



**MAY 3, 2023**

# Technical Session on the Deliverability Test Process for the LT1 RFP

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# Agenda

- Deliverability Test schedule for Long-Term RFP (LT1 RFP)
- Deliverability Test: Purpose and Logistics
- Locational Preferences and Rated Criteria for LT1 RFP
- Deliverability Test: Complexity
- Results from the E-LT1 Preliminary Deliverability Test
- Deliverability Test Data Input Form and Data Quality

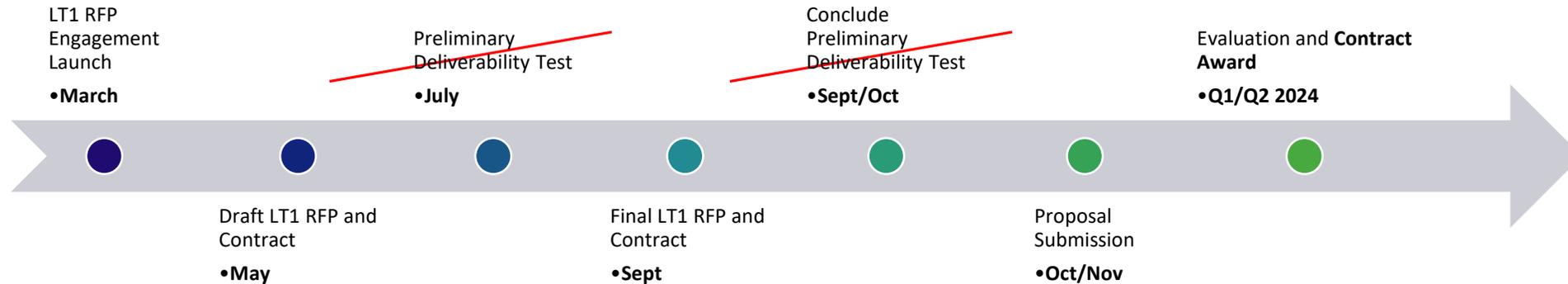
# Purpose of the session today

- The purpose of this meeting is to provide more details on the Deliverability Testing process for the LT1 RFP.
- Today's session will also provide stakeholders with an opportunity to ask questions and clarifications.



# Deliverability Test: Schedule

# LT1 Deliverability Test: Schedule



- At the March 28<sup>th</sup> webinar, the IESO proposed the schedule shown above.
- Stakeholder feedback has indicated that more time is required between Deliverability Test results and LT1 submission.
- The IESO has considered ways to shorten the test but based on the experience of the E-LT1 RFP and necessary interactions with third parties (LDCs, Transmitters) this was not feasible.
- One significant way to make the test results available earlier is to advance the Deliverability Test process schedule. The proposed dates are shown in the next slide.

# LT1 Deliverability Test: New Proposed Schedule

LT1 RFP	Proposed Dates
Deliverability Test Submission Deadline	June 16, 2023
Deliverability Test Results	September 11, 2023

- The number, quality and connection location of applications have major impact on the time required to complete the tests.
- The IESO will make every effort to meet the proposed schedule.

# LT1 Deliverability Test: Coordination with E-LT1 RFP

- With the proposed advanced schedule, the Deliverability Test Submission deadline occurs while the evaluation of E-LT1 RFP Storage Category 2 Proposals is ongoing.
- For those applicants with Category 2 Proposals that are still being evaluated, participation in LT1 may have been contingent on whether or not their project was successful in the E-LT1 procurement. Hence:
  - The applicants, at their own discretion, can choose to withdraw an LT1 project should they identified it as contingent to an E-LT1 project.

# LT1 Deliverability Test: Coordination with E-LT1 RFP (cont.)

- To meet the September 11 completion date the IESO will freeze the data early July before starting the technical tests for LT1 Deliverability Test.
- First two weeks of LT1 Deliverability Test will be used for application data clarification and preparation work for technical tests. By early July, the IESO will establish the test assumption based on the latest information available at that time.



# Deliverability Test: Purpose and Logistics

# Deliverability Test: Purpose

- Deliverability Tests are performed to ensure the resources procured are able to contribute to meeting Ontario-wide system
- The IESO needs to ensure that new generation capacity is located where the transmission system and distribution system can accommodate their injections of electricity and, if surplus to the local need, they can be transferred to meet the province wide resources needs.
- The IESO needs to ensure that the increased short circuit levels from new generation facilities do not exceed the capability of the existing transmission and distribution system equipment.
- For Electricity Storage facilities, the IESO needs to ensure the extra demands resulting from the charging cycle can be supplied.

# Deliverability Test: Logistics under LT1 RFP

- This Deliverability Test is performed before the proposal submission deadline and a subsequent Deliverability Test is carried out during proposal evaluation to establish the contract offer list.
- This Deliverability Test provides one of three answers:
  - Deliverable: this indication will remain throughout the LT1 RFP process
  - Deliverable but Competing: there are more proposals than the system can accept
    - Proposal submissions in this category will be retested during the proposal evaluation stage when the offer list is populated based on the proposal ranking
    - A proposal that passes the test will be added to the offer list
    - A proposal that fails will be discarded
  - Not Deliverable: proposals will not be accepted

## Deliverability Test: Logistics under LT1 RFP (cont.)

- A Person that is (i) a Qualified Applicant under the LT1 RFQ, or a Person Controlled by a Qualified Applicant, or ii) an Eligible Expansion Counterparty, are eligible to submit their projects for deliverability testing for the LT1 RFP.
- It should be noted that the results of previous Deliverability Tests will not be accepted by the IESO for the purpose of LT1 RFP Proposal Submission, including instances where a project from the E-LT1 RFP was previously found to be “Deliverable”.
- **Applicants that intend to participate in LT1 RFP must participate in the new Deliverability Test process for the LT1 RFP and will have to submit a new Test Data Input form.**

# Deliverability Test: Out of Scope

- The Deliverability Test does not replace or impact any of the connection assessments that are necessary for project connection, being:
  - System Impact Assessment (SIA) and Customer Impact Assessment (CIA-TX) for transmission system connected projects; and
  - Connection Impact Assessment for distribution system connected projects (CIA-DX).
- Receiving a result of “Deliverable” in a Deliverability Test does not imply that the project will pass the connection assessments or that connection costs will be within any specific range or estimate.
- Deliverability Test does not consider possible transmission congestion outside the summer and winter peak periods.

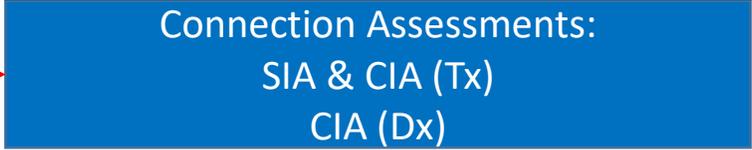
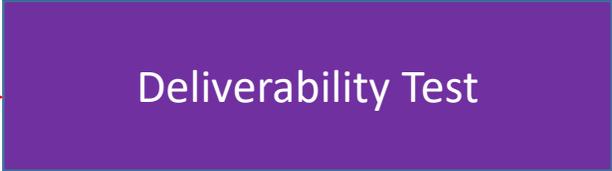
# Deliverability Test: Connection Assessment Coordination

- Projects submitted for LT1 Deliverability Test must rescind any current CIA-DXs related to project of interest. A CIA-DX allocates connection space in the distribution system. This could unfairly impact the results of the technical tests LDC would do under the Deliverability Test.
- After the Deliverability Test for the LT1 RFP is concluded, projects propose to connect to a distribution system may apply for a CIA-DX.
- An SIA does not allocate connection space. The IESO strongly recommends the SIA applications are delayed until the results of the LT1 RFP are announced.

TIME

### Connection Process

### Procurement Process



# Deliverability Test: Roles and Responsibility

- LDCs are responsible for the Deliverability Test considerations in their service territory, and can use any test method they choose, which can be unique to each LDC.
- Transmitters are responsible for completing the short circuit test for the transmission network, and the method used.
- The IESO is not responsible for variation in the assessment processes adopted by the LDCs and transmitters involved in implementing their portion of Deliverability Tests.
- The IESO is responsible for performing the Deliverability Test at the bulk transmission system level.
- The IESO is responsible for determining the final Deliverability Test results for each project under consideration.

# LT1 RFP Deliverability Test: Eligibility

- Long-Term Reliability Projects submitted by Qualified Applicants (or Persons Controlled by a Qualified Applicant)
- Eligible Expansions at Eligible Existing Facilities, as defined in the draft LT1 RFP



# Locational Preferences and Rated Criteria for LT1 RFP

# Rated Criteria Points for Location

- In the E-LT1 RFP, the IESO assigned Rated Criteria Points to projects proposing to connect in a number of areas in the province, such as the West of Chatham area (in the West Zone) and east of the Flow East Towards Toronto (FETT) Interface.
- These Rated Criteria Points were successful in driving a sufficiently high level of interest in the targeted areas for the E-LT1 RFP and Same-Technology Upgrades Solicitation and, as such, the IESO does not see a need to continue to provide rated points in those areas.
- As a result, the IESO will be eliminating locational Rated Criteria Points from the LT1 RFP, shifting the focus to meeting only province wide system needs.
- Local reliability needs will guide how location is valued in the IESO's future procurements and, as a result, the treatment of location will vary from procurement to procurement.



# Deliverability Test: Complexity

# Deliverability Test: Variables that Influence Results

- The tests need to be done with a specific connection point and size.
  - In many cases, it can be misleading to state that region X in Ontario can accept Y MW
  - There are exceptions, e.g. northern Ontario, that will be discussed later
- Deliverability depends on other proposals in the region and assumptions made regarding existing generation and load levels.

# Deliverability Test: it takes time to carry out the tests

- The technical tests are carried out with a set of 4 system test cases (extreme and normal peak for winter and summer), plus 2 cases for storage projects (charging tests).
- For the first round of tests, all proposed projects within a Zone (or grouped Zone) are included. All projects in the zone are “Deliverable” if no issues are observed in this test.
- If issues are observed in this zonal test, each project is tested one at a time, to determine whether it is Deliverable but Competing or Not Deliverable.
- We also need to consider the 3 variations for each application.
- This takes time especially in a Zone with limited transfer.
- The tests need to be coordinated with Transmitters and LDCs.



# Results from the E-LT1 Preliminary Deliverability Test

# Northwest Zone

- There is a transmission limitation within the Northeast Zone from the Wawa Transformer Station (TS) towards the Sudbury area, which resulted in proposed resources located in the Northwest Zone being deemed “Not Deliverable”.
- The system upgrades that are included in the Northeast Bulk Plan and recommended to be implemented between 2029 and 2030 will help improve the deliverability of resources located in the Northwest Zone. These upgrades were not assumed to be in service in the Deliverability Tests completed for E-LT1 RFP and Same Technology Upgrades Solicitation.
- The IESO has decided to continue to assume that they are not available. This assumption will be revisited for subsequent procurements.
- Thus, proposals for generation projects in northwest Ontario will continue to be “Not Deliverable” in the LT1 RFP.

# Northeast Zone

- The transmission limitation within the Northeast Zone eastbound from Wawa TS towards the Sudbury area has also resulted in proposed resources in the Sault Ste. Marie/Algoma area to be deemed “Not Deliverable”. The system upgrades that are included in the Northeast Bulk Plan and recommended to be implemented between 2029 and 2030 will help improve the deliverability of resources located in the Northwest Zone.
- These upgrades were not assumed to be in service in the Deliverability Tests completed for E-LT1 RFP and Same Technology Upgrades Solicitation. The IESO has decided to continue to assume that they are not available. This assumption will be revisited for subsequent procurements.
- Thus, proposals for generation projects in the Sault Ste. Marie/Algoma area will continue to be “Not Deliverable” in the LT1 RFP.

## Northeast Zone (cont.)

- Furthermore, there is a transmission limitation from Hunta towards the Sudbury area, and from Hunta towards the Dymond area, which resulted in proposed resources located in the north of Timmins and Kirkland Lake areas being deemed “Not Deliverable”.
- There may be areas in the Northeast Zone where projects can be delivered to the Sudbury area. However, there is limited transfer capacity from Sudbury to Barrie that could restrict such projects from obtaining “Deliverable” or “Deliverable but Competing” results.

# West Zone

- The Deliverability Test submissions showed a high interest in the development of projects in the West Zone. As a result, the majority of those projects were deemed to be “Deliverable but Competing”, indicating that they are competing for the limited transmission capacity in the region.
- The IESO indicated a preference for locating new resources in the area west of Chatham to meet local supply needs. However, there is a limit to the amount of new resources that can be added in that area which will also be beneficial in meeting Ontario peak demand. This results from the limited transmission capacity to transfer excess supply capacity located west of Chatham to other load centres in Ontario.
- This high interest could severely limit opportunities for projects to be deemed “Deliverable” or “Deliverable but Competing” in the area west of Chatham under the LT1 Deliverability Test.

## West Zone (cont.)

- There is a multi-stage transmission plan for the West Zone that will improve this situation. The details can be found in The West of London Bulk Planning Report. The projects included in this transmission plan that are expected to be in-service by 2028 were assumed to be available in the last Deliverability Test. The same assumption will be maintained in the LT1 Deliverability Test.

# Short Circuit considerations

- The equipment limitations at Lambton TS would not have allowed new resources to connect in the area. In order to facilitate locating new resources in the area, the IESO decided to use operational measures which involve splitting the Lambton TS bus, when required. This allowed some projects in the area to be “Deliverable” or “Deliverable but Competing”. This assumption will continue to be used in the LT1 RFP Deliverability Test.
- Existing equipment limitations at Keith TS (Windsor) would not have allowed new resources to connect in the area. However, the IESO and Hydro One agreed that by advancing the planned sustainment work at Keith TS, it would be possible to address the limitations by 2025 and improve the situation. As such this did not restrict projects from connecting in the Windsor area in the Deliverability Tests completed for E-LT1 RFP and Same Technology Upgrades Solicitation. This assumption will continue to be used in the LT1 RFP Deliverability Test.
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## Short Circuit considerations (cont.)

- Equipment limitations at Chatham TS have resulted in some projects being deemed “Not Deliverable”. Hydro One and the IESO will consider solutions and the business case for implementing a solution. However, this situation will not change for the LT1 RFP Deliverability Test.
- The equipment limitations at Trafalgar TS have resulted in many projects in the western part of the GTA to be deemed “Not Deliverable”. Hydro One and the IESO will consider solutions, and the business case for implementing those solutions. However, this situation will not change for the LT1 RFP Deliverability Test.
- The equipment limitations at Hearn TS have resulted in projects for the area to be deemed “Not Deliverable”. Hydro One and the IESO are currently exploring potential solutions including operational measures to address the issue. Depending on the outcome of those discussions, this restriction could be lifted for LT1 RFP Deliverability Test. The IESO will provide updates as those discussions progress.



# Deliverability Test Data Input Form and Data Quality

# Applications for the E-LT1 Deliverability Test

- The IESO received 188 applications for the first Deliverability Test process and of those, 90 project applications required changes or corrections.
- Many applications required multiple rounds of clarifications in order to ensure that the IESO could proceed with testing.
- These clarifications added significant challenges in maintaining stringent procurement milestones and deliverability testing schedules.
- The IESO strongly encourages applicants work more closely with relevant Transmitters and/or LDCs before submitting the Deliverability Test requests for LT1 RFP.
- The Deliverability Test Data Input Form has been updated to facilitate the data entry process based on the lessons learned.

# Applications for the LT1 RFP Deliverability Test

- Valid information is critical in carrying out the Deliverability Test. If errors or omissions in the data are identified, the IESO will issue clarifications requests to applicants to correct the information provided before proceeding with the Deliverability Test. Applications will be disqualified if the errors or omissions cannot be corrected within the opportunity provided.
- The IESO will only issue two clarifications requests to each project, in order to maintain timelines. This means that applicants that require more than two rounds of clarifications for a particular project, or those that do not respond to request for clarifications in the time allotted, will see their project removed from further deliverability testing and as such will not be able to submit a Proposal for said project into the LT1 RFP.
- The IESO is not responsible for correcting information during the clarification process. Thus, early consultation with transmitters and LDCs is strongly encouraged.