

LEGAL AUTHORITY FOR PRESIDENTIAL EXECUTIVE ACTION ON CLIMATE:

LEGAL ANALYSIS UNDERPINNING THE #CLIMATEPRESIDENT ACTION PLAN

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EXECUTIVE SUMMARY

The United States—and the planet—face an indisputable climate emergency. The solution to the crisis is also inarguable: We must transform our extractive economy to a regenerative and inclusive one, which includes rapidly converting our energy generation and transportation sectors to 100% clean and renewable energy and eliminating the production and consumption of fossil fuels. The only real question is how to accomplish this transition with the scale and speed necessary to limit warming to below 1.5°C and in a manner that is fair, just, and equitable to all.

If the world is to have any reasonable chance of staying below 1.5°C and avoiding the worst impacts of climate change, the next President of the United States must demonstrate national and global leadership and take immediate and decisive action to launch a rapid and just transition off of fossil fuels economy-wide. Recognizing the steps that the next President can take without any additional action from Congress is critical. These are the “no excuses” actions that can be taken *immediately* to set the nation on a course to zero emissions.

The actions called for in this Presidential action plan can be implemented by the President acting alone without any Congressional action.

We recognize that a full solution to the climate crisis requires action at all levels of government and from many different aspects of society. The next President should also work with Congress to pass a Green New Deal, as well as with state and local governments and in international fora to achieve further action at every scale from the very local to the truly global. The Presidential action plan below crystallizes the top ten most important actions the next President can take on climate to launch a broad mobilization to drive U.S. greenhouse emissions to zero through a just and equitable transition.

Presidential candidates have put forward a suite of proposed policies to reduce our emissions. However, actual implementation of many of such policies will require new legislation passed by Congress. Legislation inevitably takes time, and as the failed climate bills introduced in the early years of the Obama administration demonstrate, passage is far from certain. While the next President should press forward for comprehensive climate legislation to implement a Green New Deal, they need not, and must not, wait before taking action.

This working paper outlines the legal authority for ten of the most significant steps the next President can take in their first week in office via Executive Order or otherwise—and without any necessary new legislation or approval from Congress—that will both directly reduce emissions as well as affirm to the nation and the world that the United States aims to be a true leader in climate action rather than an obstacle. These actions are as follows.

TEN ESSENTIAL CLIMATE ACTIONS THE NEXT PRESIDENT CAN TAKE WITHOUT CONGRESS

1. **Declare a national climate emergency under the National Emergencies Act:** This step will communicate the urgency of the climate crisis and unlock specific statutory powers to help accomplish the necessary response. Reinstating the crude oil export ban and promoting rapid clean energy development per emergency powers; all other actions in this plan can be accomplished under the President's regular executive powers. Direct relevant federal agencies to reverse all Trump administration executive climate rollbacks and replace with sufficiently strong action as described below.
2. **Keep fossil fuels in the ground:** End new fossil fuel leasing and development approvals, ban fracking, and commit to a plan to phase out existing extraction.
 - a. Issue an Executive Order directing the Secretary of the Interior to immediately halt all fossil fuel lease sales and permits, phase out existing extraction, and ban fracking on federal lands and waters under existing resource extraction laws.
 - b. Issue an Executive Order directing Administrator of the Environmental Protection Agency (EPA) to issue a stringent pollution prevention rule for the oil and gas sector, effectively stopping fracking and other ultra-hazardous and energy-intensive extraction methods everywhere.
 - c. Commit to work with federal agencies, states, and Congress to complete a plan to phase out all U.S. fossil fuel extraction over the next several decades.
3. **Stop fossil fuel exports and infrastructure approvals.**
 - a. Issue an Executive Order immediately re-instituting the crude oil export ban.
 - b. Issue an Executive Order halting gas exports to the fullest extent allowed by the Natural Gas Act.
 - c. Issue an Executive Order directing all federal agencies to deny permits for new fossil fuel infrastructure projects, including but not limited to pipelines, import and export terminals, storage facilities, refineries, and petrochemical plants, consistent with the science demonstrating that any such projects are incompatible with limiting temperature rise to below 1.5°C.
4. **Shift financial flows from fossil fuels to climate solutions.** Issue an Executive Order directing actions to promote investments in climate solutions instead of dirty fossil fuels, including: (a) establishing a new mandate for the Federal Reserve and Secretary of the Treasury to manage climate risk; (b) urging the Securities and Exchange Commission (SEC) to mandate corporate disclosure of material risks related to the climate crisis in SEC filings, including disclosure of asset retirement obligations; (c) directing the Department of Energy to end all loan and guarantee financing programs for fossil fuels; (d) abolishing the

Department of Energy's Office of Fossil Energy; (e) directing the State Department, Treasury Department, Export-Import Bank, and Development Finance Corporation to prohibit any U.S. government financing for fossil fuel projects and related infrastructure overseas; and (f) directing all federal agencies to ensure that polluters who enter into settlements in connection with corporate wrongdoing are not able to deduct the payments from their taxes, thereby stopping the shift of a significant portion of the burden onto taxpayers.

5. **Use the Clean Air Act to set a science-based national pollution cap for greenhouse pollutants.** Then use all Clean Air Act programs to drive emissions towards zero economy-wide.
 - a. Issue an Executive Order directing the EPA to designate greenhouse pollutants as criteria air pollutants and set a science-based national pollution cap (National Ambient Air Quality Standard, or NAAQS) under the Clean Air Act. The science-based target is essential to unlock the full power of the Clean Air Act and ensure that the overall climate action plan will succeed.
 - b. Direct the EPA to issue strict Clean Air Act rules to rapidly reduce greenhouse emissions from power plants, motor vehicles, airplanes, ships and trains, including implementing a ban on the sale of all new fossil fuel vehicles by 2030.
6. **Power the electricity sector with 100% clean and renewable energy by 2030 and promote energy democracy.**
 - a. Pursuant to the National Emergencies Act, issue an Executive Order directing the Secretary of Defense to redirect a portion of military spending to carry out a rapid construction program of renewable energy projects to meet a significant portion of the nation's power needs. The program shall prioritize photovoltaic solar installations built on already existing structures, and well-managed wind and solar installations and battery storage sited on already-degraded environments—and in doing so, generate a substantial number of new family-sustaining jobs.
 - b. Pursuant to emergency powers, provide critical loan guarantees (i) to clean energy developers, including communities and cooperatives, to help cover upfront costs for new renewable generation; (ii) to building and home owners for building electrification, weatherization, and energy efficiency upgrades; and (iii) to compel utilities to transform the egregiously-outdated and unsafe grid system with technologies that are aligned with a resilient, decentralized, and modern energy system.
 - c. Issue an Executive Order directing the Rural Utilities Service to purchase stranded fossil fuel assets of rural cooperatives and municipal power providers on terms that would commit the cooperatives and providers to 100% solar and wind generation by 2030.

- d. Direct the Department of Energy to rapidly shift and expand existing federal energy financing programs to prioritize funding for clean energy projects (e.g. distributed and community solar) and alternative energy governance models (e.g. worker-owned cooperatives and community choice aggregation) in communities that are disproportionately harmed by the dirty energy economy. All actions should be designed to ensure that energy burdens for low- and middle-income communities are lowered, and the President should direct the Department of Commerce and other relevant agencies to implement policies that protect against any inadvertent energy price hikes.
7. **Launch a just transition to protect our communities, workers, and economy.** Issue an Executive Order creating an inter-agency just transition task force with a deadline of six months to create a comprehensive, multi-industry, national program that guarantees support and protection for affected communities and workers. The task force must meaningfully consult with unions, workers, Indigenous Peoples, and frontline community organizations, and include the EPA, Departments of Labor, Energy, Transportation, Housing and Urban Development, Commerce, Interior, Defense, and other relevant agencies.
 8. **Advance Climate Justice: Direct federal agencies to assess and mitigate environmental harms to disproportionately impacted Indigenous Peoples, People and Communities of Color, and low-wealth communities.**
 - a. Issue an environmental justice Executive Order that strengthens Executive Order 12898 by directing federal agencies (i) to pro-actively “mitigate,” instead of only “identify and address,” disproportionate health and environmental impacts of their programs on Indigenous Peoples, low-income and low-wealth communities, and people and communities of color; and (ii) to use geographic, socioeconomic, and environmental hazard metrics when identifying environmental justice communities.
 - b. Direct the Departments of Treasury and Health and Human Services and the Attorney General to commence a study for mitigation and payment of damages to those deliberately and disproportionately exposed to and harmed by fossil fuel pollution and toxins.
 - c. Direct the Department of Justice to institute rules to protect the rights of individuals protesting climate and environmental harms, including from extreme prosecution and disproportionate sentencing for such persons.
 - d. Issue an Executive Order directing the Departments of Justice and Interior to investigate and, as appropriate, seek damages and restoration from fossil fuel industry actors found responsible for damages to public lands and waters, including the Gulf of Mexico.
 - e. Reverse all harmful and unethical Trump immigration directives and issue a cross-agency directive to respond to and absorb the growing number of climate-displaced

persons who are impacted by extreme weather events and other climate impacts. The new system must preserve the human rights, health, safety, and dignity of all persons affected by climate-induced migration and displacement.

9. Make polluters pay: Investigate and prosecute fossil fuel polluters for the damages they have caused. Commit to veto all legislation that grants legal immunity for polluters, undermines existing environmental laws, or advances false solutions.

- a. Direct the Attorney General to investigate all legal violations by fossil fuel polluters and prosecute them to the maximum extent of the law, including by supporting the “nuisance” and “fraud” suits brought by more than a dozen local and state governments against fossil fuel producers for the damages they have caused. Like asbestos, tobacco and opioid manufacturers, the fossil fuel industry had long-standing knowledge of the risks associated with their products; rather than taking steps to prevent climate change, the industry took action to conceal and deny that knowledge and discredit climate science, in contradiction to their own internal research and their actions to protect their assets from climate impacts.
- b. Commit to veto all legislation that grants legal immunity to polluters from nuisance and other climate claims, or that rolls back existing laws like the Clean Air Act, such as the “Baker-Shultz Carbon Dividend Plan” advanced by the oil-industry led Climate Leadership Council.
- c. Commit to reject and to veto all other false solutions proposed by the polluters that have created and perpetuated the climate crisis including: (i) market-based mechanisms and emissions trading schemes such as offsets which have proven both to be ineffective and to have harmful consequences, such as concentrating pollution in already overburdened environmental justice communities; (ii) technology options such as carbon capture and storage and the use of captured carbon for enhanced oil recovery, which perpetuate fossil fuel extraction and create new public dangers; (iii) biomass energy which increases carbon pollution per unit of energy and incentivizes clearcutting and other harmful forestry practices; (iv) waste-to-energy processes which similarly do not reduce greenhouse pollution and increase dangerous air pollution, usually in already overburdened environmental justice communities; and (v) nuclear power which creates severe safety, health, proliferation, and waste disposal issues and is far more expensive than new clean and renewable energy. These corporate schemes all share the common characteristic that they place corporate profits over community well-being and perpetuate the many systemic injustices that have led to the climate emergency.

10. Rejoin the Paris Agreement and lead with science-based commitments that ensure that the United States, as the world’s largest cumulative historical emitter, contributes its fair share and advances climate justice. Vastly increase the United States’ emissions reduction commitment (Nationally Determined Contribution) to slash U.S.

greenhouse emissions below 2005 levels by at least 70% by 2030 and reduce them to near zero by 2040—in line with what science, equity, and climate justice demand. Include deadlines to halt all oil, gas, and coal production in the U.S. commitment and ensure that future agreements set limits on fossil fuel production consistent with meeting the 1.5°C target. The actions in this report will form the backbone of the plan to achieve this commitment. However, because these domestic reductions alone are insufficient to fulfill the U.S.'s fair share of global climate action, the President must leverage their full executive authority and work with Congress to appropriate funds for large-scale financial and technological support to enable poorer countries to reduce their own emissions, as well as to support crucial adaptation measures so that vulnerable communities can survive the climate disruption already underway.

While the actions outlined in this plan can be initiated by a single individual—the President—they will touch the lives of every person living in America and those beyond who are harmed by the climate crisis. As a fundamental building block of this plan, we must take this once-in-a-century opportunity to establish new relationships of power that are centered in justice, equity, and environmental sustainability to give our future a fighting chance.¹ In implementing each of the actions described herein, the next President must prioritize support for communities that historically have been harmed first and most by the extractive economy, including communities of color, Indigenous communities, and low-wealth communities. The next President must also take special care to ensure that the rights of Indigenous Peoples are upheld, which includes following the Indigenous Principles of Just Transition.² Moreover, climate policies must drive job growth and spur a new green economy that is designed and built by communities and workers and that provides union jobs with family-sustaining wages. These policies must ensure that workers in the energy sector and related industries, whose jobs will be fundamentally transformed, are not abandoned. Finally, these policies must espouse energy democracy by empowering communities long-polluted by the dirty energy economy to govern their own electricity systems, choose clean and affordable energy, and reinvest profits back into their local communities instead of utilities' pockets.

The steps outlined above and discussed in greater detail below can all be taken in the next President's first ten days in office. Some of these, such as the halting of new fossil fuel leases, would have immediate effect, while others, such as actions under the Clean Air Act, would ultimately be implemented via agency rulemaking in the following months. All are critically important components of a comprehensive climate plan that can be implemented regardless of the makeup of Congress. The only thing they need to be enacted is direction from the incoming President. Completing a just transition to a carbon free economy may take several decades, but the first steps that can put us clearly on that path can be launched by the next President in their first ten days in office.

¹ Climate Justice Alliance, Just Transition, A Framework for Change, <https://climatejusticealliance.org/just-transition/> (last visited Dec. 4, 2019).

² Indigenous Environmental Network, Indigenous Principles of Just Transition, <https://www.ienearth.org/justtransition/> (last visited Dec. 3, 2019).

THE TEN ESSENTIAL CLIMATE ACTIONS THE NEXT PRESIDENT CAN TAKE WITHOUT CONGRESS

1. DECLARE A NATIONAL CLIMATE EMERGENCY UNDER THE NATIONAL EMERGENCIES ACT TO COMMUNICATE THE URGENCY OF THE CLIMATE CRISIS AND UNLOCK SPECIFIC STATUTORY POWERS TO HELP ACCOMPLISH THE NECESSARY RESPONSE.

The first step to solving a problem is to honestly acknowledge it. On Day 1, the next President can declare a national climate emergency under the National Emergencies Act,³ the law that codifies the emergency powers of the President. Since it was passed in 1976, every President has declared multiple national emergencies under this law.⁴ Declaring a national emergency will not only establish the necessary sense of urgency to guide climate action, but will unlock specific emergency powers enumerated in more than 130 statutes.⁵

While the majority of actions proposed in this report can be accomplished with regular executive authority and do not actually require those emergency powers, authority for two of the actions spring from the emergency declaration. These two actions are reinstating the crude oil export ban on a year-by-year basis (Section 3) and redirecting military spending towards the construction of clean renewable energy projects and infrastructure (Section 6).

While only necessary for two of the actions listed below, the national emergency declaration will also set the appropriate tone of urgency for climate action. Along with the emergency declaration, the next President should also issue executive directives to agency heads to undo the remarkable series of Trump administration climate and environmental rollbacks and replace them with action appropriate to the scale of the crisis. For many major rules, the specifics are described below. For others, the next President should direct agency heads to follow the most expeditious path available to unwind and replace Trump rollbacks pursuant to the Administrative Procedure Act and other applicable law. The next President must also appoint Cabinet members and agency leaders who, unlike the vast majority of Trump officials, do not come from the industries they are supposed to be regulating and are otherwise free from conflicts of interest.

³ 50 U.S.C. §§ 1601-1651.

⁴ Brennan Center for Justice, Declared National Emergencies under the National Emergencies Act, *available at*: <https://www.brennancenter.org/analysis/declared-national-emergencies-under-national-emergencies-act> (last updated October 18, 2019). Of the 59 national emergencies issued by presidents, 34 are still active.

⁵ *See, e.g.*, Farber, D., Declaring a Climate Change Emergency: A Citizen's Guide, LEGAL PLANET, Mar. 14, 2019, *available at*: <https://legal-planet.org/2019/03/14/declaring-a-climate-change-emergency-a-citizens-guide/> (last visited Sept. 23, 2019).

2. KEEP FOSSIL FUELS IN THE GROUND: END NEW FOSSIL FUEL LEASING AND DEVELOPMENT APPROVALS, BAN FRACKING, AND COMMIT TO A PLAN TO PHASE OUT EXISTING EXTRACTION.

Today the world faces a fossil fuel “production gap” of tremendous proportions: producers currently plan to extract far more fossil fuels than the world can afford to burn.⁶ There is enough oil, gas, and coal in already developed fields and mines globally—that is, places where the infrastructure is built and the capitol is sunk—to far exceed the pollution budget for 1.5°C if these reserves were all produced and burned.⁷ This means that meeting global climate goals will require an immediate halt to the approval of new fossil fuel projects and a phase-out of existing oil, gas, and coal extraction before the reserves in existing field and mines are fully depleted.⁸

The United States is the world’s largest oil and gas producer and third largest coal producer.⁹ An unprecedented planned expansion of oil and gas extraction in the United States is one of the greatest threats undermining the world’s ability to limit global warming to less than 1.5°C. New development, *90% of which is enabled by fracking*, could result in 120 billion metric tons of greenhouse pollution by 2050, equivalent to the lifetime emissions of nearly 1,000 average U.S. coal plants.¹⁰ This U.S. expansion would lock the world into more than 2°C of warming—unless other countries, many of them poorer and less economically diverse than the United States, compensate by rapidly shutting down their own production.¹¹

The next President can take the following actions to immediately halt the expansion and begin the phase-out of US fossil fuel extraction.

a. Halt Federal Fossil Fuel Leasing

Over the last decade, about a quarter of U.S. fossil fuel emissions have come from the leasing of federally owned mineral rights.¹² Lands yet to be leased, if developed, could unleash an order of magnitude more emissions—emissions that the world cannot afford to burn.¹³ Given the large oversupply of fossil fuel

⁶ SEI, IISD, ODI, Climate Analytics, CICERO, and UNEP (2019). The Production Gap: The discrepancy between countries’ planned fossil fuel production and global production levels consistent with limiting warming to 1.5°C or 2°C. <http://productiongap.org/> (last visited Dec. 3, 2019).

⁷ Trout, Kelly & Lorne Stockman, Drilling Towards Disaster: Why U.S. Oil and Gas Expansion Is Incompatible with Climate Limits, Oil Change International (2019) (“Drilling Towards Disaster”) at Section I, *available at*: <http://priceofoil.org/2019/01/16/report-drilling-towards-disaster/> (last visited Sept. 23, 2019).

⁸ *Ibid.*

⁹ *Id.* at 5.

¹⁰ *Id.* at 6.

¹¹ *Ibid.*

¹² Center for Biological Diversity, Petition to End Federal Offshore Oil and Gas Leasing of the United States Outer Continental Shelf to Address Climate Change (2016) (“CBD 2016a”) at 29, *available at*: https://biologicaldiversity.org/news/press_releases/2016/offshore-drilling-03-29-2016.html (last visited Sept. 24, 2019).

¹³ Ecoshift Consulting, The Potential Greenhouse Gas Emissions of U.S. Federal Fossil Fuels (2015) (“Ecoshift”) at 18, *available at*: <http://www.ecoshiftconsulting.com/wp-content/uploads/Potential-Greenhouse-Gas-Emissions-U-S-Federal-Fossil-Fuels.pdf> (last visited Sept. 24, 2019).

reserves in already developed fields and mines, it is madness for the federal government to continue selling off publicly-owned lands, water, and mineral rights for new fossil fuel development.

The next President must halt all new federal fossil fuel leasing—as formally requested by hundreds of organizations in 2016.¹⁴ As explained below, offshore and onshore leasing are governed by different federal laws, but both regimes allow the President to end the leasing of publicly owned fossil fuels.

Offshore

Federal offshore oil and gas development is governed by the Outer Continental Shelf Lands Act (OCSLA), which establishes a multi-stage process for leasing, exploration and development, under the direction of the Secretary of the Interior. OCSLA provides that “[t]he President of the United States may, from time to time, *withdraw* from disposition *any* of the unleased lands of the outer Continental Shelf.”¹⁵ Presidents from Dwight Eisenhower to Barack Obama have withdrawn outer Continental Shelf areas from leasing.¹⁶

Moreover, under current legal precedents, a Presidential withdrawal of areas from offshore leasing cannot be undone by a subsequent President, but only by an act of Congress. This is demonstrated by Trump’s 2017 attempt to reverse President Obama’s withdrawal of certain areas of the Arctic and Atlantic Oceans from drilling.¹⁷ In April 2017, Trump purported to reverse the withdrawals via Executive Order, and in March 2019, a federal district court vacated Trump’s action because the Outer Continental Shelf Lands Act does not authorize the President to reverse a previous withdrawal.¹⁸

In March 2016, dozens of organizations requested that President Obama use his legal authority under OCSLA to withdraw *all* unleased federal offshore areas from further leasing because such leasing is incompatible with maintaining a safe climate.¹⁹ Accomplishing the withdrawal is straightforward, as detailed in the 2016 petition, and can be carried out by the next President on Day One.

Onshore

Onshore oil, gas, and coal leasing is governed by several federal environmental laws, including the Minerals Leasing Act of 1920 (MLA), as amended, which designates the Bureau of Land Management (BLM) as the primary manager of federal onshore fossil fuel resources.²⁰ The Federal Land Policy and Management Act of 1976 (FLPMA) establishes a three-phase process for onshore leasing and development. In the first phase, BLM prepares a land use plan, known as a resource management plan (RMP), which establishes areas as

¹⁴ CBD 2016a; Center for Biological Diversity, Petition for a Moratorium on the Leasing of Federal Public Land Fossil Fuels Under the Mineral Leasing Act, 30 U.S.C. §§ 226, 241 (2016) (“CBD 2016b”), *available at*: https://www.biologicaldiversity.org/campaigns/keep_it_in_the_ground/pdfs/Petition_for_a_Moratorium_on_the_Leasing_of_Federal_Public_Land_Fossil_Fuels.pdf (last visited Sept. 24, 2019).

¹⁵ 42 U.S.C. § 1341(a) (emphasis added).

¹⁶ CBD 2016a at 11-12.

¹⁷ *League of Conservation Voters v. Trump*, 363 F. Supp. 3d 1013, 1016-1017 (D. Alaska 2019).

¹⁸ *Id.* This case is currently on appeal.

¹⁹ CBD 2016a.

²⁰ 30 U.S.C. §§ 181-196, 201-209; 43 U.S.C. §§ 1701-1703; 30 U.S.C. § 1201 *et seq.*

open or closed to leasing. In the second phase, the Secretary of the Interior exercises discretion whether and where to hold lease sales for oil and gas development.²¹ In the third phase, lessees submit applications for permits to drill for approval to BLM. The area overseen by BLM is enormous—over 245 million acres of land and over 700 million acres of subsurface mineral rights in the Continental US and Alaska, managed pursuant to about one hundred separate RMPs.²² BLM can halt new leasing in various ways, including by designating all lands as closed for leasing when updating the RMP, and by refraining from holding lease sales for areas currently designated as open for leasing.²³

In summary, under existing statutes, the Secretary of the Interior wields extremely broad discretion whether or not to issue any additional onshore fossil fuel leases.²⁴ To ensure a nationwide, uniform and immediate halt to leasing on Day One, the next President can issue an Executive Order directing the Secretary of the Interior to immediately halt all fossil fuel lease sales on federal land, similar to the Obama administration coal leasing moratorium enacted in January, 2016.²⁵ The order should instruct the Secretary to exercise their statutory discretion to halt all leasing while BLM conducts a full review of the climate and environmental consequences of fossil fuel leasing under the National Environmental Policy Act (NEPA). That analysis can then form the basis for a rulemaking that ensures that those harms are avoided through a continued moratorium on fossil fuel leasing and other measures as necessary.

b. Enact a Rapid Phase Out of Federal Fossil Fuel Extraction under Existing Resource Extraction Laws

The Trump administration has gone to extraordinary lengths to maximize fossil fuel production on over 40,000 existing oil and gas leases alone encompassing over 26 million acres of BLM onshore land (in addition to oil and gas production in offshore waters).²⁶ This massive expansion effort has increased the urgency for a rapid phase-out of fossil fuel extraction on existing federal leases.

Decisions will again be guided by the existing statutory regimes for offshore and onshore extraction. First, as to offshore leases, OCSLA sets forth criteria that allow for cancellation of a lease and disapproval of development plans. Of particular note, the Secretary of the Interior *must* disapprove a development plan if the lessee fails to demonstrate that it can comply with OCSLA or other laws, and in such cases the lessee is

²¹ 30 U.S.C. §§ 201, 226(a), 241.

²² Testimony of BLM Director Neil Kornze to House Committee on Oversight and Government Reform, March 23, 2016, available at <https://www.doi.gov/ocl/blm-lands-leasing>.

²³ See CBD 2016b.

²⁴ See *Udall v. Tallman*, 380 U.S. 1, 4 (1965); *United States ex rel. McLennan v. Wilbur*, 283 U.S. 414, 417 (1931); *McDonald v. Clark*, 771 F.2d 460, 463 (10th Cir. 1985); *McTiernan v. Franklin*, 508 F.2d 885, 887 (10th Cir. 1975); *Duesing v. Udall*, 350 F.2d 748, 750 (D.C. Cir. 1965); *Cont'l Land Res.*, 162 I.B.L.A. 1, 7 (2004).

²⁵ United States Department of Interior, Order 3338: Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program (Jan. 15, 2016), available at: https://www.eenews.net/assets/2016/01/15/document_gw_04.pdf (last visited Sept. 23, 2019).

²⁶ United States Department of Interior, Onshore Energy Burden: Examining the Department of the Interior's Actions to Eliminate Onshore Energy Burdens – Statement of Brian C. Steed, Deputy Director, United States Bureau of Land Management (Jan. 18, 2018), available at: <https://www.doi.gov/ocl/onshore-energy-burdens> (last visited Sept. 23, 2019).

not entitled to compensation.²⁷ Continued oil production violates applicable federal laws in many ways, depending on the circumstances, including the Clean Air Act (CAA), the Clean Water Act (CWA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), FLPMA, and others.

In addition, the Secretary “may cancel any lease obtained by fraud or misrepresentation.”²⁸ There is a large and growing body of investigative journalism, academic scholarship, and court proceedings showing misrepresentation by fossil fuel producers in regard to climate change.²⁹ For example, the New York Attorney General’s office is currently prosecuting a case against Exxon for fraud in its communications to investors about climate change.³⁰ Exxon shareholders are similarly bringing a class action against Exxon for fraudulent climate change communications.³¹ Based on current knowledge, it appears quite likely that an Interior Department investigation into fraud or misrepresentation in the leasing process would yield information that would support widespread lease cancellation.

As to onshore leases, MLA provides the Department of the Interior substantial authority to unilaterally cancel leases if such leases were “improperly issued.”³² In addition to the reasons discussed above, onshore leases issued by the Trump administration (and earlier) were improperly issued for failing to conduct proper environmental review of their greenhouse gas implications under NEPA.³³ The next administration can therefore cancel all such improperly issued leases and decline to re-issue them.

As to older, producing leases where the companies have already removed much of the oil, gas, and coal, the Interior Department has the authority to set a declining rate of production to phase out the operations,³⁴ as opposed to cancelling the lease outright. This may be the best course of action in some instances.

²⁷ 43 U.S.C. § 1351(h).

²⁸ 43 U.S.C. § 1337(o).

²⁹ See, e.g., Supran, Geoffrey & Naomi Oreskes, *Assessing ExxonMobil’s Climate Change Communications (1977-2014)*, 12 Environ. Res. Lett. 084019 (2017); Cushman, J., *Shell Knew Fossil Fuels Created Change Risk s Back in 1980s, Internal Documents Show*, INSIDECLIMATE NEWS, Apr. 5, 2018, available at: <https://insideclimatenews.org/news/05042018/shell-knew-scientists-climate-change-risks-fossil-fuels-global-warming-company-documents-netherlands-lawsuits> (last visited Oct. 7, 2019).

³⁰ Kusnetz, Nicholas & David Hasemyer, *Exxon Accused of Pressuring Witnesses in Climate Fraud Case*, INSIDECLIMATE NEWS, Aug. 9, 2019, available at: <https://insideclimatenews.org/news/06082019/exxon-climate-fraud-investigation-witness-pressure-investors-new-york-attorney-general> (last visited Sept. 23, 2019).

³¹ Savage, K., *Federal Judge: Employees Can Pursue Climate Fraud Suit Against Exxon*, CLIMATE LIABILITY NEWS, Aug. 15, 2018, available at: <https://www.climateliabilitynews.org/2018/08/15/climate-fraud-suit-exxon-employees-ramirez/> (last visited Oct. 7, 2019).

³² 43 C.F.R. § 3108.3(d), see also, 30 U.S.C. § 188; 43 C.F.R. § 3108.3(d); *Boeschle v. Udall*, 373 U.S. 472 (1963).

³³ Oil and gas leases issued in violation of federal law, including NEPA, are voidable. See *Northern Cheyenne Tribe v. Lujan*, 804 F. Supp. 1281, 1286-87 (D. Mont. 1991); *Sangre de Cristo Development Co., Inc. v. United States*, 932 F.2d 891, 896 (10th Cir. 1991); *Clayton W. Williams*, 103 IBLA 192, 210-12 (1988); *Elaine D. Berman*, 140 IBLA 173, 180 (1997). Since 2008, a consistent line of judicial precedents has found systematic NEPA violations in the Department of Interior’s failures to disclose and analyze climate consequences prior to federal fossil fuel leasing and other development decisions. See *WildEarth Guardians v. Zinke*, No. 16-1724 (RC), 2019 WL 1273181 (D.D.C. Mar. 19, 2019); *Western Organization of Resource Councils v. BLM*, No. 16-cv-21, 2018 U.S. Dist. LEXIS 49635 (D. Mont. Mar. 26, 2018); *High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp. 3d 1174, 1193 (D. Colo. 2014); *Sierra Club v. Fed. Energy Regulatory Comm’n*, 867 F.3d 1357, 1375 (D.C. Cir. 2017); *WildEarth Guardians v. BLM*, 870 F.3d 1222, 1236 (10th Cir. 2017); *Montana Environmental Information Center v. OSM*, 274 F.Supp.3d 1074, 1098 (D. Mont. 2017).

³⁴ See 43 U.S.C. § 1334(g)(1); 30 U.S.C. § 226(b).

Fossil fuel companies declare strongly, but wrongly, that any attempt to rein them in will violate federal law or cause a taking of private property without just compensation. As demonstrated above, there are many fully lawful steps the next President can take to immediately curtail and then phase out existing fossil fuel extraction on federal lands, both onshore and offshore, without violating lessees' legal rights or triggering the need for the federal government to pay compensation. This is true as well of "takings" claims frequently brought by fossil fuel plaintiffs, arguing that government regulation results in a taking without just compensation or due process of law as required by the Fifth and Fourteenth Amendments. While a full exposition on takings law is beyond the scope of this working paper, we note that there are many reasons why such claims should not withstand judicial scrutiny. There is one overarching reason why such takings claims should fail, however: even in the exceptional circumstance where government action deprives a property owner of all value of the property, courts will still decline to find a taking if the restricted activity is a public nuisance.³⁵

The scientific consensus on the fossil fuel industry's effect on the climate, together with countless studies linking fossil fuel production with other adverse environmental and public health harms, shows oil and gas production is clearly a public nuisance. In fact, multiple state and local governments are currently bringing nuisance suits against fossil fuel producers to recover damages from climate change because the producers knew about climate change, understood their product caused the harm, and manufactured an elaborate disinformation campaign to lie about the science of climate change and continue to sell their destructive fossil fuels.³⁶ The fossil fuel producers subject to affirmative nuisance cases are trying desperately to escape from them. But these companies cannot escape from these same nuisance arguments when they bring their affirmative takings cases. If takings claims against the federal government are not dispatched on other grounds, they should still fail because it is clear that continued fossil fuel production constitutes a public nuisance. Thus, the next President can order the Secretary of the Interior to phase out federal fossil fuel production without violating any existing law or triggering the need for compensation.

On Day One, the next President can issue an Executive Order directing the Secretary of the Interior to implement an immediate moratorium on the approval of new development plans and drilling permits while the relevant Interior Department agencies carry out a full review of potential legal violations relating to the underlying management plans, leases and permits, and the environmental consequences thereof. At the end of the review, the agencies would propose a detailed plan to wind down existing oil and gas extraction in a way that does not violate any federal law or trigger viable takings claims, utilizing a combination of the approaches referenced above.

³⁵ See *Keystone Bituminous Coal Ass'n v. DeBenedictis*, 480 U.S. 470 (1986); *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1029 (1992) (confirming once again that all property is subject to "background principles of the State's law of property and nuisance[.]")

³⁶ Hasemyer, D., *Fossil fuels on trial: Where the major climate change lawsuits stand today*, INSIDECLIMATE NEWS, July 22, 2019, available at: <https://insideclimatenews.org/news/04042018/climate-change-fossil-fuel-company-lawsuits-timeline-exxon-children-california-cities-attorney-general> (last visited Sept. 23, 2019).

c. Ban Fracking

Fracking is an ultra-hazardous extraction technique that supercharges the extent and intensity of air and water pollution, habitat destruction, and human health harms that come from oil and gas development. Fracking is also completely unsustainable from a climate perspective: some 90% of U.S. drilling into new oil and gas reserves through 2050 would depend on fracking³⁷ and nearly 60% of the carbon emissions enabled by new U.S. drilling would come from the epicenters of fracking—the Permian Basin of Texas and New Mexico and the Appalachian Basin across Pennsylvania, West Virginia, and Ohio.³⁸

The President has the legal authority to ban fracking to protect a safe climate. The procedure for federal lands and waters is straightforward: the responsible federal agencies can simply issue a rule banning it. BLM has jurisdiction on federal lands and the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) have jurisdiction in federal offshore waters. In March of 2015, the Obama BLM issued the first ever rulemaking regulating fracking onshore.³⁹ Even though the Obama rule was not a ban and provided only partial and weak protections from fracking, the Trump administration rescinded the rule in 2017. The next President should not reinstate the Obama onshore fracking rule, but should instead issue an Executive Order instructing BLM, BSEE, and BOEM to place an immediate moratorium on public land and offshore fracking pending environmental review and rulemaking and order the agencies to promulgate a rulemaking permanently banning fracking on public lands and in federal offshore waters.

To fully protect our climate and environment, fracking must be stopped on non-federal lands as well. In 2005, Congress exempted fracking from the Safe Drinking Water Act (SDWA), creating what is known as the “Halliburton loophole” and enabling the subsequent fracking boom. The next President cannot therefore ban fracking on non-federal lands through SDWA regulation without new legislation. However, other existing laws provide agencies such as the EPA with jurisdiction over fracking. These laws have never been implemented in a way that meaningfully restricts fracking, but could and should be utilized to do so. For example, the Obama administration issued a rule in 2016 under the CAA’s new source performance standards (NSPS) program requiring a small reduction of methane emissions from oil and gas production, processing, storage, and transmission.⁴⁰ The Trump administration recently proposed to repeal this rule.⁴¹ The next President should not reinstate the Obama methane reduction rule, but can instead direct EPA to implement far stronger methane and other pollution reductions from the oil and gas sector. A strict pollution control rule for oil and gas production, requiring, for example, that methane and VOC emissions be reduced to near zero, would effectively prevent fracking nationwide until and unless industry could reduce emissions from fracking operations sufficiently to meet the standard.

³⁷ Drilling Towards Disaster, *supra* note 7, at 19.

³⁸ *Id.* at 7.

³⁹ Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands, 80 Fed. Reg. 16,128 (Mar. 26, 2016) (corrected by 80 Fed. Reg. 16,577 (Mar. 30, 2015)).

⁴⁰ Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. 35,824 (June 3, 2016).

⁴¹ Gardner, T., *Trump EPA Proposes Scrapping Methane Limits at Oil and Gas Operations*, REUTERS, Aug. 29, 2019, available at: <https://www.reuters.com/article/us-usa-climate-methane/trump-epa-proposes-scrapping-methane-limits-at-oil-and-gas-operations-idUSKCN1VJ1IU> (last visited Oct. 7, 2019).

The next President should direct the EPA to protect the air we breathe and effectively stop fracking with new, strict limits on methane and VOC emissions from oil and gas operations. The next President should also work with Congress to permanently ban fracking everywhere in the United States.

3. STOP FOSSIL FUEL EXPORTS AND APPROVAL OF NEW FOSSIL FUEL INFRASTRUCTURE.

a. Reinstate the Crude Oil Export Ban and Take Other Actions to Limit Fossil Fuel Exports

In order to limit warming to 1.5⁰, the United States must stop burning fossil fuels at home and also stop exporting them to be burned elsewhere. Yet currently oil and gas exports are on the rise, driven by the fracking boom and enabled by Congress' reversal of the 40-year-old crude oil export ban in 2015. Crude oil exports have skyrocketed, and now hover at nearly three million barrels per day—about a quarter of all U.S. production.⁴² The production and export booms are intertwined and fuel the climate crisis along with the profits and political power of the fossil fuel lobby.

The 2015 legislation lifting the crude oil export ban allows the President to reinstate the ban on a year-by-year basis through the declaration of a national emergency.⁴³ In April 2016, 350 organizations petitioned President Obama to reinstate the crude oil export ban, setting forth the climate rationale.⁴⁴ Since that time, the case for reinstating the ban has only grown stronger and more urgent. The next President can declare a national emergency as described in Section One and re-instate the crude oil export ban.

The next President can also immediately ban at least a subset of natural gas exports. Parties seeking to export natural gas must file an application with the Department of Energy (DOE) pursuant to the Natural Gas Act (NGA).⁴⁵ An application for export may not be approved if it is not in the public interest. The next President can issue an Executive Order finding that natural gas exports are not in the public interest due to their climate harms, and thus DOE must stop approving new applications. NGA also contains a provision stating that applications for export to certain nations for which there is a free trade agreement requiring national treatment for trade in natural gas shall be deemed to be in the public interest and shall be

⁴² United States Energy Information Administration, Data: Petroleum & Other Liquids, *available at*: <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=mcrexus2&f=m> (last visited Sept. 23, 2019); DiChristopher, T., *US crude oil exports hit a record last week at 3.6 million barrels a day*, CONSUMER NEWS AND BUSINESS CHANNEL, Feb. 21, 2019, *available at*: <https://www.cnbc.com/2019/02/21/us-crude-oil-exports-hit-a-record-high-last-week.html> (last visited Sept. 23, 2019).

⁴³ 42 U.S.C. § 6212a(d)(1)(A).

⁴⁴ Center for Biological Diversity 2016(c). Petition for the Declaration of a National Emergency Addressing Climate Change and The Consequent Prohibition of United States Crude Oil, *available at*: https://www.biologicaldiversity.org/news/press_releases/2016/climate-emergency-04-20-2016.html (last visited Sept. 23, 2019).

⁴⁵ 15 U.S.C. § 717(a); 10 C.F.R. § 590.201 et seq.

granted.⁴⁶ The President's order would likely not override this provision for these nations, but nonetheless should be issued due to its clear effect for exports to countries without such agreements.

b. End Approval of New Fossil Fuel Infrastructure Projects

As discussed above, there is no room in the carbon pollution budget for new fossil fuel extraction projects, and most developed oil and gas fields and coal mines must be shut down before their reserves are fully depleted to keep warming to below 1.5⁰ C. Given this reality, it is unsurprising that researchers have also demonstrated that construction of new fossil fuel infrastructure projects, including but not limited to pipelines, import and export terminals, storage facilities, refineries, and petrochemical plants, is also inconsistent with meeting the 1.5⁰ C target.⁴⁷ Approval and construction of new fossil fuel infrastructure projects create a variety of adverse consequences and risks. First, such approvals lead to “carbon lock-in,” a term referring to a variety of incentives to continue to operate the project—and thus to continue to extract and burn fossil fuels—even when it is not beneficial from an investment or policy perspective to do so.⁴⁸ Such approvals also greatly increase the cost of the transition to a low carbon economy.⁴⁹ Such approvals also place investors at risk of being left with “stranded assets,” a term referring to an asset that must be shut down before it reaches the end of its expected investment horizon, or otherwise produces a poor return for the investor.⁵⁰

Many such infrastructure projects require permits or approvals from one or more federal agencies, issued under one or more federal laws, in order to move forward. For example, approval of the Keystone Pipeline to import tar sands oil from Canada required the Secretary of State to find that the pipeline construction was in the national interest. Citing its contribution to climate change, the Obama State Department found that the pipeline would not serve the national interest and denied the permit.⁵¹ Many other laws governing fossil fuel infrastructure projects require similar considerations.

Federal agencies must also comply with NEPA prior to issuing such permits and approvals. Any proper NEPA analysis would necessarily conclude that the environmental impacts of such projects are significant and cannot be mitigated, providing the agency with an analysis supporting project denial. The next President should direct the Council on Environmental Quality to issue new NEPA Guidance summarizing the best available science on climate impacts and policy implications of new fossil fuel infrastructure,

⁴⁶ 15 U.S.C. § 717(c); Nations with such a free trade agreement include: Australia, Bahrain, Canada, Chile, Colombia, Dominican Republic, El Salvador, Guatemala, Honduras, Jordan, Mexico, Morocco, Nicaragua, Oman, Panama, Peru, Republic of Korea and Singapore.

⁴⁷ Tong, D. et al., Committed emissions from existing energy infrastructure jeopardize 1.5 °C climate target, 572 *Nature* 373-377 (2019); Smith, C.J. et al., Current fossil fuel infrastructure does not yet commit us to 1.5 °C warming, 10 *Nature Communications* 101 (2019).

⁴⁸ Erickson, P. *et al.*, Assessing carbon lock-in, 10 *Environmental Research Letters* 084023 (2015).

⁴⁹ *Ibid.*

⁵⁰ De Lorenzo, Luca & Enkvist, Per-Anders, Framing stranded assets in an age of disruption, *Stockholm Environmental Institute & Materials Economics* (2018).

⁵¹ The White House Office of the Press Secretary, Statement by the President on the Keystone XL Pipeline, <https://obamawhitehouse.archives.gov/the-press-office/2015/11/06/statement-president-keystone-xl-pipeline> (last visited Dec. 3, 2019).

explaining the adverse consequences of such approvals. This will provide a valuable science and policy resource upon which federal agencies can rely in their NEPA reviews, avoiding the need to inefficiently replicate the analysis.

Advocates have long urged the U.S. federal and other governments to apply a “Climate Test” when approving infrastructure projects, and to deny approvals if the project would not be consistent with the pollution budget for maintaining a safe climate.⁵² Since those calls began, the situation has grown more dire, and it has now been demonstrated in the scientific literature that there simply is no room for any new fossil fuel infrastructure if we are to limit warming to 1.5°C.⁵³ Thus, there is no longer any need for agencies to spend time on lengthy climate test analyses because the answer is always the same: no new infrastructure project can be compatible with also avoiding climate catastrophe.

The next President can issue an Executive Order on approval of new fossil fuel infrastructure projects, instructing federal agencies to deny all permits and approvals for fossil fuel infrastructure unless denial would be unlawful under the applicable statute(s).

4. SHIFT FINANCIAL FLOWS AWAY FROM FOSSIL FUELS TO CLIMATE SOLUTIONS.

The climate emergency not only poses an existential threat to our planet, but also to our economy. As one leading economist said, “Climate change is a result of the greatest market failure the world has seen.”⁵⁴ The Governor of the Bank of England, Mark Carney, has warned that climate change poses “catastrophic risk” to the global economy on par or greater than the 2008 financial crisis, and has urged central banks, such as the Federal Reserve Board, to play a much larger role in tackling the crisis.⁵⁵ Yet despite the growing risk, government and financial institutions continue to channel financial support to fossil fuels.

The next President must act swiftly and decisively to manage climate risk and to shift financial flows away from fossil fuels and into climate solutions. As part of a multi-faceted process, the new President must first urge the Federal Reserve to join the international Network for Greening the Financial System (NGFS). The next President must direct the Secretary of the Treasury, in their capacity as the chair of the Financial Stability Oversight Council, to carry out their mandate to preserve financial stability by managing climate risks to large financial institutions including bank holding companies, insurance companies, and asset

⁵² See e.g., Climate Test, Ahead of Trudeau White House visit, environmental groups unveil new proposed “climate test,” Feb. 23, 2016, *available at*: <http://www.climate-test.org/us-press-release/> (last visited Sept. 23, 2019).

⁵³ Tong, D. et al., Committed emissions from existing energy infrastructure jeopardize 1.5 °C climate target, 572 *Nature* 373-377 (2019); Smith, C.J. et al., Current fossil fuel infrastructure does not yet commit us to 1.5 °C warming, 10 *Nature Communications* 101 (2019).

⁵⁴ Alison Benjamin, *Stern: Climate Change a ‘Market’ Failure*, THE GUARDIAN, Nov. 29, 2007, <https://www.theguardian.com/environment/2007/nov/29/climatechange.carbonemissions> (last visited Nov. 1, 2019).

⁵⁵ Adam Tooze, *Why Central Banks Need to Step Up on Global Warming*, FOREIGN POLICY, Oct. 30, 2012, <https://foreignpolicy.com/2019/07/20/why-central-banks-need-to-step-up-on-global-warming/> (last visited Nov. 1, 2019).

managers.⁵⁶ Such measures would include stress testing for climate risks, capital and margin requirements that incorporate climate risk, and portfolio limits linked to climate change.⁵⁷

The next President must also halt all U.S. financing of fossil fuel development. Specifically, the next President should direct the Department of Energy to end all loan and guarantee financing programs for fossil fuels and abolish the Department of Energy's Office of Fossil Energy. Further, the President should direct the State Department, U.S. Treasury, U.S. Export-Import Bank, and U.S. Development Finance Corporation to prohibit any U.S. government finance to fossil fuel projects and related infrastructure overseas. In addition, the next President should direct all federal agencies to ensure that polluters who enter into settlements in connection with corporate wrongdoing are not able to deduct the payments from their taxes, thereby stopping the shift of a significant portion of the burden onto taxpayers.⁵⁸

Finally, in the spirit of the New Deal's Reconstruction Finance Corporation Act of 1932, the next President should work with Congress to develop a financing agency to guide and facilitate the Green New Deal and clean and renewable energy investment decisions.

To ensure that energy decisions are carried out in the best interest of the public, the next President must institute a clear conflicts of interest policy in Presidential appointments that prohibits appointees to key energy bodies from having fossil fuel and climate-polluting industry ties. The President must appoint commissioners to the Securities and Exchange Commission and leaders of the Federal Reserve, U.S. Treasury Department, and other relevant financial agencies, who are climate advocates and do not have conflicts of interest with the fossil fuel industry.

5. USE THE FULL POWER OF THE CLEAN AIR ACT TO SET A SCIENCE-BASED NATIONAL POLLUTION CAP FOR GREENHOUSE POLLUTANTS AND USE ALL CLEAN AIR ACT PROGRAMS TO DRIVE EMISSIONS TOWARDS ZERO ECONOMY-WIDE.

The Clean Air Act is the single most important law for reducing greenhouse pollution economy-wide from smokestacks, tailpipes, and other pollution sources. It provides powerful programs that have proven successful for more than half a century in protecting the air we breathe. The next President must harness the full power of the Clean Air Act to address the climate emergency.

⁵⁶ Gelzinis, Gregg and G. Steele, Climate Change Threatens the Stability of the Financial System, CENTER FOR AMERICAN PROGRESS, Nov. 21, 2019, <https://www.americanprogress.org/issues/economy/reports/2019/11/21/477190/climate-change-threatens-stability-financial-system/> (citing Sections 113 and 165 of the Dodd-Frank Act as legal authority to ensure financial stability).

⁵⁷ *Id.*

⁵⁸ Phineas Baxandall and Michelle Surka, *Settling for a Lack of Accountability?*, U.S. PIRG EDUCATION FUND, December 2015, available at https://uspirg.org/sites/pirg/files/reports/USPIRG_SettlementsReport.pdf.

a. Set a Science-Based National Pollution Cap, the Engine that Drives all Clean Air Act Programs

The NAAQS program is the heart of the Clean Air Act, providing an overarching, comprehensive system for the reduction of those air pollutants, emitted from numerous and diverse sources, that endanger public health or welfare.⁵⁹ Once a pollutant has been added to the NAAQS program through designation as a “criteria” air pollutant, the EPA must set standards for that pollutant that are sufficient to protect the public health and welfare. Each of the states must then adopt plans to meet that standard over time, aided by the reductions in emissions that will be achieved through other Clean Air Act and federal programs.⁶⁰ Setting a *science-based* target is essential to ensure that the overall action plan will be sufficient and successful. The NAAQS regime is the engine that drives pollution reductions from all other Clean Air Act programs because it requires the establishment and attainment of this science-based national pollution cap for each designated pollutant. The NAAQS program saves lives through deep pollution reductions and is one of the single most important steps the next President can take to address the climate emergency.⁶¹

As noted above, scientific research has established the need to limit warming to below 1.5⁰ C to avoid the most devastating climate change damages. Science also has identified the total greenhouse “pollution budget”—the remaining amount of greenhouse pollution that can be emitted—for maintaining a likely chance of staying below 1.5⁰ C.⁶² These numerical limits themselves are nonnegotiable, as we cannot ignore the laws of physics. These temperature and emissions limits set the benchmarks for action: global greenhouse emissions must be cut by half in the next decade and be nearly eliminated by 2050 in order to have a reasonable chance of meeting the 1.5⁰ C limit. As the single largest cumulative greenhouse emitter bearing the greatest historical responsibility for the climate emergency,⁶³ and one of the world’s wealthiest nations, fairness demands that the United States not just meet, but exceed these global targets.

⁵⁹ See 42 U.S.C. §§ 7408-7410.

⁶⁰ For a roadmap on how this can be accomplished, see Crystal, H. *et al.*, *Returning to Clean Air Act Fundamentals: A Renewed Call to Regulation Greenhouse Gases Under the National Ambient Air Quality Standards (NAAQS) Program*, 31 *Georgetown Env'tl L. Rev.* 233 (2019).

⁶¹ Between 1990 and 2010, the Clean Air Act produced an almost 50% reduction in volatile organic compounds and nitrogen oxides, and more than a 60% reduction in sulfur oxides, while producing economic benefits that dwarfed the costs. See United States Environmental Protection Agency, *The Benefits and Costs of the Clean Air Act from 1990 to 2020 (2011)*, available at: https://www.epa.gov/sites/production/files/2015-07/documents/fullreport_rev_a.pdf (last visited Sept. 23, 2019).

⁶² The 2018 IPCC special report on Global Warming of 1.5°C estimated the carbon budget for a 66 percent probability of limiting warming to 1.5°C at 420 GtCO₂ and 570 GtCO₂ from January 2018 onwards, depending on the temperature dataset used. At the current emissions rate of 42 GtCO₂ per year, this carbon budget would be expended in just 10 to 14 years. See Intergovernmental Panel on Climate Change, *Global Warming of 1.5°C*, an IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty (2018) at SPM-16.

⁶³ Irfan, U., *Why the US bears the most responsibility for climate change, in one chart*, *Vox*, Apr. 24, 2019, available at: <https://www.vox.com/energy-and-environment/2019/4/24/18512804/climate-change-united-states-china-emissions> (last visited Sept. 24, 2019).

In 2009, the Center for Biological Diversity and 350.org petitioned the U.S. EPA to set a NAAQS for greenhouse gas pollution.⁶⁴ Since that time, the need for a nationwide health-based standard has become ever greater. The next President can issue an Executive Order directing EPA to begin the rulemaking process to establish a greenhouse gas NAAQS, including a national pollution cap for greenhouse gas emissions at 350 ppm of carbon dioxide equivalent or less, as necessary to protect the public health and welfare, and to complete the entire process within the minimum timeframes allowed by law.

Section 115 of Clean Air Act provides additional authority to reduce greenhouse pollution.⁶⁵ Section 115 allows the EPA to require states to address emissions that contribute to air pollution endangering public health or welfare in other countries, if the other countries provide the United States with reciprocal protections.⁶⁶ There are numerous agreements that the President might rely on to establish the required reciprocal rights, including the Paris Agreement, in which countries pledge to reduce greenhouse gas emissions to keep the average global temperature increase well below 2^o C, and to make best efforts to keep it below 1.5^o C.⁶⁷ The next President should direct EPA to develop complementary regulatory components under Section 115 to support the greenhouse gas NAAQS.

b. Set Stringent Facility Pollution Standards for Industrial Sources

Under the new source performance standards (“NSPS”) program, the EPA sets baseline pollution reduction measures for regulated categories of pollution sources so that each facility within a category must meet the same minimum standards nationwide.⁶⁸ NSPS apply to all new sources in the category, and to existing sources of emissions of non-criteria pollutants. After EPA has set a national pollution cap (NAAQS) for greenhouse gases, the NSPS program will continue to play an important role ensuring stringent facility-based emission standards for new and modified stationary sources such as power plants and industrial sources of many kinds, from cement plants to landfills.

The EPA is required to set emission reduction standards at the level achievable through the “best” system of emissions reduction that has been “adequately demonstrated.”⁶⁹ The NSPS program does not just require the use of existing common-sense measures; it is also meant to speed the development and deployment of

⁶⁴ Center for Biological Diversity and 350.org, Petition to Establish National Pollution Limits for Greenhouse Gases Pursuant to the Clean Air Act (2009), *available at*:

https://www.biologicaldiversity.org/programs/climate_law_institute/global_warming_litigation/clean_air_act/pdfs/Petition_GHG_pollution_cap_12-2-2009.pdf (last visited Sept. 23, 2019).

⁶⁵ Berger, M. *et al.*, Legal Pathways to Reducing Greenhouse Gas Emissions Under Section 115 of the Clean Air Act, 28 Georgetown Env'tl. L. Rev. 359 (2016).

⁶⁶ 42 U.S.C. § 7415.

⁶⁷ United Nations Framework Convention on Climate Change, Art. 13.1, opened for signature Apr. 22, 2016 to Apr. 21, 2017 (“Paris Agreement”).

⁶⁸ 42 U.S.C. § 7411. The stationary sources currently regulated under section 111 can be viewed at United States Environmental Protection Agency, Stationary sources of air pollution: Industry sector groups, *available at*: <https://www.epa.gov/stationary-sources-air-pollution/industry-sector-groups> (last visited Sept. 23, 2019).

⁶⁹ 42 U.S.C. § 7411(a)(1).

new technologies to reduce pollution. As one court has held, the NSPS program “looks toward what may fairly be projected for the regulated future, rather than the state of the art at present.”⁷⁰

To take advantage of this powerful tool to limit new sources of pollution, the next President must direct EPA to immediately begin updating all existing NSPS to incorporate ambitious, technology forcing greenhouse pollution reductions. Advocacy organizations have previously filed petitions or litigated for greenhouse gas limits to be incorporated into existing NSPS programs for multiple sources, including but not limited to cement plants,⁷¹ petrochemical facilities,⁷² coal mines,⁷³ pulp and paper plants,⁷⁴ and concentrated animal feeding operations (CAFOs).⁷⁵ These pollution sources can be addressed immediately. The next President can also direct EPA to expeditiously develop new source categories and emissions limits to capture all significant stationary sources of greenhouse pollution.

Another of EPA’s primary pollution reduction tools, the new source review (NSR) program, requires preconstruction review and permitting of any new or modified major stationary pollution source and consists of two sub-programs, Prevention of Significant Deterioration (PSD), which applies to non-criteria pollutants and criteria pollutants in areas in attainment, and nonattainment NSR (NNSR), which applies to areas exceeding limits established for criteria pollutants. The President can direct EPA to set robust and ambitious emission standards for the NSR program to ensure stringent pollution controls on new stationary sources of pollution once a greenhouse gas NAAQS is in place.

c. Decarbonize Transportation

Transportation accounts for about one-third of the nation’s greenhouse gas emissions.⁷⁶ The Clean Air Act authorizes and directs the EPA to set pollution reduction rules for all major transport and shipping modes, including cars and pick-ups, buses, trucks,⁷⁷ airplanes,⁷⁸ ships,⁷⁹ and locomotive engines.⁸⁰

⁷⁰ *National Asphalt Pavement Ass’n v. Train*, 539 F.2d 775, 785-86 (D.C. Cir. 1976).

⁷¹ Sabin Center for Climate Change Law, *Sierra Club v. EPA*, <http://climatecasechart.com/case/sierra-club-v-epa-2/> (last visited Dec. 3, 2019).

⁷² Center for Biological Diversity *et al.*, Legal Petition Seeks New Air Pollution Standards for Petrochemical Plants, available at <https://biologicaldiversity.org/w/news/press-releases/legal-petition-seeks-new-air-pollution-standards-petrochemical-plants-2019-12-03/> (last visited Dec. 4, 2019).

⁷³ Center for Biological Diversity *et al.*, EPA Called on to Set National Limits on Air Pollution From U.S. Coal Mines, June 16, 2010, available at: https://www.biologicaldiversity.org/news/press_releases/2010/coal-mines-06-16-2010.html (last visited Nov. 30, 2019).

⁷⁴ *Center for Biological Diversity et al. v. EPA*, No. 11-6059 (N.D. Cal Dec. 6, 2011), Complaint, available at: https://www.biologicaldiversity.org/programs/climate_law_institute/global_warming_litigation/clean_air_act/pdfs/Complaint_Filed_12-6-11.pdf (last visited Sept. 23, 2019).

⁷⁵ Humane Society of the United States *et al.*, Petition to List Concentrated Animal Feeding Operations Under Clean Air Act Section 111(B)(1)(A) of the Clean Air Act, and to Promulgate Standards of Performance Under the Clean Air Act Sections 111(B)(1)(B) and 111(D) (2009), available at: <https://www.humanesociety.org/sites/default/files/docs/petition-et-al-v-epa-cafo-caa.pdf> (last visited Sept. 23, 2019).

⁷⁶ United States Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2017 (2019) (“US EPA Inventory 1990-2017”) at ES-24, 2-23, available at: <https://www.epa.gov/sites/production/files/2019-04/documents/us-ghg-inventory-2019-main-text.pdf> (last visited Sept. 23, 2019).

Cars, Pick-ups, Buses and Trucks

Twenty years ago, 19 organizations—led by the International Center for Technology Assessment — petitioned EPA to regulate greenhouse gas emissions from motor vehicles under section 202 of the Clean Air Act.⁸¹ After years of litigation, in 2007 the Supreme Court in the case entitled *Massachusetts v. EPA* found that GHG emissions are air pollutants and that EPA has authority to regulate GHG emissions from new motor vehicles under the Clean Air Act.⁸²

In 2009, EPA finalized a rule finding that greenhouse gas emissions endanger the public health and welfare of current and future generations, and that motor vehicle engines cause or contribute to the greenhouse gas pollution that threatens public health and welfare.⁸³ Since then, EPA has set greenhouse standards for emissions from cars and light trucks, medium and heavy-duty trucks, and buses,⁸⁴ and—until the Trump administration—supported California ZEV and greenhouse gas emissions programs.⁸⁵ (Twelve states have followed California’s lead under section 177 of the Clean Air Act in adopting similar programs.)

But these federal standards, finalized years ago—even if they withstand the ongoing Trump administration assault—are not nearly good enough. Other countries, including Norway (2025), Denmark, Sweden, the Netherlands, Iceland, and Germany, have already pledged to ban the sale of new fossil-fuel cars by 2030.⁸⁶

⁷⁷ 42 U.S.C. § 7521; *Massachusetts v. EPA*, 549 U.S. 497 (2007).

⁷⁸ *Id.* § 7571.

⁷⁹ *Id.* § 7547(a)(3), (4) (emissions standards for non-road engines and vehicles); 42 U.S.C. § 7545(c) (regulation of fuels).

⁸⁰ *Id.* § 7547(a)(5); 40 CFR Part 1033.

⁸¹ United States Environmental Protection Agency, Petition for Rulemaking and Collateral Relief Seeking the Regulation of Greenhouse Gas Emissions from New Motor Vehicles Under Article 202 of the Clean Air Act (Docket ID EPA-HQ-OAR-2001-0002-0001), available at: <https://www.regulations.gov/document?D=EPA-HQ-OAR-2001-0002-0001> (last visited Sept. 23, 2019).

⁸² *Massachusetts v. EPA*, 549 U.S. 497 (2007).

⁸³ Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009).

⁸⁴ See e.g., Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 75 Fed. Reg. 25, 324 (May 7, 2010); Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles, 76 Fed. Reg. 57,106 (Sept. 15, 2011); 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, 77 Fed. Reg. 62,624 (Oct. 15, 2012); Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, 81 Fed. Reg. 73, 478 (Oct. 25, 2016).

⁸⁵ Under section 209 of the Clean Air Act, California can adopt more stringent standards than the federal standards if EPA grants a waiver. See e.g., *inter alia*, California State Motor Vehicle Pollution Control Standards; Notice of Decision Granting a Waiver of Clean Air Act Preemption for California’s Advanced Clean Car Program and a Within the Scope Confirmation for California’s Zero Emission Vehicle Amendments for 2017 and Earlier Model Years, 78 Fed. Reg. 2,112 (Jan. 9, 2013); California State Motor Vehicle Pollution Control Standards; Within the Scope Determination and Waiver of Preemption Decision for Amendments to California’s Zero-Emission Vehicle (ZEV) Standards, 76 Fed. Reg. 61,095 (Oct. 3, 2011); California State Motor Vehicle Pollution Control Standards; Notice of Decision Granting a Waiver of Clean Air Act Preemption for California’s 2009 and Subsequent Model Year Greenhouse Gas Emission Standards for New Motor Vehicles, 74 Fed. Reg. 32,744 (July 8, 2009).

⁸⁶ Brown, Aaron, *Norway Might Ban the Sale of New Gas-Powered Cars by 2025*, THE DRIVE, June 6, 2016, available at: <http://www.thedrive.com/travel/3841/norway-might-ban-the-sale-of-new-gas-powered-cars-by-2025> (last visited

The United States should not be left behind. The next President can direct EPA to use its Clean Air Act authority to establish increasingly stringent greenhouse gas tailpipe emissions in cars, pickups, buses, and trucks.⁸⁷ These standards should prohibit greenhouse gas emissions from all new vehicles by no later than 2030.

Aviation

Aircraft are the third-largest source of greenhouse gas pollution from the transportation sector and account for approximately 10 percent of U.S. transport emissions.⁸⁸ U.S. aircraft are also one of the fastest-growing sources of emissions: emissions from domestic aviation have increased 17 percent since 1990,⁸⁹ to account for 29 percent of all global aircraft greenhouse gas emissions and 0.5 percent of total global greenhouse gas emissions.⁹⁰

In contrast to these rapidly increasing emissions from conventional aviation, technology to decarbonize air travel is rapidly developing. Electric commuter flights are projected to be operating soon,⁹¹ and Norway's

Sept 24, 2019); Staufenberg, J., *Norway to 'Completely Ban Petrol Powered cars by 2025*, UK INDEPENDENT, June 4, 2016, available at: <https://www.independent.co.uk/environment/climate-change/norway-to-ban-the-sale-of-all-fossil-fuel-based-cars-by-2025-and-replace-with-electric-vehicles-a7065616.html> (last visited Sept 24, 2019); Farland, Chloé, *Denmark's New Government raises Climate Change to Highest Priority*, CLIMATE HOME NEWS, June 26, 2019, available at: <https://www.climatechangenews.com/2019/06/26/denmarks-new-government-raises-climate-change-highest-priority/> (last visited Sept 24, 2019); Levring, Peter, *Denmark to Ban Sale of Fossil Fuel Cars in 2030, Boost EV Sales*, BLOOMBERG, Oct. 2, 2018, available at: <https://www.bloomberg.com/news/articles/2018-10-02/denmark-plans-2030-ban-on-fossil-fuel-car-sales-premier-says> (last visited Sept 24, 2019); Hampel, Carrie, *Sweden to Ban Sales of Fossil-Fuel Powered Cars by 2030*, ELECTRIVE, Jan. 22, 2019, available at: <https://www.electrive.com/2019/01/22/sweden-joins-nations-dropping-combustion-engines-target-2030/> (last visited Sept 24, 2019); Jacobs, Frank, *Sweden to Ban Fossil-Fuel Cars by 2030*, FLEET EUROPE, Jan. 24, 2019, available at: <https://www.fleeturope.com/en/safety/sweden/article/sweden-ban-fossil-fuel-cars-2030?a=FJA05&t%5B0%5D=&curl=1> (last visited Sept 24, 2019); Staff Writer, *Government Unveils Steps to Combat Climate Change: Vehicles Using Fossil Fuels Banned in 2030*, ICELAND MAGAZINE, Sept. 10, 2019, available at: <https://icelandmag.is/article/government-unveils-steps-combat-climate-change-vehicles-using-fossil-fuels-banned-2030> (last visited Sept 24, 2019); Lambert, Fred, *The Dutch Government Confirms Plan to Ban New Petrol and Diesel Cars by 2030*, ELECTREK, Oct. 10, 2017, available at: <https://electrek.co/2017/10/10/netherlands-dutch-ban-petrol-diesel-cars-2030-electric-cars/> (last visited Sept 24, 2019); Schmitt, Bertel, *Germany's Bundesrat Resolves End of Internal Combustion Engine*, FORBES, Oct. 8, 2016, available at: <https://www.forbes.com/sites/bertelschmitt/2016/10/08/germanys-bundesrat-resolves-end-of-internal-combustion-engine/#169e9b7c60bd> (last visited Sept 24, 2019); Dugdale, Magdalena, *European Countries Banning Fossil Fuel Cars and Switching to Electric*, FORBES, Aug. 1, 2018, available at: <https://www.roadtraffic-technology.com/features/european-countries-banning-fossil-fuel-cars/> (last visited Sept 24, 2019).

⁸⁷ 42 U.S.C. § 7521.

⁸⁸ US EPA Inventory 1990-2017 at 3-22.

⁸⁹ *Id.* at ES-12.

⁹⁰ Finding That Greenhouse Gas Emissions From Aircraft Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare, 81 Fed. Reg. 54,422, 54,425 (Aug. 15, 2016).

⁹¹ Hall, D. *et al.*, Beyond Road Vehicles: Survey of zero-emission technology options across the transport sector, International Council on Clean Transportation (2018) (Hall 2018) at 4-8, available at: https://theicct.org/sites/default/files/publications/Beyond_Road_ZEV_Working_Paper_20180718.pdf (last visited Oct. 7, 2019); T. Bowler, *Why the age of electric flight is finally upon us*, BBC NEWS, July 3, 2019, available at:

national airline intends to use only electric aircraft for all short flights by 2040.⁹² Executive action is essential to ensure adoption of other available measures to reduce emissions from aircraft⁹³ while technology to completely decarbonize the sector is further developed and adopted.

In 2007 multiple organizations petitioned the U.S. EPA to set standards limiting greenhouse gas emissions from aircraft under section 231 of the Clean Air Act.⁹⁴ Spurred by subsequent litigation challenging the agency's delay, EPA has made a finding that emissions from aircraft endanger the public health and welfare,⁹⁵ but it still has not set the emission standards that the Clean Air Act legally requires. The next President can direct EPA to immediately promulgate regulations setting ambitious, technology-forcing emission standards for aircraft, to drive rapid decarbonization of the aviation sector.

To the extent that the nascent supersonic aviation industry develops to the point that it is commercially viable, the next President must also direct the Federal Aviation Administration to require that luxury commercial passenger supersonic planes, which are currently projected to burn five to seven times more fuel per passenger than typical airliners, meet the same stringent, technology-forcing emission standards as must be developed for subsonic aircraft.⁹⁶ There is no basis upon which supersonic aircraft should be given relaxed standards.

These actions are essential if aviation is to continue at a scale similar to today. If the industry is not able to slash greenhouse emissions through technological and operational changes in the near future, then this highly carbon intensive activity will need to be curtailed through other means, such as a just and equitable mechanism to limit the number of flights.

<https://www.bbc.com/news/business-48630656> (last visited Oct. 7, 2019); Staff Writer, *Norway Aims for all short-haul flights to be 100% electric by 2040*, THE GUARDIAN, Jan. 17, 2018, *available at*:

<https://www.theguardian.com/world/2018/jan/18/norway-aims-for-all-short-haul-flights-to-be-100-electric-by-2040> (last visited Oct. 7, 2019).

⁹² Hall 2018.

⁹³ See, e.g. Kharina, A. *et al.*, *Cost Assessment of Near and Mid Term Technologies to Improve New Aircraft Fuel Efficiency*, International Council on Clean Transportation (2016), *available at*:

https://theicct.org/sites/default/files/publications/ICCT%20aircraft%20fuel%20efficiency%20cost%20assessment_final_09272016.pdf (Oct. 7, 2019).

⁹⁴ Center for Biological Diversity *et al.*, *Petition for Rulemaking Under the Clean Air Act to Reduce the Emission of Air Pollutants from Aircraft that Contribute to Global Climate Change* (2007), *available at*:

<https://www.biologicaldiversity.org/swcbd/PROGRAMS/policy/energy/aircraft-ghg-petition-12-05-2007.pdf> (last visited Oct. 7, 2019).

⁹⁵ *Finding that Greenhouse Gas Emissions from Aircraft Cause or Contribute to Air Pollution that May Reasonably be Anticipated to Endanger Public Health and Welfare*, 81 Fed. Reg. 54,422 (Aug. 15, 2016).

⁹⁶ Center for Biological Diversity, *Trump Urged to Block Return of Super-polluting Supersonic Planes*, <https://biologicaldiversity.org/w/news/press-releases/trump-urged-block-return-super-polluting-supersonic-planes-2019-08-28/> (last visited Dec. 3, 2019).

Shipping

Ships and boats are responsible for three percent of U.S. domestic transport emissions.⁹⁷ This is in line with the global situation—the shipping sector contributes three percent of emissions worldwide.⁹⁸ With international trade expected to increase in coming years, emissions from the shipping sector may increase by as much as 250 percent by 2050.⁹⁹ Further, cargo ships in particular are still reliant on “bunker fuel”—a low quality, carbon-intensive fuel blend left over from the petroleum refining process.¹⁰⁰ Fully-electric cargo and passenger ferries are already in operation in Canada, Europe and China.¹⁰¹ Executive action to decarbonize the shipping sector through electrification or other means is urgently needed.

In 2007 multiple environmental organizations and the state of California petitioned the U.S. EPA to exercise its power under section 213(a) of the Clean Air Act¹⁰² to set greenhouse gas emission standards for ships.¹⁰³ The next President can direct EPA to immediately set standards that will rapidly eliminate greenhouse emissions from marine vessels via electrification or other means.

Trains

Though the expansion and increased utilization of rail transportation in the United States is often considered a necessary element of decarbonizing the transportation sector, the U.S. rail network is currently far from zero emissions. Greenhouse gas emissions from rail transportation have increased seven percent since 1990, to contribute two percent of U.S. transport emissions.¹⁰⁴ These emissions are mostly attributable to the continued use of diesel-electric locomotives, despite the availability and widespread use elsewhere of fully-electrified rail. Globally, about 40% of railway energy demand is already supplied through electricity,¹⁰⁵ with fully electric trains able to achieve higher speeds and operate with superior efficiency than diesel trains.¹⁰⁶ The United States has an urgent need to modernize its rail network and eliminate fossil-fuel powered rail engines.

⁹⁷ United States Environmental Protection Agency, Fast Facts: U.S. Transportation Sector Emissions 1990-2017 (2019), *available at*: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P100WUHR.pdf> (last visited Oct. 7, 2019).

⁹⁸ International Maritime Organization, Third IMO Greenhouse Gas Study (2014) at 1, *available at*: <http://www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Documents/Third%20Greenhouse%20Gas%20Study/GHG3%20Executive%20Summary%20and%20Report.pdf#page=32> (last visited Oct. 7, 2019).

⁹⁹ *Id.* at 4.

¹⁰⁰ Hall 2018, *supra* note 91, at 19.

¹⁰¹ *Id.* at 8-10.

¹⁰² 42 U.S.C. § 7547(a); read with 42 U.S.C §§ 7550(10), (11) and 40 C.F.R § 89.2.

¹⁰³ Oceana *et al.*, Petition for Rulemaking Under the Clean Air Act to Reduce the Emission of Air Pollutants from Marine Shipping Vessels that Contribute to Global Climate Change, Oct. 3, 2007, *available at*:

https://www.biologicaldiversity.org/programs/climate_law_institute/pdfs/marine-greenhouse-gas-emissions-petition-2007 (last visited Oct. 8, 2019); People of the State of California, Petition for Rule Making Seeking the Regulation of Greenhouse Gas Emissions from Ocean-Going Vessels, Oct. 3, 2007, *available at*:

https://www.biologicaldiversity.org/programs/climate_law_institute/pdfs/California-petition-to-regulate-ship-emissions-2007.pdf (last visited Oct. 8, 2019).

¹⁰⁴ United States Environmental Protection Agency, Fast Facts: U.S. Transportation Sector Emissions 1990-2017 (2019), *available at*: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P100WUHR.pdf> (last visited Oct. 3, 2019).

¹⁰⁵ Hall 2018 at 16.

¹⁰⁶ *Ibid.*

In 2010, the Center for Biological Diversity, Friends of the Earth and the International Center for Technology Assessment petitioned the U.S. EPA to set emission standards for greenhouse gases and black carbon emissions from trains under Clean Air Act Section 213.¹⁰⁷ The next President can order EPA to immediately begin the process of setting emission standards for trains to ensure the transition of this sector to 100% clean and renewable electric power by no later than 2030 with strict interim targets along the way.

6. POWER THE ELECTRICITY SECTOR WITH 100% CLEAN AND RENEWABLE ENERGY BY 2030 AND PROMOTE ENERGY DEMOCRACY.

Our energy system is broken. The country still relies on dirty fossil fuels to generate more than 60% of our electricity, and fuel most heating in buildings.¹⁰⁸ At the same time, this fossil fuel reliance disproportionately pollutes Indigenous and low-income communities and communities of color, who neither have a choice in purchasing dirty energy nor a voice in the governance of their energy system.¹⁰⁹ The root cause of these defects is the electricity sector's legal structure: an antiquated remnant of the 20th Century that vested the provision of the public good of electricity into private corporations' hands in a regulated monopoly that has since been proven to suffer from regulatory capture. The resulting business model drives utility companies to constantly build new infrastructure and favor fossil fuel interests, defer critically important maintenance and upgrades to the power grid to ensure climate resilience and cyber security, and stifle distributed solar power and other distributed energy resources in the face of the climate emergency.¹¹⁰ That is why the country needs a fundamental reformation of the legal and power structures of electricity delivery, where the provision of power is not driven by profit but by serving the public good.

Given the near-term cost parity of clean energy,¹¹¹ the remaining barrier to our renewable energy future is no longer economics and technology, but sheer political will. The next President can initiate the transformation of the electricity system to maximize energy efficiency and ensure 100% clean, renewable, and zero emission energy by 2030, as required by climate science.¹¹² The steps below will help ensure the

¹⁰⁷ Center for Biological Diversity *et al.*, Petition for Rulemaking Under the Clean Air Act to Reduce Greenhouse Gas and Black Carbon Emissions from Locomotives (2010), *available at*: https://www.biologicaldiversity.org/programs/climate_law_institute/transportation_and_global_warming/pdfs/Locomotives_Petition_09_21_2010.pdf (last visited Oct. 3, 2019).

¹⁰⁸ United States Energy Information Administration, What is U.S. Electricity Generation by energy source?, *available at*: <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3> (last visited on Oct. 3, 2019).

¹⁰⁹ National Association for the Advancement of Colored People & Clean Air Task Force, Fumes Across the Fence-Line: The Health Impacts of Air Pollution from Oil and Gas Facilities (2017), *available at*: http://www.naacp.org/wp-content/uploads/2017/11/Fumes-Across-the-Fence-Line_NAACP_CATF.pdf (last visited Oct. 3, 2019); *see also* American Lung Association, State of the Air (2017), *available at*: <http://www.lung.org/assets/documents/healthy-air/state-of-the-air/state-of-the-air-2017.pdf> (last visited Oct. 3, 2019).

¹¹⁰ *See Salt River Project Agric. Improvement and Power District v. TESLA Energy Operations, Inc.*, No. 17-368 (2018), Center for Biological Diversity *et al.* Amicus Curiae Br. 16-18 (petition dismissed).

¹¹¹ International Renewable Energy Agency, Global Energy Transformation: A Roadmap to 2050 (2018) [IRENA], *available at*: <https://www.irena.org/publications/2019/Apr/Global-energy-transformation-A-roadmap-to-2050-2019Edition> (last visited Oct. 7, 2019).

¹¹² All new clean and renewable energy should exclude all combustion-based power generation and biomass energy.

transformation realizes a new energy paradigm that is not only powered by clean and renewable energy, but also distributes wealth, power, and decision-making about our energy choices equitably—to seize this once-in-a-century opportunity to restructure relationships of power to be centered in justice, equity, and environmental sustainability. While the next President can and should also work with Congress and state governments to speed and complete this complex undertaking, the President can independently take several steps that are essential to begin and guide the process.

a. Rapidly Expand Clean and Renewable Energy Generation

The President can lead the country’s energy transition by proactively expanding clean power generation to displace fossil fuel generation and satisfy a significant portion of the country’s energy needs. As outlined in Section One, the President’s emergency declaration made pursuant to the National Emergencies Act—recognizing the national security threat that climate disruption poses to the country—would unlock the President’s emergency powers to direct the Secretary of Defense to undertake construction projects by redistributing military funds to address the climate emergency.¹¹³ Pursuant to these authorities, the next President can order the Secretary of Defense to carry out a rapid construction program of clean and renewable energy projects as well as battery storage and smart grid infrastructure on military installations. This construction should prioritize distributed solar and storage projects—including photovoltaic solar installations built on already existing structures—as well as well-sited, well-managed wind and photovoltaic solar installations built on already-degraded environments in order to minimize environmental and wildlife impacts.¹¹⁴ Critically, the relevant federal agencies should be directed to ensure that all government contracts contain strong labor protections and standards.

Further pursuant to emergency powers, the President can bolster investment in clean and renewable energy projects by extending critical loan guarantees to renewable energy project developers, including communities and cooperatives, to help cover upfront costs for project construction, again prioritizing the distributed clean and renewable projects described above due to their relatively minimal harms to the environment and wildlife.¹¹⁵ These vital loan guarantees must also be made available to utility companies

¹¹³ 10 U.S.C. §2808 (“In the event of a proclamation of war or the proclamation by the President of a national emergency in accordance with the National Emergencies Act (50 U.S.C. 1601 et seq.) that requires use of the armed forces, the Secretary of Defense, without regard to any other provision of law, may undertake military construction projects, and may authorize the Secretaries of the military departments to undertake military construction projects, not otherwise authorized by law that are necessary to support such use of the armed forces. Such projects may be undertaken only within the total amount of funds that have been appropriated for military construction, including funds appropriated for family housing, that have not been obligated.”)

¹¹⁴ Hernandez, R.R. et al., Techno-ecological synergies of solar for global sustainability, 2 *Nature Sustainability* 560 (2019), *available at*: <https://www.nature.com/articles/s41893-019-0309-z> (last visited Oct. 3, 2019); Center for Biological Diversity, *Wild Energy: Building a Renewable Future for Wildlife and the Planet* (2015), *available at*: https://www.biologicaldiversity.org/programs/population_and_sustainability/pdfs/WildEnergyFactsheet.pdf (last visited Oct. 3, 2019).

¹¹⁵ 50 U.S.C. §§ 4531 (a)(2) (President may authorize an agency to guarantee loans by private institutions in order to finance products and services essential to the national defense without regard to normal procedural and substantive requirements for such loan guarantees), (d)(1) (Federal government may make a guarantee or obligation relating to a domestic industrial base shortfall that causes the aggregate outstanding amount of all guarantees for that shortfall to exceed \$50,000,000 without first notifying Congress).

to enforce the long-deferred maintenance and upgrades necessary to ensure that the power grid and transmission lines are modern, smart, energy-efficient, and resilient to both climate disruption and cyber security threats. In addition, loan guarantees can also be extended to home and building residents and owners for building electrification, energy efficiency upgrades, and other energy conservation measures.

To distribute this new, clean electricity, the President can direct the Department of Energy to transmit the production of the newly-constructed renewable energy projects through the four federal Power Marketing Administrations across the 33 states in which they operate. In tandem, other power providers will also be compelled to purchase this renewable energy generation under section 210 of the Public Utilities Regulatory Policy Act, which requires utilities to purchase the output of certain renewable generators at the same “avoided cost” they would otherwise pay for wholesale fossil fuel generation.¹¹⁶ This massive investment in clean energy construction will generate a substantial amount of new green jobs, and ensure strong labor protections and standards should be incorporated.

b. Electrify Rural America with 100% Clean and Renewable Energy

Nearly 900 rural electric cooperatives deliver electricity to over 42 million residents, making up 13% of U.S. electricity—almost 70% of which remains fossil-fuel-generated.¹¹⁷ Many cooperatives are locked into long-term fossil fuel contracts and coal plant debt that keep them from transitioning their energy portfolio to 100% clean energy.¹¹⁸ If they can be freed of their stranded fossil fuel assets in exchange for clean energy and energy efficiency commitments, rural cooperatives can also move rapidly toward a clean energy future.¹¹⁹ As a prime example, in 2016, the Kit Carson Electric Cooperative in northern New Mexico did just that in buying themselves out of a long-term contract to transition to 100% day-time solar generation. The transition is on track to occur by 2021 and is estimated to save the co-op at least fifty million dollars.¹²⁰

The Rural Utility Service (RUS), an agency in the Department of Agriculture, administers rural electricity programs and federal loans to member-owned rural electric cooperatives and municipal power providers. The next President should direct RUS to purchase stranded fossil fuel assets of rural cooperatives and municipal power providers on terms that would commit them to 100% solar, wind, and other clean and

¹¹⁶ Public Utility Regulatory Policies Act, Pub. L. No. 95-617, 92 Stat. 3117 (1978).

¹¹⁷ National Rural Electric Cooperative Association, *America’s Electric Cooperatives* (2019), *available at*: https://www.electric.coop/wp-content/uploads/2019/04/Co-op_Facts_and_Figures_4-2019.pdf (last visited Oct. 7, 2019).

¹¹⁸ See Hatlestad, Erik, Katie Rock, and Liz Veazey, *Rural Electrification 2.0: The Transition to a Clean Energy Economy*, Center for Rural Affairs, *Clean Up The River Environment Minnesota et al.* (2019), *available at*: https://www.cureriver.org/wp-content/uploads/2019/06/Rural-Electrification-2.0-report_CURE-1.pdf (Oct. 7, 2019).

¹¹⁹ *Id.* at 3.

¹²⁰ Stewart, Donna, *The Rising Tide of Renewable Energy*, San Juan Citizens Alliance, May 2, 2017, *available at*: sanjuancitizens.org/climate-change/rising-tide-renewable-energy (last visited Sep. 13, 2019); Best, Allen, *Solar plus storage will put Kit Caron Electric at 48% renewables*, Nov. 11, 2019, *available at*: <http://mountaintownnews.net/2019/11/11/solar-plus-storage-will-puts-kit-carson-electric-at-48-renewables/> (last visited Nov. 22, 2019).

renewable energy generation and storage by 2030—pursuant to the agency’s existing authority under the Rural Electrification Act.¹²¹

c. Expand Federal Financing Programs to Fund Local Energy Democracy Projects

Energy democracy models empower local communities to make energy choices, as well as direct funding to serve local needs—in contrast to the current system where the public plays little role in the decisions of private utilities. In particular, restructuring and democratizing electricity systems through public ownership—whether government, community, or cooperative—can help move the U.S. away from fossil fuel production and toward a clean energy future driven by community interests and participation as opposed to maximizing company profit.¹²² The next President can direct the Department of Energy to rapidly expand existing federal energy financing programs under the Department of Energy Loan Guarantee Program to prioritize financing for clean energy projects (e.g. community shared solar) and business models (e.g. worker-owned cooperatives) developed by non-profit and community organizations, local governments, and academic institutions.¹²³

d. Appoint Decision Makers Free of Conflicts of Interest to Key Energy Governing Bodies

To ensure that energy decisions are carried out in the best interest of the public, the next President must institute a clear conflicts of interest policy in Presidential appointments that prohibits appointees to key energy bodies from having fossil fuel industry ties. The President has the authority to execute this policy by appointing commissioners to the Federal Energy Regulatory Commission, board members to the Tennessee Valley Authority board, administrators to the Power Marketing Administrations, and the Secretary and top leadership of the Department of Energy, who are climate advocates and do not have conflicts of interest with the fossil fuel industry.¹²⁴

7. LAUNCH A JUST TRANSITION TO PROTECT OUR COMMUNITIES, WORKERS, AND ECONOMY.

The transition from an extractive to a regenerative economy will be transformational for the workers and communities of this country. As this plan identifies steps to change the economy, the nation must not only create new jobs for workers, but also ensure that those new jobs are good jobs, with family-sustaining wages, health care and retirement benefits, worker protections, and avenues to empower workers to have voice in their employment. Moreover, it is critical that these new jobs are created in the very communities that are losing them, and that programs are established to help workers transition to new employment, receive protections until they are able to start their new jobs, and are supported with vocational education programs to succeed in their new employment.

¹²¹ 7 U.S.C. §§ 902(a), 904(a), 907.

¹²² See, e.g., Bozuwa, J., *Energy Democracy: Taking Back Power*, The Democracy Collaborative (2019), available at: <https://thenextsystem.org/sites/default/files/2019-03/EnergyDemocracy-2-star-Final.pdf> (last visited Oct. 7, 2019).
¹²³ 42 U.S.C. § 16513.

¹²⁴ See 42 U.S.C. § 7171(b)(1) (authority for Presidential appointment of FERC commissioners); 16 U.S.C.S. § 831a(a)(1) (authority for Presidential appointment of TVA board members); 42 USC § 7152(a)(2) (1977) (authority for Department of Energy Secretary’s appointment of PMA administrators).

In order to guarantee that equity and justice will be at the center of the needed societal transformation, the next President should issue an Executive Order creating an inter-agency just transition task force with a deadline of six months to create a comprehensive, multi-industry, national program that guarantees support and protection for affected communities and workers. The task force must meaningfully consult with unions, workers, Indigenous People and frontline community organizations, and include the Department of Labor, EPA, Department of Energy, Department of Transportation, Department of Housing and Urban Development, and the Department of Commerce. The mobilization would be similar in scale to what occurred during World War II, but based on a shared purpose and principles of justice that leaves no one behind.

8. ADVANCE CLIMATE JUSTICE: DIRECT FEDERAL AGENCIES TO ASSESS AND MITIGATE ENVIRONMENTAL HARMS TO DISPROPORTIONATELY IMPACTED INDIGENOUS PEOPLES, PEOPLE AND COMMUNITIES OF COLOR, AND LOW-WEALTH COMMUNITIES.

The President must issue an environmental justice Executive Order that strengthens Executive Order 12898 by directing federal agencies to pro-actively “mitigate,” instead of only “identify and address,” disproportionate health and environmental impacts of their programs on Indigenous Peoples, low-income and low-wealth communities, and people and communities of color. Further, within that Executive Order, the President should also require agencies to use geographic, socioeconomic, and environmental hazard metrics when identifying environmental justice communities, similar to the robust criteria developed in New York state legislation on climate justice.¹²⁵

The President should also direct the Department of Treasury, Health and Human Services, and the Attorney General to commence a study for mitigation and payment of damages to those deliberately and disproportionately exposed to and harmed by fossil fuel pollution and toxins. Further, the President should direct the Department of Justice to institute rules to protect the rights of individuals protesting climate and environmental harms, including from extreme prosecution and disproportionate sentencing for such persons. Moreover, the President should issue an Executive Order directing the Departments of Justice and Interior to investigate and, as appropriate, seek damages and restoration from fossil fuel industry actors found responsible for damages to public lands and waters, including the Gulf of Mexico. This is a critically important action as some states pass laws to block local governments and others from bringing litigation seeking to force polluters to pay their fair share.¹²⁶

Finally, addressing climate justice in the United States means necessarily addressing the climate-induced migration and displacement which is both affecting populations newly migrating into the country, as well as those within it. As an initial and crucial step, the next President must reverse the numerous harmful and unethical Trump immigration directives, including family separation, mass deportation raids, travel bans based on race and nationality, and the “zero-tolerance” policy. At the same time, the next President must issue a cross-agency directive to effectively respond to and absorb the growing number of climate-

¹²⁵ State of New York, Senate Bill 6599, *available at*: <https://legislation.nysenate.gov/pdf/bills/2019/S6599>.

¹²⁶ Neela Banerjee, *Louisiana governor signs law to block suits against oil industry*, LOS ANGELES TIMES, June 6, 2014, <https://www.latimes.com/nation/la-na-louisiana-lawsuit-jindal-20140606-story.html> (last visited Nov. 1, 2019).

displaced persons who are impacted by extreme weather events and other climate impacts. The new cross-agency system must preserve the human rights, health, safety, and dignity of all persons affected by climate-induced migration and displacement.

9. MAKE POLLUTERS PAY: INVESTIGATE AND PROSECUTE FOSSIL FUEL POLLUTERS FOR THEIR LEGAL VIOLATIONS AND COMMIT TO VETO ALL LEGISLATION THAT GRANTS LEGAL IMMUNITY FOR POLLUTERS OR UNDERMINES EXISTING ENVIRONMENTAL LAWS.

a. Investigate and Prosecute Fossil Fuel Polluters' Legal Violations to the Full Extent of the Law

Fossil fuel polluters are the single greatest cause of the climate emergency and the single greatest barrier to addressing it. For decades, fossil fuel companies have understood the dangers associated with their fossil fuels. Yet instead of acting responsibly, they manufactured elaborate disinformation campaigns to lie about the science and mislead the public about the harms caused by their destructive products.¹²⁷ Like asbestos, tobacco and opioid manufacturers, the fossil fuel industry had long-standing knowledge of the risks associated with their products; rather than taking steps to prevent climate change, the industry took action to conceal and deny that knowledge and discredit climate science, in contradiction to their own internal research and the actions they took to protect their assets from climate impacts. At the same time, these polluters and their trade associations have successfully blocked climate policies that would have provided alternatives to fossil fuels.¹²⁸ As the climate emergency becomes ever more dire, these efforts are evolving in tone and strategy but remain as active and destructive as ever.¹²⁹

Many legal efforts are underway to hold fossil fuel polluters accountable. More than a dozen local and state governments are currently bringing “nuisance” suits against some of the world’s largest fossil fuel producers to force them to pay for the damage they have caused. These “Carbon Majors” should be held liable for climate damages not just because their products caused the climate harms, but because these companies’ executives understood the science and gravity of the harm, and yet lied about these facts and blocked government policy to provide alternatives to fossil fuels.¹³⁰ Other ongoing accountability efforts include the New York Attorney General’s case against Exxon for fraud in its communications to investors about climate change,¹³¹ the Massachusetts Attorney General’s case against Exxon for fraud in its

¹²⁷ Supran, Geoffrey & Naomi Oreskes, *Assessing ExxonMobil’s Climate Change Communications (1977-2014)*, 12 *Environ. Res. Lett.* 084019 (2017).

¹²⁸ See, e.g., Influence Map, *Big Oil’s Real Agenda on Climate Change (2019)* (Influence Map 2019), *available at*: <https://influencemap.org/report/How-Big-Oil-Continues-to-Oppose-the-Paris-Agreement-38212275958aa21196dae3b76220bddc> (last visited Sept. 24, 2019); Influence Map, *The Carbon Policy Footprint (2017)*, *available at*: <https://influencemap.org/report/Corporate-Carbon-Policy-Footprint-4274a464677481802bd502ffff008d74> (last visited Sept. 24, 2019).

¹²⁹ Influence Map 2019.

¹³⁰ Hasemyer, D., *Fossil Fuels on Trial : Where the Major Climate Change Lawsuits Stand Today*, INSIDECLIMATE NEWS, July 22, 2019, *available at* : <https://insideclimatenews.org/news/04042018/climate-change-fossil-fuel-company-lawsuits-timeline-exxon-children-california-cities-attorney-general> (last visited Oct. 7, 2019).

¹³¹ Kusnetz, Nicholas, & David Hasemyer, *Exxon Accused of Pressuring Witnesses in Climate Fraud Case*, INSIDECLIMATE NEWS, Aug. 9, 2019, *available at*: <https://insideclimatenews.org/news/06082019/exxon-climate-fraud-investigation-witness-pressure-investors-new-york-attorney-general> (last visited Oct. 7, 2019).

communications to both investors and consumers,¹³² as well as several class actions by Exxon shareholders against the company for misrepresenting climate change risk.¹³³ These cases are critically important, but much more needs to be done, including an investigation and prosecution of the polluters under the Racketeer Influenced and Corrupt Organizations Act, similar to the case brought by the Department of Justice against several major tobacco companies for their coordinated efforts to deceive the public about the risks associated with their products.

The next President can direct the Attorney General to investigate all legal violations by fossil fuel polluters and prosecute them to the maximum extent of the law, including by supporting the “nuisance” and “fraud” suits discussed above. The Attorney General should undertake the investigations so as to fully account for the government’s full range of criminal, civil, regulatory and administrative remedies. The President should also direct that the Department of Justice coordinate as appropriate with related executive branch actions discussed above, such as the Interior Department review of legal violations in the issuance of fossil fuel leases, as well as investigations and prosecutions undertaken by state attorneys general.

b. Commit to Veto all Legislation that Grants Legal Immunity for Polluters, Undermines Existing Environmental Laws, or Advances False Solutions

Today, the fossil fuel industry is desperate to obtain relief from all ongoing and future efforts to hold them accountable and eliminate greenhouse pollution. As such, a central part of the industry’s strategy is promoting a plan for new legislation, often referred to as the “Baker-Shultz carbon dividend plan” that would provide the world’s largest polluters with legal immunity from current and future climate-related lawsuits and eliminate major portions of existing successful pollution control laws.¹³⁴ In exchange for bestowing these extraordinary benefits on fossil fuel polluters, the legislation would institute a carbon tax.¹³⁵ The Climate Leadership Council is one of the primary public faces for this effort.

The Climate Leadership Council was founded by many of the world’s largest oil companies including ExxonMobil, Shell, BP, and others. The group does not hide the fact that eliminating existing law and regulations is the group’s top priority: “In the majority of cases where a carbon fee offers a more cost-effective solution, the fee will replace regulations. All current and future federal stationary source carbon regulations, for example, would be displaced or preempted.”¹³⁶ The Climate Leadership Council plan

¹³² Hasemyer, David, *Massachusetts Sues Exxon Over Climate Change, Accusing the Oil Giant of Fraud*, INSIDECLIMATE NEWS, Oct. 25, 2019, available at: <https://insideclimatenews.org/news/24102019/massachusetts-sues-exxon-climate-change-investor-fraud-misleading-advertising-healey> (last visited Dec. 2, 2019).

¹³³ See, e.g., Savage, K., *Federal Judge: Employees Can Pursue Climate Fraud Suit Against Exxon*, CLIMATE LIABILITY NEWS, Aug. 15, 2018, available at: <https://www.climate-liabilitynews.org/2018/08/15/climate-fraud-suit-exxon-employees-ramirez/> (last visited Oct. 7, 2019).

¹³⁴ Irfan, U., *Exxon is lobbying for a carbon tax. There is, obviously, a catch*, VOX, Oct. 18, 2018, available at: <https://www.vox.com/2018/10/18/17983866/climate-change-exxon-carbon-tax-lawsuit> (last visited Sept. 24, 2019).

¹³⁵ *Ibid.*

¹³⁶ Climate Leadership Council (“CLC”), *The Four Pillars of our Carbon Dividends Plan* (updated September 2019), available at: <https://www.clcouncil.org/our-plan/> (last visited Oct. 7, 2019). While CLC recently removed explicit

originally included an explicit liability waiver for ongoing and future climate-related lawsuits against polluters. This language has recently been excised from their websites,¹³⁷ in an apparent attempt to hide this element of the campaign and garner further support. The Climate Leadership Council plan, like so many other polluter initiatives, is particularly dangerous because it is designed to trick people into thinking it offers a real climate solution, when in fact it is counter-productive.

In addition to the carbon tax legislation, polluters are advancing a suite of other false solutions in many areas. These include market-based mechanisms and emissions trading schemes such as offsets which have proven both to be ineffective and to have harmful consequences such as concentrating pollution in already overburdened communities. They include technology options such as carbon capture and storage and the use of captured carbon for enhanced oil recovery, which perpetuate fossil fuel extraction and take us in the wrong direction. Biomass energy is also, in almost all cases, a false solution because it increases carbon pollution per unit of energy and incentivizes clearcutting and other harmful forestry practices. Waste-to-energy similarly does not reduce greenhouse pollution and increases dangerous air pollution, usually in already overburdened environmental justice communities. Similarly, nuclear power creates severe safety, health, proliferation, and waste disposal issues—which has led to compounded health impacts of radiation on communities—and is far more expensive than new renewable energy. These corporate schemes all share the common characteristic that they place corporate profits over community well-being and perpetuate the many systemic injustices that have led to the climate emergency.

The next President can pledge to veto any legislation that eliminates existing environmental laws, gives polluters legal immunity from current or future lawsuits against them, or contains any other false solution or rollback.

10. REJOIN THE PARIS AGREEMENT AND LEAD WITH SCIENCE-BASED COMMITMENTS THAT ENSURE THAT THE UNITED STATES, AS THE WORLD'S LARGEST CUMULATIVE HISTORICAL EMITTER, CONTRIBUTES ITS FAIR SHARE AND ADVANCES CLIMATE JUSTICE.

The next President can rejoin the international negotiations and advance U.S. commitments for emissions reductions that are in line with what science, equity, and climate justice demand. The next President can and should recommit the United States to the modest requirements of the 2015 Paris Agreement.¹³⁸ But rejoining Paris is not nearly enough. The science demands global greenhouse emissions be cut by half in the next decade and be eliminated altogether by no later than 2050 in order to have a reasonable chance of

reference to the carbon tax from their website, there can be no question that obtaining immunity from the growing number of lawsuits against it remains one of the fossil fuel industry's top priorities.

¹³⁷ Savage, K., *Climate Liability Waiver Dropped from Major Carbon Tax Proposal*, CLIMATE LIABILITY NEWS, Sept. 12, 2019, available at: <https://www.climateliabilitynews.org/2019/09/12/climate-liability-waiver-carbon-tax-baker-schultz/> (last visited Oct. 7, 2019).

¹³⁸ U.S. Const. art. II, § 1 (“the executive Power shall be vested in the President of the United States of America”); U.S. Const. art. I, § 3 (take care clause). See also Center for Biological Diversity, *Yes, He Can: President Obama’s Power to Make an International Climate Commitment Without Waiting for Congress* (Working Paper No. 2) (2009) (“CBD 2009”), available at: https://www.biologicaldiversity.org/programs/climate_law_institute/pdfs/Yes_He_Can_120809.pdf (last visited Oct. 7, 2019).

limiting warming to below 1.5.¹³⁹ The Paris commitments alone will come nowhere close to meeting these targets.

The next President can immediately increase the ambition of the U.S. greenhouse reduction commitment (called the “Nationally Determined Contribution” (NDC)) to reach the deep U.S. reductions required by science and equity. The United States’ current NDC commitment falls woefully short of the country’s fair share of mitigation in proportion to the country’s position as the largest historical contributor of GHG emissions.¹⁴⁰ Our nation must cut domestic greenhouse emissions by at least 71% by 2030 and reduce them to zero by no later than 2040 in order to contribute our fair share of reductions.¹⁴¹ In order to limit the risk and harm to communities and species across the globe from additional global warming, the U.S. must catalyze emergency-speed action to reach zero emissions worldwide as soon as possible.

In addition to commitments to slash total U.S. emissions, the NDC must include limits and deadlines to halt all oil, gas, and coal production, as well as plans for economic diversification, fossil fuel subsidy reforms, and finance to support climate action in poorer countries.¹⁴² Because these domestic reductions alone are insufficient to fulfill the U.S. fair share of global climate action, these actions must be accompanied by large-scale financial and technological support to enable poorer countries to reduce their own emissions, as well as to support crucial adaptation measures so that vulnerable communities can survive the climate impacts that are already happening. Specifically, the next President must leverage their full executive authority and work with Congress to at least double the U.S.’s current financial commitments to the Green Climate Fund to over \$8 billion.¹⁴³ Importantly, these additional contributions still fall well short of a proper U.S. contribution calculated on the basis of our historical responsibility (cumulative greenhouse gas emissions) and national capacity (wealth, technology, human resources, etc.).

The President can also direct the State Department, U.S. Treasury, and other relevant agencies to prohibit any U.S. financing from funding fossil fuel projects and related infrastructure overseas, including funds deployed by the Green Climate Fund, U.S. Import-Export Bank, Organisation for Economic Co-operation and Development (OECD), World Bank, International Monetary Fund, and other unilateral, bilateral, and multi-lateral funding sources.¹⁴⁴

¹³⁹ Intergovernmental Panel on Climate Change, *Global Warming of 1.5°C*, an IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty (Oct. 6, 2018), <http://www.ipcc.ch/report/sr15/> at Summary for Policymakers at 12 and Chapter 2 at 95.

¹⁴⁰ Irfan, U., *Why the US bears the most responsibility for climate change*, Vox, Apr. 24, 2019, available at: <https://www.vox.com/energy-and-environment/2019/4/24/18512804/climate-change-united-states-china-emissions> (last visited Sept. 23, 2019).

¹⁴¹ Climate Equity Reference Project, *Climate Equity Reference Calculator*, <https://calculator.climateequityreference.org/> (last visited Dec. 3, 2019).

¹⁴² Lazarus, M. *et al.*, *Closing the fossil fuel production gap*, Stockholm Environment Institute (2019).

¹⁴³ World Resources Institute, *Green Climate Fund Contributions Calculator 2.0* (2019), available at: <https://www.wri.org/resources/data-visualizations/green-climate-fund-contributions-calculator-20> (last visited Oct. 7, 2019).

¹⁴⁴ Past presidents have issued program guidance to restrict agency funding toward certain projects. See, e.g., Bush Administration’s “abstinence-only” program.

The next President can also lead the way in quickly forging a stronger global agreement (either within the Paris instrument or as a successor agreement) that is fair, ambitious, and binding, as required by U.S. commitments in the 1992 U.N. Framework Convention on Climate Change, the umbrella agreement signed by H.W. Bush and ratified by the U.S. Senate in 1992. The next President must also work to ensure that any new climate agreements and their implementation are wholly consistent with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).¹⁴⁵

The executive actions listed in this report will form the backbone of the U.S. greenhouse gas reduction commitment under the UNFCCC. Yet the U.S. responsibility is so large that even this will not be sufficient to meet our fair share.¹⁴⁶ Therefore, providing finance and technology to developing countries to unlock greater emissions reductions abroad is essential to both meeting U.S. obligations as well as ensuring sufficient global action to have a chance at keeping global temperature rise to acceptable levels.

It has been a common misconception that U.S. participation in any international climate agreement requires ratification by a supermajority in the Senate. In fact, the President has authority to enter into international accords by executive agreement, and the great majority of international agreements since World War II have been accomplished through this method.¹⁴⁷ Existing environmental laws provide authority for negotiating such agreements, in addition to the specific authority to negotiate international agreements to reduce greenhouse gas emissions Congress granted the President in the Global Climate Protection Act.¹⁴⁸ Thus the next President has full legal authority to take the steps outlined above.

CONCLUSION

If the world is to avoid the worst impacts of climate change, a rapid shift from an extractive to a regenerative and just global economy is necessary. Such global decarbonization is only possible if the U.S. plays a leading role. The effectiveness of the climate policies of the next U.S. President likely represent the most important variable in whether warming can be kept below 1.5° C and complete climate catastrophe can be avoided. While innumerable actions, great and small, are part of the climate solution, the ten executive actions described above can be implemented by the next President during their first ten days in office. These ten pillars can form the foundation of a bold, ambitious and realistic climate plan that achieves the necessary deep and rapid cuts in greenhouse emissions. The enormity of the climate emergency requires nothing less.

¹⁴⁵ United Nations, United Nations Declaration on the Rights of Indigenous Peoples, <https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html> (last visited Dec. 4, 2019).

¹⁴⁶ CSO Equity Review Coalition, *After Paris: Inequality, Fair Shares, and the Climate Emergency* (2018), available at: http://civilsocietyreview.org/files/COP24_CSQ_Equity_Review_Report.pdf (last visited Oct. 7, 2019).

¹⁴⁷ CBD 2009, *supra* note 138 at 6 (FN 19).

¹⁴⁸ Global Climate Protection Act, Pub. L. No. 100-204, § 1103(c), 101 Stat. 1407-09 (1987).