



Facilities Study Report

IR-742

Goose Harbour Lake Wind Phase II

35 MW Addition

Guysborough County, NS

FINAL DRAFT

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EXECUTIVE SUMMARY

Interconnection request IR-742 for Goose Harbour Lake Phase II was submitted for an additional 35 MW Network Resource Interconnection Service (NRIS) at the same Point of Interconnection (POI) as IR-618 and was studied under System Impact Study SIS-006-R2 dated August 21, 2026.

IR-742 was studied collectively with IR-618 and with a common Point of Interconnection.

No additional upgrades to the Transmission Provider Interconnection Facilities (TPIF) are required to accommodate the additional 35 MW (NRIS) at the IR-618 Goose Harbour Lake site other than those identified for IR-618.

There are no additional Network Upgrades required for the IR 742 interconnection other than those already identified and included with IR-618.

The Interconnection Customer is responsible for addressing the Interconnection Customer's Interconnection Facilities (ICIF) identified in the SIS prior to commercial operation.

A 230kV revenue metering system, owned by NSPI, is being installed at the Interconnection Customer's substation (126C) at part of IR-618 scope of work. The metering system does not require any modifications to accommodate the additional 35 MW being added under IR-742.

The proposed Commercial Operation Date is 2026-12-15. This date aligns with the proposed in-service dates for IR-618.

All interconnection facilities must meet NSPI's Transmission System Interconnection Requirements (TSIR) as published on the NSPI OASIS site.

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1.0 INTRODUCTION

IR-618 Goose Harbour Lake Phase I (130.5 MW) was studied under System Impact Study Report GIP-IR618-SIS-Part1-R1 Dated August 17, 2023. A Facilities Study (FAC) for IR-618 Goose Harbour Lake Phase I was completed dated August 31, 2023.

Interconnection request IR-742 for Goose Harbour Lake Phase II was submitted for an additional 35 MW Network Resource Interconnection Service (NRIS) at the same Point of Interconnection (POI) as IR-618 and was studied under System Impact Study SIS-006-R2 dated August 21, 2026.

IR-742 was studied collectively with IR-618 and with a common Point of Interconnection.

This Facilities Study Report was initiated through a standard Interconnection Facilities Study Agreement signed on September 4, 2026.

1.1 Project Ownership and Responsibilities

Ownership, maintenance, and other commercial operation arrangements will be covered separately in a Generation Interconnection Agreement (GIA) between NSPI and the Interconnection Customer.

All interconnection facilities must meet NSPI's Transmission System Interconnection Requirements (TSIR) as published on the NSPI OASIS site as well as NPCC bulk power system facility requirements.

1.2 Estimated Cost

Network upgrades identified for IR-618 are sufficient to cover the 35 MW addition proposed under IR-742. There are no additional upgrades associated with IR-742. The estimated cost is zero.

1.3 Project Schedule

The proposed Commercial Operation Date is 2026-12-15. This date aligns with the proposed in-service dates for IR-618.

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2.0 IR-742 Scope of Work

IR-742 proposes a 35 MW addition to the IR-618 Goose Harbour Lake site. The total facility (IR-618 & IR-742) nameplate capacity is proposed to be 168 MW. An overview diagram of the interconnection is provided in Appendix A. A single line diagram of the Customer's interconnection substation is provided in Appendix B.

The SIS for IR-742 did not identify any additional upgrades to the Transmission Provider Interconnection Facilities (TPIF) that are required to accommodate the additional 35 MW at the IR-618 Goose Harbour Lake site. The FAC has not identified any additional requirements to support the expansion to the combined Goose Harbour Lake Facility other than those already identified for IR-618.

The SIS did identify requirements for the Interconnection Customer's Interconnection Facilities (ICIF). These are the responsibility of Interconnection Customer (IC) and are summarized below:

1. Facilities to provide 0.95 leading and lagging power factor when delivering rated output at the HV terminals of the IC Substation Step Up Transformer when the voltage at that point is operating between 95 and 105% of nominal. Rated reactive power shall be available through the full range of real power output, from zero to full power.
2. Centralized controls for voltage setpoint control for the high side of the ICIF transformer. Fast acting control is required and will include a curtailment scheme, which will limit/reduce total output from the facility, upon receipt of a telemetered signal from the System Operator's SCADA system.
3. NSPI to have supervisory and control of this facility (IR742 and IR618), via the centralized controller. This will permit the System Operator to raise/lower the voltage setpoint, change the status of reactive power controls, change the real/reactive power remotely.
4. When curtailed, the facility shall offer over-frequency and under-frequency control with ± 0.2 Hz deadband and 4% droop characteristic. The active power controls shall also react to continuous control signals from the System Operator's SCADA system's Automatic Generation Control (AGC) system to control tie-line fluctuations as required.
5. Voltage ride-through capability as described in the NS Power TSIR.
6. Frequency ride-through capability in accordance with the NS Power TSIR.
7. Facilities for the System Operator to execute high speed generation rejection (transfer trip). The plant may be incorporated in AAS or RAS runback, or load rejection schemes as the system changes.
8. Operation at ambient temperatures as low as -30°C . The IC shall also provide icing models and conduct icing studies for their facility.
9. The facility must meet NSPI's TSIR as published on the NSPI OASIS site.

Ownership, maintenance, and other commercial operation arrangements will be covered separately in a Generation Interconnection Agreement (GIA) between NSPI and the Interconnection Customer.

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2.1 Interconnection Overview

An interconnection overview diagram of the 168 MW Goose Harbour Lake Wind interconnection for IR-618 and IR-742 is provided in Appendix B. The Point of Interconnection (POI) is at the 230kV bus node of the new 230kV three-breaker ring substation (125C-Grosvenor) located approximately 11.8 kms from 3C-Port Hastings substation (between existing line structures L7003-696 and L7003-697). The Point of Change of Ownership (PCO) is at the new 230kV line (L-7025) terminal structure at the Goose Harbour Lake Wind Interconnection Facility substation 126C.

2.2 Revenue Metering

A 230kV revenue metering system, owned by NSPI, is being installed at the Interconnection Customer's substation (126C) at part of IR-618 scope of work. The metering system does not require any modifications to accommodate the additional 35 MW being added under IR-742.

All metering design requirements identified under IR-618 apply to the addition of 35 MW under IR-742.

Nova Scotia Power will install the revenue meter at the Interconnection Customer's substation once the commissioning is complete and the system is ready for energization.

2.3 Canadian Electrical Code

All customer owned additions associated with IR-742 shall be designed and constructed to comply with Canadian Electrical Code requirements as required.

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3.0 PERMITS, APPROVALS, AND STANDARDS

The Interconnection Customer is responsible to obtain all permits and approvals required to construct the additional 35 MW facility at 126C-Goose Harbour Lake Wind substation.

The Nova Scotia Electrical Inspection Act requires that electrical work be performed under permit. Contractors must take out permits for work at voltage levels below and above 750V – including work on customer owned substations. Plans must be submitted for review and all equipment must be approved by a recognized certification authority (CSA, ULC, etc.).

The customer facilities are subject to the minimum requirements of the latest edition of the Canadian Electrical Code, CSA C22.1, and other applicable CSA standards, for the purpose of electrical inspection. The cost associated with acquiring wiring permits and the associated electrical inspections are the responsibility of the customer. No equipment will be connected or energized without authorization of the electrical inspector.

Where applicable, all NPCC bulk power standards must be met.

The interconnection substation installation will be subject to the review and approval by Nova Scotia Power to ensure coordination of the Nova Scotia Power and Interconnection Customer's scopes of work.

4.0 DESIGN AND CONSTRUCTION

NSPI is responsible for the design and engineering drawing production for all aspects of the scope of work from the Point of Interconnection to the Point of Change of Ownership, and any other associated network upgrades identified in the System Impact Study, unless otherwise specified and agreed in the Generation Interconnection Agreement (GIA).

For IR-742, no additional upgrades or modifications have been identified, other than those required under IR-618.

5.0 COMMISSIONING / OPERATIONS

NS Power reserves the right to inspect all Interconnection Facilities identified in this study prior to connection to the NS Power Transmission System to ensure the facility design and construction will not adversely affect the reliability of the Transmission System. All Interconnection Facilities are subject to NS Power's review and acceptance of all testing and commissioning requirements and results. Construction, switching, testing, and commissioning schedules that affect the reliable and stable operation of the Transmission System shall be coordinated with the Nova Scotia Power System Operator.

All interconnection facilities must meet NSPI's Transmission System Interconnection Requirements (TSIR) as published on the NSPI OASIS site as well as NPCC bulk power system facility requirements.

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Appendices

APPENDIX A – INTERCONNECTION OVERVIEW

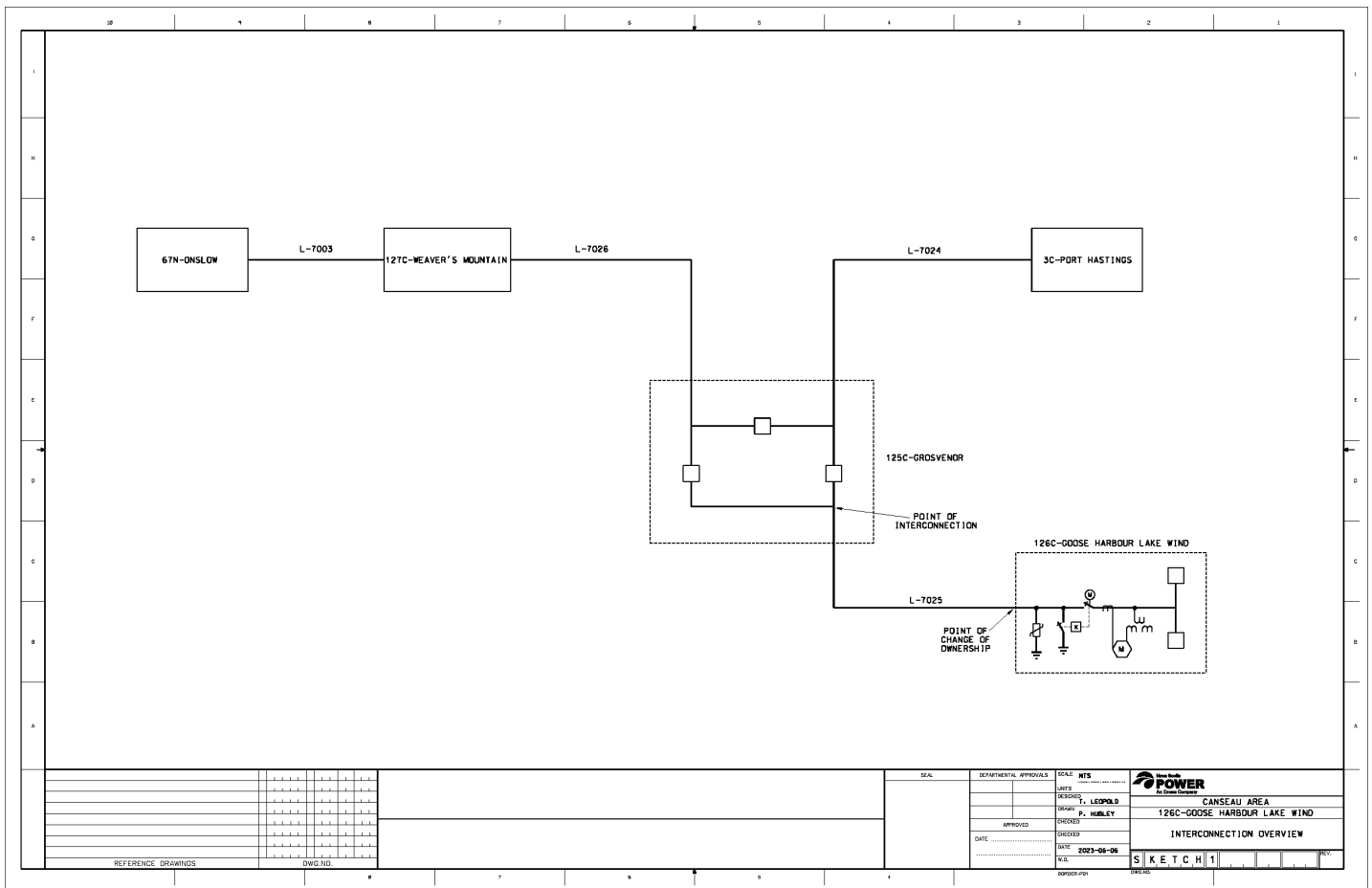
APPENDIX B – 126C-GOOSE HARBOUR LAKE TERMINAL STATION ONE LINE

APPENDIX C – MINUTES OF FACILITIES STUDY REVIEW MEETING

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IR-742 proposes a 35 MW addition to the IR-618 site. The total facility (IR-618 & IR-742) nameplate capacity at 126C- Goose Harbour Lake Wind is proposed to be 168 MW.

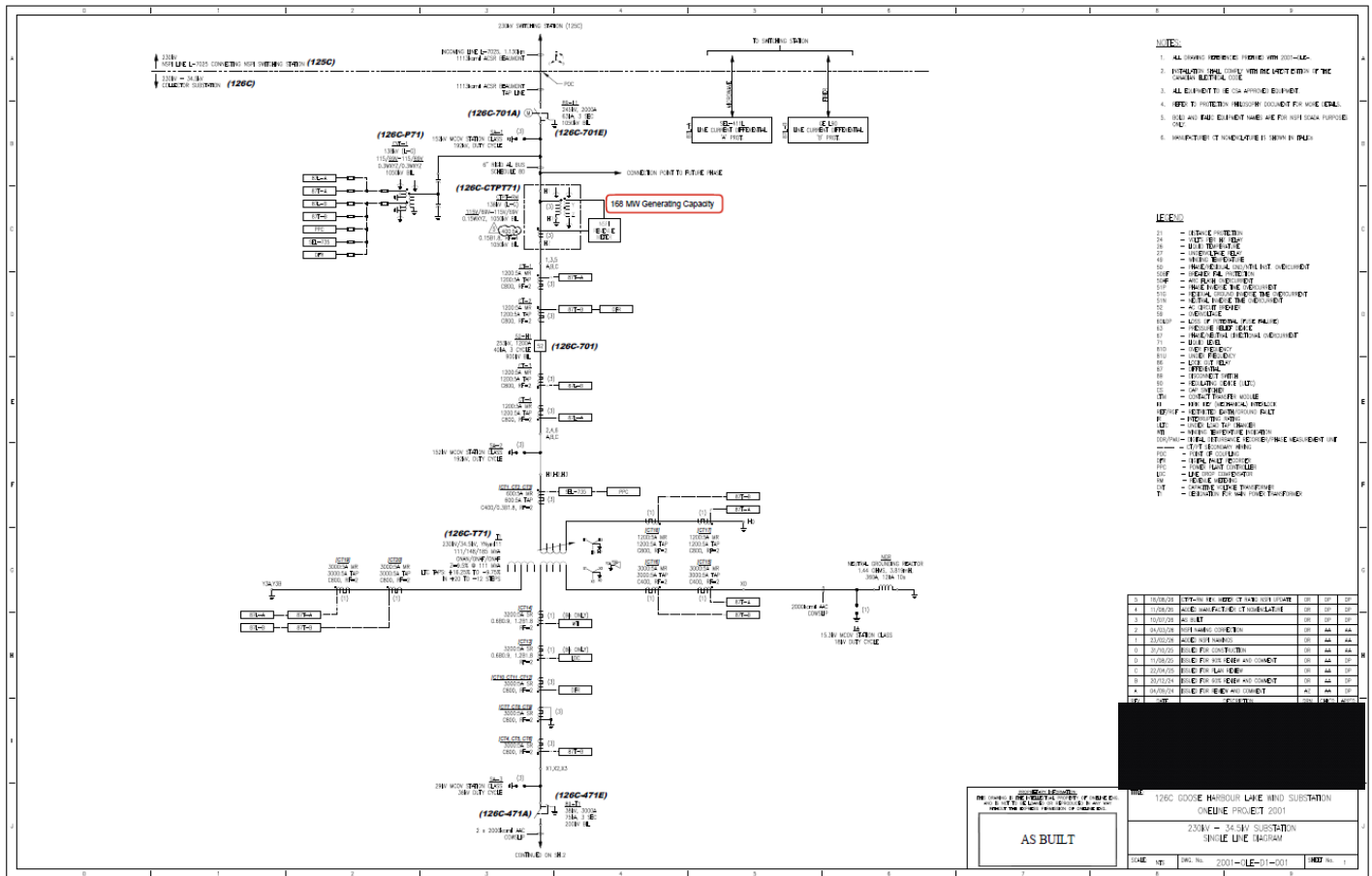


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Appendix B – 126C-Goose Harbour Lake Wind Terminal Station One Line



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Appendix C – Minutes of Facilities Study Review Meeting (if requested)

Notes:

- Attendees:
- Introductions
- Review of questions provided by the Interconnection Customer (IC) on the draft Facilities Study (FAC):
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- Next steps:
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