UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Advanced Notice of Proposed Rulemaking Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection	))))	Docket No. RM21-17-000

COMMENTS OF THE STATE AGENCIES

On July 15, 2021, the Federal Energy Regulatory Commission (FERC or the Commission) published an Advanced Notice of Proposed Rulemaking[1] (Notice or ANOPR) in Docket No. RM21-17-000, referred to as "Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection."[2] The below-defined signatory state parties (together, the State Agencies) provide the following comments.

The Commission opened this rulemaking pursuant to its authority under Section 206 of the Federal Power Act (FPA) to consider the need for reforms to established orders of the Commission, including Order Nos. 890, 1000 and 2003, to improve the electric regional transmission planning, cost allocation, and generator interconnection processes. The ANOPR considers the need for various transmission- and interconnection-related reforms in light of the evolving resource mix and location of resources and anticipated needs on the system. The Commission is seeking comments on a wide variety of transmission issues including reforming planning processes to accommodate anticipated future generation needs, cost allocation of

[1] ANOPR, 170 FERC ¶ 61,204.

[2] The ANOPR can be accessed here: https://www.ferc.gov/media/e-1-rm21-17-000.

transmission facilities, potential changes to funding and cost recovery for interconnection related network upgrades, enhanced transmission oversight, consumer protection, and other related topics. In the ANOPR, the Commission does not put forth definite proposals from the Commission but explores the need for and appropriateness of potential reforms.[3]

The signatory State Agencies agree that significant upgrades are needed to the nation's transmission system to facilitate new generation resources—including those promoted through state policies, to better protect consumers and the public welfare, to enhance reliability and resilience, and to efficiently accommodate the transition to the electric power system of the future. The State Agencies also agree that this effort needs to begin now and that the first step is to address transmission tariff reform.

As detailed below, the State Agencies urge the Commission to:

- focus on the fundamental need to protect ratepayers from unjust and unreasonable costs and risks through increased transparency and cost oversight at every stage of the transmission planning process, and the establishment of an Independent Transmission Monitor,

- better plan for anticipated future system needs by breaking down unnecessary silos in the planning process and considering a broader range of project benefits,

[3] See, ANOPR at P 4: "has not predetermined that any specific proposal discussed herein shall or should be made or in what final form; rather, we seek comment from the public on these proposals and welcome commenters to offer additional or alternative proposals for consideration."

- enhance coordination and proactive engagement with the States while retaining appropriate flexibility for regional transmission operators and independent system operators (RTOs/ISOs),

- ensure that the burdens of new transmission infrastructure do not fall disproportionately on historically underserved and environmental justice communities and that the benefits are equitably shared,

- in view of the threat to the nation's infrastructure posed by climate change and extreme weather events, adopt reforms to improve the resiliency of the existing system, recognize improving resilience as a project benefit, and ensure that any new transmission infrastructure contributes to overall system resiliency,

- eliminate current policy barriers to interregional transmission planning and development and require separate processes to identify and evaluate beneficial interregional transmission that will more efficiently integrate new resources

- promote the more efficient use of existing transmission infrastructure and deployment of non-wires alternatives before building expensive new infrastructure,

- consider alternatives to the participant funding model that support active competition to reduce costs and protect consumers from undue risk, and

- couple tariff reforms with the broader regional governance reforms and increased transparency measures necessary to ensure their long-term success.

THE PARTIES

The Connecticut Attorney General (CTAG) is an elected Constitutional official and the chief legal officer of the State of Connecticut. The Connecticut Attorney General's responsibilities include intervening in various judicial and administrative proceedings to protect the interests of the citizens and natural resources of the State of Connecticut and in ensuring the enforcement of a variety of laws of the State of Connecticut, including Connecticut's Unfair Trade Practices Act and Antitrust Act, so as to promote the benefits of competition and to assure the protection of Connecticut's consumers from anti-competitive abuses. The Attorney General is an elected Constitutional official and the chief legal officer of the State of Connecticut. The CTAG's responsibilities include intervening in various judicial and administrative proceedings to protect the interest of the citizens and natural resources of the State of Connecticut and in ensuring the enforcement of a variety of laws of the State of Connecticut, including Connecticut's Unfair Trade Practices Act and Antitrust Act, so as to promote the benefits of competition and to assure the protection of Connecticut's consumers from anti-competitive abuses.[4]

The Connecticut Department of Energy and Environmental Protection (Connecticut Department) has statutory authority over the state's energy and environmental policies and

[4] The CTAG has previously initiated or intervened in a number of recent FERC proceedings addressing important policy issues affecting the electric industry and electric ratepayers in Connecticut and New England. These proceedings include FERC Docket Nos: AD18-7, *Grid Resilience in Regional Transmission Organizations and Independent System Operators*; RM18-1, *Grid Reliability and Resiliency Pricing*; RP16-301, *Iroquois Gas Transmission System, LP*; ER16-1023, *ISO New England, Inc., et al;* EL16-19, *ISO New England, Inc.;* CP16-21, *Tennessee Gas Pipeline Company, L.L.C.*; ER-13-185, *ISO New England, Inc.;* EL-13-033; *Environment Northeast, et al. v. Bangor Hydro-Electric Company, et al.;* ER09-197, *ISO New England, Inc.* Comments of Southern New England State Agencies, *ISO New England Inc. and New England Power Pool*; ER09-197, *ISO New England, Inc.; Inquiry Regarding the Commission's Electric Transmission Incentives Policy;* PL19-3.

for ensuring that the state has adequate and reliable energy resources.[5] The Connecticut Department is tasked with interacting with the regional transmission operator in response to state and regional energy needs and policies.

The Connecticut Public Utilities Regulatory Authority (CT PURA) is the state commission charged with regulating utilities and setting retail utility rates within Connecticut. The CT PURA, like the Commission, must balance the interests of utilities providing services with those of ratepayers who must pay a fair price – but no more – for those services. The CT PURA is authorized by General Statutes of Connecticut § 16-6a to participate in proceedings before federal agencies and courts on matters affecting utility services rendered or to be rendered in Connecticut.

The Connecticut Office of Consumer Counsel is the statutorily designated ratepayer advocate in all utility matters concerning the provision of electric, natural gas, water, and telecommunications services. The Office of Consumer Counsel is authorized by statute to intervene and appear in any federal or state judicial and administrative proceedings where the interests of utility ratepayers are implicated.

Kathleen Jennings is the duly elected Attorney General of the State of Delaware, and the chief legal officer for the State of Delaware, whose constitutional, common law, and statutory powers include initiating litigation or appearing on behalf of the State of Delaware in any court or tribunal in which the State of Delaware may be a party or have an interest, including matters to protect the safety, health, and economic well-being of the State of Delaware's residents.[6]

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[5] Conn. Gen. Stat. §§ 22a-2d; 16a-3a.

[6] *Darling Apartment Co. v. Springer*, 22 A.2d 397, 403 (Del. 1941); Del. Code Ann. tit. 29, § 2504.

Karl A. Racine is the independently elected Attorney General for the District of Columbia (DC Attorney General), and is charged with conducting all law business on behalf of the District of Columbia (the District).[7] By common law and statute, the DC Attorney General is responsible for upholding the public interest, including initiating and intervening in lawsuits brought in the District's name to uphold the public interest.[8] In exercising the aforementioned duties, the DC Attorney General has participated in a number of proceedings before this Commission to protect the health and economic welfare of the District's residents, and to advance the District's clean energy laws and policies.[9]

The Office of the Illinois Attorney General represents the People of the State of Illinois on public utility issues in proceedings before state and federal regulatory agencies and in state and federal courts. The Illinois Attorney General is directed by statute "to protect the rights and interests of the public in the provision of all elements of electric . . . service both during and after the transition to a competitive market, and . . . to ensure that the benefits of competition in the provision of electric . . . services to all consumers are attained." Further, the Illinois Attorney General is vested "with responsibility to initiate, enforce and defend all legal proceedings on matters relating to the provision, marketing, and sale of electric… service whenever the Attorney General determines that such action is necessary to promote or protect the rights and interests of all Illinois citizens, classes of customers, and users of electric … services."

[7] D.C. Code § 1-301.81(a)(1).

[8] *Id*.

[9] Examples of FERC proceedings in which the DC Attorney General has recently participated include: RM20-10-000, *Electric Transmission Policy Under Section 219 of the Federal Power Act*; PL18-1, *Certification of New Interstate Gas Facilities*; RM19-15, *Qualifying Facility Rates and Requirements*; and AD16-16, *Implementation Issues Under the Public Utility Regulatory Policy Act of 1978.*

The Attorney General of Maryland is the state's chief legal officer with general charge, supervision, and direction of the State's legal business. Md. Const. art. V, § 3(a)(2); Md. Code Ann., State Gov't § 6-106.1. Pursuant to that authority the Attorney General of Maryland has intervened in numerous proceedings before the Commission.

The Maryland Office of People's Counsel is an independent state agency that represents the interests of Maryland residential consumers in utility cases. Pursuant to Maryland Public Utilities Code Annotated, §2-205(b)(2019), the People's Counsel "may appear before any federal or state agency as necessary to protect the interests of residential…users [of gas, electricity or other regulated services]."

The Maine Office of the Public Advocate is the agency of the State of Maine directed by the Maine legislature to represent the interests of consumers of utility services, including participation on behalf of Maine consumers in federal regulatory proceedings.[10]

The Massachusetts Attorney General is the chief legal officer of the Commonwealth of Massachusetts and is authorized by both state common law and by statute to institute proceedings before state and federal courts, tribunals, and commissions as she may deem to be in the public interest. The Massachusetts Attorney General is further authorized expressly by statute to intervene on behalf of public utility ratepayers in proceedings before the Commission and has appeared frequently before the Commission.[11]

Dana Nessel is the duly elected and qualified Attorney General of the State of Michigan and holds such office by virtue of and pursuant to the provisions of the Const 1963, art 5, § 21,

[10] 35-A M.R.S.A. § 1702.

[11] MASS. GEN. LAWS ch. 12, § 11E.

and mandate of the qualified electorate of the State of Michigan, and she is head of the Department of Attorney General created by the Executive Organizations Act, 1965 PA 380, ch 3, MCL 16.150 *et seq*. The Michigan Attorney General has the right, by both statutory and common law, to intervene and appear on behalf of the People of the State of Michigan in any court or tribunal, in any cause or matter, civil or criminal, in which the People of the State of Michigan may be a party or interested.[12]

The Minnesota Attorney General is a public officer charged by common law and by statute with representing the State of Minnesota, the public interest, and Minnesota citizens, including with respect to electric or gas industry matters that affect electric or gas consumers in Minnesota. The Minnesota Attorney General is specifically authorized by Minnesota Statutes section 8.33 to intervene in federal matters to further the interests of small business and residential utility consumers.

The New Jersey Board of Public Utilities is an administrative agency, comprised of a five-member board of commissioners. It is charged under New Jersey law with the general supervision, regulation, and control over public utilities in the State, including electric utilities.[13]

The Oregon Attorney General is the chief law officer for the state and is the head of the Oregon Department of Justice.[14] The Department of Justice has control of all legal proceedings in which the state may be interested.[15]

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[12] MCL 14.28; *People v O'Hara,* 278 Mich 281; 270 NW2d 298 (1936); *Gremore v Peoples Community Hospital Authority,* 8 Mich App 56; 153 NW2d 377 (1967); *Attorney General v Liquor Control Comm'n,* 65 Mich App 88; 237 NW2d 196 (1975); *In re Certified Question,* 465 Mich 537, 543-545; 638 NW2d 409 (2002).

[13] N.J.S.A. §§ 48:2-1, 48:2-13, and 48:2-21.

[14] ORS 180.210

[15] ORS 180.220

The Pennsylvania Office of Consumer Advocate represents consumers' interests before the Pennsylvania Public Utility Commission and other state and federal agencies and courts that regulate the activities of Pennsylvania's public utilities involving electric utilities, natural gas utilities, telecommunications companies, water, and wastewater companies.[16] The PA-OCA is an independent state office administratively within the Pennsylvania Office of Attorney General.

The Rhode Island Attorney General is a public officer charged by common law and by statute with representing the State of Rhode Island, the public interest, and the people of the State. This includes representation with respect to energy matters affecting consumers in Rhode Island. In Rhode Island, "the Attorney General is entitled to act with a significant degree of autonomy, particularly since the Attorney General is a constitutional officer and is an independent official elected by the people of Rhode Island."[17] Under the common law, he is the representative of the public, obligated to protect the public interest and empowered to bring actions to redress grievances suffered by the public as a whole.[18] The Attorney General, through his designated Environmental Advocate, and pursuant to the Environmental Rights Act, R.I. Gen. Laws § 10-20-1, *et seq*., also has a separate statutory right and obligation to "take all possible action" to protect the right of each Rhode Islander to "the protection, preservation, and enhancement of air, water, land, and other natural resources located within the state." *See* R.I. Gen. Laws § 10-20-1 and § 10-20-3(d)(5).

[16] 71 P.S. § 309-1 et seq.

[17] *State v. Lead Indus., Ass'n, Inc.,* 951 A.2d 428, 474 (R.I. 2008).

[18] The Rhode Island Attorney General "'has a common law duty to protect the public interest.'" *Id.* at 471 (*quoting Newport Realty, Inc. v. Lynch*, 878 A.2d 1021, 1032 (R.I. 2005).

The Attorney General of Vermont is authorized to represent the state of Vermont in civil matters involving the state's interests, when, in his judgment, the interests of the state so require.[19]

BACKGROUND

I. Transmission Reform Is Urgently Needed.

The State Agencies agree that there have been, and will continue to be, significant changes in the nation's electric system that fully justify a review of transmission planning and tariff reforms. As Chairman Glick notes in his concurrence to the ANOPR:

> The generation resource mix is changing rapidly. Due to a myriad of factors—including improving economics, customer and corporate demand for clean energy, public utility commitments and integrated resource plans, as well as federal, state, and local public policies—renewable resources in particular are coming online at an unprecedented rate. As a result, the transmission needs of the electricity grid of the future are going to look very different than those of the electricity grid of the past.[20]

However, the current transmission planning processes, which have often worked well in the past for addressing discrete reliability concerns, pose a significant impediment to adapting to the rapidly changing resource environment. Interconnection queues are jammed, important potential benefits are missed to the detriment of ratepayers, there is a lack of

[19] Vt. Stat. Ann. tit. 3 ch.7.

[20] ANOPR P 1, Chairman Glick, concurring.

transparency, and there is little or no independent review or check on the efficiency of the overall process.

The existing processes are insufficient to meet urgent national policy goals – the foremost of which is the Biden Administration's goal to decarbonize the power sector by 2035.[21]

Many studies in recent years have concluded that substantial expansion of the nation's transmission grid will be necessary to decarbonize the country's electricity system. For example:

- The Massachusetts Institute of Technology has released two studies[22] indicating that a nationwide transmission build-out could materially lower the costs of reaching a zero-carbon grid and proper inter-state coordination could reduce the cost of zero-carbon energy by up to 46%.

- Princeton University recently released a study that charts a $2.5-trillion pathway to a zero-carbon future by 2050.[23] This study confirms that $350 billion in transmission investment will be needed to increase the size of the

[21] https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/27/fact-sheet-president-biden-takes-executive-actions-to-tackle-the-climate-crisis-at-home-and-abroad-create-jobs-and-restore-scientific-integrity-across-federal-government/.

[22] Paul Joskow, *Transmission Capacity Expansion is Needed to Decarbonize the Electricity Sector Efficiently*, Joule 4, at 1-3, January 15, 2020. Patrick R. Brown and Audun Botterud, *The Value of Inter-Regional Coordination and Transmission in Decarbonizing the US Electricity System*, Joule, December 11, 2020

[23] https://www.princeton.edu/news/2020/12/15/big-affordable-effort-needed-america-reach-net-zero-emissions-2050-princeton-study

country's high-voltage network by 60 percent by 2030 and as much as triple its current scale by 2050.[24]

- Another important study from the Department of Energy focused on interconnection "seams" shows that transmission upgrades permitting controlled transfer of power across regions could yield a nearly 3-times cost-benefit ratio in terms of sharing generation capacity and flexibility across regions.[25]

- A Wood Mackenzie report demonstrates that the largest single factor in achieving a 37-percent carbon-free grid by 2030 could come from $70 billion in transmission investment; a figure materially smaller that the estimate of $690 billion needed to replace fossil fuel power plants with zero carbon generation.[26]

- The National Renewable Energy Laboratory has concluded that wind, solar, and transmission development must approximately double in a high electrification scenario compared with business-as-usual load growth.[27]

[24] https://www.princeton.edu/news/2020/12/15/big-affordable-effort-needed-america-reach-net-zero-emissions-2050-princeton-study

[25] The Value of Increased HVDC Capacity Between Eastern and Western U.S. Grids: The Interconnections Seam Study: Preprint (nrel.gov)

[26] https://www.woodmac.com/our-expertise/focus/Power--Renewables/us-renewable-energy-policy-scenario-analysis/?utm_campaign=pandr&utm_medium=article&utm_source=gtm

[27] Brinkman, Gregory, Dominique Bain, Grant Buster, Caroline Draxl, Paritosh Das, Jonathan Ho, Eduardo Ibanez, et al. 2021. *The North American Renewable Integration Study: A U.S. Perspective.* Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-79224. https://www nrel.gov/docs/fy21osti/79224.pdf.

The need for interregional transmission in particular arises from the fact that most of the areas of high wind and solar potential in the United States are located in rural areas at distance from the urban areas of highest load. On land, 88% of the best wind and solar resources areas are located in 15 central states.[28] These concerns are also particularly acute in the context of the Biden Administration's goal of 30 gigawatts of offshore wind by 2035. This goal cannot be attained without major offshore transmission to access new resource areas and new onshore transmission to integrate these important clean energy resources. Current transmission planning processes are simply unable to do this efficiently.

Despite the pressing need for it, virtually no interregional transmission has been built in the past ten years.[29] Regionally planned projects have also declined in RTOs, and almost none have been built outside of RTOs during that time.[30] At year-end 2020, there were over 755 GW of generation projects in interconnection queues in the United States, 89% of which were solar or wind – including 61 GW of offshore wind.[31] The amount of renewable generation in the queues represents over half the capacity necessary to

[28] Gardiner, David. *Transmission Upgrades and Expansion: Keys to Meeting Large Customer Demand for Renewable Energy.* Wind Energy Foundation (January 2018), available at https://acore.org/transmission-upgrades-expansion-keys-to-meeting-large-customer-demand-for-renewable-energy/.

[29] Gavan, John C. and Gramlich, Rob, *A New State-Federal Cooperation Agenda for Regional and Interregional Transmission,* NRRI Insights, September 2021, available at https://pubs.naruc.org/pub/FF5D0E68-1866-DAAC-99FB-A31B360DC685.

[30] *Id*.

[31] Joseph Rand et al., *Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection As of the End of 2020*, Lawrence Berkeley National Laboratory, May 2021, available at https://eta-publications.lbl.gov/sites/default/files/queued_up_may_2021.pdf.

decarbonize the electric system.[32] Many of these projects are unable to go forward due to a lack of grid access.[33]

II. Contents of the ANOPR.

In light of the rapidly changing generation mix, as well as the critical necessity of a modified and expanded transmission system, the Commission "believe[s] it timely and appropriate to consider whether there should be changes in the regional transmission planning and cost allocation and generator interconnection processes and, if so, which changes are necessary to ensure that transmission rates remain just and reasonable and not unduly discriminatory or preferential and that reliability is maintained."[34]

On July 27, 2021, the Commission published the ANOPR seeking comment on topics including transmission planning and cost allocation and interconnection queue processes, as well as oversight of transmission infrastructure development.[35] Specifically, the Commission seeks comment on whether existing regional transmission planning and cost-allocation processes appropriately consider the transmission needs of anticipated future generation to drive study assumptions, or instead rely on less comprehensive information, such as existing interconnection requests with completed facilities studies, and whether such current planning criteria are appropriate or should be revised.[36]

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[32] Goldman School of Public Policy, *2035 Report*, June 2020, available at https://www.2035report.com/electricity/.

[33] Energy Systems Integration Group, *Transmission Planning for 100% Clean Electricity,* February 2021, available at https://www.esig.energy/wp-content/uploads/2021/02/Transmission-Planning-White-Paper.pdf.

[34] ANOPR P 4.

[35] ANOPR P 4.

[36] ANOPR P 5.

In addition, the Commission is interested in comments on whether criteria in addition to those related to reliability, economic, and public policy needs should be planned for and considered in the evaluation of benefits and used to determine cost allocation in the regional transmission planning process, and that these needs should be clear, credibly quantifiable and not speculative.

The Commission is also considering whether the costs of interconnection-related network upgrades should be either (1) directly assigned to the interconnection customer or (2) funded initially by the interconnection customer and reimbursed through transmission service process to ensure a more purposeful integration with the regional transmission planning and cost allocation processes.[37]

Finally, the Commission is asking for comment regarding whether the current approach to oversight of transmission investment adequately protects customers, particularly given the potentially significant and very costly investments proposed to meet the transmission needs driven by a changing resource mix, and, if customers are not adequately protected from excessive costs, which potential reforms may be required and are legally permissible to ensure just and reasonable rates.[38]

COMMENTS OF THE STATE AGENCIES

I. Consumer Protection Must Be a Core Guiding Principle of Any Transmission Reform.

[37] ANOPR P 5, fn 9.

[38] ANOPR P 5.

The State Agencies support the goal of improving the efficiency and flexibility of transmission tariffs. In so doing, the Commission must closely scrutinize the proposed transmission reforms in a manner consistent with its duty under the FPA to ensure that consumers are not charged excessive costs. *Xcel Energy Servs. Inc. v. FERC*, 815 F.3d 947, 952 (D.C. Cir. 2016); *see Jersey Cent. Power & Light Co. v. FERC*, 810 F.2d 1168, 1207 (D.C. Cir. 1987) ("The Commission stands as the watchdog providing 'a complete, permanent and effective bond of protection from excessive rates and charges.'" (Starr, J., concurring (quoting *Atl Ref. Co. v. Pub. Service Comm'n*, 360 U.S. 378, 388 (1959)))); *California ex rel. Lockyer v. FERC*, 383 F.3d 1006, 1017 (9th Cir. 2004) (noting the Act's "'primary purpose' of protecting consumers"); *City of Chicago v. FPC*, 458 F.2d 731, 751 (D.C. Cir. 1971) ("[T]he primary purpose of the Natural Gas Act is to protect consumers." (citing, *inter alia*, *City of Detroit v. FPC*, 230 F.2d 810, 815 (D.C. Cir. 1955))).

There is no doubt that there are clear consumer interests involved. Transmission is expensive. For example, in ISO-NE, in recent years New England customers have paid over $11 billion on reliability projects and an additional billion dollars in planned projects. In Illinois, the 375 mile-long Illinois Rivers Transmission Project was completed in December of 2020 at a cost of about $1.4 billion.[39] Moreover, reliability projects, which have received much recent investment, are not subject to stringent prudency or cost review by the RTOs/ISOs or FERC and stakeholders lack information to determine whether the projects will facilitate a cleaner generation mix. Beyond the immediate horizon, studies have suggested that hundreds of billions

[39] https://www.ameren.com/company/illinois.rivers.project. See also *Adams Cnty. Prop. Owners & Tenant Farmers v. Ill. Com. Comm'n*, 2015 IL App (4th) 130907 (2015).

of dollars of transmission upgrades will be needed in the coming decades.[40] If ratepayers are paying billions now and need to spend billions more to reach clean energy goals, then we cannot afford inefficient, non-transparent and non-competitive planning and procurement processes.

II. Regional Planning Processes Must Better Recognize and Support the Needs of Anticipated Future Electric Generation.

The Commission seeks comment as to whether existing regional planning procedures appropriately consider the needs of anticipated future generation or whether they rely instead on existing interconnection requests. In the State Agencies' experience, existing planning processes are insufficiently forward-looking and fail to identify more efficient, regional solutions that would better accommodate anticipated system needs. As Chairman Glick and Commissioner Clements noted:

> we believe that the *status quo* approach to planning and allocating the costs of transmission facilities may lead to an inefficient, piecemeal expansion of the transmission grid that would ultimately be far more expensive for customers than a more forward-looking, holistic approach that proactively plans for the transmission needs of the changing resource mix. A myopic transmission development process that leaves customers paying more than necessary to meet their transmission needs is not just and reasonable.[41]

The State Agencies note that Order No. 1000 instituted reforms to support development of more efficient transmission facilities including reforms requiring transmission owners to

[40] See, Comments of Wires, RM20-10, p.8.

[41] ANOPR P 2

participate in a regional planning process and reforms related to cost allocation, rights of first refusal, transparency, encourage competition and interregional planning. In the approximately ten years since the Commission adopted Order No. 1000 there have been several successes. However, even after implementation of Order No. 1000, transmission planning is mostly focused on identifying and addressing traditional reliability needs, usually over a limited horizon. Planners typically only consider generation that is "known and knowable," which is defined as existing or new generation that has signed contracts and a capacity supply obligation or other comparable indications that the project will proceed. In large measure, RTOs/ISOs' planning processes look to address potential reliability violations of North American Electric Reliability Corporation (NERC) standards and generally contemplate a 10-to-15-year evaluation horizon based on known and knowable resources assumptions.

The traditional planning model is no longer sufficient. Many states have aggressive clean energy and zero-carbon mandates that have already resulted in deployment of significant amounts of clean energy. Beyond the thousands of solar, energy efficiency, and other new zero-carbon resources installed across the country, hundreds of gigawatts of clean energy projects are currently in interconnection queues.[42] It is true that not all these projects will get built. But if even half of the 700 gigawatts of new projects are built, this will result in the need for significant amounts of new and smarter transmission.[43] This is particularly true because the current Administration is proposing up to 30 gigawatts of offshore wind by 2030.[44] Consumer and

[42] *See* Joseph Rand, *Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection as of the End of 2020*, Lawrence Berkeley National Laboratory, May 2021, http ://eta-publications.lbl.gov/sites/default/files/queued_up_may_2021.pdf.

[43] ANOPR P 4, Chairman Glick, concurring

[44] FACT SHEET: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs | The White House

corporate demand for clean energy, as well as utility commitments in their integrated resources plans, are driving an unprecedented growth in renewable energy which will result in a corresponding need for more and better transmission planning.

There is, therefore, a disconnect between the regional planners, who plan primarily for addressing reliability issues in response to a small subset of proposed new generation, and the significant investments in carbon-free generation occurring across the country, driven by changing economics, power company commitments, consumer preferences, and policy mandates. The problems arising out of this disconnect are exacerbated by the fact that it takes ten or more years to plan, design and develop a new transmission project whereas new clean generation can be planned and built in often less than half that time. Thus, it is vital to plan now to develop the transmission necessary to meet the generation needs in the next decade and beyond.[45] And those needs must include what states require to meet clean energy and climate change goals, not only what new generation happens to have a contract at present.

Numerous studies have considered the benefits from what the Commission is referring to as "anticipatory" planning. Anticipatory planning "requires a proactive approach to the planning of regional and interregional transmission system that explicitly takes into account the uncertainties about future growth in energy use, fuel costs, technological changes, technology cost, shifts in supply and demand patterns, environmental regulations, and other state, regional, and federal policy goals."[46] The potential ratepayer savings are enormous. One estimate shows

[45] See, Johannes Pfeifenberger and Judy Chang, *Well-Planned Electric Transmission Saves Customer Costs*, The Brattle Group, 2016 (Brattle Report) p.4

[46] *Id*. See also, https://cleanenergygrid.org/wp-content/uploads/2021/01/ACEG_Planning-for-the-Future1.pdf

savings from an anticipatory or proactive approach of up to $47 billion per year.[47] Beyond the direct financial benefits, there are important system advantages. Traditional planning is mostly focused, as noted above, on identifying reliability needs and evaluating developer interconnection requests. Under that approach, developers are incented to interconnect at the least expensive (or most easily sited) locations, not necessarily where interconnection would bring the greatest overall or long-term grid benefit. Further, planning based on reliability needs as they occur can lead to piecemeal solutions that functionally foreclose the development of transmission options that could offer lower costs and greater overall benefits to consumers. If transmission owners build out their systems in an incremental manner to address reliability issues as they arise, valuable and limited rights-of-way space will not be used efficiently. In effect, our transmission infrastructure will be locked into a sub-optimal design. In addition, anticipatory planning allows transmission planners and regulators to look beyond the traditional five- to ten-year planning horizon and consider solutions that provide long-term benefits and efficiencies.[48]

To facilitate more forward-looking planning processes that better anticipate future generation needs, the State Agencies urge the Commission to adopt the specific process reforms detailed below.

A. The Commission Should Establish a Process Rooted in States' and Other Key Stakeholders' Projections of Evolving Resource Needs.

[47] Brattle Report p. 17

[48] As noted by Chairman Glick and numerous commentators, including some RTOs such as ISO-NE and NYISO, to achieve a grid that will support a pathway to a de-carbonized future, it will be necessary to look further ahead in time and over a broader range of possible solutions than is typically done today

The State Agencies encourage the Commission to develop a forward-looking planning process through which States will work with transmission owners and regional planners to develop a set of resource mix scenarios at specified future dates—such as 10, 20, and 30 years into the future. Regional planners would then evaluate these scenarios for reliability impacts, overall costs and benefits, and likely development time, and identify portfolios of transmission solutions that could meet system needs. This information, in turn, would give State policy officials the data they need to determine which regional solutions to pursue. As part of this information exchange, the planning process should allow State Agencies and other stakeholders access to data that allows them to determine whether transmission investments are prudent, cost-effective, consistent with state siting requirements, least impactful to state preserved natural and cultural resources,[49] and facilitating the deployment of clean generation. Of course, planning processes should include appropriate public participation opportunities throughout and provide greater transparency

B. Regional Planning Processes Should Consider Each Project's Full Range of Benefits Instead of Unhelpfully Siloing Projects into Arbitrary Categories.

The Commission is seeking comment as to whether the regional transmission planning and cost allocation processes' consideration of transmission needs driven by reliability, economic considerations, and Public Policy are inappropriately siloed from one another, and, if

[49] See e.g., Maryland PSC Case No. 9471, Transource Maryland, LLC - Petition - for Adoption, Exhibit 1 *Settlement Agreement and Stipulation*, p. 2 (10/17/2019) (approved, MD PSC Order No. 89571 (06/20/2020)). In the Maryland proposed settlement Transource MD, the Department of Natural Resources' Power Plant Research Program and the Maryland Technical Staff agreed that " in accordance with PJM's Operating Agreement, PJM's Regional Transmission Expansion Plan ("RTEP") is to be developed to enable the transmission needs in the PJM Region to be met on an environmentally acceptable basis, and that in furtherance of these objectives, should take into consideration state statutory and regulatory requirements during the constructability analysis phase of its review of projects proposed for inclusion in the RTEP." *Id*., p. 6, para. 19. The document can be accessed at https://www.psc.state.md.us/search-results/?q=9471&x.x=22&x.y=9&search=all&search=case.

so, whether this influences the consideration of potential benefits of a regional transmission facility (and the associated beneficiaries for purposes of allocating the costs of such a facility).[50]

The State Agencies agree that planning processes "over-compartmentalize" transmission projects into reliability, economic efficiency, and public policy categories, which often are reviewed under separate criteria. In reality, most transmission projects offer multiple benefits within or across regions. Currently planners do not consider multiple sources of benefits, and interregional planning processes currently exclude multi-value projects from being considered in the region's evaluations. As a consequence, valuable opportunities are being lost solely due to the methods used for categorizing projects into different, and largely arbitrary, silos. Instead, planners should evaluate each project according to its full range of anticipated benefits. In New England for example, only "reliability" projects have been built in the last decade or so, even though many of those projects, which cost billions of dollars, could have been planned and designed to help integrate clean energy for the region. Those same projects helped to reduce transmission congestion for the region, thus in reality, they provided both reliability and economic benefits to the region and should have been considered multi-value projects. All future transmission projects should be considered and planned with an eye toward the region's overall needs to simultaneously maintain reliability while electrification takes effect, maintain low system congestion, and integrate significant amounts of clean energy resources.

C. Criteria for the Evaluation of Benefits of Transmission Projects Should Be Expanded Appropriately.

The Commission is seeking comment as to whether criteria in addition to those related to traditional reliability, economic, and public policy needs should be planned for and considered in

[50] ANOPR PP 5, 39.

the evaluation of benefits and used to determine cost allocation in the regional transmission planning process.[51] The State Agencies urge the Commission to adopt reforms to ensure that regional planners evaluate, to the extent feasible, a more comprehensive range of a project's benefits according to preestablished criteria that are clear, objective, and quantifiable.

Currently, both planners and policymakers do not consider the full range of ratepayer and system benefits that transmission investment can provide, thus materially understating the value of many such projects. Traditional benefits analysis focuses on production cost savings, which is an attractive metric because it is well-known and fairly easy to estimate according to established methodologies. However, it is a fiction that transmission can only provide one, limited set of benefits; and production cost analysis, in particular, ignores a number of potentially important benefits.

For example, in addition to the standard production cost elements, transmission projects can provide additional cost savings, particularly if they can help integrate clean energy resources that are needed to meet the region's needs as electrification begins to ramp up. In addition, the State Agencies urge the Commission to consider other criteria such as whether the proposed project will reduce energy transmission losses, reduce amounts and costs of operating reserves and other ancillary services, reduced costs of cycling of conventional power plants, and mitigation of reliability-must-run contracts. In addition, if effective proactive planning is employed, transmission projects, properly designed and sized can enable renewable energy generation that provides additional production cost benefits. Non-traditional benefits could also include access to lower-cost generation, capacity cost benefits from reduced peak energy losses,

[51] ANOPR PP 70-72.

and savings from reduced curtailments of clean energy resources paid for by State-sponsored contracts.

The State Agencies also urge the Commission to require regional planners to evaluate clear, credibly quantifiable and non-speculative system resilience benefits that might accrue from properly designed transmission projects. Indeed, regional planners should adopt project evaluation criteria to ensure that any new transmission infrastructure contributes to overall system resilience in a verifiable manner. Recent extreme weather events in the United States underscore the threat to the power system from climate change and its consequences.[52]

Numerous papers and technical reports have demonstrated the ways in which transmission infrastructure – especially interregional transmission lines – contribute to system resilience against extreme weather, as well as other threats such as fuel shortages, terrorism, and cyber-attacks.[53] These reports generally conclude that transmission increases resilience by providing greater geographic diversity of generation resources; more power import capability for a region experiencing weather events that impact generation within the region; and multiple pathways for power to flow to local distribution systems. However, these reports also conclude that a transmission system planned using only standard reliability and economic criteria will be

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[52] FERC and NERC Staff, *Outages and Curtailments During the Southwest Cold Weather Event of February 1-5, 2011: Causes and Recommendations*, (August 2011), available at: https://www ferc.gov/sites/default/files/2020-04/08-16-11-report.pdf; and FERC and NERC Staff, *The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018*, (July 2019), available at: https://www.nerc.com/pa/rrm/ea/Documents/South_Central_Cold_Weather_Event_FERC-NERC-Report_20190718.pdf.

[53] See for example, National Academies of Sciences, Engineering, and Medicine 2017. *Enhancing the Resilience of the Nation's Electricity System*. Washington, DC: The National Academies Press, available at https://doi.org/10.17226/24836; Chupka, Marc and Donohoo-Vallett, Pearl. *Recognizing the Role of Transmission in Electric System Resilience,* Brattle Group (May 2018), available at https://brattlefiles.blob.core.windows.net/files/13820_recognizing_the_role_of_transmission_in_electric_system_resilience.pdf; Goggin, Michael. *Transmission Makes the Power System Resilient to Extreme Weather.* Grid Strategies LLC (July 2021), available at https://acore.org/wp-content/uploads/2021/07/GS_Resilient-Transmission_proof.pdf.

insufficiently resilient. To address this shortcoming, FERC should require consideration of resilience in transmission planning; should approve a metric or metrics for estimating the value of increased resilience; and should include the value of increased resilience in the evaluation of benefits for new projects.

In addition, transmission planning should also consider the need to locate and construct new infrastructure to make it resilient against extreme weather. As one example of how this could be done, consider the siting of a new substation or new transmission line in a coastal area or near a major river. Planners could evaluate different routes or substation locations or configurations when planning the needed projects. If additional storm hardening of an old substation, or building a new substation in a more expensive, but safer location could prevent potential major outages in the event of severe storms or floods, the resilience benefits should be considered when planning the system of the future. Some states are in the midst of analyzing the potential risks associated with more severe weather patterns, including developing a better understanding of how those weather-related risks affect infrastructure such as transmission lines. This is an important consideration for transmission system planners; all future transmission projects should consider the weather-related risk to ensure that we minimize the long-term costs of maintaining our transmission system.

There is reason for caution. The expanded definition of benefits should not be designed to make undesirable projects look desirable. We need to ensure that all benefits are realistic and measurable and provide real value to ratepayers.

D. Equity and Environmental Justice Must Be Meaningfully Considered at Every Stage of the Planning Process.

Much of the nation's energy infrastructure has historically and systemically been sited and constructed in communities that are majority people of color and low-income. Residents in these areas experience the resulting negative health consequences from pollution and blight that impedes participation in day-to-day activities and healthy use of community spaces. Further, reliability and resilience are often worse in disadvantaged communities, though they can least afford the impacts of outages like a refrigerator of spoiled food. (e.g., Louisiana following the recent hurricane). In addition to racism and classism, another reason for the current inequities is the disproportionate ability and influence of well financed groups and individuals to intervene in processes to prevent projects from being constructed in their communities.

The energy transition that is just beginning and the subject of this ANOPR is the energy industry's chance to acknowledge and correct the historic discrimination caused by the infrastructure development approach used for the past hundred years. The shift to incorporate equity into this work requires intentionally delivering the clean, advanced, reliable, resilient, more distributed services that are foundational to the energy transition to families and businesses in disadvantaged communities. Further, the voices of representative members of these communities need to be elevated so their experiences and perspectives are an inherent part of the decision-making processes. The State Agencies urge the Commission to ensure that transmission planning reforms include an overt and express recognition of this historic inequity and measures to promote equity and environmental justice going forward.

The Commission's Office of Public Participation (OPP) is a key place to start. As the OPP begins its work, there are significant opportunities to incorporate equity into the FERC decision-making processes. The State Agencies offer the following ideas for the Commission's consideration:

- Invite representatives from disadvantaged communities to participate in FERC policy development proceedings and provide financial support including stipends to compensate community members for their time, expenses, technology, and availability of training on FERC basics. We can't expect residents from disadvantaged communities to participate for free while everyone else in the room is being compensated to be there.

- Incorporate the expertise that comes with life experience from community voices as key aspects of due diligence in considering the impact of a decision.

- Support building a bench and network of diverse voices in policy making to better understand and integrate the needs of and impacts on impacted communities. This includes supporting education, mentoring, and exposure to industry activities.

In addition to OPP, FERC can revise its strategic goals to incorporate equity measures more formally into how it does its work. Soliciting members of disadvantaged communities to join the Commission as employees and interns would serve to expose more citizens to FERC and how the decision-making process works. Opening the dialog to voices that have historically been missing will provide other ideas for meaningful engagement and input. Solidifying the Commission's intent to do this work and to continue to learn and adapt will be instructive to the industry.

E. The Commission Should Remove the Current Policy Barriers to Interregional Planning and Require Planning Processes that Focus on Identifying Beneficial Interregional Projects.

Development of interregional transmission is imperative to meet the future needs of the electric grid economically and reliably. The Commission is seeking comment on whether the fact

that "an interregional project must first be selected in each of the neighboring regions' regional planning processes before being selected in the interregional process…is impeding the selection and development" of valuable interregional projects.[54] The State Agencies point to the lack of interregional project development as strong evidence that existing planning processes fail to appropriately consider or value interregional projects, and urge the Commission to adopt reforms that result in beneficial interregional projects being planned and built. As one report by London Economics notes, "over the 1999–2017 time period, transmission investments within RTOs grew at a compound annual growth rate . . . of 14% . . . while interregional transmission investment projects. . . have been scarce."[55] London Economics found that "the paucity of interregional transmission investment is not due to a lack of possibilities," noting that that as much as $50–110 billion in interregional transmission investment will be needed through 2030.[56]

The State Agencies recommend that the Commission remove the noted "triple hurdle" approval process for interregional projects, specifically the need to have an interregional transmission project approved through two separate regional planning processes before the project begins an interregional evaluation. This requirement may put the interests of adjacent RTOs at odds, resulting in projects with overall benefits that well exceed costs never being considered in the interregional evaluation. For example, a project may provide relatively fewer benefits to one region than to their neighbor and therefore not be selected in the regional process even through the cumulative project benefits that well exceed the costs.

[54] ANOPR P 63.

[55] *Economic Considerations in the Matter of Electric Transmission Incentives*, London Economics, (July 1 2020) p. 18.

[56] *Id*.

Further, the RTO interregional planning processes required under Order No. 1000 to address the lack of interregional planning are not effective. Contrary to the Commission's requirement that RTOs in neighboring regions, "jointly identify and evaluate whether interregional transmission facilities are more efficient or cost effective than regional transmission facilities,"[57] most interregional transmission planning is merely reactive to the reliability needs internal to adjacent ISOs/RTOs. Current interregional planning rarely involves more than one or two meetings a year to exchange data about upcoming developments in each region. In effect, interregional project evaluation is often nothing more than evaluating whether a new project in an adjacent RTO will cause negative impact on one's own grid.

To make interregional planning more effective, the State Agencies recommend that the Commission elevate interregional planning by requiring RTOs to commit staff to work with planners in adjacent regions with the sole purpose of identifying and evaluating interregional projects, including potential High Voltage Direct Current (HVDC) solutions, that can address needs in both regions using the full set of potential benefits that are considered for regional projects described above. An annual report of these activities should be provided to the Commission and include the number of projects identified, the results of the cost/benefit evaluation overall and to each region, whether other regions have been or should be included to maximize the value of the project, barriers to development of the project(s), and next steps within each RTO. Extracting interregional planning from the regional process and arming planners with the requirement of identifying beneficial interregional projects without regard to regional barriers will help bring transparency to opportunities for interregional development.

[57] Order 1000, P 398.

In the alternative, the Commission could consider establishing or convening a national transmission planning entity that will work with the RTOs, state entities, and other stakeholders to develop a national transmission plan that focuses on attaining the benefits of coordinated, interregional transmission.[58] This work may be done within FERC, by the Department of Energy, or a newly established group.[59] This effort can build upon the prior efforts of DOE and others to capture the myriad of benefits, including cost savings, of taking a national view of transmission development.[60]

III. The Commission Should Promote Improvements to Existing Transmission Infrastructure and Innovative Technologies.

Consumers benefit from the widespread adoption of advanced transmission technologies through reduced costs and improved productivity and quality of electric service.[61] Advanced transmission technologies, also known as "grid-enhancing technologies" or GETs, improve transmission capacity or efficiency through adoption of upgraded technology and power management approaches that enhance the capability of the existing grid infrastructure. Examples of these technologies and management approaches include: dynamic line ratings, power flow control, storage-as-transmission, and topology optimization, among others.[62]

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[58] This concept is described in the Energy Systems Integration Group (ESIG) report Transmission Planning for 100% Clean Energy, available at: https://www.esig.energy/wp-content/uploads/2021/07/Transmission-Planning-Tech-Brief.pdf.

[59] To be clear, the State Agencies' recommendation to establish a national transmission planning entity should not be construed as support for an entity of this type to have jurisdiction over the siting or construction of transmission facilities as that authority is generally left to the states.

[60] *Id*. Also, The Value of Increased HVDC Capacity Between Eastern and Western U.S. Grids: The Interconnections Seam Study, National Renewable Energy Laboratory, available at: https://www.nrel.gov/docs/fy21osti/76850.pdf.

[61] Improving Transmission Operation with Advanced Technologies: A Review of Deployment Experience and Analysis of Incentives, The Brattle Group, June 24, 2019, p. 1. See Comments of WATTS Coalition and AEE, RM20-10.

[62] *Id*. at pp 1-2.

Compared to expensive new transmission upgrades, operations-focused technologies can be placed into service much faster than the ten years for a conventional major project and at a fraction of the cost. Many of these advanced technologies, dynamic line ratings for example, have already been demonstrated to be reliable and effective.[63] There are a number of important studies that uniformly demonstrate the economic benefits of improved operational efficiency from advanced technologies and especially from transmission topology control systems.[64] These studies strongly suggest that the benefits of broader deployment of these systems and applications can be achieved at a significantly lower cost than traditional poles-and-wires and, possibly more importantly, a much quicker installation.[65]

As some of the undersigned State Agencies stated in their prior comments in Docket PL19-03, although grid-enhancing technologies often cost a small fraction of a conventional transmission solution, they are not frequently deployed, either because they do not provide the same return on equity as the conventional solution or because they are viewed as unfamiliar or unproven.[66] Part of the problem in evaluating innovative technologies is that transmission operators are allowed to recover through rates the cost of capitol of assets, such as poles, wires, transformers, and other equipment, but generally not for other improvements to operational techniques and practices—such as the use of dynamic line ratings—that are in

[63] Wang, Warren and Pinter, Sarah. *Dynamic Line Rating Systems for Transmission Lines*. April 25, 2014 p. 36, available at https://www.smartgrid.gov/files/SGDP_Transmission_DLR_Topical_Report_04-25-14_FINAL.pdf; Marmillo, J, Mehraban, B, Murphy, S, and Pinney, N. *A Non-Contact Sensing Approach for the Measurement of Overhead Conductor Parameters and Dynamic Line Ratings*. CIGRE US National Committee 2017 Grid of the Future Symposium, Cleveland, OH, available at https://watttransmission.files.wordpress.com/2017/11/genscape-cigre-gotf-whitepaper-2017.pdf.

[64] *Improving Transmission Operation with Advanced Technologies: A Review of Deployment Experience and Analysis of Incentives*, The Brattle Group, June 24, 2019, pp. 1-2. See Comments of WATTS Coalition and AEE, RM20-10.

[65] *Id*.

[66] Comments of the Southern New England State Agencies, PL19-03, pp. 19-20

consumers' best interests but do not involve large, rate base additions and, so, do not offer substantial profit opportunities for transmission owners.

As a U.S. Department of Energy report states:

> [t]he U.S. currently lags behind other countries in the deployment of some advanced transmission technologies. . . . One of the variables is the difference in regulatory environments; the U.S. provides transmission owners little incentive to deliver more power over existing lines or to reduce transmission congestion."[67]

This ANOPR offers the opportunity for the Commission to take action to eliminate that outcome, which harms ratepayers and is not just and reasonable.

The State Agencies emphasize, however, that this is not an "either-or" situation. Advanced technologies and systems are not necessarily competing with the building of new transmission lines. It is more accurate to say that in most instances new transmission buildout and advanced technologies will complement each other.[68] Development of new transmission lines will be necessary in many instances, such as the development offshore wind, where there is a need to access new geographic areas with high renewable energy potential. Designing new lines in coordination with advanced technologies will provide materially greater capabilities and improve the cost effectiveness of the entire project.[69] This is particularly true in those areas with mature transmission systems. For instance, a new high-capacity transmission line bringing in

[67] US DOE, *Dynamic Line Ratings*, Report to Congress, p. iv, June 2019.

[68] *Improving Transmission Operation with Advanced Technologies: A Review of Deployment Experience and Analysis of Incentives*, The Brattle Group and Grid Strategies, LLC, June 24, 2019, pp. 1-2. See also, Comments of WATTS Coalition and AEE, RM20-10.

[69] *Improving Transmission Operation with Advanced Technologies: A Review of Deployment Experience and Analysis of Incentives*, The Brattle Group and Grid Strategies, LLC, June 24, 2019, pp. 1-2.

significant amounts of new wind power from some distance away may have its overall utility limited by existing lower-capacity local systems. New topological optimization systems or advanced line ratings systems could relieve power flows on the lower capacity system providing better overall project cost-benefit ratios.[70]

The Commission should reform transmission planning processes to better ensure that transmission providers act in the public interest by appropriately prioritizing the use of advanced technologies. Such reforms could include, for example, providing transmission owners with a percentage of savings from new technologies while reserving the majority of savings for customers. Other possibilities include tariff changes mandating competitive solicitations for transmission upgrades that expressly permit or even require consideration of non-wires alternatives and grid enhancing technologies or both.[71] Such a tariff change could include a requirement that planners identify what technologies were evaluated and, if not chosen to proceed, include a justification. An independent regional transmission monitor, if established, could then then review the report and its justifications independently (*see* discussion *infra,* Section IV).

IV. The Commission Should Establish an Independent Transmission Monitor.

The Commission is seeking "comment on whether, to improve oversight of transmission facility costs, it would be appropriate for the Commission to require that transmission providers.

[70] *Id*.

[71] A potentially more sophisticated alternative would be to co-optimize non-wires and grid enhancing approaches in a layered planning process. For example, assume an overtaxed transmission line that needs to be addressed in the near term. Planners could use the shared savings incentive to deploy a non-wires alternative to address the immediate reliability issue over an initial five-year period and using that five years to develop and deploy a grid enhancing optimization software system that would provide further efficiencies.

. . establish an independent entity to monitor the planning and cost of transmission facilities in the region."[72] The State Agencies strongly support the establishment of an independent entity, funded by transmission providers, to improve oversight of transmission costs. In general, the State Agencies support the concept of creating an independent transmission monitor for each relevant region with sufficient authority to review regional and interregional transmission planning processes before projects are constructed to ensure fairness and transparency.

The importance of effective oversight of future transmission buildout cannot be overstated. As noted earlier, transmission planning and development is complicated and expensive. As the ANOPR notes: "it is itself a significant investment that represents a major component of customers' electric bills."[73] Consumers, and the public generally, have little insight and little opportunity to learn and understand about the transmission system that is so very important to their lives. And as the Commission notes, the transition to the grid of the future will require billions of dollars in new infrastructure.[74] The anticipated scale and intensity of the buildout needed to meet a clean energy future has no historical precedent, and existing cost-oversight and control mechanisms were not designed for this future. It is critical to ensure that money is spent wisely. An independent transmission monitor could be a very effective means of helping to ensure that ratepayers are not burdened with undue costs and risks and to help ensure that consumers' interests are protected. If the Commission deems it reasonable and prudent shift away from participant-funded network interconnection upgrades, then an

[72] P 163.

[73] P 11 Chairman Glick, Concurring.

[74] *See*, https://www.princeton.edu/news/2020/12/15/big-affordable-effort-needed-america-reach-net-zero-emissions-2050-princeton-study; https://www.woodmac.com/our-expertise/focus/Power--Renewables/us-renewable-energy-policy-scenario-analysis/?utm_campaign=pandr&utm_medium=article&utm_source=gtm.

independent transmission monitor could be even more important because consumer interests have less ability to effectively scrutinize upgrade need and cost than merchant developers under participant funding regimes.

There are a variety of models for how an independent transmission monitor could be structured, what authorities it would exercise, and how it would interact with RTOs/ISOs, transmission developers, the States, and the Commission. The State Agencies look forward to further public discussion about this promising concept. As the Commission continues to consider how to structure an independent transmission monitor, the State Agencies preliminarily urge the Commission to consider the following recommendations:

- The independent transmission monitor should have authority to review the planning criteria that identify particular transmission needs and facilities, as well as the rules and regulations governing such processes.

- The independent transmission monitor should be able to review the procedures in place for each planning region for conducting competitive solicitations to ensure transparency and fairness.

- The independent transmission monitor should be able to review processes used to evaluate the potential applicability of non-wires alternatives and/or advanced technologies, such as dynamic line ratings, as alternatives to poles-and-wires project to meet specific transmission needs. As discussed above, incumbent transmission owners have little incentive to use alternatives to traditional transmission lines to meet major upgrade needs.

- An independent transmission monitor would be very valuable in ensuring that non-incumbent transmission providers have fair access to bid on projects and that alternative technologies get a full and fair evaluation in the planning process.

- The independent transmission monitor should be empowered to provide advice on the design and implementation of regional planning generally, including assessing possible improvements to existing structures and procedures.

- The independent transmission monitor should have the power to provide independent cost estimates for projects and to review transmission owner spending on transmission infrastructure to identify instances of potentially excessive facility costs and cost overruns on major projects.

- The independent transmission monitor should be empowered to identify inefficiencies in regional planning processes, or between local and regional transmission planning processes, and between regions, that result in excessive costs and cost overruns and further be empowered to identify areas in which the planning process itself can be improved.

- In order to maximize its effectiveness, the independent transmission monitor review should be required prior to project construction, both for reliability and expansion projects.

- To promote transparency and fairness, the independent monitor's reports, with appropriate CEII redactions, should be publicly available.

Please note that the State Agencies offer these comments on the proposed Independent Transmission Monitor primarily in the context of such a position with respect to those regions with RTOs/ISOs. For the bulk of the West, where there is no centralized RTO transmission planning and procurement process to be monitored, FERC should provide more details on how such a monitor would be authorized and function.

V. The Commission Should Consider Alternatives to the Participant Funding Model for Certain Types of Projects that Protect Consumers from Undue Risks and Costs.

The Commission seeks comment as to whether the current approach to cost allocation for transmission projects is just and reasonable, and further comment on specific proposals regarding shifting the cost of system upgrades to transmission owners, whether to charge non-refundable fees for interconnection requests, and whether revisions to the existing crediting policy are necessary.[75]

The ANOPR notes that "largely due to the potential shortcomings with the current regional transmission planning and cost allocation processes, transmission infrastructure is increasingly being developed through the generator interconnection process."[76] There are several problems with this approach. As an initial matter, this cedes siting and planning decisions to individual developers who are generally motivated to use the closest or least cost interconnection position, which may not be the best interconnection site for purposes of overall system efficiency and system-wide benefits and could lead to unjust and unreasonable shifting of costs to customers of load-serving entities.[77] Or as the ANOPR puts it, relying on generator

[75] ANOPR PP 123-146.

[76] ANOPR P 10, Chairman Glick concurring.

[77] ANOPR, P 41.

interconnection processes for system planning is "a dynamic that is almost sure to result in comparatively inefficient investment decisions."[78]

The second major problem with relying on the generator interconnection process is that transmission development is very "lumpy." One or more developers may be able to interconnect to the existing system with minimal expense but the next one in the queue may find that there is no more capacity left at a given point of interconnection and be forced to finance interconnection-related network upgrade at vast expense. This approach places all the cost of needed upgrades on the developer whose project triggered the reliability need.[79] These costs, for example, a new substation or a new or reconductored transmission line—can be in the millions or hundreds of millions of dollars. However, once designed and built, the new upgrades will often have excess capacity that succeeding developers can access without additional cost, what is sometimes referred to as "free riding" in the ANOPR.[80] In addition, the interconnecting developer is strongly incented to pay only for the minimum system expansion to accommodate its project and not the upgrades that produce the most system benefits, even if such upgrades are only minimally more expensive.[81] Ultimately, as the ANOPR notes, this, "may cause those interconnection customers to withdraw projects from the queue, causing considerable uncertainty

[78]ANOPR P 10, Chairman Glick concurring.

[79] Please note that the ANOPR discusses the related issue of participant funding. P 110. Participant funding requires the developer to take on the upfront risks of a transmission project. In practical effect, the interconnection queue process described above is essentially the same thing because all of the risks/costs end up on the unfortunate developer triggering the upgrade.

[80] ANOPR P 112.

[81] ANOPR P 117.

and delay, and may mean that net beneficial transmission infrastructure is never developed due to a misalignment in how that infrastructure would be paid for."[82]

The State Agencies agree that the current participant funding approach has demonstrated weaknesses. It creates significant uncertainty for developers who may trigger lumpy transmission upgrade costs. It can also significantly burden or delay new generation resources and transmission projects that could provide important regional benefits if long term or regional or interregional benefits were considered.

The State Agencies oppose, however, shifting transmission system upgrade and development risks to consumers. A central premise of the Federal Power Act is to protect ratepayers. *California ex rel. Lockyer v. FERC*, 383 F.3d 1006, 1017 (9th Cir. 2004) (noting the Act's 'primary purpose' of protecting consumers"); *Xcel Energy Servs. Inc. v. FERC*, 815 F.3d 947, 952 (D.C. Cir. 2016); *see Jersey Cent. Power & Light Co. v. FERC*, 810 F.2d 1168, 1207 (D.C. Cir. 1987) ("The Commission stands as the watchdog providing 'a complete, permanent, and effective bond of protection from excessive rates and charges.'") (Starr, J., concurring) (quoting *Atl Ref. Co. v. Pub. Service Comm'n*, 360 U.S. 378, 388 (1959)); *City of Chicago v. FPC*, 458 F.2d 731, 751 (D.C. Cir. 1971) ("[T]he primary purpose of the Natural Gas Act is to protect consumers." (citing, *inter alia*, *City of Detroit v. FPC*, 230 F.2d 810, 815 (D.C. Cir. 1955)). The current approach places risk on developers, which has the advantage of placing risk on the parties that will profit from a project and who have the opportunity to avoid the risk by abandoning the project if needed. Those risks and responsibilities should not be wholly

[82] ANOPR P 10, Chairman Glick concurring.

transferred to consumers, and the benefits developers receive from transmission access should be appropriately accounted for in any planning process.

The ANOPR seeks comment on a potential alternative approach under which developers would pay only for their individual interconnection costs and that the cost of major system upgrades would be borne "more broadly."[83] Once in service, "the transmission provider would be able to include the cost of that interconnection-related network upgrade in its transmission service rate base and recover a return on, and of, the network upgrade capital costs through the cost-of-service transmission rates in its OATT."[84]

The State Agencies are concerned that this potential approach could shift the economic risks of transmission projects to ratepayers. Placing the cost of transmission upgrades on transmission owners, to be paid through their approved rates in the OATT, essentially is placing the costs on ratepayers. In addition to violating the basic principle of keeping undue risk off ratepayers, having transmission owners front the cost of major transmission projects could also result in stranded costs. It takes ten or more years to plan, design, site, and build a major new transmission line. A lot can happen in ten years. New technology can swiftly render older generation or transmission requirements obsolete. Building major new infrastructure to unlock, for example, major potential land-based wind, only to find six or eight years down the road that solar photovoltaics paired with batteries or new tidal power units are significantly more cost effective, could result in ratepayers bearing the burden of expensive new infrastructure that is no longer needed.

[83] ANOPR P 124.

[84] ANOPR P 132.

The State Agencies urge the Commission to consider instead one of two alternatives.

The first would apply in circumstances where there are a known and defined number developers, for example offshore wind where federal leaseholds are held by a publicly known set of developers. Instead of having the first project(s) in the queue interconnect at minimal cost until any spare capacity is exhausted and the next developer alone must pay for major system upgrades, the State Agencies suggest that regional transmission planners evaluate the total cost to integrate the full potential of the leasehold area (and optimize the best selection of interconnection points) in accordance with the plan developed and submitted by the stakeholder process described above (*see supra* Section II). The developers would then divide the cost among themselves, most likely by each party's percentage of total generation produced; or, if the developers agree, a subset of the initial developers could pay for the entire cost of needed upgrades, but subsequent developers would reimburse the initial group through an agreed upon schedule of fees. This latter approach might be more useful in circumstances where, for planning or permitting reasons, some developers are looking to build their projects earlier in time.

The second potential alternative approach recommended by the State Agencies has three components. First, interconnecting generators would be charged a non-refundable variable fee that is linked to project size, essentially a reservation charge.[85] The variable fee would be used to conduct system impact studies and facilitate queue processing. It would protect ratepayers

[85] This recommendation is based on several concepts touched on in the ANOPR. For example, the Commission is seeking comment on various reforms including imposing a fixed or variable fee on interconnecting customers to discourage speculative interconnection requests, PP 135-137, imposing the obligation to pay for upgrades on transmission owners only for larger scale projects based on a voltage threshold, P 139, and a cost sharing option whereby interconnection customers bear some percentage of the total costs and transmission owners bear the rest.

from undue risks while discouraging speculative interconnection requests that currently overwhelm interconnection queues.

Second, for smaller projects, the current participant funding regime would remain intact. Transmission owner participation, and the cost allocation to load, would only be required for larger projects over a defined threshold. This threshold approach would account for the fact that there are a large number of smaller renewable energy projects that generally interconnect at lower voltage lines. The broader benefits from these small projects would likely be minor and not worth the extra complications of having multiple parties responsible for costs. If, however, State officials or regional planners recognize that there is going to be a series of smaller projects in a given area that will likely need significant upgrades along a lower voltage section of the system, nothing would prohibit a "cluster study" approach, whereby planners evaluate the projected overall generation additions and upgrade costs, and if those costs exceed a certain threshold, a portion of the costs could be allocated to transmission owners. State regulatory approval should be required to allocate costs to transmission owners.

The third element would be a cost-sharing mechanism for larger projects, with transmission owners responsible for some portion of total costs and interconnection customers responsible for the rest. The State Agencies strongly believe that protecting ratepayers remains a critical function for the Commission and that developers, who ultimately profit from the new generation should be the primary payers for the upgrades needed to accommodate their projects. The State Agencies therefore suggest that the Commission consider whether there should be a 50/50 split between developers and transmission owners for upgrades that exceed $10 million on 345 kV or larger systems. Alternatively, the State Agencies are willing to consider whether there should be a cost-sharing mechanism for large upgrades over a certain threshold costs to

encourage the development of new generation resources and facilitate State policy goals. This would reduce interconnecting customers' costs and risks, would provide valuable protection for ratepayers, encourage the development of new generation resources, and facilitate State policy goals.

VI. The Commission Should Couple Tariff Reforms with Broader Regional Governance Reforms and Increased Transparency Measures

As the ANOPR notes, circumstances have changed over the last decade and, largely in response to state public policy initiatives, there has been a profound shift to new clean energy resources. Just as the time is right for a comprehensive reform of transmission planning, so too is it time to ensure RTO/ISO governance practices keep pace with changes in state laws and policies and a transitioning energy system. The State Agencies are concerned that consumers will ultimately incur increased costs absent a reexamination of RTO/ISO governance structure and mission in light of the aforementioned changes.

RTO/ISO governance rules and processes do not always give a sufficiently meaningful voice to state and consumer interests. Transparency and the opportunity to participate in the stakeholder process for transmission planning and other RTO/ISO functions are inadequate in some cases. A lack of transparency and accountability in RTO/ISO governance structures undermines public confidence that there are entities ultimately responsible, subject to stakeholder feedback and federal approval, for determining resource adequacy and system planning and operation requirements for the region.

Given the intersection of state laws with resource adequacy and other system changes, the State Agencies urge the Commission to conclude that RTOs/ISOs must discharge their responsibilities guided by a mission that actively supports states in meeting their policy imperatives for a clean, affordable, and reliable energy system, including sustained investment in

transmission planning to integrate clean energy resources, while incorporating cost saving mechanisms like non-wires alternatives and grid enhancing technologies to ensure that the transmission system is developed at least cost to consumers.

CONCLUSION

The State Agencies appreciate the Commission's solicitation of public input on regional transmission planning and cost-allocation processes. We respectfully urge the Commission to consider the above comments and recommendations as it considers potential reforms.

Respectfully Submitted

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