ENERGY

Promoting Cost-Effective Grid Modernization

Incumbent utilities are using state-granted rights of first refusal to block competitors' transmission lines.

BY JIM ROSSI

Over the past year, electricity customers have faced unprecedented increases in their monthly bills because of skyrocketing fuel costs. Often overlooked is the cost each customer pays for transmission, the bulk transport of energy from electrical power plants to distribution substations.

The cost of delivering energy comprises as much as 50% of retail energy bills for customers in some states, such as California. Utility spending on electricity delivery costs was 68% higher in 2020 than in 2010 (in constant 2020 dollars), reflecting the replacement costs for aging equipment and incremental investments in reliability, resilience, and grid security. With the growing use of low-carbon power generation, it is inevitable that grid infrastructure costs will rise further.

As regulators address grid modernization, they need to ensure that retail customers have cost-effective and reliable power. State regulators already routinely encourage utilities to select competitive sources of power supply, even where that energy is not produced by the incumbent utility. Similar efforts can play a role in promoting cost-effective new transmission projects.

In 2011 the Federal Energy Regulatory Commission (FERC) issued Order No. 1000 to increase regional transmission development. Since then, more than two dozen competitive transmission projects have been selected by regional grid planners. To date, these non-incumbent projects comprise a mere 3% of total investment in transmission. Nonetheless, competitive transmission projects have produced an estimated cost savings of 20% to 30%, according to a 2019 Brattle Group report. A FERC proposed rule on long-term transmission planning would require a 20-year transmission planning horizon, opening up even more future opportunities for new regional transmission projects.

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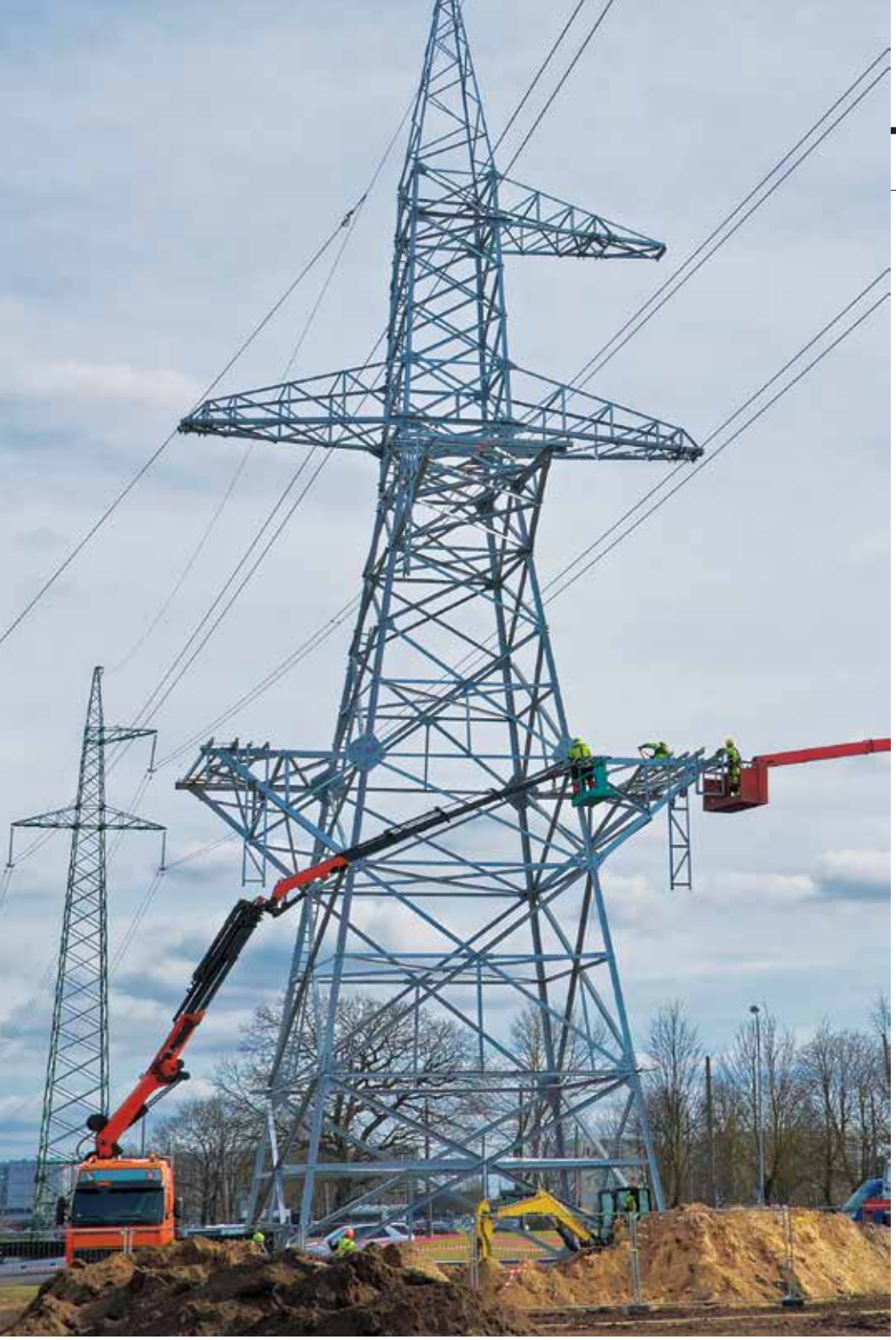
However, rights of first refusal (ROFRs)—privileges granted by states to incumbent utilities—threaten to obstruct competitive regional transmission projects and keep customers from realizing cost savings. This article discusses the need for new transmission, how new regional lines are selected, and recent state legislative developments that expand the monopoly grip that incumbent utilities in several states hold over the development of new transmission lines, specifically ROFRs over new transmission lines. States can promote cost-effective grid modernization by encouraging processes for the competitive bid selection for new transmission lines by regional planners. States can also preserve or enhance the authority of regulators to balance a broad range of factors in issuing permits and other regulatory approvals for new transmission projects.

THE NEED TO EXPAND THE TRANSMISSION GRID

There is a critical need for new transmission projects in the United States to help promote reliable and low-cost power supply options for customers. According to a 2022 Department of Energy (DOE) report, the United States "faces challenges as its electric grid infrastructure continues to age—studies from the past decade find that 70 percent of the grid's transmission lines and power transformers were over 25 years old." The report notes that the DOE has devoted billions of federal dollars to catalyzing nationwide efforts to upgrade the transmission grid to "enhance grid reliability and resilience and enable the cost-effective integration of clean energy."

The scale of private investment that will be required to meet this infrastructure challenge is daunting. Old power plants are being retired and new energy supply (including significant growth in renewable energy resources) is coming online. Americans are expected to increasingly rely on electricity for transportation. To enable the connections of wind and solar facilities to customer



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demand, high voltage transmission capacity will need to grow by more than twice 2020 levels, requiring trillions of dollars in new transmission investments by 2050, according to Princeton University's 2021 *Net-Zero America* report.

In many areas of the country, new transmission lines are required to move electricity across state lines, from generation sources (and promising generation locations) to urban customer demand centers. Wyoming, for example, has some of the most significant potential in the United States to develop wind energy, but without significant expansions in transmission capacity that energy cannot serve customer load in markets such as California and the Midwest.

Midwestern and southern states also face considerable challenges in preserving a reliable transmission grid to serve geographically dispersed customer load while also integrating new energy resources. The Midcontinent Independent System Operator (MISO) manages the grid in 15 states across the Midwest and portions of the southern United States. It decides annually what transmission should be built in its footprint. In 2022 MISO approved 18 new high-voltage transmission lines (concentrated primarily in the Great Lakes area), representing an estimated $10.3 billion investment in the grid. More than 90% of these projects will be built by incumbent utilities, rather than competitively bid, while the costs of new lines will be broadly allocated across the footprint of MISO North.

HOW ARE NEW TRANSMISSION LINES SELECTED?

Historically, state regulators approved new transmission lines by issuing permits for new projects and approving their cost recovery in bundled utility rates. Prior to the rise of regional electric power markets, state regulators focused on approving transmission line investments to encourage reliability in each individual utility's defined service area while minimizing adverse effects on retail customer rates.

Retirement of older, fossil-fueled power plants and increased renewable energy development throughout most of the United States present an urgent need for more new transmission lines. These are not the kinds of lines that were built half a century or more ago to serve that era's regulated, vertically integrated utilities. The organized wholesale power markets that provide energy for more than 60% of U.S. retail customers will require new regional and inter-regional transmission lines spanning multiple states. New transmission lines with a regional footprint magnify the challenges that many states already confront in approving these projects. Despite their many benefits, transmission lines require lateral property easements that span hundreds and sometimes even thousands of miles and remain highly unpopular with landowners. Everyone wants the electric grid to work and the lights to go on, but most people do not want high-voltage transmission lines near their homes and businesses or on the property they own.

Each state controls its own project approval process through

the siting and permitting of new lines, as well as the eminent domain permissions that typically accompany these regulatory decisions, so any regional transmission project requires the coordination of multiple states. As the need for transmission to serve the regional power grid has grown, many state regulators have faced expanded political pressures to veto new transmission projects. Landowners often oppose new lines, but so too do some customers who may not see how a new line in their state will produce tangible benefits for them. Incumbent utilities, too, sometimes oppose new transmission lines that threaten the utilities' market power. That can occur where transmission build-out expands competitive power supply options for retail customers or threatens to leave some of the utility's legacy power plant investments at a cost-disadvantage—or, at the extreme, stranded by more competitive power supply options.

Against this backdrop, FERC's open access transmission policies, along with its emphasis on reducing barriers to competitive sources of energy for organized regional markets (such as MISO), have helped to encourage building transmission lines with a focus on the regional market rather than the parochial interests of any particular utility. In Order No. 1000, FERC recognized the importance of planning transmission projects for regional markets in reducing barriers to competitive power supply markets and to develop cost-effective transmission to meet regional market needs. FERC's policies require regional transmission operators (RTOs) and other planning regions to select transmission lines not simply to promote reliability utility-by-utility, but to support a reliable, cost-effective grid to support access to competitive sources of energy in a regional interstate power supply market so that all utilities and consumers benefit. In Order No. 1000, FERC also required RTOs to hold competitive bidding processes for new regional transmission projects that were cost allocated among member utilities.

Even within an organized market like MISO, the new transmission projects selected by regional planners need to obtain state regulatory approvals. These regional transmission expansion projects still ultimately rely on various state regulators for permitting, which often includes the eminent domain authority necessary to build a project. State law thus remains critically important to the cost-effective development of new regional transmission lines.

Over the past decade, however, at the urging of in-state incumbent utilities, some state legislatures have enacted statutes that restrict the ability of regional markets to rely on competitive forces to discipline expansion costs for new transmission lines. In particular, several states have changed laws to give ROFRs to incumbent utilities. These preferences or exclusive rights to build new transmission lines foreclose the ability of non-incumbent projects selected by regional planners to obtain the permits that they need to proceed with new projects.

To take one example, a 2019 statute enacted by the Texas Legislature states that the ability to build, own, or operate new transmission lines "that directly [connect] with an existing utility facility ... may be granted only to the owner of that existing facility." Under this Texas ROFR law, a transmission line to serve retail customers may only be built by an incumbent utility. The statute prohibits Texas state regulators from granting a permit for a new line to a competitive transmission developer even if regional planners have selected it as the best option and if that project is the least-cost option for regulators. Minnesota enacted a similar statute in 2012, giving in-state utilities "the right to construct, own and maintain an electric transmission line that has been approved for construction" by a FERC-regulated transmission planning process.

These kinds of state ROFR laws pose a significant impediment to competitive transmission within MISO, hindering selection and construction of the regional transmission projects judged to provide the greatest overall value for customers. Within the Southwest Power Pool, an RTO whose operational footprint spans 14 states in the central United States (including part of Texas), similar transmission ROFR bills have been adopted by or proposed to several state legislatures. State legislation favoring incumbent utility transmission projects threatens to shut out any competitive proposals to build new transmission, particularly throughout the central United States.

WHY STATE ROFR LAWS ARE CONSTITUTIONALLY DUBIOUS

State laws that give incumbent utilities a ROFR to build new transmission lines, even where RTOs have selected someone else to build them, pose a barrier to interstate commerce and are constitutionally suspect. In 2015, then–FERC chairman Norman Bay issued a series of concurrences questioning the legality of state ROFRs under the dormant Commerce Clause of the U.S. Constitution. Commentators, too, have raised concerns about the constitutionality of state transmission ROFR laws.

Developers of competitive transmission projects have mounted several legal challenges against state transmission ROFR laws. Texas's transmission ROFR, for example, was challenged in federal court by a transmission developer that had been selected by MISO to construct a new Texas transmission line. The developer argued that the Texas transmission ROFR law violates the dormant Commerce Clause because it blocks a company without a physical presence in Texas from building transmission facilities and reserves development opportunities exclusively for in-state utilities. A trial court judge granted the state's motion to dismiss the complaint, concluding that the law "does not purport to regulate the transmission of electricity in interstate commerce; it regulates only the construction and operation of transmission lines and facilities within Texas."

However, in *NextEra Energy Capital Holdings, Inc. v. Lake*, 48 F.4th 306 (5th Cir 2022), a panel of the U.S. Court of Appeals for the Fifth Circuit reversed the trial court's dismissal, ruling that the Texas transmission ROFR statute discriminates on its face against interstate commerce. The panel's decision began: "Imagine if Texas—a state that prides itself on promoting free enterprise—passed a

law saying that only those with existing oil wells in the state could drill new wells. It would be hard to believe." Similar to oil wells, the decision reasoned, in the market for electricity transmission, vertically integrated incumbent utilities and transmission-only companies compete and offer the same essential service, namely building, operating, and owning transmission lines.

The court observed that a transmission line serving the regional market is an "instrumentality of interstate commerce" that is "much closer to the heartland of interstate commerce than the wine stores, dairies, or waste processing facilities that have faced dormant Commerce Clause scrutiny" elsewhere by the U.S. Supreme Court. The panel remanded the case to the trial court with instructions to consider whether the State of Texas can defend the law by showing that it has no other means of advancing a legitimate local purpose and to allow the plaintiff to pursue its claims that the law discriminates in purpose and effect.

The Fifth Circuit's decision to subject the Texas ROFR law to dormant Commerce Clause scrutiny is a significant precedent with nationwide implications, especially for states that are considering or that have adopted transmission ROFR laws. In reversing the trial court's dismissal of the constitutional challenge to Texas's ROFR law, the Fifth Circuit distinguished and rejected a previous Eighth Circuit decision that had upheld Minnesota's transmission ROFR law as a constitutionally permissible "residency" requirement. Most circuits, the Fifth Circuit observed, reject the notion that a law is nondiscriminatory because the local interests it favors are incorporated in another state.

The panel emphasized that the Texas law bans "new entrants outright." Beyond that, the court noted, the law is constitutionally dubious because of its discriminatory effects. A state ROFR law is unconstitutional if, in effect, it "prevents those without a presence in the state from ever entering the portions of the interstate transmission market" that cross into the state. While the Fifth Circuit only made a ruling about the Texas statute, its decision is an important precedent that raises serious questions about the constitutionality of other state transmission ROFR laws and is likely to invite future legal challenges to these laws.

HOW STATE ROFR LAWS HARM CUSTOMERS

State transmission ROFR laws reflect bad policy choices that thwart reliability in competitive regional power supply markets and, at bottom, are harmful to customers. Transmission ROFRs pose a barrier to a coordinated approach to grid expansion, making it more difficult to promote reliability and new technological approaches that enable the lowest-cost power supply options for customers.

As a practical matter, transmission ROFR laws discourage RTOs from fully considering evidence about the costs and benefits of new transmission line proposals by a non-incumbent transmission developer. In effect, ROFR laws expand incumbent utility control over expansion of the transmission grid, compounding the parochial pressures that some state and local regulators face to veto the most desirable transmission projects for the regional grid. In a 2021 *Energy Law Journal* article, Harvard law professor Ari Peskoe goes so far as to call this expansion of the incumbent utility monopoly over grid expansion a "utility transmission syndicate" and calls for greater federal oversight of state laws that expand incumbent utility monopolies over transmission, including ROFR laws.

In recent joint comments to FERC, the U.S. Department of Justice and the Federal Trade Commission opposed FERC's proposal in its pending long-term transmission planning rulemaking to partially reinstate a federal transmission ROFR for regional markets. According to these federal antitrust agencies, "Local, regional, and interregional transmission networks are physical networks, like interstate highways and interstate gas pipelines, that gain value through the efficiency of their interconnections." If state authorization of transmission lines favors incumbent monopolists in individual states, and proceeds at crossways with decisions by regional planners to select the transmission lines that promote reliable, low-cost grid expansion, grid reliability will suffer and the industry likely will not build the most efficient integrated regional or interregional transmission network.

Competition not only incentivizes developers to propose solutions with lower costs, it also drives developers to propose tighter cost containment mechanisms. The cost reductions from competitively developed transmission can provide important rate relief to residential and smaller commercial customers, especially as they face significant increases in the energy cost components of their monthly bills because of rising fuel costs.

These savings may be even more important for energy-intensive industrial and large commercial customers, who are particularly sensitive to excessive transmission costs. In a recent complaint to FERC, business and industrial customers estimate that lack of competitive bidding in MISO states with transmission ROFR laws will increase their transmission costs by 18%. As manufacturers save on their energy inputs, lower production costs are also passed through in lower retail product prices.

Non-utility companies have considerable expertise and experience in building transmission lines in a manner that translates into considerable savings for retail customers. In New York, the recently commissioned Empire State Line, a competitive transmission project developed and operated by NextEra, will enable 3,700 megawatts (MW) of renewable power throughout state, producing an estimated customer savings of $950 million and removing 7.4 million tons of carbon emissions. This line will add to other efforts by non-utility transmission developers to connect New York's grid to renewable sources, including Invenergy's Clean Path New York project (connecting offshore wind resources to New York City) and Transmission Developers' Champlain Hudson Power Express, a buried line that would connect to Hydro Quebec.

By its nature, when a state has adopted a ROFR, there is no competitive bidding for new line proposals in the state. When there is no alternative proposal to serve as a check on an incumbent's transmission line, a project is more likely to incur cost

overruns and pass them on to customers in higher rates. Incumbent utility projects benefit from a greater likelihood that state regulators determining the need for the line will bootstrap cost recovery of project expenditures in customer rates down the road, creating an artificial sense of comfort in cost recovery and, potentially, less scrutiny of project expenditures during construction. Cost overruns are a common problem for utility-sponsored power generation projects—many of which have been bailed out by regulator-approved rate increases—and that is no less the case with transmission. One utility-sponsored transmission project that has faced considerable cost overruns is a 115-kilovolt (kV) line in Kansas under construction by a company whose subsidiary, the state's largest incumbent electric utility, was selected to build it. The project was originally estimated to cost $5.9 million, but its latest cost estimate is $14.1 million, a 139% jump. Kansas has not yet adopted a transmission ROFR, but such legislation has been under consideration. If it were to be adopted, Kansas regulators and customers would lose an important safeguard on cost overruns provided by competitive transmission proposals.

In contrast, competition can help minimize the chance of project cost overruns and shift maximum risk from ratepayers to the transmission cost developer. Competition often promotes non-project cost concessions such as forgone allowance for funds used during construction, lower returns on equity, and reduced capital structure equity content. As an example, NextEra Energy maintains that its winning bid for the Wolf Creek–Blackberry transmission project awarded by the Southwest Power Pool, running from Coffey County, KS, to Jasper County, MO, will not only generate project cost savings of around $58 million but will also generate $11 million in additional savings by including non-project cost concessions.

Refusing to allow competitive bidding by national firms with expertise in transmission also does not open the door to the full range of available technological innovations in the development of new transmission infrastructure. Proposals by competitive transmission firms often propose new, more efficient technologies than those offered by incumbent utilities or those that are conventional to a particular region. To name just a few examples:

- In the PJM Artificial Island Project area of south New Jersey, LS Power, a competitive transmission company, proposed a solution that included high-voltage direct current lines that the incumbent had not considered. The idea saved hundreds of millions of dollars for customers, according to the 2019 Brattle report.
- Recently in PJM for New Jersey offshore wind, planners received proposals from 13 entities and 80 different projects. Many variations were proposed, including utilizing substations PJM had not considered that would provide more cost effectiveness. One proposal advanced a novel "backbone" offshore wind transmission network.
- In New York, four entities proposed 19 varying solutions for incorporating 3,000 MW of offshore wind into Long Island. The proposals offered a range of costs and solutions, including one novel idea to use battery storage to replace a transmission line and another to construct an offshore substation.

Historically, transmission has expanded ad hoc, resulting in a patchwork of transmission lines with pockets of congestion throughout the United States. This has caused serious problems for U.S. regions where transmission constraints are limiting access to new sources of power supply. Many of the incumbent utilities in MISO states that have adopted transmission ROFR laws face new pressures from competitive power suppliers because of the expansion of low-cost renewable resources. Without competitive transmission, these low-cost renewable power sources may be forced to operate below capacity and their energy may never even reach customers. Continued expansion of incumbent utility transmission ROFR laws takes an important option for development of new lines off the table and is certain to allow these kinds of regional pressure points on grid capacity to proliferate further.

COMPETITIVE SAFEGUARDS FOR COST-EFFECTIVE GRID MODERNIZATION

The expansion of state ROFR laws for transmission lines is especially disconcerting because it hobbles the ability of regulators to use competition as a check on excessive regional transmission expansion costs that must be borne by residents. State laws already give state regulators many effective tools to help them ensure that only the most reliable, lowest-cost transmission lines will proceed. To the extent that any state laws need to be changed, legislation must focus on encouraging competitive bidding for new RTO-approved transmission lines and ensuring more effective use of prudence review by regulators to protect customers.

In approaching power supply, state regulators commonly recognize the benefits of competitive bidding for new sources of power supply, an approach reinforced by the competitive wholesale power market regulated by FERC. Using a similar competitive bidding approach for the selection of new RTO-approved transmission lines, as many regional markets already do, can help to promote low-cost, reliable new transmission projects. If an incumbent utility can build transmission better and cheaper than anyone else, that would benefit consumers and the utility should be allowed to do so. But RTOs and states can and should allow for competitive bidding by transmission line developers, including national firms with experience and expertise in developing new transmission lines.

Opening up the bidding process for new RTO-approved transmission lines to non-incumbent developers would complement the historical role of state regulators in overseeing utilities to ensure that a monopolist does not become idle and is committed to providing the lowest-cost, reliable service for customers. The prospect of bids by national firms focused on the development of RTO-approved, competitive transmission projects would further

incentivize incumbent utilities to do an even better job of deploying state-of-the-art technologies for expansion of the grid at the lowest possible cost. And nothing about competitive bidding would preclude an RTO from selecting the incumbent utility to construct a new regional transmission project if the incumbent has demonstrated that its proposal offers the greatest overall value of all submitted bids.

In no way would opening up the process to competitive bidding for new transmission projects threaten grid reliability, nor would it leave retail customers vulnerable to transmission developers who lack a commitment and demonstrated capability to meet project deadlines and performance metrics. The non-incumbent developers that have been selected to build various transmission projects in states such as New York, New Jersey, and California have considerable experience in project design, development, and construction. Many of them already have a demonstrated track record of taking projects from the earliest stages of planning, through construction, and coming in on budget—and they have strong incentives to continue to perform and meet the milestones and performance metrics that regulators put into place for new projects. Once a non-incumbent transmission line is placed into operation, it is subject to the same operational and reliability requirements as existing RTO-controlled lines.

States concerned with new, unfamiliar developers constructing new transmission projects within their borders have many ways to help ensure that opening up the selection process will lead to qualified bidders who are committed to retaining reliability and quality. RTOs seeking proposals for new lines can coordinate with states to impose requirements for bidders, as well as project milestones and performance metrics in the bidding process. New York's independent system operator, for example, has worked with state regulators to steer bidding toward transmission projects that offer the kinds of technological and operational features that it needs to build a reliable and cost-effective clean energy grid throughout the state. Ensuring a level playing field to encourage competitive bids to build new regional transmission lines crossing a state will provide consumers with many tangible benefits from grid modernization at a low cost—and it will be far more likely to produce those benefits than expanding an incumbent monopoly's grip over any new transmission projects.

Some form of cost prudence review remains central to utility regulation in virtually every state. Cost prudence review of projects typically follows or works hand-in-hand with state regulator determinations of need for new projects. Like the need determination that accompanies a decision to permit a new transmission line, state regulators must ultimately consider a broad range of factors and strike a balance between the needs of the regional market and cost-effectiveness for customers when assessing the cost prudence of any new project.

Evaluating the prudence of the costs for competitive transmission line projects is no different than assessing the prudence of a long-term contract to purchase energy from a power plant that will be built by someone other than the incumbent utility. Electricity regulators in every state already have considerable experience making these kinds of prudence decisions in approving power purchase decisions from non-incumbent generators, and they could benefit from using competitive safeguards as tools for assessing the cost prudence of grid modernization. As with power generation from non-utility sources, there is nothing that precludes state regulators from doing this under existing laws in most states, whether the source of a new cost is a transmission line built by the incumbent utility itself or by another business—as long as state regulators are able to balance a broad range of factors in assessing the reasonableness of expenditures related to regional transmission lines.

CONCLUSION

State ROFR laws that insulate incumbent utilities from competition in the development of new transmission lines are not necessary to achieve any of the goals of cost-effective, reliable grid modernization. These laws are constitutionally dubious, anti-competitive, and—most importantly—harmful to consumers. They thwart state regulators from working with regional planners to enhance reliability and adopt the most cost-effective transmission line proposals.

State legislatures must preserve and enhance the authority of RTOs to ensure that new regional transmission lines are cost-effective. Rather than tightening the grip that incumbent monopolies have over transmission, state legislatures should promote cost-effective grid modernization by encouraging state regulators to work with RTOs to implement robust planning and competitive bidding processes for new regional transmission line projects. Adding project milestones and performance metrics to the regional transmission line bidding process can help to ensure that the best projects are selected to be developed and built in areas that need them, in a manner that is the most cost-effective for customers. Balancing a broad range of factors in need determinations and prudence review is also important to ensuring that the customers who stand to benefit from regional transmission projects do not suffer adverse rate impacts. Regulators have successfully used these approaches with power generation. It is time that they apply the same cost-effectiveness tools for proposals for new regional transmission lines. *R*

READINGS

- *Building a Better Grid Initiative to Update and Expand the Nation's Electric Transmission Grid to Support Resilience, Reliability, and Decarbonization*, issued by the U.S. Department of Energy. Federal Register 87: 2769–2773, January 19, 2022.
- *Cost Savings Offered by Competition in Electricity Transmission*, by Johannes Pfeifenberger, Judy Chang, Akarsh Sheilendranath, et al. Brattle Group, April 2019.
- "Is the Utility Transmission Syndicate Forever?" by Ari Peskoe. *Energy Law Journal* 42(1): 1–66 (2021).
- *Net-Zero America: Potential Pathways, Infrastructure, and Impacts*, by Eric Larson, Chris Greig, Jennifer Jenkins, et al. Princeton University, October 29, 2021.
- "When Do State Transmission Siting Laws Violate the Constitution?" by Alexandra B. Klass and Jim Rossi. *Electricity Journal* 28(8): 6–18 (2015).