

2026 10-Year System Outlook Report
(Nova Scotia Energy Board M12916)

Nova Scotia Independent Energy System Operator (IESO Nova Scotia)
Responses to Small Business Advocate (SBA) Information Requests

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Request IR – 1

Refer to Exhibit N-1, the 2026 10-Year System Outlook (the “2026 Report”) Section 2 – Load Forecast, page 6, Table 1: Forecast System Peak and Net System Requirement. The 2026 Report shows the IESO-NS NSR increasing from 11,838 GWh (2026F) to 13,224 GWh (2036F), an average annual increase of 1.1%. The 2025 10-Year System Outlook showed the Net System Requirement (NSR) declining from 11,607 GWh (2025F) to 11,365 GWh (2035F), which is an average annual decrease of 0.2%.^[1]

- a) Please provide a comparison of the 2026 Load Forecast to the 2025 Load Forecast for both energy (NSR) and system peak demand.
- b) Please identify the key drivers responsible for the change from a declining energy forecast to a growing energy forecast, and quantify each driver’s contribution.
- c) Please identify any needed changes in the resource buildout to accommodate the increase in load in the 2026 Report compared to the 2025 Report.

^[1] M12386 – Exhibit N-1 - NS Power 2025 10-Year System Outlook Report (the “2025 Report”), pp. 9-10 of 64.

Response IR - 1

- a) Please refer to the NSPI 2026 Load Forecast Report, M12916, Figures 1 and 2 for a comparison of the 2026 Load Forecast to the 2025 Load Forecast for both energy (NSR) and system peak demand. These graphics are not affected by the change in the approach for loads served by Renewable to Retail and behind the meter solar resources described in part b) below and therefore provides a comparison showing only the underlying forecast drivers.

- b) One of the main differences between the load forecast included in the 2026 10-Year System Outlook (the “2026 Report”) and the forecast in the 2025 10-Year System Outlook (the “2025 Report”) is that in the 2026 Report the energy forecast is for the entire province of

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Nova Scotia, as is the mandate of IESO Nova Scotia. The energy forecast in the 2025 Report only covered energy sales by NSPI, as was their mandate when they had responsibility for the 10-Year System Outlook. This difference in perspective is the main reason for the significant difference in the forecast energy requirement between the two reports. In the 2025 Report, NSPI treated customer migration to the Renewable-to-Retail market and behind-the-meter solar as load modifiers, whereas in the 2026 Report, all customer load is included in the energy forecast and the generation supplying this demand, including Renewable-to-Retail and behind-the-meter solar, is included on the supply side of the ledger in the 2026 Report. The impact this has on the energy requirement in the 2026 10 Year System Outlook Report is quantified in Table 1.

When comparing the underlying components of the forecast, the 2026 NSPI Load Forecast report offers the following: "Compared to the 2025 Load Forecast, the 2026 Load Forecast shows an increased net system requirement across the forecast period, due predominantly to decreased estimates for solar generation and increased estimates for Electric Vehicle (EV) penetration."¹

¹ 2026 Load Forecast Report (M12916), Exhibit No N-1, P. 9 of 105, Lines 8 - 10

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44 c) IESO Nova Scotia has not identified any significant changes in the resource buildout to
45 accommodate the increase in NSR in the 2026 Report compared to the 2025 Report. The
46 reason for this is because the 2025 Report treated some generation as a load modifier,
47 whereas in the 2026 Report, while load is higher, energy volumes that had been previous
48 netted off of the load are instead included on the supply side.

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Request IR – 2

Refer to the 2026 Report Section 2 – Load Forecast, page 6, Table 1: Forecast System Peak and Net System Requirement.

- a) Please explain the drivers between the increase in Renewable-to-Retail (RtR) Energy from 15 GWh in 2026 to 239 GWh in 2027 and then 286 GWh in 2028, respectively.
- b) Please explain why RtR sales are assumed to remain flat at 286 GWh from 2028 through 2036.
- c) In Table 3: Additions and Retirements in the 10-Year System Outlook Resource Plan (p. 15), the resource expansion shows incremental Renewable to Retail additions of 36 MW in 2026/27, 54 MW in 2027/28, and 59 MW in 2029/30. These additions do not correlate with the timing or magnitude of the increases in energy production discussed in part (a) of this information request. Please reconcile these differences.

Response IR - 2

- a) The increase in the volume of energy served by the Renewable-to-Retail market from 2026 to 2028 is based on the Licensed Retail Supplier's forecast for the timing and volume of customers they forecast to supply.
- b) Sales stay flat from 2028 to 2036 because the volume of customers the Licensed Retail Supplier can serve is limited by the amount of low impact renewable energy they have available to sell. The Licensed Retail Supplier would need to develop additional generation projects beyond those currently included in the 10-Year System Outlook to serve additional customers. The alternative way for the RTR sales volumes to increase would be for one or more new proponents to seek a Retail Supplier license(s), but there are no such applications before the Nova Scotia Energy Board for approval.

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25 c) The magnitude of the increases in energy production does not correlate with the magnitudes
26 of the capacity additions because energy is a function of both the capacity and time, while
27 capacity is a one-time change. As an example, the first 36 MW is expected to come online
28 in late 2026, which is why the load impact in that year is low, as only a small portion of
29 the customer's annual energy need will be supplied by the Licensed Retail Supplier.

30
31 NSPI had not made adjustments to the load forecast reflecting the Licensed Retail Suppliers
32 forecast increase in generating capacity of 59 MW in 2029, so IESO Nova Scotia did not
33 need to make any modifications to the load to compensate for this.

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1 **Request IR – 3**

2 Refer to the 2026 Report Section 2 – Load Forecast, page 6, Table 1: Forecast System Peak and
3 Net System Requirement. Please explain the source for the assumed growth in behind-the-meter
4 solar penetration.

5 **Response IR - 3**

6 IESO Nova Scotia utilizes the NSPI load forecast as the foundation for the expected system peak
7 and net system requirement. Please refer to the NSPI 2026 Load Forecast Report filed with the
8 NSEB (M12861), Section 4.5.5 Solar Generation (PV) for details on the assumed growth in
9 behind-the-meter solar penetration.

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Request IR – 4

Refer to the 2026 Report Section 3 – Existing Generation Resources, pages 7-8.

- a) Please provide a comparison table showing the ELCC values from the 2025 Report and the 2026 Report. Provide the average and incremental ELCC values for all penetration levels available.
- b) The 2026 Report cites to the June 2026 E3 ELCC Study (page 8, footnote 6). E3 subsequently conducted additional ELCC analyses and presented the results to stakeholders in the IRP process on August 27, 2026 (see <https://www.ieso-ns.ca/wp-content/uploads/2026/08/2026-Nova-Scotia-ELCC-Study-Follow-up-Wind-Storage-ELCC-Results.pdf>). Does the 2026 Report rely on the June 2026 ELCC study, the August 2026 supplemental analysis, or a combination of both? Please clarify the resource used for each ELCC study in the 2026 Report.
- c) Please describe how the interactive effects of combined wind, solar, and battery energy storage resources, as calculated by E3 in its latest study, have been incorporated into the resource plan in the 2026 Report.

Response IR - 4

- a) The 2025 10-Year System Outlook used ELCC values from the 2019 E3 Planning Reserve Margin and Capacity Value Study.¹ Please see Appendix 6 of the study for average and marginal ELCC values for all penetration levels on Page 278/487 of the referenced PDF. The 2026 10-Year System Outlook used ELCC values from the 2026 ELCC Study.² Please see Appendix D of the study for average and marginal ELCC values for all penetration levels on Page 66/70 of the referenced PDF.

¹Integrated Resource Planning and Generation Utilization and Optimization, M08929, (P-884). Energy+Environmental Economics, Planning Reserve Margin and Capacity Value Study, July 2019, [20191018-ns-power-pre-irp-final-report-updated.pdf](https://www.ieso-ns.ca/wp-content/uploads/2019/10/20191018-ns-power-pre-irp-final-report-updated.pdf)

² Nova Scotia Effective Load Carrying Capability Study, Energy+Environmental Economics, June 2026. <https://www.ieso-ns.ca/wp-content/uploads/2026/06/2026-Nova-Scotia-ELCC-Study-Report.pdf>

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b) The 2026 10-Year System Outlook relies on the June 2026 ELCC Study. The updates subsequent to this version will be incorporated into the 2026 IRP and into future 10 Year System Outlook Reports.

c) The interactive effects of combined wind, solar and battery energy storage resources are captured as “diversity credit” in Table 3 and Table 4 of the 2026 10-Year System Outlook. These represent the “Diversity Benefit” discussed in the 2026 ELCC Study, and are calculated as 12% of combined firm capacity contribution of wind and storage, as indicated on slide 41 of the 2026 Nova Scotia ELCC Study Stakeholder Meeting presentation.³

³ [2026-Nova-Scotia-Electric-System-ELCC-Study.pdf](#)

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Request IR – 5

Refer to the 2026 Report Section 3 – Existing Generation Resources, pages 8-9, Table 2: 2026 Nova Scotia Generation Resources.

- a) Table 2 does not show an ELCC value for thermal resources, but does reflect firm capacity that is equivalent to installed capacity for each. Please confirm that IESO NS has assumed an ELCC of 100% for each of these thermal resources, and explain the reasoning for that assumption.
- b) Table 2 assigns a uniform ELCC of 20% to all wind resources and 12% to all solar resources. Please confirm whether IESO has applied an average ELCC to all existing resources rather than marginal ELCC, and explain the reasoning for that assumption.
- c) Please describe how the uniform 20% wind ELCC in Table 2 reconciles with the statement on Page 8 that the wind ELCC “declines to 5% at higher amounts of installed wind capacity.”

Response IR - 5

- a) The 20% target planning reserve margin (PRM) is calculated based on installed capacity of thermal units. This is often referred to as an ICAP PRM, or installed capacity PRM. As such, the firm capacity from thermal resources is properly expressed as the installed capacity in Table 2 in order to maintain analytical consistency.

- b) IESO Nova Scotia confirms it has applied the average ELCC for existing variable and energy limited resources. The average ELCC is appropriate to use for existing resources as it represents the firm capacity contribution to the system for the installed capacity of the resource. For resource additions over the ten year horizon, the marginal ELCC value is

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25 used to represent the incremental contribution to firm capacity from the incremental
26 increase in installed capacity.

27

28 c) Table 2 only shows existing resources so the average ELCC of existing wind capacity
29 (20%) is used uniformly for all existing wind farms. The statement that the wind ELCC
30 “declines to 5% at higher amounts of installed wind capacity” is a reference to the marginal
31 ELCC rate at which future wind capacity additions are accredited.

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Request IR – 6

Refer to the 2026 Report Section 3 – Existing Generation Resources, page 8, Table 2: 2026 Nova Scotia Generation Resources.

- a) Please describe the methodology used to determine the ELCC value of hydro resources.
- b) Please explain why Mersey System hydro is assigned an ELCC of 82% while all other NS Power-owned hydro facilities are assigned a 95%.
- c) Please describe how the Mersey ELCC was calculated. Was it calculated as part of the June 2026 E3 ELCC Study, or separately?
- d) Please explain the source of the assumption that demand response resources have an ELCC of 67%.

Response IR - 6

- a) The 95% ELCC value for hydro is based on the 2019 ELCC ¹. The value for domestic hydro is shown on page 265/487 of the referenced PDF. E3 reviewed the a part of the 2026 ELCC study, and the values used in the 2026 10-Year System outlook remain consistent with their findings.
- b) Mersey Hydro is assigned a lower ELCC, to account for a higher forced outage rate than other hydro facilities prior to completion of potential refurbishment projects.
- c) The Mersey ELCC value uses the NERC equivalent forced outage rate (EFOR) stat for small hydro units as a proxy for the assumed DAFOR of Mersey and the value used in the 2026 10-Year System Outlook reflects the most recent five year average (2021 – 2025).²

¹ Integrated Resource Planning and Generation Utilization and Optimization, M08929, (P-884). Energy+Environmental Economics, Planning Reserve Margin and Capacity Value Study, July 2019, [20191018-ns-power-pre-irp-final-report-updated.pdf](#)

² [generating-unit-statistical-brochure-3---2021-2025-units-reporting-events.xlsx](#)

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- 22 This approach was adopted in the 2023 Evergreen IRP as a result of stakeholder feedback
23 and has been continued in subsequent resource planning processes in Nova Scotia.
- 24 d) See SBA IR-10, part a. The value is based on the 2026 E3 ELCC Study results.³

³ Nova Scotia Effective Load Carrying Capability Study, Energy+Environmental Economics, June 2026.
<https://ieso-ns.ca/wp-content/uploads/2026/06/2026-Nova-Scotia-ELCC-Study-Report.pdf>

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Request IR – 7

Refer to the 2026 Report Section 3 – Existing Generation Resources, page 9, footnote 9. Please describe how much of the installed capacity in Table 2 is attributable to the Community Feed-In-Tariff (FIT) program and provide a list of the FIT projects included.

Response IR - 7

2.5 MW of the 27.6 MW of Biomass IPP capacity is attributed to the Community Feed-In-Tariff (FIT) program. Due to the small volume of installed capacity from biogas Community Feed-in-Tariff projects they were aggregated with biomass Community Feed-in-Tariff projects. A list of all Community Feed-In-Tariff projects can be found in the 2025 Comfit Annual Report (M12687). For convenience, IESO Nova Scotia has summarized the in-service biogas and biomass projects below.

Project ID	Applicant Name	Generation Type	Capacity (MW)	Location
271	Windmill Holsteins Inc	Biogas	0.5	Shubenacadie
310	Courthouse Hill Farm	Biogas	0.5	Gore
361	TE Boyle Farm and Forestry Limited	Biogas	0.5	Tracadie
363	Dalhousie	Biomass	1	Bible Hill

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Request IR – 8

Refer to the 2026 Report Section 3 – Existing Generation Resources, page 15, Table 3: Additions and Retirements in the 10-Year System Outlook Resource Plan. There are multiple winters – specifically 2027/2028-2028/2029 and 2030/2031-2035/2036 – where there is the addition or inclusion of a “Diversity Credit” which contributes additional firm capacity even in years without battery storage additions.

- a) Please describe the methodology used to calculate the Diversity Credit firm capacity values for this table.
- b) Please explain why there are Diversity Credit values in years without incremental battery storage resources.
- c) Please describe whether the Diversity Credit in each year of Table 3 reflects only the interaction of new resources added in that year, or reflects the interaction of new resources with existing resources on the system.
- d) Please describe the sensitivity of the Diversity Credit values in Table 3 to changes in the timing or magnitude of BESS, wind, and solar additions, as well as other resource additions that may have an effect on the Diversity Credit values.

Response IR - 8

- a) Please refer to SBA IR-04.

- b) The interactive effects between in-service battery energy storage systems (BESS) and new wind or new solar resources enables the diversity benefit in years without incremental storage capacity additions.

- c) The diversity credit reflects the interactive effect of new wind or solar resources with new or existing BESS resources.

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d) In Table 3 the annual incremental firm capacity attributed to the diversity credit is a function of the installed capacity of storage (existing plus incremental), and the annual incremental capacity additions of wind and solar resources. If the installed capacity of storage or the annual incremental capacity addition of wind or solar was to change the diversity credit depicted in Table 3 for a given year would change. Any changes in the timing or magnitude to other resource additions in the 10-Year System Outlook would not impact the diversity credit. Please see the Expanded Wind-Storage results, published as a follow up to the 2026 ELCC study, to see the sensitivity of the diversity benefit to changes in BESS or wind capacity.¹

¹ <https://www.ieso-nb.ca/wp-content/uploads/2026/08/2026-Nova-Scotia-ELCC-Study-Follow-up-Wind-Storage-ELCC-Results.pdf>

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Request IR – 9

Refer to the 2026 Report Section 3.2.7 Firm Imports – New Brunswick, page 14, where IESO NS states that it has contracted 100 MW of firm generation capacity from NB Power under a 10-year agreement, with delivery beginning “as early as 2028.”

- a) Please describe the basis for the delivery timing assumption of Winter 2028/2029 and any preconditions that must be met before delivery begins.
- b) If the 100 MW firm import does not materialize by Winter 2028/2029, please describe IESO NS’s alternative plan to maintain resource adequacy.

Response IR - 9

- a) The basis for the delivery timing assumption of Winter 2028/2029 is the forecast commercial operation date of 2028 for NB Power's Renewables Integration Grid Security (RIGS) Project.¹ Commercial operation of the facility is the precondition for delivery of capacity.
- b) The Load and Resource Outlook table in the 10-Year System Outlook is showing a 152 MW surplus for the Winter 2028/2029. If the 100 MW firm import did not materialize by Winter 2028/2029 the Planning Reserve Margin for that year would still be 52 MW above the 20% target, assuming no other changes to load or resource additions or retirements.

¹ [Renewables Integration Grid Security \(RIGS\) Project](#)

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Request IR – 10

Refer to the 2026 Report Section 3 – Existing Generation Resources, page 15, Table 3: Additions and Retirements in the 10-Year System Outlook Resource Plan, and the Demand Response additions. The Demand Response ELCC values vary widely across the horizon, ranging from roughly 16% (24 MW installed / 3.8 firm in Winter 2026/2027) to 48% (6 MW installed / 2.9 MW firm in Winter 2028/2029). These values vary significantly from the 67% ELCC value attributed to Demand Response in Table 2.

- a) Please explain the difference between the Demand Response ELCC value of 67% as listed in Table 2, which summarizes the 2026 capacity of Nova Scotia's Generation Resources, and the Demand Response ELCC value of roughly 16% for Winter 2026/2027 in Table 3.
- b) Please explain the drivers behind the variation in the implied Demand Response ELCC values in Table 3.
- c) Please confirm whether the Demand Response ELCC values in Table 3 represent marginal ELCC or average ELCC.

Response IR - 10

- a) The 67% ELCC for demand response listed in Table 2 represents the average ELCC for the existing 16.3 MW of demand response programming in Nova Scotia. The stated additional installed capacity for Winter 2026/2027 in Table 3 inadvertently includes the 16.3 MW of existing capacity in its total. The correct value should be 7.6 MW of incremental installed capacity with a corresponding ELCC of 3.8 MW.
- b) The drivers behind the variation in the implied Demand Response values are:
 - The firm capacity contribution is impacted by the mix of programs used to deliver the demand response programming. There are two different demand response programs in Nova Scotia: the critical peak pricing program administered by NS

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Power and EfficiencyOne's demand response programs for residential and commercial customers. The different programs have different operating characteristics (i.e.: whether events can be called on weekends or not, number of events per year, etc.) and as such have different ELCC values. Please refer to the 2026 ELCC Study¹, page 69/70, for the ELCC tables for both the Critical Peak Pricing (CPP) demand response program and EfficiencyOne's demand response program.

- Each of the different DR programs has varying levels of participation which impacts the ELCC contribution of each due to the saturation effect which results in the ELCC decline with increased penetration of a particular energy limited resource.

c) The demand response ELCC values in Table 3 represent marginal ELCC values.

¹<https://www.ieso-nb.ca/wp-content/uploads/2026/06/2026-Nova-Scotia-ELCC-Study-Report.pdf>

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Request IR – 11

Refer to the 2026 Report Section 3.2.3 – NS Community Solar, page 13, which states that “The forecast commercial operation date for the first three projects approved by the Nova Scotia Department of Energy is Q3 2027.”

- a) Please provide the current development status of each of the three Community Solar projects referenced in footnotes 19-21 of the 2026 Report (Annapolis County, Sydney, and Rural HRM).
- b) Please describe the risk, if any, that the Q3 2027 commercial operation date will not be met for each project, and any implications for resource adequacy if any or all of the Community Solar projects are delayed.

Response IR - 11

- a) The information requested is not available to IESO Nova Scotia. As the Nova Scotia Department of Energy is the owner of this information, they would be best positioned to respond to inquiries regarding it.

- b) IESO Nova Scotia has not identified nor been made aware of reasons for concern regarding in-service timeframe of the Community Solar projects, but there are no risks to resource adequacy if the Q3 2027 commercial operation date is not met. There is sufficient renewable generation available to comply with the 40% Renewable Energy Standard for the years 2027-2029 even if one or more of these projects is delayed, and their contribution to resource adequacy is minimal as the system peak in Nova Scotia generally occurs after the sun has set.

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Request IR – 12

Refer to the 2026 Report Section 3 – Existing Generation Resources, page 15, Table 3: Additions and Retirements in the 10-Year System Outlook Resource Plan, and the 2025 Report Section 3.2, Figure 7: Additions and Retirements as in the 10-Year System Outlook Resource Plan^[1].

- a) Please provide a reconciliation of the additions and retirements presented in Table 3 of the 2026 Report against the additions and retirements presented in Figure 7 of the 2025 Report, including any changes in resource type, capacity, timing, or categorization.
- b) Please describe the drivers of the differences between the two resource plans.
- c) Please describe any additions or retirements included in the 2025 Report that are not carried forward into the 2026 Report, and identify the current status of each.

^[1] M12386 – Exhibit N-1 - NS Power 2025 Report, Page 17 of 64, Figure 7: Additions and Retirements as in the 10-Year System Outlook Resource Plan.

Response IR - 12

a-c) Please refer to the table below for a reconciliation of the additions and retirements presented in Table 3 of the 2026 Report against the additions and retirements presented in Figure 7 of the 2025 Report, including the drivers of the differences between the two plans. There were not any additions or retirements included in the 2025 Report that were not carried forward into the 2026 report.

Name	Addition/ Retirement/ Conversion	2026 10 YSO - Table 3		2025 10 YSO - Figure 7		Reconciliation and Drivers for Change
		Installed Capacity (MW)	Winter	Installed Capacity (MW)	Winter	
Rate Base Procurement	Addition	33 273	in-service 2026/2027	128 178	2025/2026 2026/2027	2026 10 YSO reflects updated timing of projects. Total capacity (306 MW) remains the same.

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Renewable to Retail	Addition	36 57	2026/2027 2027/2028	90	2025/2026	2026 10 YSO reflects the updated timing of the project with implementation split between two Winter periods. Total capacity (90 MW) is unchanged.
Port Hawkesbury Paper Wind	Addition	168	2026/2027	168	2026/2027	No change
Minas Highlands Wind	Addition	13	2026/2027	13	2026/2027	No change
NS Power BESS	Addition	50	2026/2027	50	2026/2027	No change
NS Community Solar	Addition	9 45 45	2027/2028 2028/2029 2029/2030	25 25 25 25	2026/2027 2027/2028 2028/2029 2029/2030	2027/2028 installed capacity updated to reflect announced projects in 2026 10YSO. Remaining capacity spread over next two years. Total capacity (100 MW) remains the same.
Green Choice Wind	Addition	262	2028/2029	262	2028/2029	No change
Point Tupper Coal-to-Gas	Conversion	150	2028/2029	150	2028/2029	No change
Firm Imports - New Brunswick	Addition	100	2028/2029	-	-	Not included in 2025 10 YSO
Renewable to Retail	Addition	59	2029/2030	59	2027/2028	Commercial operation date updated in 2026 10 YSO.
Green Choice Wind	Addition	350	2029/2030	350	2029/2030	No change
IESO-NS BESS	Addition	250	2029/2030	150 100	2027/2028 2029/2030	Anticipated timing updated in 2026 10YSO.
Fast-Acting CT's	Addition	450	2029/2030	300 300	2027/2028 2029/2030	Timing of project updated in 2026 10 YSO. Capacity adjusted due primarily to the addition of a 100 MW firm import in the 2026 10 YSO and

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						will continue to be refined in the 2026 IRP.
Lingan 1, 3, 4 Coal to HFO	Conversion	450	2029/2030	450	2029/2030	No change
Point Aconi	Retirement	168	2029/2030	168	2029/2030	No change
Trenton 5	Retirement	150	2029/2030	150	2029/2030	No change
Lingan 2	Retirement	148	2029/2030	148	2027/2028	Timing updated in 2026 10YSO to maintain alignment with updated timing for fast-acting gas resource addition.
Demand Response	Addition	8* 5 6 7 8 21 3 2 1	2026/2027 2027/2028 2028/2029 2029/2030 2030/2031 2031/2032 2032/2033 2033/2034 2034/2035	-	-	Demand response was included as a load modifier in the 2025 10YSO but is listed as a resource in 2026 10YSO.
Wind Future Procurements	Addition	300 200 200 200 150 150	2030/2031 2031/2032 2032/2033 2033/2034 2034/2035 2035/2036	300 200 200 200 150 -	2030/2031 2031/2032 2032/2033 2033/2034 2034/2035 -	Winter 2035/2036 added in 2026 10 YSO to reflect the shift in the planning horizon, but otherwise no changes.

*This value has been corrected to represent the intended value. Please refer to SBA IR-10

for more details.

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Request IR – 13

Refer to the 2026 Report Section 3 – Existing Generation Resources, page 15, Table 3: Additions and Retirements in the 10-Year System Outlook Resource Plan, and the implied marginal wind ELCC values reflected within the table, which range from roughly 5% to 20%.

- a) Please provide the full marginal wind ELCC schedule by year over the 10-year horizon.
- b) Please confirm that the marginal wind ELCC values implied in the table are consistent with the results of the June 2026 E3 ELCC study, and identify any variations between the two.
- c) Please describe the installed wind capacity threshold at which the marginal wind ELCC transitions from 20% to lower ELCC values as shown in the table and described on page 8 of 28, where IESO NS describes that the “ELCC of existing wind on the system is 20% but declines to 5% at higher amounts of installed wind capacity.”

Response IR - 13

- a) Please refer to NSEB IR-03.

- b) Confirmed. The marginal ELCC values are based on the 2026 ELCC study.

- c) Please refer to ES Figure 2 on page 3 of the 2026 ELCC Study¹. At 1176 MW of cumulative installed wind capacity, the marginal ELCC is 12%. At 1376 MW, marginal ELCC is 6. At 2176 MW, the marginal ELCC is 5%.

¹ Nova Scotia Effective Load Carrying Capability Study, Energy+Environmental Economics, June 2026.
<https://ieso-ns.ca/wp-content/uploads/2026/06/2026-Nova-Scotia-ELCC-Study-Report.pdf>

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1 **Request IR – 14**

2 Refer to the 2026 Report Section 3.3.1 – Planning Reserve Criteria, page 16, which states that
3 “NS Power studied the appropriate calculation of the PRM in Nova Scotia as part of the 2020
4 IRP, which confirmed that a 20% PRM target was appropriate for long-term planning. IESO
5 Nova Scotia continues to use the 20% PRM target.”

- 6 a) Please describe whether IESO NS intends to conduct or commission an updated study of
7 the appropriate PRM for Nova Scotia.
8 b) Please confirm whether the IESO NS or NS Power is responsible for restudying the
9 PRM, and the anticipated timeline for that restudy.

10

11 **Response IR - 14**

12 Please refer to NSEB IR – 9.

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Request IR – 15

Refer to the 2026 Report Section 3 – Existing Generation Resources, page 18, Table 4: IESO-NS 10-Year Load and Resource Outlook, and the BESS additions.

- a) Please confirm whether IESO NS has assumed any degradation of BESS capacity over time.
- b) If degradation is assumed, please provide the assumed degradation curve and IESO NS's source for that assumption. If no degradation is assumed, why not?

Response IR - 15

- a) Battery degradation impacts the storage capacity (MWh) of the battery, but not the maximum output (MW) of the battery, which is a product of the inverter size. For Table 4 of the 2026 10-Year Load and Resource Outlook, IESO Nova Scotia has not assumed any degradation in BESS storage capacity which would impact the Effective Load Carrying Capability of a storage resource over time.

- b) Degradation was not assumed as all BESS additions in the 2026 Report have either recently gone into service or are forecast resource additions for subsequent years. Thus, the impact of degradation is not expected to substantially impact the storage capacity of these resources in a way that their ELCC would be meaningfully reduced during the 10-year horizon reviewed in the 2026 Report.

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Request IR – 16

Refer to the 2026 Report Section 4.3 – Clean Electricity Regulations (CER), page 21.
Specifically considering the treatment of new fast-acting generation under the CER:

- a) Please describe IESO NS’s current assessment of whether the 450 MW of new fast-acting generation described in Section 3.2.4 is likely to qualify as a “Planned Resource” under the CER.
- b) Please provide any updated analysis on whether new fast-acting generation would be subject to the CER’s emissions performance standards.
- c) Please describe any implications for IESO NS’s resource plans if the new fast-acting generation is not eligible for treatment as a Planned Resource under the CER.

Response IR - 16

a, b) IESO Nova Scotia continues to advance the projects and provide the necessary documentation to Environment and Climate Change Canada to enable the new fast-acting generation units (up to 600MW at up to two sites) to be considered as "planned units" under the Clean Electricity Regulations. IESO Nova Scotia does not anticipate it will receive notification of whether the unit(s) will be designated as planned units until the units are in-service and all applicable requirements have been met. IESO Nova Scotia has no updated analysis to provide regarding the applicability of the CER.

c) There are no implications for IESO Nova Scotia’s resource plan if the new fast-acting generation is not eligible for treatment as a planned unit under CER. If it is designated as a planned unit it creates operational flexibility that helps reduce costs for customers, and if it is not designated as a planned unit, it does not impact the need for firm capacity for this

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24 resource, it just creates additional constraints that the system dispatch must be managed
25 within.

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Request IR – 17

Refer to the 2026 Report Section 5 – Transmission Planning, Sub-section 5.1.1 Interconnection Requirements, page 22, mentioning various studies.

- a) Refer to where it states, in reference to inverter-based resources (IBRs), that “ongoing system study indicates newer and better tuned IBRs can ride through grid events and meet performance criteria with reduced levels of grid support mechanisms such as synchronous condensers.” Please identify the specific study or studies referenced, and whether the study is specific to Nova Scotia or is a general industry study. Please provide copies of the study/studies, if available.
- b) Refer to where it states “Grid-forming BESS is also showing potential specifically to reduce the requirement for synchronous support.” Please identify the specific study or studies referenced, and whether the study is specific to Nova Scotia or is a general industry study. Please provide copies of the study/studies, if available.
- c) Refer to where it states “Ongoing study will refine requirements for the interconnection of IBR to set more stringent performance requirements to allow for lower levels of synchronous support required online in the next generation of IBR facilities.” Please identify the specific study or studies referenced, and whether the study is specific to Nova Scotia or is a general industry study. Additionally, please describe the anticipated timeline for completion for this study. Please provide copies of the study/studies, if available.

Response IR - 17

a-c) System studies are ongoing as new IBR projects are submitted for interconnection to the Nova Scotia system. Some of these proposed facilities incorporate technology advances as well as enhanced OEM tuning experience, which is being developed across the industry globally. Combined with performance results from newly commissioned grid-forming BESS (with Nova Scotia-specific tuning), there is cautious optimism that some of the identified long-term requirement for synchronous support may be able to be replaced by

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29 grid forming BESS. Studies continue to demonstrate a significant requirement for
30 synchronous support to enable the reliable operation of existing and near-term planned IBR
31 facilities, particularly under high IBR dispatches. More stringent performance
32 requirements for IBR are anticipated to be mandated by NERC for future facilities, which
33 will be incorporated as these standards are approved for implementation in Nova Scotia.
34 As new technologies enter the market and advanced control system tuning is implemented,
35 there is potential for future generations of IBR to utilize grid forming BESS for a portion
36 of the inertial support currently provided by synchronous machines. IESO Nova Scotia
37 continues to work with consultants with global experience in IBR integration and EMT
38 simulation to support this ongoing work.

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Request IR – 18

Refer to the 2026 Report Section 5.2.1 Generator and BESS Interconnection, page 23, which states “there are twenty (20) Interconnection Requests associated with eighteen (18) projects currently anticipated to connect to the Nova Scotia transmission system prior to 2030”. Please provide the full list of the 20 Interconnection Requests and 18 associated projects, including project name, generation type, installed capacity, and expected in-service date.

Response IR - 18

The table below provides the full list of 20 Interconnection Requests, 18 associated projects, including project name, generation type, installed/ nameplate capacity and expected in-service date.

Interconnection Request	Project Name	Nameplate Capacity	Generation Type	In-Service Date
542	Parrsboro Tidal	3.78	Tidal	2027-06-30
574	Ellershouse III	66.72	Wind	2026-12-31
598	SMEC Tidal	2.52	Tidal	2027-06-30
597	Mersey Wind River I	36	Wind	2026-09-30
670	Kmtnuk Wind	94.4	Wind	2027-08-31
671	Bear Lake Wind	88.96	Wind	2027-03-31
669	Higgins Mountain Wind	99	Wind	2026-01-26
668	Weavers Mountain Wind	94.4	Wind	2026-10-31

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618	Goose Harbour Lake Wind	130.2	Wind	2026-06-30
675	Mersey River II	112.5	Wind	2028-05-31
677	Wedgeport Wind Farm	80	Wind	2026-11-15
697	White Rock BESS	55	Storage	2026-08-21
686	Windy Ridge	336	Wind	2028-05-31
739	Medway River Wind	90	Wind	2027-12-31
742	Goose Harbour Lake Wind II	35	Wind	2026-06-30
762	Benjamins Fork Wind	12.6	Wind	2026-12-31
728	Upper Afton Wind I & II	120	Wind	2027-12-31
824		48	Wind	
732	Eigg Mountain Wind	149.6	Wind	2028-09-30
826	Sugar Maple Wind	112	Wind	2028-12-31

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Request IR – 19

Refer to the 2026 Report 5.2.2 Large Load Interconnection Requests, page 23, referring to Table 8: Large-Load SIS.

- a) For each of the nine projects listed in Table 8, please provide the expected in-service date, ramp schedule for load growth, load factor, and any interruptible or curtailment provisions.
- b) Are these loads included in the load forecast? Why or why not?
- c) If these loads materialize as forecasted, how would they impact IESO NS's resource adequacy assessment? Please describe any additional firm capacity that would be required and the year in which that capacity would need to be in service.

Response IR - 19

- a) Proposed in-service dates for the referenced projects are detailed in NSEB IR-15. Ramp rates are not yet determined as the System Impact Study may require specific ramp rate requirements. Once the System Impact Study determines the basic requirements to connect, the Customer can move forward as a committed customer. Load Factor is not considered during a transmission System Impact Study. There may be instances where the Customer has started tariff discussions (which set conditions for interruptible load or curtailment) with the Load Serving Entity in parallel.

- b-c) Please refer to IG IR-2.

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Request IR – 20

Refer to the 2026 Report Section 5.4.3 Transmission Development Project List, pages 25-26, referencing the Transmission Development Project List which includes “transmission system development projects identified by IESO Nova Scotia.”

- a) Please describe whether the projects listed in Table 9: Transmission Project List 2026-2036 are based on studies recently conducted by IESO NS, carried over from prior NS Power studies, or a combination of both. For each project, please identify the underlying study.
- b) Please confirm whether IESO NS has independently validated the need for each project listed in Table 9.
- c) Please describe which entity is ultimately responsible for building each of the transmission upgrades listed in Table 9.

Response IR - 20

- a) Please refer to table provided in response to NSEB IR-19.

- b) The majority of the projects listed have been identified by IESO Nova Scotia or are associated with previously completed Interconnection studies. Additional transmission planning studies are expected to be completed over the next 12 to 18 months due to ongoing changes in system load and new projects to identify any additional upgrade or design changes

- c) NSPI is responsible for upgrades or changes to the NSPI-owned transmission system.

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Request IR – 21

The 2026 Report does not discuss offshore wind (OSW) generation resources.

- a) If Nova Scotia successfully achieves its goals of up to 5 GW of OSW in the 2026 call for bids, and an additional 10 GW in future calls for bids, how will the 10-Year System Outlook change?
- b) Please describe how and when offshore wind resources will be reflected in future 10-Year System Outlook Reports.

Response IR - 21

a-b) The 2026 10-Year System Outlook report would not change meaningfully if Nova Scotia successfully achieved its goal to award up to 5GW of offshore wind in the 2026 call for bids and an additional 10 GW in future calls for bids. As noted in the Province of Nova Scotia's Wind West Strategic Plan¹, commissioning of the first offshore wind turbines would not be anticipated to occur until sometime after 2033, which is near the end of the horizon of this report. In addition, impacts to the 10 Year System Outlook resource plan would relate specifically to how much offshore wind will serve the Nova Scotia system, rather than the total capacity developed. The amount of energy produced by the potential offshore wind projects identified far exceeds the energy needs of Nova Scotia; accordingly, an offtaker, with demand exceeding that of the current Nova Scotia electricity system, would be needed to utilize this energy. Offshore wind would only be identified as a resource addition in the 10-Year System Outlook if Nova Scotia became an offtaker of some of the energy. Similarly,

¹ [wind-west-strategic-plan-en.pdf](#)

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22 any transmission infrastructure associated with the development of offshore wind would
23 only be reflected in the 10-Year System Outlook if it is connected to the bulk electric power
24 system in Nova Scotia. Currently the transmission path for offshore wind is to be
25 determined.

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Request IR – 22

The 2025 Report included several sections that do not appear in the 2026 Report, including but not limited to various sections under “Generation Resources”, “Resource Adequacy”, “Transmission Planning”, “Transmission Development”, and “Clean Energy Regulations”.

a) For all of the sections not included, please describe why it was not included in the 2026 Report.

b) Please describe where stakeholders can find the equivalent information going forward, including whether each topic is now the responsibility of NS Power or IESO NS.

Response IR – 22

a-b) The Market Rules prescribe the provision of the 10 Year System Outlook report and certain minimum requirements, but does not otherwise prescribe the contents of the report. IESO Nova Scotia, in taking over the responsibility of the report, examined which sections were no longer applicable under IESO Nova Scotia’s mandate, or which may be more appropriately provided by NSPI in other proceedings. There are also areas where no material update is required or available, and so some sections have been merged. As such, information from the sections that were previously included and not in this year’s report were either a) merged into other sections of the report or b) are the responsibility of NSPI. For example, sections related to specific generating units, their utilization, and certain transmission related information is the responsibility of NSPI– information like this can be found in NSPI’s Annual Capital Expenditure Plans.