APRIL 21, 2026

2026 Annual Planning Outlook

Independent Electricity System Operator

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Territory Acknowledgement

The IESO acknowledges the land we are delivering today's webinar from is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnawbe, the Chippewa, the Haudenosaunee and the Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples. We also acknowledge that Toronto is covered by Treaty 13 with the Mississaugas of the Credit First Nation.

As we have attendees from across Ontario, the IESO would also like to acknowledge all of the traditional territories across the province, which includes those of the Algonquin, Anishnawbe, Cree, Oji-Cree, Huron-Wendat, Haudenosaunee and in addition to the Métis and Inuit peoples.

Engagement Principles

This engagement is conducted in accordance with the IESO's External Engagement Framework, which includes the following principles:

- **Purposeful** – Initiate meaningful conversations that move the sector forward
- **Inclusive** – Invite many voices and diverse perspectives to the table
- **Timely** – Seek input and insight when it can have the most impact
- **Accessible** – Ensure we meet people where they are on their energy journey
- **Traceable** – Allow everyone to follow the path that is being taken
- **Transparent** – Show how engagement helped shape the final outcome

Shared Commitment to Respectful Participation

To support a focused and constructive discussion:

- We will take questions one at a time; please use the raise-hand feature to enter the speaking queue
- We encourage concise and focused comments to allow time for multiple perspectives
- Participants are encouraged to raise relevant points during the discussion and provide more detailed feedback through the written submission process
- We ask that all participants maintain a respectful and professional tone throughout the session
- Facilitators will guide the discussion and manage participation to stay aligned with today's focus and agenda
- Where necessary, we may disable a participant's microphone to manage participation

Agenda

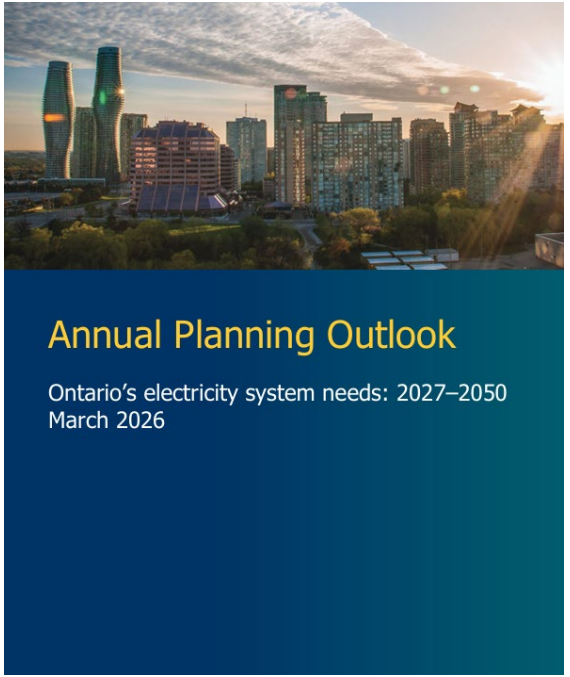
This information session provides an overview of the 2026 Annual Planning Outlook (APO) and covers the following topics:

- Demand forecast
- Supply outlook
- Transmission outlook
- Resource adequacy needs
- Operability needs
- Actions to meet system needs

Purpose of the APO

24-Year Outlook (2027-2050)

- Forecasts electricity demand and identifies capacity, energy, transmission and operability needs
- Provides a set of planned actions to meet needs and provides the electricity sector with insights to guide investment decisions
- Captures evolving economic and system conditions through its annual, iterative process

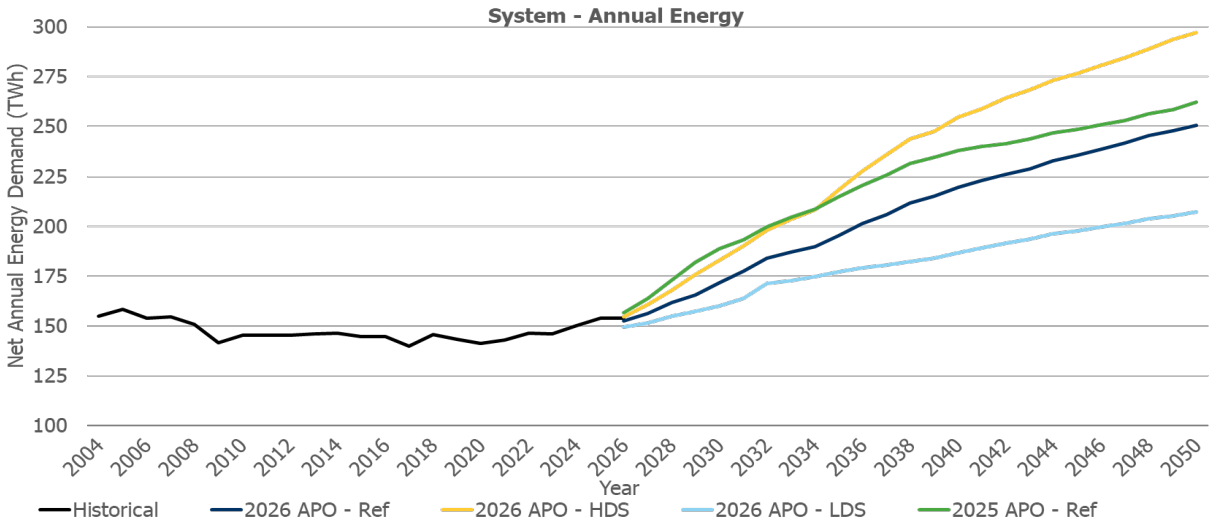


Demand Forecast

Demand Forecast Summary

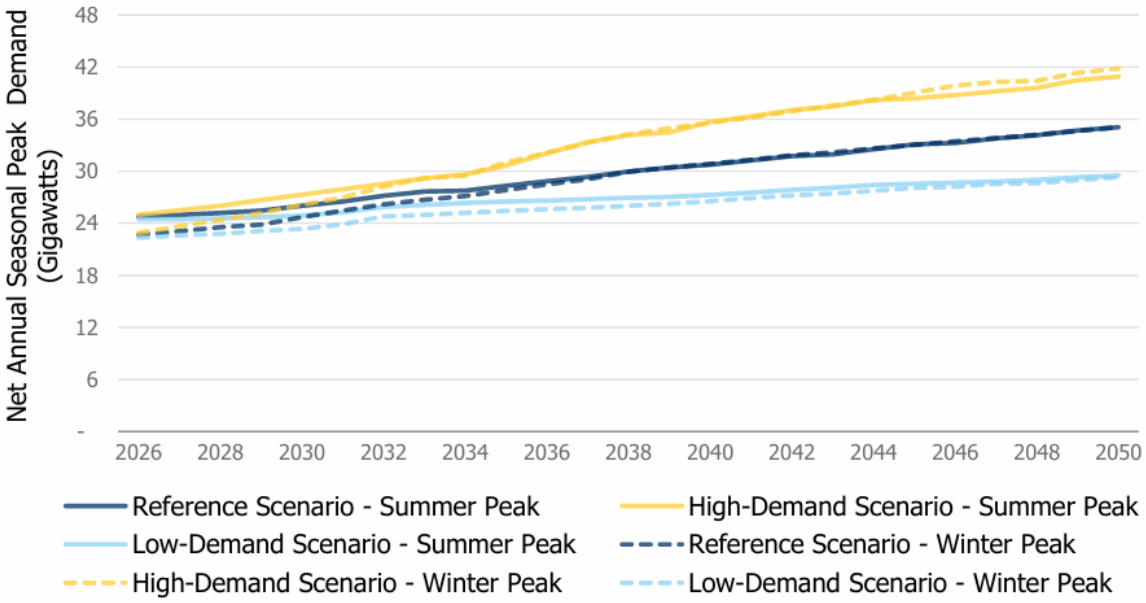
- The 2026 APO reference scenario demand forecast has slightly lower (but still very strong) demand growth compared to the 2025 APO demand forecast
  - Forecasted net annual energy demand growth is 65% by 2050 (to 250 TWh), compared to the 75% growth (to 262 TWh) indicated in the 2025 APO
- Stronger demand growth compared to the 2025 APO demand forecast is attributed to strong increases in commercial floorspace expansion and data centre demand
- Reduced demand growth compared to the 2025 APO demand forecast is attributed to:
  - Higher electricity demand-side management program savings
  - Decreased population and household forecast
  - Delays in industrial large step loads
  - Lower EV adoption forecast
- Significant uncertainties exist with many of these factors; this is managed through the IESO's iterative planning and resource adequacy cycles, which provide the ability to assess and respond to changing conditions

Annual Energy Demand Forecast



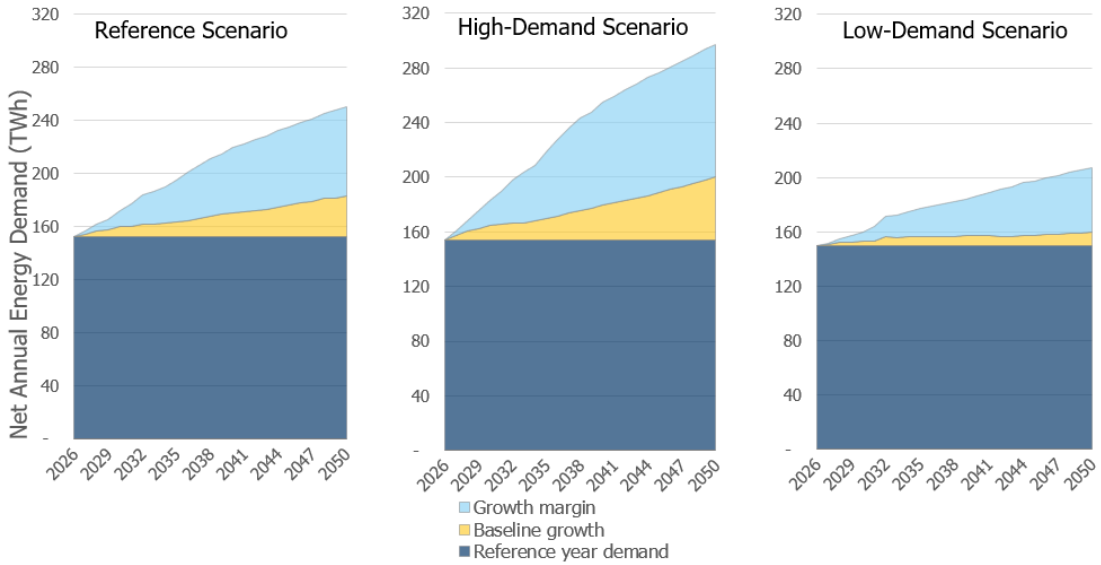
- The 2026 APO includes three demand forecast scenarios – reference, high and low – reflecting different levels of economic growth and policy and consumer-driven electrification trends
- Each scenario represents a fundamentally different future and varying rates of demand growth
- Forecasted annual energy demand growth is 65% in the reference scenario; 92% in the high-demand scenario and 38% in the low-demand scenario

Net Annual Seasonal Peak Demand



- Consistent with the 2025 APO, the 2026 APO forecasts Ontario's electricity system to become dual peaking, with summer and winter peaks reaching similar magnitude
- The timing of occurrence depends on the scenario: the early-2030s in the high-demand scenario, late-2030s in the reference scenario, and beyond 2050 in the low-demand scenario

Demand Forecast: Growth Components



- The 2026 APO presents each demand forecast scenario in terms of growth-related components – **reference year demand, baseline growth and growth margin** – to separate more variable drivers from more stable areas of demand growth
- This aggregated view is intended to provide insight into the impact of inherent demand uncertainty on overall electricity system needs and allow for improved tracking and monitoring of key drivers

Demand Uncertainties

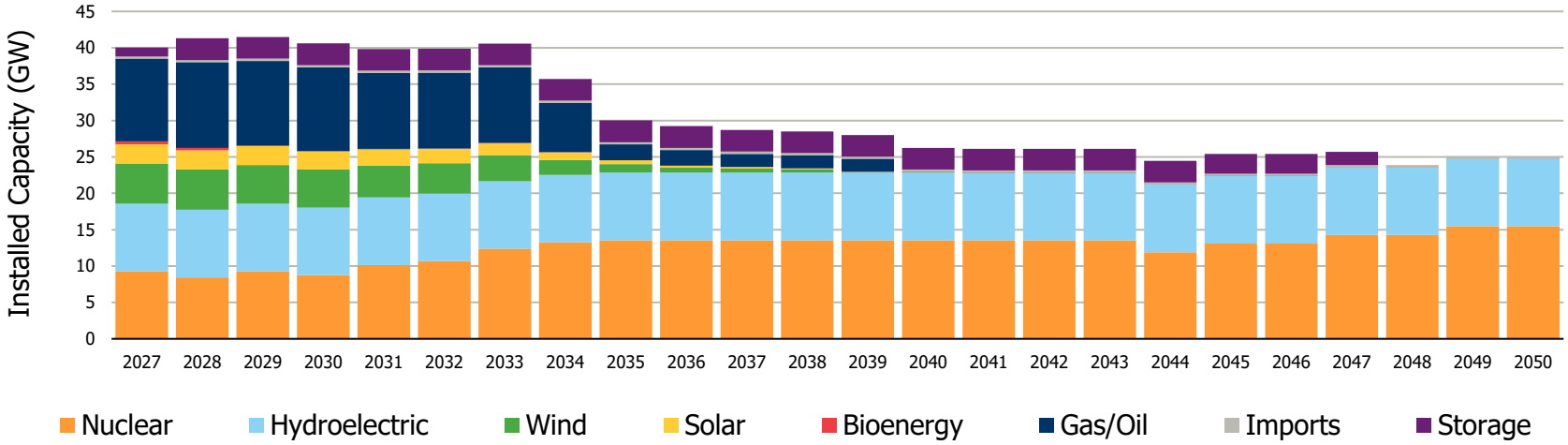
As with any long-term demand forecast, uncertainties can impact materialization of the forecast; key uncertainties include:

- Current and near-term state of the economy, particularly tariff impact
- Long-term demographic, affordability and productivity trends
- Materialization of:
  - Commercial data centres and industrial cryptocurrency mining projects
  - Industrial automobile production & supply chain sub-sector transition to EVs
  - Hydrogen production, energy storage and carbon capture, utilization & sequestration
- General decarbonization strategies: thermal storage & networks, distributed energy resources
- General provincial & federal policy direction, such as data centre development, EV adoption targets, space and water heating decarbonization
- Industrial mineral extraction sub-sector project development and electrification
- Electrification technology development & acceptance: buildings, vehicles, industry
- Climate change on weather-sensitive demand

Supply, Transmission and Resource Adequacy Outlook

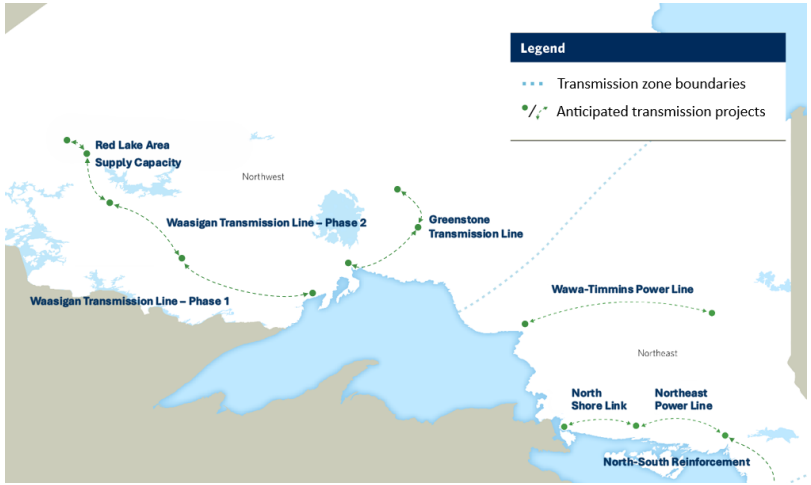
Supply Outlook

- A significant amount of existing capacity is expected to reach contract end in the mid-2030s; some of these resources may be available for reacquisition through subsequent medium-term procurements, participation in the capacity auction, or repowering through the second long-term procurement.



Transmission Outlook: Planned Projects

- Multiple planned transmission projects are expected to connect off-grid communities and supply mining growth in the North, and greenhouses, data centres and EV manufacturing in the South
- Studies are underway to assess additional transmission required to support growing demand and to connect new supply resources, including the Darlington SMR and Bruce C nuclear sites



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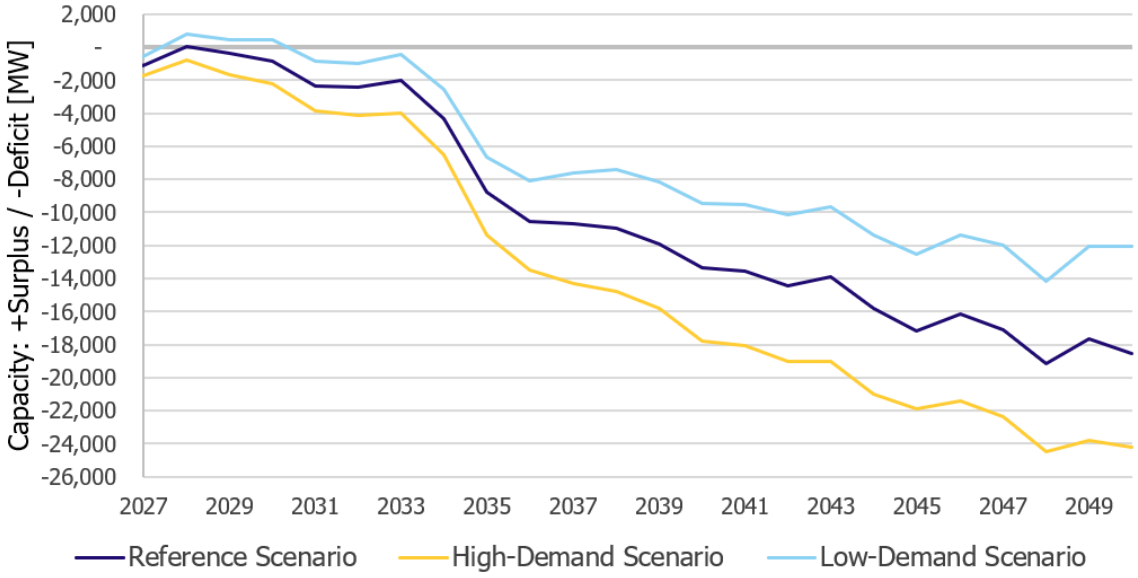
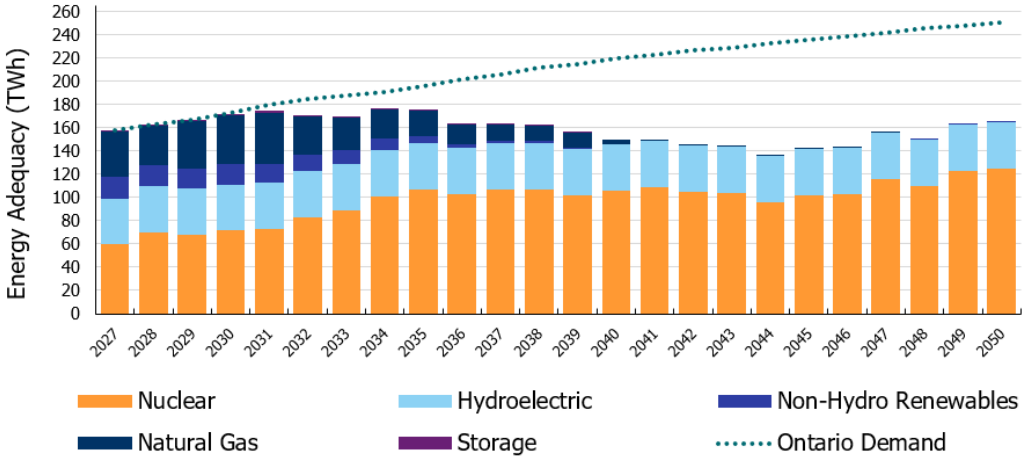
Capacity Adequacy Outlook (Summer)



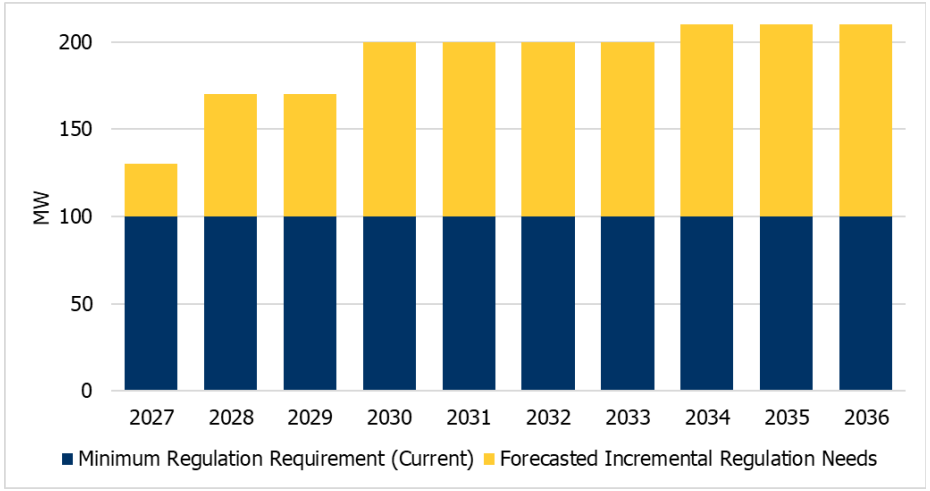
- Summer capacity needs are typically higher than winter capacity needs until the mid-2030s due to summer peak demands and resource performance
- Capacity deficits into the early-2030s are expected to be met through previous planned actions and in-flight actions; **no additional actions are needed to meet these needs**
- Significant capacity needs emerge in the mid-2030s when demand increases and existing resources reach contract end; **planned actions are identified in the APO to meet these needs**

Energy Adequacy Outlook (Reference Scenario)



- An energy adequacy gap emerges in 2032 and continues to grow due to increasing demand and existing resources reaching contract end; **planned actions are required to meet these needs**
- Ontario's refurbished nuclear fleet and new nuclear resources are expected to provide substantial energy throughout the outlook period, and hydroelectric production is expected to remain stable
- While energy production from the gas fleet was limited in the assessment to support a trajectory to a near-zero emission system by 2050, additional capability is available to meet energy needs if required

Operability Needs



*The need for 30 MW of incremental regulation service in 2026 was identified in the 2025 APO and the need continues into 2027.

- The APO included an updated regulation service assessment; **regulation service** helps to balance minute-to-minute fluctuations in supply and demand to restore frequency immediately after a system event
  - Incremental regulation service of **~30 MW is required in 2027*** and grows to **110 MW by 2034**
- The APO included new assessments of operability needs, including primary frequency response, load following and operating reserve
  - Shortfalls in load following and operating reserve may arise in the mid-2030s as gas comes off contract
  - Committed storage resources can help meet needs, but more operational experience is required

Operability Opportunity: Voltage Control

- The refurbishment of Pickering B (starting in September 2026) will remove over 1,000 MVAr of robust voltage control capability near the GTA
- The IESO has planned the system to ensure sufficient facilities will be available to control voltages within safe and reliable ranges; however, this loss of capability is expected to increase transmission losses, shift power flows and increase the need for voltage regulation, particularly during shoulder seasons and critical outages, making voltage control more complex and costly
- As early as 2027, additional voltage support in the GTA – beyond standard range obligations – is required to support a more cost-effective voltage control
- The IESO has identified strategically-positioned energy resources in the GTA and initiated discussions with the market participants to support enhanced reactive support and voltage control services beyond their standard range obligations
- The IESO is currently working with participants towards clarifying eligible costs and appropriate compensation structure

Integrated Needs: Supply Risks and Uncertainties

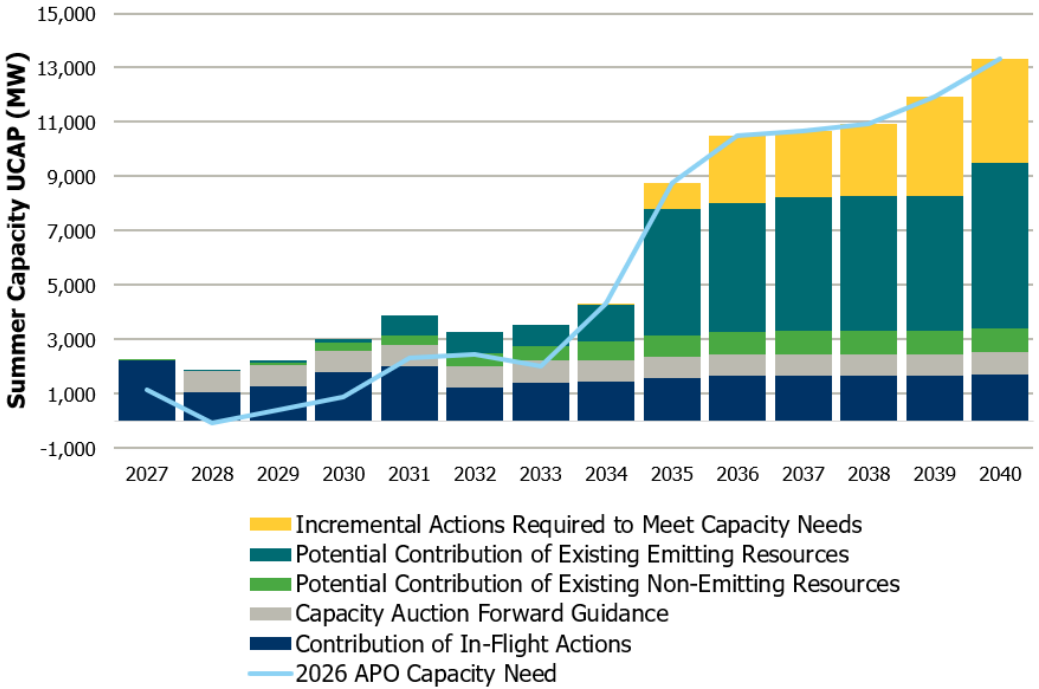
Risks and Uncertainties

- New resources facing in-service delays (e.g., supply chain challenges, permitting) or not reaching commercial operation
- Unreliable operation of new resources during first years of operation
- Market exit of existing resources after contract expiry, or capacity taken offline for repowering
- Delays to nuclear refurbishments and new large-scale nuclear projects

In-Flight Actions

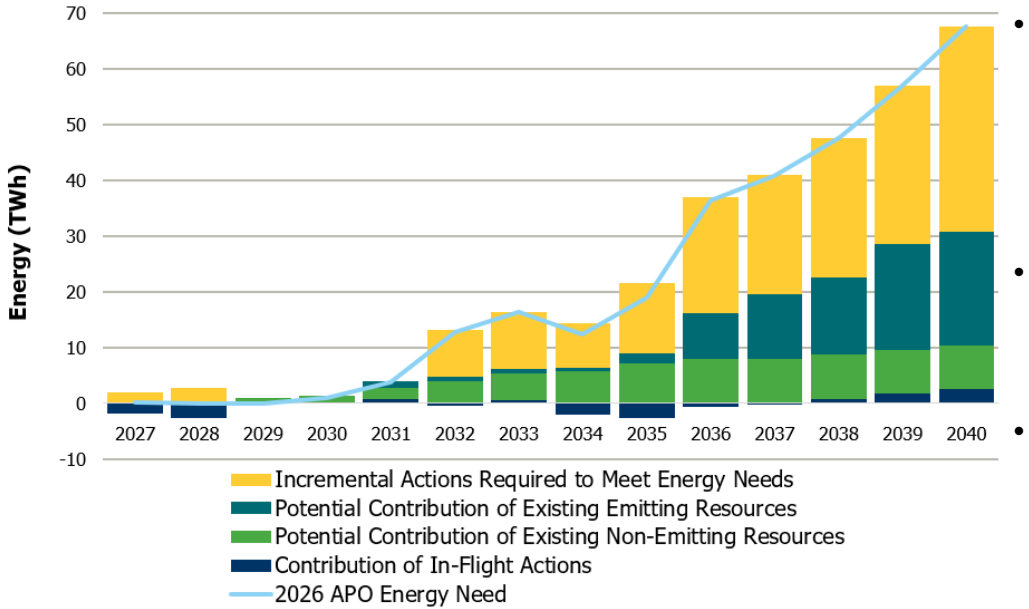
- Anticipated contribution from resources secured through the first window of the second long-term procurement
- Resources secured through the Capacity Auction
- Firm imports through Capacity Sharing Agreements with Hydro-Quebec
- Uprates to Bruce nuclear units and OPG hydroelectric units, following refurbishments
- Potential new hydroelectric stations in northern Ontario (Nine Mile and Grand Rapids)

Integrated Needs: Summer Capacity Needs



- **2027-2033:** Summer capacity needs are met with the contribution of in-flight actions, capacity auction forward guidance, and potential contribution of existing resources after contract end
- **2034-2035:** Incremental needs (yellow bars) of under 100 MW emerge in 2034, growing to 950 MW in 2035
- **2036+:** Incremental need increases to ~2,500 MW and continues to rise through the decade; additional actions likely required to meet the entire need

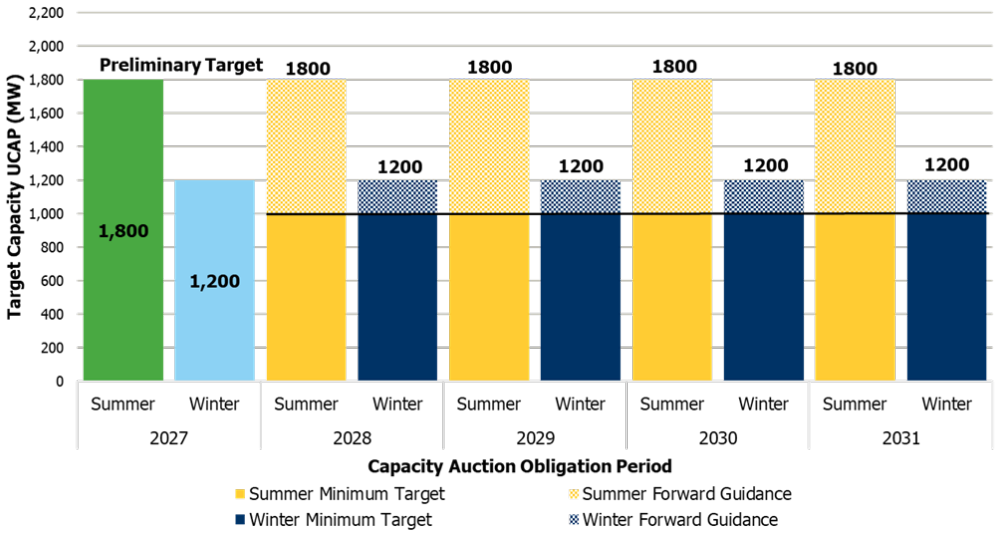
Integrated Needs: Annual Energy Needs



- **2027-2028:** Energy needs (up to 2.5 TWh) driven by risk of delays to nuclear refurbishments; increased dispatch of existing resources is sufficient to mitigate this risk
- **2032-2035:** Incremental need (yellow bars) of 8.5 TWh emerges in 2032 and grows to over 12 TWh in 2035
- **2036+:** Incremental need rises to over 20 TWh and continues to rise through the decade; additional actions likely required to meet the entire need

Actions to Meet Needs

Capacity Auction



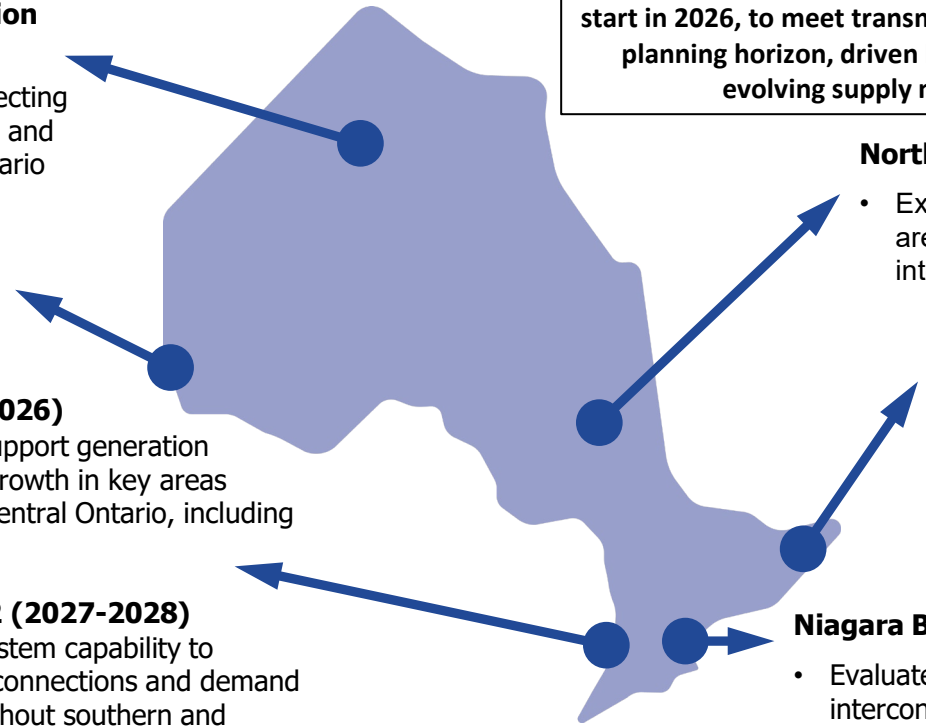
- **Preliminary targets** for the 2026 auction published in the 2026 APO; 1,800 MW for the summer 2027 obligation period and 1,200 MW for the winter 2027 obligation period.
- **Firm targets** for the 2026 auction will be published in the pre-auction report and may incrementally increase or decrease relative to the preliminary targets in the APO.
- **Minimum targets** and **forward guidance** are published for the next four auctions. Each year, the IESO reassesses forward guidance for future auctions and, if required, adjusts to help meet system needs.

Planned Actions

- Meeting incremental needs in the early to mid-2030s requires a combination of planned actions, including:
  - Acquiring new resources through subsequent windows of the second long-term and long-lead time procurements;
  - Reacquiring existing resources through medium-term RFPs;
  - Potential growth of annual Capacity Auction targets;
  - Resources committed through the Local Generation Program;
  - Additional demand-side management programming beyond the targets forecasted under the new framework.
- Needs may be reduced by:
  - On-time delivery of new and refurbished nuclear resources
  - Increased dispatched of the gas fleet as necessary (depending on future policy)
  - Outcomes of the first window of LT2 RFP
- Additional measures beyond 2026 APO planned actions will likely be required to meet needs in 2035 and beyond
- Needs will be re-evaluated through the iterative planning process and planned actions specified in future APOs to meet needs

Transmission Planning Activities

Multiple transmission studies and plans are in-flight or scheduled to start in 2026, to meet transmission system needs anticipated over the planning horizon, driven by forecasted demand growth and the evolving supply mix needed to support growth



Northern Ontario Connection Study (2024-2026)

- Considers options for connecting First Nations, mining loads, and generation in Northern Ontario

Ontario-Manitoba Intertie Joint Study (Ongoing)

- Plans for aging intertie equipment with Manitoba

South and Central Ontario Bulk Plan (2024-2026)

- Plans the bulk system to support generation connections and demand growth in key areas throughout southern and central Ontario, including the Greater Toronto Area

South and Central Ontario Bulk Plan, Phase 2 (2027-2028)

- Proposed to review bulk system capability to support future generation connections and demand growth in key areas throughout southern and central Ontario in the 2050s

North of Sudbury Bulk Plan (2025-2026)

- Examines supply to the north of Sudbury area, non-emitting resources, and interconnection with Hydro-Québec

Eastern Ontario Bulk Plan (2024-2026)

- Assesses bulk transmission system adequacy to supply eastern Ontario demand, support interconnections with Québec and New York, and new resources

Niagara Bulk Plan (2026-2027)

- Evaluates supply to the Niagara region and interconnection with New York

Thank You

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