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HOW FEDERAL DEPARTMENTS, AGENCIES, AND NATIONAL LABS 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 Department of Energy (DOE), Department of Interior (DOI), Department of Labor (DOL), Environmental Protection Agency (EPA), and national laboratories could:

- Under Clean Air Act authority, **require states to create implementation plans for rapid electricity system decarbonization** given the availability of lower-cost and lower-pollution alternatives, and limit carbon pollution from new gas-fired power plants (EPA).
- **Develop and update national energy corridors and renewable energy zones**, and publish a national database of land conflicts to facilitate development and responsible siting (DOE, DOI).
- Expand the DOE's capacity to **provide low-cost capital** to companies with proven experience willing to expand manufacturing capacity of solar, grid-scale storage, and wind in the U.S. (DOE).
- **Sponsor new pilots for "clean energy portfolio" development** in partnership with distribution utilities (DOE, national labs).

- Allocate funds to improve electricity sector resource planning and wholesale market models. Use national laboratory capabilities to improve these models and develop open-source tools that utilities, ISOs/RTOs, and state public utility commissions can use in their planning and operations (DOE).
- Articulate advanced modeling capabilities ISO/RTOs must possess and use to qualify as regional planning entities. (FERC)
- Work with FERC/RTOs to develop useful technology pilots, model language to increase resource participation, and model rules to pay for flexibility (DOE, national labs).
- Conduct research in conjunction with utilities and RTOs into grid-forming inverters and other technologies to support system stability (DOE, national labs).
- Create a Just Transitions Office with state satellite offices to support the transition for fossil fuel-dependent communities (DOL).
- Create labor standards including wage requirements, benefits standards, and rights to organize for renewable energy development, with a focus on supporting clean energy development in coal communities (DOL).
- Address the need for job training to support the rapid growth of the wind, solar, and energy storage industries under a 90 percent clean energy standard (DOL).