

()TCEnergy

# **Powering Ontario Forward**

#### **Our Mission**

Together with Saugeen Ojibway Nation, develop, finance, construct, own and operate the Ontario Pumped Storage Project in order to address the future electricity needs of the province, while supporting made-in-Ontario economic growth and assisting with the transition to emission-free generation.

Council for Clean & Reliable Energy October 17, 2024



### What is the Ontario Pumped Storage Project?

- The Ontario Pumped Storage Project is a 1,000-megawatt, 12,000-megawatt-hour clean energy storage facility, proposed for construction in Meaford on Department of National Defence lands.
- The Project will provide reliable and flexible energy to Ontario's electricity system by pumping water from Georgian Bay to an upper reservoir, during periods of low power demand. The water stored in the upper reservoir is like a battery, ready to create energy when it is released back to Georgian Bay, flowing underground through turbines, delivering electricity back to Ontario's power grid when it is needed most.



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## A Made-in-Ontario solution

In April 2024, the Canadian Centre for Economic Analysis (CANCEA) released a report which assessed the economic and social benefits of the Project. The key findings below demonstrate, in present value terms, the contribution of the Ontario Pumped Storage Project over the next 50 years.



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CANCEA

### Made-in-Ontario **Pumped Hydro Storage**

**Economic and Social Value Benefits** 

Persearch Penort | April 2024



www.cancea.ca

Rural Households Benefited

benefited, 20,700 (56%) are in rural regions. The majority of benefited households are couples with children.

61% of the total employment benefits and 65% of the total GDP benefits will occur in rural parts of the province.

## The Need for Long Duration Storage:

Resource Adequacy Risks Periods have varying lengths



Source: Independent Electricity System Operator, Annual Planning Outlook, Data Tables, December 2022

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Source: The Brattle Group, NERSC Phase 2 Modelling Ontario's Future Electricity Markets, December 2018 (commissioned and posted by IESO)

# A partnership opportunity with Saugeen Ojibway Nation

The Project represents an important and meaningful step in our journey toward Indigenous reconciliation.

- TC Energy and Saugeen Ojibway Nation (SON) are committed to a joint development and ownership structure that will have material and long-term benefits for SON, this includes significant equity ownership, commitments to employment, economic opportunities and environmental stewardship.
- SON is conducting their own independent aquatics studies to ensure Indigenous knowledge and priorities are incorporated into design. Included in this is detailed mapping of fish habitat and movements across the entire portion of southern Georgian Bay.



### Preferred commercial pathway: Rate Regulation

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We believe that rate regulation through the Ontario Energy Board is the most appropriate commercial vehicle for capital intensive, long-life assets like pumped hydro storage. Further, it will produce the best cost outcomes for electricity consumers as the asset will be built on a cost-of-service basis at a regulated rate of return. Here's why:

- Large Scale Pumped Hydro Storage in Ontario is in the nature of a **natural monopoly** and rate regulation is designed as a proxy to fulfill the function of competition
- The Ontario Energy Board provides a **transparent public adjudicative process** and ensures costs are incurred prudently in the best interest of consumers
- Provides for the lowest cost of capital these savings are passed on to ratepayers, while the stability of the regulated structure enables private sector funds to invest in Ontario's grid
- Rate regulation provides **flexibility** to the Regulator in that payments can be adjusted to reflect prevailing conditions and focus the asset on best providing for the evolving needs of Ontario's grid. Large hydro is a 100-year asset and "each generation of regulators is like a refreshed contract" to ensure regulated assets, and their managers are working hard to serve Ontario's electricity consumers (many of whom haven't been born yet).

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### Trendlines: Bolder, Faster Action

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- IESO's 2024 Annual Planning Outlook continues to demonstrate a growing resource adequacy need in Ontario as demand grows and resources reach the end of their commitment period.
- Even with the continued operation of existing resources to the end of their operating life and build out of all nuclear proposals, Ontario's need for new energy is fast approaching and growing rapidly.
- IESO has announced that a new Demand Forecast will be released soon, incorporating material increases to the previous forecast including new industrial loads, data centres and other demand factors.
- Tax incentives play a major role in incentivizing long duration storage, but time is of the essence.
- Regardless of the path of specific domestic regulations, the direction of travel is clear –
  Ontario's trade-linked economy requires us to maintain and improve our clean energy advantage.