ENERGY INNOVATION
POLICY & TECHNOLOGY LLC

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

HOW FERC AND RTO/ISO OPERATORS 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 wholesale electricity markets and transmission systems need reform to cost-effectively and equitably support the rapid transition to a clean electricity future. To secure this economic opportunity, the Federal Energy Regulatory Commission (FERC) and regional transmission organization/independent system operators (RTOs/ISOs) could:

- Exercise authority to **require regional transmission expansion and simplified interconnection rules** that support the realities of society's policy goals and a 90% by 2035 clean energy standard (FERC).
- **Apply authority for transmission cost allocation and planning** for public policy impacts to the grid, including regions outside of RTO/ISOs. Give particular attention to the federal clean energy standard, or in its absence state and utility clean electricity goals (FERC, RTO/ISOs).
- Clarify the intention to **reduce interconnection queue times**, develop criteria for fast-tracking projects with sufficient transmission capacity, and require beneficiary customers to pay their fair share of interconnection costs (FERC, RTO/ISOs).
- **Require regional Planning Authorities to develop compatible models** (incorporating state energy resource plans) and pursue transmission where benefits exceed costs. Require states denying a regionally beneficial line to demonstrate certain criteria are met to justify denial (FERC).

- Require regional transmission planning bodies created under FERC Order 1000 to propose to FERC multi-value transmission projects, accounting for state and federal clean energy policies, with Federal authority to promulgate a cost allocation methodology where regions fail to act (FERC).
- Enhance price signals in the energy markets themselves. Reduce or eliminate dependence on capacity markets; raise or remove the cap on scarcity prices; and adopt reserve shortage adders like operating reserve demand curves, which better reflect the value of resources to the system as it approaches a shortage. (FERC, RTOs/ISOs).
- Keeping in mind a preference for enhancing energy price signals and reducing dependence on capacity-like mechanisms, expose the value of flexibility through specific products that pay for and obtain the type of flexibility that has system value. (FERC, RTOs/ISOs).
- Require all generators participating in wholesale markets, including imports and renewables, to participate in economic dispatch. Consider expanding this requirement non-RTO, FERC-jurisdictional utilities and generators. (FERC, RTOs/ISOs).
- Address restrictions on resource participation in energy, ancillary services, and capacity markets, particularly wind, solar, storage, efficiency, and demand response. Continue and build on the work of Order 841 (FERC, RTOs/ISOs).
- As new resources enter the electricity mix and create value for new and different ancillary services, ISOs/RTOs should create new products that expose the value of these services and allow encourage their provision at least cost. (FERC, RTOs/ISOs).
- Articulate advanced modeling capabilities ISO/RTOs must possess and use to qualify as regional planning entities (FERC).