I. Introduction

The Federal Energy Regulatory Commission (FERC) has issued a Notice of Proposed Rulemaking (NOPR) concerning “Reform of Generator Interconnection Procedures and Agreements.”¹ The Federal Trade Commission (FTC) staff appreciates the opportunity to submit this comment.²

Over the past two decades, the electric power industry has experienced a profound competitive transformation.³ Decisions by FERC and state regulators to reduce entry barriers in


² This comment expresses the view of the FTC’s Office of the General Counsel, Office of Policy Planning, and Bureau of Economics. The comment does not necessarily represent the views of the FTC or of any individual Commissioner. The Commission, however, has voted to authorize the filing of this comment.

³ Technological developments and regulatory innovations have often motivated the expansion of competition in the electric power industry. At first, new technologies enabled new (and relatively small) power generation resources to become more cost-effective, facilitating the entry of independent power producers that compete with one another as well as with the large-scale generating facilities historically owned by most electric distribution utilities. The rise of these smaller generation resources precipitated the unbundling of generation from transmission, facilitating competition in wholesale electricity markets. Several states then introduced competition at the electric retail level, which allows independent marketers (as well as utility affiliates) to seek customers on the basis of more attractive prices, service improvements, environmental attributes, or bundling with hardware and software to help customers reduce their electric bills. Some states are now examining how to accommodate more on-site generation that can compete with central station generation.
parts of the industry previously deemed “off limits” to competition led to or facilitated many competitive developments in formerly monopolized electricity markets.

FERC’s consideration of reforms to its generator interconnection rules is a logical next step in this procompetitive process because FERC and industry participants are concerned that some transmission owners still can discriminate against generation entrants under the current rules. Where it arises, such discrimination can result in anticompetitive delays and/or increased costs for generation entrants that need to obtain essential interconnections with the transmission grid.  

FTC staff supports FERC’s proposals to reform its interconnection rules to facilitate the construction of generation interconnections to the grid. The reform of generation interconnection rules is particularly timely in light of changes in technology and in relative fuel prices that have resulted, and likely will continue to result, in substantial shifts in the sources of electricity generation. In addition to alleviating potential transmission interconnection discrimination, the proposed changes to FERC’s rules may provide generation entrants with opportunities to innovate in ways that will reduce costs and lessen delays in the interconnection process. FERC also proposes steps to increase the efficiency of the interconnection process, which also should facilitate increased competition that will benefit electricity consumers.

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4 FERC has been working for more than 20 years to alleviate undue discrimination in transmission services as a means to remove barriers to entry and increase competition in electric generation. Notable examples include the development of independent transmission system operators (both Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs)) and the removal of legal barriers to merchant transmission firms that (if approved in the transmission planning process) can build transmission lines to areas where new generators prefer to locate. The FTC staff commented to FERC as far back as 1995 on independent transmission system operators. Comment of the Staff of the Bureau of Economics of the Federal Trade Commission, Promoting Wholesale Competition through Open Access Non-discriminatory Transmission Services by Public Utilities, Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, FERC Dkt. Nos. RM96-8-000 and RM94-7-001 (Aug. 7, 1995), https://www.ftc.gov/sites/default/files/documents/advocacy_documents/ftc-staff-comment-federal-energy-regulatory-commission-matter-promoting-wholesale-competition-v950008.pdf. FERC previously addressed interconnection issues in Order No. 2003, FERC Stats. & Regs. ¶ 31,146 at P 8.

5 NOPR at PP 24-25. For example, the Energy Information Administration (EIA) forecasts that natural gas and renewable resources will continue to expand their shares of the generation mix at least through 2050. EIA, Annual Energy Outlook 2017, http://www.eia.gov/outlooks/aeo/data/browser/#/?id=9-AEO2017&region=0-0&cases=ref2017&start=2020&end=2050&f=Q&linechart=&ctype=linechart&sourcekey=0.
II. FTC Staff Statement of Interest

The FTC is an independent agency of the United States Government responsible for maintaining competition and safeguarding the interests of consumers. The FTC fulfills these missions through law enforcement, policy research, and advocacy. For example, in the field of consumer protection, the FTC enforces Section 5 of the Federal Trade Commission Act, which prohibits unfair or deceptive acts or practices. To further its competition mission, the FTC enforces antitrust laws regarding mergers and unfair methods of competition that harm competition and consumers. In addition, the FTC often analyzes regulatory or legislative proposals that may affect competition, allocative efficiency, or consumer protection. It also engages in considerable consumer education, mostly through its Division of Consumer and Business Education. In the course of all of this work, the FTC applies established legal and economic principles as well as innovative developments in economic theory and empirical analysis.

The energy sector, including the electric power industry, has been an important focus of the FTC’s merger review and other antitrust enforcement, competition advocacy, and consumer protection efforts. In particular, the FTC and its staff have filed numerous comments advocating competition and consumer protection principles with state utility commissions, state legislatures, the Department of Energy (DOE), and FERC. The FTC staff also issued two


8 A listing, in reverse chronological order, of FTC and FTC staff competition advocacy comments to federal and state electricity regulatory agencies is available at http://www.ftc.gov/policy/advocacy/advocacy-filings?combine=&field_matter_number_value=&field_advocacy_document_terms_tid=5290&field_date_value%5Bmin%5D%5Bdate%5D=&field_date_value%5Bmax%5D%5Bdate%5D=&Apply. In addition, the FTC’s Bureau of Consumer Protection has been monitoring the evolving uses of energy-related consumer data for privacy and data security issues. See, e.g., Letter from Jessica L. Rich, Dir., Bureau of Consumer Protection, FTC, to Eric Lightner, Director, Federal Smart Grid Task Force, Office of Electricity Delivery and Energy Reliability, U.S. Dep’t of Energy, concerning a Voluntary Code of Conduct for Utilities and Third Parties Providing Consumer Energy Use Services (Oct. 29, 2014),
III. Background on the NOPR and Transmission Interconnection Queues

FERC issued the present NOPR to address concerns raised by the American Wind Energy Association (AWEA) and other parties about the effectiveness and efficiency of existing rules governing interconnection procedures and agreements. AWEA also filed a formal petition requesting changes to interconnection rules for large generators. AWEA’s petition points out that transmission owners have both incentives and abilities to engage in anticompetitive discrimination against independent power generators’ entry attempts, at a time


12 In addition to receiving interconnection complaints and the AWEA petition, FERC held a technical conference on interconnection issues before issuing the NOPR. NOPR at PP 22-23. At that technical conference, AWEA and other participants – including transmission interconnection applicants, transmission owners, and economic and technical experts – provided additional details and comments, https://www.ferc.gov/CalendarFiles/20160823100648-Transcript%20%20Revised%20-%20051316FERCTechConf.pdf.

when there is an ongoing “dramatic transformation of the electric generation system.” The kinds of discrimination identified by AWEA can delay a generator’s entry and/or raise its costs during the interconnection process. FERC reached the same conclusion in Order No. 2003. According to its petition, AWEA’s members have continued to face anticompetitive discrimination, which may have taken different forms since FERC issued Order No. 2003.

The incentives to discriminate stem from the fact that many transmission owners also own power generation facilities that would compete against generation entrants. The transmission owners’ generating assets may yield higher profits if they can delay or increase the costs of new generation entrants. Coupled with these incentives is an incumbent transmission owner’s ability to delay and raise the costs of power generation entrants by virtue of its control over the timing and costs of a generation entrant’s connection to the transmission system. The transmission owner can raise entry barriers using tactics to delay and/or raise rivals’ costs, reducing the competition and consumer benefits that would otherwise flow from generator entry. Some concerns about anticompetitive interconnection delays and increased costs stem from what may be biased interpretations of interconnection rules by transmission owners and from disputes of dubious validity raised by transmission owners.

In addition to concerns about anticompetitive behavior by transmission owners, the transmission owners have expressed concerns about their ability to manage effectively the interconnection process for power generation and energy storage entrants because many applicants subsequently withdraw their requests for interconnections to the grid. When an application in the interconnection queue is withdrawn, projected patterns of power flows and transmission congestion will change. As a result, transmission owners must often restudy the interconnection requests remaining in the queue. The resulting costs and delays are exacerbated when additional interconnection applicants in the queue withdraw their applications. Thus, a power generation applicant remaining in the queue could be subject to multiple interconnection restudies. These additional studies can impose increased direct costs and delays on potential power generation entrants, independent of concerns about anticompetitive increases in the cost or frequency of interconnection restudies. In extreme circumstances, the added costs and delays

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14 Petition at 1.
15 NOPR at PP 24-30.
16 Order No. 2003, supra note 4, at PP 11-12.
17 Petition at 7.
18 NOPR at PP 19, 26, 28. Examples of undue discrimination in the form of anticompetitive delays include: postponing the start or the completion of an interconnection study; unnecessarily expanding the scope or complexity of such a study; displacing an applicant’s position in the interconnection queue by falsely asserting that changes in the design of the project require a restudy; or engaging in sham disputes with an interconnection applicant that take time to resolve. Moreover, it could be costly, difficult, and time-consuming to detect and document such forms of anticompetitive discrimination.
stemming from withdrawals of projects higher in the interconnection queue may threaten the economic viability of entry plans that sit lower in the queue. This could result in a cascade effect as additional entrants withdraw from the interconnection queue due to the added costs and delays that they face.

IV. FERC’s Proposed Improvements Designed to Reduce Delays and Excessive Costs Facing Power Generation Entrants

FERC proposes several improvements to help generation entrants interconnect more quickly and at lower cost, thus increasing the effectiveness of generation competition. Even if transmission owners do not discriminate against power generation entrants, these improvements will provide generation entrants with the opportunity to propose innovations in how interconnections are built or funded.

- First, FERC proposes that each power generation entrant be allowed, at its own discretion, to reduce the size (and associated costs) of its interconnection requirements by installing onsite energy storage that reduces its interconnection needs. Existing rules mandate that the interconnection requirements be sufficient to cover the entrant’s generating capacity. FERC’s proposed alternative could be particularly attractive if, for example, an interconnection equal to the generator’s full capacity would require major transmission upgrades, whereas a slightly smaller interconnection would not. In this scenario, the generation entrant might well choose to install onsite energy storage to absorb any output that exceeds the size of the smaller, lower-cost interconnection for which it applies. The generation entrant could then sell the stored electric energy when its generators are not running at capacity. Such storage capability has the added benefit

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19 Although the NOPR focuses on power generation entrants, the same concerns apply to energy storage entrants that can also increase competition facing the power generation assets of transmission owners. FERC extends the NOPR to cover these facilities. Id. at PP 134-39, 224-30.

20 Id. at PP 32-230.

21 Id. at PP 161-80. A related proposal about the entrant’s project design would allow power generation entrants to update the technology they will use without losing their place in the transmission interconnection queue (id. at PP 212-23). The current system – which authorizes the transmission owner to force the power generation entrant to the end of the interconnection queue if the entrant’s equipment plans change – enables the transmission owner to delay and raise the costs of rival power generation entry. Moreover, to the extent that projects encompassing both generation and energy storage become more economical and enter the market with greater force, the proposed reform may also increase competition in wholesale energy markets more generally.

22 The use of onsite energy storage for this purpose could also be a temporary solution while the generation entrant waits for an existing generator to exit the market and release the transmission capacity it has been using.
of allowing the generator to sell electricity during times of peak demand, when prices are highest. The availability of this option could alleviate any anticompetitive effects of forcing a generation entrant to purchase more interconnection service than it needs.

- Second, FERC proposes to authorize each power generation entrant, at its own discretion, to build the facilities necessary to interconnect with the transmission system.\(^{23}\) (The transmission owner would continue to own the facilities.) This option to build the interconnection facilities is currently available to generation entrants only when the transmission owner formally acknowledges that it is unable to construct the interconnection facilities in a reasonable time.\(^{24}\) At the technical conference, multiple parties explained that “they are often able to build more rapidly and at lower cost than transmission owners.”\(^{25}\) Allowing such building by generation entrants that can more easily absorb the cost and burden of constructing interconnection facilities could reduce opportunities for anticompetitive delays or the imposition of excessive costs by transmission owners.

- Third, FERC proposes to limit transmission owners’ ability to self-fund generation interconnections.\(^{26}\) Currently, the generation entrant generally funds the facilities constructed by the transmission owner to interconnect the generation entrant with the transmission grid.\(^{27}\) The transmission owner, however, has the option to self-fund construction of these facilities and recover those costs from the generation entrant.\(^{28}\) Generation entrants are concerned that the self-funding option can allow the transmission owner to levy large upgrade costs on the generation entrant.\(^{29}\) (The transmission owner

\(^{23}\) NOPR at PP 52-63. The facilities can then be handed over to the transmission owner with fewer competitive concerns because the grid operator (an ISO or RTO) will control the use of the facilities and/or the open access rules for wholesale electricity trades (that still apply outside IROs and RTOs) will be in effect. FERC does not propose any change in the quality assurances that already exist under the narrower self-build option for generators. The NOPR makes no mention about concerns about the quality of such interconnection facilities built by entrants. Further, generation entrants have incentives to build reliable interconnection facilities because their sales of power on the grid depend on the reliability of these interconnection facilities.

\(^{24}\) FERC proposes to allow interconnection customers to elect to build – though not own – their own interconnection facilities regardless of the ability and willingness of the transmission owner to construct the facilities. Effectively, this provision allows a generation entrant to compete against the transmission owner to provide transmission construction services.

\(^{25}\) NOPR at P 56.

\(^{26}\) Id. at PP 64-77.

\(^{27}\) Id. at P 65.

\(^{28}\) Id. at PP 66-69.

\(^{29}\) Id. at PP 69, 72.
presumably would avoid incurring these higher costs when interconnecting its own
generation facilities. A transmission owner’s ability to increase transmission
interconnection costs for the generation entrant – including by engaging in ineffective
bargaining with underwriters or other financial agents – can raise competitive concerns because, under existing rules, any added costs resulting from such behavior are passed on to the power generation entrant. To address this concern, FERC proposes to permit self-funding by the transmission owner only if the generation entrant agrees.

We strongly agree that transmission owners’ existing ability and incentives to discriminate against new power generators raise competitive concerns. Such discrimination can result in consumer harm because anticompetitive discrimination diminishes an entrant’s potential effectiveness, such as the ability to lower costs and bring additional sources of generation to wholesale electricity markets.

FERC’s specific proposals give entrants competitive alternatives to the monopolized services on which they must currently rely. The FTC staff has endorsed the creation of competitive alternatives in the past for generators facing monopoly transmission providers, and we continue to do so.

30 Id. at P 68.
31 The transmission owner will strive to avoid any extra costs of interconnecting its own generation to the transmission system because any extra costs would reduce its own profits.
32 FERC proposes to require consent from the power generation entrant before a transmission owner arranges financing of transmission upgrades. The default would be that the power generation entrant arranges the financing for the required transmission upgrades. The power generation entrant may find it preferable to arrange its own financing because, for example, it expects that it can bargain more effectively than the transmission owner, or because it has internal access to lower-cost funds.
33 NOPR at P 71.
V. Improving Transmission Congestion Information to Promote Efficient Power Generation Entry

FERC and various electricity industry participants have observed that many proposed generation interconnection projects obtain a position in an interconnection queue, only to subsequently withdraw from the queue.\textsuperscript{35} Rather than proposing penalties for withdrawing from an interconnection queue, FERC proposes to address concerns about the effects of withdrawals by focusing on why potential power generation entrants sometimes withdraw from queues.\textsuperscript{36}

FERC found that one reason applicants withdraw from interconnection queues is that they do not receive sufficient, verifiably accurate information from transmission owners.\textsuperscript{37} From the perspective of power generation entrants, key information includes transmission congestion data, the record of generation curtailments at the proposed generation site, and means to verify that the transmission owner performed an accurate analysis of interconnection facilities and transmission upgrades needed to maintain reliable transmission service. As in the past, we support information improvements that enhance entrants’ ability to make well-informed decisions about where and when to invest, as long as the benefits of providing such information exceed the costs to FERC and the transmission system of doing so.\textsuperscript{38} Although we commend FERC’s efforts on this issue, we also encourage FERC to weigh the costs and benefits of the proposed information improvements.\textsuperscript{39}

\textsuperscript{35} NOPR at P 4.

\textsuperscript{36} \textit{Id.} at PP 97-121.

\textsuperscript{37} \textit{Id.} at PP 33-51.

\textsuperscript{38} Comment of the Federal Trade Commission on Integration of Variable Energy Resources, FERC Dkt. No. RM10-11-000, Section III.C.1 (Apr. 8, 2010), \url{https://www.ftc.gov/sites/default/files/documents/advocacy_documents/ftc-comment-federalenergy-regulatory-commissionconcerning-integration-variable-energy-resources-vers.rm10-11-000/v100009ferccomment.pdf} (“We applaud efforts to improve supply forecasts where the benefits are found to exceed the costs. We note that better micro-forecasting reportedly can be used to increase the efficiency of wind generation. This also could increase productivity and reduce consumer costs.”).

\textsuperscript{39} NOPR at PP 122-33, 140-51. To improve transparency, FERC proposes to require each transmission provider to disclose the method used to determine transmission changes required for the power generation entrant to connect to the transmission grid. This should enable the entrant to check the accuracy of the transmission connection study (as well as the validity of the method that the transmission owner employs).
FERC also proposes another set of reforms to enhance interconnection processes by transferring underutilized transmission capacity from exiting generators to entering generators.\textsuperscript{40} Where feasible, using underutilized interconnection capacity helps avoid additional costs or delays from connection studies, without additional risk to other generators or to the reliability of the power system. As stated before, a period of changes in the generation mix will likely entail both more entries and more exits by generators. Decisions on how to reassign freed-up generation capacity can play a significant role in providing transmission capacity for use by generation entrants quickly and at low cost.

VI. Facilitating Efficient Power Generation Entry by Reducing Potential Bias in the Resolution of Transmission Interconnection Disputes

Competitive concerns in the transmission interconnection process include delays and increased costs. The timeliness and objectivity with which interconnection disputes under the control of transmission owners are resolved are likely to raise these same competitive concerns.\textsuperscript{41} FERC also has cited complaints that the existing dispute resolution processes conducted by the RTOs and ISOs are biased in favor of transmission owners.\textsuperscript{42} Although appeals to FERC are possible in such disputes, such appeals can add to the delays and costs incurred by power generation entrants.

FERC proposes three reforms to address these concerns. First, RTOs and ISOs will be required to demonstrate timeliness in the resolution of interconnection disputes.\textsuperscript{43} Second, FERC proposes to allow either party in such a dispute to seek arbitration directly, without the consent of the other party.\textsuperscript{44} Under this proposal, the generation entrant can engage a neutral third party to resolve the dispute in a relatively timely fashion, without incurring the likely costs and delays of a direct appeal to FERC.\textsuperscript{45} Both of these proposals are likely to reduce the ability of transmission providers to delay resolution of transmission connection disputes. Third, FERC proposes that ISOs and RTOs be required to develop objective dispute resolution mechanisms using arbitrators or facilitators who have no current or past association with either party in the dispute.\textsuperscript{46} If FERC adopts these proposals, we encourage FERC to carefully monitor progress toward objective dispute resolution.

\textsuperscript{40} NOPR at PP 191-211.

\textsuperscript{41} Id. at PP 78-87.

\textsuperscript{42} Id. at P 81.

\textsuperscript{43} Id. at P 84.

\textsuperscript{44} Id. at PP 85, 87.

\textsuperscript{45} Id. at P 84.

\textsuperscript{46} Id. at PP 78-87.
More broadly, we note that the original rationale for RTOs and ISOs was to eliminate discrimination in the provision of transmission services in order to promote effective competition in wholesale electricity markets. Bias toward incumbent transmission owners by RTOs and ISOs in resolving interconnection disputes could represent a significant departure from the independence of RTOs and ISOs – the first minimum characteristic required of RTOs and ISOs under Order No. 2000. We encourage FERC to monitor the situation to ensure that RTOs and ISOs have not been subject to regulatory capture. Evidence that RTOs and ISOs systematically enable incumbent transmission owners to bias the resolution of transmission interconnection disputes – and thereby delay or raise the costs to power generation entrants – could be a sign of regulatory capture.

VII. Conclusion

The FTC staff appreciates the opportunity to comment on this NOPR. Please address any questions concerning this comment to John H. Seesel, Office of the General Counsel, at jseesel@ftc.gov or (202) 326-2702.

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47 Id. at P 84; FERC Order No. 2000, FERC Dkt. No. RM99-2-000, at 2-3 (Dec. 20, 1999), https://www.ferc.gov/legal/maj-ord-reg/land-docs/RM99-2A.pdf (“[T]he Commission reviewed evidence that traditional management of the transmission grid by vertically integrated electric utilities was inadequate to support the efficient and reliable operation that is needed for the continued development of competitive electricity markets, and that continued discrimination in the provision of transmission services by vertically integrated utilities may also be impeding fully competitive electricity markets. These problems may be depriving the Nation of the benefits of lower prices and enhanced reliability. The comments on the [Notice of Proposed Rulemaking] overwhelmingly support the conclusion that independently operated transmission grids will enhance the benefits of competitive electricity markets.”).