



## **Ontario Pumped Storage Project**

### Initial Project Description – Plain Language Summary

February 24, 2026

Prepared for:  
TransCanada Energy Ltd.

Prepared by:  
Stantec Consulting Ltd.

Project Number:  
123515349

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## Acronyms/Abbreviations

4 CDTC	4th Canadian Division Training Centre
Class EA	Class Environmental Assessment
CO <sub>2</sub> e	carbon dioxide equivalent
DND	Department of National Defence
GHG	greenhouse gas
ha	hectare
Hydro One	Hydro One Networks Inc.
IA	Impact Assessment
IAA	<i>Impact Assessment Act</i>
IAAC	Impact Assessment Agency of Canada
IESO	Independent Electricity System Operator
IPD	Initial Project Description
km	kilometre
kV	kilovolt
m	metre
m <sup>3</sup>	cubic metre
MW	megawatt
MWh	megawatt-hour
PTG	pump turbine generator
SAR	Species at Risk
TC Energy	TransCanada Energy Ltd.
UXO	unexploded ordnance

# Ontario Pumped Storage Project

## 1 Introduction

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# 1 Introduction

TransCanada Energy Ltd. (TC Energy) plans to build and operate a pumped hydroelectric storage facility (the Project) on the 4th Canadian Division Training Centre (4 CDTC), near Meaford Ontario. The proposed Project, called the Ontario Pumped Storage Project, will act as a very large naturally powered battery, capable of storing up to 10,600 megawatt hours (MWh) of electricity. The Project will operate by pumping water from Georgian Bay to a Reservoir located approximately 174 metres (m) above the water surface, storing the water as potential energy. When needed, water in the Reservoir will then be released back down to Georgian Bay, passing through pump turbine generators (PTG) units, to generate electricity.

This document is the plain-language summary of the Ontario Pumped Storage Project Initial Project Description (IPD) and has been prepared based on the *Physical Activities Regulations* and the information requirements outlined in the *Information and Management of Time Limits Regulation*.

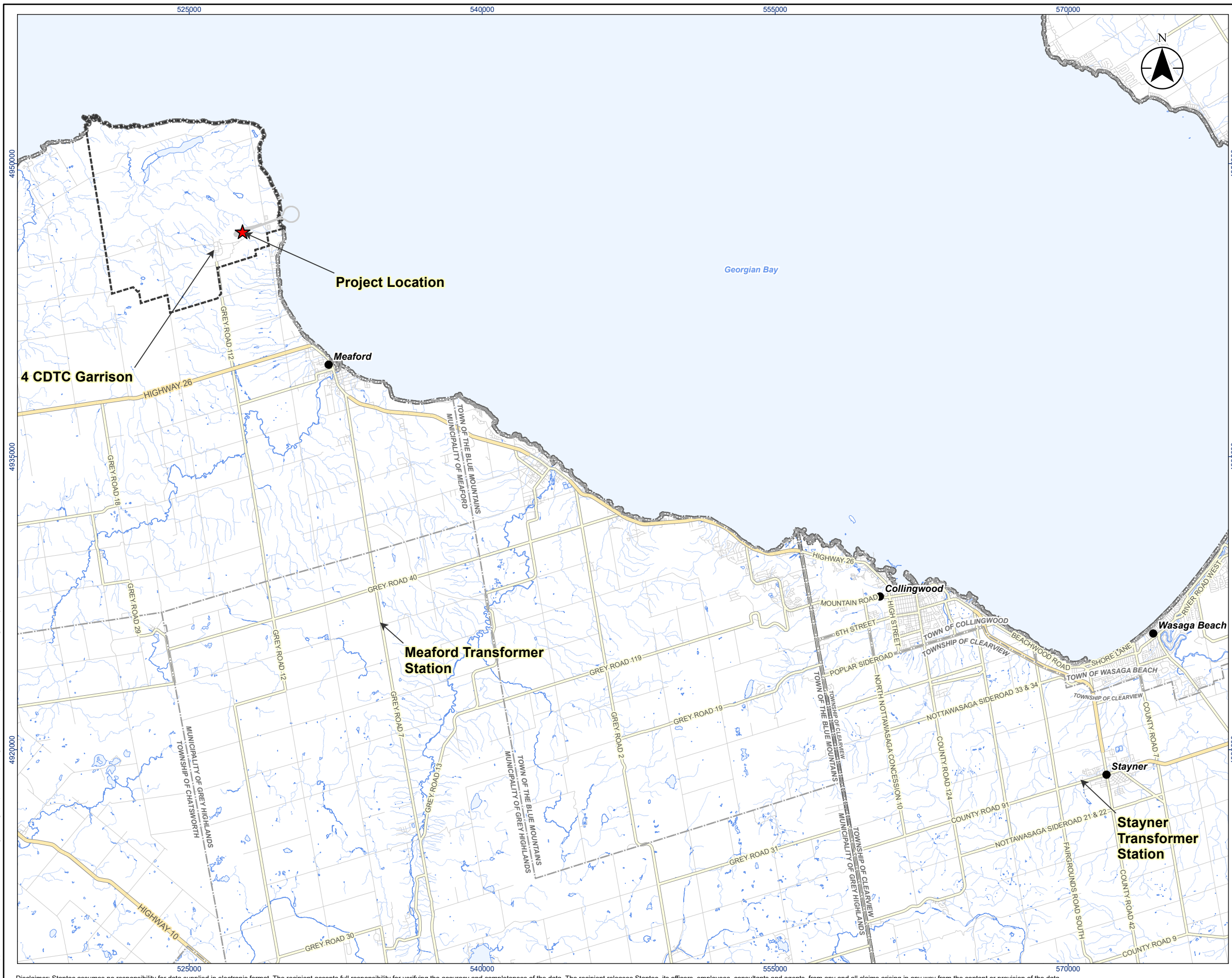
## 1.1 Proponent Information

TC Energy, a part of TC Energy Corporation, is a Canadian energy company based out of Calgary, Alberta. TC Energy has been operating for over 70 years and has a large network of power generation and natural gas pipelines across North America. It is envisioned, subject to a future agreement, that TC Energy will enter a commercial partnership with Saugeen Ojibway Nation. While a partnership has not been reached at the time of the preparation of this document, TC Energy has consistently collaborated with Saugeen Ojibway Nation in the planning of the Project and has committed to not construct the Project without Saugeen Ojibway Nation's support.

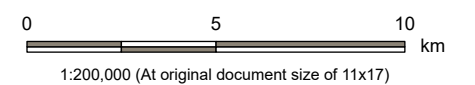
## 1.2 Project Location

The proposed Project location is within the traditional territory of Saugeen Ojibway Nation (Saugeen First Nation and the Chippewas of Nawash Unceded First Nation) and is in Grey County, Ontario. The Project is expected to be predominately located on federally owned lands managed by Department of National Defence (DND) and occupied by 4 CDTC, which is found along the southern shores of Georgian Bay, east of Owen Sound and north of Meaford's downtown (Figure 1-1). Access to portions of 4 CDTC is restricted, and the surrounding waters are located within a Military Practice Area.

At 4 CDTC, the proposed Project is expected to be situated adjacent to the 4 CDTC Garrison, which includes administrative and maintenance buildings, classrooms, support services (including a daycare), and temporary and permanent accommodation facilities. There are also residential properties adjacent to 4 CDTC, some of which would be located less than 500 m from Project components.

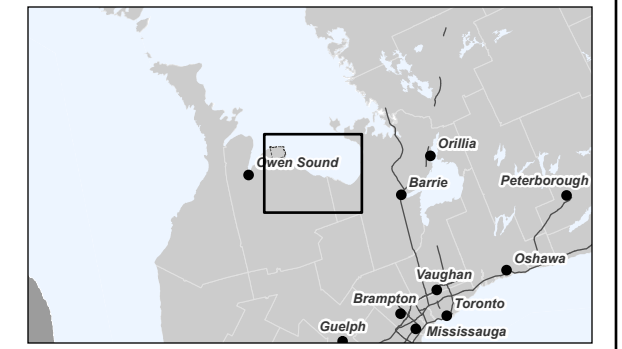


- Legend**
- ★ Project Location
  - Project Components
- Base Features**
- Expressway / Highway
  - Major Road
  - Minor Road
  - Watercourse
  - 4 CDTC
  - Municipal Boundary, Upper
  - Municipal Boundary, Lower
  - Waterbody



1:200,000 (At original document size of 11x17)

- Notes**
1. Coordinate System: NAD 1983 UTM Zone 17N
  2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © King's Printer for Ontario, 2023.



Project Location: Meaford, ON  
 Prepared by ataril on 2025-12-17  
 Technical Review by AW on 2025-07-30

Client/Project: TC ENERGY ONTARIO  
 ONTARIO PUMPED STORAGE PROJECT

Figure No.: **1-1**  
 Title: **Project Location**

## **2 Project Purpose, Need, and Benefits**

### **2.1 Project Purpose and Rationale**

The Independent Electricity System Operator (IESO) has forecasted that by 2050 the overall demand for electricity will expand by 65% relative to 2026 demand (IESO 2025). To address the growing demand, the IESO anticipates that by 2035, additional generation and peaking capacity will be needed from a mix of supply sources (IESO 2022a), along with increased energy storage capacity (IESO 2022b). Without this storage capacity, electricity would be exported to adjacent markets (typically at an economic loss) or generation would be curtailed and, therefore, wasted. To address the supply shortfall, the then Minister of Energy (now Minister of Energy and Mines) directed the IESO to undertake a variety of procurement programs to seek both new generation and storage capacity over the short, medium, and long terms (Executive Council of Ontario 2022).

TC Energy has identified an opportunity to participate in the development of incremental storage with the Minister of Energy and Mines and is seeking to advance a grid-scale energy storage solution (i.e., the Project) to help meet the future needs of the Ontario electrical system. The Project presents a unique and sustainable energy storage solution to address this existing and growing issue regarding the imbalances in the production and use of electricity in Ontario. Specifically, there are times when Ontario’s electrical system produces more power than it can consume, resulting in wasted electricity and economic loss. This surplus electricity is predominantly from non-emitting intermittent renewable energy sources and nuclear energy generated at times of low demand (e.g., nights and weekends). Without system capability to store this surplus generation, electricity is either exported to adjacent markets (typically at an economic loss) or generation is curtailed and therefore wasted. The Project seeks to address the electricity load demand in southern Ontario, specifically southwestern Ontario (areas west of Lake Simcoe) and close to the Greater Toronto Area where demand for electricity in Ontario is the greatest.

The Project intends to fulfill a portion of demand during Ontario’s peak energy periods, which typically last longer than 4 hours and usually occur in the evening hours (IESO 2023). This makes a longer duration storage solution more appropriate. The need for long duration energy storage is also anticipated to increase over time as the percentage of electricity in Ontario increasingly comes from nuclear and non-emitting energy generation sources as there are inherent fluctuations in output associated with these sources.

Given the storage needs identified by IESO (2022b), a larger capacity storage solution is desirable, but is also more challenging to locate, as it requires access to the appropriately sized electrical system infrastructure and appropriately sized site. As a long duration energy storage facility, the Project would also help address the supply shortfall identified by the Minister of Energy and Mines by providing power load management and frequency regulation, building

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### 2 Project Purpose, Need, and Benefits

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resilience and adaptability into the electrical system. The need for the Project is also supported by the Ontario Government, who announced in January 2025 an up to \$285 million investment to advance pre-development work.

## 2.2 Project Benefits

In addition to addressing the supply shortfall in generation and peaking capacity by providing a long duration energy storage facility (discussed in Section 2.1), the Project would build resilience and adaptability into the Ontario electrical system by providing flexible storage and supply. Traditional energy generation in Ontario comes from a mix of sources, including nuclear, hydroelectric, natural gas, and renewable (i.e., solar and wind) sources. However, many of these traditional energy generation facilities do not have the ability to efficiently regulate output. Renewable energy generation alternatives (i.e., solar and wind) provide intermittent capacity and are dependent on ambient conditions. The Project would build adaptability into the system by capturing and storing excess energy during low demand and times of excess generation, then dispatching it back to the Ontario electrical system during periods of demand.

The Project also builds resiliency into Ontario’s electrical system as a dependable resource that can be called upon to respond quickly to changing system conditions – generating power in the event of an unforeseen outage or absorbing excess electricity as a result of an unforeseen demand reduction, provided there is capacity). Start-up time for the Project is estimated to be under five minutes to reach full generation capacity. During a power interruption or black-out, the Project could be an important resource to assist in restoring the electrical system by providing power to the system almost instantaneously. What is more, in comparison to other grid-scale energy storage options, pumped storage has a lower environmental footprint over its lifecycle (Simon et al., 2023).

The Project would support the Government of Canada’s and Government of Ontario’s efforts to achieve sustainability goals/targets and combat climate change by providing an economically responsible and low emissions storage solution using proven technology to build resiliency and adaptability into Ontario’s existing and future electricity system. In 2021, the Government of Canada committed to achieving net-zero emissions by 2050 in the *Canadian Net-Zero Emissions Accountability Act*. This Act established Canada’s 2030 GHG emissions target at 40% to 45% below 2005 levels, with an interim objective of 20% below 2005 levels by 2026. Based on the most recent projections reported in the 2023 Progress Report, Canada is on track to exceed the previous 30% target below 2005 levels by 2030 and 20% emissions reductions below 2005 levels by 2026. In accordance with the *Canadian Net-Zero Emissions Accountability Act*, the Government of Canada is required to set progressively more ambitious GHG emissions targets for 2035, 2040 and 2045. To meet these targets, additional emissions reductions are needed (Environment and Climate Change Canada 2023).

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The Government of Ontario committed to an emissions reduction target of 30% below 2005 levels by 2030 (Government of Ontario 2023). In 2022, Ontario forecasted hitting its 2030 target by reducing emissions by an additional 12 million metric tonnes (to 143.7 million metric tonnes) from current projected levels (155.7 million metric tonnes) (Environment and Climate Change Canada 2023). It is estimated that the Project will reduce GHG emissions by an average of 490,000 tonnes per year based on current emissions levels, which is the equivalent to taking 150,000 cars<sup>1</sup> off Ontario's roads, thereby supporting the Government of Ontario's and the Government of Canada's net-zero targets (Navigant 2020).

With the support of Saugeen Ojibway Nation, the Project aims to establish a benchmark Indigenous partnership for pumped storage development in Canada. The partnership structure is intended to advance economic reconciliation and support Saugeen Ojibway Nation's self-determination, while also creating employment and economic opportunities for Saugeen Ojibway Nation members. Own-source revenue generated through the Project, including revenues, taxes, and associated funding flowing to Saugeen Ojibway Nation, will support the governments of both Saugeen First Nation and Chippewas of Nawash Unceded First Nation.

In April 2024, the Canadian Centre for Economic Analysis reported the economic and social benefits of the Project. Here are some highlights:

- The Project will generate roughly 41,000 jobs (direct and indirect), with 66% from full-time positions, and 1,700 construction jobs during the 4-year peak construction period.
- The Project will be built with Ontario supply chains. Of the total capital investment in the Project, 83% remains in Canada of which 92% stays in Ontario. More than 90% of the economic activity occurs in Ontario, with 30% of the total remaining in the local regions of Grey, Bruce, and Simcoe.
- The Project can help address affordability challenges with a third of the jobs created anticipated to be filled by those under 35. This demographic is the most likely to be facing housing affordability pressures. As most jobs created will be in skilled sectors with generally higher incomes, these jobs have the potential to improve the affordability of affected households. There is a projected \$450 million in social value contributions from the Project. This signifies a considerable improvement in regional well-being over the current levels experienced by Ontarians.

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<sup>1</sup> Assuming a standard 2016 model sedan in Ontario driven 15,000 km/year. Vehicle Emission Comparison Tool v. 1-1-5, Natural Resources Canada, July 2016, <https://www.nrcan.gc.ca/energy/vehicle-emission-comparison-tool/18907>.

### 3 Project Description

It is expected that the Project will be made up of a variety of major components. Figure 3-1 illustrates the various components of the Project, Preliminary Project Boundary, and Preliminary Construction Zone. Figure 3-2 is a conceptual rendering of the Project that illustrates some of the key Project components in relation to the surrounding environment. Table 3-1 identifies the key Project components and sub-components along with their location relative to 4 CDTC. The design and specification of the Project and its components are ongoing and approximate, as engineering and field studies are being undertaken to confirm constructability, refine design, and improve efficiency, while seeking to reduce potential environmental effects of the Project.

**Table 3-1: Key Project Components**

Key Project Component	Description	Located on Federal Lands
<ul style="list-style-type: none"> <li>• Reservoir                             <ul style="list-style-type: none"> <li>○ Ring Dam</li> <li>○ Upper Inlet/Outlet Structure</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• the Reservoir will be located close to Georgian Bay on top of the level plateau of the Niagara Escarpment and will hold approximately 26 million cubic metres (m<sup>3</sup>) of water</li> <li>• to create the Reservoir, a Ring Dam will be constructed that is approximately 4.5 kilometers (km) in length to encircle approximately 135 hectares (ha) of land</li> <li>• the slope and surfacing of the Ring Dam will be engineered for stability and to control surface water runoff related to the structure the Upper Inlet/Outlet Structure (refer to Figure 3-1) will be located within the Reservoir and will convey water into and out of the Reservoir</li> <li>• the Upper Inlet/Outlet structure will connect to two or more Headraces (i.e., tunnels or pipes that convey water between the Powerhouse and the Upper Inlet/Outlet structure) that will be outfitted with mechanisms to control the water being conveyed to and from the Powerhouse</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Powerhouse                             <ul style="list-style-type: none"> <li>○ PTG units</li> <li>○ Access Tunnel</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• consists of a series of structures that will house the equipment necessary to pump water from Georgian Bay into the Reservoir and produce electricity when water is released back into Georgian Bay</li> <li>• proposing the use of four approximately 250 megawatt (MW) reversible PTGs that will be located within the Powerhouse</li> <li>• proposed as an underground chamber(s) with an access tunnel (illustrated on Figure 3-1 and Figure 3-2)</li> </ul>	Yes

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Key Project Component	Description	Located on Federal Lands
<ul style="list-style-type: none"> <li>• Water Conveyance Structures               <ul style="list-style-type: none"> <li>○ Headraces</li> <li>○ Tailraces</li> <li>○ Spillway</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• consists of Headraces and Tailraces (i.e., tunnels or pipes that convey water between the Lower Inlet/Outlet structure in Georgian Bay and the Powerhouse)</li> <li>• consideration of a contingency spillway system to provide a conveyance route for water from the Reservoir to Georgian Bay in the unlikely scenario where water levels in the Reservoir exceed normal operating parameter</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Lower Inlet/Outlet Structure</li> </ul>	<ul style="list-style-type: none"> <li>• connects to the Tailraces and will allow for the withdrawal and release of water into Georgian Bay</li> <li>• located on or below the lakebed and currently envisioned as an underground ring-type structure that will have multiple inlet/outlet ports located above the lakebed where water will be withdrawn and released</li> <li>• Inlet/outlet ports will be outfitted with screens and are envisioned to incorporate flow dispersion measures</li> </ul>	Partially
<ul style="list-style-type: none"> <li>• Switchyard               <ul style="list-style-type: none"> <li>○ Electrical equipment</li> <li>○ Control room</li> <li>○ Offices</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• interface between the Project and Ontario’s electrical system that will house electrical switches and equipment to control power import and export operations, including a control room that will interface with the Powerhouse</li> <li>• support offices and ancillary infrastructure (i.e., septic) will be located within or adjacent to the Switchyard</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Access               <ul style="list-style-type: none"> <li>○ Access Roads</li> <li>○ Potential Marine Access</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• to facilitate construction and operational access to Project components, several roads and potential Marine Access may be required</li> <li>• a Marine Access, if needed, is an in-water structure to facilitate the movement of large components (e.g., PTG units) and bulk materials (e.g., engineered aggregates and excess soils)</li> </ul>	Partially
<ul style="list-style-type: none"> <li>• Temporary Construction Facility               <ul style="list-style-type: none"> <li>○ Staging/storage yards</li> <li>○ Potential accommodation facility</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• to support construction of the Project, warehouses, laydown and staging/storage areas, and parking areas may be required</li> </ul>	Partially

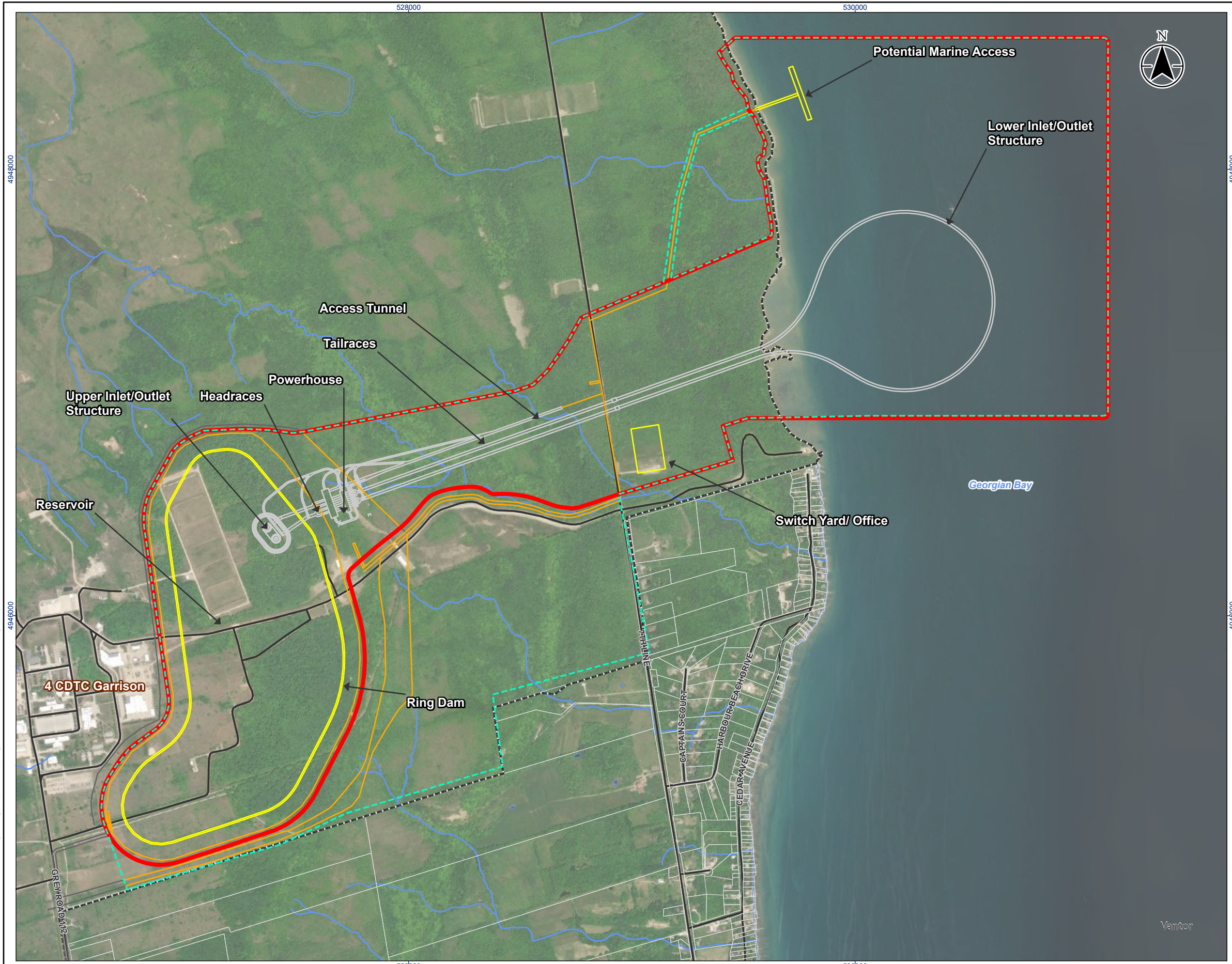
## Ontario Pumped Storage Project

### 3 Project Description

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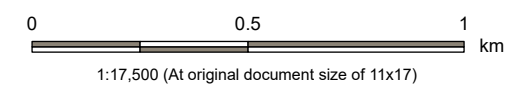
Key Project Component	Description	Located on Federal Lands
<ul style="list-style-type: none"><li>• Transmission Connection<sup>2</sup></li></ul>	<ul style="list-style-type: none"><li>• a high-voltage (i.e., 230 kilovolt [kV] or 500 kV) transmission connection to the Ontario electrical system will be required</li></ul>	Partially

<sup>2</sup> A preferred connection point or route has not been determined as input from IESO and Hydro One will be required. A coordinated connection process will be undertaken by IESO, under the purview of the Ontario Energy Board, with support provided by TC Energy, Hydro One, and other electricity transmission and distribution companies, as required at this time. TC Energy's role in the transmission connection has not yet been determined; ultimate ownership and responsibility for construction and operation of the transmission connection will be determined as part of the IESO process.

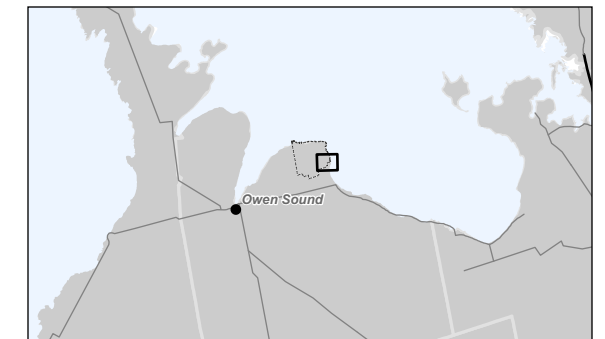


Legend

	Preliminary Project Boundary		<b>Base Features</b>
	Preliminary Construction Zone		Road
	Above Ground Project Component		Watercourse (Intermittent)
	Below Ground Project Component		Watercourse (Permanent)
	Other Road		4 CDTC
	Proposed Road (Preliminary Alignment)		Parcel Boundary
			Waterbody



- Notes**
1. Coordinate System: NAD 1983 UTM Zone 17N
  2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © King's Printer for Ontario, 2023.
  3. Orthoimagery © First Base Solutions, 2023.



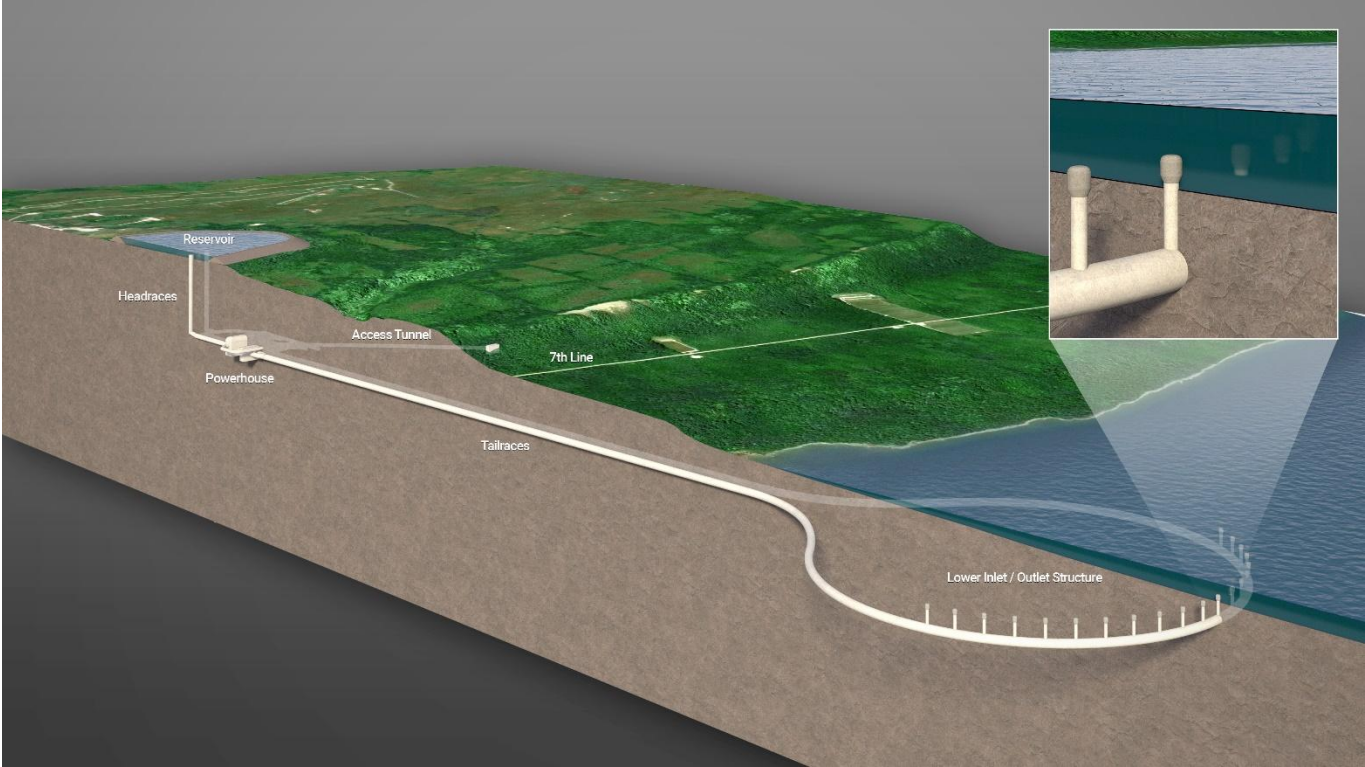
Project Location: Meaford, ON  
 Prepared by ataril on 2025-12-17  
 Technical Review by AW on 2025-07-30

Client/Project: TC ENERGY ONTARIO  
 ONTARIO PUMPED STORAGE PROJECT

Figure No.: **3-1**  
 Title: **Preliminary Project Components**

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**Figure 3-2: Conceptual Rendering of Key Project Components**



Note: This figure is not to scale.

## 4 Project Schedule

Table 4-1 provides a high-level overview of the anticipated Project phases and schedule.

**Table 4-1: Project Phases and Preliminary Schedule**

Project Phase / Activity	Date
Construction	2029 to 2035
Operations	2035 onwards

Once the Project is commissioned and ready to operate, it is envisioned that it could operate for the foreseeable future with proper maintenance and equipment upgrades.

If the Project ceases to operate, TC Energy, as the proponent, would be responsible for decommissioning and associated land reclamation. Decommissioning and land reclamation methods will be determined through engagement with applicable federal departments and provincial agencies, rightsholders, as well as DND as the end land user, and in accordance with applicable regulations as required at the time.

## 5 Project Activities

Table 5-1 describes the anticipated Project activities during each of the construction and operations phases. The sequencing of construction activities will continue to evolve as Project planning progresses; the order of activities listed below may be adjusted at the time of construction.

**Table 5-1: Anticipated Project Activities during the Construction and Operations Phases**

Phase	Project Activity
Construction	<ul style="list-style-type: none"> <li>• Unexploded ordnance (UXO) clearance</li> </ul>
	<ul style="list-style-type: none"> <li>• Decommissioning of DND infrastructure</li> </ul>
	<ul style="list-style-type: none"> <li>• Site preparation, including clearing vegetation, grubbing and earthworks</li> </ul>
	<ul style="list-style-type: none"> <li>• Stockpiling of topsoil suitable for reclamation activities for areas impacted during construction</li> </ul>
	<ul style="list-style-type: none"> <li>• Construction of Access Roads and the potential Marine Access</li> </ul>
	<ul style="list-style-type: none"> <li>• Excavation of vertical shafts, drilling, blasting, and/or tunneling for the Water Conveyance Structures and Powerhouse</li> </ul>
	<ul style="list-style-type: none"> <li>• Construction of the Lower Inlet/Outlet Structure through several potential construction methods, including but not limited to, tunnel boring, in-water construction, other forms of drilling, and prefabrication</li> </ul>
	<ul style="list-style-type: none"> <li>• Use of excavated materials for construction of the Ring Dam around the Reservoir</li> </ul>
	<ul style="list-style-type: none"> <li>• Appropriate disposal of excess materials that are not suitable for construction or on-site use at a suitable receiving facility</li> </ul>
	<ul style="list-style-type: none"> <li>• Installation of pumping and control equipment, including the PTG units, Headraces, Tailraces and the Upper Inlet Outlet Structure</li> </ul>
	<ul style="list-style-type: none"> <li>• Construction of the Switchyard and other site services</li> </ul>
	<ul style="list-style-type: none"> <li>• System commissioning</li> </ul>
	Operations
<ul style="list-style-type: none"> <li>• Construction of the transmission connection</li> </ul>	
<ul style="list-style-type: none"> <li>• Pumping, storing and releasing water within the Reservoir via a control room within the Switchyard</li> <li>• Routine inspections, monitoring and maintenance activities</li> </ul>	

## 6 Regulatory Framework

### 6.1 Project Assessment

The Project is subject to the federal Impact Assessment (IA) process under *the Impact Assessment Act* (IAA) as a designated project under the Physical Activities Regulation. Components of the Project may also be subject to several Provincial Class Environmental Assessments (Class EAs) under the *Environmental Assessment Act*, including:

- Class EA for MNRF Resource Stewardship and Facility Development Projects
- Class EA for Transmission Facilities

In addition to the IA and Class EA requirements, various federal, provincial, and municipal permits and approvals will be required for the Project. An authorization to allow for construction and operation of the Project on federal lands will be sought under the *Dominion Water Power Act* from Indigenous Services Canada.

### 6.2 Regional or Strategic Assessments

The federal *Strategic Assessment of Climate Change – Revised October 2020* is applicable to the Project. Since operation of the Project is anticipated to continue beyond 2050, this Project will be expected to achieve net-zero emissions.

## **7 Project Alternatives**

‘Alternatives to’ the Project are different technically and economically feasible ways to meet the need that the Project is expected to achieve (i.e., to address the increasing demand for storage capacity within Ontario’s electrical system— see Section 2.1). TC Energy has identified a business case to provide incremental energy storage to the Ontario electrical system and is proposing pumped storage as the preferred alternative (i.e., “alternative to”) at this location to achieve this goal.

“Alternative means” are the various technically and economically feasible ways that could allow a designated project and its physical activities to be carried out. TC Energy is currently considering alternative means of carrying out the following components of the Project:

- Project location
- Lower water source
- Spillway
- Reservoir design
- Location of Switchyard and Offices
- Project access road locations
- Potential Marine Access
- Transmission connections
- Other alternative means (e.g., construction methodologies, management of excavated materials and location of Temporary Construction Facilities)

## 8 Indigenous Engagement

As noted in Section 1.2, the proposed Project location is within the traditional territory of Saugeen Ojibway Nation. TC Energy recognizes the importance of early and meaningful engagement with Indigenous rights-holders and Indigenous groups that could be affected by the Project. TC Energy strives to establish and maintain mutually respectful relationships with Indigenous rights-holders and Indigenous groups by fostering productive dialogue and exchange of information.

### 8.1 Engagement with Indigenous Rights-holders and Indigenous Groups

TC Energy identified potentially affected Indigenous rights-holders and Indigenous groups based on the location of the Project within asserted traditional territories, established treaty areas and settlement areas, TC Energy’s own operating experience and established network of contacts, and based on the advice of the Government of Canada. TC Energy began engagement activities for the Project with Saugeen First Nation and Chippewas of Nawash Unceded First Nation, collectively known as Saugeen Ojibway Nation, in October 2018, and with other interested Indigenous rights-holders and Indigenous groups in September 2019. Table 8-1 lists the Indigenous rights-holders and Indigenous groups that expressed an interest in engaging with the Project among those who were contacted. Engagement was informed by Impact Assessment Agency of Canada (IAAC) guidance (September 25, 2023), which included their preliminary list of potentially impacted Indigenous groups, identified by an asterisk in Table 8-1.

**Table 8-1: Identified Indigenous Rights-holders and Indigenous Groups**

Indigenous Rights-holders and Indigenous Groups	Treaties/Agreements
<b>First Nations</b>	
Alderville First Nation*	Williams Treaties 2018 Williams Treaties Settlement Agreement
Beausoleil First Nation*	Treaty 18 Williams Treaties 2018 Williams Treaties Settlement Agreement
Chippewas of Georgina Island First Nation*	Treaty 18 Williams Treaties 2018 Williams Treaties Settlement Agreement
Chippewas of Nawash Unceded First Nation*	Treaty 45 ½ Treaty 72

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### 8 Indigenous Engagement

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<b>Indigenous Rights-holders and Indigenous Groups</b>	<b>Treaties/Agreements</b>
Chippewas of Rama First Nation*	Treaty 18 Williams Treaties 2018 Williams Treaties Settlement Agreement
Curve Lake First Nation*	Williams Treaties 2018 Williams Treaties Settlement Agreement
Hiawatha First Nation*	Williams Treaties 2018 Williams Treaties Settlement Agreement
Mississaugas of Scugog Island First Nation*	Williams Treaties 2018 Williams Treaties Settlement Agreement
Wendat Nation (Huron Wendat Nation)*	Huron-British Treaty of 1760 2023 Framework Agreement between Huron-Wendat Nation and Canada
Saugeen First Nation*	Treaty 45 ½ Treaty 72
Six Nations of the Grand River*	Nanfan Treaty 1701 (or Treaty of Albany 1701)
<b>First Nation Organizations</b>	
Chippewa Tri-Council	First Nation signatories to Treaty 18 and the Williams Treaty, including: <ul style="list-style-type: none"> <li>• Beausoleil First Nation</li> <li>• Chippewas of Georgina Island First Nation</li> <li>• Chippewas of Mnjikaning (Rama) First Nation</li> </ul>
Saugeen Ojibway Nation	First Nation signatories to Treaty 45 ½ and Treaty 72, including: <ul style="list-style-type: none"> <li>• Saugeen First Nation</li> <li>• Chippewas of Nawash Unceded First Nation</li> </ul>
<b>Métis Organizations and Potentially Affected Métis Groups</b>	
Historic Saugeen Métis*	TC Energy is not aware of any treaty or agreement between the Crown and the Historic Saugeen Métis
Métis Nation of Ontario (Region 7)*	Consultation Agreement between the Métis Nation of Ontario and Government of Canada Métis Self-Government Recognition and Implementation Agreement
Métis Nation of Ontario (Land, Resources, and Consultation Branch – Toronto)	
<p>Note:</p> <p>*Preliminary list of potential affected Indigenous rights-holders and Indigenous groups identified by IAAC for engagement on the Project.</p>	

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### 8 Indigenous Engagement

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TC Energy implemented a wide range of engagement activities and communication tools to share information with and solicit feedback from Indigenous rights-holders and Indigenous groups on the Project. These have included, but are not limited to:

- Participation in community events, open houses/information sessions: in-person and virtual sessions that included presentations and hosting info booths
- Face-to-face and virtual meetings: focused discussions with members of Indigenous rights-holders and Indigenous groups to cover specific topics
- Email, telephone calls, text messages: standard communications to coordinate logistics and to confirm receipt of information
- Site visits: in-person tours to both the Project location (on land and boat), as well as to see other pump storage facilities
- Indigenous newsletters: newsletters and fact sheets describing Project information, updates, and other pertinent information related to the Project
- Initial Project notification package: a package to provide Indigenous rights-holders and Indigenous groups with an overview of the Project, contact information for TC Energy, and an invitation to engage with TC Energy on the Project
- Project mailouts/announcements: formal notifications to inform Indigenous rights-holders and Indigenous groups about the Project and/or Project related changes (e.g., announcements from provincial government that affect the Project)
- Visual Communication tools: various models (e.g., scale models, working models, key component models, cut aways, and profiles) and renderings to support in-person and virtual engagement activities
- Project website: online resource that includes Project information including videos, renderings, and maps. The site also contained contact information and a Frequently Asked Questions section that is updated periodically
- Indigenous knowledge studies<sup>3</sup>

TC Energy continues to actively engage with Indigenous rights-holders and Indigenous groups consistent with the approach described above. Engagement activities will continue during the Project phases. TC Energy will continue to respond to questions and concerns, and ongoing engagement activities will continue.

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<sup>3</sup> Indigenous knowledge is community specific, and place based, arising from Indigenous peoples' intimate relationship with their environment and territory over thousands of years (IAAC 2022).

## 8.2 Summary of Comments Received

The key concerns that have been raised through engagement with Indigenous rights-holders and Indigenous groups are summarized as follows:

- **Soil and Groundwater Quality:** Concerns about long-term water storage affecting soil and groundwater quality, specifically as it relates to concerns that the Reservoir may degrade soil or contaminate groundwater.
- **Water Quality, Turbidity, and Temperature:** Potential changes to surface water quality, turbidity, and temperature in Georgian Bay due to Project operations, resulting in impacts on aquatic ecosystems.
- **Disturbance from Construction:** Concerns about tunneling, drilling, and construction disturbing lake shorelines, lakebeds, and aquatic habitats.
- **Fish Mortality and Habitat:** Concerns that Project operations could kill fish and reduce populations, including Species at Risk (SAR). Concerns include entrainment/impingement and habitat destruction.
- **Wildlife and Vegetation:** Concerns about potential habitat destruction, fragmentation, and restricted movement patterns for wildlife, as well as impacts on plant populations.
- **Potential Effects to SAR:** Concerns about impacts to both aquatic and terrestrial SAR.
- **GHG Emissions:** Interest in how the Project will contribute to lower greenhouse gas emissions and whether alternative energy options—such as solar—have been fully considered.
- **Project Location:** Concerns regarding the suitability of the Project location.
- **Workforce Accommodation and Community Life:** Questions about where construction workers will be housed and the effects on local communities. Concerns include infrastructure capacity, community well-being, and potential adverse effects from workforce influx.
- **Economic Benefits:** Interest in local job opportunities, economic prosperity, and the Project's value to Ontario ratepayers. Indigenous rights-holders and Indigenous groups want assurance that local communities will benefit economically, even if much of the Project is on federal land.
- **Restrictions on Access:** Concerns about restricted access to traditional territories for harvesting, recreation, and cultural practices due to development and privatization.

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- **Archaeology, Heritage, and Burial Sites:** Concerns about impacts to archaeological, heritage, cultural, spiritual, and burial sites.
- **Reservoir Safety:** Concerns about the safety of the Reservoir and impacts on the ability to exercise rights below the site.

## 9 Public Engagement

Recognizing the importance of early and meaningful engagement with the public in the area around the proposed Project, TC Energy initiated engagement with communities and regulatory agencies in 2019. Examples of these engagement activities are listed below.

### 9.1 Engagement with the Public

Engagement by TC Energy has begun and is proposed to continue using the following means:

- Community Liaison Committee
- Local Project Office and Coffee Chats
- Community Information Sessions
- Project Website, Toll Free Phone, Email, and Social Media
- Factsheets and Newsletters
- Video Series
- Media
- Door-to-door Canvassing
- Environmental Non-Government Organization Workshops
- Visual Aids and Models
- Virtual Meeting Rooms

TC Energy's engagement efforts up to May 2025 can be summarized as follows:

- **Municipal Engagement** - Ongoing communication with municipalities in Bruce, Grey and Simcoe Counties including regular updates to elected officials and municipal staff through Project newsletters, Council presentations, staff workshops, and email communications. The Municipality of Meaford, as the host community for the Project, is a key stakeholder and TC Energy has been communicating with staff and elected officials since 2019.
- **Public Engagement** – Public Engagement started in 2019. Activities have focused on in-person and virtual efforts to connect, inform and converse with residents and interested parties to share Project information, to clearly articulate Project benefits and Project need, to clarify Project details, and seek feedback. These interactions allow TC Energy to hear the concerns of the local community and interested parties to incorporate this feedback into the design of the Project, where applicable, and for consideration within the regulatory process.

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- **Federal Department and Provincial Agency** – Engagement with various federal departments and provincial agencies has focused on initial Project planning, study methods, and understanding of the various permits and approval processes required for the Project.

As the Project progress, TC Energy will continue engaging the public and will tailor engagement activities accordingly.

## 9.2 Summary of Comments Received

The key concerns that have been raised through engagement with the public, community, agencies, government officials, and other interested parties are summarized as follows:

- **Clean Energy:** Concerns about zero carbon energy and the use of lithium-ion batteries. Questions include whether the pumped storage will consume or store only emission-free electricity and the duration of the facility's operation, as well as whether the environmental impacts of construction will be outweighed by the benefits of clean energy.
- **Pumped Storage Technology:** Questions about the existence of other pumped storage facilities in Ontario and the Project footprint. Concerns that pumped hydroelectric storage is an old technology and questions about its future relevance compared to lithium-ion batteries.
- **Jobs:** Local employment opportunities are a significant concern. Questions include whether the Project will offer employment to locals, including high school students and local contractors.
- **Consultation Efforts:** There is interest in how TC Energy is investing in Meaford and whether it will become part of the community. Question on whether TC Energy is looking at best practices of other power facilities in the area.
- **More Energy:** Questions about how the Project will impact utility bills and whether Ontario will pursue more pumped storage projects.
- **Local Environment:** Concerns about fish and fish habitat, impacts on the Niagara Escarpment, near shore and lakeshore habitats, nuisance noise, dust, vibration, transmission connection overland, Electromagnetic Fields (EMF), water quality and quantity, water temperature, light and noise for nearby residents, drinking water, and the historical land use of the 4 CDTC property by settlers and farmers.
- **Technology:** Consideration of alternative locations and technologies (e.g., closed-loop system).

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### 9 Public Engagement

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- **Other Concerns:** These include road improvements as part of construction and whether pumped storage will address power grid issues in Ontario.

## 10 Environmental Setting

The Project is located adjacent to Georgian Bay, primarily on 4 CDTC, and on/under the lakebed of Georgian Bay. This region is defined by a unique interplay of natural landscapes, rural communities, and ongoing nature-based recreation facilities. It is located within the core territories of Saugeen First Nation and Chippewas of Nawash Unceded First Nation (collectively, Saugeen Ojibway Nation) and the historic boundaries of the Southern Ontario Treaties (1764-1862). The Project is also located within or near the areas of interest (e.g. Georgian Bay) to First Nation signatories to the Williams Treaties (1923), the Robinson-Huron Treaty (1850), and one non-treaty First Nation. The Project is also in the areas of interest to the Historic Saugeen Métis and the Métis Nation of Ontario.

Air quality in the region is generally expected to be good, with low concentrations of pollutants, reflecting its predominantly agricultural and residential land uses. Vehicle emissions and dust from farming are the main contributors to air emissions, while industrial sources of air emissions are limited in the area. The soundscape is shaped by both natural and human influences. Daytime noise is primarily generated by car traffic and military training at 4 CDTC, while nighttime noise is quieter and made up of mainly natural sounds.

Visually, the location of the proposed Project is marked by the presence of the Niagara Escarpment and the shoreline of Georgian Bay. The landscape transitions from beaches and shorelines to agricultural fields and rural communities. Lighting and skyglow from development subtly influence the nighttime environment.

Georgian Bay's waters are notably clean and support a rich diversity of fish species, including those important to Indigenous and commercial fisheries. While large areas of the region have been modified by agriculture and other human uses, the terrestrial ecosystem is varied with intact areas of woodlands, wetlands, and culturally significant plant species. SAR, such as Butternut, Western Chorus Frog and Black Ash, have been documented within 4 CDTC, alongside a wide array of wildlife including amphibians, birds, bats, and mammals.

Socio-economic conditions reflect a region with a diverse economy predominately focused on agriculture, tourism, and retail. Unemployment rates are lower than the provincial average, though median incomes lag behind the Ontario average. Housing remains relatively affordable.

Archaeological and cultural heritage investigations are being conducted in collaboration with Indigenous rights-holders and Indigenous groups and regulatory agencies. Preliminary findings have identified areas of archaeological potential and settlement period structural remains and features.

## **11 Potential Project Effects**

As part of the IA process, if required, and as guided by Tailored Impact Statement Guidelines, an assessment of environmental, health, social, cultural, and economic effects will be undertaken focusing on those effects within Federal jurisdiction. Table 11-1 identifies the potential Project interactions with the environment and corresponding potential effects associated with key Project components.

Table 11-1: Potential Effects of the Project

Potential Effects of the Project on the Environment			Project Component		
Environmental Component	Potential Effect	Potential Interactions with the Environment	Pumped Storage Facility <sup>1</sup>	Temporary Construction Facilities	Transmission Connections
Air Quality	Change in air quality	• Air contaminant emissions from equipment and vehicles burning fuel	C	C	C
		• Dust generated during soil stripping and grading, site infrastructure construction, and through vehicle and equipment movement on the construction footprint and unpaved roads	C	C	C
Noise and Vibration	Change in existing sound levels	• Noise emissions from equipment and vehicles	C	C	C
		• Noise emissions from blasting	C	-	-
		• Noise emissions from operation of the Project	O	-	O
	Change in existing vibration levels	• Vibration emissions from stationary construction equipment (e.g., piling)	C	-	C
		• Vibration emissions from mobile construction equipment	C	C	C
	• Vibration emissions from construction blasting and tunneling for underground components	C	-	-	
Visual Setting	Change in existing visual landscape	• Construction equipment and machinery will temporarily interrupt the visual landscape	C	C	C
		• Some Project components will be visible within the landscape	O	-	O
	Change in ambient nighttime light conditions	• Lighting required for safety and security has potential to be experienced as a new source of nighttime light in some locations	C/O	C	C
Terrain, Geology and Soils	Change in terrain conditions	• Terrain stability issues resulting from ground disturbance (e.g., at locations of excavations)	C	C	C
		• Potential water erosion and sedimentation due to exposure of bare soils			
	Change in soil quality/quantity	• Compaction, rutting, admixing or loss of soil structure through vehicle and equipment movement	C	C	C
		• Soil loss through wind and water erosion following vegetation clearing and grading	C	C	-
	• Disturbance of pre-existing contamination	C	C	C	
Groundwater	Change in groundwater quality or quantity	• Disturbance to soil and parent material above or below the water table may change physical hydraulic properties (e.g., change in infiltration rates and locations and flows)	C	C	C
		• Alteration of groundwater levels or flow rates through drilling of extraction wells, dewatering, horizontal directional drilling (HDD), or operation of the Reservoir	C/O	-	C
		• Disturbance of pre-existing contamination	C	C	C
Surface Water	Change in surface water quality	• Increased sediment concentrations and transport in surface water due to in-water construction, vegetation clearing, increased erosion, or release of water from the Project	C/O	C	C
		• Construction changes to natural flow patterns	C	C	C
	Change in surface water quantity	• Change in flow patterns near Lower Inlet/Outlet Structure	O	-	-

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Potential Effects of the Project on the Environment			Project Component		
Environmental Component	Potential Effect	Potential Interactions with the Environment	Pumped Storage Facility <sup>1</sup>	Temporary Construction Facilities	Transmission Connections
Fish and Fish Habitat	Change in fish habitat (including habitat for SAR)	• In-water construction resulting in the loss of habitat	C	-	C
		• In-water construction resulting in changes to habitat structure (e.g., substrate, banks, aquatic vegetation)	C	-	C
		• Construction activity on land adjacent to watercourses resulting in changes to bank stability, temporary loss of riparian vegetation, sedimentation, or in increased erosion potential	C	C	C
		• Change to water quality that have the potential to affect fish or fish habitat	C/O	C	C
		• Changes in water temperature during Reservoir filling and release	O	-	O
		• Changes to surface and groundwater flow patterns that has the potential to affect fish or fish habitat	C/O	C	C
	Change in fish mortality risk	• Mobilization and transport of sediment resulting in fish mortality or mortality of fish eggs	C	C	C
		• Change in timing, duration and frequency of flow (including during Reservoir filling and release), resulting in fish mortality by stranding, entraining or impinging fish (Lower Inlet/Outlet Structure), or by preventing access to spawning areas (watercourses)	C/O	-	-
		• Destruction of fish and/or eggs during in-water work	C	-	C
		• Lethal or sub-lethal effects on fish due to blasting or vibrations	C	-	C
Vegetation and Vegetation Communities	Change in vegetation communities and species	• Direct loss and/or alteration of native vegetation communities or plant species of concern (including SAR) arising from clearing and ground disturbance	C	C	C
		• Indirect change in vegetation communities or species (e.g., dust, weed introduction and/or spread from vehicle and equipment movement)	C/O	C	C
	Change in wetlands	• Alteration or loss of wetland vegetation arising from vegetation clearing and ground disturbance	C	C	C
		• Change in hydrological regime, storage capacity or overall function	C/O	C	C
Wildlife and Wildlife Habitat, including SAR and Migratory Birds	Change to habitat	• Direct loss or alteration of habitat from vegetation removal and ground disturbance	C	C	C
		• Indirect loss or alteration of habitat effectiveness through sensory disturbance	C/O	C	C
	Change in wildlife movement	• Alteration or impediment of wildlife movement due to physical barriers, sensory disturbance, or vegetation removal (i.e., gaps in forested habitat)	C/O	C	C
	Change in mortality risk	• Ground disturbance and vegetation clearing resulting in physical destruction of key habitat features (e.g., nests, dens, hibernacula)	C	C	C
		• Vehicle-wildlife collisions and ground disturbance	C/O	C	C
		• Collisions with Project buildings (e.g., windows) or infrastructure	O	C	O
		• Trapped wildlife (e.g., excavation areas)	C	-	-
		• Wildlife-human conflict	C/O	C	C/O
Socio-Economic	Change in Infrastructure and Services	• Potential effects to local commercial accommodations capacity	C	C	C
		• Potential effects to services within 4 CDTC	C/O	C	-
		• Potential population effects to the region	C	C	-
		• Potential effects to local housing market	C	-	-

Potential Effects of the Project on the Environment			Project Component			
Environmental Component	Potential Effect	Potential Interactions with the Environment	Pumped Storage Facility <sup>1</sup>	Temporary Construction Facilities	Transmission Connections	
		• Potential change in transportation and traffic	C	C	C	
		• Potential change in demand to social infrastructure and utilities	C	C	C	
		• Potential changes to the Ontario electrical system	O	-	-	
	Change in Land or Resource Use	• Potential effect to commercial and recreation fishing	C/O	-	C	
		• Potential change in land tenure	C	C	C	
	Change in Employment and Economy	• Potential changes in employment	C	-	-	
		• Potential changes in Project expenditures on goods and services	C/O	-	C	
		• Potential changes to gross domestic product	C/O	-	C	
		• Potential changes to labour income	C/O	-	C	
		• Potential changes in federal, provincial and local taxes	C/O	-	-	
	Change to Community Well-being	• Potential well being effects on nearby residents, land users, and 4 CDTC personnel (e.g., noise and dust nuisance, workforce interaction, perceived safety and health effects)	C/O	C	C/O	
		• Potential benefit to social value	C/O	-	C	
	Human Health	Change to human health	• Potential effect from electromagnetic fields from the transmission connection options	-	-	O
			• Potential effect from soil movement and dust generated during construction	C	C	C
• Potential effect from air quality contaminants because of vehicular traffic			C/O	C	C	
• Potential effect from noise because of Project activity			C/O	C	C	
• Potential effect to social well-being			C/O	C	C/O	
Archaeology and Cultural Heritage	Change to archaeological resources	• Removal or disturbance of archaeological site or resources	C	C	C	
	Change to cultural heritage resources	• Removal or disturbance of cultural heritage site or resources	C	C	C	
Indigenous Interests	Change in physical and cultural heritage <sup>4</sup>	• Potential loss or disturbance of archaeological, heritage or cultural sites	C	C	C	
		• Potential sensory disturbances	C/O	C	C/O	
		• Potential loss or change to land or water harvesting methods or opportunities	C/O	C	C	
		• Potential loss or change to the use or access to preferred land or water harvesting or cultural areas	-	C	C	

<sup>4</sup> TC Energy understands that changes to physical and cultural heritage and structures, sites or items of historical, archaeological, paleontological, or architectural significance consider all elements of cultural and historical importance to Indigenous rights-holders and Indigenous groups, in addition to provincial heritage legislative requirements. TC Energy also understands that there are tangible and intangible elements of physical and cultural heritage such as Indigenous language, place names, sacred, ceremonial or culturally important places and cultural landscapes.

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**11 Potential Project Effects**

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Potential Effects of the Project on the Environment			Project Component		
Environmental Component	Potential Effect	Potential Interactions with the Environment	Pumped Storage Facility <sup>1</sup>	Temporary Construction Facilities	Transmission Connections
	Change in current use of traditional lands, waters and resources	<ul style="list-style-type: none"> <li>Potential loss or change to harvested terrestrial and aquatic species or resources</li> </ul>	C/O	C	C
	Change to any structure, site or other item of historical, archaeological, paleontological or architectural importance	<ul style="list-style-type: none"> <li>Potential loss or disturbance of sites</li> </ul>	C	C	C
	Changes to the health, social and economic conditions of Indigenous rights-holders and Indigenous groups	<ul style="list-style-type: none"> <li>Potential changes in the real or perceived quality of harvested foods</li> </ul>	C/O	C	C/O
		<ul style="list-style-type: none"> <li>Potential for the disruption of subsistence-based livelihoods</li> </ul>	C/O	C	-
		<ul style="list-style-type: none"> <li>Potential for increased demands on community services (e.g., urban centres)</li> </ul>	C	C	C
		<ul style="list-style-type: none"> <li>Potential for changes to resource-based Indigenous businesses, such as guiding and fishing</li> </ul>	C/O	C	C
		<ul style="list-style-type: none"> <li>Potential economic effects and opportunities such as employment and training</li> </ul>	C/O	C	C

Notes:

C – Potential effect during construction

O – Potential effect during operation

C/O – Potential effect during construction and operation

<sup>1</sup> Pumped Storage Facility includes the Reservoir, Powerhouse, Water Conveyance Structures, Lower Inlet/Outlet Structures, Switchyard and Offices, and Access

## 12 Waste and Emissions Generated by the Project

Table 12-1 summarizes the waste and emissions that are expected to be generated by the Project. Where applicable, measures will be implemented to mitigate the extent of waste and emissions generated.

**Table 12-1: Waste and Emissions Generated by the Project**

Waste/Emission	Description
Air Emissions	<ul style="list-style-type: none"> <li>Construction-related emissions may include dust from vehicle travel on unpaved roads, earthworks and wind erosion of stockpiles, and exhaust emissions from stationary equipment (e.g., generators, pumps), light and heavy vehicles, and construction equipment.</li> <li>Incidental activities, such as vehicle emissions used during maintenance activities during the operations phase, however it is probable that any limited incidental emissions would in turn decrease over time with increasing vehicular and industry electrification.</li> <li>Preliminary GHG emissions for annual construction were estimated at 108,755 tonnes Carbon dioxide equivalent (CO<sub>2</sub>e), leading to a total projected emission of 598,153 tonnes CO<sub>2</sub>e over five and a half years.</li> <li>Initial analysis of the Project’s operations shows that the Project has the potential to reduce Ontario’s electricity system CO<sub>2</sub> emissions by approximately 490,000 t/year, on average (Navigant 2020).</li> </ul>
Noise Emissions	<ul style="list-style-type: none"> <li>Construction-related emissions from vehicle traffic, the operation of construction equipment (excavation, earth movement, drilling), as well as tunneling and blasting activities.</li> <li>No substantial environment noise expected during operations as the majority of equipment with the potential to produce noise will be located underground or within structures/buildings.</li> </ul>
Liquid Discharges	<ul style="list-style-type: none"> <li>During construction, potential liquid discharges primarily relate to runoff from within construction areas where soils have been exposed.</li> <li>Domestic sewage during construction will be collected in portable washroom facilities. During operations, domestic sewage is anticipated to be held in septic tanks and periodically pumped out for appropriate disposal at a licensed facility.</li> <li>The Project has been designed to draw water from Georgian Bay into the Reservoir and then to discharge that same water back into Georgian Bay to produce power, however the water is not treated, heated, or otherwise altered when being conveyed.</li> <li>During the operations, surface water runoff will be managed through a storm water infrastructure to control the quantity and quality of runoff.</li> </ul>

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**12 Waste and Emissions Generated by the Project**  
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Waste/Emission	Description
Other Waste Types	<ul style="list-style-type: none"> <li>• Excess soil and overburden – stripped materials suitable for use in the Ring Dam or for reclamation activities will be stockpiled for use on site. Any excess materials will be disposed of offsite, in accordance with relevant federal or provincial regulations.</li> <li>• Solid wastes generated during construction activities and operation of the Project, including Industrial, Commercial and Institutional waste and recyclable materials (wood, paper, metal) – disposal through contracted waste disposal and recycling.</li> <li>• Waste oil generated from regular maintenance activities – disposal through licensed recycler.</li> <li>• Hazardous waste (e.g., paint, solvents, batteries, fluorescent light bulbs, herbicides) – disposal through licensed disposal facility.</li> <li>• Munitions scrap (e.g. UXO) – disposal through licensed party.</li> </ul>

## 13 Closing

The proposed Project is a pumped hydroelectric storage facility located in Ontario, designed to provide a long-duration energy storage solution that helps balance electricity supply and demand. It would support Ontario's growing electricity needs and aligns with IESO forecasts for increased generation and storage capacity across the province. By capturing excess energy and releasing it when demand is high, the facility will manage imbalances in electricity production and consumption, improve grid reliability, and strengthen the resilience of Ontario's electrical system.

Economically, the Project will be built with Ontario supply chains, generate thousands of jobs, and stimulate regional development, particularly in the Grey and Bruce counties. It also has the potential to represent a benchmark Indigenous partnership with Saugeen Ojibway Nation, advancing economic reconciliation and self-determination through shared ownership and long-term collaboration.

The Project is still in the early planning stages and will go through several federal and provincial processes, including provincial Class EAs and permitting. As the Project advances through the federal IA process, Project design will be advanced and potential Project related effects will be further evaluated.

TC Energy is committed to ongoing engagement with Saugeen Ojibway Nation, other Indigenous rights-holders and Indigenous groups, stakeholders, and the public. Feedback received during these engagement activities will help shape the Project as it moves forward. TC Energy will continue to listen, share updates, and respond to questions and concerns throughout all phases of the Project.

## 14 References

- Canadian Centre for Economic Analysis. 2024. Made-in-Ontario Pumped Hydro Storage: Economic and Social Value Benefits. Available online: <https://www.ontariopumpedstorage.com/siteassets/pdfs/studies/ops-economic-and-social-benefits---final-2024.pdf>
- Environment and Climate Change Canada (ECCC). 2020. Strategic Assessment of Climate Change Revised, October 2020. Available online: <https://www.canada.ca/en/services/environment/conservation/assessments/strategic-assessments/climate-change.html>.
- ECCC. 2023. 2023 Progress Report on the 2030 Emissions Reduction Plan. Available online: <https://www.canada.ca/content/dam/eccc/documents/pdf/climate-change/climate-plan/erp-pr/2023%20Progress%20Report%20-%20FINAL%20-%20EN.pdf>
- Executive Council of Ontario. 2022. Letter from the Minister of Energy to the Independent Electricity System Operator. Order in Council 137/2022. Dated January 27, 2022. Available online: <https://www.ieso.ca/en/Corporate-IESO/Ministerial-Directives>.
- Government of Ontario. 2023. Powering Ontario's Growth: Ontario's Plan for a Clean Energy Future. Available online: <https://www.ontario.ca/files/2023-07/energy-powering-ontarios-growth-report-en-2023-07-07.pdf>
- Impact Assessment Agency of Canada (IAAC). 2022. Indigenous Knowledge Policy Framework for Project Reviews and Regulatory Decisions. Available online: <https://www.canada.ca/en/impact-assessment-agency/programs/aboriginal-consultation-federal-environmental-assessment/indigenous-knowledge-policy-framework-initiative/indigenous-knowledge-policy-framework-project-reviews-regulatory-decisions.html>.
- Independent Electricity System Operator (IESO). 2022a. Pathways to Decarbonization. Available online: <https://www.ieso.ca/-/media/Files/IESO/Document-Library/gas-phase-out/pathways-to-decarbonization.ashx>.
- IESO. 2022b. Annual Planning Outlook Report. Available online: <https://www.ieso.ca/-/media/Files/IESO/Document-Library/planning-forecasts/apo/Dec2022/2022-Annual-Planning-Outlook.ashx>.
- IESO. 2023. Peak Tracker. Available online: <https://www.ieso.ca/en/Sector-Participants/Settlements/Peak-Tracker>.

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### 14 References

February 24, 2026

IESO. 2025. Annual Planning Outlook (APO): 2026 Demand Forecast and 2027 Demand Scenario. Available online: <https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/apo/apo-20251118-presentation.pdf>

Navigant. 2020. Economic Analysis of a Proposed Hydroelectric Pumped Storage Project in Ontario. Available online: <https://www.ontariopumpedstorage.com/siteassets/pdfs/about/resources/studies/ops-p-value-of-pumped-storage-project-report.pdf>.

Simon, T.R., Inman, D., Hanes, R., Avery, G., Hettinger, D., and Heath, G. 2023. Life Cycle Assessment of Closed-Loop Pumped Storage Hydropower in the United States. *Environmental Science & Technology*, 57(33), 12251-12258. <https://doi.org/10.1021/acs.est.2c09189>.