

ISSUE BRIEF June 2021

Electric Transmission Policies



Summary

The Federal Energy Regulatory Commission (FERC or Commission) administers the Federal Power Act (FPA), the law governing the bulk transmission system. Amendments made to the FPA by the Energy Policy Act of 2005 (EPAct05) were intended to promote transmission development that would reduce power costs, but the results have been disappointing. For its part, FERC has attempted to facilitate appropriate transmission planning and development through a series of orders aimed at addressing regional and interregional transmission planning and cost allocation, integration of intermittent generation into the bulk electric grid, and applicability of open season and open access rules to merchant transmission projects and transmission built to support specific generation projects.

While FERC regulates electric transmission rates and facilities (although not their siting and construction), state and local governments generally regulate the electric distribution system (the hundreds of thousands of miles of lower-voltage lines that provide power to homes and businesses) and the electric utilities that own and operate these facilities. This division of authority over the electric grid can create regulatory tension between states/localities and the federal government, especially as the federal government seeks to promote new technologies, such as smart grids and distributed energy resources, and to expand its authority over electric system reliability.

The American Public Power Association (APPA) believes that new bulk transmission facilities are needed. However, siting constraints, planning inefficiencies, and cost allocation (who pays) are major impediments to getting new beneficial transmission facilities built. Even in regions where significant transmission investment is occurring, the planning process does not always ensure that the most beneficial and cost-effective projects are identified. One problem is that stakeholders often have limited opportunity to participate in the planning process for many new projects to ensure that customers will benefit. FERC must also be diligent in adopting and enforcing policies ensuring that transmission costs paid by consumers are just and reasonable, as required by the FPA. APPA also believes that regulation of the vast and enormously complex distribution systems owned and operated by close to 3,000 utilities nationwide should continue to reside with state and local governments.

Background

Once electricity is generated, it typically travels over high-voltage bulk power transmission lines from the generating unit to the area where it will be consumed. The electric transmission network in the U.S. is organized into three “interconnections”—very large bulk power transmission grids that operate in sync and that must be carefully coordinated at every moment to prevent blackouts. The three are the Eastern Interconnection (covering the eastern two-thirds of the U.S. and Canada), Western Interconnection (covering the western U.S. and Canada), and Electric Reliability Council of Texas (ERCOT, covering most, but not all, of Texas). These interconnections set electrical boundaries. Electrons flow freely within them, but do not flow freely between them. There are a few places where the interconnections do connect with each other, but power flows at these points are carefully controlled. FERC is the regulatory agency tasked with overseeing the interstate transmission grid, using its authority under the FPA.



Because the ERCOT interconnection in Texas is wholly intrastate, FERC does not regulate the bulk transmission lines in ERCOT; rather, the Public Utility Commission of Texas provides that oversight.

Electricity must be produced and consumed in real time. While energy storage technology continues to improve, there are still economic and technical barriers to storing significant amounts of electricity for long durations. As such, most electricity generation and consumption must be balanced continuously or blackouts can result. Once electrons flow from the generating unit to the bulk power grid, their path generally cannot be dictated. Electrons follow the path of “least impedance,” meaning they will go where their movement meets the least resistance. The path of least impedance is determined on an instantaneous basis by the laws of physics and a complex interplay of the capacity of transmission lines to move electrons, the location of the generation, and the amount of electricity consumed by homes, factories, and businesses located at different points along the grid at that particular moment.

Specific electrons cannot be delivered to a specific place on the interconnected grid. For example, if Utility “A” buys power from the owner of Generator “B,” Generator B will deliver the power to the point where the generator’s plant connects to the grid and Utility A will receive the power it needs from a different point on the grid. The electrons that Utility A uses to provide power to end-use customers are likely a mix of electrons from Generator B and many other generators, all using different fuels and technologies. However, Utility A will still receive power and Generator B will still be paid. Problems with the transmission wires or multiple generator outages would impede the ability of Utility A to receive electricity, even if Generator B were operating smoothly. Thus, a regional transmission grid is like an ecosystem; everyone who uses it is affected by everyone else’s actions (or lack of actions).

Consumers do not receive power directly from the transmission system. Bulk power transmission facilities transmit electricity to local electric distribution systems. Just as cars traveling on the interstate highway system need to exit and travel on a system of smaller roads to reach their destinations, lower voltage electric distribution systems interconnect with the bulk power transmission systems in their regions to deliver electricity to end-use consumers—industry, homes, and businesses. The wires at the very top of utility poles in a residential neighborhood are distributing electricity to customers (distribution wires may also be located in underground conduits). Increasingly, electricity is being generated at the distribution level by distributed energy resources (such as rooftop solar panels), increasing two-way flows on distribution wires. As mentioned earlier, these distribution systems are regulated by state and local governments.

Congressional and FERC Action

The last time Congress enacted major changes to the FPA was in EPCRA05. Several changes to the law were made, including provisions for the granting of additional transmission rate incentives beyond the basic rate of return granted by FERC to all owners of bulk transmission lines. In implementing these provisions, FERC scrutinizes requests for transmission rate incentives to ensure they are needed to address project risks and challenges, thereby reducing the potential for the unnecessary awarding of such incentives, and the resultant additional costs to electric consumers. In March 2020, however, FERC proposed to modify its electric transmission incentives policies in several ways that could make it easier for FERC-regulated transmission companies to obtain lucrative add-ons to the base rate of return. APPA filed extensive comments opposing most aspects of the proposed rule changes. FERC subsequently issued a supplemental proposal that would sharply scale back one of its most problematic incentive rate mechanisms – the return bonus for participation in regional transmission organizations (RTOs) and independent system operators (ISOs). FERC’s proposed transmission incentive rule changes remain pending before the agency.

Another important feature of EPCRA05 was the addition of section 217(b)(4) to the FPA, which requires FERC to facilitate transmission planning that meets the reasonable needs of electric utilities serving retail customers.



EPAAct05 also instituted new federal backstop siting authority that would have allowed FERC to step in under certain circumstances to site transmission lines if states did not act. FERC can use this authority only in corridors established by the Department of Energy (DOE) based on areas of congestion in the bulk transmission grid. Attempts in Congress have been made to repeal this provision since 2005, but they have failed. However, legal decisions from the U.S. Courts of Appeal for the Fourth and Ninth Circuits have rendered this authority of little practical use.

Since the enactment of EPAAct05, FERC has promulgated a number of rules intended to promote beneficial transmission development. Most notably, the Commission issued Order No. 1000 in 2011, which required transmission owners to participate in regional and interregional transmission planning processes with cost allocation rules for certain regionally planned projects. Regional planning processes are supposed to consider transmission needs driven by state and federal public policy requirements and allow for stakeholder participation in planning. Order No. 1000 also included provisions designed to allow non-incumbent transmission providers to compete for the right to build new transmission projects. However, industry participants, including public power utilities, have increasingly raised concerns about the implementation of Order No. 1000, citing the number of projects that are planned under exceptions to the regional planning requirements, a frequent lack of meaningful stakeholder participation in the planning process, the slow pace of interregional transmission development, and questions about the effectiveness of competitive transmission development under Order No. 1000. FERC convened a technical conference in June 2016 to consider several issues related to transmission development in the wake of Order No. 1000, but it has yet to take any specific action based on that conference. FERC Chairman Richard Glick, however, has indicated that he plans to make transmission policy a priority, and it is likely that the regional and interregional transmission planning processes, the policies for interconnecting generators to the transmission system, and the allocation of the costs for new transmission facilities are all issues that FERC will re-examine in the near future.

Another perennially important FERC policy issue is the Commission's approach to setting the allowed return on equity (ROE) included in cost-based electric transmission rates. Unfortunately, the Commission's policies for setting the base ROE for transmission assets have been in a state of flux for several years. The Commission issued a notice of inquiry in March 2019 soliciting industry comments on its current policies for setting the base ROE included in transmission rates. In the most recent orders establishing the ROE to be used in setting rates for transmission owners in the Midcontinent Independent System Operator region, FERC announced further changes to its ROE policy, although it remains to be seen whether this will be the final word on the issue.

Congressional Democrats and the Biden administration see building significant amounts of new transmission as pivotal to expanding the use of renewable generation and achieving their climate goals. President Biden's infrastructure proposal, the American Jobs Plan, and fiscal year (FY) 2022 budget request included the creation of an investment tax credit (ITC) for high-voltage transmission lines. Similarly, in May, Senator Martin Heinrich (D-NM) and Representatives Steven Horsford (D-NV) and Susie Lee (D-NV) introduced the Electric Power Infrastructure Improvement Act (S. 1016/H.R. 2406) to create an ITC for high-voltage transmission facilities that deliver power produced offshore or in a rural area.

Democratic members of the House Energy & Commerce Committee also included several provisions to promote new transmission and expand FERC's authority to site transmission in H.R. 1512, the Climate Leadership and Environmental Action for our Nation's (CLEAN) Future Act, which was introduced in March 2021. Specifically, section 213 of the CLEAN Future Act would revise and strengthen FERC's backstop siting authority, addressing the previous legal challenges that prevented its use and would allow DOE to designate priority transmission corridors not only to reduce congestion, but also to improve the integration of renewable energy resources. Additionally, the CLEAN Future Act would require FERC to convene technical conferences to evaluate improvements to the regional transmission planning process, established under Order No. 1000, and to consider developing a formal interregional transmission planning process. Following these technical conferences, FERC would be required to issue a rule updating the regional planning process and a rule requiring transmission providers engage in a formalized interregional transmission planning process.



The main policy areas involving transmission are:

Siting

States have a major role in siting new transmission. Public opposition to the siting of new lines is the most significant hurdle to getting necessary transmission built. On federal lands, the many approvals needed from different federal entities can also create very substantial delays. Because court decisions have undercut the federal government's limited backstop authority to site transmission, state opposition can prevent the development of beneficial transmission projects.

Rising Transmission Costs

In some regions, particularly those in which RTOs and ISOs supervise transmission system operation and planning, transmission costs have risen rapidly over the past several years, imposing a significant burden on transmission customers, including many public power utilities. While there are legitimate reasons for many of these costs, such as accommodating new renewable generation and upgrading aging infrastructure, APPA believes that FERC must be diligent in adopting and enforcing policies that ensure transmission rates are reasonable. FERC should ensure, for example, that proposed transmission projects receive adequate scrutiny in regional transmission planning processes and that the authorized equity returns included in cost-based transmission rates are not excessive. Incentives must be carefully designed to encourage beneficial transmission investment and should not be greater than needed to achieve the desired result.

Cost Allocation

Who pays for a new transmission line also is a very difficult issue, as there are often benefits to bringing transmission lines onto the grid that extend beyond the immediate beneficiaries. This is because the grid is like a large machine, which in some cases can often be improved by making small additions and improvements to one part. APPA believes that a plausible reason should exist to believe that the benefits received from a regionally allocated transmission project will be roughly commensurate with the costs to be assigned. Moreover, in allocating regional transmission costs, FERC should be sensitive to differences in state policies.

Joint Ownership

Some of the problems involved in regional planning, transmission cost, siting, and cost allocation could be resolved if new transmission lines were jointly owned, with some partial ownership by public power utilities where feasible. Joint ownership opportunities for public power utilities in new transmission projects can help ensure projects are in the best interest of consumers, can help keep costs affordable, and can bolster state and local support for projects. While there are areas of the country in which joint ownership is common, it is the exception rather than the rule in others, generally because of resistance by incumbent transmission owners. APPA believes FERC should use its authority under the FPA to encourage and promote the joint ownership of transmission systems in RTO and non-RTO regions.

Regional Planning

Transmission projects approved for regional cost allocation must be the result of a coordinated, open, and transparent regional planning process, as required by FERC's Order No. 1000. Such processes must identify: (a) the need for the proposed project; (b) the anticipated benefits of the proposed project; (c) the anticipated beneficiaries of the proposed project; and (d) the estimated cost of the project. FERC should also ensure the transmission needs and resource plans of load-serving entities with service obligations to retail customers are considered in regional planning processes, as section 217(b)(4) of the FPA requires.



Transmission for Renewables

Renewable generation sites are often located far from population centers, making new and longer transmission lines necessary to access that generation. However, because the wind does not always blow, and the sun does not always shine, other types of generation or demand-side resources must be available to balance out those intermittent resources—or else the lights could go out due to an imbalance of energy on the grid. This makes it even more important to plan regional transmission facilities based on the actual resource plans and needs of the load-serving entities in the region.

APPA Position

One of the most significant impediments to getting needed transmission built continues to be the siting of the lines. The EPCRA05 siting authorities were a major step forward (until they were undercut by subsequent court decisions), and should be supported, clarified, and protected from repeal. Further, to ease local and state opposition to siting transmission lines, as many regional electricity stakeholders as possible should be included in their planning and ownership, including public power, and regional transmission planning should focus on the resource plans of load-serving entities, as FPA section 217(b) (4) directed. APPA supports legislation to implement these requirements in existing regional and inter-regional transmission planning processes. Congress should also encourage and support joint ownership of transmission and eliminate financial barriers to such ownership, such as private-use restrictions on tax-exempt financing. In addition, APPA believes that the regulation of distribution systems should continue to reside exclusively with state and local governments.

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The American Public Power Association is the voice of not-for-profit, community-owned utilities that power 2,000 towns and cities nationwide. We represent public power before the federal government to protect the interests of the more than 49 million people that public power utilities serve, and the 93,000 people they employ. Our association advocates and advises on electricity policy, technology, trends, training, and operations. Our members strengthen their communities by providing superior service, engaging citizens, and instilling pride in community-owned power.