Introduction

NRStor appreciates the opportunity for feedback on Ontario's Integrated Energy Resource Plan consultation (ERO Number 019-9285).

NRStor has developed and built one of Canada's largest and most technologically diverse portfolios of energy storage assets, including the 250 MW/1000 MWh Oneida Energy Storage Project in partnership with Six Nations of the Grand River as well as thousands of home battery installations in Ontario and across Canada. As a leading for-profit-with-purpose energy storage developer, NRStor is invested in Ontario's energy system transformation to help meet today's objectives of affordability, customer centricity, decarbonization, resilience, and reliability.

NRStor submits this response to share our actionable recommendations for the Integrated Energy Resource Plan.

Main Takeaway

Ontario's trajectory for growth and the pressing need for more power calls for a smarter and more coordinated energy planning process.

NRStor proposes a three-pronged approach that is grounded in a whole-system efficiency principle:

A. multi-use of assets

B. co-location of capacity with load

C. customer and community participation in a more dynamic grid

A whole-system efficiency is essential in helping the government remain focused on keeping costs down for all Ontarians as we invest in our growth and shared prosperity.

A. Multi-Use of Assets

Certain areas in the province experience heightened transmission and/or distribution constraints. At the same time, the province needs more capacity at the bulk level per the forecasted significant increase in demand due to growth and the electrification trend.

Prioritizing deployment of multi-value assets and shared costs for grid investments through the province's Integrated Energy Resource Plan will enable more cost-effective, smarter use of our assets and infrastructure, freeing up more space for new supply to meet Ontario's growing needs.

Unlocking multi-uses from single assets will ensure affordable and reliable energy now and in the future for all Ontarians.

NRStor's Recommendations

1. Prioritize procurement of multi-use and shared assets, including the removal of contractual barriers that make exclusive use of assets that could otherwise support multiple grid functions at the bulk, transmission, and distribution levels.

2. Establish a commercial and contracting pathway for bulk and regional planning recommendations for non-wires projects that provide multi-grid services, including:
    a. Full compensation mechanisms for the stacked benefits from Front-of-the-Meter and/or Behind-the-Meter distributed energy resources and nodal aggregations, with minimum size threshold of 100 kW, for all sectors including residential, commercial and institutional, and industrial.

Alignment with energy policy vision – "Ontario's Affordable Energy Future: The Pressing Case for More Power"

- "Ontario must also plan for localized needs in certain communities and regions, changing the way power must flow across the province."

B. Co-location of capacity and generation with load

Unlocking Ontario's significant economic growth potential must ensure sufficient capacity to meet the needs of new loads and have the confidence of the customers that their needs will be met at that location with no bottlenecks in the transmission and distribution lines. Co-locating capacity and generation with load will support Ontario's economic and industrial growth.

NRStor's Recommendations

1. Assign higher procurement scoring for generation and capacity (as well as hybrids) projects that are sited within large load centres such as heavy industry or urban density areas.
2. Prioritize multi-project System- / or Connection- Impact Assessment approvals that seek a shared interconnection point, to save ratepayer funding. Projects that co-locate generation and/or capacity with load should be awarded first.
3. Ensure that storage assets can be treated as both generation and load, optimally operated depending on system needs.
4. To support on community decision-making on project selection for anticipated loads,
    a. Align energy bulk, regional, and distribution planning exercises and program offerings within broader utility and infrastructure planning and projects, starting at the municipal level (housing, transit, water treatment, etc.).
    b. Equip potential host communities and in particular First Nations with the resources (such as risk assessment tools and technical guidance) and dedicated funding to help them assess partners and projects in response to a forecasted load.
    c. Develop know-hows for communities with a focus on First Nation and underrepresented communities to be able to procure or (co-)develop their own local solutions co-sited with a load growth or constraint issue, including best practices for securing equity ownership in projects.
    d. Expand the official regional planning working group to include community representatives and developers to help ensure sufficient lead time for market exploration of DERs and non-wires solutions in response to the load and/or supply constraints of that region.

Alignment with energy policy vision – "Ontario's Affordable Energy Future: The Pressing Case for More Power"

- "Ontario must look for opportunities to enhance information sharing and communication between developers, utilities, municipalities, and local Indigenous communities to help address connection timeline challenges."

C. Customer and community participation in a more dynamic grid

Customers want to have an active participation role in shaping Ontario's energy future. However, the potential for customer participation remains largely untapped because of lack of regulatory certainty on fair compensation mechanisms for flexibility and stacked services, particularly at the bulk level for the case of aggregated residential DERs.

Enabling active customer participation will unlock more dynamic use of the grid – and help customers feel empowered with choice.

NRStor's Recommendations

1. Conduct a thorough review of the Electricity Act and the Ontario Energy Board Act to ensure the objects and mandates of the program administrators like the Independent System Operator are expanded to include reduction in greenhouse gas emissions, supporting two-way power flows, and energy system wide efficiency.
2. Commission studies and provide regular updates on integrated demand side management to help evaluate the potential for beneficial electrification as well as load management/demand flexibility in addition to traditional measures.
3. For areas that anticipate high load growth and electrification,
    a. Explore and implement procurements, programs, and pricing schemes that help prioritize solutions that enable more dynamic use of the grid and which can serve as critical thermal and electrical reserves for the customers and the grid, such as such as thermal storage and distributed batteries.
    b. Allocate funding for deep energy retrofits that lower building loads and enhance resiliency (e.g., back-up power), particularly in areas that experience energy poverty.
4. To help ensure equitable access to energy services,
    a. Conduct an energy affordability baseline analysis and benchmarking data on issues such as energy burden and access to marginalized and vulnerable communities.
    b. Implement a "local champions" program whereby representatives of a community are trained to relay information about how costs and benefits associated with (proposed) energy policy and regulatory decisions are distributed across their communities, which can help guide support and programming tailored to diverse local needs.

Alignment with energy policy vision – "Ontario's Affordable Energy Future: The Pressing Case for More Power"

- "Any efforts to enhance grid resiliency must be done in an economically efficient manner that prioritizes value for customers."