

MARCH 22, 2021

Discussion of Forecasting Uncertainties

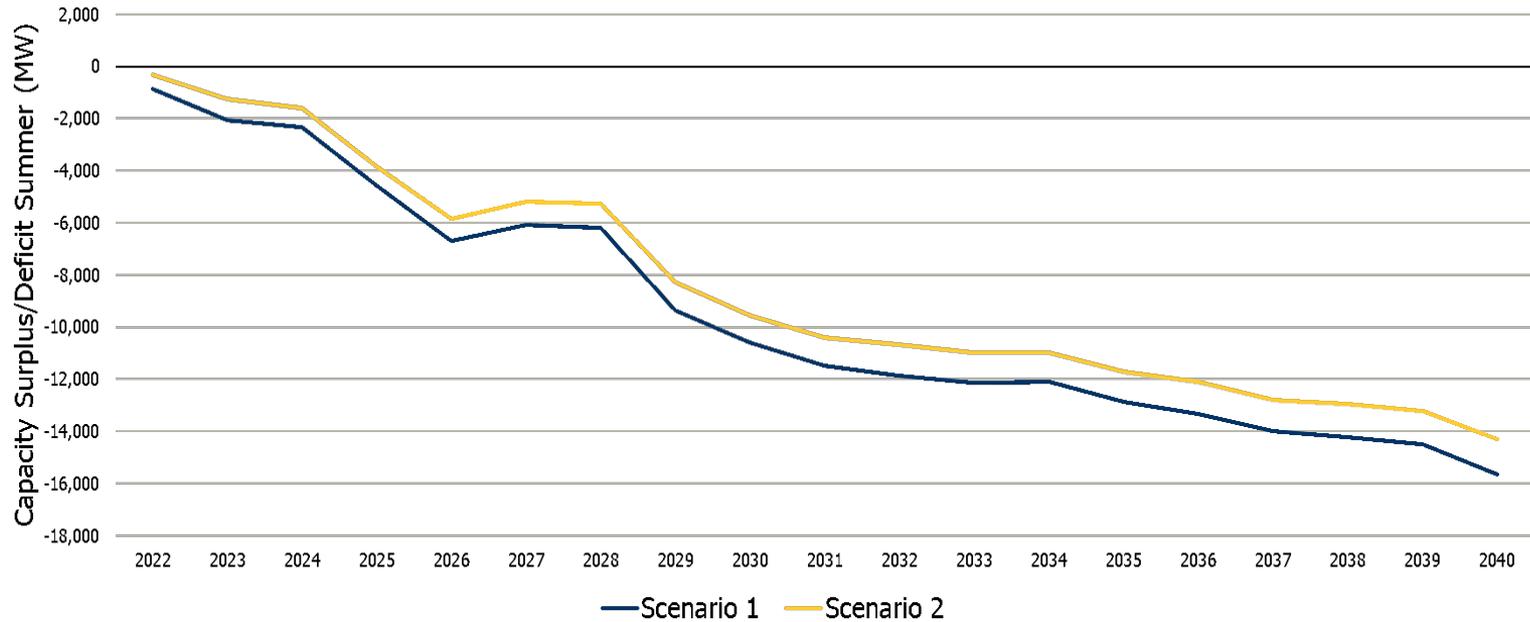
Background

- The 2020 Annual Planning Outlook identified capacity/energy needs through 2040:
 - Needs through 2025 are primarily capacity and will be met by the capacity auction
 - Needs in 2026 and beyond grow significantly as Pickering retires, demand grows and resources continue to come to the end of their contract. Needs starting in 2026 are for capacity and increasing amounts of energy

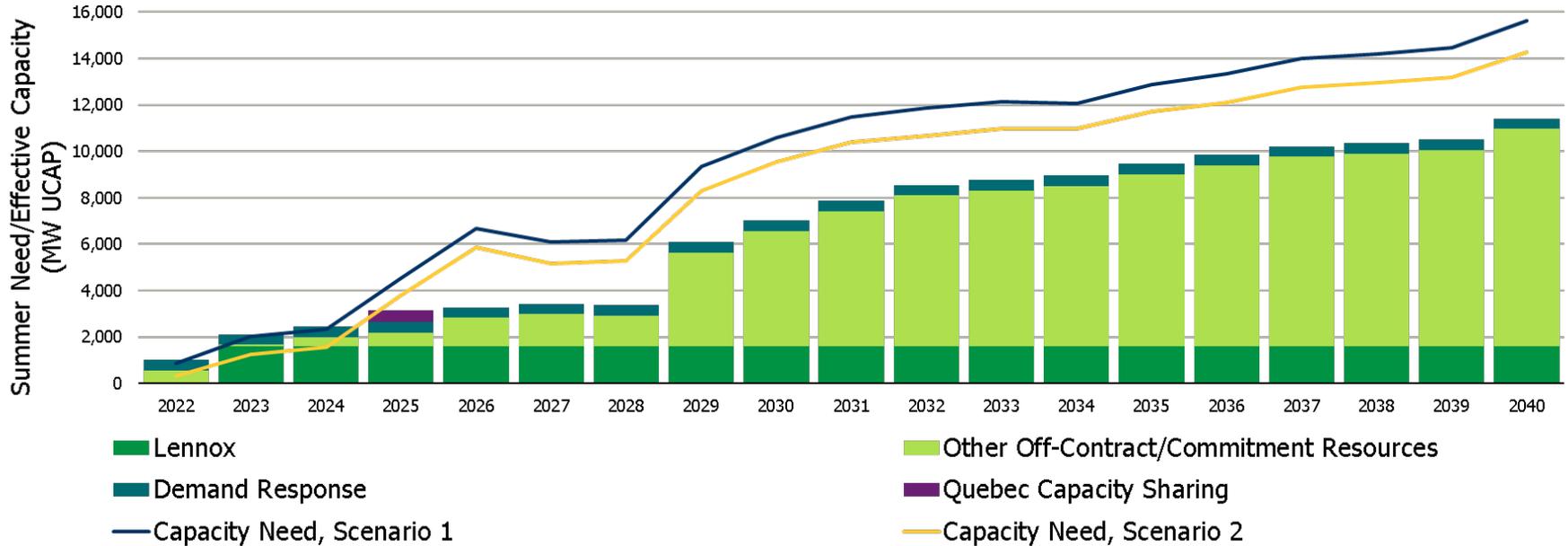
Background (continued)

- Since the release of the APO, the needs have been adjusted to account for expected changes in planning assumptions and for the expected use of the Hydro Quebec capacity arrangement
- There are several uncertainties that must be considered in developing acquisition plans

2020 APO - Summer Capacity Surplus/Deficit, without Continued Availability of Existing Resources



2020 APO - Options Available to Meet Summer Needs



Updated Summary of Capacity Needs (Summer)

- The Annual Planning Outlook (APO) assessment is updated to assume Non-Firm Imports. For illustrative purposes, the Hydro Quebec capacity arrangement is shown for 2026.
 - The base need assumes no re-acquisition.
- Energy needs are low in the initial years, confirming the near-term need as a capacity-only requirement. Towards the end of the decade energy needs grow significantly.

Adjusted Summer Capacity Needs - Before Uncertainties

- Preliminary assessments are driven by Summer Capacity needs. Winter Capacity and Energy will be key inputs into the acquisition decisions to be made in the Annual Acquisition Report
- The extended commitment for Lennox GS reduces the overall capacity need

Uncertainties - Summary

- A number of uncertainties exist that will impact the resource requirement in 2026 and beyond
- Most of the uncertainties, should they be realized, would decrease the resource requirement starting in 2026
 - Demand side: Recovery of economy/demand, Industrial Conservation Initiative, Energy Efficiency Policies, load growth (e.g. agricultural)
 - Supply side: government directives, uprates, outage management
- A number of uncertainties will become more clear in the next 6-9 months.

Uncertainties: Demand

Variable	Details
Recovery of Electricity Demand post-pandemic	<ul style="list-style-type: none">• Needs are based on Scenario 1 from APO (i.e. faster recovery).• If pandemic recovery follows Scenario 2, needs will be smaller and emerge later.• There will be enduring increases in residential loads.• The commercial sector has experienced the greatest loss; timing of recovery less certain.• Industrial sector already showing signs of rebound and will likely experience steady growth.
Industrial Conservation Initiative (ICI)	<ul style="list-style-type: none">• The 2020 APO assumed 1000 MW (700 MW effective) of response based on more recent performance.• In 2019, pre-pandemic, ICI response provided up to 1600 MW (about 1120 MW effective) peak demand reduction.• A full return to pre-pandemic response might reduce capacity requirements by up to 450 MW.

Uncertainties: Demand (2)

Variable

Details

Increased Customer Demand

- Customer demand could increase as a result of policy decisions, environmental concerns or faster economic growth.
- Examples:
- Higher than forecast greenhouse growth in SW Ontario
- Rapid electrification of transit (buses), Customer electrification trends in response to carbon policy or other gov't programs

Uncertainties: Supply

Variable

Details

Aging Assets

- Although Planning Outlooks generally include existing resources in assessments, some resources may not be able to cost-effectively continue in market due to age and condition
- Evolving federal carbon policy may change economics of some existing resources
- Some aging stations are located at strategic points on the transmission system (e.g. Lennox). It is highly unlikely that these resources would exit the market in an unexpected or unscheduled manner.

Outage Management

- Active management of nuclear refurbishment outages may provide an opportunity to reduce summer 2026 need. This information would be available 18 months before the commitment period.

Uncertainties: Supply (2)

Variable	Details
Potential Government Directives	<ul style="list-style-type: none">• Government directives received by IESO would reduce requirements
Uprates to Certain Contracted Resources	<ul style="list-style-type: none">• Certain contracts include provisions for supplier-driven uprates. If initiated by the supplier, volumes and prices would be negotiated with the IESO.