

FERC Interconnection Revamp Plan: Some Pain, Big Gains

By **Eric Runge, Evan Reese and Margaret Czepiel** (July 8, 2022)

On June 16, the Federal Energy Regulatory Commission issued a notice of proposed rulemaking on improvements to generator interconnection procedures and agreements.[1]

In the NOPR, the commission proposes reforms to the pro forma large generator interconnection procedures and agreement, and the pro forma small generator interconnection procedures and agreement, to "address queue backlogs, improve certainty, and prevent undue discrimination for new technologies." [2]

The NOPR was adopted unanimously by all five commissioners, with concurring statements from Commissioners James Danly and Mark Christie. The NOPR was published in the Federal Register July 5. Initial comments are due Oct. 13, and reply comments are due Nov. 14.

Overall, the NOPR is one significant additional piece of FERC's comprehensive efforts to reform the transmission planning, interconnection and cost allocation processes, in part to enable transition to the future grid and facilitate interconnection of diverse resources. Given the support for the NOPR and its unanimous adoption by the commissioners, it may move quickly to a final rule in early 2023.

While the NOPR proposes to make major changes to how the generator interconnection process is conducted, from both the transmission provider and the generation developer sides of the process, there may be additional issues — such as allocation of interconnection-related network upgrade costs beyond developers — that may be resolved in future rulemakings or complaint proceedings.

Finally, on compliance, stakeholder discussions at regional transmission organizations and independent system operators are likely to be contentious and lengthy. While initial implementation of a final rule may cause some pain for transmission providers and generation developers as the queue rules and composition changes substantially, in the long run, many of the reforms should make interconnection faster and more efficient for viable, ready projects.

If the NOPR proposals become requirements in a final rule, which seems likely, they will make major changes to generator interconnection procedures. Key proposals from the NOPR would:

- Create an optional information interconnection study process that would include cost estimates;
- Replace the serial interconnection study process with a first-ready, first-served cluster study process, with only a limited transition process;
- Allocate network upgrade cluster costs based on a proportional impact method;



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- Require a cost allocation method for sharing network upgrade costs among all cluster participants for shared benefits;
- Increase financial commitments and readiness requirements for interconnection customers, including more stringent requirements regarding deposits, site control and commercial readiness demonstrations, and add withdrawal penalties;
- Eliminate the reasonable efforts standard imposed on transmission providers for meeting study timelines, and replace it with firm timing requirements and penalties for failure to meet deadlines;
- Standardize and accelerate the affected system study process;
- Allow for request of an optional resource solicitation interconnection study outside of the normal interconnection process for a resource planning entity, such as a state agency or load-serving entity implementing a state mandate;
- Provide for colocation of generation at a shared site in a single interconnection request;
- Revise the material modification standard to make it easier to add generation or storage to an interconnection request without requiring the request to lose its place in the queue;
- Make surplus interconnection capacity available to others earlier, once the large generator interconnection agreement has been signed or filed unexecuted;
- Require more accurate operating assumptions for electric storage;
- Require consideration of alternative transmission technologies in the network upgrade analysis;
- Increase modeling and ride-through requirements for nonsynchronous generators; and
- Require compliance filings within 180 days of the effective date of the final rule.

The need for the NOPR stems from the dramatic increase in the volume of new generating facilities — primarily renewable energy generation — seeking to interconnect, which has placed a stress on existing interconnection queues. While FERC has tried to address the queue backlog in previous rulemakings, queues across the country remain congested.

Interconnection queue backlogs create project uncertainty, inhibit developers' ability to interconnect, stifle competition, hinder timely development of new generation and severely limit states' abilities to satisfy renewable clean energy goals.

Accordingly, the commission preliminarily finds that the pro forma large generator interconnection procedures and agreement and small generator interconnection procedures and agreement may result in unjust and unreasonable rates.

The commission is particularly concerned about the current lack of interconnection-related information for project developers; the reliance on a first-come, first-served process; the affected system study process; and the interconnection of hybrid or colocated resources and alternative transmission technologies.

Thus, the NOPR seeks to address these concerns through reforms to the interconnection process. Notably, however, the commission points out in the NOPR that it does not intend for any of the reforms therein to hinder any of the important progress that certain regional transmission organizations and independent system operators have been making to address the interconnection queue backlog to date.[3]

Reforms Implementing a First-Ready, First-Served Cluster Study Process

To help eliminate backlogs and delays caused by projects dropping out of the queue and cascading restudies, and to expedite interconnection of ready projects, FERC proposes to eliminate the serial first-come, first-served approach, and move to a first-ready, first-served cluster study process as the predominant method of interconnection.[4]

The commission preliminarily finds that a first-ready, first-served cluster study process, in conjunction with increased financial commitments and readiness requirements,[5] will address interconnection queue issues, thereby remedying potentially unjust and unreasonable FERC-jurisdictional rates.

The NOPR proposes only a limited transition process under which most existing interconnection customers would move into the cluster study process.[6]

Informational Interconnection Study

First, FERC proposes to require transmission providers to offer an alternative option for an informational interconnection study request that would not require a project to enter the interconnection queue. This informational interconnection study would inform the developer about the viability, timing and cost of a project before it enters the interconnection queue.[7]

This study would be similar to the existing feasibility study option. Further, the commission proposes to set minimum requirements for transmission providers to publicly post available information about available interconnection capacity.[8]

First-Ready, First-Served Cluster Study and Allocation of Cluster Study Costs

FERC proposes to make cluster studies the required interconnection study method for almost all projects under the pro forma large generator interconnection procedures.[9] Under this cluster process, interconnection requests within a cluster would have equal interconnection priority; earlier clusters would have higher priority over later clusters.[10]

Each cluster will entail a comprehensive study of the interconnection of the multiple proposed generators within that cluster.[11] The cluster process is intended to expedite interconnection. Projects within each annual cluster would be studied at the same time.[12]

Regarding cost allocation within each cluster, FERC proposes two new rules for the costs of cluster studies and network upgrades. For cluster studies, 90% of costs would be allocated to interconnection customers on a pro rata basis, based on requested megawatts in an applicable cluster, and 10% of costs would be allocated to interconnection customers on a

per capita basis, based on the number of interconnection requests in an applicable cluster.

For network upgrade costs, FERC proposes to require transmission providers to allocate costs to interconnection customers within a cluster using a proportional impact method, in which the transmission provider will determine the degree to which each generating facility in the cluster contributes to the need for a specific network upgrade.[13]

Finally, the commission proposes cost allocation among earlier and later clusters for shared network upgrades.[14] The NOPR does not propose to allocate generator interconnection related costs beyond the generator developers.

Financial Commitments and Readiness Requirements

As part of the first-ready reforms, FERC proposes to adopt more stringent financial commitments and readiness requirements for interconnection customers to remain in the interconnection queue, in order to "discourage speculative interconnection requests and allow transmission providers to focus on processing viable interconnection requests and better approximate the costs of the interconnection study process." [15]

First, the commission proposes to increase study deposits based on the size of the generating facility, ranging from \$35,000 to \$250,000.[16] Second, it proposes more stringent site control requirements, and to require an interconnection customer demonstrate 100% site control for a proposed generating facility when it submits the interconnection request, and not allow for a deposit in lieu of site control.[17]

Third, FERC proposes a commercial readiness framework, whereby interconnection customers must demonstrate achievement of milestones toward commercial readiness in order to enter the cluster — such as an executed term sheet related to a contract for sale of the facility's output, or selection in a resource procurement.[18]

Finally, the commission proposes to impose withdrawal penalties when the interconnection customer withdraws from the interconnection queue. Under the current pro forma rules, there are no penalties for withdrawal.[19]

Reforms to Increase the Speed of Interconnection Queue Processing

FERC proposes several reforms intended to increase the speed of interconnection queue processing. First, it proposes to replace the reasonable efforts standard for transmission providers completing interconnection studies with a requirement that would impose firm study deadlines, and establish penalties that would apply when transmission providers fail to meet these deadlines.[20]

Further, FERC proposes several reforms related to expediting and standardizing the affected system study and upgrade process. As part of the new uniform affected system study process, the commission proposes a new pro forma affected system study agreement, and a new pro forma affected systems facilities construction agreement.[21]

Finally, the commission proposes a new optional resource solicitation study that can be performed by entities required to conduct a resource plan or solicitation.[22]

Under this proposed study process, a resource planning agency — such as a state agency or a load-serving entity implementing a state mandate — would facilitate a study to group together interconnection requests associated with the qualifying resource solicitation

process, and the resources vying for selection in a qualifying state resource solicitation process would be studied together for the purposes of informational interconnection studies.

Reforms to Incorporate Technological Advancements Into Interconnection Process

FERC proposes reforms to recognize or incorporate technological advancements into the interconnection process.[23] First, the commission proposes to require transmission providers to allow resources to colocate on a shared site behind a single point of interconnection and share a single interconnection request.[24]

The commission also proposes that the addition of a generating or energy storage facility to an interconnection request would not be considered an automatic material modification, as long as the proposed change does not have a material impact on the cost or timing of any interconnection request that is lower or equally queued, and will not cause reliability concerns.

Further, the commission proposes to enable customers with unused interconnection capacity to share that surplus capacity with other resources, as soon as the original interconnection customer executes a large generator interconnection agreement, or requests filing of an unexecuted agreement.[25]

FERC also proposes to require transmission providers to use operating assumptions for interconnection studies that better reflect the proposed operation of an electric storage resource or colocated storage resource.[26]

In the area of grid-enhancing technologies, the commission proposes to require transmission providers, upon the request of the interconnection customer, to evaluate requested alternative transmission solutions during the study process.[27] The commission also proposes to require transmission providers to file an annual informational report on their use of grid-enhancing technologies.

Finally, the NOPR proposes reforms to modeling and performance requirements for nonsynchronous generators — i.e., solar and wind — both large and small, to ensure that all nonsynchronous generating facilities provide the transmission provider with the sufficiently detailed models needed for accurate interconnection studies, and to ensure the ability of the generator to ride through system disturbances in a manner comparable to synchronous generators.

Compliance Procedures

Regarding compliance, FERC proposes to require each transmission provider to submit a compliance filing within 180 days of the effective date of the final rule. The commission proposes to allow appropriate entities to seek regional reliability variations or independent entity variations from the revisions to the pro forma interconnection procedures and agreements.[28]

Observations

This NOPR is one significant additional piece of FERC's comprehensive efforts to reform the transmission planning, interconnection and cost allocation processes, in part to enable transition to the future grid and the interconnection of diverse resources. The first piece was the NOPR released in April on transmission planning.[29] It is likely that a third piece of the puzzle, focusing on transmission oversight, will be issued in the relatively near future.

While Danly dissented in the April NOPR, on the grounds that the commission could not make the required Section 206 finding that the existing transmission planning regimes were so unjust and unreasonable as to warrant change, he issued a concurring statement in response to this NOPR, stating that he believes that record evidence supports a finding that "at least some aspects of current interconnection rules are unjust and unreasonable." [30]

Given the unanimous support for this NOPR and the developed proposals in it, these proposed changes may move quickly to a final rule, potentially early in 2023.

The NOPR proposals, if reflected in a final rule, will make major changes to how generator interconnection is done, from both the transmission provider and the generation developer sides of the process. The absence of any proposed reform to allocate generator interconnection-related network upgrade costs beyond the generation developers is a gap that will likely be addressed either through another rulemaking or complaint proceedings.

Regional transmission organization and independent system operator compliance discussions following the issuance of a final rule will be quite active, as stakeholders consider the requirements and the potential for independent entity variations that best suit the needs of the region.

The initial implementation phase of a final rule based on these proposals is likely to cause some pain for transmission providers and generation developers as the queue rules and composition changes substantially. But in the long run, many of the reforms should make interconnection faster and more efficient for viable, ready projects.

The final rule would tend to facilitate transition to the future grid, but will likely result in more discipline for renewable clean energy development in the FERC interconnection space.

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[1] Improvements to Generator Interconnection Procedures and Agreements, 179 FERC ¶ 61,194 (2022) (NOPR).

[2] NOPR at P 1.

[3] *Id.* at P 6.

[4] *Id.* at P 56.

[5] *Id.* at P 64. PJM Interconnection LLC recently filed in Docket No. ER22-2110-000 proposed revisions to its OATT representing a comprehensive reform of its interconnection process and transition from a serial first-come, first-served queue approach to a first-ready, first-served cluster approach.

[6] *Id.* at P 156.

[7] Id. at P 42.

[8] Id.at P 49.

[9] Id. at P 64.

[10] Id. at PP 67-69.

[11] Id. at P 67.

[12] Id. at PP 65-71.

[13] Id.at P 88.

[14] Id.at P 97.

[15] Id.at P 103.

[16] Id. at P 106.

[17] The commission proposes to limit the option to provide a financial deposit in lieu of site control, and would only allow this option when regulatory limitations prohibit the interconnection customer from obtaining site control. In such instances, the interconnection customer would submit a deposit of \$10,000 per megawatt, subject to a floor of \$500,000 and a ceiling of \$2 million. Id. at P 114.

[18] Id.at P 128.

[19] The proposed withdrawal penalty will increase as the interconnection customer moves through the interconnection queue. The proposal includes a chart demonstrating the possible penalties. Id. at P 144.

[20] Id. at P 168.

[21] Id.at PP 197, 200.

[22] Id. at P 238.

[23] Id. at P 242.

[24] Id. at P 255.

[25] Id. at P 264.

[26] Id. at P 280.

[27] Id. at P 297.

[28] Id. at P 342.

[29] Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection, 179 FERC ¶ 61,028 (2022).

[30] NOPR, Comm'r Danly Concurrence at P 3.