

FERC Proposes Overhaul of Interconnection Procedures

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On June 16, 2022, the Federal Energy Regulatory Commission (“FERC” or “Commission”) issued a [Notice of Proposed Rulemaking](#) (“Generator Interconnection Reform NOPR”) seeking comments on proposed reforms to FERC’s *pro forma* interconnection procedures found in transmission providers’ Open Access Transmission Tariffs (“OATTs”).

The Generator Interconnection Reform NOPR comes at a time of renewed focus on the need for capital investment to modernize the grid to meet the needs of the changing generation mix. The NOPR targets perceived inadequacies in FERC’s generator interconnection processes that may be creating barriers to the efficient and cost-effective integration of generation resources. FERC took the unanimous, bipartisan action under mounting pressure to address clogged interconnection queues and long delays—often more than three years—for new resources seeking to come online.

The central aim of the proposed reforms is to transition the currently effective “first-come, first-served” approach found in many transmission providers’ OATTs to the first-ready, first-served cluster model. The “first-ready, first-served” cluster approach—which is already in place in most organized independent system operator (“ISO”) or regional transmission organization (“RTO”) markets—is intended to increase efficiency and decrease the number of speculative generation projects that enter interconnection queues. In addition, the Commission proposes reforms to accelerate the interconnection process, including penalties for transmission providers that fail to timely conduct studies. The Commission also seeks comment on a set of reforms intended to incentivize the use of new grid and transmission technologies.

These proposed reforms—many of which are widely viewed as non-controversial, common-sense measures—are described in more detail below. Comments on the NOPR are due 100 days after publication of the

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NOPR in the *Federal Register*, which has not yet occurred. We anticipate that comments will be due in the late September or early October timeframe.

PROCEDURAL CONTEXT

The Generator Interconnection Reform NOPR is part of a holistic re-evaluation of FERC's policies regarding both generator interconnection processes and transmission planning. Specifically, the Generator Interconnection Reform NOPR is a follow-on to FERC's July 15, 2021 Advanced Notice of Proposed Rulemaking ("ANOPR"). The ANOPR—which was a broad request for comments—identified a wide scope of possible transmission reforms under consideration, including reforms to the generator interconnection process. In addition to the Generator Interconnection Reform NOPR, and also directly stemming from the ANOPR, on April 21, 2022, FERC requested comments in a Notice of Proposed Rulemaking on proposed reforms for long-term transmission planning ("Long-Term Transmission Planning NOPR").

If effective, the Generator Interconnection Reform NOPR—together with the Long-Term Transmission Planning NOPR—could accelerate the interconnection of proposed generation projects as well as shift transmission investment taking place through the generation interconnection process to the transmission planning process. This significant proceeding requires the attention of, and participation by, interested industry stakeholders, including but not limited to transmission providers, transmission owners and generation developers.

Notably, PJM Interconnection LLC ("PJM") recently filed at FERC, in Docket No. ER22-2110-000, proposed interconnection process reforms that directly overlap with many of the issues FERC is seeking to address generically in the Generator Interconnection Reform NOPR. Among other things, PJM proposes to shift to a first-ready, first-served cluster approach, with rules that require the interconnection customer to satisfy certain benchmarks in order to enter and remain in the queue.

The issues that prompted PJM's filing are the very same issues that underpin the FERC Generator Interconnection NOPR. Before filing the proposed reforms, PJM implemented a two-year pause on new interconnection requests and has represented that it has a significant backlog of interconnection requests.^[1] Indeed, in 2022, PJM represented that it has approximately 2,500 projects in its queue. The amount of new generation capacity pending in the PJM interconnection queue likely far exceeds projections of PJM's actual needs for generation capacity (renewable or otherwise).

In PJM and elsewhere, there has been a proliferation of renewable energy projects resulting from, among other things, state policies promoting renewable generation and increased corporate demand for virtual power purchase agreements that allow corporations to meet "renewable" or "green" energy

targets. The FERC Generator Interconnection NOPR recognizes that a significant portion of the generation projects in transmission providers' queues will not reach commercial operation. Both PJM's filing and FERC's Generator Interconnection Reform NOPR attempt to balance requirements intended to expedite processing of interconnection requests, on the one hand, with more stringent requirements for generation projects to enter and remain in the queue, on the other hand.

PROPOSED GENERATOR INTERCONNECTION REFORMS

I. First-ready, First-served Cluster Process

A. Cluster Process Reforms to Increase the Speed of Queues

FERC proposes to make the first-ready, first-served cluster study model the universally required interconnection study method. Under a first-ready, first-served cluster study process, interconnection requests are studied in groups (meaning, individual requests submitted during a certain time window are processed together with the same priority) and interconnection customers face increasing financial commitments and readiness requirements as they proceed through the queue. In contrast, a serial study approach assigns each interconnection request a unique queue position based on when they enter the queue.

FERC suggests that requiring cluster studies will make interconnection processes more efficient by allowing transmission providers to perform larger interconnection studies that cover numerous interconnection requests and scenarios, as opposed to performing studies on an individual interconnection request basis. FERC also maintains that cluster studies will help alleviate interconnection queue backlogs by reducing the risk of cascading re-studies, which are triggered under the serial approach when a higher-queued interconnection customer withdraws or modifies its interconnection request. The Commission's move from the serial method to the cluster method is unsurprising, given that versions of a first-ready, first-served cluster approach are already in place in most RTOs, with a PJM proposal to move to a cluster approach is currently pending before the Commission. It also is worth noting that those ISOs that already have shifted to the use of a first-ready, first-served approach have continued to experience significant challenges in efficiently processing interconnection requests, with interconnection customers' progress through the queue regularly hampered by study delays, study errors, and the need for restudies triggered by customer withdrawals and other factors.

B. Shared Network Upgrades

Notably, the Commission also proposes to make later-in-time clusters responsible for portions of shared network upgrades initially necessitated by a previous cluster. Under this proposal, which is intended to more fairly allocate upgrade costs to their beneficiaries, a later-in-time project can be responsible for shared network upgrades in one of two ways: (1) if it directly connects to a network upgrade or substation where network upgrades have been completed in the prior five years, or (2) if a power flow analysis reveals that the later-in-time project will use and benefit from a network upgrade funded and placed into service in the preceding five years. In the event the transmission provider identifies a shared network upgrade, the later-in-time customer will be responsible for a one-time lump sum payment that will then be disbursed to the interconnection customers that funded the prior project.

C. Increased Financial Commitments to Decrease Speculative Generation Projects

A key theme of the Generator Interconnection Reform NOPR is the Commission's repeatedly stated desire to create a disincentive for the submission of speculative interconnection requests. To that end, the Commission proposes to include steadily increasing financial commitments and readiness requirements throughout the cluster study process. The purpose of these reforms is to require interconnection customers to demonstrate the viability of their projects, and their intention to develop those projects, earlier in the interconnection process to deter the submission of speculative interconnection requests.

For example, at the outset of *each phase* of the new study processes, the Commission proposes to require projects to provide the following deposits to the transmission provider, based on project size:

- For facilities between 20 MW and 80 MW, a \$25,000 deposit plus \$1,000 per MW;
- For facilities between 80 MW and 200 MW, a \$150,000 deposit; and
- For facilities larger than 200 MW, a \$250,000 deposit.

In addition, the Commission proposes to require projects to provide a deposit that is nine times the applicable study deposit upon the execution of an interconnection service agreement, which deposit would be subject to any applicable withdrawal penalties but would be fully refunded at the time the facility achieves commercial operation.

Though withdrawing interconnection customers are eligible to receive a refund of their study deposits to the extent their deposits exceed the study costs incurred by the transmission provider, such refunds are subject to any applicable withdrawal penalties, which have the potential to wipe out potential refunds. The scale of withdrawal penalties depends on the stage at which the project withdraws and whether the site has demonstrated commercial

readiness or submitted a deposit in lieu of such demonstration. Withdrawal penalties can range from one to nine times the study deposit, with higher penalties where a project submitted a deposit in lieu of its commercial readiness demonstration. However, an interconnection customer may be exempt from such withdrawal penalties if the withdrawal does not harm other interconnection customers or follows a significant unanticipated increase in network upgrade costs estimates.

FERC also proposes to require more stringent site control requirements and proposes a new commercial readiness construct.

For site control, projects will be required to demonstrate 100% site control at the outset of the interconnection process and then repeatedly throughout the study process. The Commission proposes a limited option for a deposit in lieu of site control, but only where regulatory limitations prohibit the customer from obtaining site control.

For commercial readiness, projects will be required to show a level of commercial readiness at the outset of the interconnection process, and then will be required to meet a more stringent set of requirements prior to executing a facilities study agreement. For example, one way an interconnection customer can demonstrate commercial readiness is to show a term sheet for the sale of the facility—or its energy, capacity, or ancillary services—for a term of at least five years. At the time of execution of the facilities study, however, the Commission proposes to require customers to show an executed agreement (as opposed to a term sheet). There are other available methods of demonstrating commercial readiness, but all are intended to show an interconnection customer's increasing level of commitment over the course of the interconnection process. The Commission also proposes to allow an interconnection customer to submit a deposit in lieu of a commercial readiness demonstration, though exercising this option also increases the amount potential liability in the event of withdrawal, as explained above.

In addition, the Commission proposes information-access reforms. Specifically, the Commission proposes to require transmission providers to offer an “informational interconnection study” to equip prospective interconnection customers with better information to use in deciding whether to enter the queue. Relatedly, to provide advanced information to prospective interconnection customers, the Commission proposes to require transmission providers to maintain and publicly post certain technical information pertaining to generator interconnection, including an interactive visual representation of available interconnection capacity and certain interconnection metrics. By providing interconnection customers with more information about the availability of interconnection capacity at locations on the transmission grid, these reforms are intended to reduce the incentive for developers to submit interconnection requests at multiple locations across the grid in order to obtain information about the availability of interconnection capacity, only to withdraw these

requests after determining that interconnecting at the location would require the construction of costly network upgrades.

D. Transition Process

FERC proposes three paths for the processing of pending interconnection requests during the transition to the new interconnection process rules:

Path 1: Proceed under existing rules (only available to late-stage interconnection customers with executed facilities study agreements);

Path 2: Proceed under a transitional serial study process; or

Path 3: Proceed under a transitional cluster study.

Interconnection customers currently pending in a queue that have not yet executed a facilities study agreement will be given the option between Path 2 and Path 3. Projects choosing to proceed under the Path 2 transitional serial study process will be required to provide a deposit equal to 100% of the allocated costs identified by the project's system impact study results and provide evidence of site control. Projects seeking to proceed under the Path 3 transitional cluster study process will be required to execute a transitional cluster study agreement, allowing them to be processed through a combined system impact and interconnection facilities study. However, these entities must select either Energy Resource Interconnection Service (ERIS) or Network Resource Interconnection Service (NRIS) and will be required to make a \$5 million deposit in addition to demonstrating site control. In exchange for meeting these more onerous requirements, the Path 3 transitional cluster study projects will be permitted to proceed under an expedited process.

II. Accelerating Interconnection Queue Processing

FERC proposes to include a new "stick" for transmission providers to timely process interconnection studies. In lieu of the "reasonable efforts" standard that previously governed transmission providers' study timeliness, the Commission proposes to require transmission providers to include express deadlines that, if not met, will result in a penalty of \$500 for each day that the study is late, capped at 100% of the total study deposit received for the late study. Transmission providers may not recover such penalties through transmission rates. Acknowledging that RTOs/ISOs are not-for-profit entities, the Commission proposes to require RTOs/ISOs to file requests to recover penalty costs under FPA section 205, and may include a tariff provision permitting the RTO/ISO to seek to allocate penalties to the transmission owner(s) responsible for the delay. In his concurrence to the Generator Interconnection Reform NOPR, Commissioner Mark Christie highlights the issue of how ISOs would cover such penalties as they are not investor owned.[2]

FERC proposes new rules (including new *pro forma* agreements) for projects that impact affected systems, i.e., systems other than the region in which the

project will have a direct interconnection. The proposed process requires initial notification of the affected system, a required affected system scoping meeting, a study process, cost allocation procedures, the sharing of study results and assessment, and a financial penalties assessment. The stated purpose of this proposal is to more closely involve affected systems from the outset of the interconnection process.

FERC further proposes new requirements providing for the use of an optional resource solicitation study by a resource planning entity (typically state and local entities that develop resource plans or resource solicitation processes). Under the proposal, a resource planning entity can facilitate and organize interconnection requests that will assist such entity in achieving its resource planning objectives. These requirements are intended to formalize coordination between transmission providers and state and local entities seeking to bring particular types of resources onto the grid consistent with their policy objectives.

III. Incentivizing the Study and Deployment of New Technologies

The Generator Interconnection Reform NOPR also proposes a variety of revisions to help promote the consideration and possible adoption of new technologies through the interconnection process. These changes include:

- **Flexibility in Co-Location:** The Commission proposes to require transmission providers to allow more than one resource to co-locate on a shared site behind a single point of interconnection and share a single interconnection request.
- **Changes to Material Modification Provisions:** The Commission proposes to alter the material modification analysis so that it is more permissive for technological changes that do not result in a change in a facility's output.
- **Surplus Interconnection Service:** The Commission proposes to allow interconnection customers to access surplus interconnection service prior to commercial operation, instead allowing access to this service once the original interconnection customer has executed an interconnection agreement. The purpose is to allow unused interconnection capacity to be accessed at an earlier point than what is currently typically allowed.
- **Incorporating Alternative Transmission Technologies:** The Commission proposes to require transmission providers, upon request of an interconnection customer, to evaluate alternative transmission solutions such as advanced power flow control, transmission switching, dynamic line ratings, static synchronous compensators, and static VAR compensators.

Finally, the Commission proposes a variety of changes regarding modeling and assumptions used in interconnection studies to, for example, better study the incorporation of non-synchronous facilities onto the grid. Although challenges

presented by non-synchronous resources appear to be a “one off” from the core focus of the NOPR, it appears that FERC seeks to resolve these issues on an expedited basis along with the interconnection queue issues.

CONCLUSION AND TAKEAWAYS

As noted above, thus far, FERC’s 2021 ANOPR has resulted in the Long-Term Transmission Planning NOPR in addition to the Generator Interconnection Reform NOPR discussed in this update. There are issues raised in the ANOPR that have not yet been addressed in a follow-on NOPR, to include interregional transmission planning (separate from the regional planning reforms proposed in the Long-Term Transmission Planning NOPR); transmission incentive reforms; participant-funding reforms; and transmission development reforms (likely focused on cost control related to transmission development). FERC has formerly expressed concerns about the need for enhanced oversight of investment in transmission and related cost recovery to ensure that ratepayers are not responsible for transmission investment that is not unneeded or imprudent. FERC has suggested the involvement of state commissions or independent oversight to monitor transmission spending in each transmission region.

The juxtaposition of PJM’s currently pending interconnection reform proposal and the Generator Interconnection Reform NOPR highlights points raised in Commissioner Danly’s concurrence to the Generator Interconnection Reform NOPR. He suggests that while the existing generator interconnection provisions may not be just and reasonable—thereby satisfying the first “step” or “prong” under FPA section 206—it may be difficult for FERC to prescribe what provisions are just and reasonable. Commission Danly noted that transmission providers and ISOs should be capable of proposing their own generator interconnection reform OATT revisions, such as those recently submitted by PJM. Commissioner Mark Christie’s concurrence also cautioned “strongly” that FERC should avoid disrupting changes being developed in the stakeholder process at ISOs to resolve queue issues, noting: “The queue reforms proposed in today’s NOPR should be seen more as guideposts or general standards rather than unyielding mandates that refuse to take local solutions into consideration.” He conveyed his preference that the need for such flexibility be memorialized in any final rule.

Also of interest is the coordination of any reforms to the generator interconnection process with the FERC’s Long-Term Transmission Planning NOPR. That NOPR, issued on April 21, 2022, highlighted FERC’s concerns about the tendency for interconnection-related needs to be identified repeatedly in interconnection studies, only for these needs to go unresolved due to the withdrawal of generation resources from the process. To address that issue, FERC’s Long-Term Transmission Planning NOPR proposes to require that

transmission providers evaluate for possible selection in the regional transmission plan and corresponding cost allocations, regional transmission facilities to address interconnection-related needs that have been identified in at least two interconnection queue cycles during the preceding five years; have a voltage of at least 200 kV and/or an estimated cost of at least \$30 million; and have not been developed due to the withdrawal of interconnection customers. FERC's proposal in the Long-Term Transmission Planning NOPR represents a small step towards harmonizing the generator interconnection process with regional transmission planning—processes that historically have employed different assumptions when evaluating reliability needs, with the result that reliability issues identified in the generator interconnection process have gone unaddressed.

FOOTNOTES

[1] It is worth mentioning that the queue backlog and PJM's decision to "pause" the generator interconnection queue has had wide and unexpected consequences, affecting projects other than new generation development. Existing generation projects are required to enter the interconnection queue to the extent that they seek to materially modify their resources, including modifying the technical characteristics of their resources or adding additional capacity behind the same point of interconnection. Also, certain requests for transmission service are required to be processed through the PJM queue and have been affected due to the pause in PJM's queue.

[2] FERC Commissioner Christie seeks to ensure that consumers do not pay for such penalties – either directly or indirectly.