

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. Over the last two decades, 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 and the interconnection of new generators to the transmission grid. Prompted by a rapidly evolving generation resource mix and the need to ensure a reliable and resilient grid, FERC is currently considering significant changes to its rules governing transmission planning, cost allocation, and generator interconnection. Congress has also taken up electric transmission issues in recent legislation, and additional policy initiatives remain under consideration.

FERC regulates electric transmission rates and facilities (including rules governing the interconnection of generators to the transmission grid), and it also possesses authority to establish transmission planning rules. State and local governments, however, generally have authority over the siting and construction of transmission facilities, and they also 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 robust transmission development, the deployment of 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) agrees 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 electric generation and consumption must be balanced continuously,

or blackouts can result. Once electrons flow from the generating unit to the bulk power grid, their paths 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 could 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

Electric transmission policy issues are receiving significant attention from both Congress and FERC. The current focus on transmission arises against a backdrop of major transmission policy developments over the last 20 years, driven by federal legislation and FERC initiatives.

The Energy Policy Act of 2005 (EPA05) made several changes to the FPA, including adding a provision for the awarding of transmission rate incentives beyond the basic rate of return granted by FERC to all owners of bulk transmission lines. In implementing this rate incentive provision, FERC scrutinizes incentive requests 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. In a more positive development, 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 is also considering incentives to promote the deployment of “grid-enhancing technologies” that allow for more efficient use of existing transmission facilities. FERC’s proposed transmission incentive rule changes remain pending before the agency.

EPA05 also instituted new federal backstop siting authority that would allow FERC to step in under certain circumstances to site transmission lines if states did not act. FERC can use this authority only in certain transmission “corridors” established by the Department of Energy (DOE). While rulings by the U.S. Courts of Appeal for the Fourth and Ninth Circuits had rendered this authority of little practical use, the Infrastructure Investment and Jobs Act, signed into law in November 2021, modified the FPA in response to the court decisions and strengthened federal backstop siting authority. Specifically, the infrastructure law clarified that FERC may invoke backstop siting authority even where a state has denied siting approval for transmission facilities within a designated transmission corridor. The law also expanded the criteria that DOE may consider in designating transmission corridors to include enhancing renewable, low-emission, or emission-free energy, reducing electricity costs for consumers, and maximizing the use of existing federal rights-of-way. Another important feature of EPA05 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.

Beyond legislatively directed actions, FERC has promulgated a number of rules intended to promote beneficial transmission development and establish clear procedures for interconnecting new generators. 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.

Prompted by a number of concerns with existing transmission planning and generator interconnection processes—particularly that these procedures have not resulted in transmission needed to accommodate an evolving resource mix—FERC issued a wide-ranging advance notice of proposed rulemaking (ANOPR) in July 2021 soliciting comments on numerous aspects of its transmission planning, cost allocation, and generator interconnection rules. FERC also established a FERC-State task force on transmission issues in conjunction with the ANOPR proceeding. The task force includes all the FERC commissioners and commissioners from ten state public utility commissions. Key issues under consideration in the ANOPR proceeding include: (1) whether transmission planning should focus more on anticipated future generation, including growth in renewables; (2) whether the transmission planning and generator interconnection processes should be more closely coordinated; (3) how to improve interregional transmission planning; (4) potential changes to FERC’s rules for allocating the costs of transmission facilities; and (5) whether greater oversight and transparency are needed for transmission planning processes. FERC received hundreds of comments in response to the ANOPR, and FERC Chairman Richard Glick has said he would like FERC to issue proposed rule changes early in 2022.

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. In recent orders establishing the ROE to be used in setting rates for transmission owners in the Midcontinent Independent System Operator region, FERC sought to clarify 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 view building significant amounts of new transmission as pivotal to expanding the use of renewable generation and achieving their climate goals. In addition to the revisions to the federal backstop siting provisions of the FPA, the Infrastructure Investment and Jobs Act includes \$2.5 billion to fund a new DOE program that would allow the agency to serve as an anchor tenant for certain new or upgraded transmission lines.

The Build Back Better Act, which passed the U.S. House of Representatives in November 2021, included the creation of an investment tax credit (ITC) for high-voltage transmission lines. Similarly, in 2021, 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.

The main policy areas involving transmission are:

Regional Planning

FERC is considering potential changes to its rules governing regional and interregional transmission planning. APPA generally agrees that it is worthwhile to explore potential improvements in transmission planning, such as a greater emphasis on identifying anticipated future generation. Planning for anticipated generation, however, should not be overly speculative and should focus on generation that is likely to be added to the transmission system based on the resource plans of load serving entities (LSEs), consistent with the requirements of FPA section 217(b)(4). Any reforms adopted by FERC, moreover, should allow for regional flexibility that permits existing regional planning and differences to be taken into account. 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.

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 LSEs in the region. Transmission planning reforms must ensure a level playing field for all types of resources. Further, transmission planning processes should not be based on overly speculative assumptions about where renewable generation is likely to be built.

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. It is not yet clear how newly strengthened federal backstop authority will impact transmission project siting challenges.

Generator Interconnection

FERC has adopted rules to govern the process by which generators interconnect to the transmission system, including procedures to identify transmission system upgrades that a new generator may need to fund in order to interconnect. To a significant degree, the generator interconnection process is separate from the transmission planning process. The rapid evolution of the generation resource mix has strained FERC's existing generator interconnection framework in some regions, with prospective generators waiting lengthy periods in the interconnection "queue" as transmission providers seek to analyze proposed interconnections and determine the scope and cost of any transmission system upgrades needed to accommodate the new generation. The process is complicated by the submission of many speculative interconnection requests. APPA agrees that improvements to FERC's current generator interconnection rules may be appropriate, such as operating the transmission planning and generator interconnection processes in a more coordinated fashion. FERC, however, should not adopt a blanket move away from the current rule in RTO/ISO regions that generators bear cost responsibility for the transmission system upgrades required to accommodate their interconnection requests. APPA also supports policies to reduce speculative interconnection requests.

Cost Allocation

Who pays for a new transmission line also is a very difficult issue, as there may be benefits to bringing transmission lines onto the grid that are hard to quantify or that may 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. Disagreement can also arise over allocating the costs of facilities needed for generation to meet a particular state's policy choices, such as transmission for offshore wind facilities. 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.

Rising Transmission Costs

In some regions, particularly those in which RTOs and ISOs supervise transmission system operation and planning, transmis-

sion 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.

Joint Ownership

Some of the problems involved in regional planning, transmission cost, siting, and cost allocation could be mitigated 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.

APPA Position

Significant impediments to getting needed transmission built include siting challenges, planning process deficiencies, and disputes over how the cost of new facilities should be allocated among customers. To help address these concerns, as many regional electricity stakeholders as possible should be included in the planning and ownership of transmission lines, including public power utilities, and regional transmission planning should focus on the resource plans of LSEs, as FPA section 217(b)(4) directed. APPA supports legislative and regulatory efforts to implement these requirements in existing regional and interregional 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 96,000 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.