

# Order 2023 - Improvements to Generator Interconnection Procedures and Agreements

Transition Process – Detailed Review

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#### **Presentation Overview**

- This presentation outlines the transition process prescribed by FERC Order No. 2023, detailing:
  - Key dates
  - Interconnection Request (IR) categories and eligibility requirements
  - Transitional Serial (Facilities) Study process
  - Transitional Cluster Study process
- The transition process will begin promptly (30 days after compliance filing – i.e. in Q1 2024) and will be the most impactful for active projects in the ISO interconnection queue
- The transition process will include several elements of the cluster design moving forward
  - Single cluster for proposed energy and capacity interconnections
  - Cost allocation for both study costs and upgrade costs

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#### **Transition Process**

- Under Order 2023, the ISO will implement the swift commencement of a transitional process
- Interconnection Customers will need to make decisions shortly after the ISO files its compliance package regarding how they plan to proceed
- Depending on eligibility, which will be discussed in detail later in this presentation, there are three options:
  - 1. Transitional Serial Interconnection Facilities Study
  - 2. Transitional Cluster Study
  - 3. Withdrawal
- Eligibility and categorization of existing interconnection customers will be reviewed and discussed in the following section

#### **TRANSITION PROCESS**

Key Dates, IR Categories, and Eligibility

#### **Transition Process – Key Dates**

#### "Eligibility Date"

- 30 days after the filing date
  - 30 days after December 5, 2023\* i.e. January 4, 2024
- The status of an IR on this date will determine how the IR will proceed through the transition process

#### "Effective Date"

- On the Commission-approved effective date of the transmission provider's compliance filing with the final rule, the transmission provider will commence the transition study process
- ISO is proposing an Effective Date of March 1, 2024
  - To allow for the completion of the post-FCA 18 restudy of projects that obtained Capacity Supply Obligations (CSO)
    - Further described later in the presentation
  - Transitional study application material is due 60 days after this date –
     whereupon the transitional studies would begin

<sup>\*</sup>Assumes no extensions to the Compliance Deadline

#### **Transition Process – Eligible Queue Positions**

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1	Any Interconnection Customer assigned a Queue Position as of thirty (30) Calendar Days after {December 5, 2023*} (the filing date of this LGIP) shall retain that Queue Position subject to the requirements in Sections 5.1.1.1 and 5.1.1.2 of this LGIP.	<ul> <li>IRs may be submitted until close of business on January 4, 2024</li> <li>After this date, no IRs can be submitted until the opening of the first "regular" Cluster Entry Window – anticipated in mid 2025</li> <li>Only IRs that are deemed valid as of January 4, 2024 may proceed in the transition process</li> </ul>

<sup>\*</sup>Assumes no extensions to the Compliance Deadline

# Transition Process – Eligible Queue Positions, continued

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1, Cont.	Any Interconnection Customer that fails to meet these requirements shall have its Interconnection Request deemed withdrawn by Transmission Provider pursuant to Section 3.7 of this LGIP. In such case, Transmission Provider shall not assess the Interconnection Customer any Withdrawal Penalty.	<ul> <li>IRs that are not deemed valid as-of the January 4, 2024* eligibility date will be withdrawn (not be assigned a queue position) without further opportunity to cure</li> <li>Any unspent portions of deposits (including the \$50,000 IR deposit) will be returned to the Interconnection Customer</li> </ul>

<sup>\*</sup>Assumes no extensions to the Compliance Deadline

# Transition Process – Eligible Queue Positions, continued

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1, Cont.	Any Interconnection Customer that has received a final Interconnection Facilities Study Report before the commencement of the studies under the transition process set forth in this section shall be tendered an LGIA pursuant to Section 11 of this LGIP, and shall not be required to enter this transition process.	<ul> <li>These IRs proceed to the LGIA negotiation phase         <ul> <li>Note that the IA would be based on the new pro forma which includes readiness deposits</li> </ul> </li> <li>Because the Facilities Study is typically waived in New England, ISO will propose that any IR with a completed System Impact Study as-of January 4, 2024* may elect to waive the Transitional Serial (Facilities) Study and proceed to the LGIA phase in this way</li> <li>However, as discussed later, the IR may wish to proceed to the Transitional Cluster Study to pursue capacity interconnection service</li> </ul>

<sup>\*</sup>Assumes no extensions to the Compliance Deadline

# **Transition Process – IR Categories**

Interconnection Process Status (as-of the Eligibility Date)	Capacity Interconnection Service Status (as-of completion of FCA 18)	Transition Process
Executed LGIA	Complete (obtained CSO for the full expected amount of capacity interconnection service)	No transition process
Executed LGIA	Not Complete	IC may elect to enter the Transitional Cluster Study for the capacity interconnection component

Interconnection Process Status (as-of the Eligibility Date)	Capacity Interconnection Service Status (as-of completion of FCA 18)	Transition Process
Negotiating LGIA (Completed Facilities Study or Completed System Impact Study & waived the Facilities Study)	Complete (obtained CSO for the full expected amount of capacity interconnection service)	Draft IA will be updated to the new pro forma version (includes readiness deposit)
Negotiating LGIA (Completed Facilities Study or Completed System Impact Study & waived the Facilities Study)	Not Complete	Draft IA will be updated to the new pro forma version (includes readiness deposit), or, IC may elect to enter the Transitional Cluster Study for the capacity interconnection component

Interconnection Process Status (as-of the Eligibility Date)	Capacity Interconnection Service Status (as-of completion of FCA 18)	Transition Process
Facility Study in-process	Complete (obtained CSO for the full expected amount of capacity interconnection service)	Will be issued a Transitional Serial Interconnection Facilities Study Agreement (includes readiness deposit)
Facility Study in-process	Not Complete	Will be issued a Transitional Serial Interconnection Facilities Study Agreement (includes readiness deposit)  IC may elect to not proceed with the Facilities Study, but instead enter the Transitional
		Cluster Study for the capacity interconnection component

Interconnection Process Status (as-of the Eligibility Date)	Capacity Interconnection Service Status (as-of completion of FCA 18)	Transition Process
System Impact Study (SIS) not yet complete or Feasibility Study (FS) in-process	Complete (obtained CSO for the full expected amount of capacity interconnection service)	IC must proceed to the Transitional Cluster Study to complete the (NCIS) interconnection process
System Impact Study (SIS) not yet complete or Feasibility Study (FS) in-process	Not Complete	Serial SIS or FS will terminate  IC must proceed to the Transitional Cluster Study or withdraw

Interconnection Process Status (as-of the Eligibility Date)	Capacity Interconnection Service Status (as-of completion of FCA 18)	Transition Process
No SIS or FS yet started	Complete (obtained CSO for the full expected amount of capacity interconnection service)	IC must proceed to the Transitional Cluster Study to complete the (NCIS) interconnection process
No SIS or FS yet started	Not Complete	IC must proceed to the Transitional Cluster Study or withdraw

#### **TRANSITION PROCESS**

Transitional Serial Interconnection Facilities Study

#### **Transitional Serial (Facilities) Study**

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.1	An Interconnection Customer that has been tendered an Interconnection Facilities Study Agreement as of thirty (30) Calendar Days after {December 5, 2023} (the filing date of this LGIP) may opt to proceed with an Interconnection Facilities Study.  Transmission Provider shall tender each eligible Interconnection Customer a Transitional Serial Interconnection Facilities Study Agreement, in the form of Appendix 8 to this LGIP, no later than the Commissionapproved effective date of this LGIP.	By the <u>effective date</u> *, the ISO will issue Transitional Serial Interconnection Facilities Study Agreements to these ICs

<sup>\*</sup>Currently proposing March 1, 2024

#### Transitional Serial (Facilities) Study, continued

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.1, cont.	Transmission Provider shall proceed with the Interconnection Facilities Study, provided that the Interconnection Customer: (1) meets each of the following requirements; and (2) executes the Transitional Serial Interconnection Facilities Study Agreement within sixty (60) Calendar Days of the Commission-approved effective date of this LGIP.  If an eligible Interconnection Customer does not meet these requirements, its Interconnection Request shall be deemed withdrawn without penalty.	<ul> <li>IC has 60 days to execute the agreement and meet the other requirements (described below)</li> <li>If the IC does not meet the requirements within 60 days, the IR is deemed withdrawn</li> <li>No penalty is incurred</li> <li>All unspent portions of deposits (including the \$50,000 IR deposit would be returned)</li> </ul>

### Transitional Serial (Facilities) Study, continued

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.1, cont.	Transmission Provider must commence the Transitional Serial Interconnection Facilities Study at the conclusion of this sixty (60) Calendar Day period.  Transitional Serial Interconnection Facilities Study costs shall be allocated according to the method described in Section 13.3 of this LGIP.	<ul> <li>The Transitional Serial Interconnection         Facilities Study will commence for all         projects that meet the requirements</li> <li>The IC will pay the study costs (individual         serial studies)</li> </ul>

#### Transitional Serial (Facilities) Study, continued

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.1, cont.	All of the following must be included when an Interconnection Customer returns the Transitional Serial Interconnection Facilities Study Agreement:  A deposit equal to one hundred percent (100%) of the costs identified for Transmission Provider's Interconnection Facilities and Network Upgrades in Interconnection Customer's system impact study report.	<ul> <li>Readiness deposit required equal to the cost estimate for the upgrades (Network Upgrades and Transmission Providers Interconnection Facilities)</li> </ul>

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.1, cont.	If Interconnection Customer does not withdraw, the deposit shall be trued up to actual costs once they are known and applied to future construction costs described in Interconnection Customer's eventual LGIA. Any amounts in excess of the actual construction costs shall be returned to Interconnection Customer within thirty (30) Calendar Days of the issuance of a final invoice for construction costs, in accordance with Article 12.2 of the pro forma LGIA.	The deposit offsets actual construction costs

LGIP Tariff Section	<i>Pro Forma</i> Tariff Change	Discussion of Change
5.1.1.1, cont.	If Interconnection Customer withdraws or otherwise does not reach Commercial Operation, Transmission Provider shall refund the remaining deposit after the final invoice for study costs and Withdrawal Penalty is settled.  The deposit shall be in the form of an irrevocable letter of credit or cash where cash deposits shall be treated according to Section 3.7 of this LGIP.  Exclusive Site Control for 100% of the proposed Generating Facility.	<ul> <li>If the IC does not complete the project, a withdrawal penalty is assessed and subtracted from the readiness deposit</li> <li>Site control demonstration is required</li> <li>The ISO is currently reviewing approaches to Letters Of Credit (LOC) versus cash deposits         <ul> <li>The ISO has not previously accepted LOCs for interconnection deposits</li> </ul> </li> </ul>

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.1, cont.	Transmission Provider shall conduct each Transitional Serial Interconnection Facilities Study and issue the associated Transitional Serial Interconnection Facilities Study Report within one hundred fifty (150) Calendar Days of the Commission-approved effective date of this LGIP.	<ul> <li>The Transmission Owner must complete the Facilities Study in 90 days (150 – 60)</li> </ul>

LGIP Tariff Section	Pro Formα Tariff Change	Discussion of Change
5.1.1.1, cont.	After Transmission Provider issues each Transitional Interconnection Facilities Study Report, Interconnection Customer shall proceed pursuant to Section 11 of this LGIP. If Interconnection Customer withdraws its Interconnection Request or if Interconnection Customer's Generating Facility otherwise does not reach Commercial Operation, a Withdrawal Penalty shall be imposed on Interconnection Customer equal to nine (9) times Interconnection Customer's total study cost incurred since entering the Transmission Provider's interconnection queue (including the cost of studies conducted under Section 5 of this LGIP).	<ul> <li>If the Generating Facility subject to the study does not reach commercial operation, a withdrawal penalty equal to nine times the total study costs is assessed against the readiness deposit provided with the Transitional Serial Interconnection Facilities Study Agreement</li> </ul>

#### **TRANSITION PROCESS**

Transitional Cluster Study

### **Transitional Cluster Study**

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2	An Interconnection Customer with an assigned Queue Position as of thirty (30) Calendar Days after {December 5, 2023} (the filing date of this LGIP) may opt to proceed with a Transitional Cluster Study.  Transmission Provider shall tender each eligible Interconnection Customer a Transitional Cluster Study Agreement, in the form of Appendix 7 to this LGIP, no later than the Commission-approved effective date of this LGIP.	By the <u>effective date</u> *, the ISO will issue Transitional Cluster Study Agreements to these ICs

<sup>\*</sup>Currently proposing March 1, 2024

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2, Cont.	Transmission Provider shall proceed with the Transitional Cluster Study that includes each Interconnection Customer that: (1) meets each of the following requirements listed as (1) – (3) in this section; and (2) executes the Transitional Cluster Study Agreement within sixty (60) Calendar Days of the Commissionapproved effective date of this LGIP.	<ul> <li>The study will proceed for those projects that meet the entry requirements (items (1) – (3) are described on the following slides)</li> </ul>

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2, Cont.	All Interconnection Requests that enter the Transitional Cluster Study shall be considered to have an equal Queue Position that is lower than Interconnection Customer(s) proceeding with Transitional Serial Interconnection Facilities Study.	<ul> <li>All IRs in the cluster will have equal Queue Positions</li> <li>The new cluster upgrade cost allocation rules required by Order 2023 will apply</li> <li>Planning Procedure 5-6 will need to be updated to describe how to perform Network Capability Interconnection Standard studies for projects with equal queue position (conforming change – after compliance filing is approved)</li> </ul>

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2, Cont.	If an eligible Interconnection Customer does not meet these requirements, its Interconnection Request shall be deemed withdrawn without penalty.  Transmission Provider must commence the Transitional Cluster Study at the conclusion of this sixty (60) Calendar Day period.	<ul> <li>IC has 60 days to execute the agreement and meet the other requirements (described below)</li> <li>If the IC does not meet the requirements within 60 days, the IR is deemed withdrawn         <ul> <li>No penalty is incurred</li> <li>All unspent portions of deposits (including the \$50,000 IR deposit would be returned)</li> </ul> </li> <li>The Transitional Cluster Study will commence for all projects that meet the requirements</li> </ul>

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2, Cont.	All identified Transmission Provider's Interconnection Facilities and Network Upgrade costs shall be allocated according to Section 4.2.1 of this LGIP. Transitional Cluster Study costs shall be allocated according to the method described in Section 13.3 of this LGIP.	The new Order 2023 cluster upgrade cost allocation rules and cluster study cost allocation rules will apply.

# **Cluster Study Cost Allocation**

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
13.3	In the event an Interconnection Customer withdraws after the commencement of the Cluster Study, Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection Studies. The costs of any interconnection study conducted on a clustered basis shall be allocated among each Interconnection Customer within the cluster as follows: {Transmission Provider shall include in this section a description of how the cost of any clustered interconnection study will be allocated.}.	<ul> <li>ISO required to propose a study cost allocation methodology</li> <li>FERC gave some guidance in the Order (next page)</li> </ul>

# **Cluster Study Cost Allocation, continued**

Order 2023 Paragraph	Order 2023 Extract	ISO Proposal
416	We adopt the NOPR proposal, with modification, to revise section 13.3 (Obligation for Study Costs) of the pro forma LGIP to allow each transmission provider to propose its own study cost allocation ratio for allocating the shared costs of cluster studies between a per capita basis and pro rata by MW, provided that: between 10% and 50% of study costs must be allocated on a per capita basis, with the remainder (between 90% and 50%) allocated pro rata by MW.	<ul> <li>ISO is proposing 50% of study costs must be allocated on a per capita basis, with the remainder (50%) allocated pro rata by MW</li> <li>ISO's experience is that project size is not a reliable predictor of study effort</li> <li>Effort is also driven by the quality of the equipment models and the location of the proposed interconnection</li> </ul>

# **Cluster Upgrade Cost Allocation**

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
4.2.1	For Network Upgrades identified in Cluster Studies, Transmission Provider shall calculate each Interconnection Customer's share of the costs as follows:  (a) Substation Network Upgrades, including all switching stations, shall be allocated per capita to each Generating Facility interconnecting at the same substation.	<ul> <li>Allocation under this section only applies to a project with a POI (at any voltage level) that is located at the substation in question</li> <li>Applies to the breakers and bus positions associated with achieving the interconnection to the substation (not to lines, statcoms etc. that are required to be added to connect to the substation)</li> </ul>

#### Cluster Upgrade Cost Allocation, continued

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
4.2.1	(b) System Network Upgrades shall be allocated based on the proportional impact of each individual Generating Facility in the Cluster Study on the need for a specific System Network Upgrade. {Transmission Provider shall include in this section a description of how cost for each facility type designated as a network upgrade will be allocated using its proportional impact method.}	<ul> <li>For transmission line and transformer upgrades, ISO will propose a distribution factor methodology, similar to ISO's existing clustering rules</li> <li>For upgrades such as static reactive devices and dynamic reactive devices, ISO will propose a per-MW methodology, similar to ISO's existing clustering rules</li> </ul>

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2, Cont.	Interconnection Customer may make a one-time extension to its requested Commercial Operation Date upon entry into the Transitional Cluster Study, where any such extension shall not result in a Commercial Operation Date later than December 31, 2027.	One time IC option.

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2, Cont.	All of the following must be included when an Interconnection Customer returns the Transitional Cluster Study Agreement:  (1) A selection of either Network Resource Interconnection Service or Capacity Network Resource Interconnection Service.  Exclusive Site Control for 100% of the proposed Generating Facility.	<ul> <li>The Transitional Cluster Study (and all subsequent clusters) will evaluate both NRIS and CNRIS requests.</li> <li>IRs that, by the eligibility date, have completed the NRIS component of the system impact study may request to enter the Transitional Cluster to be studied for CNRIS         <ul> <li>The study will identify the IR's cost allocation associated with achieving CNRIS for the requested MW amount</li> </ul> </li> </ul>

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2, Cont.	A deposit of five million dollars (\$5,000,000) in the form of an irrevocable letter of credit or cash where cash deposits will be treated according to Section 3.7 of this LGIP.	<ul> <li>\$5 Million readiness deposit required to enter the Transitional Cluster Study</li> <li>The ISO is currently reviewing approaches to Letters Of Credit (LOC) versus cash deposits         <ul> <li>The ISO has not previously accepted LOCs for interconnection deposits</li> </ul> </li> </ul>

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2, Cont.	If Interconnection Customer does not withdraw, the deposit shall be reconciled with and applied towards future construction costs described in the LGIA. Any amounts in excess of the actual construction costs shall be returned to Interconnection Customer within thirty (30) Calendar Days of the issuance of a final invoice for construction costs, in accordance with Article 12.2 of the pro forma LGIA.	The readiness deposit offsets actual construction costs

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2, Cont.	If Interconnection Customer withdraws or otherwise does not reach Commercial Operation, Transmission Provider must refund the remaining deposit once the final invoice for study costs and Withdrawal Penalty is settled.	<ul> <li>A withdrawal penalty is subtracted from the \$5 Million readiness deposit for any Generating Facility that does not achieve commercial operation</li> </ul>

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2, Cont.	Transmission Provider shall conduct the Transitional Cluster Study and issue both an associated interim Transitional Cluster Study Report and an associated final Transitional Cluster Study Report.	An interim and a final study report are required

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2, Cont.	<ul> <li>The interim Transitional Cluster Study Report shall provide the following information:</li> <li>identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;</li> <li>identification of any thermal overload or voltage limit violations resulting from the interconnection;</li> <li>identification of any instability or inadequately damped response to system disturbances resulting from the interconnection; and</li> <li>Transmission Provider's Interconnection Facilities and Network Upgrades that are expected to be required as a result of the Interconnection Request(s) and a non-binding, good faith estimate of cost responsibility and a non-binding, good faith estimated time to construct.</li> </ul>	Interim study report requirements

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2, Cont.	In addition to the information provided in the interim Transitional Cluster Study Report, the final Transitional Cluster Study Report shall provide a description of, estimated cost of, and schedule for construction of the Transmission Provider's Interconnection Facilities and Network Upgrades required to interconnect the Generating Facility to the Transmission System that resolve issues identified in the interim Transitional Cluster Study Report.	Final study report requirements

LGIP Tariff Section	Pro Formα Tariff Change	Discussion of Change
5.1.1.2, Cont.	The interim and final Transitional Cluster Study Reports shall be issued within three hundred (300) and three hundred sixty (360) Calendar Days of the Commissionapproved effective date of this LGIP, respectively, and shall be posted on Transmission Provider's OASIS consistent with the posting of other study results pursuant to Section 3.5.1 of this LGIP.	Report timing requirements

LGIP Tariff Section	Pro Forma Tariff Change	Discussion of Change
5.1.1.2, Cont.	Interconnection Customer shall have thirty (30) Calendar Days to comment on the interim Transitional Cluster Study Report, once it has been received.  After Transmission Provider issues the final Transitional Cluster Study Report, Interconnection Customer shall proceed pursuant to Section 11 of this LGIP	<ul> <li>IC has 30 days to comment on the interim study report</li> <li>After completion of the final study report, the process proceeds to the Interconnection Agreement phase</li> </ul>

LGIP Tariff Section	Pro Formα Tariff Change	Discussion of Change
5.1.1.2, Cont.	If Interconnection Customer withdraws its Interconnection Request or if Interconnection Customer's Generating Facility otherwise does not reach Commercial Operation, a Withdrawal Penalty will be imposed om Interconnection Customer equal to nine (9) times Interconnection Customer's total study cost incurred since entering the Transmission Provider's interconnection queue (including the cost of studies conducted under Section 5 of this LGIP).	<ul> <li>If the Generating Facility associated with the IR does not achieve commercial operation, a withdrawal penalty equal to nine times the total study costs is assessed against the readiness deposit provided with the Transitional Cluster Study Agreement</li> </ul>

#### **On-Going Cluster Studies**

- ISO's existing rules include clustering provisions when certain circumstances are triggered
  - Including the identification of Cluster Enabling Transmission Upgrades
- Two clustering efforts are currently underway
  - Third Maine Regional Integration Study
  - Cape Cod Cluster System Impact Study
- ISO will propose that these clustering efforts can continue through the transition process in a manner that is consistent with the current ISO clustering design

# Questions



