

Evaluation Stage Deliverability Test Methodologies for the Long-Term 2 Window 2 Requests for Proposals

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Table of Contents

Disclaimer 3

Document Change History 3

1. Introduction 4

2. Deliverability Test Methodologies 5

2.1 Scope of the Deliverability Tests 6

2.2 Roles and Responsibilities 6

2.3 Deliverability Test Result Explanation 7

2.4 Repowering Resources 7

2.5 General Considerations 7

3. Deliverability Tests Assessments and Assumptions 8

3.1 Zonal Probabilistic Energy Assessment 8

3.2 System Congestion Assessment 10

3.2.1 Study Criteria 10

3.2.2 Energy Stream Congestion Assessment 11

3.2.2.1 Case Assumptions 11

3.2.2.2 Performance Criteria and Control Actions 12

3.2.2.3 Connections to circuits which are radially connected to load 12

3.2.3 Capacity Stream Congestion Assessment 13

3.2.3.1 Injection Case Assumptions 13

3.2.3.2 Charging Case Assumptions 14

3.2.3.3 Performance Criteria and Control Actions 15

3.3 Inverter-Based Resource Assessment 16

3.3.1 Assumptions and Methodology 16

3.4 Transmission Short-Circuit Test 17

3.5 Distribution System Assessment 17

3.6 Remedial Action Scheme Considerations 18

4. Appendix A: Connection Process considerations 19

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1. Introduction

The Resource Adequacy Framework ("RAF") sets out the IESO's competitive strategy to procure electricity resources for short-, medium-, and long-term timeframes. The IESO's Long-Term ("LT") Procurements under the RAF include the First Long-Term ("LT1") Request for Proposals, the Second Long-Term ("LT2") Request for Proposals, and the Long Lead-Time ("LLT") Request for Proposals. To maintain the province's reliable, affordable, and sustainable grid, and in accordance with Ministerial Directive, the IESO plans to run multiple windows of the LT2 RFP, each with a distinct capacity and energy stream.

The LT2 Energy Supplier (Window 1) RFP ("LT2(e-1) RFP") and the LT2 Capacity Services (Window 1) RFP ("LT2(c-1) RFP") have concluded. The Evaluation Stage Deliverability Tests ("Deliverability Tests") described in this document apply to projects submitted into the second window of both the energy stream ("LT2(e-2) RFP") and capacity stream ("LT2(c-2) RFP") of LT2.

This document describes the processes, methodologies, inputs, assumptions, roles and responsibilities associated with the Deliverability Test in the LT2(e-2) RFPs and LT2(c-2) RFPs, as well as an explanation of possible outcomes of the Deliverability Test. It is intended to inform participants of how the Deliverability Test will be performed, and to maintain the fairness and integrity of the associated procurement processes. The assumptions and methodology outlined herein may be revised in future LT2 RFPs.

The LT2(e) RFPs are designed to address system energy needs throughout the year, so, the Deliverability Test for the LT2(e-2) RFPs will evaluate the ability of resources to be delivered while minimizing the risk of energy curtailment.

The LT2(c) RFPs are designed to primarily address a capacity reliability need, so, the Deliverability Test for the LT2(c-2) RFPs will evaluate the ability of resources to be delivered at system peak times.

In both cases the Deliverability Test assesses, as of the date of interconnection, the ability of a project, as an energy or capacity resource, to deliver the intended power during the applicable commitment period or contract term. It will not consider system or market conditions outside those conditions as defined in this document. Thus, a project that receives a result of "Deliverable" under the Deliverability Test may still encounter situations where their output is curtailed or otherwise constrained in real-time due to specific system conditions.

Terms in *italics* are defined in the *Market Rules*. Capitalized terms which are not defined in this document have their meaning ascribed in the prevailing LT2(e-2) RFP or LT2(c-2) RFP, as applicable.

The principles, methodologies and criteria described in this document that will be used in the Deliverability Test are similar to those used to develop the Preliminary Connection Guidance for the Long-Term 2 Energy and Capacity Supply (Window 2) Request for Proposals (the "Guidance"). The Guidance identifies circuits that may be deemed non-deliverable due to known system limitations and, therefore, will not be subject to the Deliverability Test (referred to as "Not Allowed" circuits) or face a greater risk of being assessed as non-deliverable (referred to as circuits to "Avoid").

2. Deliverability Test Methodologies

The IESO is responsible for establishing the methods and assumptions used in the parts of the Deliverability Tests under its purview subject to any applicable standards, codes or other regulatory instruments.

As this procurement is focused on meeting reliability needs, the IESO aims to ensure projects awarded contracts can operate with minimized risk of curtailment and congestion on the system.

Each project will be added to the study cases sequentially based on their ranking within the Preliminary List, until the procurement target for the applicable LT2 RFP is met, or there are no more eligible Proposals left to test. All projects that are deemed "deliverable" will be maintained in the model for the subsequent assessment of proposals lower on the Preliminary List.

Only proposals (including any associated Proposal PQ Alternates[1]) that are on the ranked Preliminary List as defined and determined in Stage 4[2] of the respective RFP proposal evaluation process, and only until such time as the applicable procurement target is met, will have their deliverability assessed in accordance with the Deliverability Test.

In accordance with the Minister's Directive dated November 28, 2024, as amended (the "Directive")[3], the deliverability stage of proposal evaluation for each window of the LT2 RFP will prioritize energy-producing resources, and all projects offered contracts as part of the LT2(e-2) RFPs will be accounted for in the applicable LT2(c-2) RFPs Deliverability Test.

[1] As per Item #2 in the Table Section 3.7(c) of the Draft LT2(e-2) RFP: In its Economic Bid Statement, the Proponent may, but is not obligated to, indicate up to two (2) ranked alternative smaller sizes for the Contract Capacity of the proposed Long-Term Energy Project or Long-Term Capacity Services Project (to be located within the boundaries of the same identified Project Site, using the same Monthly Imputed Production Factors and using the same Connection Point as set out in the Proposal), each with a corresponding proposed Fixed Price (each such alternative, a "Proposal PQ Alternate") for purposes of the Deliverability Test assessment.

[2] As per Section 4.4 of the Draft LT2(e-2) RFP. The proposal evaluation will be conducted in 5 stages, with Stage 4 being the 'Review of Economic Bid Statement', and Stage 5 the 'Deliverability Assessment' stages.

[3] https://www.ieso.ca/-/media/Files/IESO/Document-Library/corporate/ministerial-directives/Directive-from-the-Minister-of-Energy-and-Electrification-20241128-LT2.pdf

2.1 Scope of the Deliverability Tests

The Deliverability Tests will include the following assessments:

- System congestion assessment;
- Charging assessment (for storage projects only);
- Zonal probabilistic assessment (for energy projects only);
- IBR sub-synchronous control interactions (SSCI) and sub-synchronous resonance (SSR) assessment;
- Short-circuit assessment (in collaboration with the transmitters); and
- A distribution asset assessment (in collaboration with the LDCs).

In addition, as per subsection 5(k) of the Directive, the IESO will reduce the capacity available for LT2 RFP projects proposing to connect to the 230 kV circuits that connect to Nanticoke TS and/or the Niagara Reinforcement Line between Allanburg Transformer Station and Middleport Transformer Station[4] by 300 MW. Further, this 300 MW of capacity will be set aside for any renewable energy projects that are owned by, or have majority equity interest from, Six Nations of the Grand River Development Corporation ("SNGRDC Projects"), as applicable under the agreement between Six Nations of the Grand River, Six Nations of the Grand River Development Corporation and the (then) Ministry of Energy that is posted to the website of Six Nations Future (here). This 300 MW of capacity can be awarded to one or more SNGRDC Projects under the LT2(e-2) RFPs provided they meet all procurement requirements. The set aside capacity will be accounted for during the Deliverability Tests.

2.2 Roles and Responsibilities

The Deliverability Tests process will be led by the IESO in collaboration with *transmitters* and LDCs. The following is an overview of roles and responsibilities of these parties in this process:

- LDCs are responsible for assessing if a project connecting to a *distribution system* is deliverable to the point of connection with transmitter owned equipment. This assessment includes performing congestion and short circuit tests for the distribution network;
- *Transmitters* are responsible for assessing deliverability from the point of connection with the distributor to the point of connection with the transmission system (including load transformers), and completing the short-circuit tests for the transmission network;
- The IESO is responsible for assessing if there is sufficient capacity on the transmission system to deliver the energy to meet Ontario's forecasted demand, and for screening for potential Inverter-Based Resource (IBR) specific interactions; and
- The IESO is responsible for providing the Deliverability Test results for each eligible project under consideration.

[4] These circuits include: K40M, N20K, N21J, N22J, N37S, N5M, N6M, Q26M, Q35M and S39M.

2.3 Deliverability Test Result Explanation

For a project to obtain a "Deliverable" result, it must pass all applicable tests included in section 2.1 above. A project will be deemed "Not Deliverable" if it fails any of these tests.

If the test result for a given project is "Not Deliverable", the IESO will identify one of the following reasons for this status:

- Distribution system limitations (e.g. congestion, short-circuit);
- Transmission system limitations (e.g. congestion, short-circuit, potential interaction of inverter-based resources).

2.4 Repowering Resources

Deliverability testing will only be required for the extent of the increase to the nameplate capacity of the existing facility. Any PQ alternates for repowering projects that are not greater than the existing facility's nameplate capacity will automatically be considered deliverable.

2.5 General Considerations

- The electricity system is dynamic and subject to change before and during the applicable Deliverability Test process. For fairness and consistency, final test assumptions will be established just before the technical tests for each Deliverability Test is initiated and will remain unchanged throughout the tests. If the test assumptions presented in this document need to be updated prior to a Deliverability Test being initiated, the changes will be publicly communicated.
- The Deliverability Tests do not replace or impact any of the connection assessments that are necessary for project connection and required under applicable rules and regulations. The Connection Assessment and Approval process is outlined in Market Manual 1: Connecting to Ontario's Power System - Part 1.4: Connection Assessment and Approval[5]. This is further discussed in Appendix A.
- Receiving a result of "Deliverable" in a Deliverability Test does not imply that the project will pass the Connection Assessment and Approval process, or that connection costs or connection in-service dates will be within any specific range or estimate.
- For clarity, the Deliverability Tests do not evaluate the technical solution to connect a proposed project. Applicants are encouraged to discuss that aspect with applicable transmitters and Local Distribution Companies (LDCs) prior to submitting a Proposal.

[5] https://www.ieso.ca/-/media/Files/IESO/Document-Library/planning-forecasts/apo/2026/2026-APO-Supply-Adequacy-and-Energy-Outlook-Module.pdf

3. Deliverability Tests Assessments and Assumptions

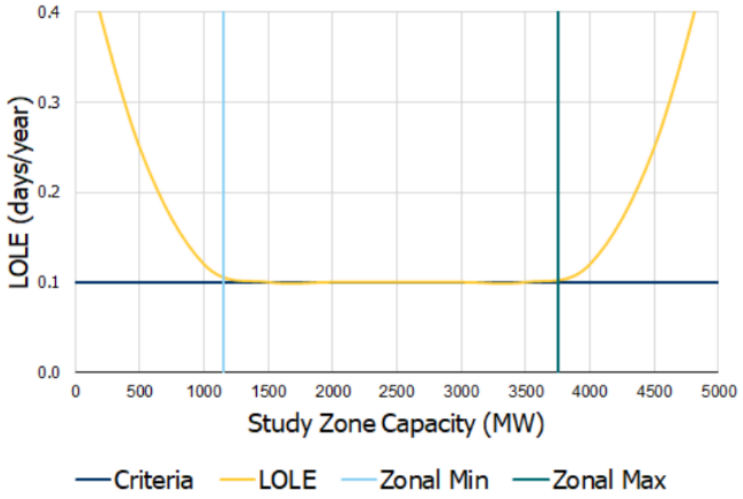
The following set out more detailed descriptions of the Deliverability Test assessments, and primary assumptions to be used in carrying out the Deliverability Tests.

3.1 Zonal Probabilistic Energy Assessment

The Probabilistic Zonal Energy Assessment will only be applied for projects in LT2(e-2). Each project will be tested based on their ranking within the Preliminary List to ensure they have a positive contribution towards provincial resource adequacy. To calculate the zonal probabilistic limitations, the methodology used for 'perfect capacity' assessments was modified for renewables. This methodology is outlined in the Annual Planning Outlook: Supply, Adequacy and Energy Outlook Module[6], and is further detailed below:

Zonal minimum and maximum capacity values are calculated using zonal constraint curves. Zonal constraint curves are developed by adding or removing capacity in a zone and removing or adding a corresponding amount of capacity in the rest of the system, such that the total incremental capacity is constant. The zonal constraint curve is developed using a 'two-zone' representation of the transmission system. The only interfaces that are represented in the capacity adequacy tool should be those that are connected to the study zone; the remainder are removed or set to a non-limiting value. The resulting system Loss of Load Expectation (LOLE) across a range of study zone capacities creates the zonal constraint curve, as shown in Figure 1.

Figure 1 | General Shape of Zonal Constraint Curve



The flat portion of the curve represents the range of study zone capacity where the system LOLE will remain approximately unchanged for an equal and offsetting amount of capacity in the rest of the system. Where the curve slopes downwards to the right, LOLE is decreasing as study zone MWs are added and an equal amount of MWs are removed from the rest of the system. This indicates that

[6] https://www.ieso.ca/-/media/Files/IESO/Document-Library/planning-forecasts/apo/2026/2026-APO-Supply-Adequacy-and-Energy-Outlook-Module.pdf

additional MWs in the study zone improve total system adequacy. When the curve starts to rise, those additional MW cannot be fully utilized to offset capacity in the rest of the system and a zonal maximum can be established where the LOLE is greater than the LOLE threshold.

The established zonal maximums will be used as a screening threshold during deliverability testing. Projects within a zone will be accumulated in rank order, and projects will generally be assumed to provide a positive adequacy contribution while the cumulative capacity remains well below the zonal maximums.

3.2 System Congestion Assessment

The goal of this assessment is to determine which projects can be accommodated without causing thermal overloads or voltage violations of transmission equipment to minimize the risk of curtailment or congestion during the study conditions.

The system congestion assessment uses three main basecases for three larger sub-systems of focus:

- Northern Ontario sub-system – includes the Northwest and Northeast electrical zones;
- West of Toronto sub-system – includes the Southwest, West, Bruce and Niagara electrical zones; and
- East of Toronto sub-system – includes the Essa, East and Ottawa electrical zones.

All cases are adjusted to deliver power towards Toronto.

All major transmission projects expected and committed to come into service by the contract date of the applicable RFP, based on the 2026 Annual Planning Outlook (APO) and any subsequently published bulk system plans or regional plans, will be considered in the study.

3.2.1 Study Criteria

The Deliverability Test assesses the pre-contingency and post-contingency system performance by monitoring power flows and system voltages. For a project to pass the system congestion assessment, the project needs to meet the pre- and post-contingency thermal and voltage performance criteria for the relevant scenarios outlined below.

The study criteria are generally aligned with the performance criteria outlined in Sections 2.4.2, 2.4.3 and 2.4.8 of the Ontario Resource and Transmission Assessment Criteria (ORTAC[7]). The assumptions, operating conditions and scenarios used to set up the study cases are described below in Sections 3.2.1 and 3.2.2. The contingencies that are applied are outlined in Section 2.3.1 and 2.3.3 of ORTAC.

Projects with parallel circuit connections will be modeled without a low-voltage side connection;

New connections must respect existing Operating Reserve limits and should not result in an increase in Operating Reserve. Existing 10-minute operating reserve is assumed to be 950 MW (representing what is generally the largest single contingency in the province). In all cases, new connections must respect existing operating reserve limitations.

[7] https://www.ieso.ca/-/media/Files/IESO/Document-Library/Renewed-Market-Rules-and-Manuals/market-manuals/connecting/ieso-con-ontario-resource-transmission-assessment-criteria.pdf

3.2.2 Energy Stream Congestion Assessment

This assessment will evaluate the ability of projects part of the LT2(e-2) RFPs to be delivered while minimizing the risk of energy curtailment.

3.2.2.1 Case Assumptions

Each of the three basecases described above will include the following assumptions:

- Scenario 1
  - Summer 50th percentile demand forecast from the normal weather scenario for each sub-system of focus, as per the 2026 APO for the 2032 reference year;
  - Gas generators dispatched to their maximum operating output; apart from quick-starting gas fired generators and two Lennox units, which will be assumed out-of-service. This is representative of the system conditions associated with the load scenario being studied;
- Scenario 2
  - Minimum coincident normal weather demand forecast for each sub-system of focus, as per the 2026 APO for the 2032 reference year;
  - Gas generators dispatched to 50th percentile output; apart from quick-starting gas fired generators and two Lennox units, which will be assumed out-of-service. This is representative of the system conditions associated with the load scenarios being studied;
- Common assumptions between Scenarios 1 and 2
  - Non-energy-limited resources, such as nuclear generators and run-of the river hydro, will be assumed in service at their maximum or normal operating output; with the exception of one Bruce generating unit, which will be assumed out-of-service;
  - Dispatchable energy-limited resources, such as hydroelectric plants, will be assumed at their minimum output, which is in general 50th percentile MW production, because they were considered able to generate around the intermittent resources and maximize the use of the transmission system;
  - Existing wind and solar resources will be assumed at the historic, zonal 90th percentile capacity factor in springtime, which generally corresponds to the period of highest coincident wind and solar output;
  - All previously contracted capacity resources will be assumed in-service, with the storage resources charging at 50% capacity, and any new gas generators dispatched as per the gas generation assumptions above;
  - LT2(e-2) RFP projects will be dispatched based on the capacity factor applied to existing wind and solar resources within the same zone, with dispatched output calculated as such zonal capacity factor multiplied by the project's installed capacity, as specified in the Proponent's Proposal; and
  - Summer thermal ratings will be used.

3.2.2.2 Performance Criteria and Control Actions

With **all transmission elements in-service**, flows must be within the equipment continuous ratings. Following single-element and double-element contingencies, post-contingency flows must be within the Short-Term Emergency (STE) ratings.

The assessment will rely on existing Remedial Action Schemes (RASs).

3.2.2.3 Connections to circuits which are radially connected to load

If a project is connecting to a radial circuit only supplying load, the project will be tested assuming the demand along this radial path is at the historical summer, day-time minimum (98^{th} percentile). Local load growth forecasted as of the applicable reference year will also be considered.

3.2.3 Capacity Stream Congestion Assessment

This assessment will evaluate the ability of projects part of the LT2(c-2) RFPs to be delivered at system peak times.

3.2.3.1 Injection Case Assumptions

Each of the three basecases described above will be updated with the following assumptions to test projects in conditions when they are injecting power:

- Scenario 1
  - Summer normal weather coincident system peak load for the applicable reference year, as per the 2026 APO;
- Scenario 2
  - Winter normal weather coincident system peak load for the applicable reference year, as per the 2026 APO;
- Common assumptions between Scenarios 1 and 2:
  - LT2(c-2) RFPs projects will be dispatched to their proposed installed capacity as indicated by the Proponent as part of their Proposal;
  - Scheduled long term generation outages and refurbishments will be accounted. The following generation units will be additionally considered out of service in each basecase:
    - Northern Ontario sub-system - Atikokan GS;
    - West of Toronto sub-system - one Bruce generating unit;
    - East of Toronto sub-system - one Lennox unit;
  - Non-energy-limited resources, such as nuclear generators and gas generators, will be assumed in service at their maximum or normal operating output;
  - Hydroelectric plants, will be assumed at their historic 90th percentile MW production over the Ontario summer peak period[8];
  - Existing wind and solar resources will be assumed at their historic zonal 90th percentile capacity factor over the Ontario summer peak period[9];
  - Storage resources will be assumed to be injecting at 100% of rated capacity; and
  - All resources committed to come into service by the applicable reference year will be assumed in service and dispatched according to their resource type as noted above.

[8] The 90th percentile of Hydro Output during the five peak Ontario demand hours for each of June, July and August for years 2022-2024.
[9] The 90th percentile of Wind and Solar Output during the Ontario peak demand hours (hours 13-20) in July for years 2011-2021.

3.2.3.2 Charging Case Assumptions

In addition to the assumptions detailed in 3.1.2.1, for storage projects part of LT2(c-2) RFP, a charging test will be conducted using the following assumptions:

- All storage resources will be assessed when charging at 50% of rated capacity;
- Scheduled long-term generation outages and refurbishments will be accounted for. The following generation units will be additionally considered out of service in each basecase:
    - Northern Ontario sub-system - Atikokan GS;
    - West of Toronto sub-system - one Bruce generating unit;
    - East of Toronto sub-system - one Lennox unit;
- Nuclear generators will be assumed in service at their maximum or normal operating output;
- Gas generators will be assumed in service at 50% of their maximum operating output as a baseline, to be dispatched higher or lower than 50% to meet demand for charging scenario;
- Hydroelectric plants will be assumed at their average output for the sixteen off-peak hours during Ontario's summer peak demand days[10];
- Solar generation will be assumed at zero output, with an assumption that the majority of charging will occur overnight during off-peak hours;
- Wind generation will be assumed at a 90% level available for the sixteen off-peak hours during Ontario's summer peak demand days[11];
- All contracted resources will be assumed in service; and
- The average demand of the lowest sixteen hours on the day of the Summer normal weather coincident system peak load for the applicable reference year will be assumed, as per the 2026 APO.

[10] Average hydro output for the 16 lowest demand hours (Hours 1-12, 21-24) for each Ontario system peak day for months June, July and August for the last 10 years.

[11] Historic 90th percentile output for the 16 lowest demand hours (Hours 1-12, 21-24) during the month of July for the last 10 years.

3.2.3.3 Performance Criteria and Control Actions

With **all transmission elements in service**, flows must be within the equipment continuous ratings. Following single-element contingencies, post-contingency flows must be within the Short-Term Emergency (STE) ratings before re-dispatch of resources, and within the Long-Term Emergency (LTE) ratings after re-dispatching up to 700 MW of resources. Up to 900 MW of resources are allowed to be re-dispatched (or rejected) after double contingencies to bring flows within the LTE ratings.

With **one transmission element on outage**, up to 700 MW of resources are allowed to be re-dispatched to re-prepare the system. After the re-dispatch, flows must be within the LTE ratings. Following a subsequent contingency, loadings could exceed the STE ratings, but need to be reduced below the LTE ratings by re-dispatching or rejecting up to:

- 900 MW of resources for a single contingency
- 2,700 MW of resources for a double contingency

The assessment will rely on existing and new Remedial Action Schemes (RASs), provided that the maximum amount of resources rejected does not exceed 2,700 MW in total.

This assessment assumes that LT2(c-2) RFP projects may participate in new or existing RASs.

3.3 Inverter-Based Resource Assessment

The purpose of this assessment is to check if projects submitted in a given area lead to undesirable sub-synchronous control interactions (SSCI) or introduce sub-synchronous resonance (SSR) with the existing series capacitors located at the Nobel Switching Station (SS).

IBRs have a history of oscillating under certain system conditions, typically due to interactions with local network and/or other IBRs in weakly connected systems, or when they are radially connected to a series of compensated transmission circuits.

3.3.1 Assumptions and Methodology

In order to avoid potential SSR issues with the series capacitors at Nobel SS on circuits X503E and X504E, the IESO performed a topology scan and excluded certain connection points that could become radially connected to these series capacitors for credible scenarios.

The results of the SSR topology scan identified that the circuits identified in Table 1 could end up in a radial connection to the Nobel SS series capacitors for credible contingencies, and as a result connection of any IBRs would not be allowed. To avoid potential SSR issues with the series capacitors at Nobel SS, any proposed connections to the circuits listed in Table 1 will be deemed "Not Deliverable".

Table 1 | Circuits identified for potential SSR issues

Circuits connected to Hanmer
X503E
X504E
New Hanmer to Essa 500 kV circuit

Potential SSCI will be determined by the IESO based on consideration of the following factors:

- System topology;
- Ratings and location of neighbouring IBRs; and
- Minimum short circuit ratio (SCR).

The following will be assumed:

- An SCR of 2-3 is used for existing IBRs at the point of interconnection;
- The potential risk of SSCI due to new IBRs connecting into the system is determined by calculating the Available Fault Level (AFL). AFL is an indicator of whether the system is strong enough to support stable operation of a new IBR connection at the location. It is calculated using the methodology explained in Section 6.6 of Connection of wind farms to weak AC networks[12]; and

12 CIGRE Working Group B4.62, "Connection of wind farms to weak AC networks", December 2016.

- If the Original Equipment Manufacturer is not known at the time of submission, the following assumptions will be used:
    - If the project **does not** have Grid-Forming (GFM) capability, the project shall specify the minimum short-circuit ratio (MSCR) at which the project is capable of operating at the point of interconnection (POI). Where a value is specified, the provided MSCR will be used for the assessment; a minimum MSCR of 3 will be assumed. If the project does not specify an MSCR, an MSCR of 8 will be assumed.
    - If the project **does** implement a grid stability solution, such as having GFM capability enabled, a minimum short-circuit ratio of 1 will be assumed at the point of interconnection. Proponents will be required to identify and describe the grid stability solution(s) included in their project. Based on the information provided, the IESO may, at its discretion, apply a higher MSCR requirement, taking into consideration the characteristics and performance of the proposed stability solution.

Each project will be tested sequentially, based on their ranking within the Preliminary List. All projects that were deemed "deliverable" in previous tests will be maintained in the model for the assessment of proposals lower on the Preliminary List.

3.4 Transmission Short-Circuit Test

This assessment will be performed by the Transmitters, who will be responsible for assessing deliverability from the point of connection with the distributor to the point of connection with the transmission system (including load transformers), and completing a short-circuit test for the transmission network. The goal of the short-circuit test is to identify whether the addition of a new project would cause the short-circuit levels to exceed the short-circuit capability of the transmission equipment forecasted to be in-service for the procurement target year.

Each project will be tested sequentially, based on their ranking within the Preliminary List. All projects that were deemed "deliverable" in previous tests will be maintained in the short-circuit model for the assessment of proposals lower on the Preliminary List.

During the deliverability test, IESO will coordinate with the Transmitters and ensure the short-circuit tests consider projects from the Preliminary List in their order of ranking.

3.5 Distribution System Assessment

LDCs are responsible for performing the distribution system assessment. LDCs will check if a project connecting to a distribution system is deliverable to the point of connection with transmitter owned equipment, which includes congestion and short-circuit tests for the distribution network. The assessment will be conducted with all distribution elements in service (no outage conditions).

Each project will be tested sequentially, based on their ranking within the Preliminary List. All projects that were deemed "deliverable" in previous tests will be maintained in the model for the assessment of proposals lower on the Preliminary List.

During the deliverability test, IESO will coordinate with the LDCs and ensure the distribution assessments consider projects from the Preliminary List in their order of ranking.

3.6 Remedial Action Scheme Considerations

A project that obtains a contract may need to be part of an existing or a new Remedial Action Scheme (RAS) to minimize generation bottling. This requirement will be determined during the Connection Assessment and Approval Process as part of the System Impact Assessment (SIA).

4. Appendix A: Connection Process considerations

All projects proposing to connect to the Ontario electricity grid must apply for a connection assessment as part of the connection assessment and approval process. Transmission connection assessments will include an SIA carried out by the IESO and a Customer Impact Assessment (CIA-TX) carried out by a *transmitter*. Distribution connection assessments will include a CIA-DX carried out by an LDC. A distribution connected project that is ≥ 10 MW also requires an SIA and a CIA-TX.

These assessments examine the equipment that is proposed to be connected and verify that it will meet the requirements of the *Market Rules,* Transmission System Code and/or Distribution System Code, as applicable, and that the manner in which the facility is connected would not result in an adverse impact on system reliability or to connected customers.

On the transmission side, an SIA does not assess whether the electricity moving to/from the proposed project can be delivered, because when it can't be delivered, the assumption in an SIA is that the facility will be constrained off. This is the reason that a project which may have already obtained an SIA and/or a CIA-TX cannot be deemed to be "Deliverable" for the purposes of IESO procurements without first applying for a Deliverability Test. In addition, a completed SIA does not reserve connection capacity. As stated previously, before deciding on siting a project, applicants should have preliminary discussions with their *transmitters* or LDC.

Similarly, on the distribution side, a project that has already obtained a CIA-DX will not be deemed to be "Deliverable" without going through the Deliverability Test.

Applicants are precluded from applying for a CIA-DX for *distribution system* connected projects until the conclusion of the Deliverability Test for a given RFP. For clarity, projects submitted for a Deliverability Test for an LT2(e-2) RFP or LT2(c-2) RFP must rescind any current CIA-DXs related to that project. The IESO will work with LDCs to verify that this has been completed. Should this requirement not be met, those projects will not be included in the Deliverability Test for the respective RFP, and hence, would not be eligible for the respective RFP.

After the Deliverability Test for the respective RFP is concluded, projects that obtained "Deliverable" results and that propose to connect to a *distribution system* may apply for a CIA-DX.

The IESO strongly recommends that potential applicants proposing *transmission system* projects or ≥ 10 MW *distribution system* projects delay their SIA applications until the results of the applicable LT2 (e-2) RFP and LT2(c-2) RFP are announced. If an applicant chooses to apply for an SIA, it is important to note that the SIA may need to be updated or restarted after the results of the RFPs are announced, as an SIA completed earlier would not have included all successful projects as firm projects (and as noted above, a completed SIA does not reserve connection capacity).

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