

Final Terms of Reference (TOR) for Review of NS Power Interconnections Processes

On April 22, 2022, Bill No. 145 received Royal Assent which, among other amendments, added section 2C to the *Electricity Act*. Section 2C states:

- 2C (1) The Board shall conduct a review of Nova Scotia Power Incorporated's interconnections process to ensure the best value for ratepayers and consistency and predictability for generators.
- (2) The Board shall undertake the review pursuant to subsection (1) as soon as is reasonably possible and shall make the results of the review public.

NS Power's Standard Generator Interconnection Procedures (SGIP) describe the protocols currently in place applicable to generating facilities that wish to connect to, or would impact, the transmission system at voltages of 69 kV and above. These are part of NS Power's Open Access Transmission Tariff (OATT). NS Power also has a Transmission System Interconnection Requirements document developed in 2020 whose purpose is stated as identifying the minimum technical requirements for interconnection to the grid.

NS Power's Distribution Generator Interconnection Procedures (DGIP) contain analogous procedures for generators seeking to connect to the distribution system (at or under 26,400 volts) and applicable to generators larger than 100 kW in size. NS Power also has two separate "Interconnection Requirements" documents for distribution connected generators smaller than 100 kW and larger than 100 kW, whose purpose is to state and describe the minimum design and performance requirements and interconnection requirements for distribution system interconnection. For the purposes of this review, distribution connected facilities without regard to size will be considered, although relevant data on smaller net metering facilities may also be considered, as necessary.

Reviewing and updating interconnection processes and requirements can help deliver the best value for ratepayers and market participants through assurances that NS Power's policies – including, for example, fee structures, study requirements, and *pro forma* agreements used to facilitate the interconnection – are not discriminatory and follow the tenets of the OATT. A review of interconnection policies will examine whether:

- a) new generators pay fairly towards any required studies and actual interconnection costs;
- b) existing infrastructure and rights of way are leveraged when possible;
- c) planners coordinate on a regional level; and
- d) regulations are the least restrictive means for achieving their purpose.

Interconnection can also be improved through overall transparency of the interconnection process so that generators understand and have confidence in NS Power's implementation of its protocols and that the application of such protocols is consistent and predictable. This includes NS Power adhering to expectations for study timing and consistency in applying the principles and descriptions in the SGIP and DGIP documents. Ensuring transparency may require better access to information such as interconnection points, transfer limits, feeder routes, limitations for specific transformers, and average utilization factors.

This examination of the interconnection policies will include an assessment of the extent to which NS Power's protocols allow for non-discriminatory, timely, appropriate, and transparent review of an interconnection application by a generator seeking to interconnect to the transmission grid, or

to the distribution grid. The examination will allow for limited stakeholder discovery of NS Power information that may not currently be directly available on the public website, subject to reasonable confidentiality concerns. It will include two stakeholder technical conferences, as well as opportunities for direct written comments by participants.

The Terms of Reference for the interconnections review that follows will focus on new generation proposing to interconnect at the transmission or distribution system levels.

Synapse Initial Review of NS Power’s Transmission and Distribution Interconnection and Related Processes

Synapse will conduct an initial review outlining the scope of NS Power’s interconnection protocols for both transmission and distribution connected generation requests. This review is intended as an initial identification of primary areas of potential concern. Synapse will post its first report and invite initial stakeholder comments on identified and other issues. After release of this review and receipt of stakeholder comments, a half-day technical conference will be held to allow stakeholders and NS Power the opportunity to address identified and other issues and discuss potential solutions as necessary.

At this time, the following issue areas, which are not necessarily exhaustive, have been identified for inclusion in the initial review:¹

- Overall adherence of the interconnection processes and requirements to the spirit and letter of the OATT, for provision of non-discriminatory access to the transmission and distribution grid.
- The extent to which NS Power’s protocols or implementation practicalities result in a bias towards NS Power or Emera self-interest, and against third-party generator interests.
- Specific elements of the SGIP or the DGIP documents that may require improvement, such as the extent to which studies are conducted in a “timely” manner. This includes an explicit review of expectations and actual results of feasibility, system impact, and facilities studies timing. This could also include assessing technical requirements under the SGIP, including those affecting behind-the-meter facilities interconnected at the transmission level.
- A review of how NS Power is modeling the system regarding system upgrade requirements for new interconnection customers.
- A review of the fee structure and applicability for interconnection studies, including consideration of whether:
 - ❖ separate fee structures for generators less than 10 MW are appropriate;
 - ❖ requiring a distribution system impact study (DSIS) for class 2 applications is appropriate; and,
 - ❖ the threshold size level (100 kW) for the distribution system should be revisited for interconnection studies.
- A review of how the proliferation of behind-the-meter distributed energy resources is facilitated under interconnection processes and requirements with special consideration

¹ Some overlap may exist between this interconnections process review and other planning or processes undertaken by NS Power which are not at issue in this review proceeding, such as detailed distribution system planning protocols. The review will strive to delineate between issues of critical importance to interconnection considerations, and those that overlap with interconnection but are less critical to meeting core requirements of fair and open access to the grid.

of the adequacy of interconnection processes and requirements in light of Provincial updates to the Commercial Net Metering Program under Board matter M10872. This could include the extent to which NS Power makes available information on “hosting capacity” for distribution feeders for distributed generation.

- An assessment of how and to what extent interconnection processes and requirements:
 - ❖ accommodate and allocate system upgrade costs fairly and reasonably among groups of interconnection customers within a neighborhood, load zone, or area;
 - ❖ facilitate interconnection cluster studies that are comprehensive, efficient, and not done piecemeal or in isolation. For distribution or transmission assessment, this includes reviewing NS Power’s “study grouping” option in the SGIP or DGIP document.
- A review of the overall queuing process. This will include a review of historical interconnection queue, study delays, and bottlenecks in the interconnection process by region and project type.
- A review of the overall communications processes that allow NS Power and those requesting interconnection to exchange data and information in an efficient, transparent, and timely manner.
- A limited review of other relevant jurisdictions interconnection processes and requirements such as fee structures, timelines, and procedures in the event of delays.
- A review of whether interconnection processes and requirements are sufficient for non-generation technologies, such as battery energy storage systems.
- Specific elements of the transmission and distribution interconnection requirements as described in the transmission and distribution interconnection supplemental documents, and the extent to which those requirements are sufficient, insufficient, or exaggerated for the technical purposes to which they are ascribed.
- A review of the extent to which recent US Federal Energy Regulatory Commission (US FERC) activities on interconnection issues² are applicable for consideration in Nova Scotia as a possible means to improve interconnection protocols. For instance, such a review may examine the “increased financial commitments and readiness requirements” and the “updated modeling and performance requirements for non-synchronous generators” called for in the FERC reforms. In addition, it may examine one of the highest level issues in the FERC proposal, reflecting the importance of “first ready, first served” cluster study processes.
- A review of whether interconnection cost allocation methods adequately:
 - ❖ account for net costs of interconnection, including system-wide benefits;
 - ❖ assign any of these costs, such as routine maintenance and scheduled upgrades, to rate base;
 - ❖ spread interconnection costs proportionately and fairly among all interconnection customers who benefit; and,
 - ❖ equitably and fairly distribute the system upgrade costs that may be necessary due to load change patterns in an electrified future.

Stakeholder Written Comments Regarding the Initial Review

Stakeholders and NS Power will provide written comments to Synapse on the elements included in the initial review and the extent to which additional elements require review.

² US FERC, Notice of Proposed Rulemaking, *Improvements to Generator Interconnection Procedures and Agreements*, RM22-14-000, June 16, 2022. <https://www.ferc.gov/media/rm22-14-000>.

Initial Stakeholder Technical Conference

Following receipt of comments on the initial review, a half-day technical conference will be held to allow for discussion of issues and potential solutions.

Information Exchange and Discovery

After receiving stakeholder comments regarding the first technical conference, Synapse and stakeholders may need to submit discovery requests to NS Power to further the process of identifying relevant interconnection protocol issues.

Posting of Revised Review

Synapse will update its report and post the revised version. This version may include updated recommendations for possible modification of NS Power protocols. Participants will be invited to submit further comments.

Second Stakeholder Technical Conference

After receiving additional comments, Synapse will hold a second half-day technical conference to address any suggested refinements and to discuss proposed modifications to NS Power's interconnection policies. Following the technical conference, participants will again have an opportunity to provide further written comments.

Final Synapse Report

A final version of the Synapse report on interconnections will be filed with the Board and parties will be invited to file submissions or comments with the Board. At this point, the Board will also determine if an oral hearing is needed prior to issuing a decision in this matter.

Documents for Review

- ✓ Standard Generation Interconnection Procedures (SGIP)
- ✓ Distribution Generator Interconnection Procedures (DGIP)
- ✓ Transmission System Interconnection Requirements
- ✓ Distribution System Interconnection Requirements
- ✓ Pro Forma Interconnection Agreements
- ✓ NS Power Bulk Power Facilities Connection Guide
- ✓ FERC Rulemaking NOPRs

Data for Review

- ✓ Active and advanced transmission and distribution interconnection requests queue data.
- ✓ Other appropriate data as requested by the Board or stakeholders pertinent to the review. This may include Performance Standards, as well as net metering interconnections issues.

Proposed Timeline

Steps of the Review Process	Tentative Schedule
Board issues Draft Terms of Reference	December 16, 2022
Parties notify Board of intent to participate	January 5, 2023
Stakeholders submit written comments on Draft TOR	January 5, 2023
Board issues Final Terms of Reference	Early February
Synapse issues Report on Initial Review	Early March
Stakeholders submit written comments and questions	Mid-March
First Stakeholder Technical Conference	Early April
Second submission of stakeholder comments and questions	Mid-April
Potential discovery questions to NS Power	Early May
NS Power responds to discovery questions	Mid-May
Synapse issues revised report	End of May
Stakeholders submit comments and questions on revised report	Mid-June
Second Stakeholder Technical Conference	End of June
Further Stakeholder comments and questions	Mid-July
Synapse files Final Report with the Board	End of July
Stakeholders file submissions or comments with the Board	Mid-August
Option for Oral Hearing	TBD



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July 21, 2023

By Email

Dear Participants:

M10905 - Review of NS Power's Interconnections Processes

The Board's letter of April 13, 2023, included a copy of the initial report prepared by Synapse Energy Economics, as well as a revised procedural timeline for this matter. As the process evolved, certain timeline adjustments were required to accommodate the analysis and stakeholder submissions.

The second stakeholder technical conference was held on July 19, 2023, and at that time it was noted that the tentative timeline for the remaining steps in this matter would be extended. This will provide Synapse with sufficient time to consider additional relevant filings and to provide NS Power and participants with additional time in developing their comments related to the latest draft report and technical conference.

The date for submitting comments regarding the second stakeholder technical conference and the second draft Synapse report is now **Thursday, August 10, 2023**. The date for Synapse to file its final report is now **Thursday, August 31, 2023**.

After the report is filed, the Board will advise parties regarding the hearing process and associated timeline for this matter.

Yours truly,

A handwritten signature in cursive script that reads "Jocelyn Isnor".

for Crystal Henwood
Regulatory Affairs Officer/Clerk

C: William L. Mahody, K.C., Board Counsel
Participants M10905
Bob Fagan, Synapse
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