Request IR-1:

In the Description, NS Power noted that two new software solutions are required to develop automation for tracking "independent power producer (IPP) generation, and validate and reconcile transactions for renewable generation producer compensation", and for performing "wind curtailment prioritization, notification processes and dispatch activities, as well as enhancing reporting capabilities."

(a) Please explain the functions of the two new interrelated software solutions in plain language and the reason they are required.

(b) Please describe NS Power's current operational process without the software.

(c) Please explain why the existing operation is not capable for proper dispatch and control, and processes and procedures.

(d) Please explain any regulatory requirements and restrictions that may apply to the proposed automation system, such as those from FERC, NERC, NPCC, Revenue Canada, etc.

Response IR-1:

(a) The first solution automates compensation for Independent Power Producers (IPPs). Currently, billing processes for IPPs are performed manually, which is unsustainable without the addition of employee resources, given the growing number and complexity of IPP contracts. This solution is designed to efficiently process increased volume of payments and accommodate the introduction of new and more complex contractual obligations. Key functions for this solution include:

- Automatically consolidate generation customer location, meter, and rate data into a centralized system.
- Incorporating raw meter data into a unified format to streamline approval, edits, invoicing, and journal entry creation.
- Providing reporting and audit capabilities such as summarized and generator-level reports for internal user decision-making and transaction audit logging.
- Integrating data flows between AMI, MV90, SCADA, SharePoint, and other NS Power internal systems for transactional data flow with higher efficiency and lower the risk of human error.

The second solution automates wind curtailment prioritization and notification. It is required to manage growing renewable generation and continue to ensure fair curtailment practices. It is designed to integrate data across various systems to help inform long- and short-range curtailment transactional requirements. The key functions for the Wind Curtailment Automation solution are:

- Monitoring overall system generation, load and dispatch, and transactions to assess the potential for early warning alerts based on the predicted likelihood of curtailments and to automate those notifications to IPPs, as appropriate.
- Automating curtailment calculations to continue to ensure fair and equitable balancing across legacy wind farms to serve the Area Control Error (ACE) or System MW requirements based on actual system conditions.
- Providing detailed reporting and audit capabilities, including transaction audit logging for increased transparency.

These tools are essential because recent Power Purchase Agreements (PPAs), issued through provincial renewable energy procurement, include new contractual elements such as compensation for wind curtailment while on Automatic Generation Controls (AGC), which requires enhanced tracking, settlement, and reporting. The project also enables AGC

functionality within NS Power's SCADA platform for enhanced dispatch and system stability.

(b) Currently, both processes: IPP compensation and wind curtailment management, are managed manually using Excel spreadsheets and significant employee resources across multiple teams. Please also refer to IR-8.

(c) The move toward automating tools and processes within System Operations was a consistent theme noted in the 2018/2019 FAM Audit Dispatch Study, driven by the requirement to reduce carbon emissions and achieve the stated goals in the "Path to 2030" and the significant volume of new generation forecast at that time. NS Power recognizes that effectively managing a complex and growing fleet of generation, load growth, and the transition to 80% renewable generation while continuing to maintain system reliability requires a shift from traditional manual system operations to a more automated and efficient approach that provides improved analysis, reporting, and transparency. Managing IPP generation and associated contractual obligations as installed wind generation capacity is anticipated to triple in the coming years will become quickly unmanageable under current manual processes for System Operations and insufficient for IPPs given the volume of decisions and notifications required. In addition, new tools to validate and reconcile commercial transactions for renewable generation are needed to enable NS Power's back-office to continue to provide efficient and accurate preparation of invoices and process payments for IPPs under new PPA terms.

(d) NS Power is not aware of current regulatory requirements or restrictions that apply to the proposed solution implementations from FERC, NERC, NPCC, or Revenue Canada. The impacts are primarily related to internal efficiency and accuracy.

Request IR-2:

In the Description, NS Power noted that "… requires a more robust and automated system to ensure that planned and executed dispatch scenarios align with Power Purchase Agreement (PPA) terms and are reported on with accuracy and transparency."

(a) Please describe the PPA terms that necessitate the automated system.

(b) Please indicate how many IPPs have these PPA terms, and their percentages in total wind IPPs.

Response IR-2:

(a) The Power Purchase Agreement (PPA) terms that require a more robust and automated system are those associated with the provision of Automatic Generation Control (AGC) services. In the Rate Base Procurement Power Purchase Agreement,[1] those terms are set out in section 4.3.

These provisions allow NS Power, through its System Operator function, to dispatch wind farms to levels other than their full output based on current conditions. They also provide for compensation to the wind farm for any foregone output resulting from being dispatched to a level below its full output. These terms necessitate enhanced transactional data recording, traceability, and financial analysis, which combined with existing contractual requirements for legacy IPPs are not sustainable through manual processes and efforts.

[1] The Rate Base Procurement PPA is available on the Nova Scotia Rate Base Procurement website at this link: https://img1.wsimg.com/blobby/go/d32cfc97-cc60-4342-94cd-6df57e8fba35/downloads/Appendix%208.1%20-%20Power%20Purchase%20Agreement%20(Appro.pdf?ver=1707424292831

Similar provisions that require the use of an automated system will also be included in PPAs for the Green Choice Program (M11455) and projects prescribed under s. 24 (formerly s. 4AA) of the *Electricity Act*.

Enhanced AGC capabilities are essential for the System Operator to effectively and reliably operate the power system as it transitions to higher levels of variable renewable energy and reduced dispatchable thermal generation in compliance with federal and provincial renewable energy regulations. Because these enhanced capabilities are not present in legacy wind farms managed with existing manual tools, new tools and processes included in this project, CI C0053696 - ECC Wind Integration, are needed.

(b) The PPA for new wind farms selling power to NS Power will include these AGC terms. The estimated amount of IPP wind nameplate capacity with these terms is summarized in the table below (in no order).

Non-Legacy PPA/Program (with AGC)	Output Capacity Per Site (MW)	Cumulative Capacity (MW)	Total Wind Capacity (MW)	Percentage
Rate Base Procurement	306	306	917	34%
Green Choice Program	262	568	1,179	49%
Goose Harbour Lake Wind	168	736	1,347	55%
Minas Highland Wind	13	749	1,360	56%
EverWind Fuels Wind (expected)	691	1,440	2,051	71%

Note: Legacy wind represents 611 MW of output capacity.

Request IR-3:

For both software solutions, please provide the following project development details for each of them:

(a) List the major phases.

(b) Explain the estimated duration of each phase.

(c) List key milestones and expected completion and in service dates.

(d) Explain if both software will be developed by the same team or separately and why.

Response IR-3:

(a-c) The diagram below outlines the major project phases, the estimated duration of each phase, key milestones, and expected completion dates. The in-service date for both solutions is currently expected to be July 2026.

ECC Wind Integration Project			
Task Name	**Start Date**	**End Date**	**Milestone**
Wind Integration & Automation	1-Jan-25	1-Aug-26	
Project Setup	1-Jan-25	15-Jan-25	
	15-Jan-25	***15-Jan-25***	***Set Up Complete***
AGC - Contract review & decision	20-Jan-25	9-May-25	
	9-May-25	***9-May-25***	***AGC Complete***
Integrated Wind Onboarding Impact and Studies	6-Jan-25	31-Mar-25	
	31-Mar-25	***31-Mar-25***	***Studies Complete***
Invoice / Payables Settlement	3-Feb-25	30-Jun-26	
	30-Jun-26	***30-Jun-26***	***Settlement Complete***
Wind Farm Derating / Maintenance Tracking	10-Mar-25	26-Sep-25	
	26-Sep-25	***26-Sep-25***	***Derating Complete***
ECC Analytics & Reporting	14-Apr-25	27-Mar-26	
	27-Mar-26	***27-Mar-26***	***Analytics Complete***
SCADA	24-Feb-25	5-Mar-26	
	5-Mar-26	***5-Mar-26***	***SCADA Complete***
Curtailment Strategy	2-Jun-25	6-Apr-26	
	6-Apr-26	***6-Apr-26***	***Curtailment Complete***
ECC Port Ops Enhancements	19-Feb-25	27-Feb-26	
	27-Feb-26	***27-Feb-26***	***ECCPO Complete***
Renewables Desk / Operator Expansion	27-Jan-25	10-Feb-25	
	10-Feb-25	***10-Feb-25***	***RD Complete***
Go-Live Monitoring & Validation	30-Jun-26	31-Jul-26	
	31-Jul-26	***31-Jul-26***	***Go Live Complete***
Project Closure	1-Aug-26	31-Aug-26	
	31-Aug-26	***31-Aug-26***	***Close Complete***

(d) Both software solutions included in this project are being developed by the same team. This approach ensures consistency in system architecture, process design, data integration, and overall implementation requirements. It also allows the team to leverage learnings, protocols, and best practices across both solutions, as appropriate.

Request IR-4:

Please explain how the proposed automation system correlates to the Evergreen IRP and NS Power's progress to the 2030 renewable electricity target.

Response IR-4:

The Evergreen IRP and the path to the 2030 renewable electricity target both rely on the integration of significant quantities of new renewable generation resources, primarily wind. The software tools included in this project are essential to enable this integration by providing the capabilities required to reduce manual processing steps and deliver automated curtailment functionality for the System Operator while supporting system reliability.

In addition, the new tools to validate and reconcile commercial transactions for renewable generation are needed to enable NS Power's back-office to efficiently and accurately prepare invoices and process payments for IPPs under new PPA terms for AGC, in addition to Legacy IPPs. The preparation of invoices for IPPs supplying energy requires incremental billing determinants which are not currently part of the IPP billing/invoicing process.

Request IR-5:

In the Description, NS Power noted that "The solutions will be designed to integrate the anticipated new renewable generation projects in development and planned in Nova Scotia and be scalable to support the management of additional generation as needed."

(a) Does NS Power expect the usage of this program to be only applicable to Wind integration, or could it be applied to other generation types, including solar, tidal, biomass, etc.

(b) If not, please explain why not.

(c) If yes, please explain how.

Response IR-5:

(a) The scope of this Project includes the procurement programs existing today (for both new and legacy wind IPPs) as these represent the highest priority resources in terms of volume and timeline over the coming years. However, the solutions are designed to be scalable, and the same technologies and procedures can be applied to other generation types as appropriate.

(b) N/A.

(c) Depending on future generator procurement program terms and tariffs, the solutions developed under this Project may be usable as designed. However, if tariff structures or curtailment rules for other generation types differ significantly, the software vendor may need to modify the applications to meet new requirements. The same would apply if new wind programs were introduced with significantly different terms or tariffs.

Request IR-6:

In the Description, NS Power noted that "The current manual operating, reporting, and transactional procedures for the management of legacy wind generation in Nova Scotia are sufficient for smaller capacities of generation with limited control features."

(a) Please explain whether it is a mandatory requirement for all IPPs (legacy and new) to be integrated with the proposed automation system.

(b) If not, please explain why not.

(c) Please elaborate on options and requirements for the legacy IPPs to participate in the new system, including but not limited to system upgrades, contractual agreement changes.

Response IR-6:

(a) It will be mandatory for all IPPs, both legacy and new, to be managed within the new system.

(b) N/A.

(c) Legacy IPPs will be integrated into the new system without any new or changed requirements needed. The new technology will only require changes within NS Power's systems.

Request IR-7:

In the Description, NS Power noted the following:

> **The anticipated growth in the renewable generation with enhanced control capabilities, however, requires a more robust and automated system to ensure that planned and executed dispatch scenarios align with Power Purchase Agreement (PPA) terms and are reported on with accuracy and transparency.**
> **…**
> **Legacy wind generators are not equipped with AGC capability and therefore can be curtailed only in pre-set increments under different compensation terms.**

(a) Please provide a list of all independent power producers (IPPs) currently connected to the NS Power system and projected IPPs for the next five years. For each IPP please include:

- **The capacity of the IPP.**
- **Connection feeder size, number, and location (Transmission / Distribution).**
- **Automatic Generator Controls (AGC) requirement (Yes/No).**
  - **For non-AGC IPPs, please explain the intention to upgrade and the expected timeline.**
  - **If there is no upgrade intention, please explain the reason.**

(b) Please provide the number and capacity of IPPs that will be connected to the proposed system by 2030.

(c) Please compare the number and capacity of AGC versus non-AGC IPPs and explain NS Power's process to manage the non-AGC IPPs, to ensure efficiency, accuracy and transparency.

(d) Please explain the requirements for IPPs to connect to AGC.

(e) Please provide a cost benefit analysis of the AGC system.

Response IR-7:

(a) Please refer to Partially Confidential Attachment 1 for the list of IPPs connected to the NS Power transmission and distribution systems. Note that detail for Connection Feeder Size is not available.

For Automatic Generation Control (AGC), the Distribution Generator Interconnection Procedures (DGIP) do not require distribution-connected generators to be so equipped, thus no distribution-connected IPPs provide AGC services.

AGC capability is a requirement for transmission-connected generators under the Generator Interconnection Procedures (GIP) as of version 1.2 of the Transmission System Interconnection Requirements dated November 25, 2024. For existing transmission-connected IPPs, please refer to IR-12(b) for the explanation as to why legacy wind farms will not be retrofitted with AGC functionality.

NS Power does not have a projection for distribution-connected IPPs for the next 5 years; however, the list of Active Distribution Interconnection Requests[1] is available on OASIS.

[1]The list of Active Distribution Interconnection Requests is available on OASIS at the following link: https://www.nspower.ca/docs/default-source/pdf-to-upload/nspi-active-distribution-interconnection-requests(pdf).pdf?sfvrsn=bc46353_106

A copy of the latest posted version of the list dated January 8, 2026 is provided as Attachment 2.

A projection of transmission-connected IPP capacity aggregated by PPA/Program is provided in IR-2(b). Individual IPPs within these programs, and other IPPs and non-IPP generator interconnections, advance through the GIP. IESO-NS maintains a list of Active Transmission Interconnection Requests.[2] A copy of the latest posted version of the list dated January 8, 2026 is provided as Attachment 3. The list provides IPP Capacity and Connection Feeder Number; however, Connection Feeder Size is not available. As stated above, the GIP now requires transmission-connected generators to be equipped with Automatic Generator Control (AGC) capability.

Should all the IPP generator interconnections on the list of Active Transmission Interconnection Requests (including the one non-IPP NS Power Battery Energy Storage System) come to fruition, a total of 34 resources with a combined capacity of close to 3,000 MW would need to be managed by the automated solution.

(b) Please refer to part (a).

(c) Please refer to part (a), IR-2(b), and IR-8.

(d) Distribution-connected generators are not required to provide AGC. The requirement for IPPs to connect to AGC is applicable to transmission-connected resources under the Generator Interconnection Procedures, through the technical requirements found in section 7.4.7 of the Transmission System Interconnection Requirements.[3]

[2] The list of Active Transmission Interconnection Requests is available on OASIS at the following link: https://www.nspower.ca/docs/default-source/pdf-to-upload/nspi-active-transmission-interconnection-requests(pdf).pdf?sfvrsn=17712f59_103

[3] The Transmission System Interconnection Requirements (TSIR) define the technical requirements for Interconnection Customers connecting to the transmission system under the Generator Interconnection Procedures. The TSIR is posted on OASIS at the following link: transmission-system-interconnection-requirements.pdf

(e) Please refer to IR-22.

REDACTED (CONFIDENTIAL INFORMATION REMOVED)

IPP	Type	Capacity Summer (MW)	Capacity Winter (MW)	Interconn. Voltage (Volts)	Connection Feeder Number	Transmission or Distribution Connected	AGC (Y/N)
[redacted]	Wind	0.02	0.02	12470		D	N
	Solar	0.066	0.066	24940	2H-413	D	N
	Solar	0.08	0.08	24940	2H-413	D	N
	Solar	0.09	0.09	24940	24H-406	D	N
	Solar	0.12	0.12	24940	2H-413	D	N
	Solar	0.125	0.125	24940	127H-413	D	N
	Solar	0.125	0.125	230000	67C-411	D	N
	Solar	0.125	0.125	24940	24C-442	D	N
	Solar	0.125	0.125	24940	24C-443	D	N
	Solar	0.165	0.165	12470	677N-301	D	N
	Solar	0.185	0.185	24940	1N-402	D	N
	Solar	0.185	0.185	24940	103H-433	D	N
	Solar	0.185	0.185	24940	1N-402	D	N
	Solar	0.185	0.185	12470	88W-314	D	N
	Solar	0.1875	0.1875	24940	62N-411	D	N
	Solar	0.1875	0.1875	24940	82V-423	D	N
	Solar	0.1875	0.1875	24940	40H-303	D	N
	Wind	0.19	0.199	24940	1N-405	D	N
	Solar	0.24	0.24	24940	139H-412	D	N
	Solar	0.25	0.25	12470	20V-311	D	N
	Solar	0.25	0.25	24940	103H-433	D	N
	Solar	0.25	0.25	12470	40H-303	D	N
	Biogas	0.3	0.3	12470	16V-314	D	N
	Wind	0.3	0.3	24940	57S-401	D	N
	Wind	0.3	0.3	24940	100C-422	D	N
	Wind	0.3	0.3	24940	3S-403	D	N
	Wind	0.3	0.3	12470	84S-302	D	N
	Solar	0.332	0.332	12470	88W-314	D	N
	Solar	0.37	0.37	24940	1N-402	D	N
	Solar	0.375	0.375	12470	22V-322H	D	N
	Wind	0.4	0.4	24940	62N-413	D	N
	Solar/Battery	0.4	0.4	24940	22N-404	D	N
	Solar	0.435	0.435	24940	101H-411	D	N
	Wind	0.45	0.45	24940	3S-403	D	N
	Solar	0.45	0.45	12470	11S-303	D	N
	Biogas	0.5	0.5	12470	16N-301	D	N
	Biogas	0.5	0.5	24940	82V-423	D	N
	Biogas	0.5	0.5	24940	4C-441	D	N
	Solar	0.5	0.5	69000	7N	T	N
	Solar	0.555	0.555	12470	82S-303	D	N
	Solar	0.555	0.555	24940	58H-431	D	N
	Solar	0.5625	0.5625	24940	139H-412	D	N
	Wind	0.6	0.6	24940	1C-411	D	N
	Wind	0.6	0.6	24940	103H-432	D	N
	Wind	0.6	0.6	24940	4C-424	D	N
	Solar/Battery	0.6	0.6	12470	99H-312	D	N
	Solar	0.625	0.625	24940	58H-431	D	N
	Solar	0.74	0.6475	24940	103H-431	D	N
	Solar	0.74	0.74	24940	103H-431	D	N
	Wind	0.8	0.8	12470	77V-303	D	N
	Wind	0.8	0.8	24940	56N-414	D	N
	Wind	0.8	0.8	24940	56N-414	D	N
	Wind	0.8	0.8	12470	81S-303	D	N
	Wind	0.8	0.8	12470	81S-306	D	N
	Wind	0.8	0.8	24940	1C-411	D	N
	Wind	0.8	0.8	12470	4N-313	D	N
	Wind	0.8	0.8	12470	4N-313	D	N
	Wind	0.8	0.8	24940	50N-410	D	N
	Wind	0.8	0.8	24940	50N-410	D	N
	Wind	0.9	0.9	24940	77V-401	D	N
	Wind	0.9	0.9	12470	103C-314	D	N
	Steam	1	1	12470	93V-313	D	N
	Wind	1.4	1.4	24940	56N-414	D	N
	Wind	1.5	1.5	24940	96H-411	D	N
	Biomass	1.5	1.5	24940	1N-421	D	N
	Wind	1.6	1.6	24940	3S-403	D	N

REDACTED (CONFIDENTIAL INFORMATION REMOVED)

IPP	Type	Capacity Summer (MW)	Capacity Winter (MW)	Interconn. Voltage (Volts)	Connection Feeder Number	Transmission or Distribution Connected	AGC (Y/N)
[redacted]	Wind	1.6	1.6	12470	102W-311	D	N
	Wind	1.7	1.7	24940	67C-411	D	N
	Wind	1.7	1.7	24940	104S-313	D	N
	Wind	1.8	1.8	12470	16N-301	D	N
	Wind	1.8	1.8	24940	50N-410	D	N
	Wind	1.99	1.99	24940	2C-402	D	N
	Wind	1.99	1.99	24940	62N-413	D	N
	Wind	1.99	1.99	12470	88W-323	D	N
	Wind	1.99	1.99	24940	22C-404	D	N
	Wind	1.99	1.99	24940	58C-403	D	N
	Wind	1.99	1.99	12470	88W-323	D	N
	Wind	1.99	1.99	12470	16W-302	D	N
	Wind	2	2	12470	12V-302	D	N
	Wind	2	2	24940	100C-422	D	N
	Wind	2	2	12470	84W-301	D	N
	Wind	2	2	24940	57S-401	D	N
	Wind	2	2	24940	18V-412	D	N
	Wind	2	2	24940	84S-302	D	N
	Wind	2	2	24940	82V-401	D	N
	Solar	2	2	24940	22N-404	D	N
	Wind	2.1	2.1	12470	6N-302	D	N
	Wind	2.3	2.3	12470	87H-311	D	N
	Wind	2.35	2.35	12470	15S-303	D	N
	Wind	2.35	2.35	12470	82S-304	D	N
	Biogas	3.1	3.1	24940	131H-422	D	N
	Wind	3.1	3.1	12470	81S-302	D	N
	Biomass	3.1	3.1	24940	131H-424	D	N
	Wind	3.2	3.2	24940	15N-404	D	N
	Wind	3.2	3.2	12470	126H-313	D	N
	Wind	3.2	3.2	12470	22W-311	D	N
	Wind	3.6	3.6	24940	81N-412	D	N
	Wind	3.6	3.6	24940	50W-412	D	N
	Wind	4	4	24940	4C-424	D	N
	Wind	4	4	12470	3S-301	D	N
	Wind	4	4	24940	11S-301	D	N
	Wind	4	4	12470	89W-303	D	N
	Wind	4	4	24940	82V-423	D	N
	Wind	4	4	24940	15N-401	D	N
	Wind	4	4	24940	82V-401	D	N
	Solar	4	4	12470	84S-305	D	N
	Wind	4.6	4.6	24940	50N-410	D	N
	Wind	4.6	4.6	12470	20H-301	D	N
	Wind	4.8	4.8	24940	62N-414	D	N
	Wind	4.8	4.8	24940	1N-405	D	N
	Solar	4.8	4.8	12470	65V-303	D	N
	Solar	5.072	4.072	24940	3N-412	D	N
	wind	6	6	24940	4C-430	D	N
	Wind	6	6	24940	15N-403	D	N
	Wind	6	6	24940	79V-403	D	N
	Wind	6	6	24940	62N-413	D	N
	Wind	6	6	24940	22N-402	D	N
	Wind	7.05	7.05	24940	103H-434	D	N
	Wind	7.05	7.05	69000	17V	T	N
	Wind	8	8	24940	131H-423	D	N
	Wind	10	10	24940	1C-411	D	N
	Wind	10	10	24940	1C	T	N
	Wind	10	10	24940	1C	T	N
	Wind	10	10	24940	137H-413	D	N
	Wind	13.8	13.8	69000	L-5527B	T	N
	Wind	14	14	69000	L-5575	T	N
	Wind	16.45	16.45	69000	17V	T	N
	Wind	24	24	138000	L-6004	T	N
	Biomass	25	25			T	N
	Wind	30.6	30.6	69000	L-5027	T	N
	Wind	31.5	31.5	138000	L-6535	T	N
	Wind	33.6	33.6	138000	L-6054	T	Y
	Wind	50	50		L-7004	T	N
	Wind	62.1	62.1	138000	L-6511	T	N
	Wind	78	78	138000	L-6004	T	N

IESO NOVA SCOTIA

Active Distribution Interconnection Requests

Publish Date: 2026-01-08

Queue Order	T/D/U	IR#	Request Date	County	MW Summer	MW Winter	Interconnection Point	Type	Inservice date	Revised Inservice date	Status	Service Type	IC Identity
	D	683	2022-12-14	Halifax	0.066	0.066	2H-413	Solar	2022-08-03		GIA Executed	N/A	N/A
	D	684	2022-12-14	Halifax	0.08	0.08	2H-413	Solar	2023-04-23		GIA Executed	N/A	N/A
	D	688	2022-12-22	Colchester	10	10	82V-403	Solar	2025-12-01		PA Complete	N/A	N/A
	D	689	2022-12-22	Hants	6.3	6.3	79V-401	Solar	2025-12-01		PA Complete	N/A	N/A
	D	690	2022-12-22	Hants	10	10	82V-423	Solar	2025-12-01		PA Complete	N/A	N/A
	D	691	2022-12-22	Hants	4.41	4.41	82V-423	Solar	2025-12-01		PA Complete	N/A	N/A
	D	692	2023-03-24	Pictou	0.1875	0.1875	62N-411	Solar	2024-02-01		GIA Executed	N/A	N/A
	D	696	2023-03-24	Halifax	0.1875	0.1875	82V-423	Solar	2024-02-01		GIA Executed	N/A	N/A
	D	698	2023-03-30	Halifax	0.1875	0.1875	40H-303	Solar	2024-02-01		GIA Executed	N/A	N/A
	D	759	2024-02-16	Cape Breton	2.3	2.3	59C-402	Solar	2024-12-31		SIS Agrmnt Complete	N/A	N/A
	D	771	2024-04-08	Kings	6.25	6.25	50V-401	Solar	2025-04-28		SIS Agrmnt Complete	N/A	N/A
	D	773	2024-04-08	Halifax	10	10	88H-402	Solar	2025-04-28		SIS Agrmnt Complete	N/A	N/A
	D	775	2024-04-08	Halifax	10	10	82V-402	Solar	2025-04-28		SIS Agrmnt Complete	N/A	N/A
	D	781	2024-04-30	Cumberland	5.4	5.4	22N-402	Solar	2025-12-15		SIS Agrmnt Complete	N/A	N/A
	D	783	2024-04-30	Cape Breton	9.9	9.9	22N-402	Solar	2025-12-15		SIS Agrmnt Complete	N/A	N/A
	D	789	2024-06-05	Shelburne	2.025	2.025	23W-302	Solar	2025-12-15		SIS Agrmnt Complete	N/A	N/A
	D	791	2024-06-05	Lunenburg	6.975	6.975	70W-313	Solar	2025-12-15		SIS Agrmnt Complete	N/A	N/A
	D	794	2024-06-24	Cape Breton	6.525	6.525	11S-411	Solar	2025-12-15		SIS Agrmnt Complete	N/A	N/A
	D	796	2024-07-08	Halifax	0.947	0.947	139H-413	Solar	2024-12-31		SIS in Progress	N/A	N/A
	D	805	2024-08-20	Halifax	9.9	9.9	103H-431	Solar	2025-12-15		SIS Agrmnt Complete	N/A	N/A
	D	812	2024-09-24	Cape Breton	10	10	11S-411	Solar	2025-12-01		SIS Agrmnt Complete	N/A	N/A
	D	813	2024-10-01	Shelburne	2.6	2.6	21W-311	Solar	2025-12-31		SIS Agrmnt Complete	N/A	N/A
	D	815	2024-10-21	Digby	5	5	93V-313	Solar	2025-12-31		SIS Agrmnt Complete	N/A	N/A
	D	816	2024-10-22	Shelburne	2.2	2.2	20W-312	Solar	2025-12-31		SIS Agrmnt Complete	N/A	N/A
	D	817	2024-10-22	Digby	5	5	93V-311	Solar	2025-12-31		SIS Agrmnt Complete	N/A	N/A
	D	822	2024-11-19	Cape Breton	6.98	6.98	11S-411	Solar	2025-12-31		SIS Agrmnt Complete	N/A	N/A
	D	823	2024-11-19	Digby	5	5	93V-313	Solar	2025-12-31		SIS Agrmnt Complete	N/A	N/A
	D	827	2025-01-20	Colchester	10	10	88H-402	Solar	2026-07-07		SIS Agrmnt Complete	N/A	N/A
	D	828	2025-01-20	Lunenburg	2.2	2.2		Solar	2026-12-01		IR Valid	N/A	N/A
	D	835	2025-01-27	Cape Breton	1.67	1.67	81S-306	Solar	2031-03-27		SIS Agrmnt Complete	N/A	N/A
	D	838	2025-03-05	Cape Breton	0.27	0.27	533S-211	Solar	2025-07-01		SIS Agrmnt Complete	N/A	N/A
	D	840	2025-03-10	Cape Breton	0.249	0.249	81S-305	Solar	2027-01-31		SIS Agrmnt Complete	N/A	N/A
	D	845	2025-03-18	Richmond	3.4	3.4	22C-404	Solar	2026-12-31		SIS Agrmnt Complete	N/A	N/A
	D	846	2025-03-18	Annapolis	2.6	2.6	70V-312	Solar	2026-12-31		SIS Agrmnt Complete	N/A	N/A
	D	847	2025-03-18	Annapolis	4.8	4.8	65V-301	Solar	2026-12-31		SIS Agrmnt Complete	N/A	N/A
	D	848	2025-03-18	Lunenburg	2	2	89W-302	Solar	2026-12-31		SIS Agrmnt Complete	N/A	N/A
	D	849	2025-03-18	Richmond	3.4	3.4	22C-403	Solar	2026-12-31		SIS Agrmnt Complete	N/A	N/A
	D	852	2025-04-22	Annapolis	2.6	2.6	70V-311	Solar	2026-12-31		SIS Agrmnt Complete	N/A	N/A
	D	853	2025-04-22	Shelburne	5.2	5.2	22W-313	Solar	2026-12-31		SIS Agrmnt Complete	N/A	N/A
	D	854	2025-04-22	Lunenburg	4.8	4.8	73W-411	Solar	2026-12-31		PA Complete	N/A	N/A
	D	855	2025-04-22	Lunenburg	2.8	2.8	73W-411	Solar	2026-12-31		SIS Agrmnt Complete	N/A	N/A
	D	856	2025-04-22	Yarmouth	2.2	2.2	88W-323	Solar	2026-12-31		SIS Agrmnt Complete	N/A	N/A
	D	857	2025-04-22	Colchester	7.4	7.4	81N-412	Solar	2026-12-31		SIS Agrmnt Complete	N/A	N/A
	D	858	2025-04-22	Hants	5.4	5.4	79V-403	Solar	2026-12-31		SIS Agrmnt Complete	N/A	N/A
	D	859	2025-04-22	Digby	4	4	93V-313	Solar	2026-07-07		PA Complete	N/A	N/A
	D	862	2025-05-14	Yarmouth	10	10	92W-302	Solar	2027-12-31		SIS Agrmnt Complete	N/A	N/A
	D	865	2025-06-16	Halifax	0.495	0.495	137H-411	Solar	2026-08-31		SIS Agrmnt tendered	N/A	N/A
	D	866	2025-06-24	Cape Breton	0.5	0.5	11S-411	Solar	2026-01-05		PA Complete	N/A	N/A
	D	867	2025-07-02	Cape Breton	10	10	11S-312	Solar	2027-11-27		PA Complete	N/A	N/A
	D	869	2025-08-08	Hants	2.98	2.98	82V-423	Solar	2026-12-15		PA Complete	N/A	N/A
	D	870	2025-08-08	Hants	4.99	4.99	79V-401	Solar	2026-12-15		PA Complete	N/A	N/A
	D	871	2025-08-12	Antigonish	0.12	0.12	4C-430	Solar	2026-12-31		PA Complete	N/A	N/A
	D	875	2025-09-22	Kings	0.375	0.375	55V-322	Solar	2025-11-25		PA Complete	N/A	N/A
	D	876	2025-09-23	Colchester	1.79	1.79	15N-402	Solar	2026-06-01		PA Complete	N/A	N/A

Active Distribution Interconnection Requests including projects in the Advanced Queue Stage.
Queue Order is assigned to projects in Advanced Queue Stage.

IESO NOVA SCOTIA

Active Distribution Interconnection Requests

Publish Date: 2026-01-08

Queue Order	T/D/U	IR#	Request Date	County	MW Summer	MW Winter	Interconnection Point	Type	Inservice date	Revised Inservice date	Status	Service Type	IC Identity
	D	878	2025-10-07	Colchester	10	10	15N-404	Solar	2026-12-01		PA Complete	N/A	N/A
	D	879	2025-10-07	Cumberland	10	10	81N-412	Solar	2027-11-27		PA Complete	N/A	N/A
	D	880	2025-10-09	Yarmouth	10	10	88W-312	Solar	2027-11-27		PA Complete	N/A	N/A
	D	881	2025-10-23	Cape Breton	5.7	5.7	4S-331	Solar	2027-03-05		PA Complete	N/A	N/A
	D	883	2025-11-13	Colchester	2	2	1N-405	Solar	2027-06-01		IR Valid	N/A	N/A
7	D	569	2019-07-26	Digby	0.6	0.6	509V-302	Tidal	2021-03-01	2027-09-30	GIA Executed	N/A	N/A
26	D	676	2022-08-15	Halifax	0.74	0.6475	103H-431	Solar	2022-06-01	2025-10-31	GIA Executed	N/A	N/A
28	D	699	2023-04-18	Halifax	0.625	0.625	58H-431	Solar	2024-12-31	2025-09-30	GIA Executed	N/A	N/A
36	D	716	2023-08-03	Halifax	0.24	0.24	139H-412	Solar	2023-10-01	2025-08-30	GIA Executed	N/A	N/A
44	D	740	2023-09-08	Hants	0.25	0.25	20V-311	Solar	2025-01-01	2025-09-30	GIA Tendered	N/A	N/A
60	D	746	2023-10-27	Halifax	4.3	4.3	87H-312	Solar	2024-12-31	2027-09-07	SIS in Progress	N/A	N/A
40	D	750	2023-11-20	Annapolis	0.25	0.25	70V-312	Solar	2024-03-31	2025-09-30	SIS in Progress	N/A	N/A
63	D	751	2023-12-14	Annapolis	4.8	4.8	65V-303	Solar	2024-12-31	2027-09-07	GIA in Progress	N/A	N/A
41	D	752	2024-01-01	Hants	0.185	0.185	1N-402	Solar	2024-03-15	2025-12-31	GIA Tendered	N/A	N/A
49	D	768	2024-04-02	Halifax	0.435	0.435	101H-411	Solar	2024-05-30	2026-08-30	SIS Complete	N/A	N/A
61	D	769	2024-04-04	Cape Breton	4	4	84S-305	Solar	2025-09-30	2027-09-07	GIA in Progress	N/A	N/A
50	D	777	2024-04-12	Guysborough	0.125	0.125	24C-442	Solar	2024-06-16	2026-05-30	GIA Executed	N/A	N/A
48	D	788	2024-05-27	Halifax	0.555	0.555	58H-431	Solar	2025-01-12	2025-12-31	GIA in Progress	N/A	N/A
66	D	819	2024-11-04	Inverness	0.32	0.32	1C-411	Solar	2025-12-31		SIS in Progress	N/A	N/A
56	D	837	2025-01-30	Hants	0.185	0.185	1N-402	Solar	2026-03-30		SIS Complete	N/A	N/A
67	D	843	2025-03-14	Queens	0.185	0.185	82V-401	Solar	2025-08-30		SIS Agrmnt Complete	N/A	N/A
59	D	850	2025-03-26	Halifax	0.25	0.25	40H-303	Solar	2025-12-31		SIS Complete	N/A	N/A
62	D	851	2025-04-16	Halifax	0.12	0.12	2H-413	Solar	2025-11-03		SIS Complete	N/A	N/A
64	D	860	2025-04-23	Colchester	0.165	0.165	677N-301	Solar	2025-10-30		SIS Complete	N/A	N/A
65	D	861	2025-05-06	Yarmouth	0.185	0.185	88W-314	Solar	2026-01-01		SIS Complete	N/A	N/A
69	D	863	2025-05-14	Colchester	0.156	0.156	16N-302	Solar	2025-10-15		SIS Agrmnt Complete	N/A	N/A
68	D	864	2025-04-06	Halifax	0.278	0.278	99H-312	Solar	2026-01-01		SIS in Progress	N/A	N/A
70	D	868	2025-07-03	Pictou	0.185	0.185	62N-416	Solar	2025-10-15		SIS Agrmnt Complete	N/A	N/A
71	D	872	2025-08-13	Yarmouth	0.25	0.25	88W-322	Solar	2025-12-05		SIS Agrmnt Complete	N/A	N/A

Active Distribution Interconnection Requests including projects in the Advanced Queue Stage.
Queue Order is assigned to projects in Advanced Queue Stage.

IESO NOVA SCOTIA

Active Transmission Interconnection Requests

Publish Date: 2026-01-08

Queue Order	T/D/U	IR#	Request Date	County	MW Summer	MW Winter	Interconnection Point	Type	Inservice date	Revised Inservice date	Status	Service Type	IC Identity
	T	718	2023-08-09	Pictou	147	147	L-7005	Wind	12/31/2027		SIS Agrmnt Complete	NRIS	N/A
	T	738	2023-09-07	Cumberland	84	84	L-6613	Wind	12/31/2027		SIS Agrmnt Complete	NRIS	N/A
	T	760	2024-03-04	Pictou	161.5	174.4	L-8003	Gas Turbine	09/30/2027		SIS Agrmnt Complete	ERIS	NSPI
	T	761	2024-03-04	Pictou	122.96	142.64	L-7004	Gas Turbine	09/30/2027		SIS Agrmnt Complete	ERIS	NSPI
	T	787	2024-05-22	Guysborough	210	210	L-7004	Wind	12/31/2027		SIS Agrmnt Complete	NRIS	N/A
	T	801	2024-07-19	Cumberland	7	7	6N-301	Solar	01/05/2026		FEAS Complete	NRIS	N/A
	T	802	2024-07-19	Lunenburg	7	7	89W-303	Solar	06/30/2026		FEAS Complete	NRIS	N/A
	T	804	2024-07-25	Colchester	48	48	L-7005	Wind	09/30/2027		FEAS Complete	NRIS	N/A
	T	825	2024-11-29	Colchester	56	56	L-6613	Wind	12/31/2028		SIS Agrmnt Complete	NRIS/ERIS	N/A
	T	836	2025-02-10	Richmond	150	150	BtM	Solar	06/30/2027		IR Valid	NRIS/ERIS	N/A
	T	873	2025-09-15	Inverness	10	10	22C-403	Solar	7/30/2027		IR Valid	NRIS/ERIS	N/A
	T	874	2025-09-15	Halifax	10	10	88H-402	Solar	12/1/2026		IR Valid	NRIS	N/A
	T	877	2025-10-02	Pictou	150	150	50N	BESS	6/30/2028		IR Valid	NRIS/ERIS	N/A
	T	882	2025-11-12	Yarmouth	20	20	L-5535	Solar	12/1/2027		IR Valid	NRIS	N/A
2	T	516	2014-12-05	Cumberland	1.26	1.26	37N	Tidal	01-Jul-16	2027-12-31	GIA Executed	NRIS	N/A
4	T	542	2016-09-26	Cumberland	3.78	3.78	37N	Tidal	01-Jan-19	2027-06-30	GIA Executed	NRIS	N/A
9	T	574	2020-08-27	Hants	66.72	66.72	L-6051	Wind	30-Jun-23	2026-12-31	GIA Executed	NRIS	N/A
10	T	598	2021-05-13	Cumberland	2.52	2.52	37N	Tidal	30-Jun-24	2027-06-30	GIA Executed	NRIS	N/A
12	T	597	2021-05-07	Queens	36	36	50W	Wind	31-Aug-23	2026-09-30	GIA Executed	NRIS	N/A
18	T	670	2022-08-05	Colchester	94.4	94.4	L-7005	Wind	02/28/2026	2027-08-31	GIA in Progress	NRIS	N/A
19	T	671	2022-08-05	Halifax	88.96	88.96	101V	Wind	03/28/2027	2027-03-31	GIA in Progress	NRIS	N/A
20	T	669	2022-08-04	Cumberland	99	99	L-6613	Wind	12/31/2025		GIA Executed	NRIS	N/A
21	T	668	2022-08-03	Antigonish	94.4	94.4	L-7003	Wind	12/01/2025	2026-10-31	GIA Executed	NRIS	N/A
22	T	618	2021-07-21	Guysborough	130.2	130.2	L-7003	Wind	09/30/2025	2026-06-30	GIA Executed	NRIS	N/A
24	T	675	2022-08-10	Queens	112.5	112.5	50W	Wind	12/01/2024	2028-05-31	GIA Executed	NRIS	N/A
25	T	677	2022-09-23	Yarmouth	80	80	L-6024	Wind	12/31/2025	2026-11-15	GIA Executed	NRIS	N/A
27	T	697	2023-03-28	Kings	55	55	43V	Battery	03/15/2026	2026-08-21	SIS in Progress	NRIS	NSPI
31	T	686	2023-01-23	Cumberland	336	336	L-8001	Wind	12/01/2025	2028-05-31	SIS in Progress	NRIS	N/A
34	T	739	2023-09-20	Queens	90	90	L-6025	Wind	12/31/2025	2027-12-31	SIS in Progress	NRIS	N/A
35	T	742	2023-10-13	Guysborough	35	35	L-7003	Wind	01/01/2025	2026-06-30	SIS in Progress	NRIS	N/A
53	T	762	2024-03-04	Hants	12.6	12.6	L-6054	Wind	12/31/2026		SIS in Progress	NRIS	N/A
54	T	728	2023-09-06	Guysborough	120	120	L-7005	Wind	12/31/2027		SIS in Progress	NRIS/ERIS	N/A
55	T	824	2024-12-16	Guysborough	48	48	L-7005	Wind	12/15/2025	2027-12-31	SIS in Progress	NRIS	N/A
57	T	732	2023-09-07	Antigonish	149.6	149.6	L-7004	Wind	12/31/2027	2028-09-30	SIS in Progress	NRIS	N/A
58	T	826	2024-11-29	Antigonish	112	112	L-7005	Wind	12/31/2028		SIS in Progress	NRIS/ERIS	N/A

Active Transmission Interconnection Requests including projects in the advanced Queue
Queue Order is assigned to projects in Adanced Queue
ERIS - Energy Resource Interconnection Service
NRIS - Network Resource Interconnection Service

Request IR-8:

Please explain the AGC function in plain language and compare the current manual operation process with the new automated operation system, explaining how the new system enhances the following functions.

The solution will ensure System Operators have the tools needed to:

- **manage wind generation in an equitable and transparent fashion,**
- **leverage new wind control capabilities for system stability, and**
- **automate the back-office solution needed for effective settlement and reconciliation activities.**

Response IR-8:

The Automatic Generation Control (AGC) function allows the System Operator to send real power setpoint controls to a wind farm, thereby dispatching it to a desired MW output level. AGC also permits the System Operator to place the wind farm in Regulation mode, whereby the NS Power Supervisory Control And Data Acquisition (SCADA)/Energy Management System (EMS) provides automated control of dispatch and uses the AGC functionality of the generator to help regulate the power system. Effective regulation is a vital aspect of power system operation. Differences between load and generation within the Nova Scotia Balancing Area appear as inadvertent energy flow on the NS-NB intertie and must be managed within approved limits in real time. Having AGC capability from wind farms provides an additional important source of Regulation service, historically provided by dispatchable thermal generation, which will operate fewer hours each year as the grid transitions to achieve renewable energy targets.

Under section 7.2 of the Generator Interconnection Agreement (GIA),[1] the System Operator may require the Interconnection Customer to interrupt or reduce electricity if such deliveries could adversely affect the safe and reliable operation of the transmission system. Wind farms are required to curtail output in response to system conditions such as light load and/or minimum generation conditions. For legacy wind farms, this requirement has been implemented using discrete allowable operating limits of 100%, 66%, 33%, and 0% of nameplate capacity, with the System Operator using SCADA to send these limits to wind farms when curtailment is required. Currently, System Operators manually track curtailments in a spreadsheet to ensure they are applied equitably, non-discriminatorily and only for as long as necessary. After each event, the System Operator references the spreadsheet and manually sends an email notification to all wind farms showing which wind farms were curtailed and to what level, using a code identifier for each wind farm to protect individual identities while providing transparency on curtailments for all IPPs.

As NS Power is forecasting a significant increase in the interconnection of new wind generation being added to the system by 2030 in alignment with the 10-Year System Outlook, and to meet the requirements of the Provincial Clean Power Plan and Provincial and Federal renewable energy regulations, the System Operator requires enhanced tools to help sustainably manage legacy wind farm curtailment and the new AGC functionality offered by new wind farms. Continuing with the current manual processes risks over-burdening System Operators and does not mitigate the potential for human error in decision-making, managing curtailment events, and documentation. These new software tools will help address these concerns.

The solution will automate key functions for System Operators in managing wind generation curtailment in an equitable and non-discriminatory fashion and provide transparent communication to IPPs. It will automate tasks such as curtailment list management, ensuring that curtailment lists are rotated on an equitable basis, and ensuring that communication is sent post-

[1] The Generator Interconnection Agreement is posted on OASIS at the following link: https://www.nspower.ca/docs/default-source/pdf-to-upload/revised-standard-generator-interconnection-and-operating-agreement-gia-2016.pdf?sfvrsn=12fde1f5_0

event to all wind farms, ensuring transparency – all of which are manual tasks for the System Operator today.

In addition, the new solution will leverage new wind AGC control capabilities for system stability by adding these new sources of Regulation service for use by the System Operator in balancing the system, when Regulation service from other dispatchable generation sources (such as thermal generation) is not available. The solution will also enhance situational awareness by providing new wind operational visibility. For example, when wind is curtailed today, the System Operator does not know the specific amount of wind generation that will return to the system based on real-time wind conditions when the curtailment is subsequently released. Should the resulting generation be significantly greater or less than anticipated, this can create unexpected and challenging system conditions for operators to manage. The new solution will provide the System Operator with this visibility to improve system management.

The new solution will provide the data necessary for the NS Power back office to efficiently and accurately prepare invoices and process payments for IPPs under new PPA terms for AGC. The preparation of invoices for IPPs providing AGC services in addition to supplying energy requires incremental billing determinants which are currently not part of the IPP billing/invoicing process. The process employed today for IPP billing/invoicing are primarily manual. The solution will provide automation, where appropriate, to support consistency, accuracy, and timeliness of the process.

Request IR-9:

Please explain why the proposed project was not submitted as part of CI C0032664 Energy Control Centre – Optimization Tools (M12591) application.

Response IR-9:

The ECC Optimization Tools Project includes a significant scope of work that requires a dedicated and focused team to implement. Its scope is closely tied to specific recommendations from the 2018/2019 FAM Audit Dispatch Study (M09548) and the economics of overall system dispatch function. In contrast, this ECC Wind Integration Project focuses on enhancing tools specifically related to managing wind generation and NS Power's back-office functions related to IPP settlement. The scope for this project was formed over a longer period of time and therefore this project was initiated later than the Optimization Tools Project. Proceeding with two separate projects helped to avoid unnecessary interdependencies in schedules and resources that could have negatively impacted the progress of both projects.

Request IR-10:

Has a Request for Proposals (RFP) been issued for the supply of the proposed system?

(a) If so, please provide a summary of the results.

(b) If not, when will an RFP be issued?

(c) Or please explain why an RFP is not required.

Response IR-10:

No.

(a-c) Despite its best efforts, NS Power was unable to identify a suitable source for a pre-developed or custom off-the-shelf (COTS) solution. NS Power conducted research and found that across Europe and in North America renewable generation as a percentage of total generation capacity in Nova Scotia is either the highest or amongst the highest in the world and as such Software vendors in Australia and the broader European continent have not developed the capabilities to address wind penetration as strong as it is in Nova Scotia. Additionally, NS Power participated in workshops conducted by the Energy Systems Integration Group (ESIG) and enquired with industry experts in the wind energy field. This also confirmed there was no suitable solution available to meet the Company's needs. For this reason, an RFP was not issued for the proposed system. Instead, NS Power has contracted a qualified vendor to work with and to design and develop a custom solution that addresses all technical requirements within our required timelines, and that is appropriately scaled for a smaller utility such as NS Power.

Request IR-11:

Please indicate whether NS Power or NSIESO will be the user of this new technology.

(a) Please explain whether NSIESO has been notified or involved in the proposed project and the nature of its involvement.

(b) If it is shared by both, please explain the method and the associated costs.

(c) If NSIESO is the only user, please explain NS Power's plan to transfer the assets and indicate any training requirements for NSIESO.

(d) If NS Power is the only user, please explain why.

Response IR-11:

Currently the NS Power System Operator continues to be responsible for Real Time Operations and IPP transactions. Accordingly, NS Power is the only user of this technology at this time.

(a) IESO Nova Scotia has not yet been notified of, or involved in, the proposed project, as Phase II of the transition of functions from NS Power to IESO Nova Scotia is still in the early stages of development. However, System Planning resources that were transitioned from NS Power to IESO-NS on December 1, 2025 are aware of this project.

(b) The costs are currently being borne by NS Power and offset through Federal funding provided by Natural Resources Canada.

(c) The anticipated user at go live is NS Power.

(d) NS Power is currently the only user of the technology, as it is only applicable to internal NS Power functions at this time.

Request IR-12:

In Why do this project, NS Power noted the following:

> **Legacy wind generators are not equipped with AGC capability and therefore can be curtailed only in pre-set increments under different compensation terms. The solution proposed within this Project will provide System Operators with needed planning and data solutions to adhere to PPA terms, the actual wind farm output, capacity and AGC service provision data in real-time, and automations for back-office processing of these data sets to accommodate a higher volume of reconciliation and settlement transactions.**

(a) Please explain any mandatory requirements for legacy wind generators to adopt AGC.

(b) If adoption is not mandatory, please elaborate on the compensation terms that needs to be developed for legacy wind generators and compare these terms to the PPA terms for the new AGC generators.

Response IR-12:

(a) There are no mandatory requirements for legacy wind farms to adopt AGC.

(b) There is no plan to develop compensation terms for legacy wind farms. Legacy wind farms will continue to be curtailed under the existing terms of section 7.2 of the Generator Interconnection Agreement[1] as they have been historically.

[1] The Generator Interconnection Agreement is posted on OASIS at the following link: https://www.nspower.ca/docs/default-source/pdf-to-upload/revised-standard-generator-interconnection-and-operating-agreement-gia-2016.pdf?sfvrsn=12fde1f5_0

Request IR-13:

In Why do this project, NS Power noted that "All wind generation (legacy or new) must be dispatched efficiently and in a fair and equitable manner in line with the terms of each PPA. The presence of AGC now enables dynamic and granular dispatch controls for new IPPs and consequently allows wind generators to provide ancillary services for which compensation can be defined within PPAs."

(a) Please compare how NS Power maintains a "fair and equitable manner" when curtailing and compensating both the legacy and the new IPPs.

(b) If the proposed new automatic system performs a faster reaction than a manual operation, please confirm any concerns on legacy wind generators may experience less curtailment compared to the new generators, and explain why.

(c) Please explain how NS Power manages non wind farm IPPs and whether additional automation is planned.

Response IR-13:

(a) In a power system with a high concentration of wind resources, it is a natural consequence that the system will experience hours of operation with excess generation, with both the magnitude and frequency of over-supply increasing as additional wind capacity comes online. Consequently, new wind PPAs were developed with provisions for Automatic Generation Control (AGC) services to allow the System Operator to dispatch down new wind farms in an automated manner when required, such as during light system load and/or over-supply conditions. These dispatch decisions for new wind farms will be directed by the dispatch optimization tools being developed for the Energy Control Centre under ECC Optimization Tools, capital item C0032664.

In a light system load or over-supply scenario where all new wind farms have been dispatched down and the over-supply situation persists, the System Operator will invoke curtailments of legacy wind farms as provided for under section 7.2 of the Generator Interconnection Agreement (GIA). These curtailments will be carried out using the new tools to be developed under this Project, in a fair and equitable manner, meaning that legacy wind farms will be curtailed in list-order to an allowable operate level of 66% until the required amount of curtailment is achieved. If the required curtailment is not achieved, curtailments will continue in list-order to an allowable operate level of 33% and then 0% until the required amount of curtailment is reached. Curtailments are initiated for only so long as necessary. Upon conclusion of the curtailment event, the last wind farm curtailed goes to the bottom of the list in preparation for the next curtailment event. Legacy wind farms do not receive compensation for curtailments under section 7.2 of the GIA.

(b) By design, the new automatic system for AGC-capable wind is intended to perform a faster and more granular reaction than the manual curtailment operation of legacy wind. It was anticipated that the magnitude and frequency of over-supply situations would increase with the addition of wind resources, so AGC-capable wind was devised as the solution to this issue, allowing new wind to be dispatched automatically in response to these variable conditions. There is no concern that legacy wind farms may experience less curtailment compared to the new generators because new and legacy wind provide separate functionality. New wind is dispatchable to a high degree of granularity in response to variable system needs and legacy wind remains curtailable in response to light system load or over-supply conditions.

(c) NS Power does not currently have any non-wind IPPs subject to AGC services, under a PPA.

Request IR-14:

Please compare the current manual operation process and the new AGC system on manage energy dispatch and leverage available wind.

(a) For the automated wind curtailment, please explain how the new system integrates with other generation resources (non wind generators and non AGC wind generators) to receive dynamic generation and consumption data to perform this function.

(b) Please explain the compatibility of the automation system and indicate any additional upgrades needed for the NS Power control system.

(c) If additional upgrades are needed, please explain the estimated costs to upgrade the overall system and why these upgrades were not included in the current application.

Response IR-14:

Please refer to IR-8 for a comparison of system dispatch.

(a) The automated wind curtailment solution will leverage the economic dispatch planning and prioritization of all generation sources as being developed in CI C0032664 - Energy Control Centre Optimization Tools. The Economic Dispatch Optimization Solution (EDOS) being developed within that project will produce an economically optimized dispatch plan, respecting system security constraints, for the entire generation fleet every 15 minutes. The EDOS will identify upcoming periods of light system load or over-supply conditions requiring reduction in wind generation. When a light system load or over-supply period is reached, AGC-capable wind will be set to a specific operating mode where the Supervisory Control And Data Acquisition System (SCADA)/Energy Management System (EMS) will automatically dispatch the AGC-capable wind to maintain system balance. If AGC-capable wind is fully dispatched down and the light system load/over-supply

situation persists, the System Operator will use the automated wind curtailment solution to identify and track stages for legacy wind farm manual curtailment, ensuring they are performed on an equitable and non-discriminatory basis (as described in IR-13).

(b) AGC functionality is a technical requirement found in section 7.4.7 of the Transmission System Interconnection Requirements[1] which wind farm interconnection customers must adhere to. Therefore, no additional control system upgrades will be needed to utilize AGC for IPPs that already have AGC capabilities. Under section 9.4 of the Generator Interconnection Agreement,[2] legacy wind farms are required to maintain the generating facility, including curtailment controls, at its expense, so these wind farms will remain compatible with the SCADA/EMS system and no additional control system upgrades will be required.

(c) All expected costs to implement the automated wind curtailment solution have been included in the current CI C0053696 ECC Wind Integration Project application.

[1] The Transmission System Interconnection Requirements (TSIR) define the technical requirements for Interconnection Customers connecting to the transmission system under the Generator Interconnection Procedures. The TSIR is posted on OASIS at the following link: transmission-system-interconnection-requirements.pdf

[2] The Generator Interconnection Agreement is posted on OASIS at the following link: revised-standard-generator-interconnection-and-operating-agreement-gia-2016.pdf

Request IR-15:

(a) What is the expected lifecycle of the components of this project (hardware, software, etc.)?

(b) Please explain the ongoing maintenance activities of the automation system and the expected lifecycle.

(c) Please indicate who would perform these tasks, whether they would be performed internally by NS Power or by external consultants.

(d) Please explain the operational costs for the proposed automation software, including but not limited to maintenance and support costs, software hosting costs, licensing costs, third party services, administration fees, etc.

Response IR-15:

(a) These solutions will be implemented in NS Power's cloud environment. While future enhancements may be required over time to accommodate changes in needs or scope, there are no specific solution enhancement release phases planned. The current estimate for the Cloud Hosted solution lifespan is in the 10-year range.

(b) As noted in part (a), ongoing maintenance activities are anticipated to be limited to break-fix support, as necessary.

(c) Maintenance and support needs will be handled on a case-by-case basis by NS Power IT operational support resources, and/or vendor assistance.

(d) There are currently no licensing or third-party administration fees associated with the automation software, as this solution is being developed for NS Power and hosted within

NS Power's Cloud environment. NS Power currently has an overarching Cloud service contract which is not expected to be materially impacted by this implementation.

Request IR-16:

(a) Please provide a financial analysis to show whether this new system will improve the efficiency of ECC operation and reduce overall operation costs.

(b) If not, please explain why not.

Response IR-16:

(a-b) A financial analysis to quantify the level of efficiency improvement and reduction in operating costs has not been performed as this project is an essential development of NS Power operational and back-office tools required to support the evolving power system and is not an efficiency-driven initiative intended to generate a return on investment. Implementing a technology solution was the only feasible option, so a financial analysis comparing the project implementation to a do-nothing option was not completed.

The expected addition of at least 1,440 MW of new wind generation[1] over the next several years on a system with only 3,168 MW of installed generation capacity[2] serving a peak customer load of 2,400 MW today represents a 45 percent increase in system-wide generation resources (and specifically a 236 percent increase in wind generation) that must be managed in real-time by the System Operator and monthly by back-office staff performing settlement functions.

Without the addition of these wind automation tools, an unmanageable burden will be placed on both the System Operator for real-time operations and back-office staff performing settlement functions.

[1] As detailed in IR-2 (b).
[2] Installed generation capacity does not represent firm capacity.

Request IR-17:

(a) Please provide details about the NRCan funding, including any conditions, and indicate whether NS Power has already received the funding.

(b) If NS Power has not yet received the funding, please provide the expected timeline.

(c) What would be the impact on the overall project if the Board refuses the application?

Response IR-17:

(a) All conditions can be found in Confidential Attachment 1, which includes the funding agreement and amendments. The NRCan funding for this project was available for eligible costs from the time of project start until March 31, 2025. Eligible costs included project-specific labour, contracting, consulting, software, and hardware. Overhead costs were not eligible. Project costs within the funding program timeframe were submitted to NRCan in June 2025, approved in July 2025, and the Project received 100% reimbursement on those eligible costs, representing 33 percent of the total project costs. All available funding in the agreement has been received and is not conditional on NSEB approval.

(b) All funding has been received.

(c) In a scenario where the Board denied the application, the Company would need to review the decision and rationale for any such denial to determine impacts.

CI C0053696 ECC Wind Integration Project NSEB IR-17 Confidential Attachment 1 has been removed due to confidentiality.

Request IR-18:

(a) Please explain if there are contingency plans in place to mitigate the impact of the automation system becoming unavailable during operation.

(b) If yes, please describe how ECC would operate during the absence of the automation system.

(c) If contingency plans are not available, please provide an explanation.

Response IR-18:

(a) The scope of the ECC Wind Integration Project will include the development of contingency plans to ensure business continuity should the solution become unavailable. The relative level of criticality of the resulting system will be assessed by NS Power subject matter experts to develop an appropriate contingency plan. This is a standard practice applied for all ECC operational tools.

(b-c) The contingency plan for the wind automation solution has not yet been created and will be developed as part of project design and implementation. Cloud solution redundancies, deployment of manual processes, and resourcing requirements are examples of what may be explored in this development.

Request IR-19:

Please describe the activities NS Power has explored to improve operations without the new system. Explain the reasons and limitations that prevented the utility from improving efficiency and transparency of operations.

(a) What work and associated costs would be required if the automation system is not installed, or alternative options considered?

(b) Please provide an Economic Analysis Model (EAM) for the "Do Nothing" option.

Response IR-19:

Moving from manual operations to automation is the primary activity explored by NS Power to provide improved efficiency and transparency. While there were no identified deficiencies with the existing operating approach, the increase in the volume of wind generation; the new contractual obligations; the enhanced reporting requirements related specifically to renewable transactions, and the addition of AGC functionality has driven the need to pursue automation to maintain reliable and transparent operations.

(a) If not addressed through these enhanced and automated solutions, the processing times for these functions may increase. Additionally, the risk of error on those tasks increases as more IPP programs on such high volumes of generation are introduced with new control technology. Ensuring that NS Power can integrate and transact with large, varied and technically advanced IPPs enables a sustainable environment for IPP renewable generation growth in Nova Scotia. As detailed in IR-16, without the addition of these wind automation tools, an unmanageable burden will be placed on the System Operator for real-time operations and NS Power's back-office staff performing settlement functions as the volume of monthly transactions increases. With the significant increased reliance on wind generation under PPAs, possible errors in the dispatch of and/or settlement with IPPs can

have harmful impacts to both NS Power operations and to the IPPs that are difficult to quantify.

(b) A financial analysis to quantify the level of efficiency improvement and reduction in operating costs has not been performed as this project is an essential development of NS Power's operational and back-office tools needed to keep pace with the rapidly evolving power system and is not an efficiency improvement initiative developed to yield return on investment.

Request IR-20:

In the Contingency Statement, NS Power noted "Contingency for this project has been determined using a combination of internal subject matter expertise (Project Managers, Engineers and System Operators) experience gained from similar software development/implementation work, and in conjunction with the non-binding contingency guidelines."

(a) Please list and explain any similar software development projects and provide the related NSEB/NSUARB matter numbers.

Response IR-20:

(a) The subject matter experts who have contributed to the development of the project estimates have a combined experience base of over 65 years either in technology project implementations and/or System Operations and Control Centre Operations Management. The most recent expertise specifically related to NSEB matter numbers are:

- M09477 – ECC Map Board Replacement Project
- M12592 – Dynamic Line Rating Implementation Project.
- M12591 – ECC Optimization Tools Implementation Project
- M09609 – IT – ADMS Upgrade
- M12012 – 2025 SCADA/EMS Upgrade

These projects are similar in that they all involve implementation solutions impacting System Operators and they all involve varying degrees of technology, software development, and implementation work.

Request IR-21:

(a) Please provide the task scope, work breakdown, and responsibilities associated with the following categories from the project estimate table:

1. Software

(a) Wind Reconciliation & Settlement Solution

(b) Wind Curtailment Automation Solution

2. Consulting

(a) Senior Business Analyst

(b) Junior Business Analyst

(c) Lead Engineering Consultant

(d) Project Manager

(e) System Modelling SME

(f) System Study SME

(g) Facility Operating Guideline SME

(h) System Asset Modelling Assessment

3. Administrative Overhead, is this an internal administrative role?

(b) Please explain why consulting services are required and describe the selection process.

Response IR-21:

(a) 1. (a-b) Please refer to the tables below.

Wind Reconciliation & Settlement Solution																
Schedule	April 25	May 25	June 25	July 25	Aug 25	Sept 25	Oct 25	Nov 25	Dec 25	Jan 26	Feb 26	March 26	April 26	May 26	June 26	July 26
Milestones																
Discovery Phase	Discovery															
Design Phase			Design													
Implementation					Implementation (w/ demos for business teams)											Live
UAT and Live															Training	Hypercare

Wind Curtailment Automation Solution						
Schedule	Week 1- 3	Week 4 - 6	Week 7 - 15	Week 16 - 17	Week 18	Week 19 - 20
Milestones						
Discovery Phase	Discovery					
Design Phase	Design					
Project Initiation		Infra, Planning, Setup				
Implementation			Implementation			
UAT and Go Live				UAT	Live	Hypercare

2. (a-h) Please refer to the table below.

Resource	Scope & Responsibilities	Duration
Senior Business Analyst	Capturing detailed requirements, documenting procedural and technical specifications; updating processes; updating as is & to be processes; test development; training development; preparing SCADA change requests; supporting business end users; system operators and Project Manager.	Full Project
Junior Business Analyst	Capturing detailed requirements, documenting procedural and technical specifications; updating processes; updating as is & to be processes; test development; training development; preparing SCADA change requests; supporting business end users; system operators and Project Manager.	Full Project
Lead Engineering Consultant	Updating system operating guidelines and procedures; providing subject matter insight and expertise in all processes, business and technical functions; guiding scope and implementation requirements and deliverables.	Full Project
Project Manager	Responsible for all facets of project implementation and associated deliverables, go live, hypercare and transition to operations.	Full Project
System Modelling SME	Evaluate business needs and work with internal team members to guide, develop and implement System Modeling and Grid Protection philosophies to be incorporated into day to day practice.	To April 2025
System Study SME	Developed and delivered system study procedures related to high volumes of asset onboarding and interconnection.	To April 2025
Facility Operating Guideline SME	Evaluate impacts of high volumes of asset onboarding in relation to existing assets and update guidelines and assessments.	To April 2025
System Asset Modelling Assessment	Assess current wind asset modeling in GIS; Update process model for future Wind in GIS	To April 2025

3. Administrative Overhead is not an internal administrative role. Overhead expenses are integral costs associated with the construction of capital assets. As per NS Power's Board-approved Accounting Policy 6100 – Cost, the cost of a capital asset not only includes direct construction or development costs (such as materials and labour), but also overhead costs attributable to construction or development activities. In accordance with NS Power's Board-approved Accounting Policy 6230 – Application of Administrative and Vehicle Overhead (Self-Constructed Assets), the overhead charged to a particular project is determined by multiplying the labour

costs charged to the project by the appropriate overhead application rate. The charge is debited to a Capital Work Order while the credit is recorded in Operating, Maintenance and General Expenses.

(b) For this project, consulting services are required to support a specific function such as those described in the table above and related to the roles identified in part (a), 2., items (e) through (h). The remaining consulting services are required to carry out largely technical functions throughout the project based on their expertise to fill a gap resulting from internal resource availability and/or project delivery time constraints.

Request IR-22:

(a) Please provide a cost benefit analysis for the proposed new system and explain the operational cost savings.

(b) Please quantify the expected benefits associated with this project (i.e., decreased congestion, improved reliability, and improved capacity) in terms of the expected NPV in cost savings and describe how this cost savings will outweigh the project's estimated NPV of capital and operating costs.

(c) Please provide a time frame over which these cost savings will occur.

Response IR-22:

(a-c) As explained in IR-16, a financial analysis to quantify the level of efficiency improvement and reduction in operating costs has not been performed as this project is an essential development of operational and back-office tools needed to keep up with the evolving power system and is not an efficiency improvement initiative developed to yield return on investment.

The project benefits have not been quantified; however, they have been identified qualitatively as follows:

- Maximize ECC resource capacity through a reduction in repetitive manual tasks associated with the curtailment of legacy wind farms without increasing staffing levels.

- Maximize back-office resource capacity through the reduction of repetitive manual tasks associated with the monthly settlement process for Independent Power Producers (IPP) without increasing staffing levels.

- Improve the ability to handle increasing volumes of data and IPP interactions while retaining high quality outputs.

- Improve data retention and reporting capabilities and reduce effort required for information requests and audit responses.