

Interconnection Order No. 2023 – Preliminary High-Level Overview

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Agenda

- **Background and Overview**
- **High Level Summary of Key Aspects of FERC's Final Rule**
 - Information Access and Informational Interconnection Study
 - First-Ready, First-Served Cluster Study Process
 - More Stringent Financial Commitments and Commercial Readiness Requirements
 - Reforms to Increase the Speed of Interconnection Queue Processing
 - Reforms to Incorporate Technical Advancements
 - Transition Process
- **Next Steps**

Background and Overview

Background

- **July 15, 2021**: FERC issued an Advanced Notice of Proposed Rulemaking (ANOPR) to broadly examine FERC's current electric regional transmission planning, cost allocation, and generator interconnection policies.
- **April 21, 2022**: FERC issued a Transmission Planning NOPR.
- **June 16, 2022**: FERC issued the Interconnection NOPR in Docket No. RM22-14-000.
- **July 28, 2023**: FERC issued Order No. 2023 (184 FERC ¶ 61,054)

Overview

- FERC Chairman Phillips described Order No. 2023 as an “historic,” “landmark,” and “watershed” order and one of longest orders in FERC’s history.
- Order No. 2023 requires all public utilities to adopt revised *pro forma* generator interconnection procedures and agreements “to ensure that interconnection customers can interconnect to the transmission system in a reliable, efficient, transparent, and timely manner, and to prevent undue discrimination.”
- Order No. 2023 applies only to Large Generating Facilities, with limited exception.
- FERC describes its reforms as primarily falling into 3 categories:
 - First-Ready, First-Served Cluster Study Process
 - Reforms to Increase the Speed of Interconnection Queue Processing
 - Reforms to Incorporate Technical Advancement to the Interconnection Process

High Level Summary of Key Aspects of FERC's Order No. 2023

Information Access and Informational Interconnection Study

Information Access and Informational Interconnection Study

- **Requires more publicly available interconnection information access prior to projects entering the interconnection queue**
 - Publicly posted information pertaining to generator interconnections via a heatmap and related, prescribed data metrics.
 - Heatmaps must be updated 30 days after completion of each cluster study and cluster re-study.
- **Declines to adopt the NOPR proposal to require transmission providers to offer an interconnection study for prospective Interconnection Customers**

First-Ready, First-Served Cluster Study Process

First-Ready, First-Served Cluster Study Process

- **Requires larger, clustered interconnection studies of numerous proposed generating facilities at the SRIS stage vs. separate studies for each individual generating facility.**
- **By analyzing the transmission system impacts of multiple projects at once, clustered study approach seeks to:**
 - Increase the efficiency of the interconnection process
 - Help minimize delays
 - Improve cost allocation.

First-Ready, First-Served Cluster Study Process, Cont.

- **First-ready, first-served cluster study process with firm deadlines:**
 - Cluster SRIS study (150 calendar days)
 - Includes a Cluster Request Window followed by a Customer Engagement Window and Cluster Study Scoping Meeting
 - Power flow, stability and short circuit analyses
 - Single Cluster Study Report
 - Cluster SRIS re-study (150 calendar days) if there is a change to the composition of the cluster
 - Individualized facilities study (90 or 180 calendar days, depending on the interconnection customer's requested accuracy margin)

More Stringent Financial Commitments and Commercial Readiness Requirements

More Stringent Financial Commitments and Commercial Readiness Requirements

- Subjects interconnection customers to specific requirements, including financial deposits and site control conditions, to enter and remain in the interconnection queue
- Increased study deposits based on size of generating facility (one-time study deposit)

Project MW Size	Deposit
> 20 MW <80MW	\$35,000 + \$1,000/MW
≥ 80 MW < 200 MW	\$150,000
≥ 200 MW	\$250,000

More Stringent Financial Commitments and Commercial Readiness Requirements, cont.

■ Increased Site Control Requirements:

- An Interconnection Customer must demonstrate the following:
 - 90% site control for its proposed generating facility when it submits an interconnection request and
 - 100% site control for its proposed generating facility at execution of facilities study agreement and when executing interconnection agreement (or requesting it be filed unexecuted).
- Limited option of submitting a deposit in lieu of demonstrating site control if qualifying regulatory limitations prohibit the interconnection customer from obtaining site control.

■ Commercial Readiness Deposits

- An Interconnection Customer is required to provide a commercial readiness deposit at the beginning of each study phase (cluster, cluster re-study, facilities study) and upon execution of the Interconnection Agreement (or upon request to file unexecuted).

Reforms to Increase the Speed of Interconnection Queue Processing

Reforms to Increase the Speed of Interconnection Queue Processing

■ Withdrawal Penalties

- Penalty based primarily on study phase when project withdraws

Phase of Withdrawal	Total Withdrawal Penalty (if greater than study deposit)
Initial Cluster Study	2 times study costs
Cluster Restudy	5% of network upgrade costs
Facilities Study	10% of network upgrade costs
After execution of (or request to file unexecuted) LGIA	20% of network upgrade costs

- Exemptions from withdrawal penalties under certain circumstances (e.g., increase in upgrade costs from prior study report)

Reforms to Increase the Speed of Interconnection Queue Processing

- **The final rule imposes firm deadlines and establishes penalties if transmission providers fail to complete interconnection studies on time.**
 - Eliminates the Reasonable Efforts standard for performance of LGIP interconnecting studies.
 - Imposes fines on transmission providers for each business day the study is delayed ranging from \$1,000/day to \$2,500/day.
 - Transmission providers may appeal their penalties at the Commission.
- **The final rule establishes a detailed affected systems study process, including uniform modeling standards and pro forma affected system agreements.**

Fines on Transmission Providers for Study Delays

Study	Study Period	Penalty for Delay
Cluster Study	150 calendar days	\$1,000 per business day
Cluster Re-Study	150 calendar days	\$2,000 per business day
Affected System Study	150 calendar days	\$2,000 per business day
Individual Facilities Study	(+/- 10% estimate) 90 calendar days (+/- 20% estimate) 180 calendar days	\$2,500 per business day

Revisions to the Affected Systems Study Process

- **Adopts a more structured process including:**
 - Transmission Provider's initial identification and notification of Affected Systems,
 - Affected System Study scoping meeting,
 - Affected System process (consisting of power flow, stability, and short circuit analyses),
 - Rules for cost allocation using proportional impact method,
 - Affected System Study results and assessment, and
 - Financial penalties assessment for delays to Affected System Study.
- **Establishes a *pro forma* Affected System Study agreement and a *pro forma* Affected Systems facilities construction agreement**

Reforms to Incorporate Technical Advancement into the Interconnection Process

Reforms to Incorporate Technical Advancements to the Interconnection Process

- Requires transmission providers to allow more than one generating facility to co-locate on a shared site behind a single point of interconnection and share a single interconnection request
- Allows interconnection customers to add a generating facility to an existing interconnection request under certain circumstances without such a request being automatically deemed a material modification
- Requires transmission providers to allow Interconnection Customers to access the surplus interconnection service process once original Interconnection Customer has an executed LGIA (or requests it be filed unexecuted)

Reforms to Incorporate Technical Advancements to the Interconnection Process

- **Requires transmission providers to use operating assumptions in interconnection studies that reflect the proposed charging behavior of electric storage resources, unless good utility practice requires use of different operating instructions.**
 - *E.g.*, whether the interconnecting resource will or will not charge during peak load condition
- **Requires transmission provider to evaluate alternative transmission technologies in its cluster studies in the LGIP and in the feasibility study and system impact study in the SGIP.**
 - These technologies include static synchronous compensators, static VAR compensators, advanced power flow control devices, transmission switching, synchronous condensers, voltage source converters, advanced conductors, and tower lifting.
 - Declines to include dynamic line ratings in the list of alternative transmission technologies to be evaluated
- **Establishes modeling and performance standards for non-synchronous generating facilities**

Transition Process

Transition Process

- **Three options that can be exercised depending on the progress of the interconnection request:**
 - 1) Interconnection customers that have been tendered facilities study agreements by the transmission provider may proceed to a transitional serial study (a facilities study) or may opt to move to the transitional cluster study.
 - 2) Interconnection customers in the interconnection queue that have not been tendered a facilities study agreement (have not completed the system impact study) will be eligible for the transitional cluster study.
 - 3) All other interconnection customers will be subject to the new interconnection procedures.
- **Compliance filing to indicate number of calendar days after conclusion of transition study that first standard cluster study will begin.**

Next Steps

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- Compliance filings are due 90 days after publication of the final rule in the Federal Register.
- At an upcoming TPAS meeting, NYISO plans to discuss the Order in more detail.

Questions?

Roles of the NYISO

- **Reliable operation of the bulk electricity grid**
 - Managing the flow of power on 11,000 circuit-miles of transmission lines from hundreds of generating units
- **Administration of open and competitive wholesale electricity markets**
 - Bringing together buyers and sellers of energy and related products and services
- **Planning for New York's energy future**
 - Assessing needs over a 10-year horizon and evaluating projects proposed to meet those needs
- **Advancing the technological infrastructure of the electric system**
 - Developing and deploying information technology and tools to make the grid smarter

Our Mission & Vision



Mission

Ensure power system reliability and competitive markets for New York in a clean energy future



Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation