hydro one

Welland Thorold Power Line project

Environmental Study Report Highlights | July 2025

Land acknowledgment

Hydro One acknowledges that this project is proposed within the traditional and ancestral lands of the Anishinaabe and Haudenosaunee Nations, which are now home to many diverse people.

Hydro One understands that Indigenous Nations have been here since time immemorial and are stewards of what many refer to as Turtle Island.

We are all Treaty People and with a commitment to our pursuit of reconciliation, we are thankful to be welcomed on these lands as partners to energize our futures together.

What's inside

Introduction

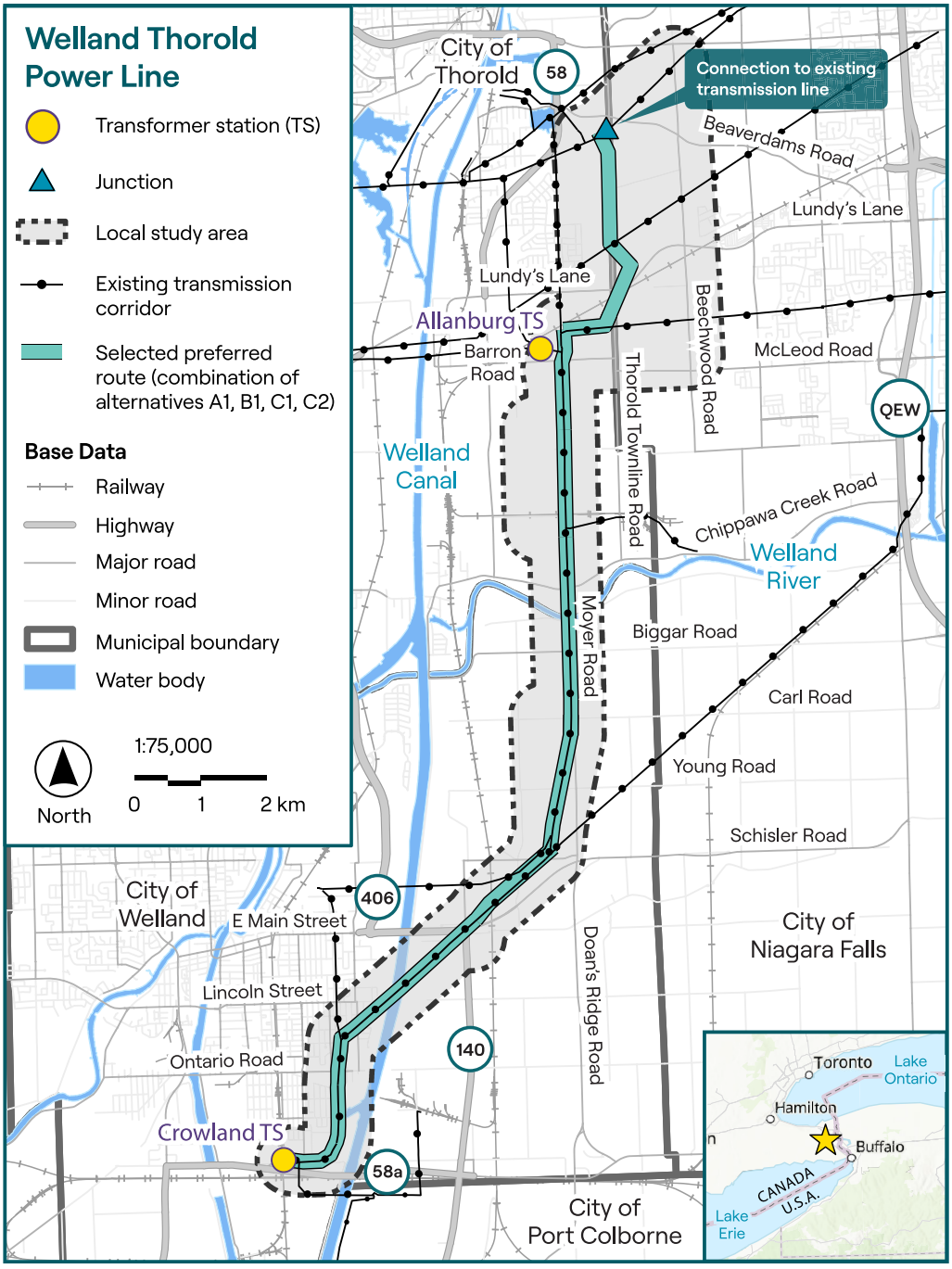
Hydro One is pleased to share the highlights of the Draft Environmental Study Report (ESR) for the Welland Thorold Power Line project. The Draft ESR is a key milestone in the Class Environmental Assessment (EA) process. It was developed with technical experts and in consultation with Indigenous communities, local and regional community members and elected officials. We welcome public input on the draft ESR. Further details on how to provide feedback are at the end of this document.

We welcome comments on the Draft ESR during the 30-day review period, from July 15, 2025 to August 19, 2025.
View the full Draft report and provide your input today.
HydroOne.com/WTPL

About the Welland Thorold Power Line project

The Welland Thorold Power Line is a proposed new transmission line that will increase resilience across the Niagara Region. Once complete, it will add approximately 400 megawatts of capacity to the electricity grid – enough to power a city nearly the size of Windsor.

The 18-kilometre, double-circuit, 230-kilovolt transmission line would connect Crowland Transformer Station (TS) in Welland to an existing Hydro One transmission line in Thorold mostly using existing transmission corridors. The project also includes upgrades to Crowland TS, including a new 230-kilovolt yard (outdoor area housing equipment).



Selecting the preferred route

We evaluated potential routes based on environmental field studies, research and feedback regarding the potential benefits and challenges of each option. Our work reviews four evaluation categories, which were applied to all routes in a fair and transparent manner:

- **Indigenous Culture, Values and Land Use**
- **Natural Environment**
- **Socio-Economic Environment**
- **Technical and Cost**

After completing a thorough study of the project area and collecting feedback from communities, Hydro One selected the preferred route in March 2025. Most of the route will be constructed within an already existing and operational transmission corridor, which will result in minimal impact to the environment and communities.

That includes limiting new crossings of the Welland Canal and the Welland River, effects on agricultural operations, wetlands and wildlife habitat. All towers in the existing 115 kV section of the project route will be replaced to accommodate higher capacity.

Energizing life in the Niagara Region

The Independent Electricity System Operator predicts that energy demand in Ontario will increase by approximately 75 per cent in the next 25 years. That means we need to invest in the power transmission system today to ensure the region continues to have reliable and clean power. The Welland Thorold Power Line is expected to be in service in 2029, bringing many benefits to the region.

Powering jobs and the economy

The line will provide power to businesses and industrial job creators that support the local economy.

Clean electricity

The project will provide a reliable supply of clean electricity, which means communities and the local economy, from small family-owned businesses to farming to electric mobility, can continue to grow.

Protecting the regional landscape

The transmission line route limits the effects on farms and the natural environment, including water and wildlife habitats, while supporting current recreational activities and future growth of the Niagara Region.

By the numbers

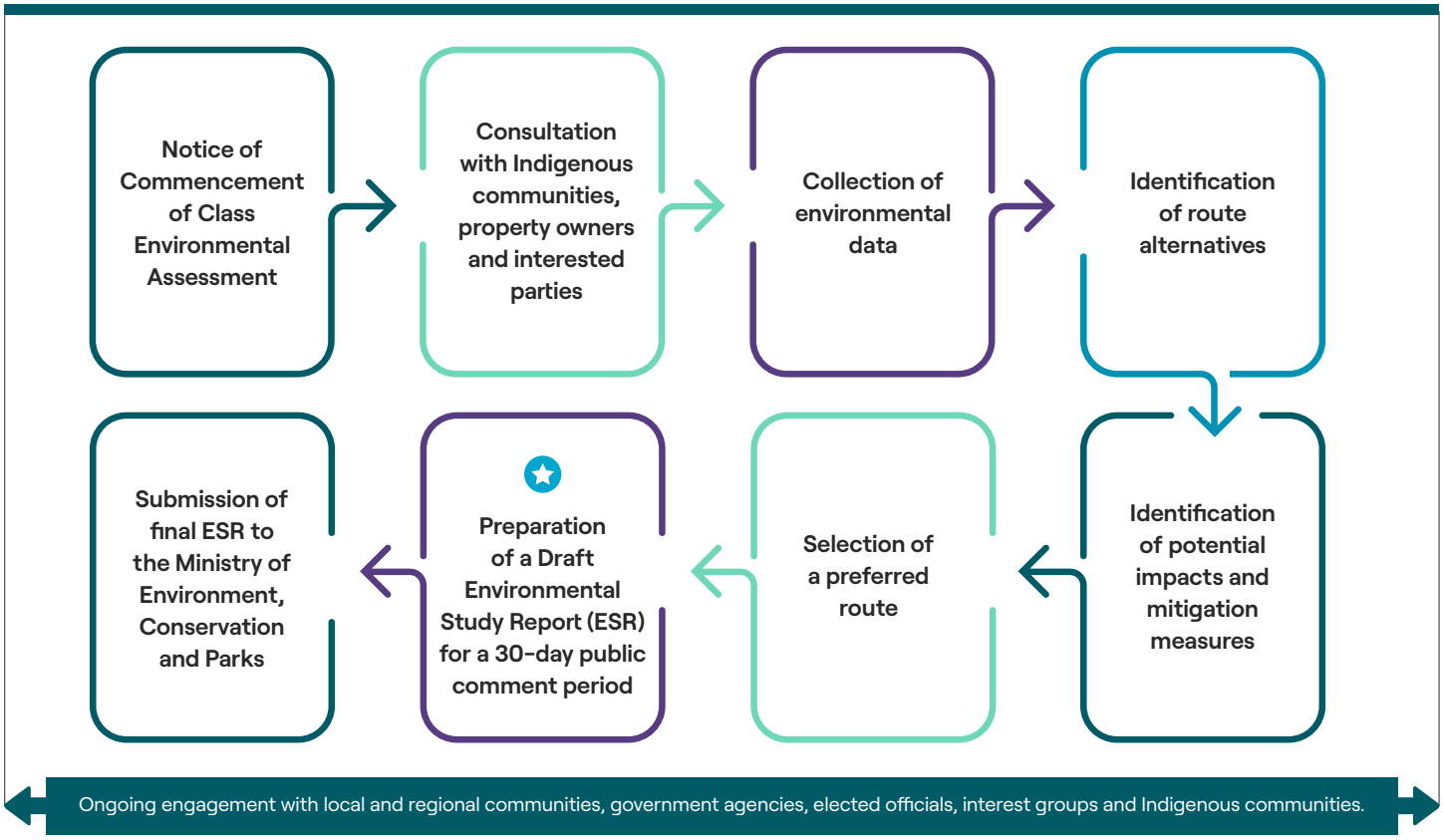
18 km long
The length of the preferred route, which will use mostly existing transmission corridors

400 megawatts
This added capacity is enough to power a city the size of Windsor

20%
This increase in electricity demand is expected in the Niagara Region by 2032, and the project will help meet it.

About the Class Environmental Assessment

The Class EA ensures that potential natural, economic, social and cultural effects are thoroughly considered before a project begins. It's a planning process that applies to transmission infrastructure projects that are carried out routinely and have predictable environmental effects that can be readily managed. The Draft ESR, and public input on it, is an important part of the overall Class EA process.



The Draft ESR describes:

- The existing conditions in the area surrounding the project
- The engagements we have undertaken with Indigenous communities, the public, local communities and government
- The process to evaluate route options and select the preferred one
- The potential natural environment and socio-economic effects identified and assessed
- The actions we will take to minimize and avoid potential negative project effects

Ongoing engagement

Continued engagement with Indigenous communities, landowners, businesses, government agencies and other interested parties is critical to help us plan a project that considers the needs and interests of the region.

69 interactions with the community
in person and via phone and email

100 participants across **two open houses**

26,000 notices
to directly affected property owners

What we've heard

- Consider effects to agricultural lands and operations
- Maximize the use of existing transmission corridors
- Consider species at risk and ecological restoration areas
- Minimize effects to homes

Hydro One's team conducts a number of on-the-ground field studies to understand the areas where our projects will take shape. This includes studies to help identify the preferred route and further studies as part of the Class EA.

Summary: what we found

The Welland Thorold Power Line project will create no significant negative effects to the environment or communities, especially since the preferred route is predominantly along an existing corridor. It is the least impactful to farm operations, recreational areas and local and regional roads. Some changes to the natural environment, including removal of some trees, will be necessary. However, we will take specific actions to limit and avoid potential impacts on plants, wetlands and wildlife, and more.

Continued work together

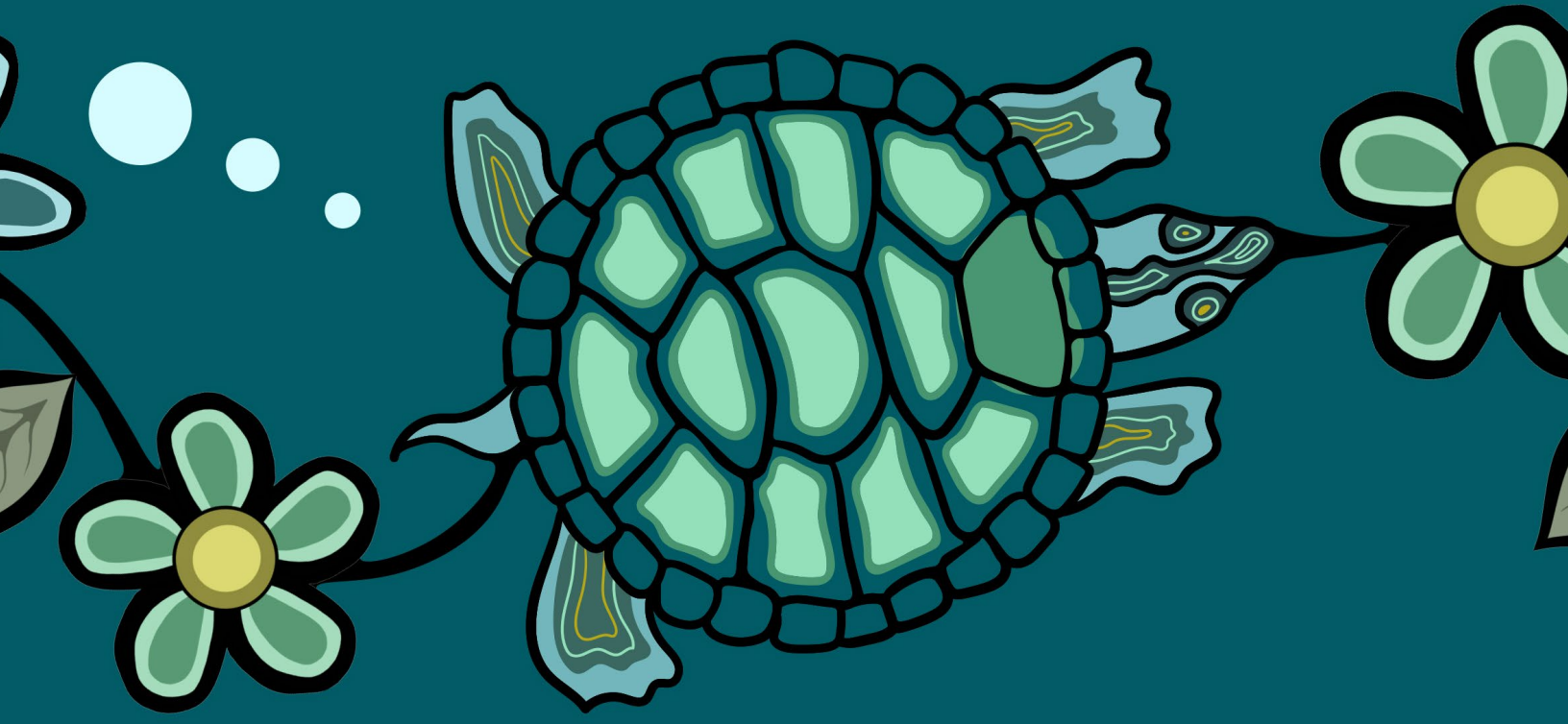
We work with Indigenous communities, municipalities, local communities and interested parties to find opportunities to contribute to the areas around our projects in a positive way, recognizing that community benefits can be varied and diverse. We will continue to work with homeowners and businesses to understand the unique features of their properties and operational demands.

The Draft ESR also outlines that:

- The project is helping to meet current and future electricity needs in the Niagara Region
- The preferred route analysis found that for this project, using an existing transmission corridor limits potential effects
- Project impacts can be mitigated to reduce potential negative impacts

Hydro One prioritizes safety in all our projects. We design and operate our equipment in accordance with all regulatory requirements. Health Canada has found no conclusive evidence of any harm caused by electric and magnetic fields (EMF) exposure from transmission lines. It also does not consider that any precautionary measures are needed regarding daily exposures to EMFs at extremely low frequencies.

Discover more at
HydroOne.com/WTPL



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Highlights: Indigenous culture, values and resources

This section summarizes how we will limit or avoid effects to Indigenous culture, values and resources during construction and operations.

Indigenous culture, values and land use

What we found

The project study area is located within the traditional territory of multiple Indigenous communities. Stewardship of the land and protection of wildlife are culturally significant and important to these communities.

What we'll do

- Provide opportunities for Indigenous communities to participate in archaeological and environmental fieldwork
- Undertake a variety of mitigation measures to limit effects to water, wildlife and fish, as described in other sections of this highlights document

Key takeaway

We will continue to work with Indigenous communities and collaborate throughout the lifecycle of the project. The protection of cultural resources and recognition of Indigenous historical land uses are also part of our continued engagement.

Indigenous communities were engaged early in the planning process and have been provided with opportunities to share feedback throughout the ESR process.

Explore more in Section 7.8 of the Draft ESR.

Highlights: socio-economic environment

This section summarizes how we will limit or avoid disruptions and other effects to local agricultural operations, land use and communities. This includes business operations in the project area, local roads and traffic, and potential future development.

Agricultural lands and farm operations

What we found

The Niagara Region has a diverse array of agriculture producers, including a winery in the project area. By mostly using an existing transmission line corridor for the preferred route, we can prevent and limit the effects on these vibrant operations. For example, loss of agricultural production land for tower infrastructure and disruptions to farm operations will not be significant.

What we'll do

- Work closely with landowners and farmers to understand their unique properties and keep them informed of work
- Consult landowners to determine existing field tile locations
- Use existing access roads, farm lanes and field edges where practicable
- Construct any new access roads, staging areas, tower construction and stringing activity areas to take up the minimum area required, while still allowing for safe movement
- Reimburse for cropland out of production before, during and for a reasonable period after construction
- Address and compensate for damages (e.g. tile drainage and soil compaction)
- Use measures including mats, geotextile or crushed rocks or similar measures to make temporary access roads and work areas easy to remove and allow for recultivation

Key takeaway

The project is not expected to have significant effects on agricultural land, and tower and line heights will be compatible with farming. Disruptions to farm operations will be short term and we will work in consultation with landowners to avoid or limit potential negative effects. We will take all necessary steps to avoid or limit effects on agricultural operations in the project area.

Explore more in Section 7.1 of the Draft ESR.

Businesses

What we found

While project operations will happen near existing commercial areas, disruptions to commercial or industrial operations will be limited. Some brief planned outages for businesses directly connected to the transmission line will be required (homes will not be affected). Some tourism and recreational resources along the preferred route could potentially be temporarily disturbed, including Memorial Park, the cricket pitch, paintball facility and the Niagara Region Model Flying Club, in addition to the Welland Canal and Welland River, but these potential effects will be short term. The project is also compatible with future development.

What we'll do

- Provide relevant updates to municipalities and business owners
- Maintain access to businesses at all times during construction to the extent feasible and arrange alternate access if necessary
- Provide advanced noticed to any affected transmission-connected facilities and work with them to mitigate the impact of brief temporary outages
- Provide advanced notice to nearby residences, farms, landowners and commercial operations and put up signage related to construction disturbances
- Use safety precautions to protect the public, such as signage

Key takeaway

Any effects on local businesses and recreation will be brief and temporary. We will take all necessary steps to avoid disruptions to the Niagara Region's thriving commercial and recreational sector, including working closely with business owners.

Brief outages will happen during upgrades at the Crowland Transformer Station, which will include adding new 230 kV transformers.

Explore more in Section 7.5 of the Draft ESR.

Local and regional roads

What we found

The project is in a rural landscape with key access routes through the Niagara Region. There is the potential for increased traffic and some temporary closures on local and regional roads.

What we'll do

- Create a Traffic Control Plan with municipalities
- Use protective measures during line stringing and minimize disruption to roads where possible
- Inspect and clean vehicles as necessary, and install mud mats
- Clean or sweep roads to remove mud and debris as needed
- Repair any local or regional roads damaged by construction

Key takeaway

We expect any effects on local and regional roads and traffic to be temporary, and we will take steps to limit the effects.

Explore more in Section 7.5.3 of the Draft ESR.

Noise and air quality

What we found

Brief noise and vibration during the project construction phase may disturb the community. Dust from construction activities and emissions from construction vehicles can be a temporary nuisance.

What we'll do

- Update landowners on upcoming work that involves noise
- Complete construction in accordance with local noise control by-laws
- Comply with the Ministry of Environment, Conservation and Parks guidance on construction, vehicle and blasting noise, and environmental noise
- Cover or otherwise contain loose construction materials being transported that could release airborne particles
- Minimize dust by using techniques like on-site watering
- Maintain vehicles and equipment to minimize excessive exhaust and minimize idling

Key takeaway

We will take measures to mitigate nuisance noise and dust during construction and ensure that the community will be informed of construction plans.

Implosive splicing is a process to join pieces of wire together. While it creates noise, it will happen at predetermined times and is not expected to last very long.

Explore more in Section 7.5.6 and 7.7.2 of the Draft ESR.

Cultural heritage and archaeology

What we found

The project will cross the Welland Canal, a Canadian Heritage River, at the same place as the existing corridor, and will include overhead transmission lines, so will not have any direct or indirect impacts to the flow of water.

What we'll do

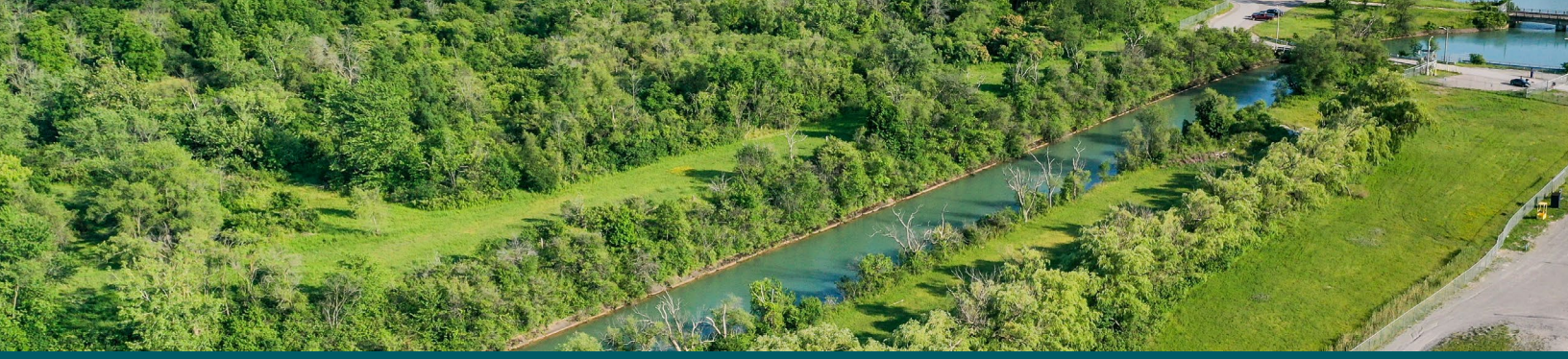
- Conduct additional studies, including a Cultural Heritage Preliminary Impact Assessment
- Plan work to avoid adverse effects to identified built heritage resources and cultural heritage landscapes
- Complete a Cultural Heritage Evaluation Report and Heritage Impact Assessment as early as possible during the detailed design phase
- Complete a Stage 2 Archaeological Assessment within the identified areas of archaeological potential along the new transmission line corridor (followed by a Stage 3 assessment if required)
- Restore construction access and work areas to pre-construction conditions

Key takeaway

Areas with cultural resources and potential for archaeological resources (as identified in the Stage 1 Archaeological Assessment conducted for the project) will undergo further study. Hydro One will also work with Indigenous communities during these assessments.

If archaeological artifacts are encountered during construction, work in the vicinity will cease and a licensed archaeologist will be engaged immediately to ensure compliance with the *Ontario Heritage Act*.

Explore more in Sections 7.3 and 7.4 of the Draft ESR.



Highlights: natural environment

This section highlights how we will limit or avoid significant effects to the natural environment in the project area, including trees, wetlands, birds, fish and other wildlife.

Water quality

What we found

Inadvertent spills of oil, gasoline or other liquids are unlikely but possible, and several measures will help protect surface water and groundwater quality. Municipal wells and local private water wells within the area will not be affected.

What we'll do

- Maintain an Emergency Response Plan to deal with any spills, in collaboration with local experts and officials
- Always have cleanup materials and equipment ready to respond
- Contain waste materials so they don't move into waterbodies, land-to-water transition areas, wetlands or agricultural fields
- Store fuels, chemicals, lubricants or other harmful substances, including water from concrete chute washing, in properly contained storage areas at ground level, and regularly inspect equipment for leaks
- Refuel vehicles and equipment 30m away from sensitive areas, such as source water protection areas and wetlands, and use spill trays
- Sort and remove excess construction materials (waste), liquid and solid sewage wastes to approved waste management or recycling facilities
- Manage excess soil and topsoil from construction sites and areas off site, including at reuse sites
- Use Erosion Sediment Control (ESC) measures (e.g., erosion blankets/coir mats, silt socks, etc.) where necessary

Key takeaway

With the measures described here, we do not expect to have any signficant net effects on surface water quality, groundwater, watercourses or aquatic features.

We will continue to engage with Indigenous communities, the Niagara Peninsula Conservation Authority, the City of Thorold, the City of Welland, the City of Niagara Falls and the Niagara Region to manage potential threats to source water protection areas.

Explore more in Section 7.7 of the Draft ESR.

Trees, woodlands and valleys

What we found

Removal of some trees, including portions of woodlands and trees near farm operations, will be necessary to ensure the safe operation of the transmission line. However, these will be minimal because the preferred route mostly uses an existing corridor.

What we'll do

- Keep trees and plants that will not affect construction or line clearances
- Replace hedgerows and windbreak areas impacted by construction in consultation with the landowner
- Remove vegetation outside of migratory bird breeding season and bat active seasons when possible

Key takeaway

Tree removal will be limited as the project uses an existing corridor. We will keep trees and other vegetation where possible.

Explore more in Section 7.7.8 of the Draft ESR.

Wetlands

What we found

The project area is adjacent to several wetlands, including five Provincially Significant Wetlands. Along with providing habitat to plants, wildlife and fish, wetlands act as a natural filter for carbon dioxide, plus play an important role in maintaining water quality and reducing flood risk.

What we'll do

- Locate towers and access roads to avoid wetlands whenever practical
- Keep stream bank vegetation as much as possible
- Store materials away from water features
- Restore wetland areas affected during construction (directly or indirectly) to pre-construction drainage patterns
- Restore any disturbed areas near watercourses, adjacent wetlands or sensitive areas as soon as practical

Key takeaway

We do not expect the overall functionality or quality of wetlands in the area. Construction and maintenance measures will limit effects to this vital part of the natural environment.

Explore more in Section 7.7.8 of the Draft ESR.

Birds, fish and other wildlife

What we found

Construction activities could disturb wildlife and, in some small areas, the removal of trees could reduce the shade for fish and aquatic habitats in the project area. There is also the possibility that the project could inadvertently spread non-native or invasive species.

What we'll do

- Install silt fences and other barriers to protect sensitive features
- Continue consultation with Indigenous communities, regulatory agencies and municipalities on detailed plans and measures to avoid or mitigate effects to wildlife and Species at Risk
- Manage any temporary soil stockpiles to avoid Bank Swallows nesting

Key takeaway

Most wildlife species within the project area are used to human activities, and they will relocate temporarily to other nearby habitats until construction is over.

Explore more in Section 7.7.8 of the Draft ESR.

Highlights: technical and cost

What we found

The selected project route is the preferred route from a technical and cost perspective because it repurposes the existing transmission corridor. That means limited removal of trees and no new water crossings, which minimizes impacts on properties, the natural environment and communities.

What we'll do

- Continue to work with landowners, as design and construction planning for the selected route continues
- Minimize tree removal and disruptions to farming operations

Key takeaway

The project is not expected to have permanent or long-term impacts to existing infrastructure, such as roads, and will have a limited impact on properties, the environment and communities. We will continue to work with homeowners and the community as the project moves forward.

Have your say

We want to know

- Do you have additional suggestions for avoiding or minimizing effects that you want to see us take?
- Do you have questions about the overall assessment or specific parts of the assessment?
- Do you have any other comments about the Draft ESR that you want us to consider?

How to provide comments

The Draft ESR is available for review and comment from **July 15, 2025 to August 19, 2025.**

Anyone wishing to provide comments must do so by **August 19, 2025 at 4:30 p.m. to:**

Adam Haulena
Senior Environmental Specialist, Hydro One
483 Bay St., 14th Floor
Toronto, ON
M5G 2P5

Comments can also be submitted to **1.877.345.6799** or **Community.Relations@HydroOne.com**

For the most up-to-date project information and project updates, visit our project website: **HydroOne.com/WTPL**

A copy of all comments will be provided to Hydro One for consideration.

Where to find the Draft ESR

Online

HydroOne.com/WTPL

In Person

Electronic and hard copies are available at the following locations:

- **Thorold Public Library**
  14 Ormond Street North
  Thorold, ON L2V 1Y8
  Hours:
  Monday-Thursday 8 a.m. - 10 p.m.,
  Friday and Saturday 10 a.m. – 5 p.m.,
  closed Sunday.

- **Welland Public Library - Main Branch**
  50 The Boardwalk
  Welland, ON L3B 6J1
  Hours:
  Monday-Thursday 9 a.m. – 8 p.m.,
  Friday 9 a.m., - 6 p.m.,
  Saturday 9 a.m. – 5 p.m., closed Sunday

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We welcome your feedback.
View the full Draft Environmental Study Report and provide your input today.
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If you have any questions or need further information about this project, contact
Community.Relations@HydroOne.com
or **1-877-345-6799**