

**Atura Power**

# WELCOME

Niagara Hydrogen Centre

Community Information Session



An opportunity to learn about the proposed project and share your feedback



# Why we are here

## The purpose of this community meeting is to:

- Share information about the Niagara Hydrogen Centre
- Provide information about the environmental assessment and permitting processes being undertaken
- Answer any questions you may have
- Receive feedback to help with the planning of the project

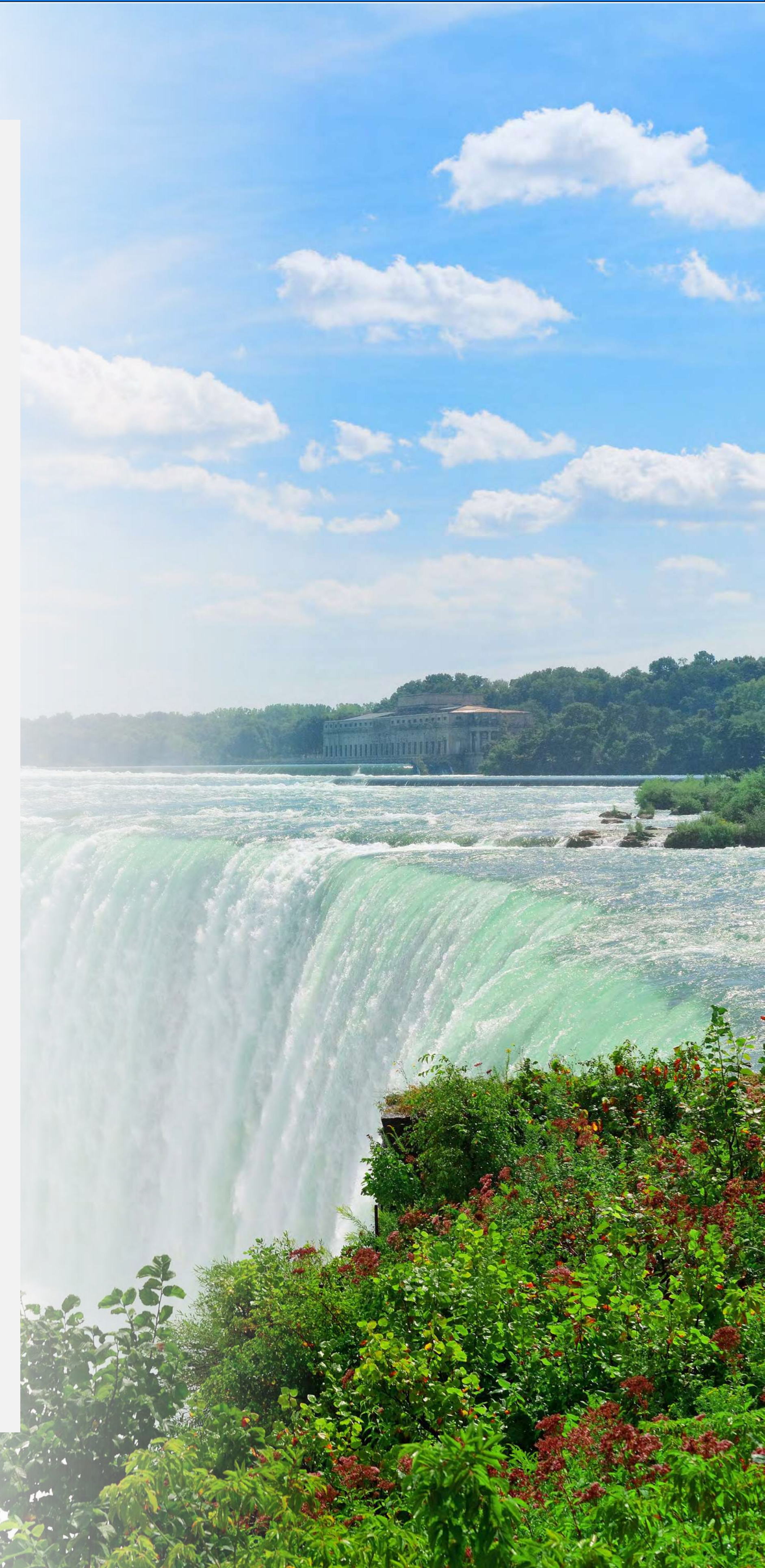


# Land Acknowledgement

Atura Power respectfully acknowledges that the land on which the City of Niagara Falls sits is the ancestral land of many generations of Indigenous Nations, who have been here since time immemorial.

Today, this land continues to be home to many Indigenous Peoples, including the Hatiwendaronk, the Haudenosaunee, and the Anishinaabe, including the Mississaugas of the Credit First Nation as well as non-Indigenous settlers from a variety of backgrounds. There are many First Nations, Métis, and Inuit people from across Turtle Island that live and work in Niagara today. As a community, we have a shared responsibility for stewardship of the land on which we live and work.

Atura Power is committed to fostering positive and mutually beneficial relationships with Indigenous Peoples and communities across Ontario, and work in allyship toward respective community goals and objectives, in peace, respect, and friendship.



# About Atura Power

## Atura Power's Fleet of Generation Assets

A subsidiary of Ontario Power Generation (OPG), Atura Power owns and operates Ontario's largest fleet of combined-cycle gas turbine power plants



02

Halton Hills  
Generating Station  
Capacity 683 MW



03

Portlands Energy Centre  
Capacity 550 MW



01

Brighton Beach  
Generating Station  
Capacity 570 MW

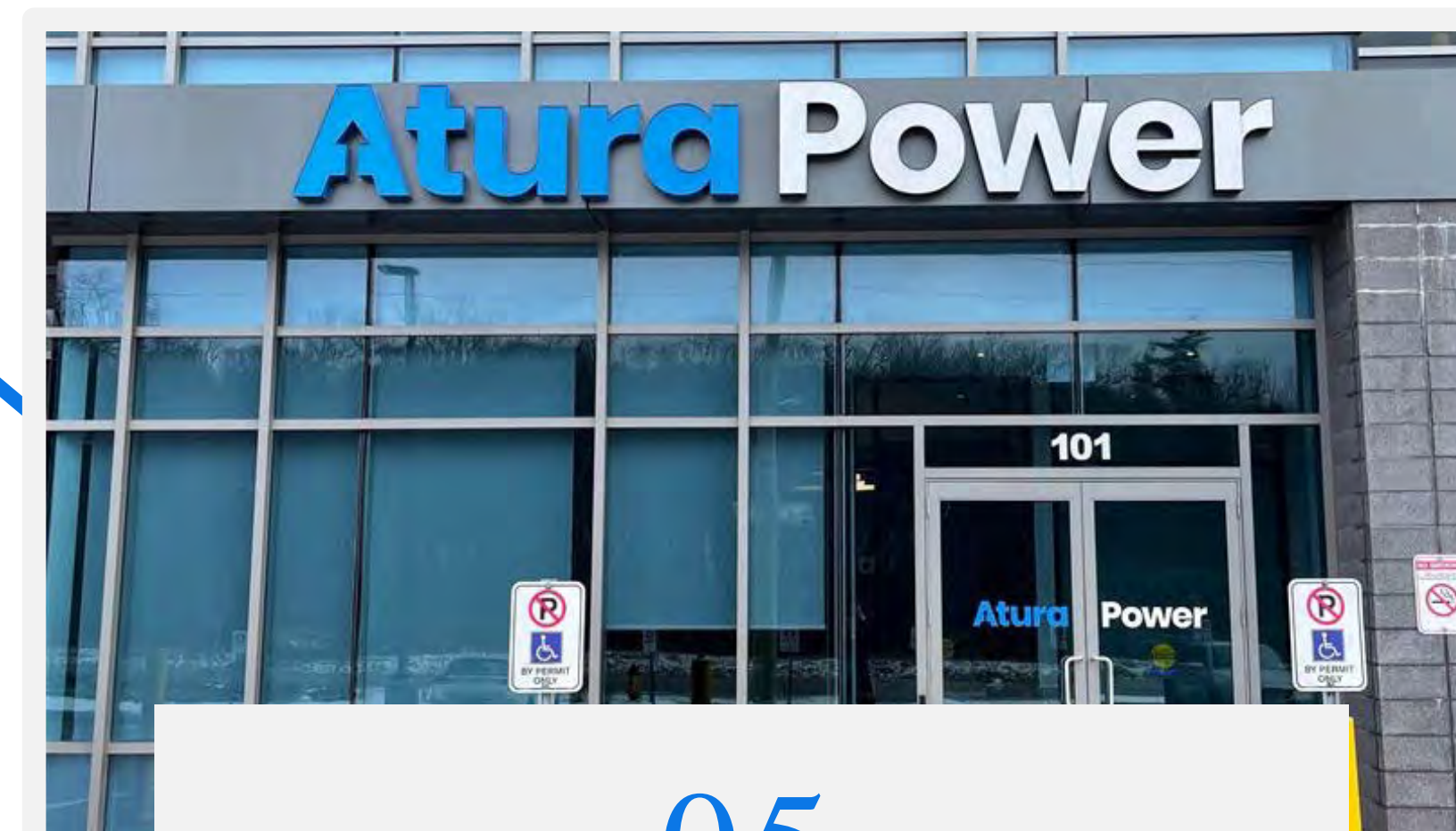
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Oakville Head Office

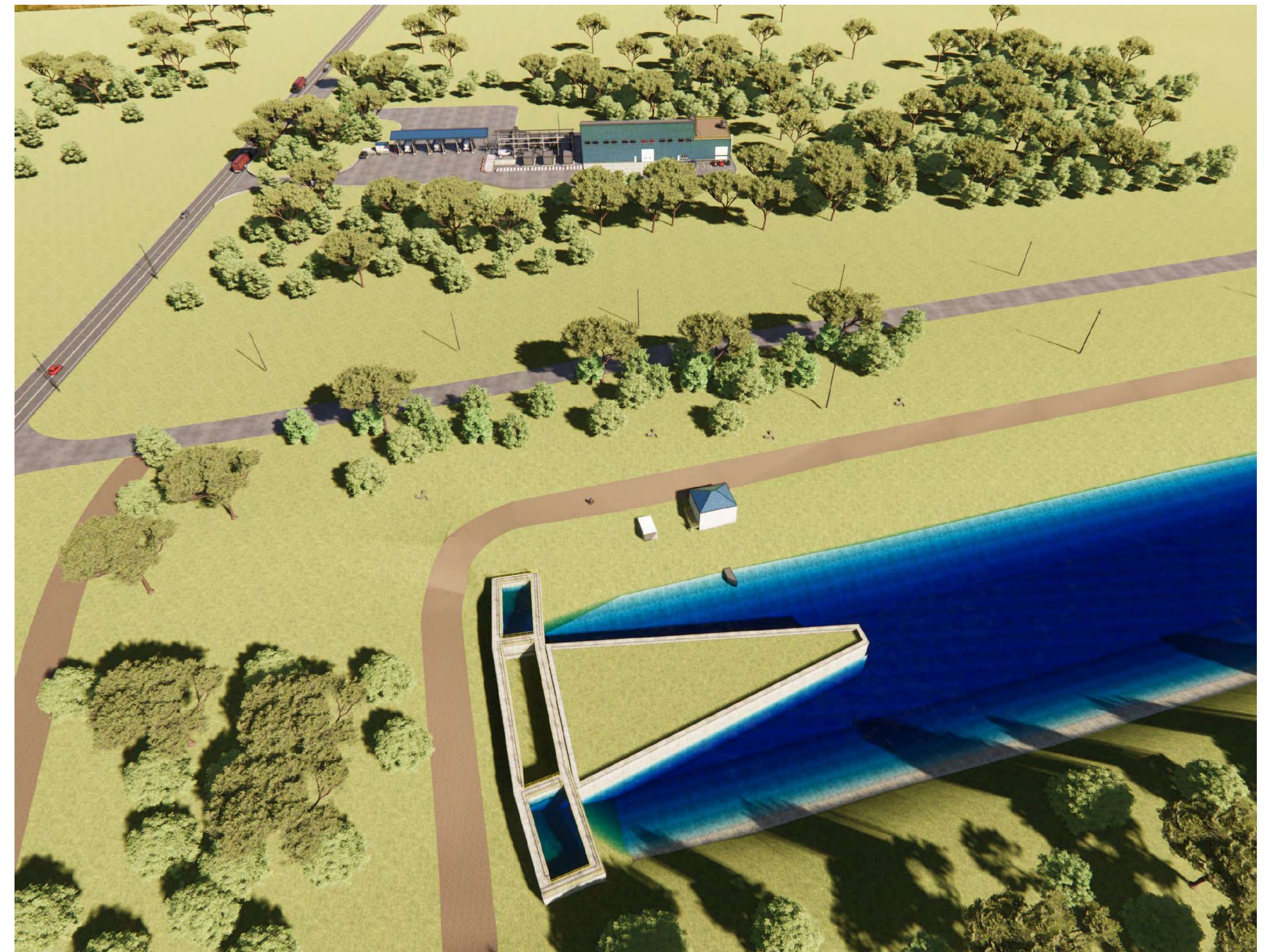


04

Napanee Generating Station  
Capacity 900 MW

# Project Need and Benefits

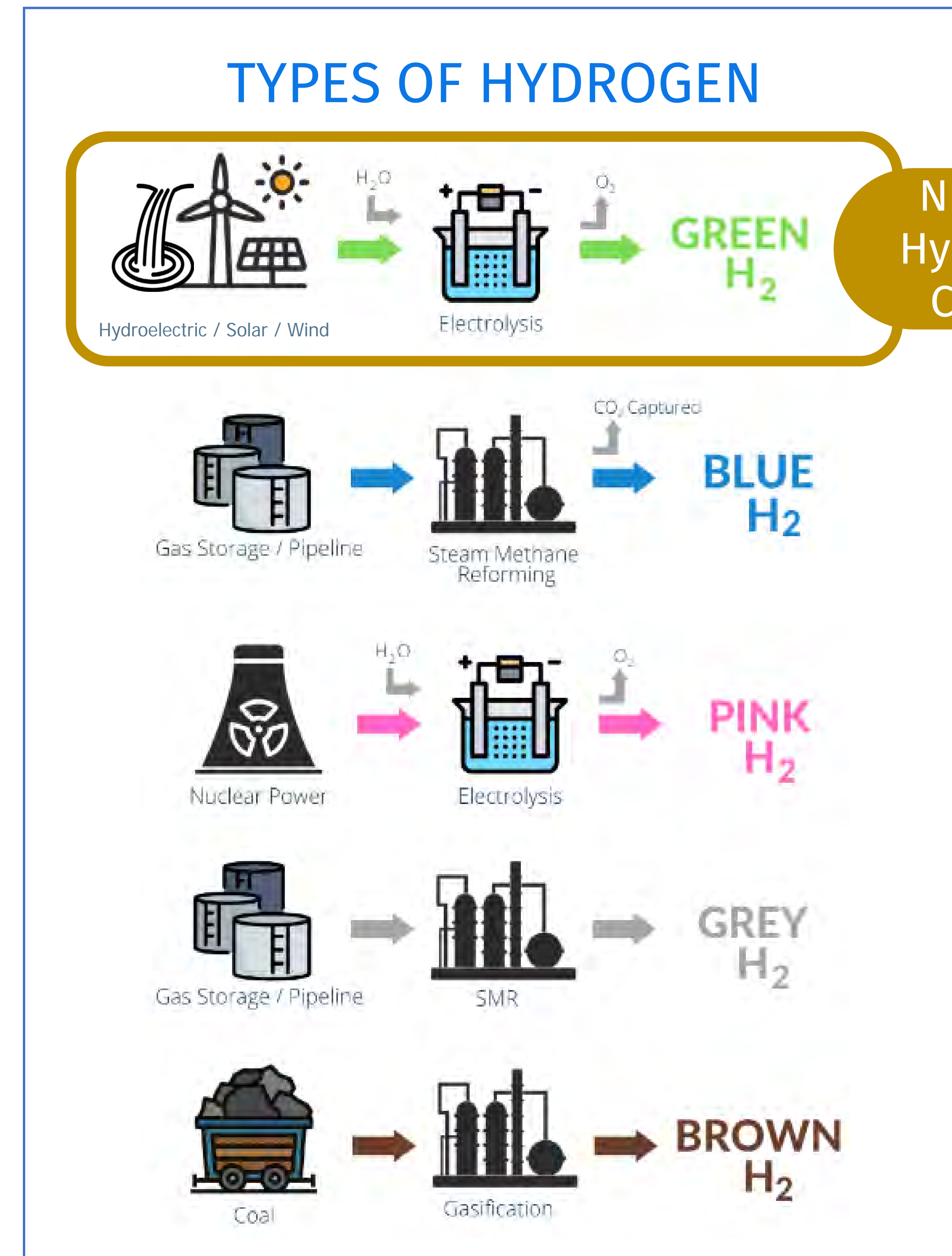
- Leverage Ontario's clean electricity to produce low-carbon hydrogen and provide grid regulation services
- Low-carbon hydrogen will assist in the reduction of greenhouse gases across the economy
- Advance and develop Canada and Ontario's strengths: manufacturing, hydrogen knowledge, skilled construction, etc.
- Economic growth: jobs, investment and technological advancement
- Cleaner air: 35% of greenhouse gas emissions in Ontario are due to transportation



# About Hydrogen

## Hydrogen:

- a low-carbon energy source
- has the highest energy density per unit mass of any source
- the most abundant substance on Earth
- when combusted with oxygen produces only water
- a clean and safe alternative to displace natural gas and reduce / offset emissions in a variety of applications:
  - industrial processes
  - transportation
  - power generation
  - heating



# About the Project

- Ontario's largest green hydrogen production facility
- The facility will use electrolysis technology to split water into hydrogen and oxygen molecules
- Powered by renewable electricity directly from the nearby OPG Sir Adam Beck II Generating Station
- The 20 MW facility will produce up to 2,000 tonnes/year of hydrogen; the equivalent of the reduced emissions from 5,500 cars annually



# Description of the Project

- An electrolyzer will use clean electricity from Sir Adam Beck II Generating Station to extract hydrogen from water molecules using an electric current
- The facility will safely produce, compress and load hydrogen into mobile tube trailers for use by regional industry and blending at Halton Hills Generating Station

## Niagara Hydrogen Centre

- Four 5 MW electrolyzers
- Municipal water and sewage connections
- Compressors
- Tube trailer loading stations



## Medium Voltage Distribution Line

- 3.5 km, 27.6 kilovolt (kV) electricity distribution line from the proposed substation to the Niagara Hydrogen Centre



## Tunnel Outlet Canal Pumphouse

- Supply of cooling water during hydrogen production
- Draw and return water from the existing OPG tunnel outlet canal



## High Voltage Electrical Substation

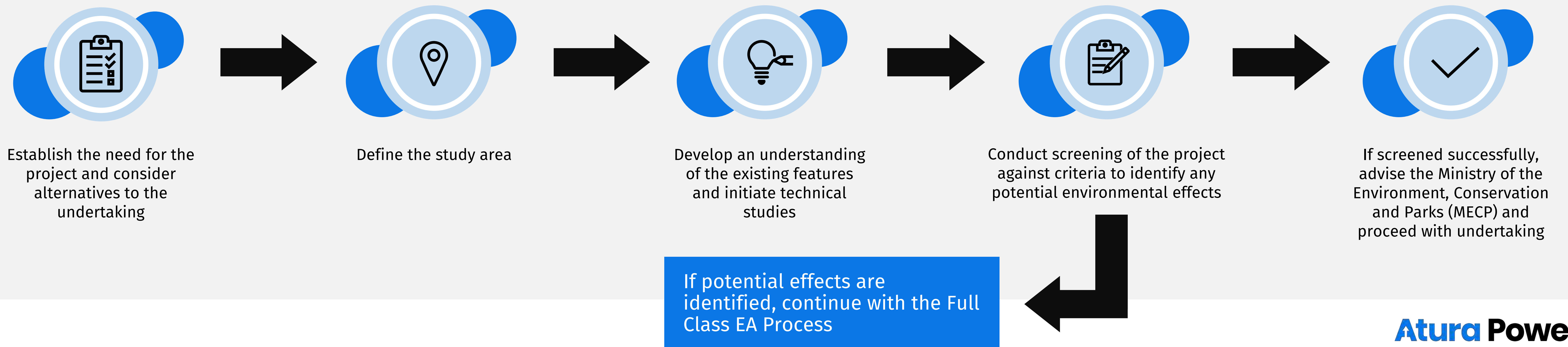
- Connection to OPG's existing 230 kV transmission system between Sir Adam Beck II Generating Station and Hydro One's high-voltage switchyard



# Environmental Assessment Process

- The hydrogen facility does not trigger environmental assessment requirements under the Ontario *Environmental Assessment Act*
- The transformer substation is subject to the Ontario Class Environmental Assessment (Class EA) for Minor Transmission Facilities as it will have a voltage level of between 115 kV and 500 kV
- Under this Class EA, projects can follow a screening assessment or undergo a full Class EA
- The Class EA screening process is being undertaken
- Technical studies, as well as public and Indigenous engagement are underway to understand existing environmental features and support a Class EA screening of potential project effects

## Class EA Screening Process



# Technical Studies & Existing Environmental Conditions

- The following technical studies have been completed to inform the project design, characterize existing environmental features, undertake the Class EA screening process, and to obtain approvals from government regulatory agencies:
  - Ecological and Species at Risk Assessment
  - Stage 1 and 2 Archaeological Assessment
  - Stage 2 Archeological Assessment
  - Heritage Impact Assessment
  - Phase One and Two Environmental Site Assessments



Indigenous communities participated in the monitoring of the ecological and archaeological field assessments for this project

# Screening of Potential Project Effects

## Environmental Components



### Land Use and Policy

#### Effects Management:

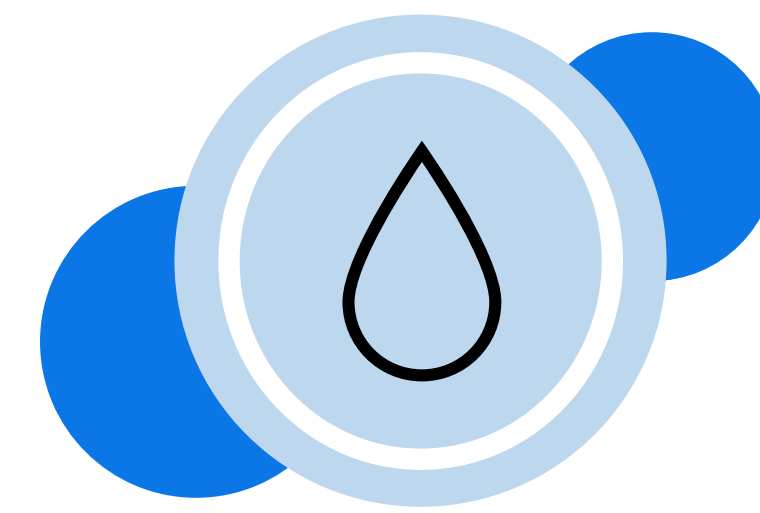
- The project site is located on land owned by OPG that is zoned Open Space, in accordance with City of Niagara Falls Zoning By-law 79-200.
- This property will be developed in accordance with By-law 79-200, where the provisions will not prevent the use of any land or the erection or use of any building or structure for the purpose of public service by Atura Power



### Air and Acoustics

#### Effects Management:

- The project will not measurably increase ambient noise levels or impact air quality
- Noise modelling has been completed for all project components
- The hydrogen production process will vent only oxygen as a byproduct to the atmosphere



### Stormwater, Hydrological and Hydraulic Resources

#### Effects Management:

- The Stormwater Management Plan will be prepared in accordance with all municipal, regional, and/or MECP requirements and is subject to regulatory review and approval
- Cooling water use will be approved through the MECP Permit to Take Water approvals process and a water taking agreement from OPG
- Hydrogen production process water will come from municipal supply



### Natural Heritage and Ecology

#### Effects Management:

- Species at Risk screening and studies have been completed
- MECP Species at Risk branch has agreed with Atura Power's Information Gathering Form identifying no impacts to Species at Risk as a result of the project

# Screening of Potential Project Effects

## Environmental Components

### Agricultural Lands and Operations

#### Effects Management:

- The project site is located on land that is not defined as Prime Agricultural Lands, Specialty Crop Areas, or Canada Land Inventory Classes 1, 2 and 3.
- This area is outside of The Greenbelt

### Cultural Heritage

#### Effects Management:

- A Heritage Impact Assessment has been completed
- Cultural heritage resources were identified and will not be impacted by the project
- No changes are being made to any of the civil or structural elements of the Provincially Significant Sir Adam Beck I Generating Facility

### Archaeological Resources

#### Effects Management:

- An archaeological field study has been completed by licensed archaeologists with monitoring from Indigenous community members
- Stage 1 and 2 reports have been accepted for all sites by the Ministry of Citizenship and Multiculturalism
- Stage 3 reports are under review for three sites

### Community Services and Facilities

#### Effects Management:

- The project will utilize water and sewage services from the City of Niagara Falls
- Water and sewer use will be approved under the Municipal Services Permit
- Renewable electricity for the facility will be provided directly from the Sir Adam Beck II Generating Station

### Neighbourhoods and Community

#### Effects Management:

- The land to be used for the project is not zoned for residential purposes or sensitive land uses, and is currently within an access controlled, fully fenced, industrial power generation complex, with no direct access to the public
- No significant change to the social structure or demographic characteristics of the surrounding neighbourhood or community is expected

### Landscaping and Visual Aesthetics

#### Effects Management:

- This project will have minimal effects on the aesthetics of the surrounding area
- The hydrogen production facility will be set back from Whirlpool Rd.
- There is currently no public access to this area and it is located within a larger industrial power generation complex

# Permits & Approvals

## **In addition to the Class EA screening process, the following major environmental permits and approvals are anticipated for the project:**

- Environmental Compliance Approvals for industrial sewage, noise and air emissions
- Department of Fisheries and Oceans Request for Review on water changes from cooling water intake structure has been accepted
- Species at Risk Habitat Review for the project site has been accepted by the Ministry of Environment, Conservation and Parks
- Building Permit and Municipal Services Permit with the City of Niagara Falls
- Archaeological Assessment with the Ministry of Citizenship and Multiculturalism
- Heritage Impact Assessment with the Ministry of Citizenship and Multiculturalism
- Permit to Take Water has been submitted to the Ministry of Environment, Conservation and Parks for cooling water intake

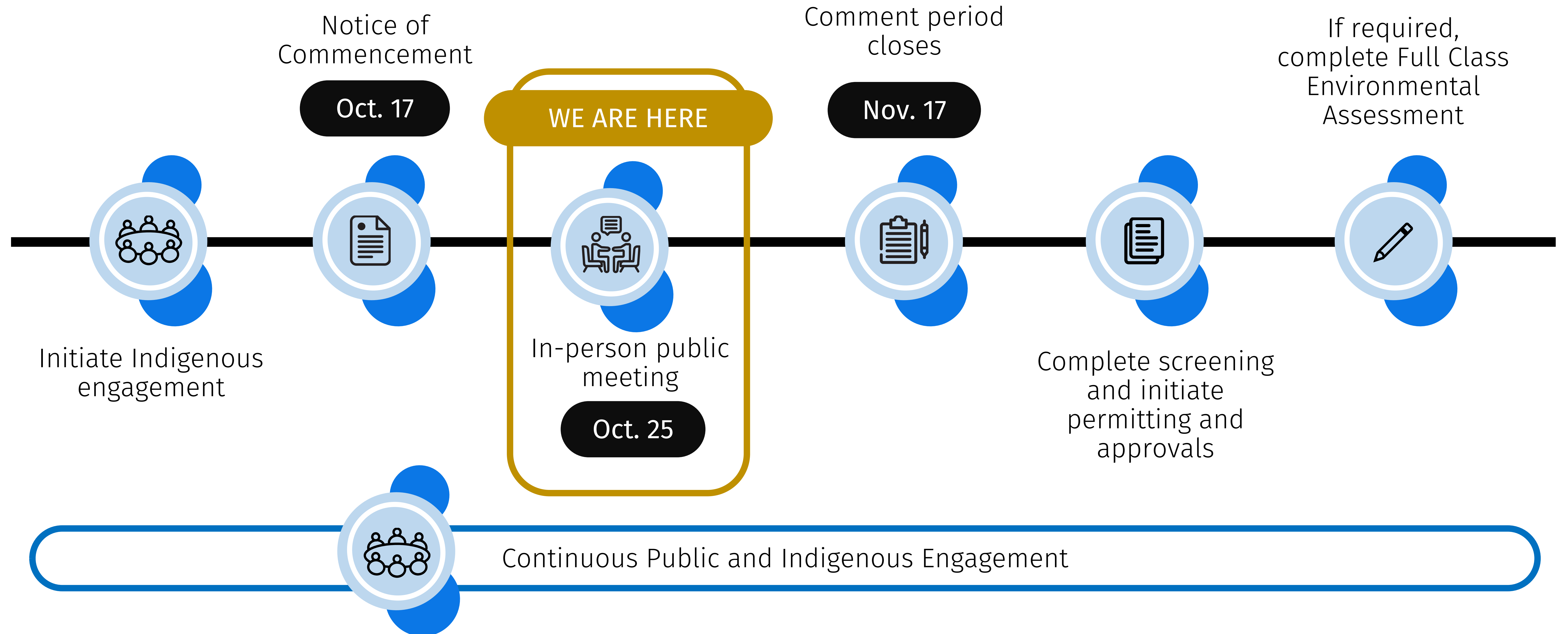


**Engagement with the appropriate agencies is underway to support future permitting and approvals.**

# Public & Indigenous Engagement

March – October

November - January



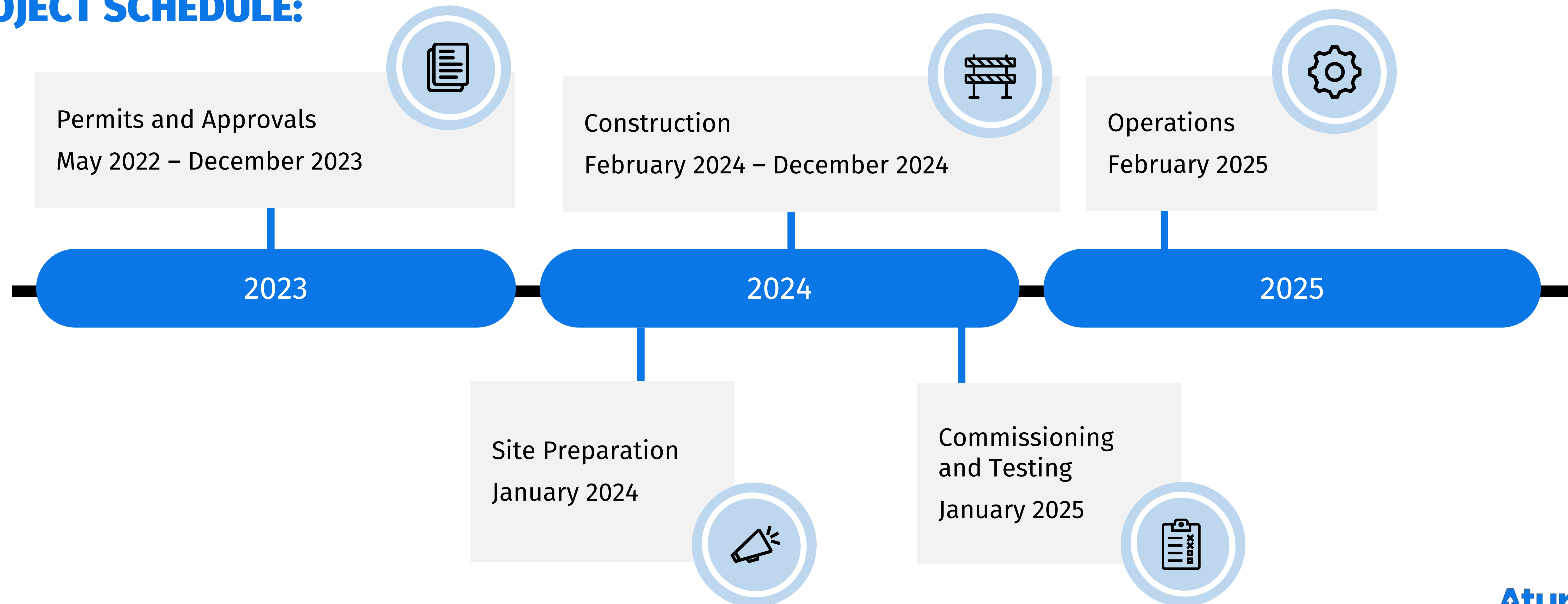
Comments or questions can be sent to: [niagarahydrogen@aturapower.ca](mailto:niagarahydrogen@aturapower.ca)

# Next Steps & Project Schedule

## NEXT STEPS:

- Summarize and respond to feedback received following this public meeting
- Complete field work and technical studies as part of the Class EA screening, permitting and approvals

## PROJECT SCHEDULE:



# Thank You for Attending!

**We appreciate the opportunity to share information on the Niagara Hydrogen Centre.**

## **We want to hear from you!**

We value your feedback and want to hear what you think. Please complete a comment form before you leave or send it to us by Friday, November 17, 2023.

**Email:** niagarahydrogen@aturapower.com

**Mail:** 1415 Joshuas Creek Drive, Unit #101, Oakville ON L6H 7G4

If you'd like more information, please email the project team or visit the project webpage:



[www.aturapower.com/niagarahydrogencentre](http://www.aturapower.com/niagarahydrogencentre)