

GREENPEACE USA SUBMISSION TO THE HOUSE SELECT COMMITTEE ON THE CLIMATE CRISIS

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GREENPEACE

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November 2019

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1. Greenpeace urges Congress to enact a managed phaseout of fossil fuel production and pass a Green New Deal.

Greenpeace USA¹ appreciates the opportunity to inform the House Select Committee on the Climate Crisis’s recommendations for comprehensive, ambitious, and equitable legislation to address the climate crisis.

The climate crisis is here. At 1.0°C of warming, wildfires, storms, etc. are putting millions of people’s lives and livelihoods under threat — including across the U.S., from Houston,² to Iowa,³ to California.⁴ Indigenous communities, communities of color, low-wealth families, and other vulnerable and marginalized communities are disproportionately affected.⁵ Limiting global temperature rise to 1.5°C, as articulated in the Paris Agreement goals⁶ and Intergovernmental Panel on Climate Change (IPCC), is critical to protect communities and ecosystems around the world, enhance justice and prosperity for all people, and provide a greater chance of avoiding potentially catastrophic and irreversible “tipping points” in the global climate system.^{7,8} In addition, numerous current and former U.S. officials have called for action on the climate crisis to maintain a “healthy, stable economy”⁹ and protect U.S. national security.¹⁰

The scale of the climate crisis demands just, inclusive, and transformative action from Congress — a Green New Deal. Not only is a just and inclusive Green New Deal imperative to stave off the worst impacts of the climate crisis, it will also afford Congress an historic opportunity to address the interlocking crises of climate change, economic inequality, and

¹ For purposes of this report, Greenpeace USA refers to Greenpeace, Inc. a 501(c)(4) non-profit organization.

² Andrew Freedman. *Climate change more than doubled the odds of Houston’s most recent deluge, study says.* Washington Post. September 27, 2019. ([link](#))

³ Jeff Berardeli. *Perfect storm of extreme weather and climate change drove deadly Midwest flooding.* CBS News. March 18, 2019. ([link](#))

⁴ Robinson Myer. *California’s Wildfires are 500 Percent Larger Due to Climate Change,* The Atlantic. July 16, 2019. ([link](#))

⁵ U.S. Global Change & Research Program. *Volume II: Impacts, Risks, and Adaptation in the United States.* Fourth National Climate Assessment. ([link](#))

⁶ United Nations Framework Convention on Climate Change. *Paris Agreement.* United Nations. December 12, 2015. ([link](#))

⁷ IPCC. *Special Report: Global Warming of 1.5 C.* Summary for Policymakers. ([link](#))

⁸ Climate Nexus. *IPCC 1.5 Report: Planet Nearing Tipping Point.* ([link](#))

⁹ Mary C. Daly. *Why Climate Change Matters to Us.* Federal Reserve Bank of San Francisco. November 18, 2019. ([link](#))

¹⁰ Sarah Flynn. *How Trump’s War on Climate Policy Threatens National Security.* Greenpeace. January 31, 2017. ([link](#))

racial and environmental injustices affecting millions of Americans and bring the U.S. into a green and prosperous 21st Century future — while establishing U.S. leadership on the world stage in responding to the threat of the climate emergency.

Greenpeace USA urges Congress to enact a Green New Deal that will mobilize the federal government and U.S. economy to:

1. Rapidly reduce U.S. greenhouse gas (GHG) emissions by at least 50% by 2030 and to near-zero well before 2050, in line with the U.S.'s "fair share"¹¹ of global GHG emission reductions required to limit warming to 1.5°C;¹²
2. Invest in 100% renewable energy and low-carbon, climate-resilient infrastructure for the 21st Century;
3. Transform the U.S. from an extractive economy to a regenerative and inclusive one;
4. Create millions of family-sustaining, union jobs; and
5. Prioritize justice, equity, and self-determination for workers and frontline and Indigenous communities in the transition away from fossil fuels.

Furthermore, in order to maximize the benefits of a Green New Deal, **Greenpeace USA urges Congress to enact legislation to halt expansion and facilitate a managed phaseout of coal, oil, and gas production that prioritizes vulnerable workers, families, and communities, including communities of color and low-wealth communities, in the transition to a regenerative, 100% renewable economy.**

Existing coal, oil, and gas mines and fields ("developed reserves") already contain enough potential CO₂ emissions to push the world beyond 1.5°C of warming.¹³ Yet, rather than halting new fossil fuel development and transitioning to alternative sources of energy, fossil fuel companies are investing more than \$1 trillion in North America alone in new wells, mines, pipelines, and other fossil fuel infrastructure projects¹⁴ — a reckless expansion of fossil fuel production that is incompatible with meeting climate goals under the Paris Agreement.¹⁵

This planned fossil fuel expansion risks "locking in" new coal, oil, and gas infrastructure that could commit us to climate chaos, economic chaos, or both.^{16,17} On the other hand, taking

¹¹ Climate Analytics, Next Climate Institute. *Climate Action Tracker*. ([link](#))

¹² IPCC. *Special Report: Global Warming of 1.5 C*. Summary for Policymakers. ([link](#))

¹³ Kelly Trout. *The Sky's Limit and the IPCC Report on 1.5 Degrees Warming*. Oil Change International. October 17, 2018. ([link](#))

¹⁴ Ted Nace, Lydia Plante, and James Browning. *Pipeline Bubble: North America is betting over \$1 trillion in risky fossil fuel infrastructure*. Global Energy Monitor. April 2019. ([link](#)) .

¹⁵ Kelly Trout and Lorne Stockman. *Drilling Towards Disaster: Why the US Oil and Gas Expansion with Climate Limits*. Oil Change International. January 16, 2019. ([link](#))

¹⁶ Peter Erickson, Mary Lazarus, Kevin Tempest. *Carbon Lock-In from Fossil Fuel Supply Infrastructure*. September 23, 2015. ([link](#))

¹⁷ Kelly Trout and Lorne Stockman. *Drilling Towards Disaster: Why the US Oil and Gas Expansion with Climate Limits*. Oil Change International. January 16, 2019. ([link](#))

action now to constrain and wind down U.S. fossil fuel production (so-called “supply-side” climate policy approaches) will provide a better chance at meeting the Paris Agreement goals and maximize the climate, economic, and social benefits of U.S. “demand-side” efforts to transition to 100% clean energy and decarbonize end-use sectors of the economy.¹⁸

As part of a Green New Deal, Congress must take swift action to:

- 1. Halt U.S. fossil fuel expansion, including by eliminating U.S. federal support for fossil fuel production, and leverage U.S. global leadership to end fossil fuel expansion worldwide;**
- 2. Manage the phaseout of existing fossil fuel production and infrastructure consistent with emission reduction and clean energy deployment trajectories to limit warming to 1.5°C; and**
- 3. Prioritize federal investments in a justice-based transition for workers and communities in fossil fuel and other emissions-intensive industries and at the frontlines of climate disasters and toxic pollution.**

In the following sections, we further lay out the imperatives — grounded in the latest climate science, economic modeling, and principles for racial, economic, and environmental justice — for Congress to secure a managed phaseout of fossil fuel production and empower historically disadvantaged workers and communities in transition under a Green New Deal, and lay out detailed policy recommendations for Congress to achieve these aims.

2. Fossil fuel “supply-side” policies are essential to address the climate crisis.

Over the past three decades, policies intended to reduce harmful GHG emissions focused primarily on mitigating demand for and consumption of fossil fuels, such as reducing emissions from industrial smokestacks or vehicle tailpipes, while growing clean and renewable energy alternatives. These policies include EPA GHG regulations, carbon pricing, cap and trade schemes, energy efficiency standards, clean energy tax incentives, and vehicle mileage standards. However, these policies alone have not succeeded in reducing GHG emissions at the pace the IPCC has shown is necessary to afford the world a decent chance at limiting global temperature rise to below 1.5°C above pre-Industrial levels.

In order to effectively address the climate crisis and protect the Indigenous communities, communities of color, and low-wealth families who are most at risk from the dangerous impacts of climate change, we must rapidly slash GHG emissions in line with the IPCC’s best available science. This means utilizing the full extent of our policy toolkit. A growing body

¹⁸ Tim Donaghy. *Why the Next President Must Prioritize A Fossil Fuel Phase Out*. Greenpeace. June 6, 2019. ([link](#))

of research and results-driven policies implemented around the world makes the case that fossil fuel “supply-side” policies — policies to directly limit the production and supply of oil, gas, and coal — are an essential part of any suite of actions Congress takes to stave off the worst impacts of the climate crisis. Often called “cutting with both sides of the scissors,” fossil fuel supply-side policies can complement Congress’s “demand-side” efforts to reduce fossil fuel demand and consumption.¹⁹

We can estimate emissions embedded in fossil fuel reserves, and thus estimate additional climate changes that would occur if fossil fuel producers continue to extract and produce unburned coal, oil, and gas. The amount of fossil fuels that producers can extract and burn before breaching the 1.5 global temperature limit is finite.²⁰

An analysis from Oil Change International revealed that GHG emissions embedded in the world’s currently operating coal mines, oil, and gas fields are enough to send global warming well past 1.5°C, and even beyond the 2°C limit countries agreed to meet in the Paris Agreement.²¹ Yet rather than taking steps to move beyond fossil fuels, governments continue to *expand* fossil fuel production. A recent report estimating the global fossil fuel “production gap” found that worldwide, governments are planning to produce 120% more fossil fuels by 2030 than would be consistent with limiting warming to 1.5°C.²² These conclusions should shock policymakers: Congress must act to ensure that vast swaths of fossil fuel reserves remain safely in the ground.²³

Reality Check

The U.S. is now the world’s largest fossil fuel producer. U.S. oil and gas companies are expanding production at four times the rate of other countries and could account for 60 percent of global oil and gas production growth by 2030.²⁴ Oil and gas production exploded by 85 percent between 2010 and 2018.²⁵ The U.S. now produces more oil than Saudi Arabia

¹⁹ Green, F. and Denniss, R. (2018). Cutting with both arms of the scissors: the economic and political case for restrictive supply-side climate policies. *Climatic Change*, 150 (1–2). 73–87. DOI:10.1007/s10584-018-2162-x

²⁰ For a description of carbon budgets see Carbon Tracker’s *Carbon Budgets Explained*, February 6, 2018. ([link](#))

²¹ Kelly Trout. *The Sky’s Limit and the IPCC Report on 1.5 Degrees of Warming*. Oil Change International, October 17, 2018. ([link](#))

²² Production Gap. *The Production Gap: 2019 Report*. United Nations Environment Programme and Stockholm Environment Institute. November 2019. ([link](#))

²³ Malte Meinshausen, “Greenhouse-gas emission targets for limiting global warming to 2°C”, *Nature*, Vol 458, April 2009; and McGlade and Ekins, “The geographical distribution of fossil fuels unused when limiting global warming to 2°C,” *Nature*, January 2015.

²⁴ Kelly Trout and Lorne Stockman. *Drilling Towards Disaster: Why the US Oil and Gas Expansion with Climate Limits*. Oil Change International. January 16, 2019. ([link](#))

²⁵ Kelly Trout and Lorne Stockman. *Drilling Towards Disaster: Why the US Oil and Gas Expansion with Climate Limits*. Oil Change International. January 16, 2019. ([link](#))

and more natural gas than Russia. All signs indicate that, left unchecked, the industry intends to extract and burn all known oil and gas reserves without regard for the impact their actions will have on billions of people facing climate catastrophe.

Recent reporting reveals that companies are projected to spend \$4.9 trillion over the next ten years on exploration and extraction of new fossil fuel reserves²⁶ — almost all of which is irreconcilable with IPCC scenarios to limit dangerous climate impacts. In addition to increased production for electric power and transportation fuels, the International Energy Agency (IEA) projects that petrochemical (including plastic) production could account for more than a third of oil demand growth to 2030²⁷ — posing yet another enormous threat to the climate due to high GHG emissions from the plastic production lifecycle.²⁸ This is part of a “lock-in” design by the fossil fuel industry — and essentially a massive bet by the industry that the world will fail to safeguard a liveable climate.

The Lock-in Effect

New investments in fossil fuel infrastructure made today can encourage greater future fossil fuel demand and “lock in” future emissions. Emissions lock-in can occur as a result of investments in leases, mines, wells, pipelines, as well as downstream infrastructure such as refineries and power plants.²⁹ Such projects often require high upfront investments that can only be recouped over a multi-decade lifetime. The risk of emissions lock-in is that once the upfront investments are made, it can be more difficult — from an economic, legal and political standpoint — to phase out production in the timeframe necessary to ensure a stable climate.³⁰ The incentive to recover the initial investment can facilitate continued production, even if demand and profit margins fall in the future.³¹ Continuing to invest in fossil fuel infrastructure in the near term will significantly raise the future costs of reaching our climate targets because, as the IEA notes, “much more costly actions are required subsequently to undo the lock-in effect.”³²

²⁶ Global Witness. *Overexposed: How the IPCC's 1.5 C Report Demonstrates the Risk of Overinvestment in Oil and Gas*. April 23, 2019. ([link](#))

²⁷ Dr. Fatif Bariol. *The Future of Petrochemicals*. International Energy Agency. May 2018. ([link](#))

²⁸ Lisa Anne Hamilton and Steve Felt. *Plastics & Climate: The Hidden Costs of a Plastic Planet*. May 2019. ([link](#))

²⁹ Smith et al. *Current fossil fuel infrastructure does not yet commit us to 1.5 °C warming*. Nature Communications. 2019. ([link](#))

³⁰ Peter Erickson, Mary Lazarus, Kevin Tempest. *Carbon Lock-In from Fossil Fuel Supply Infrastructure*. September 23, 2015. ([link](#))

³¹ Greg Muttitt. *The Sky's Limit: Why the Paris Agreement Requires a Managed Decline of the Fossil Fuel Industry*. Oil Change International. September 22, 2016. ([link](#))

³² International Energy Agency. *Redrawing the Energy–Climate Map: World Energy Outlook Special Report*. P 113. June 2013. ([link](#))

The New York Times recently reported on a coming wave of oil production from global extraction projects that highlights the lock-in effect:

“Production of more oil comes at a time when there is growing acknowledgment by governments and energy investors that not all the hydrocarbons in the ground can be tapped if climate change is to be controlled. But exploration decisions, made years ago, have a momentum that can be hard to stop.

“Legacy decisions keep going,” said John Browne, BP’s former chief executive. “Things happen in different directions because decisions are made at different times.”³³

Reducing Emissions Leakage by Constraining Fossil Fuel Supply

When demand-side levers are not paired with actions to curtail production, it can create a leakage effect when “sources outside the scope of a GHG emissions reduction system increase emissions as a result of that system.”³⁴ This happens when capital investment flows to where fossil fuels are not constrained and production rates can adjust to make up the difference.

Original Greenpeace USA research finds that if no action is taken to address the climate impacts of fossil fuel production, then a significant fraction of emissions reductions achieved by policies to reduce demand for fossil fuels could be wiped out.³⁵ If the U.S. is successful at reducing domestic consumption of oil but does not stem the boom in domestic oil production, then the surplus oil will be exported and burned overseas. These surplus oil exports will increase carbon emissions beyond our borders, counteracting roughly half of any domestic emissions reductions. Coupling demand and supply policies together is the optimal way to bring fossil fuel emissions trajectories downward and an approach the federal government has not implemented in earnest yet.

Political Economy

The economics of the energy transition are not separate from politics. We have many solutions in hand, but the barriers to far more ambitious and immediate climate action are largely political and the fossil fuel industry has been the single biggest obstacle to taking those actions. Between 2000 and 2016, the fossil fuel industry spent over \$2 billion to kill

³³ Clifford Krauss. *Flood of Oil Is Coming, Complicating Efforts to Fight Global Warming*. The New York Times. November 11, 2019. ([link](#))

³⁴ Lorne Stockman. *Lifting the Crude Oil Export Ban: Supply Side and Climate Commonsense*. Oil Change International. December 17, 2015. ([link](#))

³⁵ Tim Donaghy. *Why the Next President Must Prioritize A Fossil Fuel Phase Out*. Greenpeace. June 6, 2019. ([link](#))

climate legislation.³⁶ Companies including Exxon, ConocoPhillips and Chevron spent \$143 million in 2009 alone to defeat the last U.S. attempt to enact major economy-wide federal climate legislation.³⁷

Meanwhile, these companies have launched new advertising campaigns touting their limited renewable energy investments and focusing on individual actions to save energy. These public relations efforts distract from their continued lobbying efforts to weaken climate policy proposals and expand fossil fuel production. Allowing oil companies to set the conditions around acceptable climate policy is a recipe for a disastrous 4-degree future.

We take the history of climate politics seriously and recognize the power dynamics between industry and policymakers. As such, we believe that policies that challenge the concentrated political power of the industry are best positioned to deliver desired results. A focus on fossil fuel extraction can grab public attention, build support for climate action among communities concerned about the industry's effects on public health and the environment, and increase momentum for climate policy, creating the conditions for a swift and massive shift towards a clean energy future.³⁸ Fossil fuels are more "tangible" than emissions and past experience and research indicates this helps draw more public support.³⁹

Supply-side, more so than only demand centric policies, can help shift the "moral norms" around fossil fuel extraction and build social movements to support policymakers who present ambitious timelines to transition to a clean energy economy.⁴⁰ Focusing on extraction and production can also help delegitimize the oil and gas industry, which has no history of acting in good faith when it comes to addressing the climate crisis.⁴¹

In addition, successful policies in one region can help create conditions to advance similar fossil fuel phase outs elsewhere: "As the number of states banning an activity rises, the

³⁶ Nathaniel Rich. *Losing Earth A Recent History*, p 6. 2019.

³⁷ Jeff Goodell. *As the World Burns: How Big Oil and Big Coal mounted one of the most aggressive lobbying campaigns in history to block progress on global warming*. Rolling Stone. January 7, 2010. ([link](#)) Daniel Weiss, Rebecca Lefton, and Susan Lyon. *Oil Companies and Special Interests Spend Millions to Oppose Climate Legislation*. Center for American Progress Action Fund. September 27, 2010. ([link](#))

³⁸ Erickson, P., Lazarus, M. & Piggot, G. *Limiting fossil fuel production as the next big step in climate policy*. *Nature Clim Change* 8, 1037–1043 (2018) doi:10.1038/s41558-018-0337-0 ([link](#))

³⁹ Production Gap. *The Production Gap: 2019 Report*. United Nations Environment Programme. November 2019. ([link](#))

⁴⁰ Erickson, P., Lazarus, M. & Piggot, G. *Limiting fossil fuel production as the next big step in climate policy*. *Nature Clim Change* 8, 1037–1043 (2018) doi:10.1038/s41558-018-0337-0 ([link](#))

⁴¹ Center for International Law, *New Documents Reveal Oil Industry Knew of Climate Risks Decades Earlier Than Suspected; Suggest Coordinated Efforts to Foster Skepticism*. April 13, 2016. ([link](#)) Greenpeace. *Exxon's Climate Denial: A Timeline*. ([link](#))

social costs of non-conformity (for instance, a tarnished international reputation) increase, making it more likely, all else being equal, that other states will adopt a similar ban.”⁴²

U.S. Leadership Towards a Zero-Carbon Future

The U.S. has an opportunity to lead the world in executing policies which intentionally constrain the flow of fossil fuels into the economy. The U.S. is the world’s largest historic emitter of climate pollution, and the largest producer of fossil fuels. Coupled with U.S. responsibilities under principles of global equity enshrined in the United Nations Framework Convention on Climate Change (UNFCCC) charter and the Paris Agreement, means the U.S. had an obligation to lead the transition away from fossil fuels and lend our financial and technological resources to expedite the transition globally.

Recent work to develop a set of principles to guide the U.S. transition away from fossil fuels further points to the U.S.’s natural leadership role.⁴³ The federal government has considerable influence over fossil fuel production on public lands, and Congressional actions to eliminate fossil fuel subsidies and halt new fossil fuel infrastructure permitting and leasing present opportunities for immediate progress. As any phaseout of fossil fuel production must be grounded in justice, equity, Indigenous sovereignty, human rights, and resilience and self-determination of local communities, the world’s largest economy is ideally positioned to lead this work.

Paradoxically, the climate policy approach that dominates policy-making spaces today — focused mainly on demand side levers — will deliver a future where the emissions from expanded oil and gas production in the US will increase nearly 70 percent over the next ten years compared to 2017 levels.⁴⁴ Oil companies can well be expected to return profits from these operations back into additional expansion projects and into renewed lobbying efforts that aim to stymie meaningful climate action. Given the reality of the climate crisis and limits of the global carbon budget, and the moral imperatives to secure justice and prosperity for communities at the frontlines of climate disasters and fossil fuel pollution, Congress must take meaningful action to manage a phaseout of fossil fuel production by deploying a full suite of “supply-side” climate policies.

⁴²Tim Donaghy. *Why the Next President Must Prioritize A Fossil Fuel Phase Out*. Greenpeace. June 6, 2019. ([link](#))

⁴³ Jessica Koski, Silvan Kartha, Peter Erickson. *Principles for aligning U.S. fossil fuel extraction with climate limits*. Stockholm Environmental Institute. February 2019. ([link](#))

⁴⁴ Kelly Trout and Lorne Stockman. *Drilling Towards Disaster: Why the US Oil and Gas Expansion with Climate Limits*. Oil Change International. January 16, 2019. ([link](#))

3. A managed phaseout of fossil fuel production is necessary to protect vulnerable workers and communities.

The transition to a 100% renewable, regenerative economy through a Green New Deal is a massive challenge, and involves complex mechanisms of industrial policy, economic and fiscal policy, foreign policy, and social equity, inclusion, and justice. Congress and the U.S. government writ large have a vital role to play in managing this transition through long-range planning, smart investments, and programmatic commitments built to withstand shorter-term political pressures.

One of the most important measures of success of a Green New Deal will be whether it effectively addresses and prioritizes the needs and rights of people most impacted by the transition away from fossil fuels — particularly workers and communities heavily dependent upon the production and use of fossil fuels, as well as historically marginalized Indigenous and low-wealth communities and communities of color who have unjustly borne the burden of fossil fuel pollution and the resulting climate impacts. This imperative is often referred to as providing for a “just and equitable transition” or “just transition.”⁴⁵

Congressional leadership to ensure a *managed* phaseout of fossil fuel production as part of a Green New Deal is essential to securing a just transition for disadvantaged workers and communities.

The case of coal country provides a stark example of the suffering that is likely to come from an *unmanaged* transition away from fossil fuels (not to mention the untold suffering that would arise from a failure to transition altogether).

Coal production has been on the decline for years, and many of the country’s largest coal companies have fallen into insolvency. In the last year alone five major coal companies filed for bankruptcy.⁴⁶

⁴⁵ We use the term “just transition” here knowing that it can often provoke questions and concerns – some of which arise from the different national and historical contexts in which it has been used. See, for example, “Just Transition” – Just What Is It? An Analysis of Language, Strategies and Projects,” Labor Network for Sustainability and Strategic Practice: Grassroots Policy Project. ([link](#))

⁴⁶ Kristin Lam. *Is President Trump Losing His Fight to Save Coal?*. USA Today, July 3, 2019. ([link](#))

The impacts on regional and local economies, employees, their families, and communities has been devastating.⁴⁷ In Kentucky alone, coal output has dropped from 68 million tons per year to just 17 million tons since 2011, while costing the state nearly 10,000 coal jobs.⁴⁸ Nearly 1,700 coal workers were laid off without notice after one coal company declared bankruptcy in July 2019, many workers were left with wages and retirement benefits unpaid — driving protests to block coal shipments from leaving the facility for nearly two months.⁴⁹ The United Mine Workers of America’s multi-employer pension plan is teetering on the brink of insolvency as bankruptcies slash employer contributions.

In an unmanaged transition, promises made to workers are often broken by corporate bosses and Wall Street investors. Value is extracted from failing companies and communities are left holding the bag. A *managed transition* would rectify this problem by requiring a plan and a timeline upfront (not after the bubble has burst) and giving workers, unions and communities a democratic voice in creating that plan.

This kind of unmanaged transition can be avoided with Congressional action to enact a Green New Deal that utilizes every policy lever at our disposal. Specifically, by combining meaningful actions to constrain and wind down fossil fuel production — thereby avoiding “lock-in” of new infrastructure and associated climate pollution — with policies to guarantee protections to workers and communities during the transition. This way fossil fuel companies are not let off the hook, and Congress can ensure a fossil fuel production phaseout is a *just and managed* one.

To facilitate a well-managed, just transition, Congress should enact a variety of policies and programs tailored to the conditions of particular industrial sectors or geographic regions. Federal action should be rooted in democratic processes that provide affected workers and communities with a significant role in the design of policies and programs intended to assist them through the transition, with meaningful opportunities to review and determine how they could be expanded or improved. Just transition programs should also obey principles of community ownership and self-determination, so that local communities can shape federal policies and investments to meet local needs and build community wealth.

A well-managed just transition must address the particular needs of workers currently and formerly employed by fossil fuel companies, whose lives — as well those of their families — will be significantly disrupted. Many already are, such as coal industry workers, retirees, and communities. In addition, Congress should provide support to small businesses and local

⁴⁷ David Roberts. *Coal left Appalachia devastated. Now it’s doing the same to Wyoming.* Vox, July 9, 2019. ([link](#)); Brad McElhinny. *Manchin, mine workers express concern about Murray bankruptcy.* WV Metro News. October 29, 2019. ([link](#))

⁴⁸ Igor Derysh. *Trump said he’d save coal: Two more producers go bankrupt with 1,800 jobs lost.* Salon. July 3, 2019. ([link](#))

⁴⁹ Michael Saintano. *Laid off and owed pay: The Kentucky miners blocking coal trains.* The Guardian. September 18, 2019. ([link](#))

governments that are currently reliant on the fossil fuel industry. A just transition must also take into consideration the unique historical circumstances of communities impacted by the fossil fuel industry. This includes acknowledging and addressing the disproportionate burdens placed on communities of color and low-income communities.

In the following section, we provide detailed recommendations for Congress to initiate and coordinate a managed phaseout of fossil fuel production that addresses the needs of vulnerable and historically marginalized communities and workers as part of a Green New Deal.

In developing and enacting legislation to address the climate crisis, we urge Congress to uphold the *Jemez Principles for Democratic Organizing*,⁵⁰ *Principles of Environmental Justice*,⁵¹ and *Indigenous Principles of Just Transition*.⁵² Congress must also ensure historically marginalized communities and families meaningfully inform development and implementation of policies to advance a Green New Deal or any response to the climate crisis. As a starting point, Congress should consider the *Vision for an Equitable and Just Climate Future* platform laid out by a collective of environmental justice and national groups.⁵³

4. Policy Recommendations

A. Halt Fossil Fuel Expansion

- **End Fossil Fuel Exports:** Recent research from Greenpeace USA illustrates the need for a Green New Deal to constrain fossil fuel supply. If U.S. fossil fuel production is not limited, then even under a Green New Deal, the U.S. is likely to end up exporting any surplus fossil fuels and thereby undermine roughly half of any emissions reductions we would achieve from reducing U.S. demand for fossil fuels alone (e.g., by transitioning the U.S. energy system to 100% clean energy).⁵⁴ The 2015 decision to revoke the crude oil export ban created a global market for U.S. oil and has been

⁵⁰ Southwest Network for Environmental and Economic Justice. *Jemez Principles for Democratic Organizing*. December 1996. ([link](#))

⁵¹ Delegates to the First National People of Color Environmental Leadership Summit. *Principles of Environmental Justice*. October 1991. ([link](#))

⁵² First Indigenous Just Transition Assembly. *Indigenous Principles of a Just Transition*. Indigenous Environmental Network. 2019. ([link](#))

⁵³ Equitable & Just National Climate Platform. *A Vision for an Equitable and Just Climate Future*. 2019. ([link](#))

⁵⁴ Tim Donaghy. *Real Climate Leadership: Why The Next President Must Prioritize A Fossil Fuel Phase Out*. Greenpeace USA, June 6, 2019. [[link](#)]

cited as one key impetus for the recent boom in domestic oil and gas production.⁵⁵ The U.S. is not on track to become a net exporter of crude oil in the next few years.⁵⁶ Congress should reinstate the ban on crude oil exports, and impose new limits on gas and coal exports as well. It will be important for Congress to act to cut off this source of “carbon leakage.” The goal of any policy should be that, as we consume fewer fossil fuels domestically, fossil fuel export levels are targeted in parallel to ensure that non-domestic emissions do not increase, or even decline.

- **End Fossil Fuel Leasing on Federal Lands and Waters:** Oil, gas, and coal from federal lands and waters accounts for roughly 24% of U.S. carbon emissions.⁵⁷ If the U.S. is to make a committed effort to halt carbon emissions then it no longer makes any sense for the government to be in the extraction business. Research from the Stockholm Environment Institute has shown that a moratorium on new federal coal and oil leases would be an effective tool for reducing global carbon emissions at a scale similar to the Clean Power Plan or fuel economy standards.⁵⁸ Congress should permanently end new leasing for fossil fuel production on federal lands and waters, and reorient U.S. energy laws towards energy efficiency, renewable energy production and energy storage.
- **Reject Federal Permits for New Fossil Fuel Infrastructure:** The oil and gas industry’s rush to build more pipelines and export terminals is an attempt to jumpstart even higher levels of production.⁵⁹ But just as we can no longer afford new extraction projects, we can no longer allow the construction of new fossil fuel infrastructure. Congress should reform existing energy laws to ensure that the president and relevant federal agencies, including the Federal Energy Regulatory Commission and the Department of Interior, have the authority to reject new fossil fuel infrastructure that would increase GHG emissions and exacerbate the climate crisis.
- **Ensure Free, Prior, and Informed Consent by Indigenous Peoples:** Congress should enact policies to fully implement and uphold the United Nations Declaration on the Rights of Indigenous Peoples as well as honor existing treaties with tribal nations, including recognizing the right of Indigenous Peoples to give “free, prior, and informed consent” (FPIC) regarding policies affecting the development of tribal lands and resources. This includes the right to reject fossil fuel and other polluting

⁵⁵ Collier, K., J. Hopkins & R. Leven. 2018. As oil and gas exports surge, West Texas becomes the world’s “extraction colony.” *Texas Tribune & Center for Public Integrity*, October 11. ([link](#))

⁵⁶ U.S. EIA. 2019b. *Today in Energy: The United States imports and exports substantial volumes of petroleum*. March 13. ([link](#))

⁵⁷ U.S. Geological Survey. 2018. *Federal Lands Greenhouse Gas Emissions and Sequestration in the United States: Estimates for 2005–14*. Scientific Investigations Report 2018–5131. ([link](#))

⁵⁸ Erickson, P. & M. Lazarus. 2016. *How would phasing out U.S. federal leases for fossil fuel extraction affect CO2 emissions and 2°C goals?* Stockholm Environment Institute. ([link](#))

⁵⁹ Rachel Adams-Heard, “Permian Pinch Spurs a Pipeline Binge, and Fears of Overbuild,” *Bloomberg*, July 9, 2018. ([link](#))

infrastructure. Fossil fuel production on tribal lands conducted without full FPIC should be immediately halted. Congress should ensure full consultation with tribal nations beginning in the earliest stages of development of legislation related to the climate crisis.⁶⁰

- **Eliminate Fossil Fuel Production Subsidies:** Congress should swiftly eliminate U.S. tax incentives, direct subsidies, and research and development funding for fossil fuel production.⁶¹ The U.S. channeled at least \$14.7 billion in direct coal, oil, and gas production subsidies to fossil fuel companies in 2015 and 2016, on average.⁶² The International Monetary Fund estimates U.S. fossil fuel subsidies amount to \$649 billion when climate change, local air pollution, infrastructure damage, and public health externalities are considered. These highly inefficient subsidies are propping up energy production activities that are incompatible with safe climate limits.⁶³ Removing them would help level the playing field for renewable energy technologies that will help the U.S. transition rapidly and equitably to a 100% clean energy future.
- **Sunset the IRS Section 45(Q) Enhanced Oil Recovery Tax Credit:** Congress should sunset the provision in the IRS Section 45(Q) tax credit for enhanced oil recovery. Section 45(Q) is theoretically designed to deploy carbon capture, and sequestration technology. The credit, however, is priced to incentivize injection for oil production and not for permanent carbon sequestration. This means, in practice, nearly all of the captured carbon is sold back to oil companies to enhance additional production. Carbon capture and sequestration should not be used as a tool to prolong fossil fuel use and Congress should prioritize tax credits for renewable alternatives. Furthermore, it is still unclear whether the IRS administered past tax credits for enhanced oil recovery correctly.⁶⁴
- **End Fossil Fuel Financing:** Congress should enact policies to eliminate public financing of fossil fuel projects, and restrict or discourage private finance where possible. Congress should immediately end domestic fossil fuel subsidies (as detailed above) and reform the Export-Import Bank and the International Development

⁶⁰ First Indigenous Just Transition Assembly. *Indigenous Principles of a Just Transition*. Indigenous Environmental Network. 2019. ([link](#)); Indigenous Environmental Network. *Green New Deal Must Be Rooted In A Just Transition*. Climate Justice Alliance. ([link](#)); United Nations Department of Economic and Social Affairs. *United Nations on the Declaration on the Rights of Indigenous Peoples*. United Nations. ([link](#))

⁶¹ Environmental and Energy Study Institute. *Fact Sheet: Fossil Fuel Subsidies: A Closer Look at Tax Breaks and Societal Costs*. July 29, 2019. ([link](#))

⁶² Janet Redman. *Dirty Energy Dominance: Dependant on Denial*. Oil Change International. October 2017. ([link](#))

⁶³ Erickson, P., Down, A., Lazarus, M. et al. Effect of subsidies to fossil fuel companies on United States crude oil production. *Nat Energy* 2, 891–898 (2017) doi:10.1038/s41560-017-0009-8 ([link](#))

⁶⁴ Senator Robert Menendez. *Menendez Demands Trump Admin Clean Up Dirty Little Tax Secret.: Tax Giveaways to Polluters Cheating the System*. April 18, 2019. ([link](#))

Finance Corporation (formerly OPIC) to end all support for fossil fuels by those and other agencies. The U.S. should take the lead in international fora (G7, G20, U.N.) and multilateral institutions (World Bank, IMF, OECD working groups) to work with other nations to phase out fossil fuel subsidies globally, and to ensure that these institutions do not provide finance to new fossil fuel projects. Guidance from the Department of the Treasury should make this official U.S. policy. Congress should support the SEC to enact strong regulations requiring corporations to disclose climate risks and stress-test their business models against the Paris Climate Agreement and the 1.5C target. The Federal Reserve should join the Network on Greening the Financial System (NGFS), in order to “better manage climate related risks and promote a transition to a clean energy economy.”⁶⁵

- **Curb Demand for Fossil Fuels:** The next President and Congress should also enact strong, demand-side policies to reduce the use of fossil fuels in the electric power, transportation, and buildings sectors. A great many policy proposals have been created to decarbonize these sectors, many of which are core components of the Green New Deal. We don’t seek to offer a full suite of demand-side policies in this document, but highlight some regulatory and federal investment policies that could work in concert with the supply-side policies detailed in this report.
 - **Ending Fossil Fuel Use in the Transportation Sector:** Congress should build on existing Clean Air Act authorities by enacting fuel economy and emissions standards that require a rising percentage of new passenger vehicles, medium-duty trucks, and buses be zero-emissions vehicles (ZEVs). This regulatory base should be paired with large-scale federal investments in public transit, zero emissions buses, regional high-speed rail, ZEV manufacturing & EV charging infrastructure; grants or tax credits to support purchasing an EV or trading in old ICE vehicles (“Cash for Clunkers”); and electrification of the federal vehicle fleet.
 - **Ending Fossil Fuel Use in the Electric Power Sector:** Congress should build on existing Clean Air Act authorities to enact strict national GHG emission and localized air pollution standards for coal and natural gas-fired power plants that lead to a 100% phase out of fossil fuels in the electric power sector by 2030. This regulatory base should be paired with federal investments to boost smart grid technology, utility-scale energy storage, and wind/solar generation, prioritizing distributed and decentralized renewable energy systems that increase community ownership of electricity. Congress should also make strategic use of federal lands and waters to expand wind and solar generation; expand existing programs, such as the Rural Electrification Administration, the Federal Power Marketing Administrations,

⁶⁵ Jay Inslee for Governor. *Global Climate Mobilization*. Jay Inslee Campaign. ([link](#))

and the Tennessee Valley Authority to push renewables; policy support for public power, municipal power, power coops, and performance-based utility regulation; moratorium on permits for new coal, natural gas, and nuclear power plants.

- **Ending Fossil Fuel Use in the Buildings Sector.** Enact federal Zero Carbon building standards to require a rising percentage of new residential and commercial buildings to be zero or negative emissions. This should be paired with federal investments to support weatherization, electrification, and decarbonization of existing buildings, as well as a strong mandate to eliminate fossil fuel use in federal buildings.

B. Phase Out Existing Production

- **Set declining national targets for a fossil fuel phaseout:** In the face of a climate emergency largely caused by runaway fossil fuel combustion, the national policy of the U.S. should be to limit new fossil fuel extraction and phase out coal, oil, and gas production at the pace needed to affirm the U.S.'s "fair share" contribution to limiting global temperature rise to below 1.5°C above pre-Industrial levels. Congress should set declining national targets — including 2025 and 2030 interim targets — for phasing out fossil fuel production in concert with other climate-related targets, such as for GHG emissions reductions and renewable energy deployment.
- **Roll Back Production from Existing Fossil Fuel Leases:** Ending new federal leasing will not, in itself, affect fossil fuel production from existing leases. Production from existing oil and gas wells will decline over time, however, it could still be possible for lease holders to drill new wells on producing leases, or to drill on leases that have been "stockpiled" for future production.⁶⁶ In order to hit national production decline targets, it will be necessary for the federal government to restrict some production from existing leases. One such mechanism would be to close loopholes⁶⁷ and significantly increase royalty rates⁶⁸ on federal production. Raising royalty rates (as well as removing subsidies⁶⁹) would potentially make some fossil fuel projects uneconomic to pursue, therefore reducing production.⁷⁰ Higher royalty rates would

⁶⁶ DeSantis, M. 2018. *Oil and Gas Companies Gain by Stockpiling America's Federal Land*. Center for American Progress, August 29. ([link](#))

⁶⁷ Tabuchi, H. 2019. Government Loophole Gave Oil Companies \$18 Billion Windfall. *New York Times*, October 24. ([link](#))

⁶⁸ Gentile, N. 2015. *Federal Oil and Gas Royalty and Revenue Reform*. Center for American Progress, June 19. ([link](#))

⁶⁹ Erickson et al. 2017. Effect of subsidies to fossil fuel companies on United States crude oil production. *Nature Energy*, 2, 891–898. ([link](#))

⁷⁰ U.S. Government Accountability Office. 2017. *Oil, Gas, and Coal Royalties: Raising Federal Rates Could Decrease Production on Federal Lands but Increase Federal Revenue*. GAO-17-540, June 20. [[link](#)]

increase revenue and permit the government to recoup more of the Social Cost of Carbon due to the extracted fossil fuels. New wells on existing leases may also be subject to additional approval, and Congress should explicitly give authority to the president to explore legal options for rejecting new permits to drill, or even the possibility of buying back existing leases.

- **Advance Environmental Justice:** Fossil fuel production creates toxic air and water pollution, land degradation, and other health and environmental impacts⁷¹ that disproportionately affect people of color and low-income people — perpetuating the U.S.’s legacy of environmental injustice. Toxic sites, coal-fired power plants, oil and gas production facilities, and other polluting sources are disproportionately sited near communities of color and economically disadvantaged communities.⁷² These families and communities who have for too long borne the brunt of air, water, land, and climate pollution from coal, oil, and gas companies should have the resources and tools to secure their rights to clean air, clean water, a stable climate, and healthy local ecosystems. Congress should pass comprehensive legislation to advance environmental justice by ensuring disadvantaged communities have a meaningful voice in legislative and regulatory policymaking processes; strengthening legal mechanisms for impacted individuals to challenge disproportionate environmental harms, including strengthening protections under Title VI of the Civil Rights Act of 1964⁷³ and the Environmental Protection Agency’s Office of Civil Rights,⁷⁴ and codifying Executive Order 12898;⁷⁵ properly considering environmental justice and cumulative pollution impacts throughout federal permitting, planning, and rulemaking; and prioritizing federal investments for overburdened communities who have been too long left behind. As starting points, Congress could consider the Environmental Justice Initiative led by Natural Resources Committee Chair Raul M. Grijalva and Representative A. Donald McEachin,⁷⁶ and the *Environmental Justice Act* introduced

⁷¹ Union of Concerned Scientists. *The Hidden Costs of Fossil Fuels*. August 30, 2016. ([link](#))

⁷² Leslie Fleischmann and Marcus Franklin. *Fumes Across the Fence Line*. Clean Air Task Force and NAACP. November 2017. ([link](#)); Robert Bullard. *Toxic Wastes and Race at Twenty 1987 – 2007*. United Church of Christ Justice & Witness Ministries. March 2007. ([link](#)); Adrian Wilson. *Coal Blooded Putting Profits Over People*. Indigenous Environmental Network, NAACP, Little Village Environmental Justice Organization. ([link](#)); Ihab Mikati, Adam F. Benson, Thomas J. Luben, Jason D. Sacks, and Jennifer Richmond-Bryant. *Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status*. American Journal of Public Health. March 7, 2018. ([link](#))

⁷³ Albert Huang. *Environmental justice and Title VI of the Civil Rights Act: A critical crossroads* American Bar Association. March 1, 2012. ([link](#)) .

⁷⁴ A 2015 investigation by the Center for Public Integrity found EPA’s Office of Civil Rights has been “chronically unresponsive” to complaints. Kirstin Lombardi, Talia Buford, Ronnie Greene. *Environmental Racism Persists, and the EPA is One Reason Why*. Center for Public Integrity. September 4, 2015. ([link](#))

⁷⁵ U.S. Environmental Protection Agency. *Summary of Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. February 16, 1994. ([link](#))

⁷⁶ House Natural Resources Committee. *Environmental Justice Initiative*. Chairman Raul Grijalva and Representative Donal McEachin. ([link](#))

by Senator Cory Booker.⁷⁷ Congress should ensure any legislation to address the climate crisis or environmental injustice upholds the *Jemez Principles*,⁷⁸ *Principles of Environmental Justice*,⁷⁹ *Indigenous Principles of Just Transition*,⁸⁰ and *Vision for an Equitable & Just Climate Future* platform advanced by an alliance of environmental justice and national groups.⁸¹

- **Pursue a Global Supply-Side Treaty:** Because climate change is a global problem, it has long been understood that international cooperation is crucial for making progress on emissions reductions and reducing the problem of free-riders and emissions leakage. In enacting policies to restrict the supply of fossil fuels, the same principle applies. The U.S. has recently surged to become the world’s leading oil and gas producer, and as such, we have a responsibility to take the lead on enacting the supply-side policies outlined in this document. However, an agreement among fossil fuel-producing nations to set global and country-specific climate-safe targets for a managed decline in coal, oil, and gas production, would better ensure that the world does not overshoot our fossil fuel limits — and would boost the effectiveness of the Paris Climate Accords and the UNFCCC process. Recent academic⁸² studies⁸³ have highlighted the benefits of such a global treaty, and the concept has even gained traction with presidential candidates.⁸⁴ The next president and Congress would have key roles to play in ensuring such a global negotiation occurs and is implemented.
- **Restore the Social Cost of Carbon:** Congress should immediately end fossil fuel leasing, and the official Social Cost of Carbon (SCC) calculations should be restored and used to provide full and transparent justifications for strong climate policies. The Trump administration radically reduced the official SCC values by using inappropriate discount rates and excluding non-domestic climate costs.⁸⁵ Congress should work

⁷⁷ Cory Booker. *Cory Booker Reintroduces Sweeping New Environmental Justice Bill*. July 24, 2019. [\(link\)](#)

⁷⁸ Southwest Network for Environmental and Economic Justice. *Jemez Principles for Democratic Organizing*. December 1996. [\(link\)](#)

⁷⁹ Delegates to the First National People of Color Environmental Leadership Summit. *Principles of Environmental Justice*. October 1991. [\(link\)](#)

⁸⁰ First Indigenous Just Transition Assembly. *Indigenous Principles of a Just Transition*. Indigenous Environmental Network. 2019. [\(link\)](#)

⁸¹ Equitable & Just National Climate Platform. *A Vision for an Equitable and Just Climate Future*. 2019. [\(link\)](#)

⁸² Asheim et al. 2019. The case for a supply-side climate treaty. *Science*, 365, 6451, 325–327. [\[link\]](#)

⁸³ Newell, P. & A. Simms. 2019. Towards a fossil fuel non-proliferation treaty. *Climate Policy*. doi.org/10.1080/14693062.2019.1636759 [\[link\]](#)

⁸⁴ Kamala Harris. *A Climate Plan for the People*. 2019. [\[link\]](#) Pledges to “propose and convene a meeting of major emitters in early 2021, focusing on climate change and the global economy. The meeting will focus on renewed commitments to fossil-fuel subsidy phase out and the first-ever global negotiation of the cooperative managed decline of fossil fuel production”

⁸⁵ Newell, R. *Unpacking the Administration’s Revised Social Cost of Carbon*. Resources for the Future, October 10. [\[link\]](#)

with the president to generate updated SCC values⁸⁶ that take into account the latest scientific research⁸⁷ on climate impacts and damages, and urge the Office of Management and Budget/Office of Information and Regulatory Affairs to issue guidance requiring the use of the SCC in agency decision making. The guidance should require a full up- and down-stream, consequential lifecycle analysis of GHG emissions for all significant federal decisions, taking into account both direct and indirect emissions. Congress should work with the president to produce and make public a yearly report on the aggregate climate consequences of its policies and their likely impact on global emissions.

- **Ensure Any Carbon Price Is Equitable and Effective:** A price on carbon can be a useful component of a comprehensive climate policy package, although would be most effective used in conjunction with a broad suite of demand- and supply-side investments and regulations to transition to 100% renewable energy, decarbonize the economy, phase out fossil fuel production, and protect and uplift disadvantaged workers and communities. In isolation, a carbon price is unlikely to be sufficient enough to achieve emissions reductions at the pace and scale we need. If a carbon price is enacted, Congress should ensure it is designed to be equitable, progressive, and stringent. A carbon price enacted along with policies to advance a Green New Deal and phase out fossil fuel production should begin at a level high enough to meaningfully reduce emissions (the IPCC estimates the marginal cost of reducing emissions will be at least \$135 per metric ton CO₂e by 2030)⁸⁸ and rise quickly over the course of a decade and beyond. The price should be applied to upstream fossil fuel and other polluting-fuel producers as close to the point of extraction or import as possible. The price should be progressive, and paired with measures to mitigate any regressive impacts on economically disadvantaged families and communities. The price should also be coupled with policies that benefit communities historically exploited by the fossil fuel and other polluting industries, and not allow for offsets, free allowances, or other loopholes that could lead to pollution “hotspots” in already-overburdened communities or enable covered entities to avoid reducing emissions at the source. Congress should reject any proposal to use a carbon price to eliminate or weaken existing climate and environmental protections, such as by weakening the Clean Air Act or affording fossil fuel companies a liability waiver.
- **Revoke State Underground Injection Control Class II Primacy Authority:** EPA can grant enforcement and management authority to state agencies to implement state

⁸⁶ National Academies of Sciences, Engineering, and Medicine. 2017. *Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide*. [\[link\]](#)

⁸⁷ Ricke et al. 2018. Country-level social cost of carbon. *Nature Climate Change*, 8, 895–900. [\[link\]](#)

⁸⁸ IPCC, “Mitigation Pathways Compatible with 1.5 C in the Context of Sustainable Development,” Chapter 2. [\(link\)](#)

Underground Injection Control (UIC) Class II programs⁸⁹ if these programs demonstrate the regulations are as effective as EPA regulations in protecting underground sources of drinking water. In practice, the last three decades of state implementation indicate "primacy authority" appears to have been used as a tool for states to streamline oil and gas production. Injection wells are crucial upstream infrastructure for oil and gas wastewater disposal and enhanced oil recovery. There have been several lapses across state programs including the failure⁹⁰ to protect drinking water in Texas, a wave of earthquakes⁹¹ linked to oil and gas wastewater injection, and thousands of wells permitted to inject directly into protected⁹² aquifers. Congress should use its appropriations and oversight authority to request the EPA Administrator revoke state UIC primacy from certain states and reassert EPA as lead regulatory authority.⁹³ Congress should conduct an independent investigation of certain state UIC programs for their potential role in helping facilitate the largest oil and gas boom in U.S. history while endangering drinking water sources.

- **Close Oil and Gas Legislative Loopholes and Strengthen Protections:** Congress should pass a set of bills known as "The Frack Pack" to close loopholes in our landmark environmental laws and end the U.S. government's practice of prioritizing oil and gas extraction over public health and the environment.⁹⁴ These are common-sense baseline policies that will help reflect the true cost of oil and gas extraction. The bills would remove exemptions for the oil and gas industry in the Clean Air Act, Resource Conservation and Recovery Act, Clean Water Act, and Safe Drinking Water Act, and require new water monitoring and reporting near fracking operations. Further, Congress should enact legislation to strengthen methane requirements well beyond the standards that were derailed and repealed under the Trump Administration.⁹⁵ New research⁹⁶ linking the increase in methane emissions to oil and gas operations, and the surge in flaring and venting from large oil companies

⁸⁹ EPA program that regulates the injection of fluids associated with oil and gas activities, mainly oil and gas wastewater disposal and enhanced oil recovery.

⁹⁰ Jim Malewitz, "Texas Promised to Promised to Track Oil Field Waste in Aquifers. It Didn'," Texas Tribune, August 24, 2016. ([link](#))

⁹¹ University of California, "Injection wells can induce earthquakes miles away from the well," Science Direct, August 30, 2018. ([link](#))

⁹² Briana Mordick, "33 More Wells Shut Down in California," NRDC, October 16, 2015. ([link](#))

⁹³ An example of this potential type of appropriations and oversight action, in 2009, Congress used an Interior and Environment appropriations bill to "urge" EPA to conduct a comprehensive study of hydraulic fracturing.

⁹⁴ E&E News, "Protect Public Health and the Environment: Be an Original Cosponsor for the 'The Frack Pack'", July 1, 2019. ([link](#))([link](#))

⁹⁵ Merrit Kennedy. "EPA Aims to Rollback Limits on Methane from the Oil and Gas Industry," NPR, August 29, 2019. ([link](#))

⁹⁶ NASA, "NASA-Led Study Solves a Methane Puzzle," January 2, 2018. ([link](#))

documented by Greenpeace⁹⁷ and the New York Times,⁹⁸ bolster the case for more robust and stringent methane controls.

C. Secure a Just and Equitable Transition Away from Fossil Fuels

- **Ensure the Fossil Fuel Phaseout is Managed and Transparent:** Congress should establish directives through legislation or the appropriations process for federal agencies to plan for and coordinate a phaseout of U.S. fossil fuel production. The federal government has an essential role to play in protecting the environment and safeguarding the livelihoods and rights of affected workers and communities as coal, oil, and gas production winds down. In other words, the federal government must ensure a *managed* fossil fuel phaseout. Congress should use its legislative powers to compel federal agencies to regularly report on national progress toward a fossil fuel phaseout and ensure policies are developed and implemented transparently and with meaningful input from the public, particularly impacted and traditionally marginalized stakeholders. Congress should follow a core principle of “federal dollars, local control” — securing federal funding and support while affording local communities and regional planning bodies the ability to manage the transition away from fossil fuel production in a way that most equitably meets local needs and reflects regional circumstances.
- **Form a National Just Transition Commission:** Congress should form a commission that could guide the development and implementation of the overall transition strategy and establish task forces to recommend policies and programs appropriate to specific regions and sectors that are heavily dependent upon fossil production and use. A particular effort should be made to include representatives from communities disproportionately harmed by the fossil fuel industry, especially low-income communities, communities of color, and Indigenous communities, which have borne a disproportionate share of fossil fuel industry-related pollution, while receiving few economic benefits.⁹⁹ The commission should be resourced to provide a

⁹⁷ Lawrence Carter, Tim Donaghy, “Exxon and BP Among Worse for Flaring in US Oil Fields Despite Climate Pledges,” *Unearthed*, October 17, 2019. ([link](#))

⁹⁸ Hiroku Tabuchi, “Despite Their Promises, Giant Energy Companies Burn Away Vast Amounts of Natural Gas,” *The New York Times*, October 16, 2019. ([link](#))

⁹⁹ Research has found that carbon-emitting facilities are disproportionately located in marginalized communities. Ihab Mikati et al., “Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status,” *APHA Journal*, April 2018. ([link](#)); “NAACP et al., “Coal-Blooded: Putting Profits Before People.” ([link](#)); Michael Ash and James K. Boyce, “Racial Disparities in Pollution Exposure and Employment at U.S. Industrial Facilities,” *National Academies of Science*, October 2018. ([link](#))

democratically robust process to receive additional input, for example, through field hearings and investigation.¹⁰⁰

- **Create a Federal Just Transition Office:** Congress should create a Just Transition Office (JTO) to research and coordinate local/regional and sector-specific planning programs and policies. The JTO could help the commission and Congress with questions related to regional economic development, sector specific technological questions, workforce and community needs and other questions. It would be modeled after the Office of Technology Assessment, which provided similar expert advice to Congress in the past.¹⁰¹ One of the tasks of the JTO would be to gather and assess the policies and programs used for other large-scale transitions, including base closure programs,¹⁰² economic conversion planning,¹⁰³ the utilization of government-owned plants and facilities,¹⁰⁴ the Trade Adjustment Assistance Program,¹⁰⁵ rapid industrial conversions, and mobilizations for war. It could also research and identify how other countries have successfully brought various industrial, community, labor and other groups together into a shared framework of industrial and economic transition planning.¹⁰⁶

¹⁰⁰ Field hearings and needs evaluations could be conducted in partnership with regional community economic development organizations like the Kentucky-based Mountain Association for Community Economic Development. ([link](#))

¹⁰¹ See, for example, "Building Future Security: Strategies for Restructuring the Defense Technology and Industrial Base," Office of Technology Assessment, June 1992. OTA-ISC-530.

¹⁰² Government Accountability Office, "Military Base Realignment and Closures: DOD has Improved Environmental Cleanup Reporting but Should Obtain and Share More Information," January 2017. GAO-17-151. ([link](#))

¹⁰³ A large body of government, academic, and labor union-supported research that focused on converting industry from a military to civilian economy was conducted over a period of at least two decades. See, for example, the five-volume series entitled "Conversion of Industry from a Military to Civilian Economy," published by Praeger in 1970; and the International Association of Machinists and Aerospace Workers, "Let's Rebuild America" (1986); "Economic Conversion," Hearing Before the Subcommittee on Economic Stabilization of the Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives, June 29, 1988. Serial No. 100-74.

¹⁰⁴ "Utilization of Government-Owned Plants and Facilities," Hearings before the Subcommittee for Special Investigations of the Committee on Armed Services of the U.S. House of Representatives, December 2 and 3, 1958.

¹⁰⁵ Benjamin Collins, "Trade Adjustment Assistance for Workers and the TAA Reauthorization Act of 2015," Congressional Research Service, August 14, 2018. ([link](#))

¹⁰⁶ The German government's Special Commission on Growth, Structural Economic Change and Employment created just transition plans for two lignite mining areas and created a timeline for completely phasing out coal. See European Trade Union Institute, "Social Partners and the Collaborative Approach Are Key to the Green Transition of the Ruhr Region," February 9, 2016. ([link](#)) For more examples, see "Mapping Just Transition(s) to a Low-Carbon World," United Nations Research Institute for Social Development Just Transition Research Collaborative,,December 2018. ([link](#))

- **Require Fossil Fuel Companies Pay Full Worker Wages and Benefits, Environmental Cleanup, and Community Revitalization and Economic Diversification.** Congress should provide full income and benefit guarantees to fossil fuel employees who lose their jobs due to a managed phaseout of oil, gas and coal production.¹⁰⁷ Wage gap coverage and insurance guarantees should be provided to workers who find new “green economy” employment. Access to free education, skills development, job preparation and training should be provided to fossil fuel employees who need support to successfully transition to a new career. Apprenticeships and preferential hiring practices should be established to support workers transitioning out of the fossil fuel industry into the renewable energy and other sectors. Tax incentives should be provided to companies that adopt these practices.¹⁰⁸ Support and assistance should be provided to workers and their families wishing to relocate, including moving allowances and, potentially, residential living subsidies. Employees who choose to retire early should be guaranteed pensions and full health benefits.¹⁰⁹ Adequate treatment, counseling and community-based clinical services should be provided to workers suffering from occupational-related illnesses. Historically disadvantaged communities should also benefit from the transition. Access to free vocational training, apprenticeships and preferential hiring practices should be provided to low-income communities, people of color, and other disadvantaged communities, as well as undocumented workers and people with non-violent criminal records.¹¹⁰

¹⁰⁷ For more specific policy suggestions see Robert Pollin, “[A Green Growth Plan for Colorado: Climate Stabilization, Good Jobs, and a Just Transition](#),” Department of Economics and Political Economy Research, UMass Amherst, April 2019; Jeremy Brecher, “18 Strategies for a Green New Deal,” Labor Network for Sustainability, 2019. ([link](#)).

¹⁰⁸ Retention bonuses might be required for workers who remain on the job through closure. See, for example, the 7 year [Diablo Canyon Nuclear plant transition](#) plan projected for 2018 –2025.

¹⁰⁹ The Pension Benefit Guarantee Program should be adequately funded to cover an increase in claims made by workers formerly employed by fossil fuel companies eliminated by the transition to a clean energy economy. For many years the PBGP has had to compensate for the failure of corporations to provide traditional pension benefits. ([link](#)) The Just Transition Commission should work with Congress to anticipate the increased funding needed to rectify this failure and anticipate any increase in the number of claims filed by workers affected by the just transition. Providing for a secure path to early retirement for fossil fuel workers is an essential element in any well-managed rapid phase-out of the fossil fuel industry. See Pollin et al., 2019.

¹¹⁰ See the Principles of the Millions of Jobs Coalition. ([link](#)) Jeremy Brecher, “Making the Green New Deal Work for Workers,” In These Times, April 22/May 2019. ([link](#))

- **Reform Bankruptcy Laws to Ensure Fossil Fuel Companies Fulfill Obligations to Workers & Communities.** Bankruptcy laws have allowed companies to discharge their obligations to workers, retirees and the communities they operate in, while prioritizing the claims of investors and other creditors.¹¹¹ Congress should:
 - Make regulatory debts non-dischargeable since they do not serve the same purposes as financial obligations. Re-order priorities so that non-financial regulatory obligations come first, with some kind of security interest guarantee;
 - Restrict companies from transferring or selling any assets before meeting environmental obligations and pension and health benefit commitments;
 - Prevent corporate shell games. If a company that inherited obligations from another company goes bankrupt, the company that originally incurred the obligations would still be legally and financially responsible;¹¹²
 - Prohibit executives of bankrupt companies to continue any active management capacity for corporate entities emerging from bankruptcy and restructuring processes.

- **Require Production Declines in Fossil Fuel Company Bankruptcy and Restructuring Proceedings.** Congress should put in place a requirement when fossil fuel companies file for bankruptcy, they are put under receivership and wind production down under a reasonable timeline. Retention bonuses should be provided to workers assisting the closure process. Congress should establish a climate emergency fund to compensate companies for the remaining fossil fuel reserves at a fair price, with the revenues being allocated by the bankruptcy court (or its appointed receiver) to resolve the outstanding claims of remaining creditors.¹¹³ Remaining fossil fuel reserves would then be transferred to an independent trust

¹¹¹ Joshua Macey and Jackson Salovaara, "Bankruptcy as Bailout: Coal Company Insolvency and the Erosion of Federal Law," *Stanford Law Review*, Vol. 71, Issue 4, April 2019, ([link](#)) See additional comments by the authors in their Harvard Law School Forum blog, May 22, 2019. ([link](#))

¹¹² As Macey et al. suggest, "...strategic pre-bankruptcy conduct has played a critical role in allowing coal companies to evade their regulatory obligations. By spinning off underfunded subsidiaries and giving those subsidiaries legal responsibility for the parent's regulatory obligations, coal companies have been able to separate productive assets from onerous regulatory debts. When the underfunded successor entity liquidates, it is difficult to hold that original company responsible for honoring those regulatory debts. In this way, the ability to siphon off regulatory obligations through spin-offs and divestitures has allowed companies to pay unsecured pecuniary creditors a relatively high percentage of what they are owed while paying regulatory creditors virtually nothing."

¹¹³ Mines that produce coal for electricity should be rapidly closed under such a process, with bonuses provided to workers managing the closure and post-closure remediation process. Congress should determine whether mines producing metallurgical coal (used to produce steel) might need to remain open a little longer, in which case significant fees per tonnage produced should be applied, along with additional fees for any coal that is exported.

chartered by Congress and insulated from political decision-makers and economic interests. This trust could be modeled on the Troubled Asset Relief Program (TARP) which just over a decade ago was created by Congress to protect financial markets and the broader economy from the risk that “too big to fail banks” would collapse.¹¹⁴ The TARP was designed to purchase the big banks’ “toxic” mortgage-backed securities.¹¹⁵ The \$700 billion allocated for TARP under the Emergency Economic Stabilization Act of 2008 would certainly be much cheaper than the costs to the U.S. economy of unchecked climate change — projected to be hundreds of billions of dollars per year by the end of the century.¹¹⁶ Further, if the climate emergency trust fund more broadly applied (instead of just to corporations filing for bankruptcy) the cost would still fall well below the estimated \$1.15 trillion required to buy a majority stake in the 25 largest U.S.-based publicly traded oil and gas companies, along with the few remaining publicly traded coal companies.¹¹⁷

- **Invest in Community Revitalization, Job Training, Education, Economic Diversification, Small Business Development.** Congress should establish or strengthen regional development programs to support economic revitalization and development in fossil fuel-dependent and devastated communities.¹¹⁸ One approach could be to reinstate and expand the POWER+ program established under the Obama administration, which provided economic and workforce development grants for coal communities.¹¹⁹ Local and community protection funds could also be established with fees collected from fossil fuel companies. As tax revenues shrink along with

¹¹⁴ Nationalization may sound like an extreme measure, but in fact there are plenty of examples of historical “nationalization” in the U.S. in response to economic or national security emergencies. See Thomas M. Hanna, “A History of Nationalization in the United States, 1917 – 2009,” The Next System Project, 2019. ([link](#)); John Ohly, *Industrialists in Olive Drab: The Emergency Operation of Private Industries During World War II*. Center of Military History, United States Army, 1999.

¹¹⁵ Steve Lohr, “U.S. not always averse to nationalization, despite its free-market image,” *New York Times*, October 13, 2008.

¹¹⁶ Jeremy Martinich and Allison Crimmins, “Climate damages and adaptation potential across diverse sectors of the United States. *Nat. Clim. Chang.* 9, 397–404 (2019) ([link](#)).

¹¹⁷ The Democracy Collaborative [estimates](#) that buying a majority stake in the 25 largest U.S.-based publicly traded oil and gas companies, along with most of the remaining publicly traded coal companies would cost an estimated \$1.15 trillion. In 2016, Robert Pollin and Brian Callaci estimated that the cost of a national just transition program to phase out fossil fuels would be \$600 million/year. That assumed a 2 degree Celsius target, an assumption that they have revised to 1.5 degree Celsius in estimates published since October, 2018. See “The Economics of Just Transition: A Framework for Supporting Fossil Fuel-Dependent Workers and Communities in the United States.” ([link](#))

¹¹⁸ See S. 2398 (114th Congress 2014–2015), The “Clean Energy Worker Just Transition Act,” introduced by Senators Sanders and co-sponsored by Sens. Merkley and Markey. ([link](#)) ([link](#))

¹¹⁹ Brandon Dennison, CEO, Coalfield Development Corporation, Testimony Before the House Subcommittee on Energy and Natural Resources, February 12, 2019. ([link](#))

fossil fuel production, the funds can support new infrastructure investment or other projects that attract new businesses, creating jobs and other community benefits.¹²⁰ Meanwhile, companies should be required to provide advance notice to employees and communities before shutting down any operation or making workforce cuts or transfers. Redevelopment of industrial properties should be governed by community benefit agreements and local hiring requirements. Support should be provided to community-labor “common good” initiatives such as climate mitigation and disaster recovery projects.¹²¹

- **End Fossil Fuel Company Self-Bonding.** Congress should enact legislation to end fossil fuel company self bonding that practice, as proposed under H.R. 4435, *The Coal Cleanup Taxpayer Protection Act of 2019*.¹²² Coal companies must be forced to fulfill their land-reclamation and post-closure environmental and site cleanup obligations. The dangerous practice of “self-bonding” has allowed coal companies to make empty promises about covering cleanup costs without putting up sureties or collateral.
- **Accelerate Coal Community Land Reclamation.** Mountaintop removal and longwall mining in particular have been destroying local ecosystems and communities. Congress should enact the RECLAIM Act (Revitalizing the Economy of Coal Communities by Leveraging Local Activities and Investing More Act) to accelerate dispersals from the federal Abandoned Mine Land Fund to reclaim more abandoned coal sites more quickly. It would also prioritize public input and community participation in determining which projects are chosen based on economic potential. The Act also requires preferential hiring practices so that highly skilled miners are given preference for jobs created under land reclamation programs.¹²³
- **Strengthen workers’ rights to ensure Green New Deal jobs are union jobs** “Green jobs” in rapidly growing sectors such as renewable energy and energy efficiency, along with jobs associated with “climate protection” and other infrastructure projects should be good, secure jobs, with strong wages and benefits.¹²⁴ Congress should establish prevailing wage and benefit standards, starting with renewable energy,

¹²⁰ Institute for Energy and Environmental Research and Labor Network for Sustainability, “Beyond a Band-Aid: A Discussion Paper on Protecting Workers and Communities in the Great Energy Transition.” ([link](#))

¹²¹ Todd Vachon et al., “How Workers Can Demand Climate Justice,” American Prospect, September 2, 2019. ([link](#))

¹²² 116th Congress U.S. House of Representatives. *H.R.4435 Coal Cleanup Taxpayer Protection Act of 2019*. ([link](#))

¹²³ Western Organization of Resource Councils. *Don’t Let Troubled Companies Leave Wyoming on the Hook for Coal Mine Cleanup*. July 18, 2019. ([link](#)) and *Reclaim Act Offers Hope of Revitalization for Coal Communities*. June 25, 2019. ([link](#)).

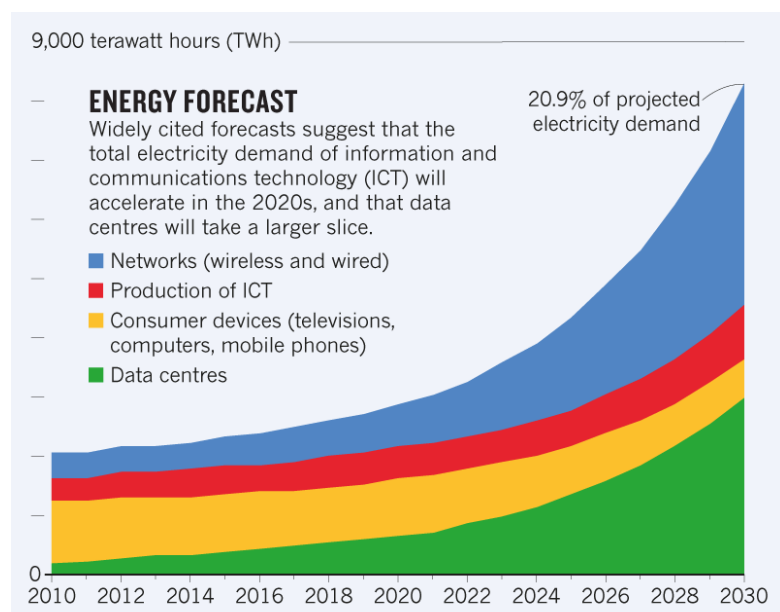
¹²⁴ For more, see Jeremy Brecher. *18 Strategies for a Green New Deal*. Labor Network for Sustainability, 2019. ([link](#))

energy efficiency and other occupational sectors that are growing rapidly as a result of the transition. Similar requirements should be immediately applied to “climate protection” jobs — including federally funded infrastructure projects — and extended across other sectors. The rights of workers to form a union need to be protected. For decades, the rights of workers to organize and bargain collectively have been systematically eroded.¹²⁵ Policies are needed to strengthen collective bargaining rights and eliminate mandatory arbitration and mandatory neutrality agreements. Sectoral (industry-wide) bargaining should be supported as well. Occupational health and safety requirements should also be strengthened. A clean and healthy workplace is essential to a clean and sustainable environment.

¹²⁵ Steven Greenhouse. *Beaten Down, Worked Up: The Past, Present, and Future of American Labor*. 2019. Human Rights Watch: *Unfair Advantage: Workers’ Freedom of Association in the United States under International Human Rights Standards*. 2000. ([link](#))

Appendix: 100% Renewable Cloud Computing

The internet will likely be the largest single thing we build as a species, and while the internet itself seems virtual, the data centers and network infrastructure behind the internet are quite physical. Not surprisingly, it takes a tremendous amount of energy to power our devices, data centers, and related infrastructural needs. Globally, data centers are estimated to consume 200TWh of energy, or 1% of global electricity demand. That number is estimated to balloon in the next ten years, to as much as 8% projected global electricity demand by 2030.¹²⁶



How we build and power our quickly growing global digital infrastructure is rapidly becoming central to the question of whether we will be able to transition to renewable energy in time to avoid dangerous climate change.

The US government is one of the largest cloud services customers in the world. In an effort to modernize, the federal government has issued guidance to agencies to accelerate cloud

adoption through its Cloud Smart strategy¹²⁷. The Pentagon recently awarded an \$10 billion dollar contract to Microsoft's cloud business for project JEDI, and more than 5,000 government agencies already use Amazon Web Services¹²⁸, including the CIA, the State Department, Department of Defense, NOAA, as well as numerous state government agencies.

If the rapid expansion of cloud computing services continues to be powered by electricity derived from fossil fuels, the growth of the internet could actually drive demand for more electricity and lock us in to coal and other dirty sources of energy. As highlighted in Greenpeace's recent *Clicking Clean Virginia* (February 2019)¹²⁹, the rapid expansion of data

¹²⁶ Nicola Jones. *How to stop data centers from gobbling up the world's electricity*. Nature. September 12, 2018. ([link](#))

¹²⁷ Office of the Federal Chief Information Officer. *Federal Cloud Computing Strategy*. Office of Management and Budget. ([link](#))

¹²⁸ AWS. *The Trusted Cloud for Government*. Amazon. ([link](#))

¹²⁹ Gary Cook and Elizabeth Jardim. *Clicking Clean Virginia*. Greenpeace. February 13, 2019. ([link](#))

centers in Northern Virginia’s “Data Center Alley”, many of which are linked to federal government contracts, is being used by Dominion Energy to justify a rapid build out in additional fracked gas delivery and electricity generation capacity, including the \$8 billion Atlantic Coast Pipeline. However, if data centers are 100% renewably powered, the Federal Government’s shift to the cloud instead could accelerate our transition to a renewably powered economy.

With the threats of climate change already upon us, the US Government must ensure its transition to the cloud does not take us in the wrong direction in terms of GHG emissions, and direct that cloud computing contracts the government awards are powered by data centers attached to renewable sources of electricity. At present, there are no legal requirements for cloud service providers to publish information about their energy use. And while there are procurement guidelines¹³⁰ for cloud services providers, none of these requirements pertain to renewable energy use or GHG emissions.

At present, a key challenge for both private and public sector cloud customers is the lack of detailed reporting by major cloud companies on the energy demand and GHG footprint that occurs with the data storage and computer services provided to each customer.

As one of the largest customers of data center companies, the US government has a unique role to play as a catalyst to drive better reporting and accelerate the renewable energy transition among throughout the tech industry.

As has done with success previously to advance important national economic and environmental goals, Congress should direct federal agencies to adopt standards to ensure the Federal Government cloud is being powered with renewable energy. Federal agencies should be directed when entering into contracts with cloud computing or data center vendors to require that the data centers operators be able to meet minimum transparency and renewable energy performance standards. Procurement standards for Renewably Powered Federal Government Cloud to advance this goal could be crafted along the following lines:

1. Transparency

Federal agencies are directed to require in all service level agreements or other provisioning of cloud computing or data center center services minimum public reporting requirements. Cloud and data center service providers must publicly and regularly report their energy consumption, energy mix and related GHG emissions. At a minimum, this reporting must include:

¹³⁰ Office of the Federal Chief Information Officer. *Federal Cloud Computing Strategy*. Office of Management and Budget. ([link](#))

- A. Annual reporting of the electricity demand, source of electricity supply, and GHG for each data center used to fulfill any portion of federal cloud contracts.
- B. Consistent WRI/WBCSD Scope 2 GHG reporting requirements¹³¹, where renewable energy that has been purchased by the cloud provider via contractual instruments, reporting of GHG emissions under (1)(A) must include both location based reporting and market based emissions reporting.
- C. Renewable energy claims must be based either on delivered electricity to the data center from the local utility or electricity service provider, or in the case of renewables secured via contractual instruments, must be bundled with the sale of electricity generated within the local balancing region.

2. Performance

To be eligible for government cloud computing contracts, cloud computing companies/data center operators must have adopted the following policies and meet the following clean energy performance benchmarks for all data centers utilized to fulfill the contract:

- A. By 2024, all data centers servicing federal contracts must be powered by electricity from 100% renewable sources through one or more of the following:
 - a. Onsite generation
 - b. Grid based power direct from local utility or electricity service provider
 - c. Contractual instruments for renewable energy from sources located within the local electricity balancing region to match the annual electricity demand of the individual data centers delivering federal cloud computing services. Contracted renewable energy must be from a new and additional deployment of renewable energy.
- B. By 2030, all data centers servicing federal contracts must be powered by electricity from 100% renewable sources through one or more of the following means:
 - a. Onsite generation
 - b. Grid based power directly from local utility or electricity service provider
 - c. Contractual instruments for renewable energy from sources located within the local electricity balancing region to meet the electricity demand of the individual data centers delivering federal cloud computing services on a 24/7, 365 day basis. Contracted renewable energy must be from a new and additional deployment of renewable energy.

¹³¹ Greenhouse Gas Protocol. *GHG Protocol Scope 2 Guidance*. WRI & WBCSD. ([link](#))