



ISO-NE Responses to New Process Related Questions Raised in the Context of Order No. 2023 Compliance Discussions

January 18, 2024

General Notes Applicable to the ISO Responses

Note there is overlap between many of the questions raised on the context of Order No. 2023 received by the ISO. Not all questions received by the ISO are documented below, but the questions and answers documented below attempt to provide responses to all received questions.

The responses in this document reflect the ISO's views of and expected compliance with Order No. 2023 at the time of its publication. These ISO views and proposals may change before the ISO presents its final Order No. 2023 compliance proposal. Participants should continually check for updates, follow the applicable stakeholder committee discussions and review the final version of the rules.

Questions and Responses

Q1: Will there be two different heat maps: one for NRIS and one for CNRIS? Will ISO-NE require that customers obtain CEII access to view the heat map(s)? Will Transmission Owners have a role in the creating and maintaining the heat map(s)?

Response: Consistent with the requirements of Order No. 2023, which requires the heatmap to approximate capacity interconnection service and not energy interconnection service, ISO-NE will propose in the compliance filing that its heatmap will approximate CNR Interconnection Service. CEII access will not be required. ISO-NE is responsible for the creation and maintenance of the heat map. Transmission Owners will be responsible for providing ISO-NE with any supporting data, as needed.

Q2: Will ISO-NE comply with Order 2023 by only allowing IR submittal during the Cluster Request Window?

Response: Yes, ISO-NE will only allow Interconnection Request submittal during the Cluster Request Window, see proposed Section 3.4.2 of the LGIP.

Q3: When is the technical data for the cluster study due? Will there be time for ISO-NE to review the data prior to the cluster study start?

Response: All data and models included in Appendix 1 of the IR and its associated attachments must be provided with the Interconnection Request during the Cluster Request Window (CRW), see Section 3.4.2 of the LGIP. In order for ISO-NE to properly review and give the customer the full time to cure any deficiencies, it is recommended to submit IR and data at least 15 business days prior to close of CRW. ISO-NE will have five (5) Business Days to review the data and the Interconnection Customer will have up to ten (10) Business Days to cure any data deficiencies, but no later than the close of the Cluster Request Window (Section 3.4.4 of LGIP).

Q4: Will Cluster Request Windows open the same time every year, or will they depend on the stage that the previous cluster cycle is in? Will Cluster Request Windows be delayed by additional restudies? Will customers have access to an updated heat map, cluster (re)study results, and base case from the most recent cluster prior to entering the next cluster study? Will ISO-NE allow customers to update their technical data prior to the cluster study start if the cluster study start is delayed by a previous cluster needing a restudy?

Response: The Initial Cluster Request Window will open sixty (60) Calendar Days after the conclusion of the Transitional Study process. Subsequent Cluster Request Windows will open thirty (30) Calendar Days after ISO-NE issues Facilities Study Agreements and/or draft Interconnection Agreements (if the Facilities Study is waived) to all Interconnection Customers in the previous Cluster Study. ISO-NE will provide advance notice on its public website when each Cluster Request Window will open. This allows for the new cluster to have access to updated heat map, Cluster Study and Cluster Restudy results (if applicable), and the most recent Base Case. Customers will be required to submit all required data and models at the time of their Interconnection Request submission.

Q5: Can customers submit a separate IR for NR Interconnection Service and CNR Interconnection Service for the same project in the same cluster?

Response: No, at the time of submission customers must request either CNR Interconnection Service or NR Interconnection Service under Section 3.2 of the LGIP.

Q6: Does Order 2023 require the ISO-NE to maintain acreage requirements for infrastructure (i.e. substations, line breaks by voltage or breaker type)? Will ISO-NE's technology specific acreage requirements allow for flexibility where specific proposals may vary from typical acreage requirements?

Response: ISO-NE will post acreage requirements for Site Control for Generating Facilities on its website. ISO-NE will allow for flexibility where specific proposals may vary from typical acreage requirements, provided the Interconnection Customer explains the variance.

Q7: Are customers required to submit the signed site control between themselves and the landowner or must it be publically recorded at the local registry of deeds before submission?

Response: ISO-NE will accept signed documentation establishing that the customer (not an Affiliate or Parent Company) has Site Control. The definition of Site Control can be found in Section I of the LGIP.

Q8: Will ISO-NE require proof of site control for a generator lead line? Will ISO-NE require 100% site control of interconnection customer interconnection facilities, including gen lead tie lines by the time the IA executed?

Response: Site Control for the generator lead line is not required with the Interconnection Request. Siting approval for Interconnection Facilities is a requirement under the LGIA Appendix B Milestones, on a date agreed to by IC & ITO. 100% Site Control for the Generating Facility is required under Section 3.4.2 (iv) of the LGIP.

Q9: If an Interconnection Request includes an HVDC interconnection, will ISO-NE require the same site control for the generator's HVDC converter that would be required if the HVDC line had been proposed separately as an ETU?

Response: ISO-NE will not require site control for the generator's HVDC converter.

Q10: Will ISO-NE require Transmission Owners and Affected Parties to attend the cluster-wide Scoping Meeting? Will there be a penalty if Transmission Owners do not attend the cluster-wide Scoping Meeting? Will Affected Parties (such as various municipal departments) maintain their current level of involvement in studies?

Response: Yes, ISO-NE will require Transmission Owners to attend the cluster-wide Scoping Meeting and will invite Internal Affected Parties (to the extent they are able to be identified at this stage of the process), which will be defined under Section 1 of the LGIP. Internal Affected Parties will maintain their current level of involvement in studies. No penalties will be imposed on Transmission Owners who do not attend.

Q11: How will project specific CEII information be protected during the cluster-wide Scoping Meeting? How does ISO-NE plan to ensure all customers have the opportunity to have their questions answered during the cluster-wide Scoping Meeting? Will there be a system for customers to submit their questions where ISO-NE would then post written answers for all customers in the cluster to see?

Response: Project specific CEII will be protected by ensuring all parties attending the Scoping Meeting 1) have CEII clearance, and 2) have signed a non-disclosure agreement (NDA) prior to the group Cluster Study Scoping Meeting. The NDA will provide confidentiality of commercially sensitive information pertaining to other Interconnection Customers. ISO-NE will determine the format of Scoping Meetings prior to the opening of the first Cluster Request Window.

Q12: Will ISO-NE allow an alternative POI that is electrically proximate to be discussed during the customer engagement window and included in the cluster study agreement? Is ISO-NE interpreting Order 2023 language to require a more specific POI? (Especially requiring mileage and location of where the project is tapping a line.)

Response: ISO-NE will allow for an alternative POI to be discussed during the Customer Engagement Window. A definitive POI must be selected for study purposes by the execution of the Cluster Study Agreement. (See Section 3.1 of the LGIP).

Q13: Will ISO-NE accept cash or Letters of Credit during the new cluster study process?

Response: ISO-NE will accept a Letter of Credit or cash for the Commercial Readiness Deposit, but will only accept cash for the Interconnection Request deposit, study deposits, and any deposit in lieu of Site Control as identified in Section 3.4.2 of the LGIP.

Q14: Will the cluster study deposit of \$250,000 cover the costs of the cluster study and any potential cluster restudies? Will customers be invoiced during the studies if costs exceed the study deposit?

Response: Under to Section 3.4.1.1 of the new LGIP, the customer will submit a refundable study deposit of \$250,000. Pursuant to Sections 7.2 and 13.3 of the new LGIP, the customer will be invoiced for any costs that exceed the study deposit.

Q15: ISO-NE seeks a uniform LGIP study deposit of \$250k, under an Independent Entity Variation. The Order contemplates a study deposit which scales based on MW, and a commercial readiness deposit of 200% the study deposit. Will the ISO-NE LGIP commercial readiness deposit follow FERC's original intention, and be scaled based on project MW? If not, how will it be calculated?

Response: Under Section 3.4.2 of the LGIP, ISO-NE will calculate the initial commercial readiness deposit as two times the study deposit. Since the study deposit is a uniform \$250,000 for Large Generators, the initial commercial readiness deposit is a uniform \$500,000 for Large Generators.

Q16: Will ISO-NE revise the required cluster study deposit amount every three years to account for the current average study cost?

Response: ISO-NE intends to complete multiple Cluster Studies before reassessing the study deposit amounts in order to ensure a sufficient sample size of data. Any proposed changes will take place through a Tariff amendment, and therefore, stakeholder engagement.

Q17: Will ISO-NE publicly post the list of queued projects that will participate in the cluster (re)studies?

Response: ISO-NE Public Queue will list the remaining active projects in the Cluster as well as the projects that have withdrawn.

Q18: If a significant infrastructure investment is identified during the cluster study, would ISO-NE provide advance notice to the affected cluster participants and give them the opportunity to reconfigure project characteristics or adjust sizes (up or down) to their projects to minimize or avert the upgrade?

Response: No, IRs cannot be reduced or reconfigured for the purpose of avoiding or reducing upgrades. See Section 4.2.1 of LGIP with regard to triggers for the ISO-NE to undertake a CRPS.

Q19: What is meant by the requirement for a validated EMT model? What level of flexibility would be afforded to offshore wind projects that struggle to provide validated EMT models? Will ISO-NE continue to require EMT models from certain synchronous generators? What portion of the cluster study timeline is taken up by EMT analysis? Does it usually result in new Network Upgrades?

Response: ISO-NE Planning Procedure PP5-6 describes the requirements needed for a validated EMT model. Order No. 2023 further explains in P 1675 that equipment behavior must be consistent with model behavior. Customers should be screening equipment manufacturers to ensure they can meet the model requirements. Yes, ISO-NE will continue to require EMT models from certain synchronous generators. The EMT portion is about 60 days if no issues arise. If issues arise, the EMT portion can become very time consuming and lead to Network Upgrades.

Q20: Will ISO-NE comply with Order 2023 by having a cluster study duration of 150 Calendar Days? Will ISO-NE take the full 150 Calendar Days to complete the restudy every time? Can there be a second restudy? Is there a limit to the amount of restudies?

Response: ISO-NE is proposing a 270 Calendar Day Cluster Study timeline and a 90 Calendar Day Cluster Restudy timeline. More than one Cluster Restudy could take place depending on individual cluster circumstances. See timeline in December 21, 2023 [Presentation](#).

Q21: Will ISO-NE publically provide a schedule of activities that occur during a cluster study, including a timeline in a Gantt style chart?

Response: The project status will be available in the public queue via IRTT, which is the same information available publically today. ICs are able to see more of an anticipated completion date in IRTT, but this information is not available to the public. See overall cluster process timeline in December 21, 2023 [Presentation](#).

Q22: Can ISO-NE provide more transparency in regards to cluster study methodologies as well as cost allocation methodologies so customers can try to predict whether they should enter the cluster?

Response: Proposed Section 7.3 of the SGIP, LGIP and ETU IP describe the scope of Cluster Studies. As stated previously, updated Heat Maps will be available for customers prior to the opening of a Cluster Request Window. Schedule 11 contains the rules related to cost allocation for upgrades.

Q23: What will the evaluation of the GETs look like? Will there be a defined basis for alternative transmission technologies to be considered?

Response: ISO-NE is proposing to adopt the Tariff language required by the Order. ISO-NE will be adding implementation details to the Planning Procedures.

Q24: What is ISO-NE's proposal for operating assumptions for storage?

Response: See [presentations from 10/17 TC](#) and [12/21 TC](#).

Q25: How will ISO-NE handle redispatch in the NRIS portion of the new cluster study process?

Response: Redispatch will be similar to how this is conducted under the current rules. ISO-NE will be adding implementation details to the Planning Procedures.

Q26: Will cluster study costs be allocated by sub-clusters or the entire region? How will NR-only, NR and CNR, and CNR-only designation affect study cost allocation?

Response: ISO-NE is proposing to establish a uniform study deposit consistent with existing requirement. See December 21st TC presentation. Costs will be allocated across the entire cluster on a 50% per MW and 50% per capita basis.

Q27: Will upgrade costs only be applied to the particular projects that triggered them, or will they be spread evenly among all projects in a cluster? How will ISO-NE assess applicable costs if the triggering projects have differing technologies/models that have different effects on the upgrade? What is ISO-NE proposing for allocating short circuit upgrade costs? How will cost allocation work if there is an upgrade that is required for one or more resources' NR interconnections as well as one or more resources' CNR interconnections (and these may be a different set of resources or it may be the same set of resources but with a different ratio of NR to CNR service requested)?

Response: The cost of Substation Network Upgrades must be initially allocated only to those interconnection customers seeking to interconnect at the same substation and will be allocated per capita to each Generating Facility or ETU, while the cost of System Network Upgrades for all Interconnection Customers in a cluster must be initially allocated based on the Distribution Factor Cost Allocation Methodology as further described in Schedule 11(5) (i) & (iii). There will not be any differentiation in the rules based on technologies, models used in the study, or if they are related to Steady State etc.

Q28: Will ISO-NE treat different voltages as separate substations for the per capita basis cost allocation of the cost of breakers and bus positions for resources to connect to a substation? Would the costs be allocated on a per capita basis according to the number of bus positions required by the project?

Response: No, ISO-NE will not treat different voltages as separate substations for the per capita basis cost allocation. See Schedule 11.

Q29: Will ISO-NE propose a per-MW methodology similar to ISO-NE's existing clustering rules for allocating the cost of reactive devices, or will ISO-NE propose a voltage impact analysis that would identify each generating facility's contribution to the voltage violation?

Response: See ISO-NE's proposal in Schedule 11(5)(i): Upgrades that are Cluster Enabling Transmission Upgrades ("CETU") Where cost allocation for an Upgrade identified as necessary for Interconnection

Requests that require a CETU cannot be determined using the distribution factor cost allocation methodology (e.g., a dynamic reactive device, or a switching station), each Generator Owner or ETU IC with an Interconnection Request included in the Cluster that requires the CETU to meet the applicable Interconnection Standard shall be obligated to pay the costs of such Upgrade based upon its pro rata megawatt share of the Interconnection Requests included in the Cluster study to be determined using the Summer Network Resource Capability in the case of a Generating Facility and the absolute value of the higher of the requested bidirectional capability in the case of an Elective Transmission Upgrade.

Schedule 11(5)(ii) Non-CETU Upgrades: (b) System Network Upgrades comprising reactive devices or any substation additions beyond the Point of Interconnection shall be allocated based on a proportional impact method and threshold under N-0 conditions, as detailed in the ISO New England Planning Procedures.

Q30: Will ISO-NE create and implement a standardized Cluster Study/SIS report template?

Response: Yes.

Q31: Will contingent facilities be noted in the cluster study reports so that a project is aware that an earlier cluster has committed to an upgrade but that it may fall to the current cluster if the earlier projects were to withdraw?

Response: Yes, contingent facilities will be noted in the cluster study reports.

Q32: How will the sub-clusters be formed? Will ISO-NE have details about the formation of those sub-clusters in the Tariff? Will ISO-NE hold separate cluster study results meetings if a sub-cluster finishes its cluster study prior to the other sub-clusters? What happens if one sub-cluster needs a cluster restudy and another one does not?

Response: The formation of subgroups within the cluster will be at the discretion of System Operator. Cluster Study results meetings will be held amongst all of the projects included in that Cluster Study report. Order No. 2023 requires that “the criteria used to define subgroups be publicly posted on a publicly accessible website,” and the ISO will post such criteria in the event it chooses to pursue subgroups.

Q33: Will there be language in the new LGIP that allows the POI to be shifted after the Customer Engagement Window if all three parties agree?

Response: Yes. See Section 4.4.3 of the LGIP.

Q34: Can a project with a CNR Interconnection Request reduce their CNR to zero if the CNR Network Upgrades are expensive?

Response: No. The IC can submit changes through the Material Modification Determination process after the completion of the TCS, but these types of changes cannot impact the findings of the TCS. In

other words, an IR cannot be reduced in size at this stage for the purpose of avoiding or reducing upgrades.

Q35: Is the commercial readiness deposit based on network upgrade costs alone, or is it based on network upgrade costs and Interconnecting Transmission Owner's Interconnection Facilities upgrades?

Response: See Sections 7.5 and 8.1 of the LGIP, the Commercial Readiness Deposit is based on Network Upgrade costs alone.

Q36: If there's a large decrease in required upgrades and the commercial readiness deposit amount decreases from one stage of the process to the next, would the excess commercial readiness deposit amount be refunded?

Response: If there is a need for a Cluster Restudy then the amounts would be trued up during the next stage of the process where additional CRD is required. Under Section 7.5 of the LGIP, the Commercial Readiness deposit is trued-up upon entering the Cluster Restudy (5% of Network Upgrades). Under Section 8.1 of the LGIP, the Commercial Readiness Deposit is trued-up upon entering the Facilities Study (10% of Network Upgrades). Under Section 11.3.1.1 of the LGIP, the Commercial Readiness Deposit is converted to the LGIA Deposit and trued-up upon execution of the IA (20% of Network Upgrades and Interconnection Facilities per 11.3.1.2 of the LGIP).

Q37: Will the commercial readiness deposits go to the Interconnecting Transmission Owner or ISO-NE?

Response: CRDs will be provided to ISO-NE up until the IA execution. Any CRDs required under the Interconnection Agreement will be required to be submitted to the Interconnecting Transmission Owner.

Q38: How will ISO-NE determine whether a withdrawal has a material impact on an equal or lower queue position? Will the penalty vary if a project withdraws that doesn't impact a fellow cluster member's allocated upgrade cost or reduces their overall cost? Does the withdrawal penalty have a cap? If so, is it capped by the CRD?

Response: The impact is assessed at the discretion of System Operator and ITO under 7.5 and 8.5 of the LGIP. Withdrawal Penalties will vary based on impacts to others, see Section 3.7.1 of the LGIP. The Commission did not adopt a cap on Withdrawal Penalties, see Order No. 2023 at P 793.

Q39: If an unforeseen upgrade is so significant and forces most if not all projects to withdraw, would ISO-NE consider waiving the withdrawal penalty?

Response: The LGIP provides the circumstances in which a project may withdraw without being subject to a Withdrawal Penalty. Pursuant to Section 3.7.1 of the LGIP, if the Network Upgrade costs increase by more than 25% in the Cluster Restudy Report from the preceding Cluster Study Report or Cluster Restudy Report, then the Interconnection Customer can withdraw without being subject to a

Withdrawal Penalty. Pursuant to Section 3.7.1 of the LGIP, if the Network Upgrade costs increase by more than 100% in the Facilities Study Report from those identified in the preceding Cluster Study Report or Cluster Restudy Report, then the Interconnection Customer can withdraw without being subject to a Withdrawal Penalty.

Q40: Will ISO-NE allow customers to waive the Facilities Study? Will the Facilities Study be serial or as a cluster in the new process?

Response: Yes, the customer is allowed to waive the Facilities Study provided all customers sharing the same network upgrades agree in writing to waive the study, see section 7.5 of the LGIP. Facilities Studies will be conducted on an individual project basis.

Q41: If you were to add storage to an existing solar facility, how would that be accommodated? How is surplus going to be indicated to the IC?

Response: The addition of storage to an existing facility may be achieved either by submitting an Interconnection Request during the Cluster Request Window to modify the existing facility or through a Surplus Interconnection Service Request under Section 3.3.1, depending on the nature of the storage addition. Surplus Interconnection Service Requests are processed outside of the Cluster Study process and will result in a new four-party Interconnection Agreement that describes the services provided to the Original Interconnection Customer and Surplus Interconnection Customer.

Q42: Will ISO-NE have more detailed discussions about how state jurisdictional ASO studies that need a Section I.3.9 will be treated post transition period?

Response: All DER/ASO studies that have received Section I.3.9 approval within 90 days after the base case formation for the Cluster Study has begun, will be included in the Base Case for the Cluster Study. DER/ASO studies that are not completed as of this point will have to respect the Cluster Study. ISO-NE will be adding implementation details to the Planning Procedures.

Q43: Would these Order 2023 changes apply to some non-PTF processes? For example, the CMP local review is serial, so would that need to be addressed (in the compliance filing or elsewhere)?

Response: The ISO's Interconnection Procedures apply to the Administered Transmission System which included PTF and non-PTF. Distribution and local studies may need to be performed by the ITO in certain areas of the Administered Transmission System to assess impacts, which would be done in parallel with the Cluster Study.

Q44: Will ISO-NE update PP5-6 in terms of evaluating co-location as non-material?

Response: All proposed modifications to existing Generating Facilities require review for Materiality. PP5-6 was recently updated through the NEPOOL Reliability Committee process and the most up-to-date rules regarding this evaluation are contained therein. ISO-NE will be updating PP5-6 as needed.

Q45: Will there be a different tool than IRTT to handle projects moving forward?

Response: No, ISO-NE will continue to use IRTT for Interconnection Request submittals as well as for tracking and for viewing project information.

Q46: How will RNS studies be conducted following Order No. 2023 compliance?

Response: Under the proposed revisions to Section II.19, ISO-NE will evaluate whether a study should be done or not, and if a study is required it will take place as part of the next Cluster Study.

SGIP Questions

Q1: What will the study deposit requirement be for small generators? Will it ramp down with size, or will it be a fixed number? Will ISO-NE have lower study deposits for SGIP compared to LGIP?

Response: The study deposit for SGIPs will be a uniform \$100,000. See December 21, 2023 TC presentation.

Q2: Will SGIPs have to post commercial readiness deposits, and if so, what will they be? If there are commercial readiness deposits for SGIP, will they differ for the transitional cluster?

Response: Yes, see December 21, 2023 TC presentation describing the relevant deposit amounts.

Q3: Will there be exceptions to the 50% per capita basis cost allocation for projects under 5 MW?

Response: No. Refer to Schedule 11 for cost allocation methodology.

Q4: Will the Interconnection Facilities Study be waivable for SGIP (if it is not waivable for LGIPs)?

Response: Yes, the ISO-NE intends to allow customers to waive the Facilities Study provided all customers sharing the same network upgrades agree in writing to waive the study, see section 7.5 of the SGIP.