



November 22, 2019

**Comments of the American Council on Renewable Energy  
to the House Select Committee on the Climate Crisis**

The American Council on Renewable Energy (ACORE) is pleased to provide comments in response to the Request for Information by the House Select Committee on the Climate Crisis. ACORE works across renewable technologies and represents the nation's leading renewable energy developers, manufacturers and investors, along with corporate electricity consumers, electric utilities, manufacturers of energy storage and smart grid technologies, and the many other diverse industries that comprise the country's thriving renewable energy economy. Renewable sector investment has exceeded \$40 billion for each of the last five years and our members are proud of renewable energy's contribution to American economic growth, job creation and greenhouse gas (GHG) reductions.

As the Committee moves forward with its critical goal of developing recommendations to achieve substantial and permanent reductions in GHG pollution and other activities that contribute to the climate crisis, renewable energy is well-positioned to meet the challenge. In 2017 alone, fossil fuels contributed approximately 76% of total U.S. GHG emissions from human activity.<sup>1</sup> However, clean renewable energy is now the nation's largest source of new power. Cost-competitive across many parts of the country, renewable energy is vital for achieving our climate obligations. The policy drivers and market reforms outlined in these comments can move capital off the sidelines, expand renewable energy generation, improve grid reliability and resilience, and accelerate the transition to America's clean energy future.

In light of the Committee's charge to craft comprehensive climate policy, the recommendations that follow fall among several Committee jurisdictions. Taken together, we believe these recommendations can provide a bedrock foundation for the scientifically driven climate solution the Committee is seeking to develop.

**Enact A Federal High-Penetration Renewable Electricity Standard (RES)**

A federal high-penetration renewable electricity standard (RES) presents a straightforward and time-tested policy tool for reducing the power sector's GHG emissions. We define a federal high-penetration RES as a regulatory mandate that requires a high percentage of renewable energy (generally, over 50%) in electricity companies' sales, generating capacity or electricity purchases. Compared to other policies that aim to replace fossil fuel generation, the RES approach is particularly noteworthy because it increases demand for renewable energy directly, providing investment certainty for renewable projects and ensuring that customers receive clean,

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<sup>1</sup> U.S. Energy Information Administration. "Where greenhouse gases come from." Available at <https://www.eia.gov/energyexplained/energy-and-the-environment/where-greenhouse-gases-come-from.php>



cost-competitive electricity free of both carbon dioxide and non-carbon dioxide GHGs like methane and nitrous oxide. A federal high-penetration RES also has the benefit of having been proven effective at the state level and is at this point well understood by federal policymakers. Qualifying technologies should include wind, solar, hydropower, ocean, tidal, hydrokinetic, geothermal energy and other zero-carbon renewable technologies. The required percentage of compliant electricity should be at least 50%, on a timeline consistent with climate commitments and other policy goals. Alternative compliance payments and penalties should be sufficient to achieve RES objectives. A federal high-penetration RES should recognize and build upon successful state renewable energy standards. For maximum additionality, a federal high-penetration RES should interact constructively with voluntary renewable energy credit markets and potential carbon policy compliance credits.

In addition to decarbonizing the nation's power supply, renewable energy generation has important characteristics that enhance the reliability and resilience of the grid – including free and inexhaustible fuel, zero reliance on fuel supply lines or volatile global fuel markets, greater decentralization, fuel proximity to load, and the ability to deploy rapidly. When combined with enhanced transmission, greater deployment of energy storage technologies and smart tax policy (see below), a federal high-penetration RES will deliver pollution-free power to American businesses and consumers at a lower cost and with greater reliability than is possible today.

### **Optimize Wholesale Energy Markets**

**Congress should clarify that “just and reasonable rates” for energy under the Federal Power Act must internalize the real costs of generation, including the cost of emissions.**

Allowing climate externalities to escape inclusion in pricing constitutes an out of market subsidy for emitting resources paid for by Americans at large. Congress should ensure these very real costs are reflected in market pricing.

**Congress should direct FERC to approve climate-aware market designs administered by wholesale energy market operators.** Two-thirds of Americans live under wholesale power markets. These policies have significant influence on the direction of the nation's generation mix and can be effective tools to drive emissions reductions in the power sector. For example, energy markets may file for FERC approval of carbon adders in their markets, an electricity-specific form of carbon pricing that factors the negative climate externalities of carbon-intensive generation into market price signals. Most recently, the New York Independent System Operator (NYISO) has considered such a proposal.<sup>2</sup> This kind of approach could also be used to develop competitive forward markets for clean energy attributes, similar to existing markets for energy, capacity or ancillary services. Implementing climate-aware market designs would promote competitive low-cost emissions reductions consistent with existing markets and consumer interests.

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<sup>2</sup> NYISO. *IPPTF Carbon Pricing Proposal*, available at <https://www.nyiso.com/documents/20142/3911819/Carbon-Pricing-Proposal%20December%202018.pdf>



Conversely, **Congress should direct FERC to reject market designs that negate state climate initiatives.** For example, the PJM market has proposed a modification of its capacity auction rules to raise the price of certain resources, all zero-carbon, on the basis of alleged state support for their operation. PJM’s proposal claims to level the capacity auction playing field for non-subsidized, polluting resources, but it in fact re-creates economic externalities that states appropriately price. In order to address the climate crisis by reducing GHG emissions, FERC should encourage states to advance their own supportive climate proposals and reject efforts to undermine those initiatives.

**Finally, Congress should direct FERC to improve wholesale energy market rules to enable greater deployment of hybrid (i.e. multi-renewable or renewable + storage) resources.**

Power producers are increasingly interested in deploying projects that combine the unique benefits of multiple forms of generation and increase project capacity factors. These new carbon-free projects can provide reliable power at lower cost. To fill the gap between FERC Order No. 841 (energy storage participation in markets) and Order No. 845 (project interconnection to the grid), the Commission should clarify the ability of storage to join operating renewable projects and projects in interconnection queues without causing those projects to exceed their studied power injection limits or lose their queue positions.

### **Expand and Enhance Electric Transmission Infrastructure**

Initiatives to expand transmission lines and related enabling infrastructure (including energy storage) can play an important role as part of comprehensive climate recommendations and are another critical feature of any plan to address the climate crisis by reducing GHG emissions. A 2016 Nature Climate Change study found that a large transmission network would be the most effective way for the nation to reach a wind and solar penetration of approximately 55%,<sup>3</sup> and a 2019 Brattle Group analysis concluded that “building transmission to access high quality but distant renewable resources is often more cost effective than making use of more local, but lower quality resources.”<sup>4</sup> These findings suggest that pairing a federal high-penetration RES with policy efforts to build out regional and interregional transmission could allow for greater financial savings than a high-penetration RES alone. Moreover, well-designed transmission provides large and diverse additional benefits, including more competitive and cost-effective electricity markets, heightened grid resilience, and increased grid reliability. Fortunately, enhanced transmission planning, coordination, and incentivization policy efforts would not be starting from scratch. Rather, they can be built on an extensive existing framework.

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<sup>3</sup> A. MacDonald et al., *Future cost-competitive electricity systems and their impact on US CO<sub>2</sub> emissions*, Nature Climate Change, Jan. 2016, available at <https://www.nature.com/articles/nclimate2921>

<sup>4</sup> WIRES, *The Coming Electrification of the North American Economy: Why We Need a Robust Transmission Grid* 13-14, Mar. 2019.



## *Streamline Transmission Infrastructure Permitting and Siting*

FERC Order No. 1000 required, among other things, “participat[ion] [by transmission service providers] in a regional transmission planning process that produces a regional transmission plan” and “coordination between neighboring transmission planning regions for new interregional transmission facilities.”<sup>5</sup> Although these planning and coordination efforts are already underway, they have to date been inadequate. Implementation efforts too often do not allow for the use of advanced technologies and grid optimization methods that could benefit the build-out of clean energy resources by increasing capacity at lower cost. These efforts also employ procedures that disincentivize transmission interconnection<sup>6</sup> and ignore benefits such as lowered delivered energy costs through new renewable integration.<sup>7</sup>

**Congress should direct FERC to revise Order No. 1000 to produce a more robust and efficient transmission system.** This can be accomplished by incorporating advanced technologies and grid optimization in the planning process, ensuring more standard and broad cost allocation in light of regional benefits, and harmonizing cross-region planning processes to increase inter-RTO transfer capability. Furthermore, Congress should direct FERC to designate a single point of contact for each project to accelerate review and decision-making. If planning and cost-sharing challenges can be overcome, studies have shown that greater grid interconnections – at least connecting the Eastern Interconnection and the Western Interconnection – will enable higher renewable penetration, lower consumer costs and enhance grid reliability.<sup>8</sup>

**Congress should clarify federal backstop siting authority by restoring Congressional intent of the Energy Policy Act of 2005.** This clarification would encourage and accelerate investment and development of needed transmission infrastructure when that infrastructure is in the national interest and advances the objectives of the Committee’s comprehensive climate plan.

In that regard, **Congress should establish a National Priority Transmission Plan to integrate carbon-free resources in a timely and cost-effective manner.** Proactive regional and interregional planning with national climate awareness can augment existing planning processes to ensure that transmission access is not an impediment to the success of the Committee’s

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<sup>5</sup> FERC. *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000-A, Docket No. RM10-23-001 (Fed. Energy Reg. Comm’n) May 17, 2012.

<sup>6</sup> For example, FERC Order No. 1000 requires interregional projects to be separately selected in the planning process for each RTO plus a joint RTO planning process. Projects which do not have clear benefits within a single RTO may not be selected in that RTO’s planning process despite benefiting the nation as a whole. This is known as the “triple hurdle” problem of interregional transmission planning.

<sup>7</sup> ACORE. Comments on *Inquiry Regarding the Commission’s Electric Transmission Incentives Policy*, Docket No. PL19-3-000 (Fed. Energy Reg. Comm’n) June 25, 2019.

<sup>8</sup> Nat’l Renewable Energy Lab., *Interconnection Seams Study Presentation*, July 2018, available at <https://register.extension.iastate.edu/images/events/transgridx/TransGrid-X-pre-Symposium-document-from-NREL--web.pdf>.



proposals to address the climate crisis. Texas' Competitive Renewable Energy Zone, which brought abundant, low-cost wind power from west Texas to load centers in east Texas, is one successful model. While existing stakeholders would continue shouldering most of the cost, the National Priority Transmission Plan should include an appropriation of federal funds for national priority transmission infrastructure projects that advance the Committee's climate objectives.

### *Incentivize Transmission Infrastructure Financing*

The Energy Policy Act of 2005 required that FERC establish incentive-based transmission rates that (1) promote cost-effective investment in reliability-improving transmission infrastructure, (2) provide a sufficient financial return to incent investment, (3) encourage the deployment of transmission technology enhancements, and (4) allow the recovery of prudently incurred costs by transmission providers. In response, FERC issued Order Nos. 679 and 679-A, which award incentives on the basis of special risks or challenges incurred by a project.

**Congress should direct the Commission to shift from a risks and challenges framework, which encourages costly and risky projects, to a benefits framework, which can stimulate private-sector investment with minimal regulatory reform by incentivizing projects in line with their consumer value.** New and optimized transmission enhances grid capacity, as well as reliability and resilience. A benefits-based incentive framework would encourage transmission infrastructure investment in a low-cost, consumer-focused way.

### *Unlock New Grid Capabilities*

**Finally, with an eye towards the advanced grid necessary for the clean energy future envisioned by the Committee, Congress should consider pilot programs, Department of Energy and National Laboratory studies, and other mechanisms designed to enable more efficient interaction among resources at the transmission and distribution system levels.** For example, simplified participation of distribution system operators, demand response aggregators, or customers in the overall power system may help to counter variability in transmission-system-level renewable generation.<sup>9</sup> While distribution-level management has historically been outside the federal government's purview, a federal comprehensive climate plan could nonetheless prove an appropriate vehicle for encouraging the Department of Energy or others to start studying and testing the possibilities of such a system.

### **Modernize Clean Energy Tax Incentives**

Any comprehensive climate plan designed to reach net-zero emissions in our lifetimes would be incomplete without the deliberate and forward-looking application of clean energy tax incentives.

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<sup>9</sup> L. Kristov, P. De Martini, and J. Taft, *A Tale of Two Visions: Designing a Decentralized Transactive Electric System*, IEEE Power and Energy Magazine, Volume: 14, Issue: 3, May-June 2016.



Despite sporadic lapses, the existing federal tax incentives for wind, solar and other renewable technologies have been enormously effective in driving private sector investment and deployment of our nation's abundant renewable resources. Over the last nine years, levelized costs for wind and solar power have come down by 68% and 88% respectively. In many areas of the U.S., renewables are the cheapest source of new power, with wind and solar bidding into power markets in the two to four cents per kilowatt-hour range. Renewables are now the largest source of private-sector infrastructure investment, with over \$48 billion invested in 2018 alone and more than \$521 billion since 2004. Renewables now comprise over 18% of total U.S. electric generation and accounted for more than one-third of all new generating capacity in 2018.

This impressive progress is an indisputable federal policy success story, but as a practical matter it is only the beginning of any meaningful effort to address the climate crisis by reducing GHG emissions. As you know, the wind production tax credit (PTC) is currently scheduled to phase out this year, and the solar investment tax credit (ITC) is currently scheduled to phase down and out in 2021, after which only a 10% ITC for commercial and utility-scale solar power will apply. These phase-outs were characterized at the time as a first step in energy tax reform. However, in 2017, the Tax Cuts and Jobs Act did not address energy tax reform, and in 2018, Congress extended incentives for nuclear power. Combined with the permanent tax law incentives enjoyed by the fossil fuel industry (e.g. expensing for intangible drilling costs, percentage depletion for oil wells, tax-advantaged treatment for master limited partnerships, etc.), these actions have cumulatively created an unlevel playing field in the tax code for the nuclear and fossil fuel industries at the expense of pollution-free renewable power. This result is clearly at cross purposes with the Committee's objectives and must be reversed in order to address the climate crisis.

**Congress should enact a permanent technology-neutral tax credit based on carbon emissions.** A technology-neutral approach would rationalize and simplify the range of existing incentives, provide needed certainty for market participants, and focus the tax code squarely on the Committee's long-term climate outcome. It would drive economic growth, help modernize the nation's aging energy infrastructure, and promote competition to deliver low-cost power to consumers. This new technology-neutral incentive should apply to all types of new domestic power generation based on their carbon emissions, as well as new transmission, energy storage and grid modernization technologies. The Clean Energy for America Act (S. 1288) introduced by Senator Ron Wyden (D-OR) offers one example of climate-focused technology-neutral tax credit legislation. To maximize efficiency, lower project costs and further increase the amount of renewable energy generation, this new technology-neutral incentive should be transferable to a limited set of eligible project partners.

**Congress should extend and expand the existing federal incentive for electric vehicles.** In 2016, the transportation sector passed electricity as the nation's largest source of carbon emissions. While increasing fuel efficiency standards can reduce emissions from the transportation sector, electrifying the transportation sector with pollution-free power can



eliminate those emissions completely. The Driving America Forward Act (H.R. 2256/S. 1094) represents a step in the right direction. In addition to reducing emissions from the transportation sector, this bipartisan legislation would support American manufacturing and create good-paying jobs. For maximum emissions reductions, medium- and light-duty electric vehicles should be included in any final EV proposal.

Finally, whether done through the tax code, tradeable pollution allowances or other regulatory compliance, **Congress should put an appropriate federal price on carbon and other GHG emissions.** While a federal, high-penetration RES paired with a technology-neutral tax credit, expanded transmission and optimized wholesale energy markets would go a long way towards decarbonizing the power sector in the most predictable way over the shortest amount of time at the lowest possible consumer cost, a properly structured carbon price can further support those objectives while driving the required carbon reductions across the rest of the economy.

But not all carbon pricing proposals are created equal. A great deal depends on the level of the price. If Congress wants to use carbon pricing to accelerate renewable energy deployment as part of a comprehensive plan to address the climate crisis, the carbon pricing policy it puts in place will need to be purpose built to accomplish that objective.

In that regard, we recommend that any carbon pricing policy intended to accelerate renewable energy deployment include the following features:

- Carbon pricing should be accompanied by complementary measures, such as a federal high-penetration renewable energy standard, a technology-neutral incentive for carbon-free electricity generation, expanded transmission and optimized wholesale energy markets to ensure the desired outcome over the fastest timeline at the lowest cost.
- Carbon pricing should be economy-wide to drive maximum emission reductions, while avoiding cross-subsidizing distortions between sectors. For example, a power-sector only carbon price could run the risk of slowing transportation electrification if electricity prices reflect carbon externalities while transportation fuel prices do not.
- Carbon prices should be initially set and regularly adjusted on a predictable schedule consistent with scientifically driven climate mitigation objectives.
- Carbon prices should be set at levels high enough to encourage fuel switching from emitting resources to zero-emission resources, without inadvertently creating the next generation of stranded assets.
- Carbon pricing policy should be politically sustainable, avoid economic regressivity and provide certainty for all stakeholders.
- Federal carbon pricing policy should protect and build upon successful state renewable energy policies.

## **Designing A Fair Transition**

Disadvantaged communities and economically struggling regions stand to gain a variety of potential benefits from increased renewable power – including health benefits,<sup>10</sup> enhanced economic activity and new employment opportunities.<sup>11</sup> At the same time, the transition to a clean energy economy may present a shifting landscape to communities that currently rely on fossil fuel generation or production for jobs. A comprehensive set of climate recommendations provides an opportunity to recognize and counter the disproportionate health and economic burdens that certain groups, communities, and regions have borne for years from fossil fuel extraction and generation.<sup>12</sup> For these reasons, the Committee should consider initiatives aimed at ensuring *all* Americans benefit from its climate policy recommendations.

The following are examples of fair transition proposals and policy tools that Congress can evaluate when crafting a comprehensive climate plan:

- Vocational training, job relocation allowances, and other reemployment services for fossil fuel workers akin to the Trade Adjustment Assistance Program, as previously proposed in the bipartisan HELP Act.<sup>13</sup>
- Regionally targeted investments in clean energy-related infrastructure and R&D.<sup>14</sup>
- Elements of the Clean Power Plan, which contemplated a Clean Energy Incentive Program and other measures to reward investments in low-income communities, required

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<sup>10</sup> As one regional example, ten Midwestern states could see \$4.7 billion in health benefits from a \$3.5 billion build-out of renewable energy. See E. Dimanchev et. al. *Health co-benefits of sub-national renewable energy policy in the US* (August 12, 2019), IOP Publishing Ltd, available at <https://iopscience.iop.org/article/10.1088/1748-9326/ab31d9>

<sup>11</sup> In 2016, for example, 8,000 new renewable energy jobs were created in the rural Midwest. That doubled to more than 17,000 additional new jobs in 2017. More rural Midwesterners are now employed by the clean energy industry than the fossil fuel industry. See NRDC, *Clean Energy Sweeps Across Rural America* (November 2018), available at <https://www.nrdc.org/sites/default/files/rural-clean-energy-report.pdf>

<sup>12</sup> See, e.g., E. Massetti et al, *Env't'l Quality and the U.S. Power Sector: Air Quality, Water Quality, Land Use, and Env't'l Justice* x, Oak Ridge Nat'l Lab. (Jan. 4, 2017) (“[A] greater percentage of minorities and people living below the poverty level live within a three-mile radius of coal- and oil-fired power plants, compared to the U.S. population overall. Additionally, existing health disparities and other inequities in these communities increase their vulnerability to the health effects of degraded air and water quality and climate change.”). As described by Senator Joe Manchin (D-WV), “coal communities . . . have done the heavy lifting that produced the energy that powered our country to greatness.” Office of Sen. J. Manchin, *Manchin Leads Group of Senators in Reintroducing RECLAIM Act to Invest in Coal Communities* (April 30, 2019), available at <https://www.manchin.senate.gov/newsroom/press-releases/manchin-leads-group-of-senators-in-reintroducing-reclaim-act-to-invest-in-coal-communities>.

<sup>13</sup> H.R. 5529, 113th Cong. (2014).

<sup>14</sup> For example, with funding from the U.S. Department of Energy, West Virginia University is developing ways to extract rare earth elements that are critical to the development of clean energy technologies from abandoned coal mines. See P. Ziemkiewicz, *Recovery of Rare Earth Elements from Acid Mine Drainage*, Written Testimony to Sen. Cmte. on Energy and Natural Res. (May 14, 2019), available at [https://www.energy.senate.gov/public/index.cfm/files/serve?File\\_id=AC6480D2-9A7F-4160-BE77-086CC84C7489](https://www.energy.senate.gov/public/index.cfm/files/serve?File_id=AC6480D2-9A7F-4160-BE77-086CC84C7489).





states to ensure low-income community and minority community participation in planning, and called for continuing EPA monitoring of impacts on vulnerable communities.<sup>15</sup>

- Increased funding for the Appalachian Regional Commission, which has invested almost \$150 million in grants to spur economic development in communities adversely affected by the closing of uneconomic coal assets through the Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Initiative started in 2015, with grantees concentrated in West Virginia, Kentucky, Ohio, and Pennsylvania.<sup>16</sup>
- Disbursement of funds from the Abandoned Mine Reclamation Fund to be spent on joint clean-up and economic development projects in coal communities, as set forth in the bipartisan RECLAIM Act.<sup>17</sup>
- Bipartisan proposals to strengthen pension protections for fossil fuel industry workers whose employers go out of business.<sup>18</sup>
- Provisions in Washington State’s recently enacted 100% clean energy standard to perform a cumulative impact analysis of environmental and health disparities; require utilities to provide energy assistance to low-income customers; and support job creation for women, minorities, veterans, and other workers.<sup>19</sup>
- Using frameworks akin to Opportunity Zones to further incentivize clean energy projects (including distributed energy resource installations) in low-income communities.
- Returning revenue from RES Alternative Compliance Payments and/or penalties to communities needing investment in connection with the transition to clean energy.

## **Conclusion**

Thank you for the opportunity to submit these comments in response to the Request for Information by the House Select Committee on the Climate Crisis. Recognizing the importance, magnitude and complexity of this undertaking, we stand ready to discuss any and all of these issues in greater detail at any time. Please let us know if we can provide any additional information by contacting Bill Parsons, Chief Operating Officer, at (202) 777-7596 or [parsons@acore.org](mailto:parsons@acore.org).

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<sup>15</sup> 80 Fed. Reg. 64662 (Oct. 23, 2015).

<sup>16</sup> See Appalachian Regional Commission, *POWER Initiative*, available at <https://www.arc.gov/funding/POWER.asp>.

<sup>17</sup> See RECLAIM Act of 2019, H.R. 2156, S. 1232, 116th Cong. (2019).

<sup>18</sup> See, for example, President Obama’s FY2016 budget request, which aimed to increase transfers from coal mining revenues to the Pension Benefit Guaranty Corporation and to the United Mine Workers of America Health and Retirement Funds, and similar legislative efforts supported by Senators Joe Manchin (D-WV), Shelley Moore Capito (R-WV), and Sherrod Brown (D-OH), and Rep. David McKinley (R-WV).

<sup>19</sup> Washington Governor Jay Inslee, Policy Brief, May 2018, <https://www.governor.wa.gov/sites/default/files/documents/clean-electricity-policy-brief-bill-signing.pdf>.