States of California, New Mexico, New York, and Washington

October 5, 2021

Via Email

Thomas Huebner
National Coal Program Review
U.S. Bureau of Land Management
Wyoming State Office
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RE: **Comments on the U.S. Bureau of Land Management's Notice of Intent to Conduct a Review of the Federal Coal Leasing Program, 86 Fed. Reg. 46,873 (Aug. 20, 2021)**

Dear Mr. Huebner:

The undersigned State Attorneys General of California, New Mexico, New York, and Washington (the "Attorneys General") respectfully submit these comments on the U.S. Bureau of Land Management's ("BLM") Notice of Intent to Conduct a Review of the Federal Coal Leasing Program, 86 Fed. Reg. 46,873 (Aug. 20, 2021). Since 2017, the states represented by the Attorneys General (the "States") have been actively involved in efforts to ensure that BLM undertakes such a review to fully consider the environmental impacts of federal coal leasing activities, which have not been comprehensively evaluated since 1979, and to ensure that the program is in the public interest and achieving a fair return for the nation. *See Citizens for Clean Energy v. U.S. Dep't of the Interior*, 384 F. Supp. 3d 1264 (D. Mont. 2019). Accordingly, the Attorneys General welcome the opportunity to assist BLM in this review and have a strong interest in ensuring that BLM follows through with much needed reforms to the federal coal leasing program.

As the latest scientific research confirms, climate change "is already affecting every inhabited region across the globe."[1] According to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change ("IPCC"), many of the effects of climate change due to past and future greenhouse gas ("GHG") emissions "are irreversible for centuries to millennia," especially changes in ocean acidification, melting ice sheets, droughts, and increasing sea levels.[2] As temperatures continue to rise, these impacts are expected to increase

[1] Intergovernmental Panel on Climate Change, *AR6 Climate Change 2021: The Physical Science Basis* (Aug. 7, 2021), *available at:* https://www.ipcc.ch/report/ar6/wg1/#SPM.
[2] *Id.*

in both intensity and frequency.[3] The IPCC has further stated that to stabilize human-induced global temperature increase at any level, humankind *must* reach net zero anthropogenic carbon dioxide ("CO_2") emissions by 2050.[4] A carbon budget would thereafter establish the amount of CO_2 that could be emitted while keeping global warming rates below a certain level.[5] Based on the latest research, it is now recognized that a majority of the Earth's unextracted fossil fuel reserves—including 90 percent of coal—must remain in the ground in order to achieve these goals.[6]

The States have long been leaders in pursuing policies and innovations to reduce greenhouse gas emissions and thereby mitigate the harmful impacts of climate change. Notwithstanding these ongoing efforts, climate change has increasingly and dramatically affected the States in recent years. In the past two months alone, California has experienced the severe impacts of yet another record-breaking fire season, while Hurricane Ida left a path of destruction from the Gulf Coast to New York—events that are directly connected to our warming planet. Consequently, the States have a substantial interest in ensuring that the federal coal leasing program, which has been estimated to account for 11 percent of total U.S. GHG emissions,[7] does not undermine these efforts.

In addition, it is unacceptable that the environmental justice impacts of the federal coal leasing program, including both direct impacts from coal mining, transport, warehousing, and export, as well as indirect impacts resulting from climate change, have never been analyzed or accounted for. For example, the transport of coal in open-top train cars across the western U.S. negatively affects local air quality due to the release of particulate matter pollution and toxic materials in low-income and minority communities that are already disproportionately impacted by environmental pollution. As coal is prepared for export at west coast ports, workers and surrounding communities suffer public health consequences as coal dust escapes into the air. Further adding to these burdens, climate change is now imposing increasing and disproportionate environmental harms on low-income communities, communities of color, and Tribal and indigenous communities, including impacts related to air quality, heat waves, and flooding.[8] Such impacts must be considered prior to moving forward with any new federal coal leasing.

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[3] *Id*.
[4] *Id.*
[5] *Id.*
[6] Welsby, D.; Price, J.; Pye, S.; *et al*., *Unextractable fossil fuels in a 1.5 °C world*, Nature 597, 230–234 (2021), *available at:* https://doi.org/10.1038/s41586-021-03821-8.
[7] BLM, *Federal Coal Program: Programmatic Environmental Impact Statement—Scoping Report* (Jan. 2017) ("Scoping Report") at 5–31.
[8] *See, e.g.,* U.S. Environmental Protection Agency, *Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts* (Sept. 2021) ("EPA Climate Report"), *available at:* https://www.epa.gov/cira/social-vulnerability-report; U.S. Environmental Protection Agency, *Climate Change, Health, & Environmental Justice* (May 2016), *available at:* https://www.cmu.edu/steinbrenner/EPA%20Factsheets/ej-health-climate-change.pdf; U.S.

Furthermore, BLM has at least two distinct legal obligations to ensure that the fair market value it charges for leasing reflects the actual costs of coal production, so that the public receives appropriate compensation when these resources are extracted and produced from our public lands. For many years and continuing today, the outdated structure for the management of federal coal has artificially depressed the amount of royalties received from the development of these resources, leaving the States to bear the direct and indirect costs and impacts of this program without adequate and required compensation.

The Attorneys General commend BLM for initiating this review and encourage the agency to complete the actions necessary to improve and modernize the federal coal leasing program to address the program's deficiencies and to bolster our nation's climate and environmental justice goals.

BACKGROUND

I. Statutory Background.

A. Mineral Leasing Act.

The Mineral Leasing Act ("MLA"), 30 U.S.C. § 181 *et seq.*, authorizes and governs the leasing of public lands for the production of coal and other minerals. Pursuant to the MLA, the Secretary of the Interior is authorized—but not required—to lease coal on public lands "as he finds appropriate and in the public interest," provided that every sale is made by competitive bid and provides the public with fair market value. 30 U.S.C. § 201(a)(1). The MLA further requires that the Secretary only lease coal in a manner that balances "long-term benefits to the public against short-term benefits." *Id*. § 201(a)(3). BLM is the federal agency within the Department of the Interior (the "Department") tasked with administering the federal coal leasing program.

B. Federal Land Policy and Management Act.

The Federal Land Policy and Management Act ("FLPMA"), 43 U.S.C. § 1701 *et seq*., establishes the broad framework under which BLM manages public lands for multiple uses in a way "that will best meet the present and future needs of the American people." 43 U.S.C. § 1702(c); *see also id*. § 1712(c)(7) (in developing land use plans, BLM must "weigh long-term benefits to the public against short-term benefits"). Under FLPMA, Congress declared that it is the policy of the United States that "public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values." *Id*. § 1701(a)(8). FLPMA also requires that BLM "receive fair market value of the use of the public lands and their resources." *Id*. § 1701(a)(9).

Global Change Research Program, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*, ch. 9: Populations of Concern (Crimmins, A., *et al*., eds) (2016), *available at:* https://health2016.globalchange.gov/.

C. National Environmental Policy Act.

The National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 *et seq*., "is our basic national charter for protection of the environment." *Center for Biological Diversity v. Bernhardt*, 982 F.3d 723, 734 (9th Cir. 2020) (citation omitted). NEPA has two fundamental purposes: (1) to guarantee that agencies take a "hard look" at the consequences of their actions before the actions occur by ensuring that "the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts," and (2) to ensure that "the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349–50 (1989).

NEPA requires the preparation of a detailed environmental impact statement ("EIS") for any "major federal action significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). In conducting this analysis, an agency is required to take a "hard look" at the direct, indirect, and cumulative impacts of its proposed action. *Idaho Sporting Cong. v. Rittenhouse*, 305 F.3d 957, 973 (9th Cir. 2002). As relevant here, the Ninth Circuit Court of Appeals has found that "[t]he impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct." *Center for Biological Diversity v. Nat'l Highway Traffic Safety Admin*., 538 F.3d 1172, 1217 (9th Cir. 2008).

The U.S. Supreme Court has found that a programmatic EIS for the federal coal leasing program is required by NEPA because the program "is a coherent plan of national scope, and its adoption surely has significant environmental consequences." *Kleppe v. Sierra Club*, 427 U.S. 390, 400 (1976). Moreover, even where an EIS has already been prepared, agencies have a duty to supplement that analysis when "[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R. § 1502.9(d)(1)(ii); *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 372–74 (1989) (NEPA requires "that agencies take a 'hard look' at the environmental effects of their planned action, even after a proposal has received initial approval").

II. The Federal Coal Leasing Program.

A. Program Background.

BLM manages coal resources on 700 million acres of mineral estate owned or otherwise administered by the federal government. *See* 86 Fed. Reg. at 46,874. During fiscal year 2020, BLM administered 287 coal leases encompassing approximately 437,000 acres in 11 states, with the majority of production coming from the Powder River Basin in Montana and Wyoming. According to BLM data, there are 21 federal coal leases encompassing 42,000 acres in New Mexico. The majority of federal coal is used to generate electricity domestically, accounting for an estimated 14 percent of the nation's electricity and 11 percent of total U.S. greenhouse gas

emissions.[9] Approximately 8 percent of all U.S. coal is exported, and many coal companies are attempting to expand exports in the face of decreasing domestic demand, including through proposed terminals in California and Washington.[10]

BLM manages the federal coal leasing program pursuant to regulations and a programmatic environmental impact statement ("PEIS") that were originally adopted 42 years ago, at a time when the threat of climate change was not fully understood and market conditions, infrastructure development, scientific understanding, and national priorities were dramatically different. *See* 44 Fed. Reg. 42,584 (July 19, 1979). The first PEIS for the federal coal program, adopted in 1975, was found to be unlawful because it failed to adequately discuss, or allow comment on, a new coal leasing system and did not sufficiently consider alternatives. *Nat. Res. Def. Council v. Hughes*, 437 F. Supp. 981, 989–91 (D.D.C. 1977). Separately, the U.S. Supreme Court recognized, in a case challenging the lack of NEPA review for the development of coal in the Northern Great Plains Region, that the federal coal program required a national-level PEIS because it "is a coherent plan of national scope" with "significant environmental consequences." *Kleppe,* 427 U.S. at 400. Around the same time, Congress passed the Federal Coal Leasing Amendments Act of 1975, Pub. L. No. 94-377, 90 Stat. 1083 (1976), which updated sections of the MLA related to fair market value and speculation.

These changes led to the preparation of a new PEIS in 1979, which analyzed seven alternatives for the federal coal program, including the preferred alternative that was ultimately chosen and largely remains in place today. This program sets forth two primary leasing procedures.[11] First, under the "regional" leasing procedure, BLM leases tracts based on recommendations from the ten regional coal teams. Second, under the "leasing by application" procedure, the process is initiated by industry, which identifies where and how much coal it wants to lease. The 1979 PEIS was approximately 1,300 pages long but contained almost no discussion of climate change. The PEIS was last revisited in 1985, when BLM updated its coal leasing regulations and completed a limited supplement in response to recommendations from the Commission on Fair Market Value Policy for Federal Coal Leasing, which addressed continued irregularities in the leasing process.[12]

Between 1987 and 1990, all six certified coal-producing regions were "decertified" by BLM, such that all federal coal leasing since 1990 has been the result of industry application.[13] During the 1990s and 2000s, the Powder River Basin became the primary area of federal coal leasing and production, and federal coal commanded a much larger share of national coal production, with the Basin currently accounting for 42% of total U.S. production.[14]

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[9] Scoping Report at ES-1, 5-31.
[10] *Id*. at 5-29.
[11] *Id*. at 5-7.
[12] *Id*. at 5-6 – 5-7.
[13] *Id*. at 5-7.
[14] *Id*. at 5-8, 5-11.

B. Recent Criticism of the Federal Coal Leasing Program.

In recent years, Congress and government watchdogs have criticized BLM's outdated structure for management of federal coal. Addressing the statutory "fair market value" leasing standard under the MLA, the Department's Office of the Inspector General in 2013 issued a report concluding that "BLM faces significant challenges in the areas of coal leasing and mine inspection and enforcement," and that its management resulted in millions of dollars in lost royalties to the federal treasury because the agency was "not receiving the full, fair market value for the leases."[15] The Inspector General made several recommendations necessary to "enhance [BLM's] coal management program significantly" and recover these lost revenues.

Also in 2013, the Government Accountability Office ("GAO") concluded that BLM had failed to ensure mining companies pay fair market value for leasing federal coal.[16] GAO determined that since 1990, "most" federal coal leases were not sold competitively and had only a single bidder. In particular, of the 107 tracts that were leased between 1990 and 2012, "sales for 96 (about 90 percent) involved a single bidder … which was generally the company that submitted the lease application. More than 90 percent of the lease applications BLM received were for maintenance tracts used to extend the life of an existing mine or to expand that mine's annual production."[17]

C. Secretarial Order 3338.

On March 17, 2015, due to these concerns and others raised by members of Congress, interested stakeholders, and the public, then-Secretary of the Interior Sally Jewell called for "an honest and open conversation about modernizing the Federal coal program."[18] BLM subsequently held listening sessions around the country that summer, heard from 289 individuals during the sessions, and received over 94,000 written comments.[19] The oral and written comments reflected several recurring concerns, in particular: that American taxpayers are not receiving a fair return for the leasing of public coal resources; that the federal coal program conflicts with the country's national climate goals; and that the structure of the federal coal program was not appropriate for current market conditions, given how implementation of the federal leasing program affects current and future coal markets, coal-dependent communities and companies, and the reclamation of mined lands.

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[15] Off. of the Inspector Gen., U.S. Dep't of the Interior, *Coal Management Program, U.S. Department of the Interior* (June 2013), *available at:* https://www.doioig.gov/sites/default/files/2021-migration/CR-EV-BLM-0001-2012Public.pdf.
[16] U.S. Gov't Accountability Off., GAO-14-140, *Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information* (Dec. 2013), *available at:* http://www.gao.gov/products/GAO-14-140.
[17] *Id*. at 16.
[18] Scoping Report at ES-3.
[19] *Id*.

On January 15, 2016, Secretary Jewell issued Secretarial Order 3338, commencing a process to prepare a new programmatic EIS for the federal coal program and putting in place a moratorium on most new leasing activity until that review was complete. *See* Secretarial Order No. 3338, Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program (Jan. 15, 2016) (the "Jewell Order"). The Jewell Order cited BLM's legal obligations "to ensure conservation of the public lands, the protection of their scientific, historic, and environmental values, and compliance with applicable environmental laws" as well as the agency's "statutory duty to ensure a fair return to the taxpayer." *Id*., Section 4. In determining that it was appropriate to suspend the issuance of new federal coal leases while BLM undertook a comprehensive review, the Secretary explained:

> Lease sales and lease modifications result in lease terms of 20 years and for so long thereafter as coal is produced in commercial quantities. Continuing to conduct lease sales or approve lease modifications during this programmatic review risks locking in for decades the future development of large quantities of coal under current rates and terms that the PEIS may ultimately determine to be less than optimal.

Id., Section 5.

The Secretary also stated that "[n]umerous scientific studies" since the program's 1979 PEIS was last updated "indicate that reducing [greenhouse] emissions from coal use worldwide is critical to addressing climate change." *Id*., Section 2.b.ii. Thus, the Secretary determined that "a more comprehensive, programmatic review [was] in order," which "should examine how best to assess the climate impacts of continued Federal coal production and combustion and how to address those impacts in the management of the program to meet both the Nation's energy needs and its climate goals." *Id*., Section 4.

In March 2016, BLM began a scoping process under NEPA by issuing a Notice of Intent to Prepare a Programmatic Environmental Impact Statement to Review the Federal Coal Program and to Conduct Public Scoping Meetings. 81 Fed. Reg. 17,720 (Mar. 30, 2016). During the spring and summer of 2016, BLM accepted more than 214,000 public comments and held six public meetings in various cities regarding its review of the federal coal program.[20]

On January 11, 2017, BLM released its Scoping Report, which found that "modernization of the Federal coal program is warranted."[21] BLM stated that "[t]his modernization should focus on ensuring a fair return to Americans for the sale of their public coal resources; addressing the coal program's impact on the challenge of climate change; and improving the structure and efficiency of the coal program in light of current market conditions, including impacts on communities."[22] As BLM summarized in the Scoping Report:

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[20] Scoping Report at ES-3.
[21] *Id.* at ES-4.
[22] *Id*.

> The last time the Federal coal program received a comprehensive review was in the mid-1980s, and most of the existing regulations were promulgated in the late 1970s and have been only slightly modified since that time. The direct, indirect, and cumulative impacts of the Federal coal program have not been fully analyzed under the National Environmental Policy Act (NEPA) in over thirty years.[23]

Consequently, BLM stated that it would move forward with the preparation of a draft programmatic EIS by January 2018 regarding the modernization of the federal coal program, and issue a final PEIS by January 2019.[24]

D. Secretarial Order 3348.

However, following the change in administration, the successor to Secretary Jewell, Secretary of the Interior Ryan Zinke, issued Secretarial Order 3348, entitled "Concerning the Federal Coal Moratorium" (Mar. 29, 2017) (the "Zinke Order"), which revoked the Jewell Order, restarted the federal coal program, and terminated the environmental review process. The States challenged this action in federal district court in Montana, alleging that BLM's decision to restart the federal coal leasing program without any environmental review violated NEPA. The States also alleged violations of the MLA and FLPMA, because the action was taken without considering whether the program is in the public interest or provides fair market value to the public. *State of California v. Zinke*, Case No. CV-17-42-GF-BMM (complaint filed May 9, 2017). The case was consolidated with an earlier challenge filed by citizen and tribal groups. *Citizens for Clean Energy v. U.S. Dep't of the Interior*, Case No. 4:17-cv-30-BMM (D. Mont. complaint filed March 29, 2017).

On April 19, 2019, the court issued an order on cross-motions for summary judgment finding that BLM's decision to restart the federal coal leasing program constituted a "major federal action" subject to the requirements of NEPA. *Citizens for Clean Energy v. U.S. Dep't of the Interior*, 384 F. Supp. 3d 1264, 1279 (D. Mont. 2019). The court determined that it could not decide the State's MLA and FLPMA claims "until Federal Defendants have completed their environmental review." *Id*. at 1282.

In response to this ruling, BLM issued a Final Environmental Assessment ("EA") and Finding of No Significant Impact ("FONSI") in February 2020, which considered the effects of only four leases that were issued since March 2017, and limited its analysis to greenhouse gas emissions, socioeconomic impacts, and water quality impacts. The States filed a supplemental complaint challenging the Final EA and FONSI on July 23, 2020.

E. Executive Order 13990.

On January 20, 2021, on his first day in office, President Biden issued Executive Order 13990. Executive Order 13990, "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis," 86 Fed. Reg. 7,037 (Jan. 25, 2021). Executive Order

[23] *Id*. at ES-2.
[24] *Id.* at ES-3.

13990 commanded all executive departments and agencies to review the prior administration's actions and "immediately commence work to confront the climate crisis." Executive Order 13990 also called upon the federal government to "advance environmental justice" where it has failed to do so in the past.

F. Secretarial Order 3398.

On April 16, 2021, current Secretary of the Interior Deb Haaland issued Secretarial Order 3398 (the "Haaland Order"), which was issued to implement the review ordered by Executive Order 13990. The Haaland Order stated that it is "Department policy to listen to the science; to address societal inequities and create opportunities for the American people; to conserve and restore our land, water, and wildlife; to reduce greenhouse gas emissions; to create jobs through a growing clean energy economy; and to bolster resilience to the impacts of climate change." The Haaland Order specifically revoked the Zinke Order and called upon the Department to "review and revise as necessary all policies and instructions that implemented [the Zinke Order] or that are otherwise inconsistent with the policies set for in" Executive Order 13990.

SPECIFIC COMMENTS ON BLM'S NOTICE OF INTENT

I. BLM Must Account for the Significant Climate Impacts of the Federal Coal Leasing Program.

As discussed above, the federal coal leasing program represents a significant portion—11 percent—of total U.S. greenhouse gas emissions and has thereby resulted in considerable adverse climate-change impacts on the States that have never been properly accounted for. Climate change impacts in the United States have increased dramatically in recent years and will likely continue to worsen for the foreseeable future. The last seven years have been the warmest on record, with 2020 tied with 2016 for the top spot.[25] Wildfires, heat waves, the frequency and severity of extreme weather events, sea-level rise, declines in agriculture and food production, droughts, floods, and other climate-change harms have increased and become regular threats to our residents' health as well as our economies and natural resources.[26]

- **Severe Weather Events:** In California, greenhouse gas emissions, and the corresponding impacts of climate change, have taken a heavy toll on the state's economy, people, and natural resources. Between 1980 and 2021, there have been 41 "billion-dollar weather events," amounting to $100 billion to $200 billion of damage in the state

[25] Nat'l Aeronautics & Space Admin., *2020 Tied for Warmest Year on Record, NASA Analysis Shows* (Jan. 14, 2021), *available at:* https://www.nasa.gov/press-release/2020-tied-for-warmest-year-on-record-nasa-analysis-shows.

[26] *See, e.g.*, U.S. Global Change Research Prog., *Climate Science Special Report: Fourth National Climate Assessment*, Vol. I, at 10 (D.J. Wuebbles, *et al*. eds.) (2017) ("U.S. 4th Assessment"), *available at:* https://science2017.globalchange.gov/.

alone.[27] Two-thirds of this total cost comes from wildfires (16 in this timeframe).[28] The last five years of weather events (2016-2020) represent roughly 55 percent of the total costs incurred between 1980-2021.[29] 2021 looks to be yet another record-breaking year for wildfires in the state. In New York, extreme storms such as Irene in 2011, Sandy in 2012, and Ida in 2021 are more frequent because of climate change and have caused huge amounts of harm, with Superstorm Sandy alone responsible for 53 deaths and at least $30 billion in damages in the state.[30] Just weeks ago, Ida resulted in the first flash flood warning in New York City's history and set a City record of 3.15 inches of rain in one hour.[31]

- **Wildfires:** In the past three decades, the frequency, size, and intensity of forest fires have all significantly increased. Five of the top ten biggest California wildfires all took place in 2020, burning almost 2.5 million acres combined.[32] Currently, three of the top 20 largest wildfires in state history are burning across California, including the Dixie Fire, which could ultimately surpass the 2020 August Complex as the largest wildfire ever in the state.[33] The latest IPCC report finds that "[p]rojections of increased fire weather in a warmer climate are widespread … and may drive increased fire frequency and severity is several regions."[34] According to California's latest climate change assessment, "[b]y 2100, if greenhouse gas emissions continue to rise, … the frequency of extreme wildfires burning over approximately 25,000 acres would increase by nearly 50 percent, and that

[27] Nat'l Oceanic & Atmospheric Admin., *Billion-Dollar Weather and Climate Disasters: Summary Stats*, *available at:* https://www.ncdc.noaa.gov/billions/summary-stats.
[28] *Id.*
[29] *Id.*
[30] Centers for Disease Control & Prevention, *Deaths Associated with Hurricane Sandy—October-November 2012* (May 24, 2013), *available at:* https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6220a1.htm. FEMA expenditures in New York totaled $14.1 billion. FEMA, New York Hurricane Sandy, *available at:* https://www.fema.gov/disaster/4085. U.S. Department of Housing and Urban Development expenditures totaled $7 billion. Dept. of Housing & Urban Dev't, HUD Announces Additional $5.1 Billion in Recovery Funds for Communities Impacted by Hurricane Sandy, *available at:* https://archives.hud.gov/news/2013/pr13-153.cfm. Total insurance payments in New York State totaled $8.3 billion, including National Flood Insurance payments, and private auto, homeowner, and commercial property insurance. Hurricane Sandy Rebuilding Task Force, Hurricane Sandy Rebuilding Strategy at 29 (August 2013), *available at:* https://archives.hud.gov/news/2013/HSRebuildingStrategy.pdf.
[31] A. Dewan, *Ida turns New York City into a front line of extreme weather supercharged by climate change*, NBC News (Sept. 2, 2021), *available at:* https://www.cnn.com/2021/09/02/world/ida-climate-change-floods-rain-intl/index.html.
[32] CalFire, Top 20 Largest California Wildfires, *available at:* https://www.fire.ca.gov/media/4jandlhh/top20_acres.pdf.
[33] *Id.*
[34] IPCC, *AR6 Climate Change 2021: The Physical Science Basis* (Aug. 7, 2021) at 5-62, *available at*: https://www.ipcc.ch/report/ar6/wg1/#SPM.

average area burned statewide would increase by 77 percent by the end of the century. In the areas that have the highest fire risk, wildfire insurance is estimated to see costs rise by 18 percent by 2055 and the fraction of property insured would decrease."[35]

- **Air quality and public health:** As EPA found in 2016, "climate change is expected to increase ozone pollution over broad areas of the country, including large metropolitan population centers, and thereby increase the risks of respiratory infection, aggravation of asthma, and premature death." 81 Fed. Reg. at 54,452. Over 100 million people in the U.S., including nearly 35 million Californians and nearly 12.5 million New Yorkers, live with air that exceeds the EPA's health standard for ozone.[36] Not only does climate change increase this air pollutant, but as mentioned, it also exacerbates wildfires. Wildfire smoke contains high levels of a particularly dangerous type of soot known as $PM_{2.5}$ (particulate matter with a diameter less than 2.5 μm), and Californians have become increasingly vulnerable to respiratory and other impacts given the current wildfire and air quality conditions.

- **Drought and water resources:** California, due to its unique hydrology and statewide water infrastructure, relies heavily on snowpack for irrigation and drinking water alike. However, from 2012–2016, California suffered drought conditions that led to over 10,000 jobs lost and the fallowing of 540,000 acres, costing $900 million in gross crop revenue in 2015.[37] As a result of diminished precipitation and warming temperatures, glaciers in the Sierra Nevada (a significant source of fresh water) have lost an average of 70 percent of their area since the start of the 20th century.[38] Climate change is expected to further diminish fresh-water storage in the form of seasonal and permanent snow pack, exacerbating drought conditions in the state. These losses in fresh-water input and storage have had—and will continue to have—devastating impacts on its cities,

[35] State of California, *California's Fourth Climate Change Assessment—Statewide Summary Report* (Aug. 2018) ("Calif. 4th Assessment") at 9, *available at*: https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf.

[36] Becker, Rachel, *Trump's smog decision fails to protect Californians from unhealthy air, experts say*, CalMatters (July 15, 2020), *available at*: https://calmatters.org/health/2020/07/trump-smog-air-quality-protection/; EPA, 8-Hour Ozone (2015) Nonattainment Area State/Area/County Report (identifying nonattainment counties), *available at:* https://www3.epa.gov/airquality/greenbook/jncs.html#NY; U.S. Census Bureau, Annual Estimates of the Resident Population for Counties in New York: April 1, 2010 to July 1, 2019 (providing county population estimates), *available at:* https://www2.census.gov/programs-surveys/popest/tables/2010-2019/counties/totals/co-est2019-annres-36.xlsx.

[37] U.S. 4th Assessment, Vol. II, at 1127.

[38] Calif. 4th Assessment at 13.

agriculture, and diverse ecosystems.[39] These chronic, long-duration droughts are increasingly likely under high-emissions scenarios if GHG emissions are not curbed.[40]

- **Sea level rise:** Studies estimate that between one and two thirds of Southern California beaches may completely erode by 2100 without large-scale human interventions. Statewide damages could reach nearly $17.9 billion from inundation of residential and commercial buildings.[41]

- **Natural resource and ecosystem threats:** In California, dramatic bark beetle infestations—driven by warming winters and drought—have created unprecedented conifer die-offs, especially in parts of the southern Sierra Nevada, where tree mortality is nearly 100 percent.[42] This has further contributed to the dramatic wildfire conditions faced by the state in recent years. Iconic California plant and animal species face severe habitat shifts and destruction due to climate change, including the Joshua tree (up to 90 percent loss of habitat), giant sequoia, elephant seal, desert tortoise, and bighorn sheep.[43]

- **Agricultural threats:** In California, which produces over half the nation's specialty crops, agriculture is projected to experience lower crop yields due to drought, extreme heat waves, heat stress, and increased water needs of crops and livestock.[44]

California has enacted several policies and programs and invested billions of dollars to both respond to the impacts of climate change and to address future threats, which would be undermined by continuing to lease, mine, and burn federal coal. For example, California has set a statutory target of reducing GHG emissions by 40 percent below 1990 levels by 2030, Cal. Health & Safety Code § 38566, and a plan to reduce fossil fuel consumption by 45 percent by 2030 to meet this target.[45] On November 19, 2019, Governor Gavin Newsom announced a series of initiatives to safeguard public health and the environment from oil and gas development to advance California's goal to become carbon neutral by 2045.[46] On September 23, 2020, the

[39] *Id.* at 56–57.
[40] U.S. 4th Assessment, Vol. II, at 1127.
[41] Calif. 4th Assessment at 9.
[42] Calif. 4th Assessment at 61; *see also* U.S. 4th Assessment, Vol. II, at 1116–17.
[43] Gonzalez, Patrick, *Climate Change Trends, Impacts, and Vulnerabilities in U.S. National Parks*, in Beissinger, S.R., *et al*. (eds.), Science, Conservation, and National Parks (U. Chicago Press 2017), at 118–125.
[44] Calif. 4th Assessment at 59.
[45] California Air Resources Board, *California's 2017 Climate Change Scoping Plan* (Nov. 2017), *available at*: https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm.
[46] California Dep't of Conservation, *California Announces New Oil and Gas Initiatives* (Nov. 19, 2019), *available at*: https://www.conservation.ca.gov/index/Pages/News/California-Establishes-Moratorium-on-High-Pressure-Extraction.aspx.

Governor signed an Executive Order that will require all new cars and passenger trucks sold in California to be zero emission vehicles by 2035.[47]

Moreover, California passed a law in 2006 that effectively prohibited long-term electricity contracts with coal-fired power plants. *See* California Pub. Util. Code §§ 8340-41. By 2019, coal fueled only about 0.1 percent of California's net electricity generation.[48] California's imports of coal-fired generation are projected to end by 2026.[49]

New York has also taken extensive measures to respond to the impacts and threats from climate change caused by burning coal mined on federal lands and elsewhere and other sources of GHGs. Among other things, since 2009, New York and a number of other eastern states have participated in the Regional Greenhouse Gas Initiative ("RGGI"), a "cap-and-invest" system that limits carbon dioxide from power plants and invests proceeds from auctioning emission allowances in programs that reduce energy demand and keep down electricity prices.[50] In 2019, New York enacted the Climate Leadership and Community Protection Act (the "N.Y. Climate Act").[51] The N.Y. Climate Act requires that statewide GHG emissions be reduced by 40% from 1990 levels by 2030, and reduced by 85% from 1990 levels by 2050.[52] The Act requires that the statewide electricity system in particular be emissions-free by 2040.[53] The Act also created a Climate Justice Working Group, which is developing criteria to identify disadvantaged communities to meet the statutory goal of directing at least 35 percent of benefits from clean energy and energy efficiency programs and related projects or investments to such communities.[54]

Like California and New York, Washington experiences many negative effects of climate change, including rising ambient temperatures, a diminished and unpredictable snowpack that is necessary for water consumption and hydropower generation, and ocean warming and acidification, which is harmful to Washington's marine ecosystems including its shellfish

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[47] Governor Gavin Newsom, Executive Order N-79-20 (Sept. 23, 2020), *available at*: https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-text.pdf.
[48] EIA, *California State Profile and Energy Estimates* (Feb. 18, 2021), *available at:* https://www.eia.gov/state/analysis.php?sid=CA#33.
[49] *Id.*
[50] *See generally* Acadia Center, *The Regional Greenhouse Gas Initiative: 10 Years in Review* (Sept. 17, 2019) at 2, *available at:* https://acadiacenter.org/wp-content/uploads/2019/09/Acadia-Center_RGGI_10-Years-in-Review_2019-09-17.pdf.
[51] N.Y. L 2019, c. 106.
[52] N.Y. Environmental Conservation Law § 75-0107; *see also* 6 N.Y.C.R.R. Part 496, Statewide Greenhouse Gas Emission Limits.
[53] N.Y. Public Service Law § 66-p(2).
[54] N.Y. Environmental Conservation Law § 75-0111; Climate Justice Working Group, *available at:* https://climate.ny.gov/Climate-Justice-Working-Group.

industry.[55] Without greenhouse gas mitigation, the predicted level of ocean acidification along Washington's coast is expected to cause a 34% decline in shellfish survival by 2100.[56] According to the University of Washington, climate change adversely affects Washington's water resources by decreasing snowpack, increasing stream temperatures, decreasing summer minimum streamflows, and causing widespread changes in streamflow timing and flood risk.[57] These changes increase the potential for more frequent summer water shortages in some basins (e.g., the Yakima basin) and for some water uses (e.g., irrigated agriculture or instream flow management), particularly in fully allocated watersheds with little management flexibility.[58]

Washington's forests are likely to experience significant changes in the establishment, growth, and distribution of tree species as a result of increasing temperatures, declining snowpack, and changes in soil moisture.[59] A rise in forest mortality is also expected due to increasing wildfire, insect outbreaks, and diseases.[60] Sea level is projected to rise in most coastal and marine areas of the state, increasing the likelihood for permanent inundation of low-lying areas, higher tidal and storm surge reach, flooding, erosion, and changes and loss of habitat. Sea level rise, rising coastal ocean temperatures, and ocean acidification will also affect the geographical range, abundance, and diversity of Pacific Coast marine species.[61]

Climate change is expected to affect both the physical and mental health of Washington's residents by altering the frequency, duration, or intensity of climate-related hazards to which individuals and communities are exposed.[62] Health impacts include higher rates of heat-related illnesses (e.g., heat exhaustion and stroke); respiratory illnesses (e.g., allergies, asthma); cardiovascular diseases, vector-, water-, and food-borne diseases; and mental health stress (e.g., depression, anxiety).[63] These impacts can lead to increased absences from schools and work, emergency room visits, hospitalizations, and deaths.[64] In particular, increased forest fire activity in Washington has led to an increase in unhealthy air days, impacting public health.[65]

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[55] State of Knowledge: Climate Change in Puget Sound (Nov. 2015), Climate Impacts Group, University of Washington, (hereinafter "State of Knowledge, Puget Sound"); *available at*: https://cig.uw.edu/resources/special-reports/ps-sok/.
[56] State of Knowledge Report, Climate Change Impacts and Adaptation in Washington State: Technical Summaries for Decision Makers, (Dec. 2013), Climate Impacts Group, University of Washington (hereinafter "State of Knowledge Report"), at 8-4; *available at:* https://cig.uw.edu/resources/special-reports/wa-sok/.
[57] *Id*. at ES-4.
[58] *Id*. at 6-5, 6-6, 6-11, 6-12.
[59] *Id*. at ES-4.
[60] *Id*. at 7-2, 7-3.
[61] *Id*. at ES-5.
[62] *Id*.
[63] *Id*.; *see also* EPA, *How Smoke From Fires Can Affect Your Health, available at*: www.epa.gov/pm-pollution/how-smoke-fires-can-affect-your-health.
[64] State of Knowledge Report at ES-5.
[65] *Id*. at 12-5.

In response to these impacts from climate change, Washington has enacted statutes and made significant investments to reduce greenhouse gas emissions and slow the pace of climate change. In the 2021 legislative session alone, Washington enacted the Climate Commitment Act, a low carbon fuel standard, and the Healthy Environment for All (HEAL) Act, a landmark environmental justice law.

Similarly, New Mexico is already significantly impacted by climate change. The 19-year period from 2000-2018 was the second driest span in the American southwest since the year 800, exceeded only by a similar "mega drought" in the late 1500s.[66] According to estimates from 31 climate models of temperature, relative humidity, and precipitation, anthropogenic trends account for nearly 50% of the severity of the 2000-2018 drought.[67] Nor has the drought ended. At the beginning of 2021, 99.6% of New Mexico was in severe to exceptional drought.[68] And while a relatively good monsoon season has provided some relief, as of September 2021, approximately 48% of the state remains in severe to extreme drought,[69] and the state's largest reservoir (Elephant Butte) is filled to only 5.6% of its capacity.[70]

Like California and other western states, New Mexico has also experienced increasingly devastating wildfires in recent years consistent with the expected effects of climate change, including: the 2000 Cerro Grande Fire in Bandelier National Monument, which burned 47,650 acres and 200 structures in the town of Los Alamos and 100 structures on Los Alamos National Laboratories land;[71] the 2011 Los Conchas Fire in the Santa Fe National Forest (156,000 acres);[72] the 2012 Whitewater-Baldy Complex Fire in the Gila National Forest (297,845 acres, the largest in the state's history);[73] and the 2012 Little Bear Fire in the White Mountain

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[66] A. Park Williams, *et al*., *Large Contribution From Anthropogenic Warming to an Emerging North American Megadrought*, *Science,* 17 Apr 2020, Vol 368, Issue 6488 pp. 314–318*, available at:* https://www.science.org/doi/abs/10.1126/science.aaz9600.
[67] *Id.*
[68] *See* National Drought Mitigation Center, U.S. Drought Monitor, New Mexico, *available at*: https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?NM.
[69] *Id.*
[70] *See* Texas Water Development Board, Elephant Butte Lake, *available at*: https://waterdatafortexas.org/reservoirs/individual/elephant-butte.
[71] Los Alamos National Laboratory, *Cerro Grande Fire Assessment Project: An Assessment of the Impact of the Cerro Grande Fire on Cultural Resources at Los Alamos National Laboratory, New Mexico* (Dec. 2002) at 3, *available at:* https://www.lanl.gov/museum/exhibitions/_docs/cerro-grande-fire-assesmentLA-UR-02-5713.pdf.
[72] National Park Service, The Las Conches Fire, *available at*: https://www.nps.gov/band/learn/nature/lasconchas.htm.
[73] Southwest Fire Science Consortium, 2012 Whitewater Baldy Fire: Gila National Forest, *available at*: http://swfireconsortium.org/wp-content/uploads/2012/10/FINAL-WB-fact-sheet.pdf.

Wilderness Area (44,330 acres and 242 homes).[74] In addition to the effects of drought and fire, higher temperature itself is an independent cause of forest mortality that, according to scientists at Los Alamos National Laboratories, is expected to contribute to massive conifer mortality in the southwest by 2100.[75]

New Mexico has also taken action at the state level to address the causes of climate change. In 2019, New Mexico enacted the Energy Transition Act,[76] which set a statewide renewable energy standard of 50 percent by 2030 for New Mexico investor-owned utilities and rural electric cooperatives and a goal of 80 percent by 2040, in addition to setting zero-carbon resource standards for investor-owned utilities by 2045 and rural electric cooperatives by 2050. Also in 2019, the New Mexico Interagency Climate Change Task Force issued its initial recommendations, which included strategies for emission reductions from all major sectors of the state's economy.[77] Among other things, the recommendations recognized the coordination between the state's Environment Department and Energy, Minerals, and Natural Resources Department to develop complementary methane regulations for the oil and gas industry in fulfillment of their respective duties to protect air quality and prevent waste.[78] Accordingly, in March 2021, after a two-year stakeholder engagement process, the New Mexico Oil Conservation Commission adopted natural gas waste reductions rules, requiring 98% capture of produced methane.[79] And, beginning September 20, 2021, the New Mexico Environmental Improvement Board will conduct hearings on the proposed ozone precursor rules for the oil and gas industry.[80] In addition to addressing excessive ozone levels in oil and gas producing regions of the state, the rule is expected to reduce methane emissions by over 851 million pounds.[81]

Climate change impacts are hardly limited to California, New York, Washington, and New Mexico. As BLM itself has recognized, "[v]irtually every community in the US is being

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[74] *See* U.S. Dept. of Agriculture, *Little Bear Fire Summary Report*, *available at:* https://www.fs.fed.us/nrs/pubs/rn/rn_nrs178.pdf.
[75] Nathan Gabriel Mcdowell, *et al*., *Multi-Scale Predictions Of Massive Conifer Mortality Due To Chronic Temperature Rise* (Dec. 2015), *available at*: https://www.osti.gov/pages/servlets/purl/1492529.
[76] NMSA 1978, §§ 62-18-1 – 23.
[77] *New Mexico Climate Strategy Initial Recommendations and Status Update* (2019)*, available at:* https://www.climateaction.state.nm.us/documents/reports/NMClimateChange_2019.pdf.
[78] *Id.* at 13–15.
[79] *See* State of New Mexico, Energy, Minerals and Natural Resources Department, *Oil Conservation Commission Approves EMNRD's Final Natural Gas Waste Reduction Rules* (Mar. 25, 2021), *available at*: https://www.emnrd.nm.gov/officeofsecretary/wp-content/uploads/sites/2/OCDMethaneRuleReleaseMarch252021.pdf.
[80] *See* New Mexico Environment Department, *Docketed Matters*, *available at*: https://www.env.nm.gov/opf/docketed-matters/.
[81] New Mexico Environment Department, *Environment Department Releases New Proposed Rule To Improve Air Quality In New Mexico's Most Ozone-Polluted Regions* (May 6, 2021) at 2, *available at*: https://www.env.nm.gov/wp-content/uploads/2021/05/2021-05-06-NMED-files-new-ozone-rule-FINAL.pdf.

impacted by climate change, and Federal programs have an obligation to be administered in a way that will not worsen and help address these impacts."[82] Reducing coal consumption is one of the lowest-hanging fruits in these efforts to reduce GHG emissions. Among fossil fuels, coal is the highest-emitting fuel still in use: Coal releases 2.21 pounds of CO_2 per kilowatt-hour ("kWh") of electricity generated, whereas natural gas produces 0.91 pounds of CO_2/kWh.[83] Beyond these fossil-fuel alternatives, renewable energy sources—which emit significantly less or no GHGs—are on the rise and being promoted by the States' clean energy policies. These sources include wind, solar, hydropower, geothermal energy, biofuels, and alternative transportation fuels. In addition to the direct GHG emissions attributable to combustion, mining, processing, and transportation of coal are responsible for significant embodied energy demand and associated emissions.

In sum, as part of its review, BLM must consider the impacts of continuing the federal coal leasing program on climate change as well as the States' efforts to mitigate these impacts and shift to a clean energy economy.

II. BLM Must Account for the Significant Environmental Justice Impacts of the Federal Coal Leasing Program.

All Americans deserve to live in a safe and healthy environment. All too often, however, our nation's low-income communities, communities of color, and Tribal and indigenous communities are denied this basic right, enduring disproportionate burdens of air pollution, climate change harms, and other serious health and environmental issues. While there are numerous environmental impacts of the federal coal leasing program that remain to be addressed—including impacts to water quality, air quality, and wildlife[84]—the Attorneys General here specifically urge BLM to consider the disproportionate impacts on environmental justice communities resulting from the federal coal leasing program.

As recognized in a recent EPA report, a growing body of literature has found "disproportionate and unequal risks that climate change is projected to have on communities that are least able to anticipate, cope with, and recover from adverse impacts."[85] Among other findings, EPA determined that environmental justice communities are significantly more likely to be located in areas with the highest projected losses of labor hours due to temperature

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[82] Scoping Report at 6-3.

[83] U.S. Energy Information Administration ("EIA"), *Frequently Asked Questions, "How much carbon dioxide is produced per kilowatt hour of U.S. electricity generation?"* (Dec. 15, 2020), *available at:* https://www.eia.gov/tools/faqs/faq.php?id=74&t=11.

[84] BLM itself recognized in the Scoping Report that several impacts of the federal coal leasing program have never been adequately considered, including harm to public lands and wildlife from coal mining; air quality impacts from coal transport and combustion; and impacts from the disposal of coal ash, which contains hazardous constituents. *See* Scoping Report at 5-46 – 5-52; *see also id.* at 6-4 ("there is a need for program reform to better protect the nation's other natural resources (*e.g.*, air, water, and wildlife)").

[85] EPA Climate Report, *supra* note 10.

increases, areas with the highest projected increases in childhood asthma due to climate-driven increases in particulate air pollution, and areas where the highest percentage of land is projected to be inundated due to sea level rise.[86]

For example, black and African American individuals are 40% more likely than non-black and non-African American individuals to live in areas with the highest projected increases in mortality rates due to climate-driven changes in extreme temperatures, and 34% more likely to live in areas with projected increased in childhood asthma.[87] Similarly, EPA found that Hispanic and Latino individuals are 43% more likely than non-Hispanic and non-Latino individuals to live in areas with the highest projected labor hour losses in weather-exposed industries due to high temperatures driven by climate change.[88] And American Indian and Alaska Native individuals are 48% more likely than non-American Indian and non-Alaska Native individuals to live in areas where the highest percentage of land is projected to be inundated due to sea level rise.[89]

Perhaps even more significant than the climate change impacts on environmental justice communities are the localized impacts associated with the transport and export of coal. Each year, millions of tons of coal are moved across the western U.S. and through California and Washington in rail cars to ports in places like Los Angeles, Long Beach, Stockton, and Richmond, CA, and through Spokane, the Columbia River valley, Centralia, Bellingham, and Ferndale, WA—areas that are surrounded by low-income and minority communities that are already disproportionately impacted by environmental pollution. A 2015 study published in the journal Atmospheric Pollution Research found that the passage of a diesel-powered, open-top coal train resulted in nearly twice as much particulate matter emissions as a diesel-powered freight train.[90] According to a 2017 report by the Bay Area Air Quality Management District ("BAAQMD"), particulate matter emissions from the storage and handling of bulk materials such as coal present an environmental and public health concern because small dust particles released from such activities cause or contribute to a wide variety of serious health problems, including asthma, bronchitis, cardio-vascular diseases, and cancer.[91]

As coal becomes more difficult to burn in the U.S. due to air quality and climate concerns, there has been a push to build more export facilities to send it overseas, including from existing and proposed new ports in California and Washington. In recent years, local leaders have grown increasingly concerned with the environmental hazards associated with such facilities. In February 2014, the Board of Port Commissioners of the Port of Oakland

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[86] *Id*.
[87] *Id*.
[88] *Id*.
[89] *Id*.
[90] Jaffe, Daniel, *et al*., *Diesel particulate matter and coal dust from trains in the Columbia River Gorge, Washington State, USA*, Atmospheric Pollution Research 6 (2015) 946-952.
[91] BAAQMD, *Rule Development Workshop Report: Particulate Matter* (Jan. 27, 2017), *available at:* https://www.baaqmd.gov/~/media/dotgov/files/rules/archive-2018-regulation-6/bundled-documents/20170127_wsr_reg6combined-pdf.

unanimously rejected a proposal for a new coal export terminal, citing environmental and climate concerns.[92] In 2016, Oakland city officials considered a proposal for a coal export terminal in West Oakland.[93] A health and safety analysis concluded that there was "substantial evidence" that such a plan would "endanger the health and safety of people working at or visiting the project site, as well as those living in, recreating in or visiting adjacent communities."[94] The report also emphasized that the communities near the proposed terminal site already suffer from elevated levels of pollution, including $PM_{2.5}$, and are particularly susceptible to the effects of air pollution because of their age, socioeconomic status, other environmental health burdens, and pre-existing health conditions.[95] Given these impacts, Oakland enacted an ordinance that categorically banned facilities in the city from maintaining, loading, handling, or storing coal, which was ultimately overturned following a legal challenge. *See Oakland Bulk & Oversized Terminal v. City of Oakland*, 960 F.3d 603 (9th Cir. 2020).

In 2020, Richmond followed Oakland's lead and enacted a similar ban, citing environmental justice concerns at yet another major California port. [96] Scientists studying the impacts of coal operations at the Levin-Richmond Terminal found that coal storage and handling increased $PM_{2.5}$ pollution in surrounding neighborhoods.[97] Furthermore, the study determined that many of Richmond's residents were in higher-risk groups: those with fewer economic resources; the elderly; infants and young children; and those with chronic diseases.[98] In fact, the incidence of asthma attacks in one of Richmond's downtown census tracts was higher than 99% of all California census tracts.[99]

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[92] *See* Meeting of the Board of Port Commissioners, Port of Oakland, Agenda (Feb. 27, 2014), *available at:* https://www.portofoakland.com/files/pdf/about/meetings/2014/boar_shee_140227.pdf.

[93] CBS SF Bay Area, *Despite a Coal Ban in Oakland, Developer Leverages Proposed Facility Against City* (July 8, 2021), *available at:* https://sanfrancisco.cbslocal.com/2021/07/08/despite-a-coal-ban-in-oakland-developer-leverages-proposed-facility-against-city/.

[94] Chafe, Zoe, *Analysis of Health Impacts and Safety Risks and Other Issues/Concerns Related to the Transport, Handling, Transloading, and Storage of Coal and/or Petroleum Coke (Petcoke) in Oakland and at the Proposed Oakland Bulk & Oversized Terminal* (June 22, 2016), *available at:* http://www2.oaklandnet.com/oakca1/groups/ceda/documents/report/oak059408.pdf.

[95] *Id.*

[96] Sciacca, Annie, *Richmond slammed with multiple federal, state lawsuits over ban on coal and petcoke*, The Mercury News (Mar. 13, 2020), *available at:* https://www.mercurynews.com/2020/03/13/richmond-slammed-with-multiple-federal-state-lawsuits-over-ban-on-coal-and-petcoke/.

[97] Brown, Claire, *et al*., *Health, Economics and Science Analysis of Coal Operations at Levin-Richmond Terminal* (Nov. 2019), *available at:* https://ncir.weebly.com/uploads/4/8/1/7/48171975/analysis_of_lrt_coal_operations_nov2019.pdf.

[98] *Id.*

[99] *Id.*

In short, the fact that coal consumption may be *decreasing* in the United States does very little to diminish the harmful impacts of the federal coal leasing program, given that the greenhouse gas emissions of coal consumption are the same, regardless of where the coal is burned, and exporting more coal overseas actually *increases* the pollution burden on already impacted communities in the United States. As BLM reviews the federal coal leasing program, it must account for the multi-faceted harms that such activities have on our country's already vulnerable communities.

III. BLM Must Ensure that the American Public is Receiving a Fair Return from the Sale of Federal Coal Resources.

As discussed above, changes in the coal industry and a grossly outdated environmental review have resulted in a federal coal leasing program that fails to properly account for its negative impacts or achieve a fair return for the American public. Since 1990, almost all federal coal leasing has been the result of industry application.[100] Reliance on leasing by application substantially impairs the efficacy of competitive lease auctions.[101] Existing lease holders have a financial incentive to submit applications that propose tracts adjacent to their existing leases.[102] Since coal mining operations are capital-intensive and mining equipment is logistically difficult to move, bidders closest to a proposed lease can generally outbid all other parties. The result is that leasing by application auctions frequently have only one bidder and are effectively noncompetitive, which in turn ensures that the public will not receive fair value on these leases.[103]

Moreover, BLM's failure to properly account for the significant environmental impacts of federal coal leasing, and the resulting costs both of avoiding and then mitigating and/or adapting to those impacts, has led to a program that fails to provide a fair return from the sale of these resources and is not serving the public interest. This disparity is readily apparent from climate change impacts alone. In February 2021, the U.S. Government's Interagency Working Group on the Social Cost of Greenhouse Gases ("IWG") priced the social cost of carbon—the monetary value of net harm to society associated with adding GHGs to the atmosphere—at $51 per ton emitted (using a 3% discount rate).[104] Yet under the current system of determining the "fair market value" of coal leases, BLM recoups approximately $2 per ton of coal, despite the fact that each ton of coal produced generates approximately 1.8–2.8 tons of CO_2 emissions.[105]

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[100] Scoping Report at 5-7.
[101] *Id*. at 5-8.
[102] *Id*. at 5-13.
[103] *Id*.
[104] IWG, Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide - Interim Estimates under Executive Order 13990 (Feb. 2021), *available at:* https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf.
[105] Executive Office of the President of the United States, *The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers* (June 2016) at 8 (finding an average

Specifically, for Powder River Basin coal, which accounts for over 85 percent of all federal coal production, BLM assumes an average heat rate of 8,600 Btu per pound of coal, and an emission factor of 212.7 pounds of CO_2 per million Btu. This yields an emission factor of 1.83 tons CO_2 per ton of coal. Other estimates assert that the complete combustion of one ton of coal generates 2.86 tons of carbon dioxide.[106] Thus, under the current social cost of carbon of $51 as determined by the IWG, BLM should be recouping *at minimum* $93.33 to $145.86 per ton of coal leased, as opposed to $2, based on the impacts of carbon emissions alone.

In the 2017 Scoping Report, BLM identified several potential ways for the federal coal leasing program to better ensure a fair return from the sale of public coal resources, and to reduce impacts from climate change and other environmental issues.[107] For example, with regard to greenhouse gas emissions, BLM identified potential alternatives such as (1) accounting for carbon-based externalities through a royalty rate increase or royalty adder; (2) adopting requirements for the use of compensatory mitigation; (3) establishing a carbon budget to guide federal coal leasing in an effort to limit the amount of greenhouse gas emissions associated with federal coal production; (4) considering opportunities to address methane emissions associated with coal mining operations; and (5) fully analyzing a no new leasing alternative.[108]

As part of BLM's review, the Attorneys General urge BLM to analyze such alternatives in light of current information regarding the full impacts and costs of the federal coal leasing program, including the costs of carbon pollution discussed above, other environmental harms arising from the program, and any nonenvironmental costs to the nation. In addition, the Attorneys General urge BLM to ensure that any return on lands leased for coal production also include an accurate valuation for the coal removed or other activities undertaken, through reform of the selection and bidding process and any other appropriate changes, so that the leases do not provide an unfair subsidy for coal extraction. In sum, BLM should work to ensure that any future leasing provides a fair return to the nation and serves the public interest.

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royalty collection of $1.70 per ton of coal from 2008 to 2012), *available at*: https://obamawhitehouse.archives.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf; *see* Scoping Report at ES-1 (noting that during the past decade, BLM-administered leases have produced over 4 billion tons of coal and generated $10 billion in federal revenue).

[106] Hong, B.D., and E. R. Slatick, Carbon Dioxide Emission Factors for Coal, EIA Quarterly Coal Report, January-April 1994 (Aug. 1994), *available at:* https://www.eia.gov/coal/production/quarterly/co2_article/co2.html.

[107] Scoping Report at 6-1 – 6-32.

[108] *Id*. at 6-13 – 6-20.

CONCLUSION

The Attorneys General appreciate the opportunity to comment on BLM's review of the federal coal leasing program. This review is long overdue and is sorely needed to advance the Biden administration's goals of confronting the climate crisis and advancing environmental justice. To avoid locking in leases with unfavorable terms that could undermine these goals, BLM should follow its past practice and suspend the issuance of new federal coal leases until this review is complete. The Attorneys General look forward to the next steps in this review process and stand ready to assist with this effort.

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