

Public Policy Actions to Meet Climate Goals by Improving Transmission

Public Policy Actions to Meet Climate Goals by Improving Transmission

There is much that can be done now to respond to the climate crisis that does not require major breakthroughs. One of these actions is improving and expanding our transmission system to be more efficient and to better connect more renewable resources waiting to gain access to the grid. Some suggested proposals focused on the use of readily-available technologies, specifically advanced conductors, are summarized below. These actions involving advanced conductors can be done now, and should quickly lower CO2 emissions while providing savings to consumers.

Advanced conductors use modern technology, such as a stronger, lightweight carbon composite core and more aluminum, for the overhead cables that transmit high-voltage electricity. Advanced conductors can transmit twice the power with the same weight, 40% less line loss, and much lower cable sag. See attached two-pager that describes the benefits of advanced conductors.

- **Department of Energy**
 - **Energy Efficiency Standard**
 - The House-passed FY-23 Energy and Water appropriations bill, as well as the introduced Senate bill, includes language requiring the Department of Energy to provide Congress within 180 days a study regarding the environmental and economic benefits a conductor efficiency standard would achieve.
 - **Proposed Action #1:** Engage with the DOE Office of Electricity (OE) to get this study moving quickly (meet the 180-day deadline), and if the study determines what we expect, get the ball rolling with the Energy Efficiency & Renewable Energy (EERE) office on an efficiency standard.
 - **Proposed Action #2:** Engage the highest level politicals (senior officials at WH/OSTP, DOE, and Congress) to make this a priority.
 - **Proposed Action #3:** Use the study results as grounds for Congress to pass legislation next year requiring DOE to set an overhead conductor efficiency standard by a certain date.
 - **IJA Funding**
 - The Infrastructure Investment and Jobs Act (IIJA) included several grant programs for transmission improvement and expansion that total \$15.5 billion. Three of these grants programs, which are fully appropriated, specifically include advanced conductors as an eligible item for funding: (1) Section 40101 grid resilience funding, (2) Section 40106 transmission facilitation, and (3) section 40107 grid flexibility enhancing technologies.
 - **Proposed Action #1:** Advanced conductors are the fastest and lowest cost way to expand grid capacity to expedite renewables deployment. They should be at the top of DOE's list of funding priorities for these programs. For instance, Funding Opportunity Announcements issued for these grants should specifically express a strong preference for funding proposals that deploy advanced conductors.

- **Proposed Action:** Encourage FERC to incorporate efficiency metrics into the transmission planning process to provide a path for renewable capacity to be added to the grid quickly and cost-effectively. Specifically, any final order by FERC should (1) encourage the use of reconductoring with modern advanced conductors for existing transmission routes rather than rebuilding to quickly add substantial transmission capacity to the existing grid to facilitate the deployment of renewable resources; (2) set efficiency in reducing line and system losses as an overarching design criterion; (3) incorporate a conductor minimum efficiency target; and (4) require the use of efficient technologies at the planning and design stages of interconnection and new transmission planning processes.
- **Transmission Incentives NOPR**
 - FERC has an open proceeding to develop financial incentives for “transmission technologies that enhance reliability, efficiency and capacity as well as improve the operation of new or existing transmission facilities.” Advanced conductors are exactly the type of technology that should be incentivized by this rulemaking.
 - **Proposed Action:** Encourage FERC to advance its incentives proceeding (it has been idle for nearly two year) and include advanced conductors as a technology eligible for the incentive.
- **Congress**
 - **Tax Credit**
 - Long term priority. Establish a tax credit (either a stand-alone or a plus up for a broader transmission ITC) for reconductoring existing transmission corridors with advanced conductors.
 - **Energy Efficiency**
 - Mandate that DOE establish an efficiency/performance standard for overhead conductors by a date certain (e.g., within 2 years).