



Reconductoring Existing Wires for Infrastructure Reliability and Expansion (REWIRE) Act

Introduced by: Senators Peter Welch (D-Vt.); Dave McCormick (R-Pa.)

Background: Our electric grid is under immense pressure. Forecasts suggest that—after two decades of stagnation—U.S. electricity demand could increase by as much as [5.7%](#) through 2030, a level of growth not seen since the 1960s. Meeting this demand will require historic investments in the electric grid, from power generation to transmission. While new transmission is essential to meeting rising demand and replacing aging infrastructure in the long run, transmission utilities must also pursue near-term solutions to increase capacity today. Failure to do so threatens the reliability of the grid, stymies economic growth, and saddles consumers with higher energy costs.

No matter how electricity is produced, it must travel through the transmission system to meet its destination. The Department of Energy's National Transmission Planning Study estimates the U.S. will need to build [nearly 5,000 miles](#) of new high-capacity transmission lines per year to meet growing demand. Yet, in 2024, only 322 miles of new high-voltage transmission lines were completed. While these hurdles persist, there are ways to improve existing transmission lines to make them more efficient, increase capacity, and reduce congestion, all while reducing regulatory barriers and red tape.

Reconductoring: Upgrading existing transmission lines with more efficient technology (referred to as “reconductoring”) is a near-term solution to increase grid capacity. Research has shown that reconductoring can more than double transmission capacity, supporting load growth of [up to 110%](#) and reducing line losses by [up to 30%](#). By operating within existing rights-of-way, these projects are often able to avoid the lengthy permitting process and can be implemented [within 18-36 months](#). Reconductoring is also cost-effective, with projects typically [75% less expensive](#) than building new transmission lines. Additionally, by decreasing congestion and enabling the interconnection of inexpensive energy resources, reconductoring could reduce system-wide costs by \$85 billion by 2035 and \$180 billion by 2050.

Legislation: The bipartisan *REWIRE Act* would modernize the electric grid and meet America's growing energy demand by advancing reconductoring. Specifically, the legislation would:

- **Eliminate permitting delays** by creating a categorical exclusion under the National Environmental Policy Act (NEPA) for projects to increase the capacity of the grid, including reconductoring with advanced conductors, deploying grid-enhancing technologies (GETs), and deploying energy storage.
- **Incentivize the adoption of advanced transmission conductors** by directing the Federal Energy Regulatory Commission (FERC) to improve the return on equity for reconductoring projects.
- **Support state-level grid planning** by allowing state energy offices to use DOE's State Energy Program funds to conduct feasibility studies reconductoring and GETs projects.
- **Foster innovation** by establishing regional collaboratives between DOE, the National Laboratories, and universities to evaluate the performance of the electric grid and identify opportunities high-impact advanced conductor and GETs deployment.
- **Build technical expertise** by directing DOE to provide technical assistance to transmission developers and establish a clearinghouse of advanced transmission technology applications, case studies, and best practices.

Supporting Organizations: The *REWIRE Act* is supported by over 20 clean energy industry leaders, including American Clean Power (ACP), Grid Action, Natural Resources Defense Council (NRDC), Siemens, The Nature Conservancy, and the Vermont Electric Power Company (VELCO). Read the full list [here](#).