A clean, quiet, renewable opportunity.

Pumped storage is a proven technology that has been utilized for over a century. Over 127,000 megawatts (MW) of pumped storage capacity exists worldwide today, including 165 MW right here in Ontario. There is a need for additional new capacity to meet Ontario’s future energy demand. This is particularly true following the anticipated closure of the Pickering Nuclear Station in 2024. The Ontario Independent Electricity System Operator (IESO) estimates between 2,000 and 3,000 MW of new supply will be required to meet Ontario’s future demand.

TC Energy is proposing to design, construct and operate a grid-scale energy storage facility for Ontario’s electricity system. The proposed project would:
- Provide needed capacity
- Reduce electricity costs and greenhouse gas emissions
- Drive local economic benefits and growth
- Provide storage for Ontario’s excess baseload generation

We will be scheduling open houses in the community and providing opportunities for community members to provide input into, and review the outcomes of, the various environmental and socio-economic studies and assessments that will be undertaken. We are committed to keeping you updated as the proposed project progresses.

How it works

The proposed project would provide 1,000 MW of flexible, clean energy to Ontario’s electricity system using a technology known as pumped storage. It would be designed to store excess baseload generation - energy that is typically exported at a loss or entirely wasted. That stored energy would then provide emission-free electricity back to Ontarians when they need it most.

Once operating, the proposed facility would withdraw water from Georgian Bay, temporarily store it in a newly constructed upper reservoir, and later return the water to Georgian Bay. During periods of low electricity demand, water would be pumped upslope from Georgian Bay through enclosed pipes to the upper reservoir. When demand for electricity is high, the water is released down through the same pipes to generate electricity for the grid. Pumped storage is a proven and safe technology, representing the largest-capacity form of grid energy storage available.

An illustrative diagram

Will the project impact fish, commercial or recreational water use?

We recognize that how we interact with the environment is of vital importance to you. It is to us as well. That’s why our environmental principles of stewardship, protection and performance reflect our culture and guide our decisions every day when project planning.

In order to ensure the protection and integrity of Georgian Bay, TC Energy will be conducting multiple environmental studies to understand the potential impacts on important environmental values such as fish and fish habitat, water resources, wildlife and other sensitive resources.

The studies will inform the environmental and socio-economic assessment documents supporting an application under both the federal Impact Assessment Act and the provincial Environmental Assessment Act.

The preparation, submission and review of that application is anticipated to take approximately three years. Once a regulatory decision is reached, additional federal and provincial permits will be needed before construction of the project can begin.

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