Reliability Outlook

An adequacy assessment of Ontario's electricity system

October 2025 - March 2027

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Executive Summary

Ontario's electricity system is prepared and expected to have adequate supply and sufficient reserves to meet system needs for the 18-month Reliability Outlook period.

Electricity demand is projected to grow modestly, with firm demand expected to rise by 2.1% in 2025 and 2.2% in 2026. The Reliability Outlook reflects lower near-term demand projections compared with previous forecasts due to slower projected economic activity related to current geopolitical uncertainty. Long-term growth is expected to remain strong as numerous large loads are planning to come online over the coming decades.

Recent actions have cost-effectively secured supply that will help meet reliability needs for the 18-month Reliability Outlook period and beyond. This includes:

- New battery storage projects procured through the Expedited Long-Term RFP have been connecting to the grid and additional projects, including potentially those procured through the first Long-Term RFP, are expected to connect to the grid throughout the 18-month Reliability Outlook period.
- Upgraded capacity resources procured via the Same Technology Upgrades Solicitation, which are expected to come online throughout this year.
- Second Medium-Term RFP resources, for which a maximum of about 260 MW of re-contracted resources under the capacity stream and more than 200 MW of re-contracted resources under the energy stream are scheduled to continue contributing to the grid following May 1, 2026.
- Approximately 270,000 smart thermostats that are enrolled in the Save on Energy Peak Perks demand response program, as of August 2025, which reduces peak demand on hot summer days. Current participants – which consist of residences and, new this year, small businesses – can deliver a demand reduction of more than 200 MW.

The Day-Ahead Market (DAM) is continuing to provide greater financial certainty for participants by establishing prices a day ahead, which in turn enhances the IESO's ability to plan and operate the grid with increased reliability and confidence. During its initial three months of operation, the DAM has consistently cleared the majority of Ontario's electricity demand, with 96% of energy requirements secured in advance. The remaining volume was procured through the real-time market, which dynamically balances supply and demand based on prevailing system conditions.

The IESO has chosen to utilize 300 MW of the 2015 Capacity Sharing Agreement, amended and restated in 2016, with Hydro-Québec for the delivery period beginning on June 1, 2026, and ending on September 30, 2026.

Refurbishment of Ontario's nuclear resources is ongoing, and schedules remain on track at the Bruce and Darlington facilities. Pickering B is expected to continue operation through September 2026, after which it will go offline and, subject to approval, undergo refurbishment.

As always, the IESO is actively co-ordinating and planning with market participants to maintain reliability. With more overlapping outage requests, some combinations of transmission and/or generation outages could create operating challenges. Generators are advised not to schedule outages during periods when reserves are forecast to be low, and they are strongly encouraged to plan ahead and carefully co-ordinate the timing of outages with IESO staff. Outage requests during periods when reserves fall below the adequacy threshold might not be granted, and further outage co-ordination may be required.

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1. Introduction

This Reliability Outlook covers the 18 months from October 2025 to March 2027, and supersedes the Reliability Outlook released on June 19, 2025.

The purpose of the 18-month horizon in the *Reliability Outlook* is to:

- Advise market participants of the resource and transmission reliability of the Ontario electricity system.
- Assess potentially adverse conditions that might be avoided by adjusting or coordinating maintenance plans for generation and transmission equipment.
- Report on initiatives being implemented to improve reliability within this time frame.

This Reliability Outlook evaluates resource and transmission adequacy using assumptions presented in both this document and the Methodology to Perform the Reliability Outlook, which provides the framework for conducting the assessment. Due to uncertainties associated with various assumptions, readers are encouraged to use their judgment in considering possible future scenarios.

Additional supporting documents are located on the Reliability Outlook webpage.

Security and adequacy assessments are published on the IESO website on a daily basis and progressively supersede information presented in this report.

For questions or comments on this Reliability Outlook, please contact us at 905-403-6900 (toll-free 1-888-448-7777) or customer.relations@ieso.ca.

2. Updates to this Reliability Outlook

2.1 Updates to Reporting

As part of ongoing efforts to improve clarity and align with the core mandate of the Reliability Outlook, certain definitions and tables, already available in the Data Tables and Methodology document, have been removed from the report. This change helps eliminate redundancy and streamline content.

Additionally, the IESO is continuing to review and refine the report, consolidating or removing sections where appropriate to ensure the assessment remains focused on delivering forward-looking insights into the reliability of Ontario's electricity system.

2.2 Updates to the Demand Forecast

The demand models use actual demand, weather, and economic data through to the end of July 2025. The latest business intelligence regarding large step loads was incorporated in mid-August. Actual weather and demand data through to the end of August 2025 are included in the tables.

2.3 Updates to Resources

This Reliability Outlook considers planned generator outages over the 18-month period, submitted by market participants to the IESO's outage management system as of August 28, 2025. Market participants are required annually to submit information to enable the IESO to conduct reliability assessments. This information, provided to the IESO through Form 1230, was submitted in Q2 2025.

2.4 Updates to the Transmission Outlook

This Reliability Outlook considers transmission outage plans that were submitted to the IESO's outage management system by August 5, 2025.

3. Demand Forecast

Forecasted firm energy demand is expected to grow over the 18-month Reliability Outlook period, with a projected increase of 2.1% for 2025 and 2.2% in 2026. Compared with the previous Reliability Outlook, the demand projections are mixed. Higher-than-anticipated demand growth in 2025 meant that both peak and energy demands were higher. Although demand growth is lower for 2026 in this Reliability Outlook, the levels are higher due to the higher demand reached in 2025. Peak demands are higher for the winter periods due to additional large step loads, but summer peaks are similar to the previous forecast. Anticipated electric load growth from numerous large step loads in the form of electric arc furnaces (EAF), electric vehicle (EV) battery manufacturing facilities and data centres has increased slightly since the last forecast. Electrification of vehicles and industrial sectors still remains a long-term growth driver. Tables of supporting information are contained in the 2025 Q3 Reliability Outlook Tables.

Reduced inflation and the corresponding Bank of Canada interest rate reductions positioned the economy for growth over 2025 and 2026. Those underlying fundamentals have supported growth across the first three quarters of 2025. At the same time, geopolitical uncertainty could contribute to slower growth in electricity demand in the near term.

Longer-term trends continue to show strong growth. Data centres and generative artificial intelligence represent a growth sector with an appetite for the low-emissions electricity within Ontario. The potential electrification of Canadian homes and businesses and the growth in electric vehicles will push demand higher over the longer term. The firm and planned forecasts in this Reliability Outlook are nearly identical due to uncertainty surrounding the next steps for large step loads.

The demand forecast faces significant uncertainties in both the economic outlook and in terms of new loads on the system.

3.1 Demand Forecast Assumptions

Summaries for forecast energy demand and forecast seasonal peaks have been updated below to indicate the results of the planned demand scenario.

- The **planned scenario** demand forecast includes loads that are less certain to reach commercial operation in this forecast period but are large enough to warrant considering their impact on grid operations.
- The **firm scenario** demand forecast includes future loads with a high probability of reaching commercial operation in this forecast period.
- The **normal weather** simulation represents a 50/50 distribution of probabilistically modelled data. This means that 50% of observations would exceed the normal value and 50% of observations would fall below the normal value.
- The **extreme weather** simulation represents a 97/3 distribution of probabilistically modelled peak demand data. This means that 3% of observations would exceed the extreme peak value and 97% of observations would not exceed the extreme value.

Table 3-1 | Forecast Energy Demand Summary

Year	Normal Weather Energy Firm Scenario (TWh)	% Growth in Energy Firm Scenario	Normal Weather Energy Planned Scenario (TWh)	% Growth in Energy Planned Scenario
2025	144.0	2.07%	144.1	2.14%
2026	147.2	2.23%	148.3	2.94%

Table 3-2 | Forecast Seasonal Peaks

Season	Firm Normal Weather Peak (MW)	Firm Extreme Weather Peak (MW)	Planned Normal Weather Peak (MW)	Planned Extreme Weather Peak (MW)
Winter 2025-26	22,706	23,741	22,860	23,897
Summer 2026	24,122	26,286	23,987	26,409
Winter 2026-27	22,735	23,834	22,852	23,944

Table 3-3 | Large Step Load Impacts, Firm and Planned Demand

Demand Forecast	Firm Energy (GWh)	Firm Peak (MW)	Planned Energy (GWh)	Planned Peak (MW)
Winter 2025-26	741	440	989	595
Summer 2026	939	484	1,210	607
Winter 2026-27	1,002	543	1,233	660

Notes on Table 3-3:

"Large step loads" are a category of potential load growth consisting of new facilities that intend to connect to Ontario's power system. The capacity required from the grid and expected timing of connection present uncertainty in the demand forecast. As such, they are treated as large *step* increases in demand and are incremental to the underlying demand growth from economic activity and population growth. The firm forecast includes those large loads that are highly likely to proceed on time. The planned forecast includes large loads that are less certain in timing.

4. Supply Forecast

Under the firm scenario and expected weather, the IESO anticipates sufficient reserves throughout the 18-month Reliability Outlook period. Resource adequacy is a key reliability factor in approving generation and transmission outages. When reserves fall below required levels, the IESO may coordinate more closely with market participants to prioritize outage requests. In such cases, the IESO may flag an outage as at risk, prompting the facility owner to consider rescheduling. Conversely, when reserves exceed requirements, additional outages may be considered—provided local conditions, operability, or transmission security do not pose reliability risks.

Ontario's installed generation capacity is summarized in **Table 4-1**. Forecast capability at the summer peak reflects the firm resource scenario, accounting for deratings, planned outages, and performance below rated capacity. Please note that totals may not add up due to rounding.

Table 4-1 | Existing Grid-Connected Resource Capacity

Fuel Type	Total Installed Capacity (MW)	Forecast Capability at 2026 Summer Peak [Firm] (MW)	Number of Stations	Change in Number of Stations compared to previous quarter	Change in Installed Capacity (MW) compared to previous quarter
Nuclear	12,184	8,706	4	0	0
Hydroelectric	8,866	5,160	76	0	0
Gas/Oil	10,544	9,523	30	0	75
Wind	4,943	735	42	0	0
Biofuel	287	250	4	0	0
Solar	478	66	10	0	0
Storage	264	295	2	1	14
Demand Measures	-	2,126	-	-	-
Firm Imports (+) / Exports (-) (MW)	-	300	-	-	-
Total	**37,566**	**27,162**	**168**	**1**	**90**

Supply Forecast Assumptions

4.1.1 Generation and Electricity Storage Resources

All generation and electricity storage resources scheduled to come into service, be upgraded or be shut down within the Reliability Outlook period are summarized in **Table 4-2**. This includes generation and electricity storage projects in the IESO's connection assessment and approval (CAA) process, those under construction, and contracted resources. Details regarding the IESO's CAA process and the status of these projects can be found on the Application Status section of the IESO website.

The estimated effective date column in **Table 4-2** indicates when the market registration process is expected to be complete for each generation and electricity storage resource, based on information available to the IESO as of September 4, 2025. Two scenarios are used to describe project risks:

- The **planned scenario** assumes that all resources scheduled to come into service are available over the assessment period.
- The **firm scenario** assumes that only resources that have reached commercial operation status and completed commissioning at the time this assessment was completed are available.

Generators with expiring contracts and planned shutdowns or permanent[1] retirements that have a high likelihood of occurring are considered for both scenarios. Also, resources procured through MT2 RFP, which concluded in Q2 2025, and expected to continue contributing to the grid under the renewed contract terms starting next summer, are not included in **Table 4-2**.

[1] Given the evolving nature of resource acquisitions and commitments in Ontario, **Table 4-2** will be listing new resources as they commission and existing resources that are expected to permanently retire or mothball at the end of their current commitments.

Table 4-2 | Committed Generation and Electricity Storage Resources Status

Project Name	Zone	Fuel Type	Estimated Effective Date	Project Status	Firm (MW)	Planned (MW)
Gas Upgrades STU	Various	Gas	2025-Q3 to Q4	Under Development	0	180
Gas Upgrades STU	Various	Gas	2025-Q2 to Q3	Commercial Operation	75	75
Brighton Beach Upgrade	West	Gas	2025-Q3	Under Development	0	43
Expedited – Long Term 1 Projects	Various	Various	2025-Q2 to Q3	Commercial Operation	176	176
Expedited – Long Term 1 Projects	Various	Various	2026-Q2	Under Development	0	1,001
Pickering B	Toronto	Nuclear	2026-Q4	Facility Out of Service	-2,064	-2,064
Total					**-1,813**	**-589**

Notes on Table 4-2:

The total may not add up due to rounding and does not include in-service facilities.

Project status provides an indication of the project progress, using the following terminology:

- Under Development – projects in approvals and permitting stages (e.g., environmental assessment, municipal approvals, IESO connection assessment approvals) and projects under construction.
- Commissioning – projects undergoing commissioning tests with the IESO.
- Commercial Operation – projects that have just achieved commercial operation status under the contract criteria, though some IESO's market registration requirements could still be pending.
- Expiring Contract – contracts that will expire during the 18-month period are included in both scenarios only up to their contract expiry date. Generators (including non-utility generators) that continue to provide forecast output data are also included in the planned scenario for the rest of the 18-month period.
- Retirement – projects scheduled for permanent shutdown.
- Facility Out of Service – projects scheduled to be shutdown for an extended period of time.

4.1.2 Generation Capability

Hydroelectric

A monthly forecast of hydroelectric generation output is developed using median historical values of production and contributions to operating reserve during weekday peak demand hours. This approach implicitly accounts for routine maintenance and forced outages, as these

events are reflected in the historical data. To reflect the impact of hydroelectric outages on the Reserve Above Requirement (RAR) and allow the assessment of hydroelectric outages as per the outage approval criteria, the hydroelectric capability is also calculated, without accounting for historical outages. The dataset used spans from May 2002 to March 2025 and is updated annually to align with the release of the Q2 Reliability Outlook.

Thermal Generators

Thermal generators' capacity, planned outages and deratings are based on market participant submissions. Forced outage rates on demand are calculated by the IESO based on actual operational data. The IESO will continue to rely on market participant-submitted forced outage rates for comparison purposes.

Wind and Solar

For wind and solar generation, monthly wind capacity contribution (WCC) and monthly solar capacity contribution (SCC) values from the weekday peak hour are used. Monthly WCC values are updated annually with the release of the Q2 Reliability Outlook.

4.1.3 Demand Measures

Both demand measures and load modifiers can impact demand, but differ in how they are treated within the Reliability Outlook. Demand measures, such as dispatchable loads and demand response procured through the IESO's capacity auction, are not incorporated into the demand forecast and are instead treated as resources. Load modifiers are incorporated into the demand forecast. The impacts of activated demand measures are added back into the demand history prior to forecasting demand for future periods.

The 2024 Capacity Auction, which secured 1,452.6 MW of winter capacity (November 1, 2025 - April 30, 2026), was included in the modelling for this Reliability Outlook. Capacity targets from the IESO's 2025 Annual Planning Outlook have been included and modelled as demand measures in the firm and planned resource scenario for the period post April 2026.

Approximately 270,000 smart thermostats that are enrolled in the Save on Energy Peak Perks demand response program, as of August 2025, which reduces peak demand on hot summer days. Current participants – which consist of residences and, new this year, small businesses – can deliver a demand reduction of about 200 MW.

4.1.4 Firm Transactions

Capacity-Backed Exports

The IESO allows Ontario resources to compete in the capacity auctions held by certain neighbouring jurisdictions, but only if Ontario has adequate supply and no reliability concerns. New York Independent System Operator (NYISO)[2] will allow up to 13 MW of capacity-backed exports from Ontario between November 2025 and April 2026.

[2] http://icap.nyiso.com/ucap/public/rgt_availability_display.do

Capacity Sharing Agreement

A 2015 Capacity Sharing Agreement, amended and restated in 2016, with Hydro-Québec saw Ontario provide 500 MW of capacity to Quebec in the winter of 2015/16. Ontario currently has a commitment from Quebec to return 500 MW of firm capacity for four months during a summer of the IESO's choosing. As mentioned in the Q2 2025 Reliability Outlook report, the IESO had chosen to utilize 300 MW for the delivery period commencing June 1, 2026, and ending September 30, 2026, with the remaining 200 MW banked for use in a later summer.

The 2024 Capacity Sharing Agreement between the IESO and Hydro-Québec (outlined in the memorandum of understanding[3]) permits for the swap of 600 MW of capacity over a period of up to seven years, starting in winter 2024/2025. Under the agreement, the IESO will provide 600 MW to Hydro-Québec in the winter, and Hydro-Québec will provide 600 MW to the IESO in the summer. The IESO may choose to bank any amount of the 600 MW of summer capacity provided in a given year, to be used in a later summer during the agreement, allowing capacity to be saved until it is required. The IESO has chosen to bank 600 MW from the 2024 Capacity Sharing Agreement for the HQEM Delivery Period commencing May 1, 2026, and ending October 31, 2026, for use in a later summer. More information can be found in the 2023 Capacity Sharing Agreement Backgrounder.

Please note that capacity that is called upon under these agreements is already considered when determining the 1,000 MW / 2,000 MW adequacy threshold.

4.1.5 Summary of Resource Assumptions

To assess future resource adequacy, the IESO must make assumptions about the amount of available resources. The Reliability Outlook considers two scenarios: a firm scenario and a planned scenario.

The starting point for both scenarios is the existing installed resources shown in **Table 4-1**. The planned scenario assumes that all resources scheduled to come into service are available over the assessment period. The firm scenario considers only those resources that have reached commercial operation status as of the time of this assessment. Generator-planned shutdowns or retirements that have a high likelihood of occurring are considered for both scenarios. They also both reflect planned outages submitted by generators. **Table 4-3** shows the available resources that are forecast over the 18-month Reliability Outlook period, under both scenarios in normal weather conditions, and at the time of the summer and winter peak demands.

[3] https://news.ontario.ca/en/release/1003444/the-governments-of-ontario-and-quebec-support-new-electricity-trade-agreement

Table 4-3 | Summary of Available Resources

Notes	Description [Normal]	Winter Peak 2025/2026 Firm Scenario	Winter Peak 2025/2026 Planned Scenario	Summer Peak 2026 Firm Scenario	Summer Peak 2026 Planned Scenario	Winter Peak 2026/2027 Firm Scenario	Winter Peak 2026/2027 Planned Scenario
1	Installed Resources (MW)	37,736	37,958	37,736	39,021	35,672	36,957
2	Total Reductions in Resources (MW)	10,412	10,345	13,000	13,374	10,289	10,863
3	Demand Measures (MW)	868	868	2,126	2,126	1,222	1,222
4	Firm Imports (+) / Exports (-) (MW)	-420	-420	300	300	0	0
5	Available Resources (MW)	27,772	28,061	27,162	28,073	26,605	27,317
6	Bottling (MW)	0	0	0	0	366	541
7	Available Resources without Bottling (MW)	27,772	28,061	27,162	28,073	26,971	27,857

Notes on Table 4-3:

The following terms are used in the table above:

- Installed Resources – The total generation capacity assumed to be installed at the time of the summer and winter peaks.
- Total Reductions in Resources – The sum of deratings, planned outages, limitations due to transmission constraints and allowances for capability levels below rated installed capacity.
- Demand Measures – The amount of demand reduction expected to be available at the time of peak, under a normal weather simulation.
- Firm Imports/Exports – The amount of expected firm imports and exports at the time of summer and winter peaks, under a normal weather simulation.
- Available Resources – Installed Resources (line 1) minus Total Reductions in Resources (line 2) plus Demand Measures (line 3) and Firm Imports/Exports (line 4). This differs from the Forecast Capability at System Peak shown in **Table 4-1** due to the impacts of generation bottling (transmission limitations).
- Bottling[4] – The amount available at the source but which cannot be delivered to the point of use because of restrictions in the transmission system.
- Available Resources without Bottling – Available resources after they are reduced due to bottling.

[4] IESO Market Manual 7: System Operations, Part 0.7.6: Glossary of Standard Operating Terms

5. Adequacy Assessment

5.1 Capacity Adequacy Assessment

The capacity adequacy assessment accounts for zonal transmission constraints resulting from planned transmission outages assessed as of August 5, 2025. The generation planned outages occurring during the 18-month Reliability Outlook period have been assessed as of August 28, 2025.

5.1.1 Firm Scenario with Expected Weather

The firm scenario incorporates all capacity that had achieved commercial operation status as of September 4, 2025. Similarly, the firm scenario includes all demand that has a high probability of materializing in the next 18 months.

Expected Weather is a subset of all weather data selected through an iterative process used to determine weekly peak demand values for the purposes of calculating Reserve Above Requirement (RAR).

Figure 5-1 shows RAR levels, which represents the difference between available resources and required resources. The required resources equals forecasted firm demand plus the required reserve. The threshold decreases to -1,000 MW in the winter months to better reflect the lowered amount of imports to Ontario that can be relied on from other regions, compared to the summer months. When the RAR drops close to or below -2,000 MW in the summer or -1,000 MW in the winter, market participants and the IESO may need to further co-ordinate outages.

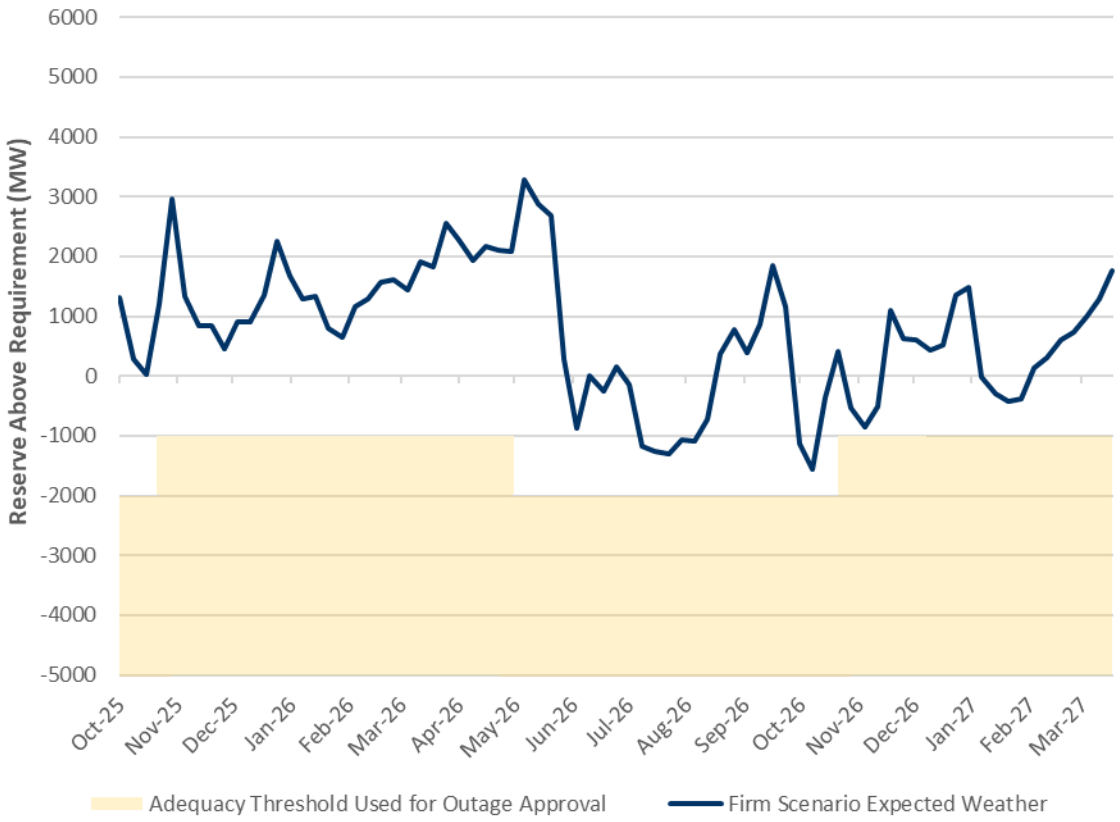
The IESO expects to have sufficient reserves for the 18-month Reliability Outlook period.

When the RAR drops close to or below -2,000 MW in the summer or -1,000 MW in the winter, market participants and the IESO may need to further co-ordinate outages.

The IESO will continue to work closely with participants that have planned outages to ensure Ontario maintains adequate reserves. Ontario may have to rely on up to 2,000 MW of supply in the summer from other jurisdictions and/or additional operating actions in order to ensure reliability, especially during periods of low reserves.

Under periods of tighter supply conditions, planned generator maintenance outages are difficult to schedule. Generators are advised not to schedule outages during periods when reserves are forecast to be low, and are strongly encouraged to plan ahead and co-ordinate the timing of outages with IESO staff. Outage requests during periods when reserves fall below the adequacy threshold will be put at risk and further outage co-ordination may be required.

Figure 5-1 | Expected Weather: Firm Scenario Reserve Above Requirement

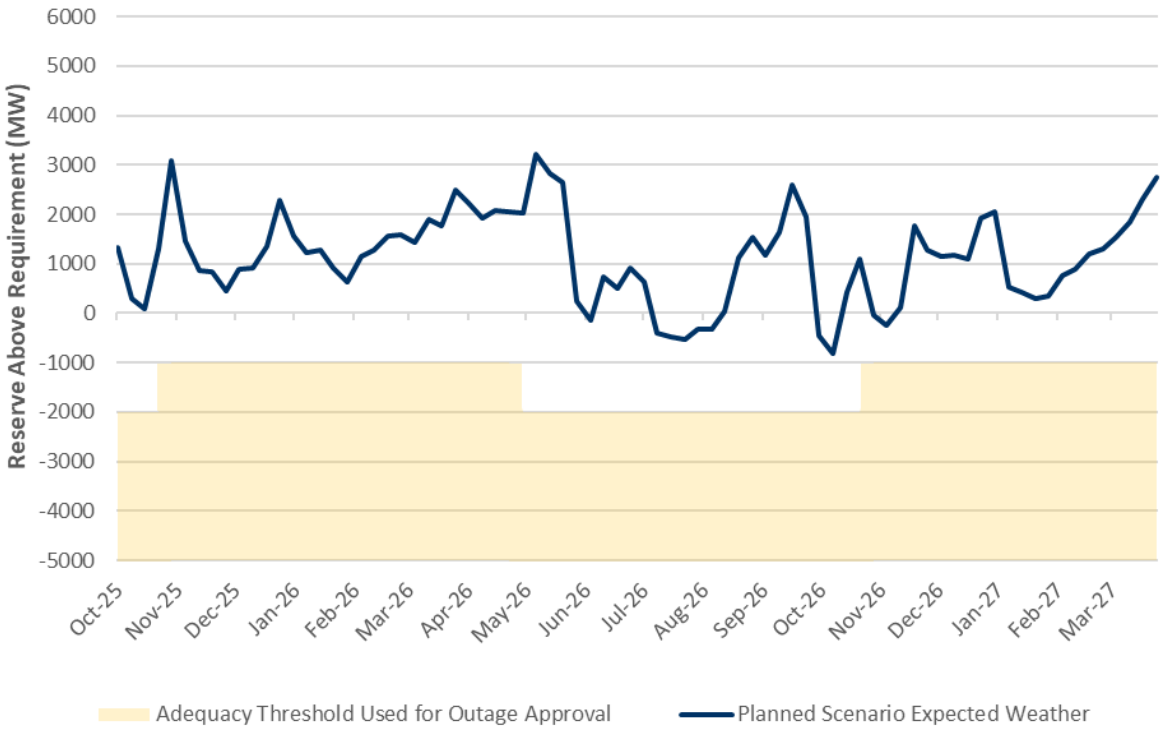


5.1.2 Planned Scenario with Expected Weather

The planned scenario incorporates all existing capacity, as well as all capacity expected to come into service and is calculated using planned demand. Planned Demand reflects incremental loads that are less certain but are large enough to warrant considering their impact on grid operations. **Table 3-3** outlines the planned demand compared to firm.

Figure 5-2 shows RAR levels under the planned scenario. Reserves do not fall below the adequacy threshold requirements in the 18-month Reliability Outlook period.

Figure 5-2 | Expected Weather: Planned Scenario Reserve Above Requirement



5.2 Energy Adequacy Assessment

This section assesses energy adequacy to determine whether Ontario has sufficient supply to meet its forecast energy demands, while highlighting any potential adequacy concerns during the Reliability Outlook time frame. At the same time, the assessment estimates the aggregate production by resource category to meet the projected demand based on assumed resource availability. This assessment is based on both firm demand with firm supply and planned demand with planned supply. The planned scenario produces a potential future scenario which will be used for informational purposes only at this point in time; it is not being used to assess outage approvals.

As the Energy Adequacy Assessment is not used for outage management specifically, and Ontario is and has been in an environment of sufficient energy adequacy for the past several quarters, the IESO intends to remove this section of the Reliability Outlook report in future quarters.

5.2.1 Summary of Energy Adequacy Assumptions

The Energy Adequacy Assessment (EAA) uses the same set of assumptions as the capacity assessment outlined in **Table 4-1** and **Table 4-2**, which indicate the total capacity of committed resources and when they are expected to be available over the next 18 months. The monthly forecast of energy production capability, based on energy modelling results, is included in the Reliability Outlook Data Tables.

5.2.2 Findings and Conclusions

The Energy Adequacy Assessment (EAA) indicates that Ontario is expected to have sufficient supply to meet its forecasted energy needs throughout the 18-month Reliability Outlook period under the firm scenario, assuming normal weather conditions. In this scenario, Ontario is not expected to rely on support from external jurisdictions.

Under the planned scenario, the energy outlook reflects increased production, indicating that planned resource additions more than offset projected changes in demand.

The tables in this section are based on simulations of Ontario's power system, using the assumptions outlined in the Reliability Outlook to evaluate energy adequacy. **Table 5-1** and **Table 5-2** present the simulated annual energy production results by fuel type.

Table 5-1 | Energy Production by Fuel Type for the Firm Scenario, Expected Weather

Fuel Type (Grid-Connected)	2025 (Jul 1 – Dec 31) (GWh)	2026 (Jan 1 – Dec 31) (GWh)	2027 (Jan 1 – Mar 31) (GWh)	Total (GWh)
Nuclear	19,241	71,916	15,100	106,257
Hydro	8,860	36,366	9,379	54,605
Gas & Oil	4,116	26,516	10,079	40,711
Wind	3,904	12,801	3,940	20,645
Biofuel	124	404	109	637
Other (Solar & DR)	174	1,023	262	1,460
Total	**36,419**	**149,026**	**38,869**	**224,314**

Table 5-2 | Energy Production by Fuel Type for the Planned Scenario, Expected Weather

Fuel Type (Grid-Connected)	2025 (Oct 1 – Dec 31) (GWh)	2026 (Jan 1 – Dec 31) (GWh)	2027 (Jan 1 – Mar 31) (GWh)	Total (GWh)
Nuclear	19,241	71,935	15,100	106,275
Hydro	8,860	36,366	9,379	54,606
Gas & Oil	4,185	27,506	10,296	41,987
Wind	3,918	12,901	3,967	20,787
Biofuel	124	402	99	625
Other (Solar & DR)	192	1,025	236	1,453
Total	**36,521**	**150,135**	**39,076**	**225,732**

6. Transmission Reliability Assessment

Ontario's transmission system is expected to continue to reliably supply province-wide demand for the next 18 months. However, some combinations of transmission and/or generation outages could create operating challenges. For this reason, planned outages will necessitate enhanced co-ordination between transmitters and generators. Planned outages for certain approval windows may need to be rescheduled.

6.1 Transmission Projects and Outages

A list of transmission projects is provided in Appendix B1, based on information submitted by transmitters regarding projects planned for completion within the next 18 months. Note that the planned in-service dates in this table and throughout this document are as of August 5, 2025. Any changes will be communicated through subsequent Reliability Outlooks.

The IESO's assessment of transmission outage plans is shown in Appendix C, Tables C1 to C11.

6.2 Transmission Considerations

The purpose of this section of the report is to highlight projects and outages that occur over a period in excess of two weeks and may significantly affect reliability and/or the scheduling of other outages. For more information about the IESO's transmission zones and interfaces, please see the Transfer Capability Assessment Methodology.

There are a significant number of major generation and transmission projects either currently underway or expected to begin in the near future. As the timing of many of these projects overlap with each other and can require multiple equipment outages, reliability assessments are increasingly complex.

Another key factor impacting outage management is the amount of extended forced transmission outages. With more overlapping and urgent outage requests, operating the power system is becoming increasingly difficult. Prioritizing the timely repair of a forced outage is necessary to reduce the impact on the delivery of other ongoing capital projects, and to enable other necessary maintenance outages to proceed.

In considering the possibility of equipment failure, tighter supply conditions and other factors such as supply chain delays, further outage co-ordination or rescheduling may be required. Transmitters and generators are strongly encouraged to plan ahead, co-ordinate with one another, submit outage requests early, and co-ordinate with the IESO. Scheduling outages at desired times may be difficult due to the significant number of major projects that are planned for the same time. Furthermore, outages are not guaranteed as unanticipated equipment failures may change reliability assessments.

One important aspect of grid equipment outages is recall time. Recall times indicate how long it takes for equipment on outage to return to service. Minimizing recall times increases the likelihood of outages being approved. If many outages are non-recallable, it can be difficult to accommodate an additional outage to repair a critical equipment failure as there needs to be a reliable plan to reposture the system. If multiple equipment failures occur, there may be instances where outage management alone will not address the concern. Under such

circumstances the IESO may need to rely on additional non-firm imports or emergency operating procedures in order to ensure reliability.

Bruce, Southwest, and West Zones

The Bruce B 500 kV switchyard rebuild work is complete. The Bruce A 500 kV switchyard rebuild work is scheduled to complete in Q1 2027. As a result, there will be many outages to equipment within the 18-month Reliability Outlook period that will have significant impact on the flow out of the Bruce zone and flows between West and Southwest zones. In addition, there is also a planned six-week outage starting July 13, 2026, on circuit N582L which will have significant impact on the flows between these zones.

Toronto, East, and Ottawa Zones

There are ongoing nuclear refurbishments of multiple units with overlapping timelines. As a result, it will be increasingly challenging for market participants to take outages impacting the Flow East Towards Toronto (FETT) interface given increased west-east flow from resources in Southwestern Ontario along those circuits. Of note, the FETT Capacity Upgrade (i.e., Richview-Trafalgar Reinforcement) project to address future needs is underway; the project is expected to be in-service by Q1 2026. The Etobicoke Greenway Project (formerly the Richview TS to Manby TS Transmission Line Reinforcement) will improve the bulk transmission supply into the city of Toronto to supply the urban centre's growing demand. This project is expected to be in-service by Q2 2026.

The following outage will impact the flow into the Ottawa zone:

- a planned three-week outage starting October 26, 2025, and another planned two-week outage starting December 1, 2025, on circuit L24A

Northwest, Northeast, and Essa Zones

To meet growing electricity need in the Northwest, mainly driven by economic development and electrification of mining activities, the Waasigan Transmission Line is currently under development. Phase 1 of the project, which consists of a new double-circuit 230 kV transmission line between Lakehead TS and MacKenzie TS, is expected to be in-service by Q3 2026. Outages to the parallel circuits, as well as at Lakehead TS and MacKenzie TS will be required in order to integrate the new circuits, and will temporarily reduce system resiliency during this time. Phase 2 of the project, which consists of a new 230 kV transmission line between MacKenzie TS and Dryden TS, is scheduled beyond the horizon of the 18-month Reliability Outlook period.

In the Sault Ste. Marie area, there will be an increase in load because of Algoma Steel converting their coke-fired furnaces to electric-arc furnaces (EAF). Phase 1 of the project, which involves EAF operating with up to 140 MW of load connected to Patrick St TS and Lake Superior Power (LSP) generating units being brought back in-service, is expected to be completed by Q4 2025. Subsequent phases of the project, which will have the EAF operating with up to 250 MW of load connected to the new 230/115 kV Tagona West TS, are scheduled beyond the horizon of the 18-month Reliability Outlook period. The fluctuating nature of electric-arc furnace operation in an electrical area with limited transmission will require special attention to manage voltage and power fluctuations, particularly prior to the completion of the system reinforcements recommended in the Northeast Bulk System plan. In the interim, these fluctuations will be managed by dynamic reactive resources and load management systems that will be implemented as part of the project.

The following outages will impact the flow in and out of the Northeast and Northwest zones:

- a planned six-week outage starting September 2, 2025, to circuit S22A
- a planned two-week outage starting October 19, 2025, to circuit A23P
- a planned two-week outage starting November 1, 2025, and another planned two-week outage starting July 27, 2026, to circuit A22L
- a planned one-week outage starting November 16, 2025, to circuit A1B
- a planned two-week outage starting November 17, 2025, and another planned two-week outage starting June 29, 2026, to circuit A21L
- a planned two-week outage starting June 5, 2026, to circuit D26A
- a planned two-week outage starting July 12, 2026, to circuit F25A
- a planned one-week outage starting August 10, 2026, to circuit K24G
- a planned two-week outage starting October 22, 2026, to circuit A3M
- a planned two-week outage starting November 5, 2026, to circuit M37L
- a planned two-week outage starting November 23, 2026, to circuit F25A

Interconnections

Circuit K21W has been out of service since May 2024 due to a phase angle regulator (PAR) failure, resulting in an unplanned, long-term outage. This circuit plays a key role in supporting power transfers between Ontario and Manitoba systems, and its continued outage is expected to impact the transfer capability. While no immediate mitigation measures are in place, a joint study has been initiated between the IESO, Manitoba Hydro, and Minnesota Power to assess long-term replacement options.

Additionally, the following outages will impact the transfer capability between Ontario and its other interconnected neighbors:

- a planned two-week outage starting September 17, 2025, to circuit J5D, impacting the Ontario-Michigan interconnection.
- a planned nine-week outage starting October 11, 2025, and another planned two-week outage starting March 22, 2026, to circuit P33C, impacting the Ontario-Quebec interconnection.

- a planned two-week outage starting on September 28, 2026 to circuit L33P, and another planned two-week outage starting on October 29, 2026 to circuit L34P, impacting the Ontario-New York interconnection.

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