Deliverability Assessment

Green Choice Program Procurement RFP II

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REVISION TABLE

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TABLE OF ABBREVIATIONS

Term	Definition
BES	Bulk Electric System
BPS	Bulk Power System
GCP RFP II	Green Choice Program Procurement Request for Proposals II
GIP	Generator Interconnection Procedure
IBR	Inverter Based Resource
IC	Interconnection Customer
IESO-NS	Nova Scotia Independent System Operator
NERC	North American Electric Reliability Cooperation
NPCC	Northeast Power Coordinating Council
NSPI	Nova Scotia Power Inc.
PCO	Point of Change of Ownership
POI	Point of Interconnection to Transmission Owner facilities
PPA	Power Purchase Agreement
RAS	Remedial Action Scheme
SCR	Minimum Short Circuit Ratio
SIS	System Impact Study
SSCI	Sub-Synchronous Control Interactions
SSR	Sub-Synchronous Resonance
TSIR	Transmission System Interconnection Requirements

DISCLAIMER

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1 INTRODUCTION

The Evaluation Stage Deliverability Assessment ("**Deliverability Assessment**") described in this document applies to projects submitted into the GCP RFP II.

This document describes the processes, methodologies, inputs, assumptions, roles and responsibilities associated with the Deliverability Test in the GCP RFP II, as well as an explanation of possible outcomes of the Deliverability Assessment. It is intended to inform participants of how the Deliverability Assessment will be performed, and to maintain the fairness and integrity of the associated procurement process.

2 SCOPE

In support of the GCP and Nova Scotia's clean energy targets, IESO-NS aims to ensure projects awarded contracts can operate with minimal curtailment under expected system conditions.

The Deliverability Assessment assesses the ability of a project, as an energy resource, to deliver the intended energy and associated benefits during a PPA term.

A project may still encounter situations where their output is curtailed or otherwise constrained due to real-time system conditions.

The Deliverability Assessment does not replace or impact any of the interconnection studies identified in the GIP that are necessary for project interconnection.

Receiving a result of "Deliverable" in a Deliverability Test does not imply that the project will meet the requirements of the TSIR and GIP as part of the interconnection process, or that interconnection costs or interconnection in-service dates will be within any specific range or estimate.

For clarity, the Deliverability Assessment does not evaluate the technical solution to connect a proposed Project. That aspect will be evaluated as part of the Interconnection Feasibility Study process prior to submitting a proposal into GCP II RFP.

3 DELIVERABILITY ASSESSMENT

Only proposals (the Primary Project Configuration and, if applicable, the Alternate Project Configuration) that are on the ranked Preliminary List, as defined and determined in the GCP RFP II proposal evaluation process, will have their deliverability assessed in accordance with the Deliverability Assessment. Proposals will be tested for deliverability sequentially, based on their ranking within the Preliminary List.

3.1 Roles and Responsibilities

The Deliverability Assessment process will be led by IESO-NS. The following is an overview of roles and responsibilities of these parties in this process:

- NSPI, or other relevant party, is responsible to provide supporting data required to complete the assessment
- IESO-NS is responsible for assessing capacity on the transmission system to deliver the energy to meet Nova Scotia's forecasted demand
- IESO-NS is responsible for assessing deliverability from the eligible Project Point of Interconnection to the customer load

3.2 Deliverability Assessment Result Explanation

A Project will receive a "Deliverability Assessment" result, based on the performance of the responsibilities noted in the Roles and Responsibilities section above.

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

- Transmission system limitations (e.g. stability, damping, thermal, short-circuit, etc.)
- Potential interaction with pre-existing facilities

4 METHODOLOGY

The following sets out the methodology and primary assumptions to be used by IESO-NS in carrying out the Deliverability Assessment for the GCP RFP II. IESO-NS is responsible for establishing the methods and assumptions used in the Deliverability Assessment, subject to any applicable standards, codes or other regulatory instruments.

The Deliverability Assessment will consider a 2030 study year and will include all active Projects in the Advanced Stage Queue at the beginning of the assessment period.

4.1 System Congestion Assessment

The goal of this assessment is to determine which projects can be accommodated while maintaining stability, damping, thermal rating and short-circuit levels within NERC, NPCC and IESO-NS system design criteria. Projects are planned to meet all applicable criteria to limit energy curtailment.

- Common assumptions
    - Non-energy-limited resources, such as Maritime Link and run-of the river hydro, will be assumed in service at their normal operating output
    - For High Wind scenarios, BESS on the system can be assumed to be charging at 90% of rated charging capacity
    - All major transmission Projects committed to come into service by 2030, as per the 2026 10 Year System Outlook, will be considered in the cases studied
    - A subset of NERC and NPCC standard contingencies will be run based on the Project location

IESO-NS will utilize basecases that reflect the expected operating scenarios, such as:

- Scenario 1 – Winter Day / High Wind
    - 90% of system peak demand forecast, as per the 2026 10 Year System Outlook for study year 2030
    - Existing and higher queued wind generation at 90% output
    - Proposed Project operating at 90% output
    - Remaining system dispatched to reflect anticipated operating conditions on high wind winter days
- Scenario 2 – Summer Peak / High Wind
    - 65% of system peak demand forecast, as per the 2026 10 Year System Outlook for study year 2030
    - Existing and higher queued wind generation at 90% output
    - Proposed Project operating at 90% output

- Remaining system dispatched to reflect anticipated operating conditions on high wind summer days

4.2 Existing Facility Interaction

The purpose of this assessment is to identify if Projects submitted have the potential for undesirable interactions with existing generation, load and storage facilities with a focus on existing IBR facilities.

Potential interactions will be determined by IESO-NS based on consideration of the following factors:

- System topology
- Ratings and location of neighbouring facilities
- Short circuit MVA

The following will be assumed:

- A minimum SCR of 3 is used for existing IBRs at the point of interconnection, unless a different SCR is appropriate due to current known or anticipated operating conditions or study requirements
- IESO-NS will assess the impact of the addition of the proposed facility on neighbouring facilities for potential adverse impact, including SCR falling below acceptable operating levels at impacted transmission facilities (IBR, transmission connected load, etc.)

4.3 Study Process

Each Project will be assessed in one or more of the following scenarios:

- Sequentially, based on their ranking within the Preliminary List
- In combination with another Project with a higher Preliminary List position

Study methodology and criteria will be aligned to NERC and NPCC criteria. Facility required performance criteria are described in the Nova Scotia Transmission System Interconnection Requirements.

For a project to pass the system congestion assessment, the grid needs to meet the pre- and post-contingency thermal and voltage performance criteria for both scenarios listed in Section 3.1.1 with the project output per the Scenario description. Engineering judgement will be applied to the evaluation of contingency analysis results. Congestion assessment evaluation may include consideration for transmission system upgrades beyond the POI which lead to the lowest cost portfolio at the discretion of IESO-NS.

4.4 System Changes During Final Evaluation Period

The electricity system is dynamic and subject to change during the Deliverability Assessment process. For fairness and consistency, final test assumptions will be established just before the technical tests for the Deliverability Assessment is initiated and will remain unchanged throughout the tests. If the Assessment assumptions presented in this document need to be updated prior to the Deliverability Assessment being initiated, the changes will be communicated to Project proponents.