Atura Power

# Plain Language Summary – Initial Project Description

## Riverside Generating Station Project

SEPTEMBER 2025

# Plain Language Summary – Initial Project Description

## Riverside Generating Station Project

Atura Power

**PREPARED FOR:**

Atura Power
1415 Joshuas Creek Drive, Unit 200
Oakville, Ontario  L6H 7G4

**PREPARED BY:**

SLR Consulting (Canada) Ltd.
100 Stone Road West, Suite 201
Guelph, ON  N1G 5L3

# Land Acknowledgement

Atura Power respectfully acknowledges that the proposed Riverside Generating Station will be located on the traditional territory of the Anishinaabeg peoples, including the Ojibwe, Odawa, and Potawatomi Nations, who form the Three Fires Confederacy.

This land is part of the territory covered by Treaty 29 and is home to many Indigenous Nations who have cared for these lands and waters for generations and continue their responsibilities as stewards to this day.

We honour their enduring presence, knowledge systems, and cultural resilience. As we live and work on these lands, we are reminded of our shared responsibility to act as respectful stewards, to listen to Indigenous voices, and to uphold our responsibilities with humility, care, and accountability.

Atura Power is committed to building respectful, meaningful, and mutually beneficial relationships with Indigenous Peoples and communities across Ontario — in the spirit of peace, friendship, and trust.

# Table of Contents

# Figures

# Tables

# Acronyms and Abbreviations

| | |
|---|---|
| °C | degrees Celsius |
| µg/m³ | micrograms per cubic metre |
| AAQC | Ontario Provincial Ambient Air Quality Criteria |
| AMFN | Aamjiwnaang First Nation |
| ANT | Anthropogenic |
| CAAQS | Canadian Ambient Air Quality Standards |
| CEMP | Construction Environmental Management Plan |
| CFN | Caldwell First Nation |
| CKSPFN | Chippewas of Kettle and Stony Point First Nation |
| COTTFN | Chippewas of the Thames First Nation |
| $CO_2$ | Carbon Dioxide |
| $CO_2e$ | Carbon dioxide equivalent units |
| CO | Carbon Monoxide |
| CTG | Combustion Turbine Generator |
| CUM1 | Mineral Cultural Meadow |
| CUP | Cultural Plantation |
| CUW1 | Mineral Cultural Woodland |
| dBA | A-weighted decibels |
| DNC | Delaware Nation Council |
| ECA | Environmental Compliance Approval |
| ECCC | Environment and Climate Change Canada |
| ELC | Ecological Land Classification |
| ESC | Erosion and Sediment Control |
| GHG | Greenhouse Gas |
| ha | hectare(s) |
| HE | Cultural Hedgerow |
| HHV | Higher Heating Value |
| Hydro One | Hydro One Networks Inc. |
| IAA | *Impact Assessment Act* |
| IAAC | Impact Assessment Agency of Canada |
| IESO | Independent Electricity System Operator |
| IPD | Initial Project Description |
| kV | kilovolt |
| km | kilometre(s) |
| LHV | Lower Heating Value |
| L/day | Litres per day |
| LSA | Local Study Area |
| LT2 RFP | Long Term 2 Request for Proposals |

| | |
|---|---|
| m | metre(s) |
| MAM2 | Meadow Marsh |
| masl | metres above sea level |
| MCM | Ontario Ministry of Citizenship and Multiculturalism |
| MECP | Ontario Ministry of the Environment, Conservation and Parks |
| $MJ/m^3$ | Megajoules per cubic meter |
| MNO | Métis Nation of Ontario |
| MOEE | Ontario Ministry of Energy and Electrification |
| MDN | Munsee-Delaware Nation |
| mm | millimetres |
| MW | megawatt(s) |
| $NF_3$ | Nitrogen trifluoride |
| $NO_X$ | Nitrogen Oxides |
| $NO_2$ | Nitrogen Dioxide |
| $N_2O$ | Nitrous Oxide |
| ONTT | Oneida Nation of the Thames First Nation (Onyota'a:ka) |
| OP | Official Plan |
| OPG | Ontario Power Generation |
| OWS | oil/water separator |
| O. Reg. | Ontario Regulation |
| PA | Project Area |
| PFC | Perfluorocarbons |
| $PM_{2.5}$ | Fine Particulate Matter |
| RAP | Reconciliation Action Plan |
| SAEHP | Sarnia Area Environmental Health Project |
| SAR | Species at Risk |
| SLR | SLR Consulting (Canada) Ltd. |
| $SF_6$ | Sulphur hexafluoride |
| $SO_2$ | Sulphur dioxide |
| SWM | Stormwater Management |
| TS | Transformer Station |
| TWh | terawatt-hour(s) |
| WIFN | Walpole Island First Nation |

# Part A: General Information

This document has been prepared in accordance with the *Impact Assessment Act* (IAA) (2019) and the "Guide to Preparing an Initial Project Description and a Detailed Project Description" (2024).

This document is the plain language summary of the Initial Project Description (IPD) for the Riverside Generating Station (the Project).

## 1. Project Information

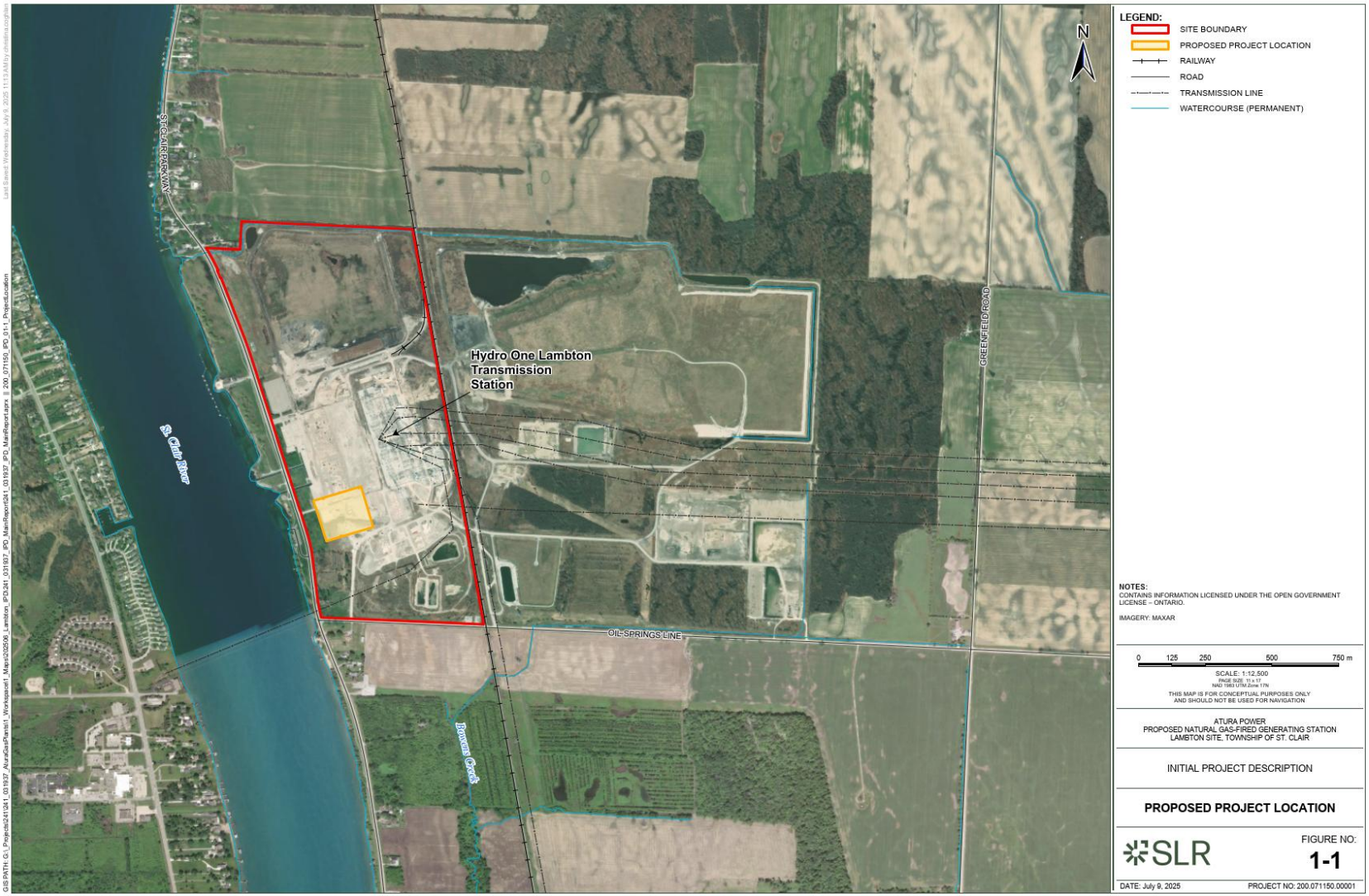
Atura Power plans to build a new natural gas power plant called the Riverside Generating Station. It will be built on part of the old Lambton Generating Station site, which used to run on coal but was shut down in 2013 and later torn down.

The new plant will produce about 500 megawatts of electricity. It will use a simple gas turbine system to generate electricity.

Atura Power plans to submit this project to Ontario's electricity planning agency (IESO) as part of a competitive process. If selected, the plant could begin operating by May 1, 2030.

The site is about 16 kilometres south of Sarnia, in St. Clair Township. It was chosen because it is already zoned for industrial use, has access to natural gas, and is close to communities that need more electricity. The land is owned by Ontario Power Generation and is bordered by roads, a railway, and the St. Clair River.

## Figure 1-1: Proposed Project Location



# 2. Proponent Information

Atura Power plays a key role in Ontario's electricity system by generating safe and reliable electricity.

Atura Power was established in 2019 as a wholly-owned subsidiary of OPG. The Company is the largest operator of gas-fired power plants in Ontario. Its current portfolio includes the following natural gas generating stations:

- Brighton Beach Generating Station (540 MW);
- Halton Hills Generating Station (710 MW);
- Napanee Generating Station (900 MW); and
- Portlands Energy Centre (550 MW).

Atura Power is also diversifying its fleet by actively advancing projects in green hydrogen and battery energy storage, and exploring solar technology as an additional renewable opportunity. These projects and activities are not associated with this project.

## 2.1 Proponent Name and Information

Portlands Energy Centre L.P. (doing business as Atura Power) or an affiliate
200-1415 Joshua Creek Drive
Oakville, ON  L6H 7G4

## 2.2 Primary Representative

Beatrice Ashby, RPP, MCIP, MES
Project Manager, Atura Power
(905) 483-6370
Beatrice.Ashby@aturapower.com

## 2.3 Project Team

Atura Power contracted SLR Consulting Ltd. (SLR) to develop this document with the support of the following key contributors:

- Engineering and Design: Burns & McDonnell Canada Ltd.;
- Engagement: Avaanz Ltd.;
- Archaeology: Archaeological Research Associates Ltd.; and
- Land Use Planning: MacNaughton Hermsen Britton Clarkson Planning Limited

# 3. Municipal and Public Engagement Summary

## 3.1 Municipal Engagement

The following municipal agencies were consulted:

- St. Clair Township
- City of Sarnia
- County of Lambton

### 3.1.1 Overview of Municipal Engagement

Municipal outreach and engagement continue with the host community of St. Clair Township, the broader Lambton County, (including the City of Sarnia), and both provincial and federal parliamentary representatives for the Sarnia-Lambton region.

Atura Power initiated Project-specific information sharing and relationship building with St. Clair Township staff and elected officials in early 2025. This built upon previous engagement in late 2024 by Atura Power's parent company, OPG, regarding the potential redevelopment of the Lambton site for electricity generation purposes and addressing future demand forecasts in Ontario.

Engagement activities specific to the Project commenced in March 2025 with an introductory presentation to the Mayor of St. Clair Township and municipal staff. This was an opportunity to share Atura Power's interest in submitting a proposal for the Project under the IESO LT2 RFP procurement process and solicit feedback on how best to engage the broader team of staff and elected representatives (i.e. Council). Since that time, Atura Power continues to engage in two-way dialogue with St. Clair Township and regularly provides Project updates as it pertains to schedules, milestones, engagement, on-site activities, and more.

To date, Atura Power has provided the following information to St. Clair Township:

- Notifications describing anticipated fieldwork on the Project site;
- A summary of Atura Power's engagement strategy and plans regarding the IESO LT2 RFP procurement process;
- A presentation summarizing the proposed Project description;
- The Project notice and an invitation to a public meeting*;
- A summary of the public meeting including materials and topics of interest raised by constituents,
- A preliminary copy of the Riverside IPD, and
- Assorted documents as required by the IESO LT2 RFP procurement process.

**Note, materials were also shared with neighbouring City of Sarnia and County of Lambton municipal leaders.*

In May 2025, Atura Power shared a presentation of the proposed Project to St. Clair Township Council. The presentation included:

- Overview of IESO's LT2 RFP procurement process;
- Summary proposed Project description;
- Description of Project need;
- Proposed site location (including a map);
- Existing site features;
- Early fieldwork and technical studies;
- Indigenous engagement;
- Community engagement activities; and
- Proposed Project timeline.

In June 2025, Atura Power hosted a public meeting on the Project and invited municipal leaders from St. Clair Township and the broader Lambton County. Elected officials including the St. Clair Township Mayor, Deputy Mayor, two Council members (Wards 1 & 2), as well as the Chief Executive Officer of the Sarnia-Lambton Economic Partnership attended.

On July 14, 2025, municipal Council for St. Clair Township unanimously passed a motion to support the Project.

### 3.1.2 Key Concerns and Comments Raised by Municipalities

Atura Power is committed to engaging with municipal leaders to understand their interests and priorities as noted in Section 3.1.1. By working closely with St. Clair Township, Atura Power will better understand the priorities of municipal leadership and those of their constituents. This will ensure Atura Power advances plans and work in a manner that best meets the needs and interests of the host community through this Project.

Through early engagement efforts, the following questions and comments were raised by municipal leaders:

- Proposed capacity of the Project;
- Opportunity to pursue additional technologies on the Project site;
- Employment and procurement opportunities;
- Atura Power's existing gas portfolio and project management experience;
- Foreign vs domestic source of natural gas to be used during Project operations;

- Potential environmental effects related to the St. Clair River;
- Construction traffic considerations;
- Municipal water supply and wastewater discharge considerations; and
- Interest/desire to see the Project be awarded by the IESO and proceed beyond the LT2 RFP procurement process.

In general, municipal leaders engaged on the Project have noted strong support for the Project and expressed an eagerness to understand how they can assist with advancing the Project through the IESO procurement process and contribute to its success. This support included tabling a motion for a Municipal Support Resolution. It is acknowledged that engagement on the Project is in its early stages and municipal leaders will continue to provide further comments and/or initiate discussion regarding the proposed Project as it progresses.

### 3.1.3 Plans for Future Municipal Engagement

Atura Power is committed to building relationships and collaborating with municipal leaders and will continue to do so over the life of the Project. As the Project progresses, Atura Power will continue to share Project updates and information with St. Clair Township leaders through:

- Email correspondence;
- Project notifications;
- Project site visits;
- Virtual and/or in-person meetings with municipal leadership (including Council meetings);
- Updates to the Project webpage (e.g., Project timelines, access to a repository of Project-related documentation); and
- Other engagement activities as requested.

Atura Power will continue to support municipal engagement by providing timely responses to Project-related enquiries received by the Project team and/or via the Project email address. To support consistent information sharing with municipal contacts, Atura Power will continue to update the Project contact list to ensure any staff or elected officials who express interest in receiving Project notifications from Atura Power receive those materials.

Should Atura Power receive approvals to proceed with the Project, a Community Benefit Agreement with St. Clair Township will be implemented to ensure that the Project facility provides value for the host community and addresses local priorities longer term. To ensure comprehensive Project records and robust information sharing, Atura Power will track all engagement and communication with municipal leaders and include them as part of the Project record.

## 3.2 Public Engagement

In May 2025, Atura Power began an engagement program to provide the public with Project-specific information and collect and respond to feedback, questions and/or concerns. Atura Power initiated this engagement program by informing the public of preliminary Project planning activities. A summary of the key public engagement activities undertaken to date is provided below.

### 3.2.1 Overview of Public Engagement Activities

In May 2025, Atura Power distributed the Project notice to property owners and tenants surrounding the Project site boundary. The Project notice was also shared with the broader public through newspaper advertisements in *The Independent* and *The Sarnia Observer*. The Project notice included a description of the proposed Project, a map of the project site, and an outline of the IESO's LT2 RFP procurement process. An invitation to the upcoming public meeting, dedicated email address and a link to the Project webpage were also provided.

Potentially affected and interested Indigenous communities received a copy of the Project notice prior to the public release of the notice. Federal and provincial members of Parliament, locally elected leaders, municipal staff, and industry advocacy groups also received a copy of the Project notice and an invitation to Atura Power's public meeting.

In June 2025, Atura Power hosted in-person public meeting in St. Clair Township at the St. Clair Parkway Golf Course. An advertisement for the public meeting was shared via Atura Power's social media (LinkedIn) and promoted by St. Clair Township through social media (Facebook) and on the municipal homepage. The meeting featured display boards communicating project information and the Atura Power project team were available to answer questions and learn about local priorities as it pertains to the Project. Comment forms were made available to collect feedback from attendees and were responded to by a member of the project team following the event.

Approximately 55 participants attended the public meeting, including members of the public and nearby residents, industry advocacy organizations, members of local business, local and regional elected officials, and representatives from Indigenous communities.

Atura Power developed and maintains a public facing Project webpage, www.aturapower.com/riverside, with Project information and a contact form for feedback. Atura Power also maintains a stakeholder contact list of interested individuals and parties. This list is updated regularly and reviewed prior to distribution of Project notifications. It is also updated to include any individual who submits a comment or feedback to the comment form on the Project webpage or via the dedicated Project email address.

All comments and feedback received via the comment form on the Project webpage and the dedicated Project email address are responded to by a member of the Project team. Incoming comments and outgoing responses are all tracked and incorporated into an engagement database for record keeping purposes.

Implementation of the public engagement program is ongoing and will continue throughout the life of the Project (see Section 3.2.3).

### 3.2.2 Key Concerns and Comments Raised by Public

Atura Power is committed to meaningful public engagement, aiming to understand the interests and priorities of the community as they relate to the Project. Through ongoing dialogue, Atura Power seeks to deepen this understanding and ensure its approach and considerations incorporate these priorities as work advances.

- General themes of questions and comments received by the public during early engagement efforts include:
- Project details and timelines (including proposed technology);
- Site layout and technical design;
- Site operations;
- Environmental effects related to water, air, noise, traffic, and aesthetics;
- Engagement conducted to date and anticipated future engagement plans;
- Employment and procurement opportunities;
- Economic development and future development opportunities (including the exploration of additional technologies on site); and
- Local/regional industrial development.

Project engagement is still in its early stages and members of the public will continue to provide further comments and/or concerns regarding the proposed Project as it progresses.

### 3.2.3 Plans for Future Public Engagement

Atura Power is committed to building positive relationships with members of the public. As part of its ongoing public engagement program, Atura Power will continue to engage the public through engagement activities, which may include:

- **Project notifications:** invitations to public meetings, emails sharing anticipated Project activities or key milestones;
- **Public meetings:** public engagement events during which members of the public will be invited to learn more about the Project (e.g., through display boards and/or presentations), share questions or comments with the Atura Power Project team, and submit feedback via comment forms;
- **Updates to the Project webpage:** details regarding anticipated environmental and permitting processes, Project timelines, and copies of Project documentation available for public review; and

- Other related engagement activities.

Atura Power will also continue to support the local and regional community by providing timely responses to Project-related enquiries received via the Project email address.

To support the distribution of Project notifications, Atura Power and will continue to update the Project stakeholder contact list.

Atura Power will continue to track all engagement and communication with members of the public and include them as part of the Project record.

# 4. Indigenous Engagement

The following Indigenous communities have been engaged as part of the Riverside Generating Station Project (Project):

- Aamjiwnaang First Nation (AMFN)
- Caldwell First Nation (CFN)
- Chippewas of Kettle and Stony Point First Nation (CKSPFN)
- Chippewas of the Thames First Nation (COTTFN)
- Delaware Nation Council (DNC)
- Métis Nation of Ontario (MNO)
- Munsee-Delaware Nation (MDN)
- Oneida Nation of the Thames First Nation (Onyota'a:ka) (ONTT)
- Walpole Island First Nation (WIFN)

## 4.1 Overview of Engagement Activities to Date

### 4.1.1 Engagement Activities Prior to Riverside Generating Station Project

Engagement activities specific to the Project began in January 2025; however, Atura Power began the process of building relationships with potentially affected and interested Indigenous communities in May 2023, as part of engagement associated with the IESO Expedited Long-term 1 (LT1), LT1, and Same Technology Upgrades Request for Proposal procurement processes. Since then, Atura Power has continued to engage with communities through various activities

Atura Power has offered multiple engagement options to align with and respect each community's unique preferences and protocols. As a result, the frequency and format of engagement have varied, but generally included a combination of the following activities:

- Email notifications;

- Virtual and/or in-person meetings;
- Access to project-specific webpages with project descriptions and related resources;
- Direct contact with the Atura Power project team through dedicated project email addresses;
- Ad hoc meetings, as requested by communities; and
- Project site visits.

Atura Power has provided funding for community events and cultural gatherings and has participated in these events when invited by the communities.

Capacity funding and monitoring agreements have been developed in collaboration with communities to ensure they have the financial resources needed to participate in project-related activities, such as fieldwork and report reviews

Opportunities for Indigenous equity participation in the Project have been shared with several communities through ongoing engagement. Atura will continue working with all five treaty First Nations to explore potential economic partnerships and pathways for involvement in the Project.

Section 4.1.2 describes Atura Power's engagement activities with potentially affected and interested Indigenous communities specific to the Project, beginning in January 2025.

### 4.1.2 Engagement Activities Regarding the Riverside Generating Station Project

#### 4.1.2.1 Aamjiwnaang First Nation

Project-specific engagement with AMFN began January 16, 2025, with an email introducing the Project. Subsequent Project-specific engagement activities have included email exchanges and both in-person and virtual meetings. Topics of discussion have included meeting logistics, engagement protocols, capacity funding, monitoring agreements, and Project schedules. Project documents, including information on natural heritage assessment activities, were shared with AMFN as well as the meeting agenda and presentation materials.

An in-person meeting took place on February 28, 2025. Topics of discussion included an overview of the Project, potential partnership opportunities, and capacity funding. A virtual meeting took place on July 10, 2025, to discuss monitoring activities and engagement protocols. AMFN was also one of four Indigenous communities that participated in an in-person meeting on July 23, 2025, that included a Project update and group discussion regarding the development of the draft IPD. Priorities and areas of interest discussed during the meeting are described in Section 4.2.1.

AMFN has indicated interest in continuing to stay involved in the Project, with a particular interest in natural heritage. Engagement between Atura Power and AMFN is ongoing.

#### 4.1.2.2 Caldwell First Nation

Project-specific engagement with CFN began January 14, 2025, when Atura Power presented the Project during a site visit to the Brighton Beach Generating Station. Subsequent Project-specific engagement activities have included email exchanges and virtual meetings. Topics of discussion have included upcoming field studies, term sheets, capacity funding, monitoring agreements, and engagement with CFN's consultants. Project documents were shared with CFN including meeting agendas and presentation materials.

Virtual meetings regarding potential partnership opportunities took place on February 27, April 25, May 2, and June 17, July 16, and August 15, 2025. CFN was also one of four Indigenous communities that participated in an in-person meeting on July 23, 2025, that included a Project update and group discussion regarding the development of the draft IPD. Priorities and areas of interest discussed during the meeting are described in Section 4.2.1.

CFN has indicated interest in continuing to stay involved in the Project, with an interest in natural heritage and participating in future ecological field studies. Engagement between Atura Power and CFN is ongoing.

#### 4.1.2.3 Chippewas of Kettle and Stony Point First Nation

Project-specific engagement with CKSPFN began January 16, 2025, with an email introducing the Project. Subsequent Project-specific engagement activities have included email exchanges, virtual meetings, and an in-person career fair at CKSPFN on March 19, 2025. Topics of discussion have included meeting logistics, capacity funding, partnership opportunities, monitoring agreements, and economic development information such as vendor partnerships and supply chain management. Project documents were shared with CKSPFN as well as all meeting agendas and presentation materials.

Virtual meetings took place on January 28, 2025, March 5, 2025, April 24, 2025, May 5, 2025, and June 2, 2025. Meeting topics included an introduction to the Project and other potential projects; capacity funding; and updates on Project activities, including fieldwork, technical studies, and engagement milestones. Meeting topics also included discussions related to cumulative effects. CKSPFN has shared written feedback describing their interests and priorities related to cumulative effects. Atura Power and CKSPFN are working together to understand and discuss these interests.

CKSPFN was also one of four Indigenous communities that participated in an in-person meeting on July 23, 2025, that included a Project update and group discussion regarding the development of the draft IPD. Priorities and areas of interest discussed during the meeting are described in Section 4.2.1.

CKSPFN has indicated interest in continuing to stay involved and participate in the Project. Engagement between Atura Power and CKSPFN is ongoing.

#### 4.1.2.4 Chippewas of the Thames First Nation

Project-specific engagement with COTTFN began January 16, 2025, with an email introducing the Project. Subsequent Project-specific engagement activities have included email exchanges, virtual meetings, and planning for upcoming monitoring activities. Topics of discussion have included meeting logistics, capacity funding, monitoring agreements, Project schedules, and economic development through corporate partnerships. Project documents were shared with COTTFN including meeting agendas and presentation materials.

Virtual meetings took place on January 30, 2025, and April 25, 2025. Meeting topics included an overview of the Project, capacity funding, and partnership opportunities. COTTFN was also one of four Indigenous communities that participated in an in-person meeting on July 23, 2025, that included a Project update and group discussion regarding the development of the draft IPD. Priorities and areas of interest discussed during the meeting are described in Section 4.2.1.

COTTFN has indicated interest continuing to stay involved in the Project, particularly in monitoring and fieldwork participation for natural heritage surveys and archaeological activities. Engagement between Atura Power and COTTFN is ongoing.

#### 4.1.2.5 Delaware Nation Council

Project-specific engagement with DNC began January 16, 2025, with an email introducing the Project. Subsequent Project-specific engagement activities have included email exchanges in which Atura Power has shared Project information including upcoming fieldwork and technical studies. Project-specific comments have not been received from DNC to date; however, Atura Power will continue to engage with DNC and welcomes the community's participation in engagement activities.

#### 4.1.2.6 Métis Nation of Ontario

Project-specific engagement with MNO began February 12, 2025, with an email introducing the Project. Subsequent Project-specific engagement activities have included email exchanges in which Atura Power has shared Project information including upcoming fieldwork and technical studies, and the Project notice. Project-specific comments have not been received from MNO to date; however, Atura Power will continue to engage with MNO and welcomes the community's participation in engagement activities.

#### 4.1.2.7 Munsee-Delaware Nation

Project-specific engagement with MDN began January 16, 2025, with an email introducing the Project. Subsequent Project-specific engagement activities have included email exchanges in which Atura Power has shared Project materials including upcoming fieldwork and technical studies. Project-specific comments have not been received from MDN to date; however, Atura Power will continue to engage with MDN and welcomes the community's participation in engagement activities.

#### 4.1.2.8 Oneida Nation of the Thames First Nation Onyota'a:ka

Project-specific engagement with ONTT began January 16, 2025, with an email introducing the Project. Subsequent Project-specific engagement activities have included email exchanges in which Atura Power has shared Project information including upcoming fieldwork and technical studies. Project-specific comments have not been received from ONTT to date; however, Atura Power will continue to engage with ONTT and welcomes the community's participation in engagement activities.

#### 4.1.2.9 Walpole Island First Nation

Project-specific engagement with WIFN began January 16, 2025, with an email introducing the Project. Subsequent engagement activities have included email exchanges, virtual meetings, and planning for upcoming monitoring activities. Topics of discussion have included consultation protocols, project schedules, capacity funding, monitoring agreements, and participation in archaeological activities. Project documents were shared with WIFN including meeting agendas and presentation materials.

Virtual meetings took place on February 10, March 26, and June 13, 2025. Meeting topics included an overview of the Project and other potential projects; capacity funding; partnership opportunities; and updates on Project activities including fieldwork, technical studies, the environmental assessment process, and engagement milestones.

WIFN has indicated interest in continuing to stay involved in the Project, particularly in fieldwork monitoring and review of technical studies. Engagement between Atura Power and WIFN is ongoing.

## 4.2 Comments and Concerns Raised by Indigenous Communities

### 4.2.1 Project-specific Key Comments and Concerns Raised by Indigenous Communities

Atura Power is committed to engaging with communities to understand their interests and priorities. Atura Power continues to initiate meetings and other touch points with communities and through these means, are hopeful to learn what is important to communities and ways they may be able to address community priorities.

Through the early engagement efforts to date, the following priorities have been identified by potentially affected and interested Indigenous communities:

- Cumulative effects, specifically;
  - Air quality and human/environmental health,
  - Water quality and quantity, and
  - Continued land alienation and loss of restoration opportunities;
- Project timelines;

- Consultation requirements and engagement protocols;
- Regulatory processes;
- Capacity of communities to engage;
- Participation in fieldwork;
- Review of technical documents;
- Economic development;
- Sustainability; and
- Project alignment with existing energy mandates.

In July 2025, Atura Power organized an in-person meeting with interested Indigenous communities to share information on the proposed Project and associated Initial Project Description (IPD), gather feedback from communities on the draft IPD, and support relationship building between all meeting participants. Four communities, including AMFN, CFN, CKSPFN and COTTFN, participated in the meeting which was held in Windsor, Ontario, on July 23, 2025.

During the meeting, Atura Power provided a summary of the proposed Project description and relevant Project updates (e.g., recent fieldwork completed on site). Next, Atura Power provided an overview of the federal Impact Assessment process and summarized preliminary content in the draft IPD. At this time, Atura Power invited participants to provide their feedback on the development of the IPD and draft content. Participants identified the following priorities and areas of interest for consideration in the IPD:

- Factors influencing Project site selection;
- Consultation and collaboration to realize mutual benefits;
- Archaeological findings on site and related approaches to risk management;
- Cumulative effects from the perspective of ‘the spirit of the land’ to Anishinaabe people;
- Air quality assessment and methodology;
- Wildlife and wildlife habitat compensation;
- Opportunities for carbon offsetting (e.g., tree planting); and
- Socio-economic benefits and opportunities for Indigenous communities.

Atura Power appreciates the feedback participants provided to inform the development of the IPD and are grateful for the ongoing opportunities to share information and support relationship-building with communities and between communities.

Atura Power acknowledges that engagement on the Project is in its early stages and not all communities have shared their comments and concerns (see engagement detailed by Indigenous community in Section 4.1.2).

Continued engagement with communities is a priority, with the goal of deepening Atura Power's understanding of each community's key priorities and interests related to the Project. Atura Power remains committed to maintaining open dialogue and building respectful, collaborative relationships as the Project progresses.

### 4.2.2 Comments and Concerns Raised by Indigenous Communities on Similar, Proximate Projects

The Project site and surrounding area is a focus for development, with several other projects undergoing studies and assessments. Due to the location of these initiatives, some proponents have undertaken engagement activities with several of the same Indigenous communities Atura Power is engaging with for this Project.

Based on a review of publicly available information, priority areas for some of the Indigenous communities engaged on projects that are similar or are in the same area include:

- Cumulative effects;
- Environmental effects (e.g., animals, birds, ecosystems, water and air quality, etc.);
- Treaty Rights;
- Sacred sites and culturally-significant locations;
- Integration of Indigenous Knowledge Systems;
- Regulatory processes for consultation and the participation of Indigenous rights holders
- Project timelines;
- Economic development, procurement, and employment opportunities for Indigenous communities;
- Social environment and required supports (e.g., population growth, housing, crime, mental health and well-being); and
- Emergency management planning.

Atura Power recognizes that these priorities neither represent a complete view of community interests nor are they directly applicable to the Project, however, they are noted here to acknowledge community interests that have been shared in publicly available materials.

## 4.3 Plans for Future Indigenous Engagement

Atura Power is committed to building relationships with potentially affected and interested Indigenous communities and will continue to engage as directed by these communities. Atura Power will continue to provide regular Project updates and notifications to ensure the consistent flow of Project information to communities. Relevant Project notifications and milestones will continue to be provided to communities in advance of the public.

For communities that have not yet established recurring meetings with the Project team, Atura Power will continue to offer regular engagement opportunities. They are open to adapting their approach and exploring alternative formats to align with each community's preferences and engagement protocols.

Atura Power will continue to engage with Indigenous communities through:

- Project notifications;
- Outreach regarding anticipated fieldwork;
- Site visits;
- Invitations to review Project-related documentation;
- Updates to the Project webpage (e.g., Project timelines, access to Project-related documentation);
- Community meetings; and similar activities,
- In-person meetings.

Atura Power will continue to work with communities to establish and implement capacity funding agreements. Atura Power has provided funding for community events and cultural gatherings and has participated in these events when invited by the communities. Atura Power understands that the level of interest and the degree to which each community may wish to participate in the Project varies and will remain flexible and open to adapting engagement approaches to suit community needs.

To ensure comprehensive Project records and robust information sharing, Atura Power will continue to track all engagement and communication with Indigenous communities and make these records available to Indigenous communities and the Agency, upon request.

As a primary energy supplier in Ontario, Atura Power is committed to advancing reconciliation through their inaugural Reconciliation Action Plan (RAP). As outlined in the RAP, Atura Power will seek to foster regular, not just required, collaboration and build respectful, mutually beneficial relationships with Indigenous communities based on trust, understanding, and shared priorities.

# 5. Regional Studies or Plans

According to the Impact Assessment Agency of Canada (IAAC), there are no regional studies being carried out under the IAA in the region where the Project is being proposed (Vypovska, pers. comm., 2025).

## 6. Strategic Assessments

The IAAC has identified the “Strategic Assessment of Climate Change” (revised October 2020) as a potentially relevant assessment to this Project (Vypovska, pers. comm., 2025). This study was conducted under Section 95(2) of the IAA. The intent was to provide “consistent, predictable, efficient and transparent consideration of climate change throughout the impact assessment process” (ECCC 2020). As it relates to this Project, the strategic assessment guides how proponents consider greenhouse gases (GHGs) in each phase of the impact assessment process and ensures a consistent approach to quantification of GHG emissions. See Section 23 for information on how GHG emissions were addressed for this Project based on the requirements and guidance within the strategic assessment.

# Part B: Project Information

## 7. Purpose, Need, and Benefits of the Project

The Riverside Generating Station will produce about 500 megawatts of electricity for Ontario. It’s being proposed as part of a competitive process to help meet the province’s growing electricity needs.

Ontario’s electricity demand is expected to grow by 75% by 2050 (IESO 2025). This increase is due to more people, more electric vehicles, and more electricity use in industries and farming (IESO 2024, 2025).

To prepare for the increasing demand, Ontario’s electricity system operator (IESO) has been running procurement programs to find new sources of electricity. These programs will meet the province’s needs until 2029 (IESO 2025). To plan for the years after that, IESO launched a new program called the Long-Term 2 Request for Proposals (LT2 RFP). It will secure electricity from sources like wind, solar, batteries, hydrogen, and natural gas.

Atura Power plans to submit this project to the LT2 RFP in December 2025. If selected, the new station would start operating by 2030.

Ontario needs some new natural gas power to avoid blackouts and keep the electricity system reliable. Renewable sources like wind and solar aren’t enough on their own, especially during peak times. Natural gas can quickly provide power when other sources can’t (IESO 2022b).

This project will help keep the lights on while Ontario builds more renewable energy. It will also support electric vehicles, industry, and farming.

Locally, the project will bring jobs, increase tax revenue, and reuse an old industrial site. Atura Power is also looking at ways to partner with Indigenous communities.

# 8. Physical Activities Regulations

The *Physical Activities Regulations* of the *Impact Assessment Act* lists the types of projects or activities that require assessment under the Act. Within the regulation, Section 30 of the physical activities schedule states:

- *The construction, operation, decommissioning and abandonment of a new fossil fuel-fired power generating facility with a production capacity of 200 MW or more.*

The Project is a proposed natural gas-fuelled power generating facility with a gross output capacity of about 500 MW. As the Project meets the conditions listed in the *Physical Activities Regulations*, an IPD must be provided to IAAC as the first step in the determination of whether an Impact Assessment is required. IPDs must meet the requirements of the *Information and Management of Time Limits Regulations.* This IPD has been prepared in accordance with that regulation.

The Project is not a component of a larger project that is not listed in the Project List.

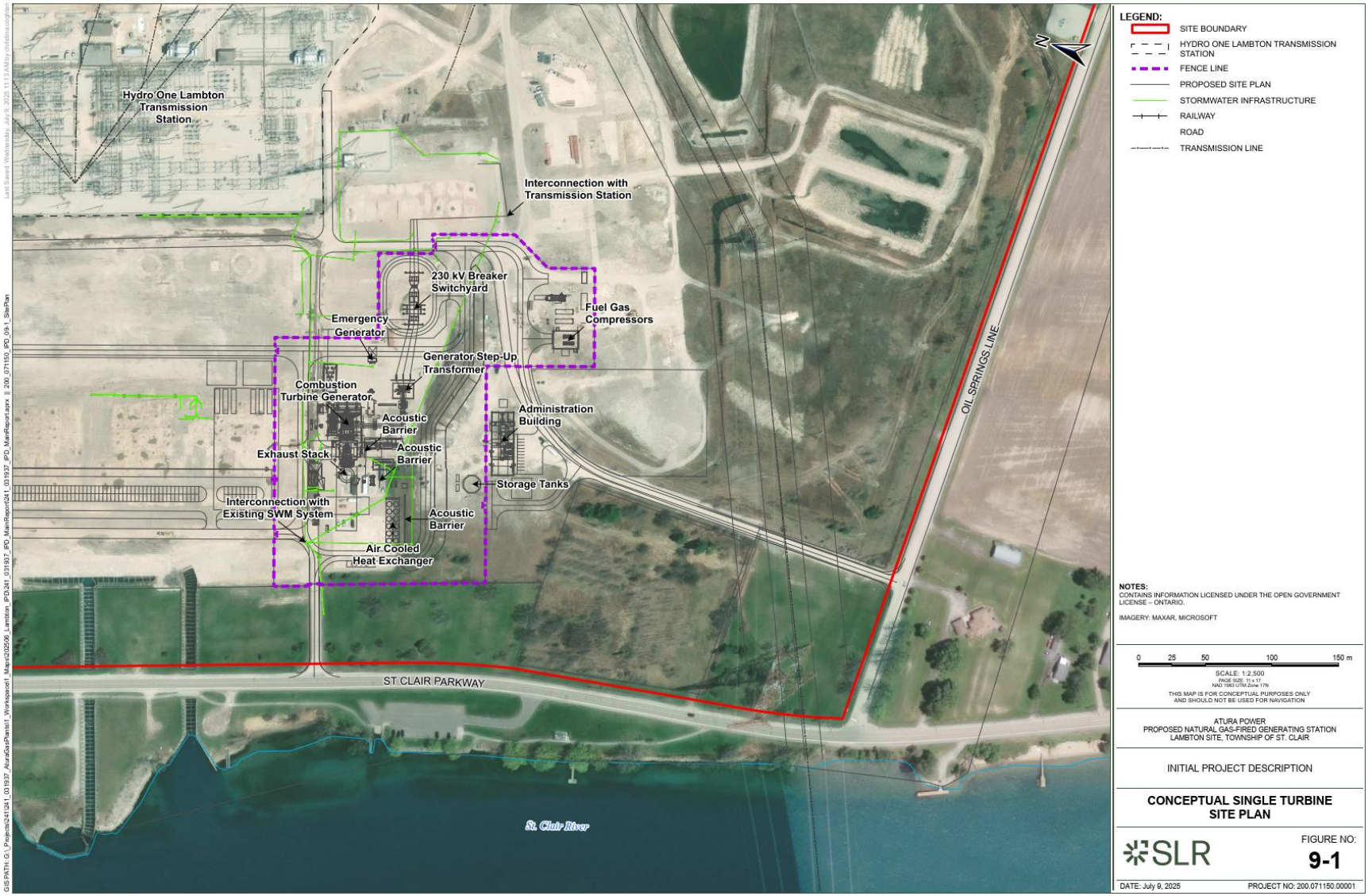
# 9. Project Activities Description

The project is a natural gas-fuelled simple cycle power generating station proposed on a portion of a brownfield site in St. Clair Township, County of Lambton, Ontario. The project includes one or more combustion turbine generators in simple cycle configuration with supporting equipment and systems. The project will connect to the provincial electricity grid via the adjacent 230-kilovolt (kV) Lambton Transformer Station (TS) owned by Hydro One Networks Inc. (Hydro One).

The following sections summarize the key project components and activities based on currently available information and preliminary project planning. Given the early stage of the project, some design decisions are not currently available, and therefore the descriptions below include options currently under consideration. The preliminary design and layout of the project is subject to change based on additional engineering and the results of future studies, engagement activities, and approval processes.

A conceptual site plan is shown based on a single gas turbine configuration in **Figure 9-1.**

## Figure 9-1: Conceptual Single Turbine Site Plan



## 9.1 Existing Structures and Activities

The Riverside Generating Station will be situated on a portion of the former Lambton Generating Station site. The former coal-fuelled generating station was shut down in 2013, with demolition and decommissioning of the site completed in December 2023. The site is currently vacant, with existing infrastructure limited to stormwater management features, site fencing and lighting.

Runoff from this area discharges directly to the St. Clair River without stormwater management controls. Runoff is collected in a series of sewer lines that daylight into several outlet channels along the bank of the St. Clair River. The Project area is collected via this local storm sewer network and outlets to southern-most outlet channel and subsequently into the St. Clair River.

The existing stormwater management system also services the adjacent Lambton TS, which is located within the OPG property boundary but owned and operated by Hydro One. The Lambton TS is currently in the process of being expanded by Hydro One as part of a separate project for Ontario regional and systemwide transmission needs.

Ongoing activities at the project site are associated with monitoring and maintenance of the operational stormwater facilities, periodic site inspections and groundskeeping.

## 9.2 Project Components

The primary project component is a new combustion turbine generator (CTG) that will generate about 500 MW of electricity. It will operate in a simple cycle configuration using natural gas as the primary fuel, and will incorporate an inlet air filtration system, evaporative cooling system, and an inlet heating system to maximize efficiency. A description of the project's electricity output capacity and the electricity generating process is provided in **Section 10**.

The remaining anticipated project components will include:

- Electrical Infrastructure – including connection to the Lambton Transmission Station; various medium- and high-voltage components required to meet electrical code, safety, and best practice requirements; transformers; and electrical servicing to the site for general uses.
- Natural Gas Infrastructure – including a new gas supply to the site, gas filtration, compressors, and a dewpoint heater.
- Infrastructure associated with supply of fresh and demineralized water.
- Stormwater management upgrades.
- Infrastructure associated with handling industrial and domestic sewage.
- Administration building and parking.
- Various other ancillary components including: site security, chemical storage, emergency response infrastructure, site lighting, and landscaping:

### 9.2.1 Temporary Construction Components

Temporary construction areas will be required for installation of project components, as well as standard uses such as material storage and equipment laydown, staging, construction trailers and worker facilities, and contractor parking. All temporary construction areas will be located within the OPG property and are currently anticipated to be located in areas that are currently paved and/or gravelled.

## 9.3 Incidental Components and Activities

This Project will also require several related components that may be the responsibility of others to enable operation of the facility, including:

- A connection to the Lambton Transmission Station
- Supply of natural gas through a new connection to be provided by a natural gas pipeline supplier
- Connection points and potential upgrades to existing water and wastewater infrastructure operated by the St. Clair Township.

## 9.4 Project Activities

### 9.4.1 Pre-Construction Activities

Pre-Construction includes all activities undertaken prior to the start of construction mobilization including construction planning and scheduling, obtaining required permits and approvals, and site surveying and utility clearances, including delineation of any sensitive areas to be avoided within the Project Site.

A Construction Environmental Management Plan (CEMP) will be developed prior to construction, which will address the planning and management of various activities including, but not limited to:

- Vegetation clearing and management;
- Wildlife encounters;
- Construction noise and vibration;
- Fugitive dust emissions/control;
- Spill prevention and contingency planning;
- Erosion and sediment control (ESC);
- Construction SWM and dewatering;
- Storage and handling of wastes, fuels, and chemicals;

- Soil handling and management, including excess soils and procedures in the event contamination is encountered;
- On and off-site traffic and road use; and
- Discovery of previously undocumented archaeological resources.

The CEMP will also include any mitigation commitments or conditions of approval associated with permitting and approval processes and the engagement program.

### 9.4.2 Construction Activities

#### 9.4.2.1 Site Mobilization

Before construction starts, the team will bring in temporary trailers for offices, break areas, and storage. They'll also set up safety barriers, fencing, lighting, and temporary services like power, water, and sanitation.

Materials and equipment will be delivered by road, rail, or sometimes by water. Some of the equipment will be very large and heavy, so deliveries will be carefully planned with local and provincial authorities.

#### 9.4.2.2 Early Works

The early work includes preparing the land and setting up basic infrastructure. This involves:

- Putting in erosion and sediment controls
- Installing temporary and permanent stormwater systems
- Clearing vegetation and removing topsoil in certain areas
- Grading the land to the right level
- Preparing roads and parking areas
- Doing excavation work (mostly shallow, but some deeper digging may be needed)
- Installing underground cables, pipes, and foundations
- Some areas will be restored and replanted after construction.

#### 9.4.2.3 Equipment Placement and Installation

Once the site is ready, the construction team will:

- Finish concrete work and place cables
- Use cranes to install large equipment
- Build scaffolding and steel structures
- Install piping, ductwork, and electrical systems

- Set up acoustic walls, lighting, and fencing

The administration building will be built using standard construction methods

#### 9.4.2.4 Post-Construction

After all major construction activities have been completed, final grade adjustments, finishing pavement of the permanent plant roads, and restoration of the areas disturbed by the construction activities will be completed. Landscaping features will be installed in applicable areas once the site has been restored and prepared for plantings.

#### 9.4.2.5 Commissioning and Testing

Commissioning and testing will be completed according to manufacturer instructions and regulatory requirements. The final commissioning process for the combustion turbine involves multiple startup and shutdown sequences, full-load operation for extended periods, and tuning and testing of the system. The commissioning period will confirm operational processes and procedures function as designed and will facilitate the transition of the Project from construction to operation.

### 9.4.3 Operation and Maintenance Activities

The Project will be operated and maintained with similar care and consideration as Atura Power's other facilities and will facilitate the protection, safety and well-being of the operations staff, neighbours, public, surrounding properties, and the environment.

Maintenance activities during the operation phase are expected to consist of:

- Scheduled maintenance such as routine inspections and servicing of equipment and ancillary components;
- Unscheduled and corrective maintenance such as responding to alarms and fixing/replacing equipment;
- System and equipment upgrades to ensure optimal performance;
- Operation and monitoring of the water and wastewater infrastructure in accordance with applicable approvals; and
- Vegetation maintenance and control, as required.

### 9.4.4 Decommissioning Activities

At the end of the project lifecycle, a decommissioning plan will be developed that will include applicable environmental protection standards at the time of decommissioning to ensure safe removal of project components.

Final site reclamation and revegetation plans will be developed in consideration of the desired end land use.

# 10. Project Production Capacity and Process

## 10.1 Maximum Production Capacity

The maximum output of a natural gas-fueled electricity generating facility is dependent on atmospheric conditions such as temperature, relative humidity, and elevation.

The Riverside Generating Station will be capable of generating an electrical output of about 500 MW. The specific CTG model will be selected as the project progresses.

## 10.2 Production Process Description

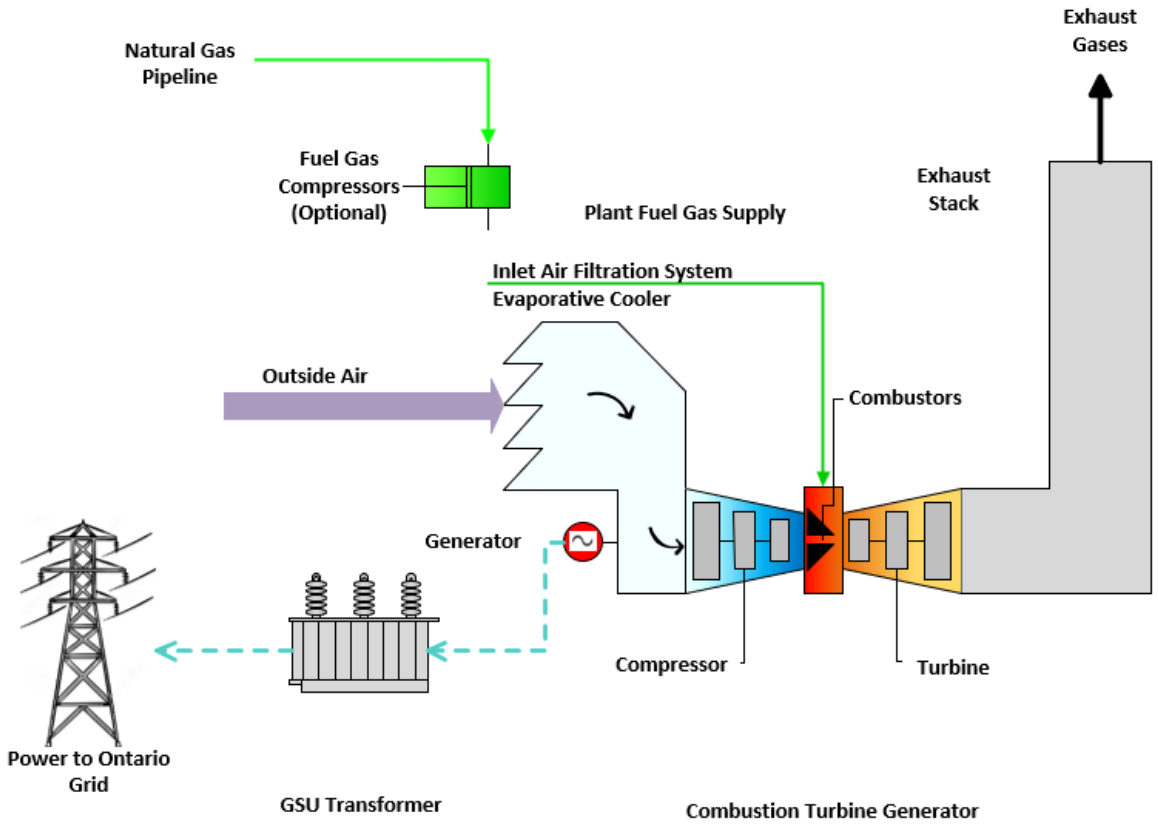
The natural gas-fuelled simple cycle power generating unit operates by compressing filtered ambient air within the compressor section of the CTG which is then supplied to the combustion section of the CTG where compressed natural gas fuel and air are mixed and ignited. The resulting high-temperature gases expand as they pass through the turbine blades, rotating the shaft and generating electricity.

Exhaust gases which are cooler and at lower pressure than the combustion section of the CTG exit the turbine section and flow into the vertical exhaust stack.

The electricity generated by the CTG is transformed to increase the voltage to 230 kV and transmitted to the interconnection point with the provincial electricity grid.

A process diagram for simple cycle electricity generation is provided in Figure 10-1.

Figure 10-1: Process Diagram




# 11. Anticipated Project Schedule

The Project schedule is outlined in **Table 11-1** below. As part of the IESO LT2 RFP process and contract requirements, this Project will be required to achieve commercial operations by 2030.

**Section 9** provides further information regarding the proposed activities, and **Section 18** provides further information regarding the required environmental approvals and permits.

Table 11-1: Anticipated Project Schedule

| Activity | Timeline | Timeline (no IA*) |
|---|---|---|
| **Pre-construction** | | |
| **IESO LT2 Contract Award** | Quarter (Q)2 2026 | Quarter (Q)2 2026 |
| **Impact Assessment Process** | 2025 – 2028 | N/A |
| **Provincial Environmental Screening Process** | 2026 – 2027 | 2026 – 2027 |
| **Environmental Approvals and Permitting** | 2027 – 2028 | 2026 – 2027 |

| Activity | Timeline | Timeline (no IA*) |
|---|---|---|
| **Construction** | | |
| **Site Mobilization and Preparation (Early Works)** | 2028 | 2027 |
| **Building Construction, Equipment Placement and Installation** | 2028 – 2030 | 2027-2030 |
| **Commissioning and Startup** | Q2 2030 | Q2 2030 |
| **Site Restoration** | Q2 2030 | Q2 2030 |
| **Operations & Maintenance** | | |
| **Commercial Operations** | 2030 – 2050 | 2030 – 2050 |
| **Decommissioning** | | |
| **Decommissioning (upon contract expiry)** | To be determined | |
| * Note: This schedule assumes that the full Federal Impact Assessment is not required. | | |

# 12. Alternatives Assessment

Ontario's electricity system needs reliable backup power. Without new natural gas facilities, the province could face blackouts. Renewable sources like wind and solar aren't enough on their own, especially during peak times (IESO 2025).

Natural gas can provide steady power all year, even when other sources aren't available. It helps keep the system stable and supports the shift to cleaner energy by powering electric vehicles, industries, and farms.

Because of this, IESO has decided that some new natural gas generation is necessary. There are no other options that can meet these needs right now.

## 12.1 Alternatives to the Project

While there is no viable alternative to a natural gas generating station, as discussed above, the project site was also reviewed and confirmed to be the most appropriate location for this facility. The reason for choosing this site is because it is:

- Considered a brownfield site and its reuse as a generating station is support by government policies.
- Currently owned by OPG. As a wholly owned subsidiary of OPG, Atura Power will have the property transferred to it as the operating entity for the facility.
- Directly adjacent to an existing Hydro One operated transmission station that connects to the provincial grid.
- Existing Natural Gas supply pipelines exist near the site, reducing the need for new distribution pipelines.

Table 12-1 below, provides justification for the selection of several project component alternatives that were evaluated through the design process.

### Table 12-1: Project Component Alternatives

| Project Component | Alternatives | Justification for Selection |
|---|---|---|
| **Project Technology** | • Simple cycle CTG<br>• Combined cycle CTG | Simple cycle CTGs can quickly respond to sudden changes in demand when intermittent renewable energy (e.g., wind or solar) is not available or has lower outputs. Combined cycle CTGs take longer to ramp up when electricity demands increase making this technology less ideal for the Riverside GS. |
| **Air Inlet to CTG** | • Side inlet<br>• Top inlet | The air inlet (a noise emitting component) was relocated from the side to the top of the CTG to be further away sensitive receptors, reducing noise effects. |
| **Process Water Discharge** | • Discharge to river<br>• Store and truck offsite<br>• Connect to municipal wastewater system | Several alternatives were considered for discharging of process water required to operate the CTG during summer months. One alternative is to discharge the process water to St. Clair River, which would involve constructing a treatment system and an outlet into the river. A second alternative is to store the process water in a discharge tank prior to trucking it offsite for disposal. The third alternative is to connect it to the municipal wastewater system, which would require construction of a pipeline of approximately 1 km in length.<br>The alternative to discharge to St. Clair River was removed from further consideration due to the potential impacts on fish and fish habitat from construction of the outlet. Atura Power is considering the remaining two alternatives, both of which will avoid impacts to the river. |

# Part C: Location Information and Context

## 13. Project Location

The site is located approximately 16 km south of the City of Sarnia, and approximately 2 km south of an unincorporated community of Courtright, in St. Clair Township, in the County of Lambton, Province of Ontario. The approximately 97 ha site is located within the property boundary of a former coal-fuelled generating station, thereby optimizing the use of a currently unused parcel of brownfield land, with proximity to natural gas supply and existing provincial electricity grid connections. The Project is only proposing to us a portion of the former Lambton Generating Station site. Geographic coordinates of key Project components are as follows:

- Approximate centre of the property: 42°47′48.86″N -82°28′5.4″W
- Site access (entrance from Oil Springs Line): 42°47′27.63″N -82°28′8.05″W
- Preliminary stack location: 42°47′41.50″N -82°28′10.44″W
- Provincial electricity grid point of interconnection: 42°47′44.234″N -82°27′59.202″W

### 13.1 Site Maps

**Figure 1-1** above shows the general location of the Project and **Figure 9-1** above shows the location of key Project components within the site. **Figure 15-1** shows the location of the Project in the context of nearby Indigenous groups as further described in the sub-sections below.

### 13.2 Site Legal Description

The property is legally described as:

> PT LT 13-19 CON FRONT MOORE PT 6 TO 57, 25R7728 T/W PT 1, 25R811 AS IN L352815; LT 12-46, B PL 29 MOORE; PT LT 5-11 PL 29 MOORE; PT PARK ST, JENKYN ST PL 29 MOORE AS IN L910132; S/T L689642, L689643, L887981 SUBJECT TO AN EASEMENT IN GROSS OVER PART 3, 25R5668 AS IN LA113826 SUBJECT TO AN EASEMENT OVER PART LOTS 13,14,15 CONCESSION FRONT, MOORE, PARTS 1 TO 10 PLAN 25R10268 IN FAVOUR OF PART LOT 26 CONCESSION 2, MOORE, PART LOT 26 PLAN 24, MOORE, PART ROAD ALLOWANCE BETWEEN LOT 26 CONCESSION 1 AND LOT 26 PLAN 24, MOORE, PARTS 1 TO 10 PLAN 25R1585 (CLOSED BY MO28032) AS IN LA169120 TOWNSHIP OF ST. CLAIR

This former Lambton Generating Station property is both designated and zoned as Industrial (St. Clair Township 2024a, St. Clair Township 2024b) and is currently owned by OPG. It is anticipated that the portion of the property representing the Project site will be legally severed and title transferred to Atura Power. Existing and future required legal easements will be determined during the severance process.

## 13.3 Proximity to Residences and Communities

The Project is located within the lower tier municipality of St. Clair Township and the upper tier municipality of the County of Lambton. St. Clair Township has a land base of approximately 619 $km^2$ with a population of approximately 15,000 (Statistics Canada 2023).

The community of Courtright is located approximately 2 km north of the Project site. The St. Clair River forms part of the Canada-United States international boundary, with the community of St. Clair, Michigan, located approximately 1 km northwest of the site.

While land uses surrounding the site are largely agricultural, the closest residential properties are located approximately 1 km north and 0.5 km south of the proposed facility, respectively (**Figure 1-1**).

## 13.4 Proximity to Indigenous Groups Land Use

The Project is located within the Sombra Township Purchase (referred to as Treaty 7 in Ontario). It was signed in September of 1796 and covers approximately 3,100 ha of southwestern Ontario (Government of Ontario, n.d.; Boileau, 2022).

The following reserve lands are located within proximity to the Project:

- Aamjiwnaang First Nation – 13 km north.
- Caldwell First Nation – 85 km south.
- Chippewas of Kettle and Stony Point – 56 km northeast.
- Chippewas of the Thames First Nation – 80 km east.
- Delaware Nation Council – 53 km southeast.
- Munsee-Delaware Nation – 80 km east.
- Oneida Nation of the Thames First Nation (Onyota'a:ka) – 80 km east.
- Walpole Island First Nation Reserve Lands (known as Walpole Island 46) – 18km south.

Traditional land use by Indigenous peoples will be discussed and confirmed through ongoing engagement with communities (see Section 4.0).

## 13.5 Proximity to Federal Lands

There are no federal lands within proximity to the Project. Section 13.4 describes the locations of nearby Indigenous community reserve lands, which are under federal trust. The closest non-reserve federal land is Point Pelee National Park, almost 100 km south of the Project.

# 14. Physical Environment

## 14.1 Spatial Boundaries

Two spatial boundaries of study areas were established for the project:

- Project Area (PA): defined as the boundary of the Project including all temporary and permanent areas.
- Local Study Area (LSA): defined as the area beyond the project footprint where project effects may extend.

The PA encompasses the project footprint and is the anticipated area of physical disturbance associated with the construction, operations, and decommissioning of the Project.

Generally, the LSA includes the entire property of the former Lambton Generating Station and extends one kilometer from the property boundary, however, in some cases, a larger LSA is considered. Below are descriptions of specific LSAs for the project.

- Air quality LSA: 10 km x 10 km area around the PA.
- Human Health/Socio-economic LSA: County of Lambton.

## 14.2 Project Environmental Setting

Southwestern Ontario, particularly the area around Sarnia, has undergone significant ecological transformation over the past several centuries. Originally part of the Carolinian forest zone, this region was once dominated by rich, biodiverse hardwood forests, wetlands, and tallgrass prairies. The area lies within the Mixedwood Plains Ecozone, characterized by a temperate climate, fertile soils, and a high diversity of flora and fauna (Government of Ontario, n.d.-b).

These landscapes were dramatically altered following European colonization in the 18th and 19th centuries, as settlers cleared vast tracts of forest for agriculture and timber (Aleksa, 2022).

### 14.2.1 Geology and Hydrogeology

#### 14.2.1.1 Geology

Based on review of records from the Ministry of the Environment, Conservation and Parks (MECP) water well record database, the overburden of the LSA is approximately 40 to 50 meters thick. The upper portion is dominated by clay loam and silty till, which is underlain by a thin layer of sand, gravel, and clay, followed by bedrock. This stratigraphy confirms the presence of overlying Rannoch Till along with underlying glaciolacustrine sediments within the overburden (UTRCA, 2008).

The bedrock surface topography ranges from 130 to 145 metres above sea level (masl) and slopes toward the west (Gao et al., 2006).

### 14.2.2 Vegetation and Wetlands

Vegetation communities present in the PA include Mineral Cultural Meadow (CUM1)/Meadow Marsh (MAM2), Mineral Cultural Woodland (CUW1)/ Cultural Plantation (CUP), and Cultural Hedgerow (HE). Within the PA, the site is entirely an Anthropogenic (ANT) ELC community. See Figure 14-1.

## Figure 14-1: Natural Heritage Field Investigations

### 14.2.3 Wildlife and Wildlife Habitat

#### 14.2.3.1 Amphibians

The PA contains several locations of amphibian breeding habitats, including wetlands, drainage ditches, and constructed ponds. Amphibian call surveys were completed over several weeks throughout spring of 2025.

Four amphibian species were heard calling during the two amphibian call surveys completed near the PA to date, including Western Chorus Frog (*Pseudacris triseriata*), Gray Treefrog (*Dryophytes versicolor*), Northern Leopard Frog (*Lithobates pipiens*), and Green Frog (*Rana clamitans*); all of which were heard calling in low numbers from flooded ditches adjacent to the PA.

#### 14.2.3.2 Bats

A total of nine trees with suitable attributes for bat roosting (i.e., cavities, crevices, cracks, loose or exfoliating bark) were identified within the CUW1/CUP community southwest of the PA, including Poplar species (*Populus spp.*), Bur Oak (*Quercus macrocarpa*), Black Cherry (*Prunus serotina*), Apple species (*Malus spp.*), and Black Walnut (*Juglans nigra*). As the CUW1/CUP community covers an area of approximately 1.5 ha, the snag density within this community is six snags per hectare. To be considered high quality potential maternity roost habitat, snag density must be ≥ 10 snags per hectare. Based on the existing snag density this community is not considered high quality potential maternity roost habitat and is not likely to contain bat maternity roost Significant Wildlife Habitat. Bat Species at Risk (SAR) may use the habitat for day roosting.

#### 14.2.3.3 Migratory Birds

A total of 24 species were observed during breeding bird point counts completed at the CUW1/CUP and the CUM1/MAM2 communities at the stations shown on Figure 14-2. These vegetation communities are outside of the proposed PA. Of these, 13 species were considered possibly breeding within the community, eight were considered probably breeding within the community, and two (American Robin [*Turdus migratorius*] and European Starling [*Sturnus vulgaris*]) were confirmed as breeding within the community. No migratory birds were observed within the PA as the disturbed gravel substrate within the PA only provides suitable breeding habitat for a very limited number of species, such as Killdeer (*Charadrius vociferus*).

One species, Chimney Swift (*Chaetura pelagica*), is unlikely to be breeding within either community. Chimney Swift is a species at risk ranked Threatened in Ontario and was observed flying over the CUW1/CUP community during the second round of breeding bird surveys in June 2025. The species breeds in anthropogenic structures with chimneys, which are not present in the PA, though it does occasionally roost in natural hollow trees.

Eastern Meadowlark (*Sturnella magna*), another species at risk ranked Threatened in Ontario, was heard singing from the CUM1/MAM2 community south of the PA during the first round of breeding bird surveys in May 2025. The species was not heard singing from this community during the second round of breeding bird surveys in June 2025 and is anticipated not to be breeding in this habitat during the 2025 breeding season. A third round of breeding bird surveys to confirm breeding by Eastern Meadowlark was not completed as impacts to this community are not anticipated due to the proposed works.

### 14.2.4 Fish and Fish Habitat & Aquatic Species at Risk

There are no watercourses or waterbodies located within the PA. The St. Clair River is the nearest known feature with fish habitat and is located approximately 100 m west of the PA and approximately 50 m west of the site entrance off the St. Clair Parkway.

### 14.2.5 Air Quality

The following sections provide the air quality context relevant to the project. The below is a summary of the air quality baseline conditions.

#### 14.2.5.1 Background Concentration

Over the five-year period from 2019 to 2023, background concentrations of Fine Particulate Matter ($PM_{2.5}$), $NO_x$, and Nitrogen Dioxide ($NO_2$) were collected from the Sarnia (ID 14111) monitoring station located about 20 km from the PA. CO is not monitored at this site and, therefore, data was taken from the Windsor station which represents the closest CO monitoring facility to the Project site. The 90th percentile background concentrations were added to the model predictions from the proposed facility to compare against the relevant Provincial and Federal air quality criteria. (Table 14-1).

**Table 14-1: Background Concentration from Sarnia Station (2019-2023)**

| Compound | Averaging Period | AAQC (µg/m3) |
|---|---|---|
| Fine Particulate Matters ($PM_{2.5}$) | 24-hour | 14.1 |
| | Annual | 5.8 |
| Nitrogen Oxides ($NO_X$) | 1-hour | 32.7 |
| | 24-hour | 27.6 |
| Nitrogen Dioxide ($NO_2$) | 1-hour | 27.5 |
| | Annual | 8.8 |
| Carbon monoxide (CO) | 1-hour | 385.3 |
| | 8-hour | 371.7 |

For information on the results of air quality modelling, see Section 24.

### 14.2.6 Noise

Sound is a dynamic, fluctuating pressure in a fluid medium such as air. Noise is defined as unwanted sound. The standard practice within the acoustical industry is to use these two terms interchangeably.

Sound levels are commonly expressed in terms of A-weighted decibels (dBA values), which account for the variation in human frequency response. Humans do not hear low frequency sound as well as that in mid or high frequencies. The A-weighting network was developed to correspond to how humans hear sounds. Unweighted measurements are designated as dBZ values. These measurements are used in investigating impacts from overpressure (blasting) or low frequency noise. Based on the noise sources associated with this project, low frequency noise impacts are not expected.

The following sections provide the noise context relevant to the project. The below is a summary of the noise baseline conditions. For information on the results of noise modelling, see Section 24.

#### 14.2.6.1 Guideline Limits

Under the MECP Publication NPC-300 guidelines, PORs are defined using area classifications. The PORs are classified and described as follows:

- Class 1 Area – Urban areas: an area with an acoustical environment typical of a major population centre, where the background sound level is dominated by the activities of people, usually road traffic, often referred to as "urban hum."
- Class 2 Area – Suburban/Semi-rural areas: an area with an acoustical environment that has qualities representative of both Class 1 and Class 3 areas:
  - Sound levels characteristic of Class 1 during the daytime (7:00 AM to 7:00 PM or to 11:00 PM)
  - Low evening and night background sound level defined by the natural environment and infrequent human activity starting as early as 7:00 PM.
- Class 3 Area – Rural areas: a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic, such as a small community, agricultural area, a rural recreational area such as a cottage or a resort area, or a wilderness area.
- Class 4 Area – Infill areas: an area or specific site that would otherwise be defined as Class 1 or 2 and which:
  - Is an area intended for development with new noise sensitive land use(s) that are not yet built.
  - Is in proximity to existing, lawfully established stationary source(s).
  - Has formal confirmation from the land use planning authority for the Class 4 Area classification, which is determined during the land use planning process.

- Areas with existing noise sensitive land use(s) cannot be classified as Class 4 areas.

Depending on the receptor area classifications above, different minimum exclusionary guideline limits apply. Baseline sound monitoring was undertaken to measure noise levels and determine the area classification surrounding the Project.

#### 14.2.6.2 Baseline Sound Monitoring

Baseline sound level measurements were performed between February 21 and February 28, 2025. The monitoring location was selected to be representative of the baseline acoustic environment at critical Project receptors. The measurement location is expected to provide a conservative baseline as it is located further from Oil Springs Line than the critical receptor(s), thereby capturing less road traffic noise.

The objective of the measurement program was to obtain a minimum 48-hours of applicable data, in accordance with MECP procedures and requirements. Measurements were completed in accordance with the following guidelines:

- MECP Publication NPC-102 – Instrumentation.
- MECP Publication NPC-103 – Procedures.
- MECP Publication NPC-300 – Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning.

A summary of measured hourly sound level ranges and averages is provided in Table 14-2.

**Table 14-2: Background Concentration from Sarnia Station (2019-2023)**

| Time Period | Minimum $L_{eq}$(1-hr) dBA [1] | Maximum $L_{eq}$(1-hr) dBA [1] | Average $L_{eq}$(1-hr) dBA [1] |
|---|---|---|---|
| Daytime (7:00 AM to 7:00 PM) | 44.5 | 55.7 | 50.2 |
| Evening (7:00 PM to 11:00 PM) | 42.1 | 51.4 | 45.7 |
| Nighttime (11:00 PM to 7:00 AM) | 40.0 | 52.2 | 43.6 |
| Notes: [1] Arithmetic average of hourly equivalent sound levels during monitoring period in the daytime, evening and nighttime time periods | | | |

Overall, measurements indicate the acoustic environment was representative and had sound level characteristics of a Class 1 Area during daytime hours (7:00 AM to 7:00 PM), with lower evening and nighttime sound levels dominated at times by the natural environment and infrequent human activity. This aligns with the definition of a Class 2 Area in MECP Publication NPC-300. Furthermore, the average sound levels for daytime, evening and nighttime periods are similar to the minimum exclusionary limits for a Class 2 Area.

Based on the results of the baseline sound monitoring program and considering the noise guideline limits applicable for the nearby Greenfield Energy Centre, a Class 2 Area designation is appropriate for the noise receptors along St. Clair Parkway.

For information on the results of noise modelling, see Section 24.

### 14.2.7 Hydrogeology

Hydrogeological conditions at the site are influenced by the hydraulic properties of both bedrock and overburden units. Groundwater movement at the Site is generally limited as both the Rannoch Till and the underlying Port Lambton Group shale, exhibits low permeability. Insights into the surficial and bedrock aquifers at the Site have been drawn from available documentation, including Upper Thames Region Conservation Authority (2008) and the MECP water well record database.

### 14.2.8 Archaeological Resources

A Stage 1 & 2 Archaeological site investigation was completed for the proposed Project in June 2025. The assessment was conducted in compliance with the 2011 Standards and Guidelines for Consultant Archaeologists (Ministry of Tourism and Culture, 2011), as used by the Ministry of Citizenship and Multiculturalism (MCM).

The assessment identified artifacts from the late 1800s; three lithic flakes, which are remnants from the manufacturing of stone tools; and one piece of Indigenous pottery. The flakes are likely associated with the previous identified lithic scatter at the same location, though it appears to have been impacted from previous disturbance to the site.

Additional site investigations or avoidance measures are being considered to ensure the findings are addressed in line with the requirements of MCM. Both locations where artifacts were found are outside of the anticipated project footprint. Avoidance of these areas, along with archaeological monitoring during construction, should mitigate further impacts to any potential remaining artifacts. No disturbance to the sites will be allowed until MCM has provided clearance to proceed.

### 14.2.9 Built Heritage Resources and Cultural Heritage Landscapes

There are no known Built Heritage Resources or Cultural Heritage Landscapes within the LSA. The Project is situated on a portion of the former Lambton Generating Station which was decommissioned in 2017 and demolished between 2017 and 2022.

A Cultural Heritage Evaluation Report was carried out on the subject property in 2018. The report found that the site did not satisfy criteria from O. Reg 9/06 or O. Reg. 10/06 of the Ontario Heritage Act and therefore had no cultural heritage value or interest.

# 15. Human Health and Socio-Economic Context

## 15.1 Site History

Indigenous peoples have lived on the lands now known as Ontario for millennia. Early partnerships between Indigenous nations and settler governments were formed through treaties and alliances, based on mutual respect, rights and agreements with colonial governments. Over many centuries these relationships were eroded by colonial and paternalistic policies that were enacted into laws (Crown-Indigenous Relations and Northern Affairs Canada, 2024).

The Sombra Township Purchase (referred to as Treaty 7 in Ontario) was signed in September of 1796 and covers 3,100 ha of southwestern Ontario, including the Project site (Government of Ontario, n.d.-a; Boileau, 2022). The land was purchased by the British to offer it to Indigenous allies who fought with them during the American Revolution and still lived in the newly formed United States. The land was eventually opened to European settlers (Boileau, 2022).

During the formation of Upper Canada in 1792, nineteen counties were created throughout what is now known as southwestern Ontario. One of these counties included what is now Lambton County (Lambton County Archives, n.d.). As settlers trickled into Lambton County, oil was first discovered around the mid-1850s. Through the 1850s and 1860s, large oil reserves were discovered in the communities of Petrolia and Oil Springs. These discoveries would lead to the construction of railways to the area, attracted additional exploration of the area, and would eventually attract petrochemical and related industries to the area (Sarnia Historical Society, n.d.).

St. Clair Township and the neighbouring City of Sarnia are the location of several existing gas-fired generating stations, each with a capacity of at least 20 MW (IESO, n.d.). Both communities are hubs for petrochemical and related industries.

## 15.2 Social Context

### 15.2.1 Municipalities

The Project site is located within the St. Clair Township and the County of Lambton. The County of Lambton is an upper tier municipality that includes 11 lower-tier municipalities, including the St. Clair Township. The County has a total population of 128,154 as of 2021 and an area of 2,999 $km^2$. The St. Clair Township is the second most populous municipality in the County of Lambton. Within the County of Lambton, 6,030 people identify as Indigenous, or 4.6% of the population. Comparatively, only 2.9% of the population of Ontario identifies as Indigenous (Statistics Canada, 2023a).

According to Statistics Canada (2023a), the St. Clair Township has a population of 14,659, an increase of 4.1% from 2016. St. Clair Township accounts for 11.4% of the population of the County of Lambton. St. Clair Township is 618 $km^2$ with a population density of 23.7 people/$km^2$. The median age within St. Clair Township is 44.8 years old, with 60.5% of the population being between the ages of 15 and 64 years old.

Gender distribution is nearly equal, with Men+ accounting for 50.2% of the population and Women+ for 49.8% (Statistics Canada, 2023a). Within the St. Clair Township, 515 people identify as Indigenous, or 3.3% of the population.

According to the St. Clair Township's Official Plan (2024b), most of the township's landmass is designated as agricultural land. The Project is located on land designated as Industrial Type 3. The primary objectives of the industrial land designation are to site industrial uses away from incompatible uses (such as residential), minimize environmental impacts, and to contribute to the community's acceptance of industry. Industrial Type 3 lands are intended for large scale, heavy industry uses such as petrochemical refineries, metal related manufacturing, and other uses that require volatile materials as a product of or used in processing. Industrial Type 1 and 2 uses are also permitted within Type 3 designated lands, essentially allowing any type of industrial use on Type 3 lands (St. Clair Township, 2024b).

### 15.2.2 First Nations and Indigenous Communities

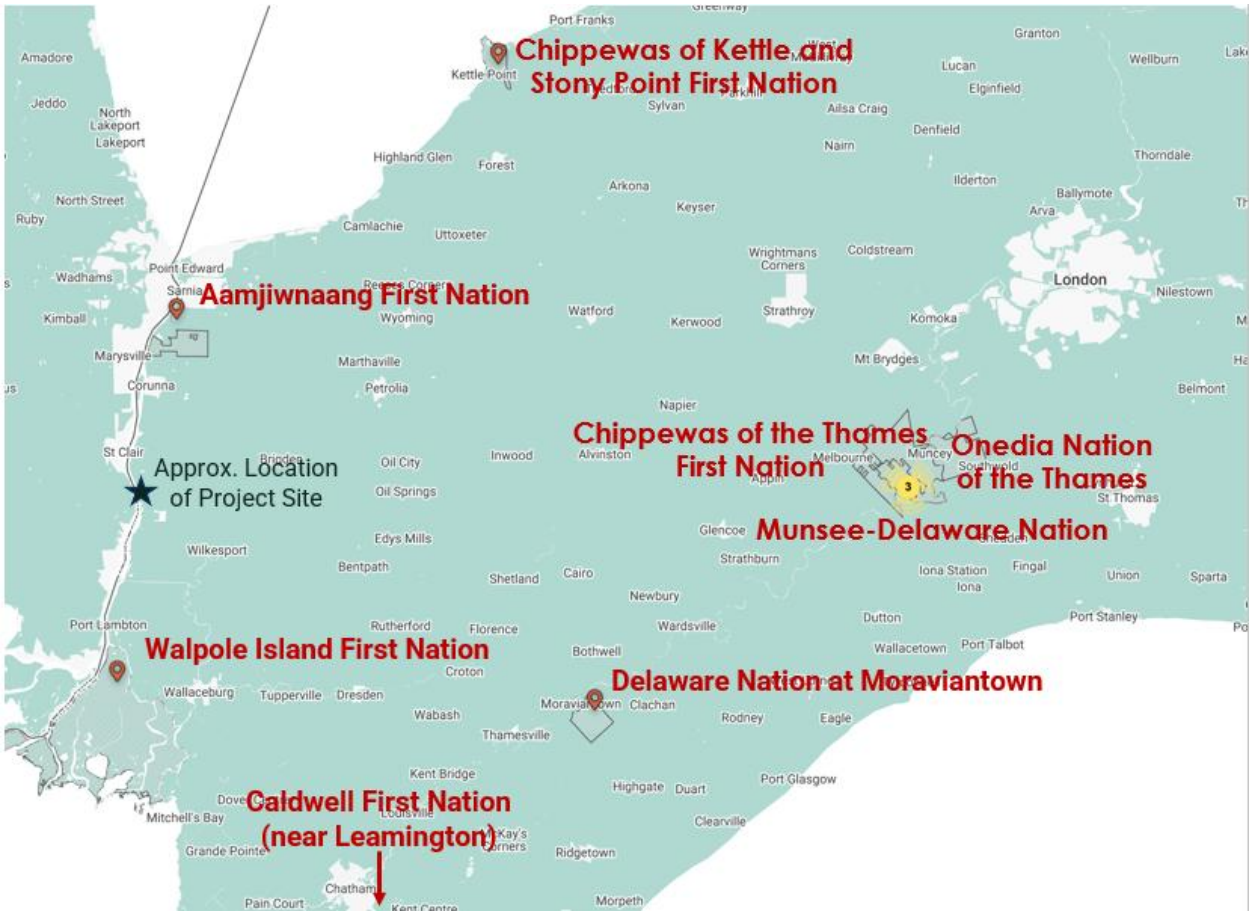
The Project site is located within proximity to eight First Nation communities:

- Aamjiwnaang First Nation;
- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Delaware Nation Council;
- Métis Nation of Ontario;
- Munsee-Delaware Nation;
- Oneida Nation of the Thames First Nation (Onyota'a:ka); and
- Walpole Island First Nation.

These First Nations, along with the Métis Nation of Ontario have been contacted through the engagement process outlined in Section 4.

Current social, economic, and health aspects of First Nations and Indigenous communities are being discussed and confirmed through ongoing engagement (see Section 4.0) and Atura is committed to the process of relationship building with these communities.

**Figure 15-1: Location of nearby First Nation Communities**




## 15.3 Economic Context

Over time, industry in the area has shifted from a focus on agriculture to the petrochemical industries. The oil fields in the nearby towns of Petrolia and Oil Springs have been commercially drilled since the late 1800s, contributing to the development of the local economy (City of Sarnia, 2025).

Within Lambton County, the primary industries are health care and social assistance and retail trade (Statistics Canada, 2025). These industries employ 8.4% and 6.3% of the County's workforce, respectively (Sarnia-Lambton Economic Partnership, 2025). These industries are also the most dominant industries across the province (Statistics Canada, 2025). Other primary industries within the County include construction and manufacturing, each employing about 6% of the workforce (Sarnia-Lambton Economic Partnership, 2025).

Within the St. Clair Township, health care and social services still account for the highest percentage of the workforce (8.8%); however, manufacturing and construction account for the second and third highest industries by workforce (8.6% and 7.4% respectively) (Sarnia-Lambton Economic Partnership, 2025).

## 15.4 Health Context

Lambton Public Health is the local health unit providing health services to the municipalities, First Nations and Indigenous Communities within the County of Lambton. Lambton Public Health offers many different services including:

- Health Clinics – immunization clinics, dental services, flu shots, sexual health clinics, tuberculosis testing, and harm reduction programs.
- Maternal & Child Health – prenatal and postpartum support, home visits, and parenting resources.
- Public Health Inspections & Investigations – inspection of businesses, restaurants, and public spaces to ensure compliance with health and safety regulations.
- Disease Prevention & Monitoring – tracking and management of outbreaks, including measles and avian influenza, and provides guidance on vaccinations.
- Community Health Education – shares health information to promote safe practices and healthy living (Lambton Public Health, n.d.).

There are two hospitals in the County of Lambton, one in Sarnia and one in Petrolia (Lambton County, 2025). The hospital in Sarnia is the closest to the Project site and is a 27 km drive. The community of Corunna, north of the Project site, has a medical clinic, dental clinic, and several paramedical services (e.g., chiropractors, physiotherapy).

The County of Lambton also operates a variety of social services that support the community's well-being. These services include:

- Housing Services – providing housing assistance, rent supplement and affordable housing, and property management services to the 830 units owned by the County.
- Homelessness Prevention – helping individuals and families find resources and housing.
- Ontario Works – providing financial assistance to those who meet the criteria.
- Children's Services – helping families find appropriate resources related to childcare needs.

Atura is committed to ongoing collaboration with First Nations and Indigenous communities to understand current health and well-being contexts. This involves identifying and verifying the availability of culturally informed health and well-being programs and services, both near and on reserves. Through continued engagement, as detailed in Section 4.0, Atura is working to further our understanding of the current health conditions of First Nations and Indigenous communities.

### 15.4.1 Health Concerns in the Sarnia Area

Released in 2024, the Sarnia Area Environmental Health Project (SAEHP) (MECP, 2024) report provided an overview of environmental health concerns in the Sarnia area, particularly related to industrial pollution. The project was developed in collaboration with local First Nations, health agencies, municipalities, and industry representatives. Its primary goal was to better understand the relationship between environmental exposures, particularly air pollution, and health outcomes in the region.

The SAEHP examined three main components: air exposure, environmental stressors, and safety of medicinal plants. This will be discussed with the First Nation communities during ongoing engagement as it relates to the proposed project.

# Part D: Federal, Provincial, Territorial, Indigenous and Municipal Involvement and Effects

# 16. Federal Financial Support

The Project will not require any federal financial support.

# 17. Use of Federal Lands

The Project will not require use of any federal lands.

# 18. Jurisdictional Involvement

## 18.1 Federal Regulatory Requirements

As discussed in **Section 8.0**, the Project is considered a “designated project” under Section 30 of the Physical Activities Regulation and is therefore subject to IAAC review under the IAA.
In addition, the project is also subject to federal regulatory requirements as outlined in **Table 18-1**.

**Table 18-1: Federal Regulatory Requirements**

| Legislation and Permit Name | Description / Permit Trigger | Key Comments and Assumptions |
|---|---|---|
| **Fisheries and Oceans Canada** | | |
| *Fisheries Act*<br>Letter of Advice or Authorization | • Protects fish and their habitats by regulating fishing activities, preventing pollution, and ensuring the sustainability of aquatic ecosystems.<br>• Applies to any activity with the potential for harmful alteration, disruption, or destruction of fish or fish habitat. | • No works are proposed within 30 m of fish habitat; therefore, a Request for Review is not required.<br>• HADD of fish/fish habitat will be avoided by ensuring no in-water or shoreline works and using |

| Legislation and Permit Name | Description / Permit Trigger | Key Comments and Assumptions |
|---|---|---|
| | | appropriate ESC and spill prevention and response measures. |
| Species at Risk Act (SARA) Section 73 Permit | • Canada's *Species at Risk Act* aims to prevent wildlife species from disappearing, support the recovery of endangered and threatened species, and manage species of special concern to ensure their long-term survival.<br>• Applies to any activity with the potential for disturbance or destruction of federally listed aquatic SAR or SAR habitat. | • Aquatic SAR and SAR habitat will be avoided by ensuring no in-water or shoreline works and using appropriate ESC and spill prevention and response measures. |
| **Environment and Climate Change Canada** | | |
| Species at Risk Act (SARA) Permit | • Canada's *Species at Risk Act* aims to prevent wildlife species from disappearing, support the recovery of endangered and threatened species, and manage species of special concern to ensure their long-term survival.<br>• The Act applies to any activity with the potential for disturbance or destruction of federally listed SAR or SAR habitat on federal land.<br>• On private land, the Act applies to aquatic species (see Fisheries and Oceans Canada information above) and migratory birds that are Endangered, Threatened or Extirpated listed under Schedule 1 of the SARA (see migratory birds information below). | • The Project is not located on federal land.<br>• No impacts to migratory birds are anticipated on private land – vegetation removals (if any) will be avoided during the breeding bird season (April 1st to August 31st) and construction contractors will be required to report potential nest activity within the work zone. |
| Migratory Birds Convention Act (MBCA) Damage or Danger Permit | • Protects migratory birds, their nests, and eggs by regulating hunting, conservation, and habitat protection.<br>• Applies to any activity with the potential for disturbance or destruction of migratory birds, as well as nests and eggs. | • Will be managed through adhering to timing windows for vegetation clearing (September 1st to March 31st).<br>• Need to obtain a permit is unlikely, and if required, would be based on an unplanned event associated with ground nesting species (e.g., Canada Goose nest established post-clearing). |
| Canadian Environmental Protection Act Environmental Emergency Regulations Compliance | • Establishes requirements for facilities handling hazardous substances to prepare and implement environmental emergency plans, ensuring swift response and mitigation in case of accidental releases.<br>• Dependent on the storage of designated materials in quantities that meet the reporting threshold criteria as listed in the Regulations (e.g., 2,500 tonnes of diesel). | • Compliance with the Act and regulations will be maintained – no permit required.<br>• Once it is determined what materials will be stored on-site and in what quantities, this legislation will be screened to confirm project implications.<br>• Licenced contractors will be retained, if required. |

| Legislation and Permit Name | Description / Permit Trigger | Key Comments and Assumptions |
|---|---|---|
| Canada-United States Air Quality Agreement<br>Compliance | • Agreement between Canada and the United States to address transboundary air pollution.<br>• New air pollution source located within 100 km of the Canada/U.S. border that is expected to emit greater than 90 tonnes per year of any one of the common air pollutants: sulphur dioxide (SO2), nitrogen oxides (NOX), carbon monoxide (CO), total suspended particulates (TSP) and volatile organic compounds (VOC), where VOCs are defined as compounds containing at least one carbon atom, excluding carbon monoxide, carbon dioxide, methane and chlorofluorocarbons. | • Project will emit greater than 90 tonnes per year of nitrogen oxides. |
| **Transport Canada** | | |
| *Canadian Navigable Waters Act*<br>Approval | • Protects the public's right to travel on navigable waters by regulating projects that may obstruct navigation, ensuring environmental safeguards, and incorporating Indigenous knowledge in decision-making.<br>• Required to construct, place, alter, rebuild, remove, or decommission a work in, on, over, under, through or across any navigable water. | • No navigable waterways on-site and no in-water work is required. |
| *Transportation of Dangerous Goods Act*<br>Compliance | • Regulates the safe handling, transport, and emergency response for hazardous materials to protect public safety and the environment.<br>• Establishes safety standards, oversight programs, and emergency response assistance plans for transporting dangerous goods by road, rail, air, and water.<br>• Applies to all activities involving the transportation of dangerous goods (e.g., flammable liquids, solids, gases). | • No permit – maintain compliance with Act and regulations.<br>• Assumes that licenced contractors would be retained, if required. |

## 18.2 Provincial Regulatory Requirements

The Project will also be subject to provincial laws and regulations that apply in the Province of Ontario. These are described in **Table 18-2**.

## Table 18-2: Provincial Regulatory Requirements

| Legislation and Permit Name | Description / Permit Trigger | Key Comments and Assumptions |
|---|---|---|
| **Ministry of the Environment, Conservation and Parks (MECP)** | | |
| *Environmental Assessment Act* Environmental Screening Process for Electricity Projects (ESP) | • The *EA Act* ensures that infrastructure projects undergo environmental evaluations to assess potential impacts before proceeding. For electricity projects, the ESP provides a streamlined assessment method, allowing proponents to identify and mitigate environmental concerns efficiently.<br>• Establishment of a generation facility that has a name plate capacity of ≥ 5 MW and that uses natural gas as its primary power source is defined in Section 9 of O. Reg. 50/24 as requiring completion of the ESP. | • As described in the Guide to EA Requirements for Electricity Projects (February 2024), the new facility would be considered a Category B project and require ESP completion.<br>• The full ESP (i.e., Environmental Review Report) will be completed rather than a screening. |
| *Endangered Species Act* 17(2)(c) Permit; or Registration of Notice of Activity | • Protects SAR by regulating habitat destruction, implementing recovery strategies, and balancing conservation efforts with economic considerations.<br>• Activities that kill, harm, or harass species listed as Endangered or Threatened under the Act and/or directly destroy their habitat or damage/impact habitat function. | • Potential impacts to SAR will be avoided due to the industrial nature of the site.<br>• Any additional, temporary construction laydown or storage areas will be within existing gravelled/paved areas. |
| *Ontario Water Resources Act* and *Environmental Protection Act* Environmental Activity and Sector Registry (EASR) (Water-Taking) | • The *Water Resources Act* governs permits for water withdrawals, requiring users to obtain a Permit to Take Water (PTTW) for significant extractions.<br>• The *Environmental Protection Act* sets guidelines for preventing pollution and managing water quality impacts from industrial and municipal activities.<br>• Water takings from a groundwater or surface water body between 50,000 L/day and 400,000 L/day. | • No permit – online registration only.<br>• Groundwater dewatering volumes during construction can typically be managed so they do not exceed 50,000 L/day. |
| *Environmental Protection Act* Environmental Compliance Approval (ECA) (Air & Noise) | • Regulates air and noise emissions by requiring industries to obtain environmental approvals, conduct impact assessments, and implement mitigation measures to minimize pollution and disturbances.<br>• Considers discharge of a contaminant, including air contaminants, noise, and/or vibration into the natural environment (air).<br>• Used for activities or equipment operations with higher risk of potential environmental impact and the potential for cumulative emissions from the surrounding areas, impacting air/noise compliance levels. | • Air and noise emissions from natural gas facilities and ancillary equipment are subject to ECA.<br>• Most temporary construction-related air and noise discharges are exempt from permitting requirements.<br>• Guideline A-5 (Atmospheric Emissions from Stationary Combustion Turbines) addresses emission requirements for projects that emit $NO_X$. |

| Legislation and Permit Name | Description / Permit Trigger | Key Comments and Assumptions |
|---|---|---|
| *Environmental Protection Act* ECA (Industrial Sewage) | • Collection, transmission, treatment, and/or disposal of industrial sewage and any additional sources of wastewater created during construction or operation and maintenance, including stormwater and that which could be generated from the potential for spill containment. | • Stormwater and sanitary sewage will be discharged as a result of the Project.<br>• A Stormwater Management Plan and Spill Response and Prevention Plan will be prepared. |
| *Environmental Protection Act* ECA (Waste) | • Certain on-site treatment of wastes or hauling of waste off-site, including excess soil. | • There will be no on-site waste disposal (landfill) activities undertaken at the site and any non-hazardous solid waste will be managed in accordance with O. Reg. 347 requirements.<br>• If required, licensed contractors with the necessary permits in place will be retained during construction. |
| *Environmental Protection Act* Excess Soil Management | • Establishes rules for handling, transporting, and reusing excess soil to prevent environmental contamination and promote sustainable soil management.<br>• The regulations require soil assessments, tracking systems, and proper documentation to ensure soil is reused safely and does not become waste. | • No permit – maintain compliance with Act and O. Reg. 406/19.<br>• Any removal of soil from site will be handled by a MECP- approved contractor with all mandatory testing, tracking, and reporting undertaken. |
| *Environmental Protection Act* Environmental Site Assessment (ESA) | • Establishes requirements for evaluating potential contamination on properties, ensuring proper site assessment before redevelopment.<br>• Related to assessment and remediation (cleanup) of contaminated land or groundwater.<br>• May be requested from municipality, construction contractor, or for financing. | • No permit – may be requested for due diligence purposes (O. Reg. 153/04).<br>• Based on precedent, financers and municipal government may require an ESA for due diligence/liability purposes.<br>• Unlikely due to site ownership. |
| **Ministry of Citizenship and Multiculturalism (MCM)** | | |
| *Ontario Heritage Act* Archaeological Assessment Report Acceptance | • Requires archaeological assessments for land development projects to identify, evaluate, and protect archaeological sites, ensuring compliance with heritage conservation regulations.<br>• Proposed disturbance of previously undisturbed/undeveloped areas. | • Stage 1-2 Archaeological Assessment completed<br>• The majority of the site is previously disturbed by construction of the original generating station. |

| Legislation and Permit Name | Description / Permit Trigger | Key Comments and Assumptions |
|---|---|---|
| *Ontario Heritage Act* Compliance | • Protects built heritage and cultural heritage landscapes, ensuring their conservation through regulations, heritage registers, and development controls.<br>• Proposed disturbance of potential built heritage or cultural heritage landscape(s). | • There are no known heritage areas or sites located in proximity to the Project Site.<br>• MCM's "Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes" checklist completed. |
| **Ministry of Transportation (MTO)** | | |
| *Highway Traffic Act* Oversize / Overweight Permit | • Establishes rules for road safety, vehicle operation, and traffic enforcement, regulating driver behaviour, licensing, penalties, and vehicle standards to ensure safe and efficient transportation.<br>• Dimensions or weight of vehicle and/or load exceed the limits set out in the Act may require permitting. | • Licenced contractors will be retained for transportation of oversize loads, if required. |
| **St. Clair Region Conservation Authority (SCRCA)** | | |
| *Conservation Authorities Act* Permit | • Development or site alteration within SCRCA regulated limits, which include wetlands, watercourses, regional flood lines and erosion hazards plus their respective setbacks. | • Project is located outside of SCRCA regulated areas. |

## 18.3 Municipal Regulatory Requirements

There are no regulatory requirements from the County of Lambton, however, applicable requirements from St. Clair Township are presented in **Table 18-3**.

### Table 18-3: Municipal Regulatory Requirements

| Legislation and Permit Name | Description / Permit Trigger | Key Comments and Assumptions |
|---|---|---|
| **St. Clair Township** | | |
| *Planning Act* Site Plan Approval (SPA) | • Industrial/infrastructure projects are typically reviewed to ensure they meet the municipality's development requirements for matters such as site servicing, setbacks, parking requirements, stormwater management, etc. | • Development within areas designated as Industrial are typically subject to Site Plan Control. |
| *Building Code Act* Building Permit | • Required for any new building over 10 $m^2$ or structures meeting the definition of "building" as per the Ontario Building Code. | • Requirements will be addressed by engineering contractors. |

# Part E: Potential Effects of the Project

The Project is regulated provincially under the Ontario *Environmental Assessment Act* and is subject to Ontario Regulation (O. Reg.) 50/24, Part II.3 Projects – Designations and Exemptions, Section 9 (3) for establishment of "a generation facility that has a name plate capacity of greater than or equal to five megawatts and that uses biomass or natural gas as its primary power source". O. Reg. 50/24 requires that the Project be carried out in accordance with the Environmental Screening Process for Electricity Projects, as described in Part B of the Government of Ontario's *Guide to Environmental Assessment Requirements for Electricity Projects* (2024) (the Guide).

The Environmental Screening Process was developed by the Ministry of the Environment, Conservation and Parks (MECP) to ensure that the purpose of the *Environmental Assessment Act* is maintained in the review of specified electricity projects. In the Environmental Screening Process, the definition of "environment" is the same as that in the *Environmental Assessment Act*, which is broadly defined to include air, land and water as well as natural, cultural, social and economic components. The Guide specifies the list of screening criteria which must be applied to all projects that are subject to the Environmental Screening Process, developed by the MECP to reflect this broad definition of "environment."

A preliminary screening of potential environmental effects was undertaken using the Environmental Screening Process screening checklist to inform early project planning and design, and to support the early engagement program with Indigenous communities, agencies and the public. The results of this screening are captured in an appendix of the Initial Project Description.

Given the breadth of the screening criteria required by the provincial process, components under federal jurisdiction will be considered and assessed as part of the Environmental Screening Process. The preliminary screening of environmental effects therefore also supports the identification and description of the Project's likely effects on components falling under federal jurisdiction as required for the IPD and described in the following sections.

# 19. Potential Effects to Fish and Fish Habitat, Aquatic Species at Risk, and Migratory Birds

## 19.1 Fish and Fish Habitat

There are no rivers, streams, or lakes on the Project site. The closest waterbody is the St. Clair River, about 100 metres west of the site. Because no work will take place in the water, the Project will not directly affect fish or fish habitat.

Stormwater from the site will be managed using the existing system, which drains into the St. Clair River. This system is already approved by the province and will be updated to meet all quality and quantity requirements. The updated design will be reviewed and approved by the Ministry of the Environment, Conservation and Parks (MECP) and St. Clair Township.

A detailed stormwater management plan will be developed for both construction and operation phases. Since the Project will follow existing approvals, no impacts to fish or fish habitat are expected.

Any process water created during operations will either be sent to the municipal sewer system through a new pipe or stored and taken offsite for treatment. Neither option will affect fish or fish habitat.

To prevent spills or sediment from entering the environment, the Project will include erosion and sediment control plans during construction and decommissioning. Spill prevention and emergency response measures will be in place at all times to protect nearby water features, including the St. Clair River.

## 19.2 Aquatic Species at Risk

There are no Aquatic Species at Risk located within the PA. The following Aquatic Species at Risk are known to occur in the St. Clair River, however, they are not necessarily using the habitat adjacent to the PA.

- Northern Brook Lamprey (Special Concern)
- Silver Lamprey (Special Concern)
- Northern Sunfish (Special Concern – provincially only)
- Spotted Sucker (Special Concern)
- Northern Madtom (Endangered)

As there are no anticipated effects to fish or fish habitat, there are no pathways for the Project to interact with aquatic species at risk. Therefore, effects to aquatic species at risk are not predicted.

## 19.3 Migratory Birds

The Project will be built on land that has already been disturbed and mostly covered with pavement or gravel. No vegetation removal is expected for construction.

Some birds, like Bank Swallows and Killdeer, are known to use human-made areas like this one. While these birds have been seen near the site, there's no evidence they nest or feed there.

During construction, a Construction Environmental Management Plan (CEMP) will be followed to protect migratory birds. This includes:

- Avoiding any vegetation removal during bird nesting season, if removal becomes necessary
- Monitoring for bird nests or mating activity
- Bringing in a bird expert if nests or breeding pairs are found, to recommend protective actions like setting up buffer zones

Construction activities may disturb nearby wildlife due to noise, dust, lighting, and movement. The CEMP will include standard measures to reduce these impacts.

Once the Project is operating, new buildings and equipment will be in place. This could increase the risk of birds flying into structures. Design features like proper lighting and landscaping will help reduce this risk. Because the site is already disturbed, using standard industry practices is expected to minimize any impacts on migratory birds.

# 20. Potential Environmental Changes on Federal Lands or Lands Outside of Ontario

The closest non-reserve federal lands are Point Pelee National Park, nearly 100 kilometres away. Section 13.4 describes the locations of nearby Indigenous community reserve lands, which are under federal trust.

Studies have been done to assess air and noise emissions. The Project design includes measures to reduce these emissions, and they will meet Ontario's environmental standards. Because of this, the Project is not expected to affect federal lands.

Air pollution can travel across borders depending on weather conditions. This is called a transboundary effect. In southern Ontario, most air pollution from May to September comes from the United States due to prevailing winds.

Canada and the U.S. have an agreement to reduce air pollution that crosses the border (GOC, 1991). Since 2000, both countries have significantly reduced emissions of harmful pollutants like nitrogen oxides and sulphur dioxide.

Under this agreement, Canada must notify the U.S. if a new project near the border will release more than 90 tonnes per year of certain pollutants. This Project is expected to exceed that threshold for nitrogen oxides. If the Project moves forward, Atura Power will notify Environment and Climate Change Canada, who will inform the U.S.

Overall, the Project is not expected to cause significant environmental effects across the border or on federal lands.

# 21. Potential Effects to Indigenous Peoples Resulting from Changes to the Environment

This information presented in this section and the following section is based on ongoing studies being completed by Atura Power and information available to public and is in the process of being reviewed and informed by Indigenous Communities. As documented in Section 4, Atura Power has been meeting with Indigenous Communities as part of early engagement on the Project. Atura Power is committed to ongoing and continued engagement with Indigenous Communities throughout the lifecycle of the project. The engagement process will help identify effects on Indigenous Communities and how to mitigate them.

The Project will be built on private land owned by Ontario Power Generation (OPG), which has been used for electricity generation since the 1960s. The site is fenced and gated, so public access is restricted. Nearby land is mostly used for homes and farming. To the south, there is a protected area called the Bowen's Creek Habitat Management Area, but it is not open for hunting or trapping.

There are no rivers or lakes on the Project site, and no work will be done in water. Stormwater will be managed using the site's existing system, which will be reviewed and approved by the Ministry of the Environment, Conservation and Parks (MECP) and St. Clair Township.

Because the site is small, industrial, and lacks natural vegetation or wildlife habitat, the Project is not expected to affect local wildlife. Indigenous communities are being engaged to discuss traditional land use and will continue to be involved throughout the Project. Indigenous communities noted they are eager to understand potential effects to land, water, air, etc. from a holistic perspective. They shared a collective desire to consider and understand potential cumulative effects from the perspective of 'the spirit of the land' to Anishinaabe people.

Archaeological studies have found some artifacts on the property, including:

- Items from the late 1800s
- Stone flakes from tool-making
- A piece of Indigenous pottery

These items were found outside the main construction area but close enough that they could be affected. More studies or protective measures are being considered.

Indigenous community monitors were present during the archaeological work and will continue to be involved. They will receive reports and be invited to take part in any future studies.

Atura Power is committed to ongoing and continued engagement with Indigenous Communities throughout the lifecycle of the project. The ongoing engagement process will help Atura Power continue to identify effects and how to mitigate them.

# 22. Potential Effects to Indigenous Peoples Resulting from Changes to Health, Social or Economic Conditions

## 22.1 Health Conditions

As discussed in Section 15.4.1, the SAEHP (MECP, 2024) studied three areas of concern related to emission concentrations in the Sarnia area that the report considered relevant to the health of Indigenous Peoples. The implications of this project on those three concerns are: (1) air quality risks; (2) quality of life impacts; and (3) cultural and environmental health.

### 22.1.1 Air Quality Risks

Air quality modelling results indicate that under all assessed scenarios and worst-case meteorological conditions, predicted concentrations of $NO_x$, CO, and $PM_{2.5}$ at nearby residential sensitive receptors remain well below applicable air quality criteria.

### 22.1.2 Quality of Life Impacts

The Project's operational sound levels are predicted to meet applicable guidelines at the identified receptors during all periods of the day. The highest predicted sound levels are 44 dBA, below the stricter nighttime sound level limit of 45 dBA. Potential construction noise associated with the Project can be controlled through the implementation of best practices and practical mitigation measures. Similarly, dust will only occur during construction and can be mitigated via best management practices.

### 22.1.3 Cultural and Environmental Health

Air and noise emissions from the Project are not expected to adversely affect traditional uses that may be practiced within the area as the land surrounding the site is mostly privately owned. As there are no project components in the St. Clair River and no anticipated effects to water quality, fish or fish habitat resulting from the project.

Atura is committed to engaging with First Nations and other Indigenous communities to better understand the Project's potential effects on these areas of concern.

Effects to Indigenous peoples resulting in changes to health conditions are being discussed and confirmed through ongoing engagement with communities (see Section 4.0). Should any effects be identified, mitigation measures will also be discussed with the communities.

## 22.2 Social Conditions

The Project is located on private land that is currently owned by OPG and that has been used for electricity generation since the 1960s. Access to the property is restricted and the site is fully fenced, gated, and cannot be accessed. Therefore, the Project is not anticipated to change Indigenous Peoples' ability to exercise their Aboriginal and Treaty Rights in the PA.

Effects to Indigenous peoples resulting from changes to social conditions are being discussed and confirmed through ongoing engagement with communities (see Section 4.0). Should any effects be identified, mitigation measures will also be discussed with the communities.

## 22.3 Economic Conditions

The Project may provide economic benefits through the reuse of an existing brownfield site and associated increased tax revenue, job creation especially during construction, and through Atura Power's monetary support of organizations and charities in the local communities in which it operates.

Atura Power is currently exploring opportunities for economic partnerships with local Indigenous communities. One of Atura Power's guiding principles to collaborating and engaging with Indigenous communities is "seeking new and mutually beneficial Indigenous partnerships built on collaboration and good governance" (Atura Power, n.d.).

Effects to Indigenous peoples resulting from changes to economic conditions are being discussed and confirmed through ongoing engagement with communities (see Section 4.0). Should any effects be identified, mitigation measures will also be discussed with the communities.

# 23. Greenhouse Gas Emission Assessment

The goal of the GHG Assessment is to measure the initial estimated GHG emissions in carbon dioxide equivalent units ($CO_2e$) per year associated with the Project. The assessment evaluated the Project for compliance with applicable federal and provincial regulatory limits.

The assessment has been completed in accordance with methods documented in the Strategic Assessment of Climate Change (GOC, 2020) and associated technical guides.

## 23.1 Context

Ontario's electricity system is expected to face a shortage starting in 2025. This is due to:

- More demand from electric vehicles and growing industries

- Maintenance work at nuclear power plants
- Expiring electricity supply contracts

To meet this demand, natural gas is expected to be used more often to generate electricity. While this may increase emissions from the electricity sector, overall emissions in Ontario are expected to go down thanks to cleaner technologies like electric vehicles and industrial electrification.

### 23.1.1 Federal Regulations

Canada's environmental laws require facilities that emit over 10,000 tonnes of $CO_2e$ per year to report their emissions. There are also specific rules for natural gas power plants that limit how much CO2 they can emit per unit of electricity produced.

New federal regulations aim to make Canada's electricity system net-zero by 2050. Natural gas plants can help meet short-term electricity needs while renewable energy projects are being built.

### 23.1.2 Provincial Regulations

Ontario also requires facilities that emit over 10,000 tonnes of CO2e per year to report their emissions. Facilities that emit over 50,000 tonnes must follow stricter rules and meet yearly emission limits. These limits get tougher over time.

The Riverside Generating Station will be required to report its emissions and follow Ontario's performance standards.

Ontario also has guidelines to control other air pollutants, like nitrogen oxides ($NO_X$), from natural gas turbines. These guidelines apply to facilities that run less than 1,500 hours per year.

### 23.1.3 Assessment Boundaries

The GHG assessment looked only at direct emissions from the Riverside Generating Station during its operation. These are emissions from sources that Atura Power owns or controls on the project site. These are called Scope 1 emissions.

The assessment did not include:

- Scope 2 emissions (from purchased electricity), because the project won't be buying electricity.
- Scope 3 emissions (from the supply chain or product use), because they are not required by law or relevant guidelines.
- Carbon sinks (like forests that absorb $CO_2$), because none are affected by the project.
- GHG removals or offsets, because none are planned at this time.

The area considered for emissions is limited to the project property. The project's emissions were compared to overall emissions from Ontario's electricity sector.

### 23.1.4 Selected Parameters

The assessment considered the main GHGs tracked by Canada's national reporting system:

- Carbon dioxide ($CO_2$)
- Methane ($CH_4$)
- Nitrous oxide ($N_2O$)

Other gases like Perfluorocarbons (PFCs), Hydrofluorocarbons (HFCs), Sulphur hexafluoride ($SF_6$) and Nitrogen trifluoride ($NF_3$) were not included because the project won't emit them.

Each gas was converted into carbon dioxide equivalent ($CO_2e$) using standard values from federal and provincial guidelines. This allows all emissions to be reported in the same unit.

### 23.1.5 Emission Sources

The main source of greenhouse gas (GHG) emissions from the Riverside Generating Station will be a natural gas turbine. Other minor sources including the dewpoint heater (natural gas), emergency generator and fire pump (both diesel) have been included in the calculation for completeness of the initial GHG estimate. The Project does have Heating, Ventilation, and Air Conditioning (HVAC) systems; however, these sources are not directly related to the process, are intermittent, and not significant in terms of GHG emissions. As such, these sources have been excluded from the assessment. The GHG emissions assessment considered the Riverside's direct GHG emissions from sources that are owned or controlled by Atura Power and within the property. No carbon sinks have been identified as being modified/affected in relation to this Project which fall under Atura Power's control. As per the GHG Protocol, direct emissions are also commonly referenced as Scope 1 emissions (WRI, 2015). No GHG removals have been identified for this assessment.

### 23.1.6 GHG Emissions Data Sources and Calculations

Estimates of GHG emissions resulting from the Project (when in operation) were prepared based on information provided by Atura Power and calculated based on the number and type of equipment, fuel consumption, and gas composition.

### 23.1.7 Assumptions and Limitations

Assumptions for the projected GHG emissions from the Project include:

- Calculations for the gas-fired turbine generator are based on 1,500 operating hours per year.

- Calculations of natural gas combustion were conservatively based on the Lower Heating Value (LHV) of approximately 35.07 megajoules per cubic meter (MJ/$m^3$) instead of the Higher Heating Value (HHV) of approximately 38.9 MJ/$m^3$.
- The emissions from the turbine are based on the running at 100% load for all 1,500 hours assumed and operating during wintertime conditions.

The emissions from the emergency generator and fire pump are conservatively based on 500 hours per year to represent maintenance testing and emergency usage.

## 23.2 Results

### 23.2.1 Project Net GHG Emissions

As the number of operating hours will vary year to year depending on IESO needs, the initial GHG estimates are based on a maximum number of operating hours of 1,500 per year as per the Province of Ontario's Guideline A-5. Using these conservative assumptions, the estimated annual GHG emissions would be a maximum of 345,000 tonnes of $CO_2e$, from the turbine, dewpoint heater, emergency generator and firepump. However, it is expected that the facility will operate several times below the maximum emissions levels noted above, consistent with other facilities within the province that operate less frequently[1].

For information on GHG emissions during the construction and decommissioning phases, see Section 24.1 and 24.3.

### 23.2.2 Uncertainty

The primary uncertainty in this assessment relates to the estimated GHG emissions based on the IESO projections. The GHG emissions estimated for this assessment are based on 1,500 operating hours; however, future demands are dependent on local and regional constraints of the provincial electricity grid. These constraints may include, but are not limited to, changes in electricity sources, climate changes, and population changes. Future demand is forecasted based on IESO's understanding of the potential needs for electricity, therefore, the actual needs are unknown. As such the initial GHG estimates are based on maximum allowed operating timeframes.

[1] *The York Energy Centre generated approximately 24,000 tonnes of CO2e in 2023. Over the past five years, the York Energy Centre has been dispatched by the IESO an average of 146 hours annually, with an average run time of just under 3 hours per dispatch request (SLR Consulting (Canada) Ltd. 2024).*

# 24. Waste and Emissions

## 24.1 Construction Phase

The Project will generate typical construction emissions, discharges, and wastes throughout the construction phase. A list of the types of wastes and emissions that are likely to be generated in the air (atmospheric emissions), in or on water (liquid discharges), and in or on land (solid wastes) are identified in Table 24-1.

**Table 24-1: Types of Wastes and Emissions likely to be Generated during the Construction Phase**

| Category | Type | Source Description |
|---|---|---|
| **Atmospheric Emissions** | Air emissions | • Engine exhaust from machinery and equipment<br>• Construction traffic |
| | GHG | • Combustion of diesel fuel in machinery and equipment<br>• Construction traffic |
| | Fugitive dust | • Civil earthworks<br>• Loading, unloading, and transfer of materials<br>• Wind erosion of storage stockpiles |
| | Noise | • Machinery and equipment operation<br>• Delivery and movement of components and materials<br>• Construction traffic |
| | Light | • Temporary site illumination for safety purposes |
| **Liquid Discharges** | Stormwater runoff | • Stormwater runoff from work areas. |
| | Dewatering | • Excavation dewatering, if required, will generate discharge of groundwater and/or runoff<br>• Quantities of discharge are anticipated to be less than 50,000 L/day |
| | Domestic Sewage | • Sanitary services will be provided by portable toilets and wash stations |
| **Solid Wastes** | Domestic solid waste and hazardous waste | • Typical construction waste, such as packing materials, office wastes, scrap lumber, excess concrete, metals, cables, glass, cardboard containers, and other miscellaneous debris.<br>• Hazardous materials that may require disposal are expected to be limited to fuels and lubricants that will be on-site for use in equipment. |

## 24.2 Operation and Maintenance Phase

The Project will generate discharges and wastes throughout the operations and maintenance phase. The key emissions of interest from the operation of a natural gas-fuelled power generation facility are greenhouse gas emissions (previously discussed in Section 23), air emissions (Section 24.2.1), and noise emissions (Section 24.2.2).

A list of all types of operational wastes and emissions that are likely to be generated in the air (atmospheric emissions), in or on water (liquid discharges), and in or on land (solid wastes) are presented in Section 24.2.3.

### 24.2.1 Air Emissions

The proposed emission sources for the Project include the gas turbine stack, dewpoint heater, emergency fire pump, and emergency diesel genset. Emissions from the gas turbine stack with the dewpoint heater were assessed under two worst-case scenarios for the gas turbine:

- Case 1: assumes the minimum ambient temperature of -35 °C, operating at 100% or full load.
- Case 2: assumes the winter average ambient temperature of -1.2 °C, also operating at 100% or full load.

For each case, four operating scenarios were evaluated: startup, normal operation, shutdown, and emergency as follows:

- Startup and Shutdown: Only the gas turbine stack emissions were considered.
- Normal Operation: Emissions from both the gas turbine stack and the dewpoint heater were included.
- Emergency Scenario: Emissions from the emergency fire pump and emergency diesel genset were assessed as to be operating simultaneously, more specifically, tested at the same time.
- Startup, normal, and shutdown operation scenario durations were considered as 23.0, 28.1, and 8.9 minutes, respectively.

Pollutants considered include $NO_X$ and CO for all four operating scenarios, and $PM_{2.5}$ for the normal operation scenario, only.

#### 24.2.1.1 Normal Operating Conditions

All predicted concentrations of $NO_x$ and CO outside the Project fenceline (Figure 9-1) meet their respective O. Reg. 419/05 requirements.

The maximum total predicted NOx concentrations for both case 1 and 2 for the 1-hour and 24-hour averages were 27.6 micrograms per cubic metre (µg/m³) at grid receptors, and 15.9 µg/m³ at sensitive receptors. All of these values are below 11% of the O. Reg. 419/05 objectives and show no exceedances at any point.

The maximum total predicted CO concentrations for both case 1 and 2 for the 1/2-hour averages were 33.5 µg/m³ at grid receptors, and 4.7 µg/m³ at sensitive receptors. All of these values are below 1% of the O. Reg. 419/05 objectives and show no exceedances at any point.

#### 24.2.1.2 Startup and Shutdown Conditions

All predicted concentrations of $NO_x$ and CO outside the Project fenceline (Figure 9-1) meet their respective Provincial Ambient Air Quality Criteria (AAQC).

The maximum total predicted 1-hour $NO_x$ concentrations for startup and shutdown scenarios for both case 1 and 2 were 135.8 µg/m³ at grid receptors, and 83.2 µg/m³ at sensitive receptors. All of these values are below 34% of the AAQC objectives and show no exceedances at any point.

The maximum total predicted 1/2-hour CO concentrations for startup and shutdown scenarios for both case 1 and 2 were 2977.3 µg/m³ at grid receptors, and 1821.3 µg/m³ at sensitive receptors. All of these values are below 50% of the O. Reg. 419/05 objectives and show no exceedances at any point.

#### 24.2.1.3 Emergency Conditions

The maximum predicted concentrations of 1-hour $NO_X$ predicted for the emergency scenario including the testing of both the emergency fire pump and the emergency generator simultaneously, was 102.1 µg/m³ at sensitive receptors or 26% of the 400 µg/m³ standard.

#### 24.2.1.4 Cumulative Impacts

In addition to meeting the applicable provincial regulatory compliance limits that will be required for MECP approval, a combined effects analysis was conducted to consider the existing ambient air quality conditions in the local region. The criteria used to evaluate the results of the dispersion modelling in the context of the regional air quality regime were the AAQC and Federal Canadian Ambient Air Quality Standards (CAAQS).

**Normal Operating Conditions**

All predicted concentrations of $NO_x$, CO, and $PM_{2.5}$ meet the respective AAQC and CAAQS at all selected sensitive receptors.

The maximum total predicted NOx concentrations for both case 1 and 2 for the 1-hour and 24-hour averages was 48.6 µg/m³ at sensitive receptors. All of these values are below 15% of the AAQC objectives and show no exceedances.

For the normal operation scenario, the NO2 results were compared to the CAAQS. The maximum total predicted NO2 concentrations for both case 1 and 2 for the 1-hour and annual averages were 35.3 µg/m³ and 8.9 µg/m³ at sensitive receptors. All of these values are below 45% of the CAAQS objectives and show no exceedances.

The maximum total predicted CO concentrations for both case 1 and 2 for the 1-hour and 8-hour averages were 389.2 µg/m³ and 373.1 µg/m³ at sensitive receptors. All of these values are below 3% of the AAQC objectives and show no exceedances at any point within the domain.

The maximum total predicted PM2.5 concentrations, including background concentrations, for both case 1 and 2 for the 24-hour and annual averages were 14.2 µg/m³ at sensitive receptors. Predicted concentrations of PM2.5 are dominated by the existing background concentrations, with the proposed facility contributing less than 1% of the maximum concentration. All of these values are approximately below 67% of the AAQC and CAAQS objectives and shows no exceedances.

### 24.2.2 Noise Emissions

#### 24.2.2.1 Noise Source Summary

Sources considered in the assessment of predictable worst-case operational noise, associated with the key equipment components, are summarized in Table 24-2. Table 24-2 also presents the modelled overall sound power level of the sources.

**Table 24-2: Noise Source Summary Table**

| Noise Source | Modelled Total Sound Power Level (dBA) |
|---|---|
| **Operational Noise** | |
| 4 Stage Cooler | 106 |
| Air Cooled Heat Exchanger | 104 |
| Auxiliary Transformer | 90 |
| Cooling Water Pump | 98 |
| 2 Stage Cooling Tower | 100 |
| Demineralized Water Pump | 98 |
| Dew Point Heater | 97 |
| Dew Point Stack | 98 |
| Enhanced Cooling Air Compressor | 102 |
| Enhanced Cooling Air Cooler | 101 |
| Fuel Gas Compressor Cooler | 92 |
| Fuel Gas Compressors Enclosure | 93 |
| Fuel Gas Valve | 98 |
| Generator | 109 |
| Generator Step-Up Transformer | 96 |
| Gas Turbine Auxiliary Package | 103 |
| Gas Turbine Casing Cooling Fan 1 | 96 |

| Noise Source | Modelled Total Sound Power Level (dBA) |
|---|---|
| Gas Turbine Casing Cooling Fan 2 | 96 |
| Gas Turbine Enclosure | 115 |
| Gas Turbine Enclosure Air Discharge 1 | 105 |
| Gas Turbine Enclosure Air Discharge 2 | 105 |
| Gas Turbine Enclosure Air Inlet 1 | 104 |
| Gas Turbine Enclosure Air Inlet 2 | 104 |
| Gas Turbine Exhaust Stack | 107 |
| Gas Turbine Inlet and Filter Housing | 105 |
| Gas Turbine Cooling Air Cooler | 104 |
| GT Inlet Downstream Ducts/Elbows | 114 |
| Lube Oil Mist Separator | 105 |
| Transition to GT Exhaust Stack | 114 |
| **Emergency Sources** | |
| Emergency Generator | 100 |
| Diesel Fire Water Pump | 105 |

A combination of manufacturers' data, engineering calculations, and equipment specifications was used to establish source sound levels for noise sources associated with Project operations. For the emergency generator, a specific of 75 dBA at 7 m was considered, and for the diesel fire pump, historical data for a similar source was considered.

As part of the preliminary Project design, some sources outlined in Table 24-2 include inherent acoustical mitigation, including (but not limited to) the following:

- Selection of "low noise" equipment option upgrades from the manufacturer for sources such as the Gas Turbine Air Inlet Filter Housing (and immediate downstream ducting components), Gas Turbine Exhaust Stack (and associated components), Gas Turbine Auxiliary Package, Gas Turbine Cooling Air Cooler, Enhanced Cooling Air Cooler, Enhanced Cooling Air Compressor, Dew Point Heater, Fuel Gas Compressor Cooler, and Air Cooled Heat Exchanger.
- Implementation of silencers (for the Gas Turbine Air Inlet) and baffles (for the Gas Turbine Exhaust Stack).
- Placing some equipment in sound enclosures, such as the Fuel Gas Compressors and the base of the Gas Turbine Exhaust Stack.

Furthermore, the Project design includes acoustic barriers. The acoustic barriers and their design details will be finalized as the design progresses but are described as follows:

- PT Acoustic Barrier – approximately 50 m long, 18.3 m high, absorptive on north (source) side.
- Air Cooled Heat Exchanger Barrier – approximately 40 m long, 11 m high, absorptive on north (source) side.

- Cooler Barrier – approximately 11 m long, 5.5 m high, absorptive on north (source) side.

All of the mitigation measures considered in the assessment are considered feasible from an economic, administrative and technical perspective. Specific mitigation options and measures will be confirmed during the detailed design phase of the Project.

#### 24.2.2.2 Noise Impact Assessment Results

**Operational Noise**

Predicted operational sound levels from the Project are summarized in 24-3.

The Project operational sound levels are predicted to meet applicable Class 2/Class 3 guidelines at the identified receptors during all periods of the day. The highest predicted sound levels are 44 dBA, compared to the 45 dBA nighttime sound level limit.

**Table 24-3: Predicted Project Sound Levels at Surrounding Points of Reception – Operational Noise**

| POR ID | Predicted Sound Level ($L_{eq}$(1-hr), dBA) | Applicable Sound Level Limit ($L_{eq}$(1-hr), dBA) | | | Predicted Compliance with Applicable Limit (Y / N) | | |
|---|---|---|---|---|---|---|---|
| | | Day | Eve | Night | Day | Eve | Night |
| **Plane of Window PORs** | | | | | | | |
| POR001 | 44 | 50 | 50 | 45 | Y | Y | Y |
| POR002 | 42 | 50 | 50 | 45 | Y | Y | Y |
| POR003 | 41 | 50 | 50 | 45 | Y | Y | Y |
| POR004 | 41 | 50 | 50 | 45 | Y | Y | Y |
| POR005 | 43 | 50 | 50 | 45 | Y | Y | Y |
| POR006 | 44 | 50 | 50 | 45 | Y | Y | Y |
| POR007 | 44 | 50 | 50 | 45 | Y | Y | Y |
| POR008 | 44 | 50 | 50 | 45 | Y | Y | Y |
| POR009 | 44 | 50 | 50 | 45 | Y | Y | Y |
| POR010 | 33 | 45 | 40 | 40 | Y | Y | Y |
| VPOR001 | 36 | 45 | 40 | 40 | Y | Y | Y |
| **Outdoor PORs** | | | | | | | |
| OPOR001 | 44 | 50 | 45 | n/a[1] | Y | Y | n/a[1] |
| OPOR002 | 43 | 50 | 45 | n/a[1] | Y | Y | n/a[1] |
| OPOR003 | 42 | 50 | 45 | n/a[1] | Y | Y | n/a[1] |
| OPOR004 | 41 | 50 | 45 | n/a[1] | Y | Y | n/a[1] |
| OPOR005 | 44 | 50 | 45 | n/a[1] | Y | Y | n/a[1] |
| OPOR006 | 44 | 50 | 45 | n/a[1] | Y | Y | n/a[1] |
| OPOR007 | 43 | 50 | 45 | n/a[1] | Y | Y | n/a[1] |
| OPOR008 | 43 | 50 | 45 | n/a[1] | Y | Y | n/a[1] |

| POR ID | Predicted Sound Level ($L_{eq}$(1-hr), dBA) | Applicable Sound Level Limit ($L_{eq}$(1-hr), dBA) | | | Predicted Compliance with Applicable Limit (Y / N) | | |
|---|---|---|---|---|---|---|---|
| | | Day | Eve | Night | Day | Eve | Night |
| OPOR009 | 41 | 50 | 45 | n/a[1] | Y | Y | n/a[1] |
| OPOR010 | 33 | 45 | 40 | n/a[1] | Y | Y | n/a[1] |
| Notes:<br>[1] Sound level limits do not apply to outdoor PORs during nighttime hours. | | | | | | | |

### 24.2.2.3 Emergency Equipment Testing

Predicted sound levels from routine testing of emergency equipment (emergency generator and diesel fire water pump) are summarized in Table 24-4. The predicted sound levels meet applicable Class 2/Class 3 guideline limits at all PORs.

## Table 24-4: Predicted Project Sound Levels at Surrounding Points of Reception – Emergency Equipment Testing

| POR ID | Predicted Sound Level ($L_{eq}$(1-hr), dBA) | Applicable Sound Level Limit ($L_{eq}$(1-hr), dBA), Daytime | Predicted Compliance with Applicable Limit (Y / N) |
|---|---|---|---|
| **Plane of Window PORs** | | | |
| POR001 | 38 | 55 | Y |
| POR002 | 33 | 55 | Y |
| POR003 | 33 | 55 | Y |
| POR004 | 34 | 55 | Y |
| POR005 | 32 | 55 | Y |
| POR006 | 33 | 55 | Y |
| POR007 | 32 | 55 | Y |
| POR008 | 32 | 55 | Y |
| POR009 | 32 | 55 | Y |
| POR010 | 25 | 50 | Y |
| VPOR001 | 27 | 50 | Y |
| **Outdoor PORs** | | | |
| OPOR001 | 38 | 55 | Y |
| OPOR002 | 36 | 55 | Y |
| OPOR003 | 36 | 55 | Y |
| OPOR004 | 35 | 55 | Y |
| OPOR005 | 32 | 55 | Y |
| OPOR006 | 32 | 55 | Y |
| OPOR007 | 31 | 55 | Y |
| OPOR008 | 31 | 55 | Y |
| OPOR009 | 30 | 55 | Y |
| OPOR010 | 25 | 50 | Y |

The significant sources of noise associated with the Project were modelled based on a combination of manufacturers' data, engineering calculations, and equipment specifications. Sound levels from Project operations are predicted to meet applicable Class 2 and Class 3 minimum exclusionary limits at all surrounding PORs/OPORs/VPORs with appropriate Project design, equipment specifications, and inclusion of mitigation measures

### 24.2.3 Other Wastes and Emissions

Operational wastes and emissions that are likely to be generated in the air (atmospheric emissions), in or on water (liquid discharges), and in or on land (solid wastes) are presented in Table 24-5.

**Table 24-5: Types of Wastes and Emissions likely to be Generated during the Operation and Maintenance Phase**

| Category | Type | Source Description |
|---|---|---|
| **Atmospheric Emissions** | Air emissions | • CTG system operation |
| | GHG | • CTG system operation |
| | Noise | • CTG system operation<br>• Transformer and auxiliary equipment operation<br>• Emergency Equipment (generator & diesel fire water pump) |
| | Light | • General site illumination<br>• Maintenance and safety lighting<br>• Stack lighting for personnel access<br>• Additional stack aeronautical obstruction and warning lights if and as required by Transport Canada. |
| **Liquid Discharges** | Stormwater runoff | • Stormwater runoff from the Project site |
| | Industrial Sewage | • Treated process water discharged from the oil/water separator (OWS), collected from all drains within the project that have potential to contain hydrocarbon petroleum products |
| | | • Turbine wash water, drains and any potential oil leakage from the OWS |
| | Domestic Sewage | • Washroom and kitchen facilities for occupants of administration building, maintenance shops and warehouse. |
| **Solid Wastes** | Domestic solid waste and hazardous waste | • Domestic waste administration building and worker activities including typical office wastes and recyclables (e.g., paper, glass, cardboard containers).<br>• Industrial garbage from maintenance activities including scrap lumber, excess concrete, metals, cables, and other miscellaneous debris.<br>• Hazardous materials that may require disposal are primarily limited to fuels and lubricants that will be on-site for use in equipment. |

## 24.3 Decommissioning Phase

Generally, wastes and emissions during the decommissioning process are expected to be substantially less than that required for construction of the Project. However, the decommissioning plan developed at the end of the project lifecycle will include a waste management plan for refurbishment, recycling, or disposal of materials and components in accordance with regulatory standards at the time.

# 25. References

Aleksa, M. (2022). Afforestation in southwestern Ontario: A historical and ecological analysis [Master's thesis, Lakehead University]. Lakehead University Knowledge Commons. https://knowledgecommons.lakeheadu.ca/jspui/bitstream/2453/4940/1/AleksaM2022b-1a.pdf

Boileau, J. (2022). Sombra Township Treaty (No.7). The Canadian Encyclopedia. Retrieved May 6, 2025, from https://www.thecanadianencyclopedia.ca/en/article/sombra-township-treaty-no-7

City of Sarnia. (2025). History of Sarnia. Retrieved May 20, 2025, from https://www.sarnia.ca/living-here/history-of-sarnia/.

Crown-Indigenous Relations and Northern Affairs Canada. (2024) About treaties. Government of Canada. https://www.rcaanc-cirnac.gc.ca/eng/1100100028574/1529354437231

Environment and Climate Change Canada (ECCC). (2023). Canada's greenhouse gas quantification requirements. https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/facility-reporting/reporting/quantification-requirements.html

ECCC. (2020). Strategic Assessment of Climate Change. Environment and Climate Change Canada. October 6, 2020.

Gao, C., Shirota, J., Kelly, R.I., Brunton, F.R., & van Haaften, S. (2006). Bedrock topography and overburden thickness mapping, southern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 207.

Government of Canada (GOC). 1991. Agreement between the Government of Canada and the Government of the United States of America on Air Quality. https://www.canada.ca/en/environment-climate-change/services/air-pollution/issues/transboundary/canada-united-states-air-quality-agreement.html.

GOC. (1999). Canadian Environmental Protection Act, 1999 (S.C. 1999, c. 33). https://laws-lois.justice.gc.ca/eng/acts/c-15.31/

GOC. (2020). Strategic assessment of climate change. https://www.strategicassessmentclimatechange.ca/.

Government of Ontario. (n.d.-a). Map of Ontario treaties and reserves. Ontario.ca. https://www.ontario.ca/page/map-ontario-treaties-and-reserves

Government of Ontario. (n.d.-b). The ecosystems of Ontario – Part 1: Ecozones and ecoregions. https://www.ontario.ca/page/ecosystems-ontario-part-1-ecozones-and-ecoregions

Independent Electricity System Operator (IESO). (n.d.). Ontario energy map. https://www.ieso.ca/localContent/ontarioenergymap/index.html

IESO. (2025). Annual Planning Outlook, Ontario's electricity system needs: 2026-2050. Independent Electricity System Operator. April 2025.

IESO. (2024). Annual Planning Outlook, Ontario's electricity system needs: 2025-2050. Independent Electricity System Operator. March 2024.

IESO. (2023). Evaluating Procurement Options for Supply Adequacy: A Resource Adequacy Update to the Minister of Energy. Independent Electricity System Operator. December 11, 2023.

IESO. (2022a). Resource Eligibility Interim Report. Independent Electricity System Operator. October 7, 2022.

IESO. (2022b). Pathways to Decarbonization: A report to the Minister of Energy to evaluate a moratorium on new natural gas generation in Ontario and to develop a pathway to zero emissions in the electricity sector. Independent Electricity System Operator. December 15, 2022.

IESO. (2021). Six things to know about the IESO's study on phasing out gas-fired generation by 2030. IESO. https://www.ieso.ca/Powering-Tomorrow/2021/Six-things-to-know-about-the-IESOs-study-on-phasing-out-gas-fired-generation-by-2030

Intergovernmental Panel on Climate Change. (2021). Climate change 2021: The physical science basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (V. Masson-Delmotte, P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, et al., Eds.). Cambridge University Press. https://www.ipcc.ch/report/ar6/wg1/

Lambton County. (2025). Health services. https://www.lambtononline.ca/en/resident-services/health-services.aspx

Lambton County Archives. (n.d.). From forest to field: Early years. Lambton County Museums. Retrieved June 6, 2025, from https://www.lambtonmuseums.ca/en/lambton-county-archives/from-forest-to-field-early-years.aspx

Lambton Public Health. (2025). About us. https://lambtonpublichealth.ca/about/

Ministry of Energy and Electrification (MOEE). (2024). "Ontario Expands Largest Competitive Energy Procurement in Province's History". News Release. Ministry of Energy and Electrification. December 11, 2024.

Ministry of the Environment, Conservation and Parks (MECP). (2018). O. Reg. 390/18: Greenhouse gas emissions: Quantification, reporting and verification. https://www.ontario.ca/laws/regulation/r18390

MECP. (2019). O. Reg. 241/19: Greenhouse gas emissions performance standards. https://www.ontario.ca/laws/regulation/r19241

MECP. (2024). Guideline for quantification, reporting and verification of greenhouse gas emissions – March 2024. https://www.ontario.ca/page/report-greenhouse-gas-ghg-emissions

MECP. (2021). Guideline A-5: Atmospheric emissions from stationary combustion turbines. Government of Ontario. https://www.ontario.ca/page/guideline-5-atmospheric-emissions-stationary-combustion-turbines

MECP. (2024). Sarnia Area Environmental Health Project (SAEHP): Community report. Clean Air Sarnia and Area. https://www.cleanairsarniaandarea.com/resources/documents/saehp/SAEHP-Community-Report.pdf

Sarnia Historical Society. (n.d.). History of the chemical industry in Lambton County. https://sarniahistoricalsociety.com/story/history-of-the-chemical-industry-in-lambton-county/

Sarnia-Lambton Economic Partnership. (2025). Lambton County data and reports. https://www.sarnialambton.on.ca/data-and-reports/lambton-county

Statistics Canada. (2021). Gender and gender diversity reference guide, Census of Population, 2021. https://www12.statcan.gc.ca/census-recensement/2021/ref/gender-genre-eng.cfm

Statistics Canada. 2023a. (table). Census Profile. 2021 Census of Population. Statistics Canada Catalogue no. 98-316-X2021001. Ottawa. Released November 15, 2023. https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E (accessed May 6, 2025).

Statistics Canada. 2023b. (table). Census Profile. 2021 Census of Population. Statistics Canada Catalogue no. 98-316-X2021001. Ottawa. Released November 15, 2023. https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E (accessed May 20, 2025).

Statistics Canada. (2025). Table 98-10-0592-01: Class of worker by industry groups, labour force status, age and gender: Canada, provinces and territories and census divisions. Retrieved May 20, 2025, from https://doi.org/10.25318/9810059201-eng

St. Clair Region Conservation Authority. (2023, June). Hunting map and property descriptions [PDF]. https://www.scrca.on.ca/wp-content/uploads/2023/06/Hunting-Map-and-Property-Descriptions.pdf

SLR Consulting (Canada) Ltd. (2024). Environmental review report: York Energy Centre Upgrades Project (Report No. 241.030524.00026). Capital Power Corporation. https://www.capitalpower.com/wp-content/uploads/2024/07/Capital-Power-York-Energy-Centre-Upgrades-project-environmental-review-report-main-report-2024.pdf

St. Clair Township. (2024a). Comprehensive zoning by-law (By-law 17 of 2003, Office Consolidation January 2024). County of Lambton Planning and Development Department. https://www.stclairtownship.ca/wp-content/uploads/St.-Clair-Zoning-By-law-4.pdf

St. Clair Township. (2024b). St. Clair Official Plan. Lambton County Planning & Development Department. https://www.stclairtownship.ca/wp-content/uploads/St-Clair-Official-Plan-November-18-2024.pdf

Upper Thames River Conservation Authority (UTRCA). (2008). Thames-Sydenham and Region Watershed Characterization Report: Volume 1. www.sourcewaterprotection.on.ca.

Vypovska, A. 2025. Impact Assessment Agency of Canada. E-mail correspondence. April 30, 2025.

World Resources Institute. (2015). The greenhouse gas protocol: A corporate accounting and reporting standard (Revised ed.). https://ghgprotocol.org/sites/default/files/standards/ghg_project_accounting.pdf

Atura Power