

Expanding and Modernizing Transmission Infrastructure to Facilitate Interstate Commerce, Lower Costs, and Drive Growth

Reliability and Resilience

Transmission infrastructure allows electricity that would otherwise go unused to serve customers located at distant population centers. This enhances reliability by increasing access to on-demand power and improves resilience by offsetting lost generation resulting from storms, fires, and other unanticipated events. Interregional transmission networks provide the most flexibility by allowing grid operators to pull generation from multiple resources across a wide geographic footprint. This can obviate the need to overbuild generation capacity to meet local peak demand.

Affordability and Economic Growth

Interregional transmission infrastructure can provide access to the lowest cost electricity regardless of where it is generated, putting downward pressure on consumer costs. According to the U.S. Department of Energy's National Renewable Energy Laboratory, increasing interregional transmission capacity could save consumers up to \$47 billion per year. The economic benefits are not limited only to consumer savings. The same DOE study found that interregional transmission investments return more than \$2.50 for every dollar invested. A similar study from the Midcontinent Independent System Operator (MISO) found that its proposed regional transmission infrastructure portfolio will create between \$12.1 billion to \$52.6 billion in net economic benefits over the next 20 to 40 years.

Efficiency and Clean Energy

Greater transmission infrastructure investment will enable grid operators to deliver power from remote areas with high generation capacity to energy-hungry markets. Doing so provides a smoother glidepath to retire less efficient, higher emitting facilities, while facilitating the build-out of the nation's vast utility-scale clean energy resources. Transmission infrastructure investment provides the quickest route to a cleaner, modern, and more efficient power sector while enhancing reliability.

Obstacles to a Modern Transmission Network

Byzantine Planning Protocols

- Interregional and Regional Planning: Currently, a project that spans RTO regions must pass a "triple hurdle" test consisting of each RTO's different metrics and then a third jointly agreed-upon test with different metrics altogether. Intra-regional transmission is planned in separate silos for reliability, economics, and applicable public policy, resulting in unnecessary delay, duplication, and wasted resources.

State, Federal, and Local Impediments to Permitting and Siting

- States: States have primary siting authority over transmission facilities, meaning large transmission projects that cross multiple states require the approval of each state the project crosses. This presents a significant impediment, as states are often reluctant to allow projects to cross over and through their borders without any direct benefits to the state or its municipalities. Congress attempted to address this challenge legislatively by providing the Department of Energy (DOE) and the Federal Energy Regulatory Commission (FERC) with limited federal backstop siting authority. However, multiple court rulings have rendered those provisions mostly useless.
- Federal Permitting: Nearly all interstate transmission projects – whether on state or federal land – require an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). This is a long and arduous process. Project developers also must successfully dispose of any litigation challenging the veracity of the EIS. Siting transmission facilities solely on federal land has its own challenges, often requiring sign-off from as many as nine federal agencies. Currently, all nine agencies operate under a Memorandum of Understanding that designates DOE as the lead agency for siting lines crossing through areas administered by one or more federal agencies.
- Landowners and NIMBY-ism: Many transmission projects cross over thousands of acres of privately-owned land. Any landowner can object to granting a transmission project developer an easement or "right-of-way" through their land. If a project sponsor is unable to negotiate the right to use private land to construct a planned transmission project, they can seek eminent domain under state law (i.e., a legal right to use private land for a public benefit), which can lead to years of litigation.

Lack of Workable Cost Allocation Methodologies

- Cost Allocation; Determining who should pay for multi-state or regional transmission facilities – is also highly contentious. Cost allocation relies on a “beneficiary pays” principle in which costs are borne by those who caused the build-out and those who would enjoy the project’s economic or reliability benefits. However, as utility models and electricity markets evolved, larger, regional transmission projects became necessary to move power across longer distances and regions. With multiple stakeholders, states, and political views, cost allocation became a more complex process, often delaying the build-out of needed transmission infrastructure.

CRES Forum Policy Recommendations

- **Transmission policy and funding should facilitate reliability, resilience, and affordability.** Federal transmission planning, siting, permitting, and funding efforts should prioritize projects that deliver the greatest amount of tangible benefits to the greatest amount of communities considering the short- and long- term impacts on reliability, system resilience, and consumer costs. Regional and interregional transmission planning should utilize the best available projections to build infrastructure not only where it is needed currently and in the near-term, but also to account for projections of future generation resource deployments and retirements.
- **Transmission infrastructure costs must align with benefits.** Transmission project cost allocation should be guided by quantifiable and verifiable metrics and costs should only be allocated commensurate with benefits that can be determined using those metrics. A misalignment between costs and benefits will increase public and subnational government resistance to transmission projects, potentially preventing them altogether.
- **Streamline transmission infrastructure permitting processes.** Large, multi-state transmission projects that meet certain criteria should be afforded a highly streamlined federal permitting process under NEPA and other federal requirements. Several case studies show that state-level siting issues and lengthy and duplicative federal permitting and siting laws are among the largest impediments to increased transmission infrastructure deployment.
- **Revisit federal siting authorities.** Congress should grant DOE or FERC primacy in interstate transmission infrastructure project siting, akin to the authority FERC has to site interstate natural gas pipelines. This authority should be limited in a way that requires FERC to site transmission lines in a manner that better accounts for landowner and state concerns. Efforts should also be made to incentivize contiguous states to work together to address project-related issues.
- **Provide federal financial incentives for needed transmission projects.** Beneficial transmission projects should be eligible for financial assistance, including projects that: further measurable regional or interregional economic, energy, congestion, or reliability needs; are more difficult to site due to size and/or multiple state crossings; utilize undergrounding and co-location along existing rights of way (e.g., highways, rail, transmission, fiber, etc.); repurpose existing transmission lines previously used by coal-fired power plants or similar facilities; or take creative measures to mitigate or offset landowner concerns (e.g., laying cable for broadband along the right-of-way, etc.).
- **Utilize advanced transmission technology alternatives.** All regional or interregional transmission planning processes should evaluate the efficacy of advanced transmission technologies as alternatives to building new lines. In certain circumstances, improving existing transmission lines can satisfy the same needs as building an entirely new transmission line. Integrating new technologies in place of building new lines can often lower project costs. Further, assessing each new project for a less disruptive alternative will provide greater confidence to state, municipal, landowner, and other stakeholders that tools like eminent domain and streamlined permitting and siting practices are not being used arbitrarily and unnecessarily.