www.energyinnovation.org



98 Battery Street; San Francisco, CA 94111 policy@energyinnovation.org

HOW CONGRESS CAN ENSURE PLUMMETING SOLAR, WIND, AND BATTERY COSTS ACCELERATE OUR CLEAN ENERGY FUTURE

BY SONIA AGGARWAL AND MIKE O'BOYLE JUNE 2020

Dramatic recent reductions in the costs of key technologies mean the U.S. can reach 90 percent zero carbon electricity by 2035 without raising customer electricity bills at all from today's levels, according to *The 2035 Report: Plummeting Solar, Wind, and Battery Costs Can Accelerate Our Clean Energy Future*.

On the path to 90 percent over the next 15 years, the electric grid can productively employ \$1.7 trillion dollars in investment, support a net increase of 530,000 energy sector jobs each year, and reduce economy-wide emissions by 27 percent. This future requires no new fossil fuel power plants, with all existing coal plants retiring by 2035, and avoids up to 85,000 premature deaths from fossil fuel emissions by 2050.

Building a 90 percent zero carbon electricity system is a huge opportunity for economic recovery from the COVID-19 recession—investing in a healthier economy and supporting new jobs with a focus on coal communities in transition, without raising electricity bills when budgets are tight. This is a no-regrets blueprint for investing in America's future and stimulating innovation.

But without policy interventions, zero carbon electricity sources would only comprise 53 percent of our nation's electricity in 2035. Additionally, our national institutions need new policy tools to cost-effectively and equitably support the rapid transition to a clean electricity future. To secure this economic opportunity, the U.S. Congress could:

- Adopt a **Clean Energy Standard** targeting 55 percent by 2025, 75 percent by 2030, 90 percent by 2035, and 100 percent by 2045.
- Extend existing tax credits for all zero-carbon electricity sources and make energy storage projects eligible. Convert current tax credits into cash grants and refundable tax credits.
- Reinstate the manufacturing tax credit offered in the American Recovery and Reinvestment Act to support domestic manufacturing of clean energy technologies.
- Greatly increase DOE's capacity to **provide low-cost capital** to companies with proven experience willing to expand manufacturing capacity of wind, solar, and grid-scale storage.
- Offer utilities federal debt financing on unpaid fossil capital costs, where compliance with clean energy standards accelerates coal and gas power plant closures.
- Condition federal funds assisting utilities with compliance with a 90 percent clean energy standard on competitive all-source procurement.

- Require DOE and DOI to develop and update national energy corridors and renewable energy zones, publish a national land conflicts database to facilitate development and responsible siting.
- Affirm FERC's authority for transmission cost allocation and planning for consideration of public
 policy impacts to the grid, including regions outside of ISOs/RTOs, with particular attention to the
 federal clean energy standard, or in its absence state and utility clean electricity goals. Clarify the
 intention to reduce interconnection queue times and require beneficiary customers to pay their
 fair share.
- Provide states with matching funds to pay for interstate transmission lines with demonstrable reliability, cost, and renewable integration benefits. Consider vesting DOE with authority to plan for and site interregional transmission lines to streamline development of the nation's most crucial and beneficial long-distance transmission projects.
- Introduce legislation clarifying FERC's authority to direct or modify the governance of ISOs/RTOs, and providing a framework for evaluating stakeholder and state regulator access to decision-making.
- Allocate funds to DOE and the national labs to create new models for resource adequacy under high shares of renewables, improve electricity sector resource planning and wholesale market models, and study and commercialize grid-forming inverters and grid stability in high-renewables electricity systems.
- Provide stopgap funding to supplement the tax base provided by retired coal infrastructure. Consider setting up a national Just Transition Office with state satellite offices.
- Shore up federal programs that sustain pensions for coal workers, including the Black Lung Disability Trust Fund and Pension Benefits Corporation.
- **Build on and expand the 2019 RECLAIM Act**, which proposed appropriating \$1 billion for the Abandoned Mine Reclamation Fund to revitalize communities hardest hit by the coal industry downturn.
- Increase tax incentives (or more liquid cash grants) for wind and solar developers if sited near coal communities. Condition incentives on training and employing workers from these communities to work on construction and maintenance of new facilities, as well as increased labor standards.
- Address the need for job training to support the rapid growth of wind, solar, and storage industries under a 90 percent clean energy standard.