental actor violates a plaintiff's due process rights when, through its "affirmative conduct," it "places the plaintiff in danger by acting with 'deliberate indifference' to a 'known or obvious danger'…." *Pauluk v. Savage*, 836 F.3d 1117, 1122 (9th Cir. 2016) (citing *Patel v. Kent Sch. Dist*, 648 F.3d 965, 971-72 (9th Cir. 2001)); *see also L.W. v. Grubbs*, 974 F.2d 119, 122 (9th Cir. 1992). Where the government's "affirmative acts exposed [a plaintiff] to a *greater* danger than he otherwise would have faced," the plaintiff may state a claim for a substantive due process violation. *Brown v. Rawson-Neal Psychiatric Hosp.*, 840 F.3d 1146, 1152 (9th Cir. 2016) (emphasis in original).

[9] *Camelot* lyrics, All Musicals, https://www.allmusicals.com/lyrics/camelot/camelot.htm (last visited Feb. 28, 2019).

Defendants have acted in exactly such a manner with regard to climate change. The United States' total carbon dioxide ("CO_2") emissions constitute over a quarter of cumulative global emissions from 1850 to 2013—more than double that of the next highest country—and the U.S. is currently the second-largest emitter in the world.[10] The catastrophic climate dangers that threaten Plaintiffs are directly linked to increased greenhouse gas emissions. A substantial portion of those emissions derive from fossil fuels extracted from federally-owned lands with the explicit permission and encouragement of the federal government. *See infra* at 12-16. And the vast majority of U.S. emissions come from sources over which Defendants exercise sweeping regulatory authority.[11]

Even though federal actions and federally-authorized activities have played a central role in creating this perilous situation, and despite the pleas of citizens and dozens of state and local governments, Defendants have failed for decades to limit these emissions or curtail fossil fuel extraction on federal lands in a meaningful

[10] Dist. Ct. Dkt. 98 ¶7; *see also* World Resources Inst., CAIT Climate Data Explorer: Historical Emissions, http://cait.wri.org/historical/ (interactive tool depicting historical emission levels by country) (last visited Feb. 28, 2019).

[11] *See* EPA, *Draft Inventory of Greenhouse Gas Emissions and Sinks: 1990-2017*, Table ES-2 (Feb. 12, 2019), *available at* https://www.epa.gov/sites/production/files/2019-02/documents/us-ghg-inventory-2019-main-text.pdf. Approximately 75 percent or more of U.S. emissions come from mobile or stationary sources over which EPA has statutory authority to limit their greenhouse gas emissions, and the agency could assert the same authority over many of the remaining sources.

and lasting way. Defendants' culpability in causing the climate crisis reflects no mere act of omission, but one of affirmative, deliberate *commission*.

Time is of the essence in curtailing greenhouse gas pollution,[12] but recalcitrance and competing priorities at the federal level have led to fruitless efforts, endless delays, and backtracking. Every comprehensive legislative proposal to tackle climate change since the United States ratified the United Nations Framework Convention on Climate Change has died in Congress.[13] Indeed, the legislative branch has actively exacerbated the climate crisis by providing billions of dollars in subsidies to the nation's oil, gas, and coal industry.[14]

Although global warming was first identified many decades ago, no meaningful executive action to combat climate change occurred until the 2010s, and even those modest steps would not have been sufficient to enable the United

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[12] *See* Intergovernmental Panel on Climate Change, *Global Warming of 1.5 °C: an IPCC Special Report – Chapter 1*, 66 (Oct. 8, 2018), *available at* https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15_Chapter1_Low_Res.pdf ("multiple lines of evidence" indicate that at the current rate of warming, global temperatures will reach a 1.5°C increase by 2030).

[13] *See, e.g.*, H.R. 2454, 111th Cong. (2009); S. 2191, 110th Cong. (2007).

[14] For example, in 2015 and 2016, the oil, gas, and coal industries received an average of $14.7 billion in federal production subsidies, including an average of $2.5 billion to "incentivize expanding fossil fuel reserves, including the discovery of new resources." Oil Change Int'l, *Dirty Energy Dominance: Dependent on Denial - How the U.S. Fossil Fuel Industry Depends on Subsidies and Climate Denial* at 5, 7 (Oct. 2017), *available at* http://priceofoil.org/content/uploads/2017/10/OCI_US-Fossil-Fuel-Subs-2015-16_Final_Oct2017.pdf.

States to address the severity of the crisis.[15] Now, the current administration is taking a giant leap backwards. Over the last two years, it has embarked upon an aggressive agenda to weaken or eliminate virtually all of the modest federal actions previously adopted to limit our dependence on fossil fuels and reduce greenhouse gases. *See infra* at 12-30. Early in its tenure, this administration issued a sweeping executive order intended "to promote clean and safe development of our Nation's vast energy resource," with "particular attention to oil, natural gas [and] coal." Exec. Order No. 13,873, 82 Fed. Reg. 16,093, §§1(a), 2 (Mar. 28, 2017).

Even as the climate crisis hurtles toward a critical tipping point, the administration has, with all deliberate purpose, smashed the guardrails that were once in place to help limit our nation's—and our government's—substantial contribution to global climate change. Defendants' affirmative conduct and deliberate indifference to a known danger has exposed Plaintiffs to a greater danger than they would have otherwise faced, thus violating their constitutional rights. *See Pauluk*, 836 F.3d at 1122; *Rawson-Neal Psychiatric Hosp.*, 840 F.3d at 1152.

[15] Jeffrey Greenblatt and Max Wei, *Assessment of the climate commitments and additional mitigation policies of the United States*, 6 Nature Climate Change 1090 (2016).

C. Recognizing Plaintiffs' Substantive Due Process Rights Is an Appropriate Exercise of the Judicial Function.

The legislative and executive branches have proven time and again that they will not rise above the political fray and mitigate the existential threat of climate change. Our Constitution was designed to address this circumstance. "The idea of the Constitution 'was to withdraw certain subjects from the vicissitudes of political controversy, to place them beyond the reach of majorities and officials and to establish them as legal principles to be applied by the courts.'" *Obergefell*, 135 S. Ct. at 2605-06 (quoting *W.V. Bd. of Educ. v. Barnette*, 319 U.S. 624, 638 (1943)).

Throughout its history, the judicial branch has taken action to protect previously unrecognized fundamental rights under the Constitution when the political gears have ground to a halt, placing those rights in jeopardy.[16] Defendants' argument that the federal government's contribution to climate change is too big for courts to handle misapprehends and diminishes the crucial role of our federal judiciary in protecting fundamental rights. Historically, judicial recognition of constitutional rights has led to enormous changes in the machinery of government in a broad array of topics, including marriage,[17] criminal procedure,[18]

[16] A full discussion of this issue is provided in the brief of *amicus curiae* law professors at 18-27.

[17] *Loving v. Virginia*, 388 U.S. 1, 6 (1967) (invalidating interracial marriage bans in 16 states); *Obergefell*, 135 S. Ct. at 2591 (holding that same-sex couples may now exercise the fundamental right to marry in all states).

prison reform,[19] and school desegregation,[20] to name just a few. These decisions required a transformation in governmental operations and led to the development of new laws and agency practices.

The same would be true in the climate context. Judicial recognition of the fundamental constitutional rights to a life-sustaining climate and to be free of state-created climate endangerment is necessary to overcome the political branches' wanton disregard of the climate crisis and guide federal action to address climate change. Federal agencies can and must adapt to protect this right and fulfill their sovereign duty.

II. The Federal Government's Direct Actions Have Caused Climate Change Over the Course of Decades and Particularly In Recent Years.

Federal government actions—including its longstanding promotion of fossil fuel extraction and combustion and its refusal to fulfill its legal obligations to control greenhouse gas emissions—are a principal cause of climate destabilization. Below, we provide an overview of federal government action in six critical areas that have contributed to climate change: coal mining on federal lands; federal oil

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[18] *Miranda v. Arizona*, 384 U.S. 436, 444-445 (1966) (requiring safeguards against self-incrimination); *Douglas v. California*, 372 U.S. 353, 356 (1963) (upholding right to counsel).

[19] *Brown v. Plata*, 563 U.S. 493 (2011) (requiring California to limit prison overcrowding to safeguard inmates' Eighth Amendment rights).

[20] *Brown v. Bd. of Educ. of Topeka*, 347 U.S. 483 (1954) (desegregating public schools); *Swann v. Charlotte-Mecklenburg Board of Education*, 402 U.S. 1 (1971) (upholding constitutional authority of courts to require busing to achieve desegregation).

and gas leasing and regulation; vehicles; power plants; the federal social cost of greenhouse gas metrics; and energy efficiency. These are but a few examples of Defendants' continuous support for fossil fuel development on federal lands and their endless denials, delays, false starts, marginal gains, and backsliding on climate action.

A. Coal Mining on Federal Lands

The Bureau of Land Management ("BLM") permits fossil fuel extraction on federal lands and oversees the federal coal program, which leases coal on approximately 570 million acres of the federal mineral estate.[21] In recent years, approximately 41 percent of U.S. coal production occurred on federal lands, mostly in the Powder River Basin.[22] According to the Department of the Interior, over three billion tons of coal were mined on federal lands between 2010 and 2017.[23] The extraction and combustion of coal from federal lands produces massive quantities of greenhouse gases. For example, the U.S. Geological Survey found that in 2014, over 725 million metric tons of CO_2-equivalent were emitted

[21] 81 Fed. Reg. 17,721 (Mar. 30, 2016).
[22] *Id.* at 17,724.
[23] U.S. Dep't of Interior, Natural Resources Revenue Data, https://revenuedata.doi.gov/explore/#federal-production (last visited Feb. 28, 2019).

by the combustion of federally mined coal,[24] contributing approximately 11 percent of all U.S. greenhouse gas emissions.[25]

In April 2013, after a surge in proposals that would have permitted the mining of 3.5 billion tons of federally-owned Powder River Basin coal, Sierra Club and others urged the Secretary of the Interior to establish a moratorium on new coal leasing and to perform a comprehensive review of the leasing program, which had not been updated in approximately forty years.[26] In January 2016, the Department granted the request, agreeing to prepare a discretionary programmatic environmental impact statement to analyze potential reforms, and establishing a moratorium on most new coal leasing activities until the review was complete.[27]

That victory proved short-lived. On March 29, 2017, former Secretary Zinke revoked the moratorium and terminated the environmental review, directing BLM to process coal lease applications in accordance with the pre-moratorium regulations.[28] That same day, Sierra Club and other groups challenged Secretary

[24] U.S. Geological Survey, *Federal Lands Greenhouse Gas Emissions and Sequestration in the United States: Estimates for 2005-14* at Table 1 (Nov. 23, 2018).
[25] EPA, *supra* n. 11, at Figure 2-1 (Feb. 19, 2019).
[26] Letter from Sierra Club, *et al.*, to Sally Jewell, U.S. Secretary of the Interior, 1 (Apr. 15, 2013) (on file with authors).
[27] Secretarial Order No. 3338, Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program (Jan. 15, 2016), at 1, 8.
[28] Secretarial Order No. 3348, Concerning the Federal Coal Moratorium (Mar. 29, 2017), at 1-2.

Zinke's order in federal court,[29] and a coalition of states followed suit soon thereafter.[30]

After lifting the moratorium, BLM resumed its long-term practice of offering leases for coal mining on federal lands. In November 2018, BLM announced a competitive sale offering for the Alton Coal Tract, which contains approximately 30.8 million tons of recoverable coal on over 2,100 acres southwest of Alton in Kane County, Utah.[31] Just two weeks ago, the Alton Coal Tract lease was approved, as BLM triumphantly announced that the lease "will extend the life of the existing mine by up to five years" and "further the Administration's energy dominance."[32] Coal mining on federal lands thus continues unabated despite the ongoing climate crisis.

B. Oil and Gas Development

As climate change draws nearer to a critical tipping point, oil and gas development in the United States has expanded dramatically. Between 2006 and 2015, domestic natural gas production increased by over 50 percent and domestic

[29] *Citizens for Clean Energy, et al v. U.S. Dep't of the Interior, et al.*, No. 4:17-cv-00030-BMM (D. Mont. Mar. 29, 2017).
[30] *State of California, et al v. U.S. Dep't of the Interior, et al*, No. 4:17-cv-00042-BMM (D. Mont. May 9, 2017).
[31] 83 Fed. Reg. 57,746 (Nov. 16, 2018).
[32] Press Release, Bureau of Land Mgmt., *The War on Coal Is Over: Interior Announces Historic Coal Projects in Utah* (Feb. 14, 2019), https://www.blm.gov/press-release/war-coal-over-interior-announces-historic-coal-projects-utah (last visited Feb. 28, 2019).

oil production by nearly 90 percent, with federal lands providing 21 percent of oil and 16 percent of natural gas in 2015.[33] Historically, federal leasing provided an even greater proportion of oil and gas development, often accounting for around one-third or more of all U.S. production.[34] Between 2006 and 2015, federal onshore oil production increased from 262,000 barrels per day to 455,000 barrels per day.[35] Federal offshore oil drilling in the Gulf of Mexico in 2016 was the highest level since at least 1980.[36]

The U.S. government is no mere passive onlooker to oil and gas development on its landholdings: it is an industry booster. In 2018, the Bureau of Land Management ("BLM") executed 28 leases covering about 1,412 parcels of land and 1.5 million acres—and in 2019, BLM plans to enter into another 28 oil and gas leases.[37] In touting BLM's record year, Department of Interior officials recently boasted of "the historic year for oil and gas," of the administration's "bold, new approach to energy development," of a "President who recognizes that conventional wisdom is meant to be challenged"[38]—presumably, the conventional

[33] Cong. Research Serv., *U.S. Crude Oil and Natural Gas Production in Federal and Nonfederal Areas* 3-4 (June 22, 2016).
[34] *Id.*
[35] Cong. Research Serv., *supra* n. 33 at 3.
[36] U.S. Energy Info. Admin., *Federal Offshore—Gulf of Mexico Field Production of Crude Oil*, https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFP3FM2&f=M (last visited Feb. 28, 2019).
[37] *Id.*
[38] *Id.*

wisdom that fossil fuel extraction and combustion must dramatically *decrease* if we can expect to avoid the worst impacts of climate change.

In addition to the CO_2 released when oil and gas are combusted, the extraction and transportation of these fuels emits enormous quantities of methane, a greenhouse gas that is 87 times more powerful at disrupting the climate than CO_2 over a twenty-year time horizon.[39] In 2017, the U.S. oil and gas sector emitted approximately 30 percent of total U.S. methane emissions.[40] After years of urging from states and environmental groups, BLM and EPA both adopted regulations in 2016 to limit methane emissions from oil and gas production.[41] Consistent with its other actions, the current administration has since taken steps to suspend[42] and eliminate essentially all of the substantive provisions of the BLM rule[43] and to delay[44] and substantially weaken[45] the EPA rule. Federal courts have already

[39] Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis*, Ch. 8, 714 (2013); Bradbury, et al., Dep't of Energy, Office of Energy Policy and Systems Analysis, *Greenhouse Gas Emissions and Fuel Use within the Natural Gas Supply Chain-Sankey Diagram Methodology* (July 2015), at 10, n. ‡‡‡ (July 2015).
[40] EPA, *supra* n. 11, at Table ES-2.
[41] 81 Fed. Reg. 35,824 (June 3, 2016) (EPA methane rule); 81 Fed. Reg. 83,008 (Nov. 18, 2016) (BLM waste prevention rule).
[42] 82 Fed. Reg. 58,050 (Dec. 8, 2017).
[43] 83 Fed. Reg. 49,184 (Sept. 28, 2018).
[44] 82 Fed. Reg. 25,730 (June 5, 2017) (retroactive 90-day stay of key rule requirements); 82 Fed. Reg. 27,645 (June 16, 2017) (proposed two-year stay); 82 Fed. Reg. 27,641 (June 16, 2017) (proposed 3-year stay).
[45] 83 Fed. Reg. 52,056 (Oct. 15, 2018).

rejected several of the administration's attempts to cripple these vital programs,[46] and a coalition of environmental groups—including Sierra Club—have taken legal action to oppose the administration's efforts.[47]

C. Motor Vehicles and Power Plants

Fossil fuel-fired power plants and vehicles account for the majority of U.S. greenhouse gas emissions.[48] The long history of efforts to impose federal emission limits on those sources is intertwined, with generally dismal results. More than a quarter-century after the United States ratified the United Nations Framework Convention on Climate Change, which seeks to "stabiliz[e] greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system,"[49] no federal standards are in effect to limit CO_2 pollution from our nation's vast fleet of existing coal, oil, and gas plants. Vehicles did finally become subject to federal greenhouse gas standards

[46] *Clean Air Council v. EPA*, 862 F.3d 1, 4-9 (D.C. Cir. 2017) (striking down EPA's 90-day administrative stay of key methane rule requirements); *State v. Bureau of Land Mgmt.*, 286 F. Supp. 3d 1054, 1075 (N.D. Cal. 2018) (preliminarily enjoining BLM from suspending the methane waste rule).

[47] *See* Pet. for Review, Doc. 1678132, *Clean Air Council v. Pruitt*, Case No. 17-1145 (June 5, 2017); Complaint for Declaratory and Injunctive Relief, Doc. 1, *Sierra Club v. Zinke*, Case 3:17-cv-07187-WHO (N.D. Cal. Dec. 19, 2017); Complaint for Declaratory and Injunctive Relief, Doc. 1, *Sierra Club v. Zinke*, Case No. 3:18-cv-5984 (N.D. Cal. Sept. 28, 2018).

[48] EPA, *supra* n. 11, at ES-2 (in 2015, electric power and transportation sectors accounted for 67 percent of U.S. CO_2 emissions and 55 percent of total greenhouse gas emissions).

[49] United Nations Framework Convention on Climate Change art. 2, June 12, 1992, S. Treaty Doc No. 102-38, 1771 U.N.T.S. 107.

a dozen years after environmental and business groups petitioned the EPA, but overall emissions from the sector have not declined and the current administration has proposed substantially weakening those standards.[50]

i. Motor Vehicles

The saga of federal greenhouse gas standards for motor vehicles, which now spans two decades and four presidential administrations, is replete with prolonged delays, marginal progress, and leaps backward. In 1998, the Clinton EPA concluded that greenhouse gases were subject to the Clean Air Act, yet declined to regulate those emissions.[51] In 1999, numerous organizations petitioned EPA to set greenhouse gas standards for motor vehicles under section 202(a) of the Clean Air Act, 42 U.S.C. § 7521(a), and when EPA failed to respond, Sierra Club and others sued.[52] Under the Bush Administration, EPA backtracked, denying the petition and disavowing its authority to regulate under the Clean Air Act.[53] After lengthy litigation, the Supreme Court decided *Massachusetts v. EPA* in 2007, holding that greenhouse gases are air pollutants under the Clean Air Act and affirming EPA's

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[50] *See* EPA, Sources of Greenhouse Gas Emissions, Transportation, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#transportation (last visited Feb. 27, 2019).

[51] *See* Memorandum from Jonathan Cannon to Administrator Carol Browner on EPA's Authority to Regulate Pollutants Emitted by Electric Power Generation Sources (Apr. 10, 1998); *see also Massachusetts v. EPA*, 549 U.S. 497, 510-11 (2007) (discussing Cannon memo).

[52] *Int'l Ctr. for Tech. Assessment v. Whitman*, No. 02-cv-02376-RBW (D.D.C. Dec. 5, 2002).

[53] 68 Fed. Reg. 52,922, 52,925 (Sep. 8, 2003) (denying petition for rulemaking).

authority and responsibility under the Clean Air Act to address those pollutants. 549 U.S. at 528-29, 532-33; 49 U.S.C. § 32902(a).

Despite the holding of *Massachusetts*, the Bush Administration took no action to control greenhouse gas emissions from motor vehicles. The following year, EPA denied California's request for a waiver from federal preemption under the Clean Air Act, approval of which would have allowed California to adopt its own more stringent vehicle standards for greenhouse gases.[54] Along with other states and numerous environmental groups, including the Sierra Club, California challenged EPA's denial in the D.C. Circuit.[55]

After another change in administrations, the Obama EPA finally determined in 2009 that greenhouse gas emissions endanger the public health and welfare,[56] triggering the agency's obligation to issue greenhouse gas standards for vehicles. In the following years, EPA undertook joint rulemakings with the Department of Transportation ("DOT") and issued greenhouse gas emission standards for light-duty vehicles for 2012-2016 and a subsequent set of standards for 2017-2025.[57] EPA also committed to conduct a mid-term evaluation of the 2022-2025 standards

[54] 73 Fed. Reg. 12,156 (Mar. 6, 2008).
[55] *California v. EPA*, No. 08-1178 (D.C. Cir. 2008).
[56] 74 Fed. Reg. 66,496 (Dec. 15, 2009) (Endangerment Finding).
[57] 75 Fed. Reg. 25,325 (May 7, 2010) (issuing 2012-2016 standards); 77 Fed. Reg. 62,624 (Oct. 15, 2012) (issuing 2017-2025 standards).

no later than April 1, 2018.[58] Upon completing its review in January 2017, the agency concluded that the standards remain appropriate and that automakers are well positioned to meet them at lower costs than previously estimated.[59] EPA also approved California's waiver request for both the 2012-2016 and 2017-2025 sets of standards,[60] and the state promulgated regulations for these sources and established a zero-emission vehicle mandate.[61]

In 2017, the administration changed again, and the Trump EPA took swift action to reverse the modest progress toward reducing vehicle emissions. That April, EPA arbitrarily withdrew its January 2017 decision affirming the 2022-2025 standards, citing no record support or justification for its change in position.[62] Sierra Club and others challenged EPA's reversal of the mid-term evaluation determination in the D.C. Circuit.[63] In August 2018, EPA and DOT proposed to

[58] 77 Fed. Reg. 62,784 (Oct. 15, 2012); 40 C.F.R. § 86.1818-12(h).
[59] EPA, *Final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation*, EPA-420-R-17-001, at 3-5, 18-24 (Jan. 2017), *available at* https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100QQ91.pdf
[60] 74 Fed. Reg. 32,744 (July 8, 2009) (approving waiver for 2012-2016 standards); 78 Fed. Reg. 2112 (Jan. 9, 2013) (extending waiver through 2025 and approving California's zero-emission vehicle program).
[61] *See* California Air Resources Board, Advanced Clean Cars Program, https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program (last visited Feb. 27, 2019) (providing overview of central features of California's regulatory program to reduce emissions from vehicles).
[62] 83 Fed. Reg. 16,077 (Apr. 13, 2018).
[63] *California v. EPA*, No. No. 18-1114 (D.C. Cir. 2018).

dramatically weaken the 2021-2025 vehicle standards,[64] offering as their "preferred alternative" a policy that would freeze emissions standards at 2020 levels. This approach would erase all further year-to-year emissions reductions currently required for subsequent model years.[65]

To make matters worse, EPA also proposed revoking California's current waiver starting in 2021.[66] Even while California and other states[67] seek to adopt more stringent vehicle standards to mitigate the impacts of climate change, the federal government has taken *active steps to prevent them from doing so,* proposing to strip them of their previously-granted authority. This is "affirmative conduct" reflecting "deliberate indifference to a known or obvious danger." *See Pauluk*, 836 F.3d at 1122 (internal quotations omitted).

ii. Power Plants

In parallel with the vehicles litigation, many states and environmental groups long sought Clean Air Act standards for power plant CO_2 pollution. In 2002, Sierra Club and others sent a notice of intent and in 2003 filed a lawsuit to force EPA to update the power plant performance standards to include CO_2.[68] EPA issued a final

[64] 83 Fed. Reg. 42,986 (Aug. 24, 2018).
[65] *Id.* at 42,995.
[66] *Id.* at 43,232-43,253.
[67] Under 42 U.S.C. § 7543(b), California may seek a preemption waiver to adopt its separate vehicle emission standards. Under 42 U.S.C. § 7507, other states may adopt those California standards.
[68] *Save Our Children's Earth Found. v. EPA*, No. 03-cv-00770-CW

rule but refused to include CO_2 standards.[69] That refusal necessitated a second lawsuit, this time challenging the final rule, which the D.C. Circuit remanded to EPA for "further proceedings in light of *Massachusetts*."[70]

In 2010, after three more years passed in which EPA failed to act, states and environmental groups yet again demanded that EPA comply with the remand and set CO_2 standards for power plants. In the resulting settlement, EPA agreed to propose regulations and take final action by May 2012.[71] EPA missed that deadline. Over three years later, it finally promulgated the Clean Power Plan, a regulatory program to reduce emissions from existing power plants starting in 2022—twenty years after Sierra Club first sent its notice of intent to sue.[72]

Immediately thereafter, states and industry challenged the final rule, and the Supreme Court issued a stay pending litigation in February 2016.[73] While that litigation has remained in abeyance since April 2017, EPA has wasted little time in proposing to repeal the Clean Power Plan and replace it with the so-called "Affordable Clean Energy" ("ACE") rule.[74] The ACE rule would leave natural

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(N.D. Cal. Feb. 21, 2003); Proposed Consent Decree, Clean Air Act Citizen Suit, 68 Fed. Reg. 65,699 (Nov. 21, 2003); Consent Decree, *Save Our Children's Earth Found.*, No. 03-cv-00770-CW (Feb. 9, 2004).

[69] 71 Fed. Reg. 9,866, 9,869 (Feb. 27, 2006)

[70] Order, *New York v. EPA*, No. 06-1322 (D.C. Cir. Sept. 24, 2007).

[71] 75 Fed. Reg. 82,392 (Dec. 30, 2010) (proposed settlement agreement).

[72] 80 Fed. Reg. 64,662 (Oct. 23, 2015) (final Clean Power Plan).

[73] Order in Pending Case, *West Virginia v. EPA*, No. 15A773 (2016).

[74] 83 Fed. Reg. 44,746 (Aug. 31, 2018).

gas- and oil-fired power plants entirely unregulated and would do virtually nothing to limit greenhouse gas emissions from existing coal plants. It would merely task states with *considering* (and not even *requiring*) extremely modest efficiency improvements in issuing performance standards for existing coal plants,[75] establishing no emission reduction threshold that state-issued implementation plans must achieve to receive federal approval.[76] According to one recent study, the ACE rule could actually *increase* CO_2 emissions at close to 30 percent of operating plants in 2030 compared to no regulation at all, and could increase power-sector emissions in 19 states plus the District of Columbia in 2030.[77]

In December 2018, EPA likewise proposed to eviscerate the carbon pollution standards for new coal plants.[78] Whereas the agency finalized a rule in 2015 that reflected the use of advanced technology to reduce emissions at new units,[79] EPA now seeks to relax those standards by up to 50 percent and to

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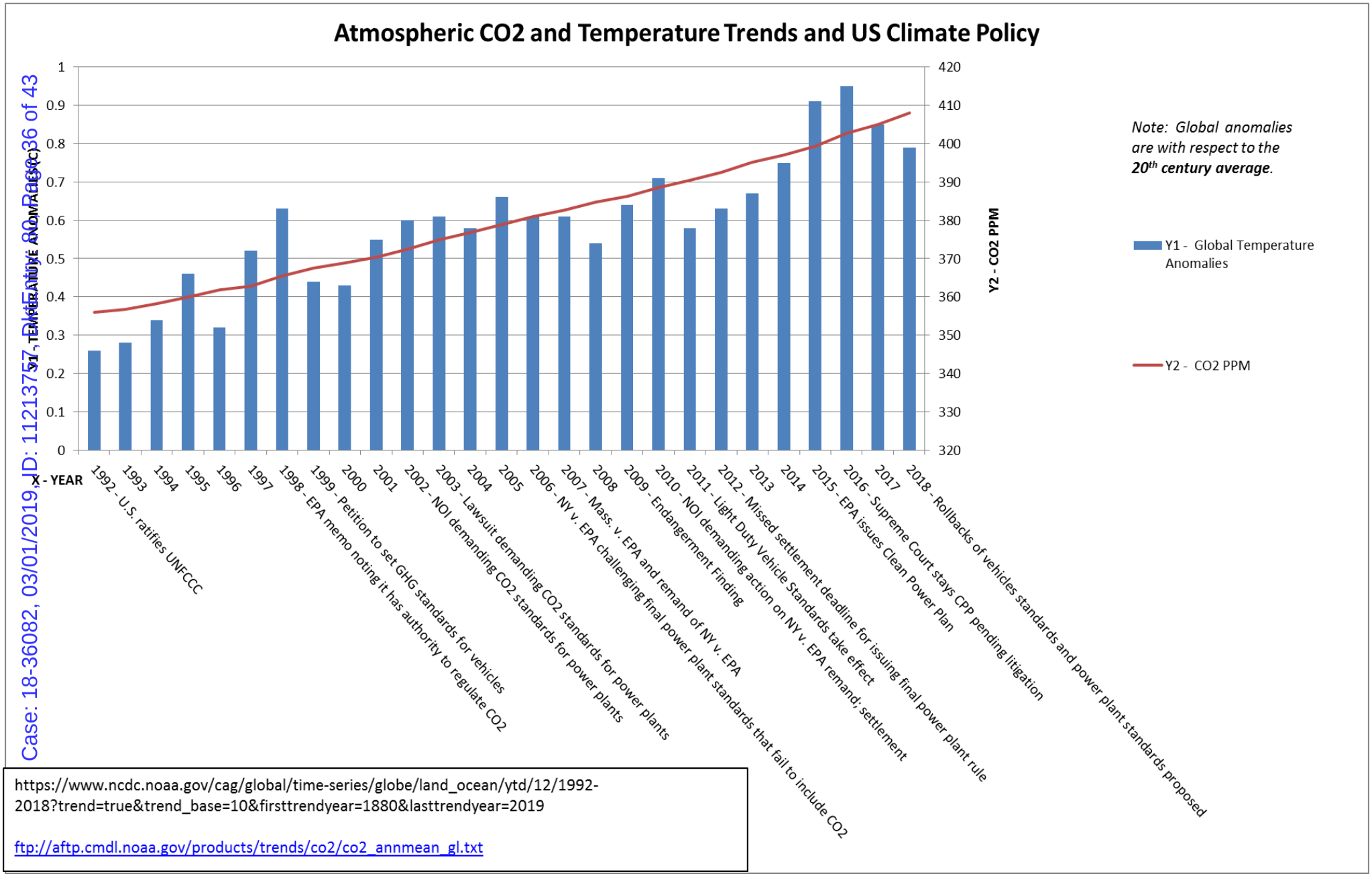
[75] *See* 83 Fed. Reg. 44,809 (Aug. 31, 2018), Proposed § 60.5740a(1) (requiring states to undertake "*an evaluation of the applicability* of each of the following heat rate improvements to each affected [power plant]…. ") (emphasis added).
[76] Niina Heikkinen and Nick Sobczyk, *Trump kicks off next big climate battle*, E&E News (Aug. 21, 2018) (quoting EPA Assistant Administrator for Air and Radiation Bill Wehrum as affirming that, under the ACE Proposal, "[t]here is no lower limit, there is no number below which states can't go. That's not how this program works.").
[77] Amelia Keyes, et al., *The Affordable Clean Energy Rule and the Impact of Emissions Rebound on Carbon Dioxide and Criteria Air Pollutant Emissions*, Environmental Research Letters, 5 (published online Jan. 14, 2019).
[78] 83 Fed. Reg. 65,424 (Dec. 20, 2018).
[79] 80 Fed. Reg. 64,510 (Oct. 23, 2015).

effectively permit coal plant operators to rely on outdated technology for any new units that might be built, despite the worldwide availability of much more efficient plant designs.

Millennials, such as some of the Plaintiffs in this lawsuit, have grown to adulthood during the pursuit of greenhouse gas limits on vehicles and power plants while the planet keeps getting hotter. This stark reality is presented in the chart below, which plots the above-mentioned federal actions (and inactions) while at the same time depicting the precipitously increasing global temperature and atmospheric CO_2 levels. As this chart shows in stark relief, justice delayed on climate action is truly justice denied.



https://www.ncdc.noaa.gov/cag/global/time-series/globe/land_ocean/ytd/12/1992-2018?trend=true&trend_base=10&firsttrendyear=1880&lasttrendyear=2019

ftp://aftp.cmdl.noaa.gov/products/trends/co2/co2_annmean_gl.txt

D. Social Cost of Greenhouse Gases

Although it had known for decades that CO_2 emissions harm society, the federal government lacked a consistent, scientifically-grounded method to quantify this harm until 2010, when an interagency working group developed a formal estimate of the social cost of carbon ("SCC").[80] This action was the result of a Ninth Circuit decision holding that the National Highway Traffic Safety Administration acted unlawfully by failing to monetize the costs of the CO_2 emissions associated with its fuel economy standards for automobiles. *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1198-1203 (9th Cir. 2008). The working group subsequently updated its estimates to reflect research and modeling improvements and to evaluate the social costs of additional greenhouse gases.[81] Sierra Club and others have described this metric as significantly underestimating the true social cost of greenhouse gases for a number of reasons, for instance, by undervaluing the interests of future generations. It is nevertheless the best tool of its kind developed thus far in the United States. Federal agencies have used this metric to evaluate and monetize the greenhouse gas impacts in over 80 regulatory proceedings and environmental impact

[80] Interagency Working Group on Social Cost of Carbon ("IWG"), United States Government, *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866* (Feb. 2010).
[81] *See, e.g.*, IWG, *Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866* (Aug. 2016).

analyses,[82] and multiple court decisions have affirmed it as a valuable—or, some cases, legally mandatory—tool for those actions.[83]

In keeping with its pattern of aggressive hostility to any policy that would restrain the use of fossil fuels and reduce greenhouse gas emissions, the current administration disbanded the working group in March 2017, withdrew all of its work product, and disavowed its social cost metrics. In their stead, the administration has been using an "interim domestic" social cost indicator that simply eviscerates the earlier metrics, diminishing the monetized impact of greenhouse gas emission by approximately 90 to 95 percent compared to the working group's already-low estimates.[84] The administration achieves this feat of

[82] Peter Howard and Jason Schwartz, *Think Global: International Reciprocity As Justification for A Global Social Cost of Carbon*, 42 Colum. J. Envtl. L. 203, App. A (2017).

[83] *See, e.g., Zero Zone, Inc. v. U.S. Dep't of Energy*, 832 F.3d 654, 677 (7th Cir. 2016) (upholding Department of Energy's use of SCC in rulemaking proceeding against industry challenge); *Sierra Club v. Fed. Energy Regulatory Comm'n*, 867 F.3d 1357, 1375 (D.C. Cir. 2017) (directing FERC to quantify downstream greenhouse gas impacts of pipeline project and justify any decision not to use federal SCC values); *Montana Envt'l Info. Ctr. v. U.S. Office of Surface Mining*, 274 F.Supp.3d 1074, 1094-99 (D. Mont. 2017) (rejecting agency's environmental assessment for not using federal SCC estimates in evaluating proposed mine expansion impacts).

[84] For instance, the working group's SCC values for 2020 emissions range from $14 to $140 per metric ton (updated to 2016 dollars), while the "interim domestic" values range from $1 to $7 per metric ton (2016 dollars). *Compare* IWG, *supra* n. 81, at Table A1, with EPA, *Regulatory Impact Analysis for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations;*

analytical vandalism by 1.) pretending that domestic greenhouse gas emissions have no impact outside U.S. borders and 2.) monetarily discounting future climate impacts of greenhouse gas emissions in a way that ignores basic economic facts and unjustly shortchanges the needs of today's youth and future generations.[85]

In practice, the "interim domestic" social cost metric permits federal agencies to proceed with regulatory actions—including increased coal, oil and gas leasing and regulatory rollbacks, as discussed above—while grossly downplaying the climate impacts of those actions. Despite unflagging advocacy from Sierra Club and others in dozens of matters,[86] the federal government has chosen to ignore the gaping flaws in its "interim domestic" values, continuing to lease huge amounts of land for fossil fuel development and to roll back climate safeguards without properly taking stock (or informing the public) of the true climate effects of those decisions.

Revisions to New Source Review Program, EPA-452/R-18-006, Table 4-1 (Aug. 2018).

[85] *See, e.g.*, Inst. for Policy Integrity, et al., *Comments on Flawed Monetization of Forgone Benefits in the Proposed Reconsideration of Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources* (Dec. 17, 2018), at 7-22 (discussing need to account for global impacts) and 22-29 (discussing appropriate discount rates).

[86] *See, e.g.*, *id.*

E. Energy Efficiency

Energy efficiency savings are the lowest-cost way of reducing greenhouse gas emissions, and many of these opportunities remain untapped in the United States. The Energy Policy and Conservation Act, 42 U.S.C. § 6295(2), expressly authorizes the Department of Energy ("DOE") to issue or revise energy conservation standards for appliances. Unfortunately, instead of exercising this authority, the current administration has taken active measures to stymie earlier efforts to improve energy efficiency. For example, after the change in presidential administrations in 2017, the DOE refused to formally publish and enforce four sets of energy efficiency standards finalized by the agency in December 2016. These standards, which cover air compressors, uninterruptible power supplies, commercial packaged boilers, and portable air conditioners, would significantly reduce energy consumption and curtail CO_2 emissions by close to 100 million metric tons over a thirty-year period. *Nat. Res. Def. Council, Inc. v. Perry*, 302 F. Supp. 3d 1094, 1096 (N.D. Cal. 2018). Sierra Club and others filed federal lawsuits opposing the delay, and litigation is now pending before this court.[87]

Similarly, in just the last month, DOE proposed to withdraw two final rules published on January 19, 2017, that would extend its energy efficiency standards to

[87] *Nat. Res. Def. Council, Inc., et al. v. Perry, et al.*, No. 18-15380.

certain categories of lamps previously exempted from regulation.[88] According to the Lawrence Berkeley National Laboratory, the 2017 rules would reduce CO_2 emissions by 540 million tons by 2030, achieving 18 percent of the previous administration's goal of reducing 3 billion metric tons of CO_2 through efficiency standards for appliances and federal buildings.[89] The Department issued its proposed rollback after holding confidential discussions with the National Electrical Manufacturers Association, an industry trade group representing lighting manufacturers that had previous challenged both rules in the Fourth Circuit.[90] Other stakeholders, such as Sierra Club and other environmental groups, were excluded from these discussions.

CONCLUSION

For decades, despite full awareness of the climate crisis, the United States federal government has pursued policies to encourage and expand the combustion of fossil fuels in this country. In doing so, the government has willfully endangered the lives and well-being of Plaintiffs. It has thus violated their Fifth Amendment

[88] 82 Fed. Reg. 7,276 (Jan. 19, 2017) (first final rule); 82 Fed. Reg. 7,322 (Jan. 19, 2017) (second final rule); 84 Fed. Reg. 3,120 (Feb. 11, 2019) (proposed withdrawal).

[89] Colleen L.S. Kantner, et al., Lawrence Berkeley Nat'l Lab., *Impact of the EISA 2007 Energy Efficiency Standard on General Service Lamps*, 34 (Jan. 2017), *available at* https://www.eenews.net/assets/2017/05/04/document_gw_04.pdf.

[90] *See* Pet'r's Unopposed Mot. to Hold in Abeyance at 1-2, *Nat'l Elec. Mfrs. Ass'n v. U.S. Dep't of Energy*, No. 17-1341 (4th Cir. May 4, 2017) (referring to "informal confidential discussion" between Association and government to negotiate resolution of claims).

rights to a sustainable climate and to be free from a state-created climate danger. The Court should thus deny the appeal and permit the case to go to trial.

Dated: March 1, 2019

/s/ Joanne Spalding
Joanne Spalding
CA Bar No. 169560
Sierra Club
2101 Webster Street Suite 1300
Oakland California 94612
Phone: (415) 977-5725
Joanne.Spalding@sierraclub.org

Alejandra Núñez
CA Bar No. 268958
Andres Restrepo
DC Bar No. 999544
Sierra Club
50 F Street NW, Eighth Floor
Washington, DC 20001
Phone: (215) 298-0335
alejandra.nunez@sierraclub.org
andres.restrepo@sierraclub.org

Attorneys for Sierra Club

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