

**Stakeholder Advisory Committee – Challenge Statement
Resource Adequacy (and how it evolves with net-zero goals)**

Challenge Statement:

Resource Adequacy: Reliability, Affordability and Sustainability

- *How to build a pathway to a net zero electricity grid in Ontario that guarantees sufficient supply at affordable rates to people and businesses every step of the way.*

Supportive Facts and Rationale:

- Ontario will soon be faced with significant reliability challenges. There is much to do in short order to maintain adequate supply over the next decade.
 - Pickering retirement and customer demand growth is driving the near-term needs.
 - Significant MWs of contracted resources are nearing the end of their contract terms toward the end of this decade.
 - Population growth and increasing electrification of the economy is driving significant demand growth over the next two decades
 - A robust electricity system requires ongoing investment, both to maintain existing assets, and to build new assets, as they are required. This is not a given, since developers face global opportunities for their time, capital and expertise
- Over the longer-term, there is increasing pressure to plan for emissions reductions
 - ESG requirements amongst investors, manufacturers and property owners are also putting pressure on the grid to achieve net zero and other sustainability outcomes
 - The IESO is currently undertaking the Pathways to Decarbonization study in response to the Minister of Energy's request;
 - The federal government is developing a Clean Electricity Standard and regulations to enable a net zero by 2035 pan-Canadian electricity grid
 - Considerable debate has been taking place at a municipal level about the future of electricity supply
 - The Ontario Government has not yet provided its policy directions and views
- Equally important:
 - Reliability and affordability¹ will remain key issues for government and ratepayers
 - There is a consensus that both wise use of existing assets and the need for a pathway for prudent and affordable longer term electricity investment are required.

¹ See, for example, RBC's recent paper: *The Price of Power: How to cut Canada's Net Zero electricity bill*
<https://thoughtleadership.rbc.com/the-price-of-power-how-to-cut-canadas-net-zero-electricity-bill/>

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- Innovations in energy storage, nuclear, and other supply areas are promising, but could be affected by supply chain challenges and long-lead times. Other potential no-emitting technologies (e.g. hydrogen, CCUS) are not readily available or commercially viable.
- There is strong support for “Made-in-Ontario” solutions among politicians and residents of the province.
- **Bottom Line:** Reliability, Affordability and Sustainability will underpin policy decisions that shape the electricity grid of tomorrow

IESO Role:

- The IESO’s role is to operate the electricity system with a primary objective of maintaining reliability.
 - Planning should drive key decision-making, particularly on needs assessments to support procurement pathways through the IESO or the OEB. Competitive procurements should be pursued where possible, but it is also understood that the OEB and regulatory oversight on a cost-of-service basis can serve as a useful surrogate to competitive tension (particularly on certain long lead and large-scale capital projects, e.g., nuclear power, very large hydro storage).
- The IESO must be transparent on how the electricity system will continue to support reliability. It should take into account detailed socio-economic analysis and input on demand growth, electrification and energy transition, informed by input from the Ministry of Economic Development, Job Creation and Growth, the Ministry of Northern Development, the Ministry of Natural Resources and Forestry, and the Ministry of Mines. This work should be included as part of the analysis forming the APO.
- The IESO should take a Conservation First approach, and work with LDCs as part of an updated 2021-2024 CDM Framework to optimize CDM programming and planning.
- The IESO should work aggressively to enable DERs and NWAs to participate in the IESO-Administered Market.
- The IESO should provide clear and plain language information to municipalities and Indigenous communities on electricity planning.

Role of Others:

- The IESO should work with the Ministry of Economic Development, Job Creation and Growth, the Ministry of Northern Development, the Ministry of Natural Resources and Forestry, and the Ministry of Mines, to help better understand:
 - The drivers of electricity demand tomorrow and in the years ahead, and
 - The sustainability or emissions profile of that electricity supply needed to support economic development imperatives in key sectors and amongst the general population.

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- Municipalities, Indigenous communities, business groups and other stakeholders should be consulted to help inform decision-making.

Strategic Considerations and Committee Advice:

- The APO and AAR should be collapsed into one annual update document.
- Following the release of the Pathways to Decarbonization, the IESO should work with the Ministry of Energy to transform the APO/AAR into an Integrated Resources Plan. This Plan will provide Ontario’s plan to meet its own and federal net zero by 2035 requirements.
- Decarbonizing Ontario’s economy requires an “all hands on deck” and “all resources” approach:
 - Take a “safe bets” approach: proven technologies + Ontario’s sustainable/reliable electric system + a reliable/resilient and affordable natural gas distribution infrastructure, provides a pathway to a reliable, sustainable and affordable 2030 outcome;
 - Transportation electrification can drive significant abatement with modest impact on incremental demand for electric energy (if done right);
 - Post 2030 decarbonization will call for a massive deployment of capital-intensive infrastructure – soon.