



**ENVIRONMENTAL ASSESSMENT REGISTRATION DOCUMENT  
& INITIAL PROJECT DESCRIPTION  
Plain Language Summary**  
**Fast Acting Natural Gas Power Generation Facility – Marshdale**  
(IAAC Project Title: Marshdale Natural Gas Power Generation Facility)

Prepared for: IESO Nova Scotia



December 2025

# TABLE OF CONTENTS

	<i>Page</i>
<b>PART A: GENERAL INFORMATION</b> .....	<b>1</b>
<b>1.0 PROJECT INFORMATION</b> .....	<b>1</b>
1.1 Project Location .....	2
1.1.1 Alternative Project Locations.....	3
<b>2.0 PROPONENT INFORMATION</b> .....	<b>4</b>
<b>3.0 ENGAGEMENT WITH THE PUBLIC, REGULATORY AGENCIES, &amp; OTHER PARTIES</b> .....	<b>5</b>
3.1 List of Engaged Parties.....	5
3.2 Regulatory Requirements .....	6
3.2.1 Federal.....	6
3.2.2 Provincial .....	7
3.2.3 Municipal.....	9
3.3 Stakeholder and Public Engagement.....	10
3.3.1 Digital Communications .....	12
3.3.2 Newsletter .....	12
3.3.3 Media .....	12
3.3.4 Public Open House .....	12
3.3.5 Individual Meetings with Members of the Public .....	13
3.3.6 Community Liaison Committee .....	13
3.4 Overview of Key Comments and Concerns Expressed .....	13
3.4.1 Review of Government Concerns .....	14
3.4.2 Review of Public & Stakeholder Concerns.....	14
3.5 Ongoing Engagement Activities & Future Engagement Plans .....	22
<b>4.0 ENGAGEMENT WITH INDIGENOUS COMMUNITIES</b> .....	<b>22</b>
4.1 Mi'kmaq of Nova Scotia .....	22
4.2 Overview of Engagement Activities Carried to Date .....	24
4.3 Summary of Key Issues Raised by Indigenous Communities.....	28
4.3.1 Mi'kmaq Ecological Knowledge Study.....	29
4.4 Future Engagement Plan .....	30
<b>5.0 RELEVANT STUDIES OR REGIONAL ASSESSMENTS CONDUCTED</b> .....	<b>31</b>
<b>6.0 RELEVANT STRATEGIC ASSESSMENTS CONDUCTED</b> .....	<b>31</b>
<b>PART B: PROJECT INFORMATION</b> .....	<b>32</b>
<b>7.0 PURPOSE AND NEED FOR THE PROJECT</b> .....	<b>32</b>
<b>8.0 PHYSICAL ACTIVITY</b> .....	<b>32</b>
<b>9.0 ACTIVITIES, COMPONENTS, &amp; INFRASTRUCTURE</b> .....	<b>33</b>
9.1 Infrastructure & Components .....	33
9.1.1 Size of the Designated Project Footprint.....	33
9.1.2 Project Features.....	33
9.1.3 Project Components.....	34
9.1.4 Existing Infrastructure .....	37
9.2 Physical Activities Incidental to the Project Within the Proponent's Control.....	38

9.3	Physical Activities Incidental to the Project Outside the Proponent's Control .....	38
9.4	Project Expansion .....	38
<b>10.0</b>	<b>MAXIMUM PRODUCTION CAPACITY .....</b>	<b>38</b>
<b>11.0</b>	<b>ANTICIPATED CONSTRUCTION, OPERATION, &amp; DECOMMISSIONING SCHEDULES .....</b>	<b>38</b>
<b>12.0</b>	<b>ALTERNATIVES TO THE PROJECT .....</b>	<b>39</b>
<b>PART C: LOCATION INFORMATION &amp; CONTEXT .....</b>		<b>41</b>
<b>13.0</b>	<b>PROJECT LOCATION DESCRIPTION .....</b>	<b>41</b>
13.1	Geographic Coordinates .....	41
13.2	Site Maps .....	41
13.3	Legal Land Description .....	41
13.4	Proximity to Residences .....	41
13.5	Proximity to Indigenous Lands .....	42
13.6	Proximity to Federal Lands .....	42
<b>14.0</b>	<b>PHYSICAL &amp; BIOLOGICAL ENVIRONMENT .....</b>	<b>42</b>
14.1	Valued Components .....	42
14.2	Atmosphere and Air Quality .....	43
14.2.1	Baseline Conditions .....	43
14.2.2	Potential Effects .....	44
14.2.3	Mitigation Measures .....	44
14.3	Greenhouse Gases .....	44
14.3.1	Baseline Conditions .....	44
14.3.2	Potential Effects .....	45
14.3.3	Mitigation Measures .....	45
14.4	Sound .....	46
14.4.1	Baseline Conditions .....	46
14.4.2	Potential Effects .....	46
14.4.3	Mitigation Measures .....	47
14.5	Geophysical Environment .....	47
14.5.1	Baseline Conditions .....	47
14.5.2	Potential Effects .....	48
14.5.3	Mitigation Measures .....	48
14.6	Surface Water, Fish and Fish Habitat .....	49
14.6.1	Baseline Conditions .....	49
14.6.2	Potential Effects .....	50
14.6.3	Mitigation Measures .....	50
14.7	Wetlands .....	51
14.7.1	Baseline Conditions .....	51
14.7.2	Potential Effects .....	51
14.7.3	Mitigation Measures .....	51
14.8	Terrestrial Flora .....	52
14.8.1	Baseline Conditions .....	52
14.8.2	Potential Effects .....	52
14.8.3	Mitigation Measures .....	53

14.9	Terrestrial Fauna.....	54
14.9.1	Baseline Conditions .....	54
14.9.2	Potential Effects .....	55
14.9.3	Mitigation Measures .....	55
14.10	Avifauna.....	56
14.10.1	Baseline Conditions .....	56
14.10.2	Potential Effects .....	56
14.10.3	Mitigation Measures .....	57
<b>15.0</b>	<b>HEALTH, SOCIAL, &amp; ECONOMIC CONTEXT .....</b>	<b>58</b>
	<b>PART D: FEDERAL, PROVINCIAL, TERRITORIAL, INDIGENOUS &amp; MUNICIPAL INVOLVEMENT.....</b>	<b>63</b>
<b>16.0</b>	<b>FEDERAL FINANCIAL SUPPORT .....</b>	<b>63</b>
<b>17.0</b>	<b>FEDERAL LANDS USED FOR THE PROJECT .....</b>	<b>63</b>
<b>18.0</b>	<b>FEDERAL, PROVINCIAL, LEGISLATIVE OR OTHER REGULATORY REQUIREMENTS.....</b>	<b>63</b>
	<b>PART E: POTENTIAL EFFECTS OF THE PROJECT .....</b>	<b>64</b>
<b>19.0</b>	<b>IMPACTS TO ENVIRONMENTAL COMPONENTS.....</b>	<b>64</b>
19.1	Fish & Fish Habitat.....	64
19.2	Aquatic Species at Risk .....	65
19.3	Migratory Birds.....	65
<b>20.0</b>	<b>POTENTIAL ENVIRONMENTAL IMPACTS ON FEDERAL LANDS, IN OTHER PROVINCES, OR OUTSIDE OF CANADA .....</b>	<b>66</b>
20.1	Federal Lands .....	66
20.2	Other Canadian Provinces .....	66
20.3	Outside of Canada .....	66
<b>21.0</b>	<b>POTENTIAL ENVIRONMENTAL IMPACTS ON INDIGENOUS PEOPLES .....</b>	<b>67</b>
21.1	Physical & Cultural Heritage .....	67
21.2	Current Use of Lands and Resources for Traditional Purposes .....	68
21.2.1	Hunting and Trapping.....	68
21.2.2	Plant Gathering .....	68
21.2.3	Fishing .....	69
21.2.4	Use of Navigable Waters .....	69
21.2.5	Recreational Use.....	69
21.2.6	Commercial Use of the Lands by Indigenous Communities.....	69
21.3	Sites & Structures of Historical, Archaeological, Paleontological, or Architectural Significance..	69
<b>22.0</b>	<b>POTENTIAL HEALTH, SOCIAL, OR ECONOMIC IMPACTS ON INDIGENOUS PEOPLES .....</b>	<b>69</b>
22.1	Health & Social Impacts on Indigenous Peoples .....	69
22.2	Economic Impacts on Indigenous Peoples .....	70
22.3	Summary of Potential Health, Social and Economic Impacts on Indigenous Peoples .....	70
<b>23.0</b>	<b>GREENHOUSE GAS EMISSIONS ESTIMATE .....</b>	<b>71</b>
<b>24.0</b>	<b>EMISSIONS, DISCHARGE, &amp; WASTE.....</b>	<b>72</b>
24.1	Atmospheric Emissions.....	72
24.1.1	Operational Emissions .....	72
24.1.2	Fugitive Dust.....	72
24.1.3	Tailpipe/Exhaust Emissions .....	73

24.1.4	Noise .....	73
24.2	Stormwater and Wastewater Treatment .....	73
24.3	Industrial Wastewater .....	74
24.4	Domestic Waste .....	74
<b>PART F: SUMMARY .....</b>		<b>75</b>
<b>25.0 INITIAL PROJECT DESCRIPTION SUMMARY .....</b>		<b>75</b>
<b>26.0 CLOSURE .....</b>		<b>76</b>
<b>27.0 REFERENCES .....</b>		<b>77</b>

## **LIST OF TABLES**

---

Table 1.1: Summary of Setbacks and Separation Distances .....	3
Table 2.1: Proponent and Primary Representative Contact Information .....	4
Table 3.1: Federal Regulatory Requirements .....	6
Table 3.2: Provincial Regulatory Requirements .....	8
Table 3.3: Municipal Regulatory Requirements .....	10
Table 3.4: Stakeholder Meetings and Events .....	10
Table 3.5: Comments Received from the Public .....	14
Table 4.1: Engagement with the Mi'kmaq of Nova Scotia .....	24
Table 9.1: Areas of Study .....	33
Table 9.2 Project Components and Description .....	34
Table 11.1: Project Timelines.....	39
Table 13.1: Areas of Study .....	41
Table 13.2: Summary of Modelled residential Receptors and Associated Civic Addresses.....	42

## **LIST OF APPENDICES**

---

Appendix A: Project Location Drawings

## LIST OF ACRONYMS

Acronym	Definition
%	Percent
ARIA	Archaeological Resource Impact Assessment
CAAQS	Canadian Ambient Air Quality Standards
CCME	Canadian Council of Ministers of the Environment
CEMS	Continuous emissions monitoring systems
CEO	Chief Executive Officer
CEPA	Canadian Environmental Protection Act
CLC	Community Liaison Committee
cm	Centimetre
CO	Carbon monoxide
CO <sub>e</sub>	CO equivalent
CO <sub>2</sub>	Carbon dioxide
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CWS	Canadian Wildlife Service
DFO	Fisheries and Oceans Canada
EA	Environmental Assessment
EAC	Ecology Action Centre
EARD	Environmental Assessment Registration Document
ECCC	Environment and Climate Change Canada
ESCP	Erosion and Sediment Control Plan
EQS	NS Tier I Environmental Quality Standards
FWALS	CCME Guidelines for the Protection of Freshwater Aquatic Life
GHG	Greenhouse gas
ha	Hectares
IAA	<i>Impact Assessment Act</i> , S.C. 2019, c. 28, s. 1
IAAC	Impact Assessment Agency of Canada
IESO Nova Scotia	Independent Energy System Operator – Nova Scotia
IPD	Initial Project Description
km	Kilometre
km <sup>2</sup>	Square kilometre
KMKNO	Kwilmu'kw Maw-klusuaqn Negotiation Office
kV	Kilovolt
m	Metres
m <sup>3</sup>	Cubic metres

<b>Acronym</b>	<b>Definition</b>
MBCA	Migratory Bird Convention Act
MEKS	Mi'kmaq Ecological Knowledge Study
MP	Member of Parliament
MPOC	Municipality of Pictou County
MW	Megawatt
NO <sub>2</sub>	Nitrogen dioxide
NO <sub>x</sub>	Nitrogen oxides
NRCan	Natural Resources Canada
NCNS	Native Council of Nova Scotia
NS	Nova Scotia
NSAAQS	Nova Scotia Ambient Air Quality Standards
NSCCTH	Nova Scotia Communities, Culture, Tourism, and Heritage
NSDOE	Nova Scotia Department of Energy
NSEB	Nova Scotia Energy Board
NSECC	Nova Scotia Environment and Climate Change
NSDGD	Nova Scotia Department of Growth and Development
NSNR	Nova Scotia Department of Natural Resources
NS Power	Nova Scotia Power Inc.
NSPW	Nova Scotia Public Works
NPRI	National Pollutant Release Inventory
OLA	Nova Scotia Office of L'nu Affairs
O <sub>2</sub>	Oxygen
PC	Point Count
PCP	Pictou County Partnership
PID	Property Identification Number
PM <sub>2.5</sub>	particulate matter
Q	Quarter
REOI	Request for expression of interest
RFP	Request for Proposals
SARA	Species at Risk Act
SAR	Species at Risk
SOCI	Species of Conservation Interest
TSP	Total suspended particulate matter
tCO <sub>2</sub> e	tonnes of CO <sub>2</sub> equivalent
VC	Valued Component

Acronym	Definition
WMA Ltd.	Wskijnu'k Mtmó'taquuow Agency Limited
WSS	Wetland of Special Significance



## **PART A: GENERAL INFORMATION**

---

This Plain Language Summary has been prepared in both English and French and will be submitted to the Impact Assessment Agency of Canada (IAAC), alongside the Environmental Assessment Registration Document (EARD)/Initial Project Description (IPD). The content of this document meets the information requirements of the Information and Management of Time Limit Regulations, Schedule 1, Section 3, SOR/2019-283 (IAAC, 2024). The numbers and titles used as main headings in the document align with the guide for ease of reference,

### **1.0 PROJECT INFORMATION**

---

The Independent Energy System Operator – Nova Scotia (IESO Nova Scotia or the “Proponent”) is a new, independent, non-profit organization that will be responsible for the planning and reliable operation of Nova Scotia’s bulk electricity system. Starting in 2025, IESO Nova Scotia is taking on the responsibilities of planning and managing the electricity grid in Nova Scotia in a phased approach.

The Proponent has initiated a request for expression of interest (REOI) to select a company to complete the final design, construct, own, and operate an up to 300 megawatt (MW) fast acting natural gas power generation facility. Under Nova Scotia’s Clean Power Plan, the province must stop using coal fired electricity by 2030 and have 80% of electricity come from renewable sources. The facility would provide foundational, reliable power to Nova Scotia’s electrical system and represents the most cost-effective path toward grid decarbonization.

The Proponent has selected two potential project locations including Marshdale (the “Project”) is located near the community of Marshdale in Municipality of Pictou County (MOPC), Nova Scotia (Drawing 1, Appendix A). The second site, Salt Springs, is also located in MOPC; the EARD/IPD for the Salt Springs Project is being submitted under separate cover.

The Project will consist of a simple cycle combustion turbine generating station, fueled primarily with natural gas and the ability to switch to light fuel oil as necessary. The Project will consist of the following primary components:

- Dual fuel combustion turbine package (combined nominal capacity up to 300 MW), consisting of a turbine generator, air inlet filtration unit, exhaust stack, start-up system, and instrumentation and control system designed with synchronous condensing capabilities
- Natural gas supply pipeline and interconnection to the Maritimes & Northeast Pipeline
- Secondary light fuel oil capability including storage system, storage tanks, fuel forwarding equipment, and fuel unloading equipment
- Electrical systems, including generator step up transformers, 230 kilovolt (kV) interconnection and protection, and auxiliary station services
- Water processing facilities

- Water supply, storage, and treatment
- Balance of plant and operator facilities building
- Septic tank or field
- Access roads
- Laydown area
- Security fence and gates

Interconnection to the natural gas pipeline and the installation of new electrical transmission lines are incidental activities required to operate the Facility but excluded from the EARD/IPD. Such scopes are typically implemented (permitting, design, construction, ownership, and operation) in Nova Scotia by separate companies (Maritimes and Northeast for the natural gas interconnection and NS Power for the electrical interconnection from the on-site substation to the existing NS Power grid) because such entities have regulatory rights and obligations associated with such interconnection scopes. These interconnections will be designed and permitted as applicable separately from the natural gas power generation facility.

## **1.1 Project Location**

The Project will be located on private land [Property Identification Number (PID) 910307] in the MOPC, approximately 12 km southwest of New Glasgow, near the communities of Marshdale, Concord, Lorne, and Glengarry Station (Drawing 1, Appendix A). The Proponent has secured the land required for the Project through an option to purchase agreement, option to lease agreement, or negotiations towards an option to purchase or lease.

The Project will be constructed within 55.95 hectares (ha) of privately owned land with an estimated disturbance area of 12.55 ha (both temporary and permanent). The Project location was selected based on several factors, including:

- Proximity to natural gas supply (i.e., Maritimes & Northeast Pipeline).
- Proximity to the Nova Scotia electricity grid and strategic interconnection point for grid stability and reliability considerations.
- Availability and accessibility of suitable land parcels.
- Avoidance of known protected areas, significant habitats, and wildlife sites, provincial parks, and reserves, and field identified archaeological, cultural, and heritage resources.
- Maximizing use of previously disturbed areas to the greatest extent possible.
- Adherence to setbacks and separation distance requirements.

Construction activities are proposed to begin by December 31, 2027, and completion and commercial operation is planned for the fall of 2029. The Project is expected to be operational for a minimum of 30 years, with the possibility of refurbishment to extend its life.

The approximate center of the Project Area is at:

- Latitude: 45.4439°N
- Longitude: 62.7397°W

### 1.1.1 Alternative Project Locations

As part of the Project planning process, and alternatives assessment, a constraints analysis was undertaken that considered potential effects to the environment, nearby residents, and sociocultural resources early in the EA process, prior to field studies being completed. A detailed assessment for four potential sites in Marshdale was completed, with computed normalized performance scores used to compare the attributes of the four sites. These performance scores included considerations of the following criteria:

- Environmental
- Social and Cultural
- Economic
- Technical

Project siting also considered the following factors:

- Proximity to natural gas supply (i.e., Maritimes & Northeast Pipeline).
- Proximity to the Nova Scotia electricity grid and strategic interconnection point for grid stability and reliability considerations.
- Availability and accessibility of suitable land parcels.
- Avoidance of known protected areas, significant habitats, and wildlife sites, provincial parks, and reserves, and field identified archaeological, cultural, and heritage resources.
- Maximizing use of previously disturbed areas to the greatest extent possible.
- Adherence to setbacks and separation distance requirements (Table 1.1).

**Table 1.1: Summary of Setbacks and Separation Distances**

Setback	Distance	Relevant Regulator
Watercourses	Recommended 30 m (from disturbance)	Nova Scotia Environment and Climate Change (NSECC)
Inland Watercourses	15.24 m (from the ordinary high-water mark)	MOPC
Wetlands	Recommended 30 m	NSECC
Wetlands of Special Significance	Recommended 30 m (to be determined in consultation with NSECC)	NSECC
Old-growth Forest Stands	100 m limited development buffer (buffer distance subject to NSNR consultation, applicable on Crown land)	NSNR

<b>Setback</b>	<b>Distance</b>	<b>Relevant Regulator</b>
Rare Plants	Species-specific	NSNR
Rare Lichens	100 m to 500 m (species-specific, may be only applicable on Crown land)	NSNR
Protected Areas & Public Resources	To be determined during consultation.	NSECC, NSNR, MOPC

Following this assessment, Strum completed a detailed constraints assessment to support potential environmental constraints, and to support IESO Nova Scotia to select one site to move forward with through the EARD/IPD based on potential environmental constraints. Through this process, Strum also identified specific field work requirements to support the EARD/IPD. The site selected and presented herein was selected based on social and cultural, economic, technical, and environmental considerations as listed above.

## **2.0 PROPONENT INFORMATION**

IESO Nova Scotia is a new, independent, non-profit organization that will be responsible for the planning and reliable operation of Nova Scotia’s bulk electricity system. Starting in 2025, IESO Nova Scotia is taking on the responsibilities of planning and managing the electricity grid in Nova Scotia in a phased approach. Their responsibilities include running the integrated resource planning processes, overseeing procurement of electricity resources and services, system operations, and the transition to clean energy in a fair and transparent way.

Refer to Table 2.1 for the Proponent’s contact information.

**Table 2.1: Proponent and Primary Representative Contact Information**

<b>Name of the Designated Project</b>	Fast Acting Natural Gas Power Generation Facility – Marshdale  IAAC assigned Project Name: Marshdale Natural Gas Power Generation Facility
<b>Name of the Proponent</b>	Independent Energy System Operator – Nova Scotia
<b>Address of the Proponent</b>	1791 Barrington Street, Suite 1010 Halifax, NS B3J 3K9
<b>President and Chief Executive Officer (CEO)</b>	Johnny Johnston
<b>Primary Representative for the IPD</b>	Aaron Long Project Manager Community@ieso-ns.ca

## 3.0 ENGAGEMENT WITH THE PUBLIC, REGULATORY AGENCIES, & OTHER PARTIES

---

IESO Nova Scotia is committed to transparent, meaningful, and ongoing engagement with government, the public, stakeholders, and the Mi'kmaq of Nova Scotia. IESO Nova Scotia has aimed to involve communities at-large, elected officials, and key stakeholder groups early in their planning process to strengthen acceptance and foster local engagement.

Considering the public and Indigenous engagement undertaken, the Proponent is confident that stakeholders and rights-holders have been:

- Properly and adequately notified about the Project.
- Given the opportunity to ask questions and raise issues and concerns about the Project and have had those questions, issues, and concerns addressed.
- Able to provide initial feedback to the Project design.

### 3.1 List of Engaged Parties

The following lists federal, provincial, and municipal agencies; stakeholders, and rights holders engaged on the Project. Indigenous engagement is described in Section 4.0.

#### Federal

- Member of Parliament (MP) Sean Fraser, MP, Central Nova
- IAAC
- Fisheries and Oceans Canada (DFO)
- Environment and Climate Change Canada (ECCC)

#### Provincial

- Nova Scotia Department of Energy (NSDOE)
- Nova Scotia Department of Growth and Development (NSDGD)
- Nova Scotia Department of Environment and Climate Change (NSECC)
- NSNR
- Nova Scotia Office of L'nu Affairs (OLA)

#### Municipal

- MOPC

#### Stakeholder and Public Engagement

- Stakeholder meetings and events
- Digital Communications
- Newsletter
- Media
- Public Open House
- Individual Meetings with Members of the Public
- Community Liaison Committee

### 3.2 Regulatory Requirements

A summary of existing federal, provincial, and municipal regulatory requirements is provided in the sections that follow.

#### 3.2.1 Federal

The Project is a “designated project” as defined in Section 30 of the *Physical Activities Regulations*, SOR/2019-285, is defined as “the construction, operation, decommissioning and abandonment of a new fossil fuel-fired electrical generating facility with a production capacity of 200 MW or more.” As the Project is anticipated to have a maximum production capacity of 300 MW, the threshold of 200 MW would be exceeded. The Proponent is therefore submitting an Initial Project Description (the more detailed version of this summary document) to IAAC to inform the decision as to whether a federal Impact Assessment is required. The IPD will be submitted as a combined document with the Provincial EARD.

The Project will be subject to emissions limits under the *Clean Electricity Regulations*, S.O.R./2024-263 (CER) enacted under the *Canadian Environmental Protection Act* (1999) (CEPA) as it meets the following criteria, defined in subsection 5(1) of the CER:

- The Project has an electricity generation capacity of at least 25 MW.
- The Project generates electricity using fossil fuels.
- The Project is connected, directly or indirectly, to an electricity system.

Other potentially applicable federal regulatory requirements, including approvals, permits, notification, and compliance for the Project, along with the status of requirements current at the time of the EARD/IPD submission, are provided in Table 3.1.

**Table 3.1: Federal Regulatory Requirements**

Requirement/Application	Regulatory Body	Application/Permit Status and Comments
Impact Assessment	IAAC	The Proponent will submit an Initial Project Description (the EARD/IPD) and Plain Language Summary to IAAC as the Project is a listed activity in the <i>Physical Activities Regulations</i> , S.O.R./2019-285 under the <i>Impact Assessment Act</i> (2019):  “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 requirement for an Impact Assessment will be determined by IAAC through their Screening Decision.
<i>Fisheries Act</i> (Canada, 1985) <i>Authorization</i>	DFO	Compliance legislation. An authorization under the <i>Fisheries Act</i> is not anticipated at this time. If, during the detailed design phase potential effects to fish or fish

Requirement/Application	Regulatory Body	Application/Permit Status and Comments
		habitat are identified that may require authorization under the <i>Fisheries Act</i> , the Proponent will submit a Request for Review to DFO.
National Pollutant Release Inventory (NPRI) Reporting	ECCC	The Project may be subject to annual NPRI reporting requirements if operational pollutant thresholds are met or <u>exceeded</u> . Reporting to the NPRI is mandated by CEPA and administered by ECCC.
<i>Migratory Bird Convention Act</i> (MBCA) (Canada, 1994) Permit	ECCC	Compliance legislation. The requirement to obtain a permit under the MBCA is not anticipated at this time.
<i>Species at Risk Act</i> (SARA) (Canada, 2002) Permit	ECCC, DFO	Compliance legislation. Species at Risk (SAR) impacts and subsequent permitting are not anticipated at this time. No SARA permits were acquired for environmental studies for the Project, as none were required.
Approval of Emergency Response Assistance Plan	Transport Canada	The Proponent will apply for approval of an Emergency Response Assistance Plan (as required) based on requirements under the Transportation of Dangerous Goods Regulations, S.O.R./2001-286.
Explosives Transportation Permit	Natural Resources Canada (NRCan)	Pursuant to Section 28 of the Explosives Regulations, S.O.R./2013-211, the Proponent must submit an application for authorization for the transport and use of an explosive.  This permit will be acquired if explosives are required to be transported in the event of their use (blasting) to support construction of the Facility.
Temporary Blaster's License or Blaster's Permit	NRCan	The <i>Explosives Act</i> requires anyone working with explosives to have a license, certificate or permit issued by the Minister of Natural Resources. This permit will be acquired if explosives are required for the construction of the Facility.

### 3.2.2 Provincial

The Project is subject to a Class I EA as determined by NSECC and the Environmental Assessment Regulations, N.S. Reg. 26/1995 under the *Environment Act*, S.N.S. 1994-95, c 1. As such, the submission of the EARD/IPD has been prepared in accordance with:

- A Proponent's Guide to Environmental Assessment (NSECC, 2025a)
- The Guide to Addressing Wildlife Species and Habitat in an EA Registration Document (NSECC, 2009)
- Nova Scotia Class I Environmental Assessment Checklist (NSECC, 2025b)

Other regulatory requirements, including approvals, permits, notification, and compliance may apply to the Project (Table 3.2).

**Table 3.2: Provincial Regulatory Requirements**

<b>Requirement/Application</b>	<b>Regulatory Body</b>	<b>Application Permit Status and Comments</b>
Environmental Assessment Registration	NSECC	This approval application (the EARD/IPD) will be submitted to NSECC in accordance with the <i>Environment Act</i> , S.N.S. 1994-95, c 1.
Industrial Plant / Facilities Approval	NSECC	This approval application will be submitted to NSECC in accordance with the Activities Designation Regulations, N.S. Reg. 47/1995, following Environmental Assessment (EA) Approval and prior to Project construction/commissioning.
Dangerous Goods Transportation Regulation	Nova Scotia Public Works (NSPW)	Compliance with provisions of the Dangerous Goods Transportation Regulations, N.S. Reg. 152/85 as required during construction, operations and decommissioning.
Dangerous Goods Approval	NSECC	This approval will be acquired prior to the storage of materials as set out in the Dangerous Goods Management Regulations, N.S. Reg. 56/95, Schedule A.
Filing of Approved Contingency Plan	NSECC	A contingency plan is to be filed with NSECC prior to the storage of dangerous goods onsite, in accordance with the Dangerous Goods Management Regulations, N.S. Reg. 56/95.
On-Site Sewage Disposal Approval	NSECC	This approval will be acquired prior to the installation of any on-site sewage disposal systems as set out in the On-site Sewage Disposal Systems Regulations, N.S. Reg. 317/2015.
Water Approval – Withdrawal and/or Storage	NSECC	Water approvals will be submitted to NSECC in accordance with the Activities Designation Regulations, N.S. Reg. 47/1995, following EA Approval.
Wetland and/or Watercourse Alteration Permit	NSECC	Wetland alteration applications will be submitted to NSECC in accordance with requirements under the <i>Environment Act</i> , S.N.S. 1994-95, c 1 following EA approval. Watercourse alteration applications are not expected to be required.
Boilers and Pressure Vessels: Equipment License	Nova Scotia Labour Skills and Immigration	All boilers and pressure vessels (if required) will be installed and inspected at regular intervals as prescribed by the Chief Inspector per the Boiler and Pressure Equipment Regulations, N.S. Reg. 10/2011.



<b>Requirement/Application</b>	<b>Regulatory Body</b>	<b>Application Permit Status and Comments</b>
Electrical Wiring Permit  Communications Cabling Permit	Nova Scotia Labour Skills and Immigration  Nova Scotia Power Inc. (NS Power)	Permits to be applied for before installing/modifying of electrical or communication installations during construction.
Notification of Blasting	NSECC	Notification to be submitted prior to blasting activities, if required.
Overweight/Special Move Permit  Access Permit  Work within Highway Right-of-way	NSPW	Permits to be applied for before mobilizing oversize vehicles on public roads.  Permits to be applied for before constructing new driveways.  Permits to be applied for before commencing work within a highway right-of-way.
<i>Endangered Species Act</i> (ESA) (Nova Scotia, 1998) Permit	NSNR	Compliance legislation. Provincial SAR impacts and subsequent permitting are not anticipated.
Building Plan Approval	Office of the Fire Marshal	Prior to the start of construction, the Proponent will provide building plans for the construction of the Facility to the Fire Marshal.
Heritage Research Permit Archaeological Resource Impact Assessment (ARIA) Approval	Nova Scotia Communities, Culture, Tourism, and Heritage (NSCCTH)	NSCCTH Permit A2025NS175 obtained to complete the ARIA, received September 19, 2025.
Nova Scotia Temporary Workplace Traffic Control Manual	NSPW	Compliance for the use of provincial roads during the construction, operation, and decommissioning phases of the Project.

### 3.2.3 Municipal

Municipal Planning Strategies and Land Use Bylaws in MOPC require approval and/or permits for industrial projects (Table 3.3). The Project is in the Rural General Zone (G1) which permits industrial use subject to the approval of a development permit (Municipality of Pictou County, 2025a, 2025b). Project components may also be subject to provisions under the *Municipal Government Act*, 1998, c. 18, s.1.

**Table 3.3: Municipal Regulatory Requirements**

Requirement/Application	Regulatory Body	Application Permit Status and Comments
Building and Development Permits	MOPC	Application will proceed following receipt of EA approval and prior to construction.

### 3.3 Stakeholder and Public Engagement

The Proponent has been involved in formal engagement activities with the public and stakeholders to ensure the community was made aware of the Project and given ample opportunity to receive information, ask questions, provide feedback, and share local knowledge.

In addition to sharing project information, the Proponent has expressed a commitment to ensuring that the communities in close proximity to the Project benefit from local hiring and potential training for operations roles at the facility. The Proponent is focused on providing residents and businesses in the local region preferential attention and access to business and employment opportunities. It is the Proponent’s intent to maximize economic benefits for local communities and the Mi’kmaq of Nova Scotia by promoting long-term commercial growth through access to goods and service contracts, capacity training, and employment. As such, the Proponent will continue to work with economic development organizations and local businesses to create a “local business directory” to ensure major contractors are aware of local business/individuals that can be hired.

Engagement with the public and stakeholders will continue through the development, construction, and operational phases of the Project. Table 3.4 summarizes engagement with stakeholders.

**Table 3.4: Stakeholder Meetings and Events**

Community/Stakeholder Organization	Engagement
Port Hawkesbury Paper Michelin Canada Northland Power Scotian Wind DP Energy (Nova East Wind) Eastward Energy Maritimes and Northeast Pipeline Efficiency Nova Scotia Energy Storage Canada Electricity Canada InnovEvo BioCarb Siemens Canada	Meetings held with Industry from September to November 2025 to introduce IESO Nova Scotia and share organizational plans.

Community/Stakeholder Organization	Engagement
Net Zero Atlantic CanREA Irving Scotia Investments Oxford Frozen Foods Natural Forces	Meetings requested.
Ecology Action Centre (EAC)	November 18, 2025 - The Proponent sent an introductory email to the EAC with an introduction to IESO Nova Scotia, the Project, and meeting request.  November 25, 2025 - The Proponent met with EAC staff to discuss the role and responsibilities of IESO Nova Scotia as well as provide an overview of the proposed fast-acting natural gas power generation facility.
Clean Foundation	November 19, 2025 - The Proponent sent an introductory email to the Clean Foundation with an introduction to IESO Nova Scotia, the Project, and meeting request.  December 5, 2025 - The Proponent met with Clean Foundation staff to discuss the role and responsibilities of IESO Nova Scotia as well as provide an overview of the proposed fast-acting natural gas power generation facility.
Pictou County Rivers Association	November 10, 2025 - Phone call from Proponent to share project details and invite to open house.  November 21, 2025 - The Proponent sent an email follow up and request for one-on-one meeting.
Friends of Redtail Society	November 10, 2025 - Email introduction, invitation to open house and/or to one-on-one meeting.
Pictou County Chamber of Commerce	November 6, 2025 - Email introduction, invitation to open house and/or to one-on-one meeting.  November 18, 2025 - The Proponent met virtually with Executive Director Layla Rahmeh to discuss economic benefits, points of collaboration, and outreach to local business.
Pictou County Partnership (PCP)	November 6, 2025 - Email introduction, invitation to open house and/or to one-on-one meeting.  November 12, 2025 - Staff from PCP attended the open house and discussed points of interest and collaboration.
West River Fire Department, Fire Chief DJ Worth	November 10, 2025 - Sent invitation to open house.

Community/Stakeholder Organization	Engagement
	The Proponent plans to engage with the Fire Chief to share project details and discuss emergency response measures.
Pictou Mountain Bike Trail Builders	November 10, 2025 - Sent invitation to open house.
Pictou County ATV Club	November 10, 2025 - Sent invitation to open house.
Pictou County Sno-Riders Snowmobile Club	November 10, 2025 - Proponent had phone conversation to share project details and invite to open house.
Salt Springs Provincial Park	October 31, 2025 - Proponent met with NSNR staff Suzanne Adshead (Area Manager) and Doug Oliver (Manager NS Parks) to share information about the Project.

### 3.3.1 Digital Communications

The Proponent has maintained a Project website - [www.ieso-ns.ca](http://www.ieso-ns.ca) - since September 2025. This publicly accessible website continues to be updated regularly. It includes information about the Project and IESO Nova Scotia including:

- Introduction to the Project
- About IESO Nova Scotia
- Community benefits
- Questions and answers
- Project documents and articles
- Project contact information

### 3.3.2 Newsletter

The Proponent publishes a Project update newsletter to their website, e-mail list, mailing lists, and via the Municipality of Pictou County's newsletter. Sign-up for this newsletter is available on the Project website, as well as at public events such as the open house. The first newsletter for the Project was issued in December 2025.

### 3.3.3 Media

A news release on the Project was issued to all Nova Scotia media outlets on October 16, 2025. Interviews have been conducted and/or follow media statements have been provided to CBC, New Glasgow News, and Pictou Advocate.

### 3.3.4 Public Open House

One public open house took place prior to EARD/IPD Submission. The Proponent and Strum Consulting representatives were present to provide information on the Project and answer any questions or concerns brought forward by community members.

The open house was held on Thursday, November 13, 2025, from 4:00 pm to 8:00 pm at the Eureka Fire Hall (19 Gates Road, Salt Springs). The venue was fully accessible, ensuring that residents of all mobility levels could comfortably attend and participate.

This event was advertised on the Municipality of Pictou County's October e-newsletter (posted October 16, 2025) as well as the MOPC Facebook page (October 16, October 28, November 12, 2025), New Glasgow News (October 23, October 30, November 6, 2025), The Advocate (October 22, October 29, November 5, November 12, 2025), 94.1 The Breeze (October 22 – November 12, 2025), 989 XFM (October 22 – November 12, 2025), IESO Nova Scotia website, community Facebook pages, as well as posters posted at the West River Fire Hall (October 22, 2025 onwards) and John's Country Canteen (October 16, 2025 onwards), and postcard invitations dropped off at residences near the Project site (October 16, 2025 onwards).

The objective of this open house was to introduce the Proponent and the Project to the community, show a site location and rendering of the Facility, EA study findings especially related to Facility emissions, noise and water usage, community engagement, benefits as well as gather community feedback.

The Project Team presented 15 posters, answered questions, and took feedback about concerns and interests from the local community and various stakeholders (Figure 6.1). Sign-in sheets were available for participants to provide their contact information and enable follow-up via email list signup. A total of 75 attendees were recorded on the sign-in sheets.

### 3.3.5 Individual Meetings with Members of the Public

The Proponent also met with individual members of the public within the local community on an as requested basis to foster dialogue, listen to and acknowledge concerns, and respond to questions related to the Project.

### 3.3.6 Community Liaison Committee

A Community Liaison Committee (CLC) will be established for the Project and will serve as a valuable platform for ongoing dialogue between the Project team and the local community. The CLC will help build trust, ensure transparency, and allow community members to share concerns, ask questions, and provide input throughout the life of the Project. The goal of the CLC will be to support knowledge-sharing, improve local understanding of Project activities, and identify opportunities for enhanced community engagement and benefits.

Interest in joining the CLC was solicited at the community open house held on November 13, 2025, with nearly 10 community members interested in taking part in the committee. The first CLC meeting will take place in early 2026.

## **3.4 Overview of Key Comments and Concerns Expressed**

A summary of key comments and concerns expressed by stakeholders is provided in the following sections.

**3.4.1 Review of Government Concerns**

Discussions with federal and provincial regulators primarily focused on:

- Project scope
- Project and EARD/IPD timeline
- Scope of environmental surveys
- Public engagement
- Mi'kmaq engagement

Questions from municipal government mainly pertained to:

- Community concerns and questions (e.g. water usage, impacts to local water, discharge of water, sound, air quality)
- Community benefits
- Public engagement
- Project scope

Engagement with government officials will continue throughout the development, including construction and operational phases of the Project.

**3.4.2 Review of Public & Stakeholder Concerns**

Issues and concerns raised by the public as expressed in individual meetings and from in-person and written feedback received at the open house can be grouped into broader categories, which have been assessed throughout the IPD/EARD (Table 3.5).

**Table 3.5: Comments Received from the Public**

Key Issues	Proponent Response
How will the Facility affect my property values? What guarantees can be provided to residents?	<p>The Facility site has been carefully selected to align with existing land uses and minimize potential impacts on nearby properties. The Proponent has focused on locations appropriately zoned and set back from residential areas where possible. Modern design standards, environmental safeguards, compliance with environmental constraints, and mitigation measures – such as noise and visual buffers – will help ensure the facility operates safely and unobtrusively, as well as minimize impacts on nearby property values.</p> <p>While these measures act as strong safeguards, it is important to note that individual property values are influenced by many market factors beyond the control of the Project. Environmental modelling and site characteristics have been chosen to reduce potential impacts as much as possible.</p>

Key Issues	Proponent Response
How much will the Municipality earn in tax revenues each year from the Facility?	Municipal tax revenues have not yet been determined and will be based on Facility size, road upgrades, commercial rate, and comparable local and provincial facilities.
How will the Proponent provide benefit to the community through support to local community groups?	The successful operator, with input from the community, will be required to implement a community benefit program, which may include sponsorship of local events, grants for community groups, and investment in community infrastructure. Details of this benefits program will be shared with the community once available.
Interest in business opportunities for local organizations.	The Proponent is currently compiling a local business directory which will be shared with the facility owner/operator to ensure that the use of local resources is maximized.
How many jobs will be created?	Construction is expected to generate 100-125 short-term employment opportunities, and operations will create 10-15 longer-term positions.
How will the community continue to be engaged?	Engagement will be broad and diverse, with a variety of opportunities to receive information and provide feedback, including open houses, written communication, online, and through the CLC. A community log is being maintained by the Proponent of written communications received.
How can residents share ideas and complaints?	Residents can share ideas, ask questions, or raise concerns by emailing <a href="mailto:community@ieso-ns.ca">community@ieso-ns.ca</a> or booking a meeting with the project team. Additional opportunities include open houses and participation in the CLC. A formal complaint resolution plan will be developed before construction begins and will be posted on the Project website and shared within the community.
What will the Facility sound like? Will it be noisy?	<p>The facility has been designed to reduce sound levels with features such as landscaping, noise barriers, and natural vegetation buffers. A sound assessment was conducted as part of the EA to model cumulative noise effects generated by the Project on nearby receptors, including residences. The results indicate that noise levels will be below the permissible sound levels. For example, the permissible overnight sound level for a rural area of 40 decibels (dBA) is equivalent to the sound of a quiet library.</p> <p>Facility sound will be monitored to ensure continued compliance and construction activities may also be limited to specific hours to further minimize disruption.</p> <p>The Project will implement a Complaint Response Plan to address concerns raised related to noise by the local residences as needed. Should any concerns arise, they will be promptly reviewed, and appropriate solutions will be implemented in collaboration with the community.</p>

Key Issues	Proponent Response
<p>What emissions (GHGs) are associated with the natural gas power Facility and will they be lower than coal-burning facilities?</p>	<p>Although there are some direct greenhouse gas (GHG) emissions, the Project is expected to offset the current use of coal to meet grid requirements and facilitate the ongoing expansion of renewables leading to an overall decrease in the GHG emissions intensity of Nova Scotia's electrical grid.</p> <p>The Project is expected to emit approximately 326 kt/annually of CO equivalent (COe) of GHG, equal to 2.4% of Nova Scotia's emissions and 0.05% of Canada's emissions.</p> <p>The Project will have approximately 55% less GHG emissions intensity per unit of electricity generated than coal fired power plants. Unlike coal-fired plants, this facility will not run continuously, further resulting in significantly lower overall GHG emissions.</p> <p>The submission of annual GHG reports to the provincial and federal regulators will be required during operations and are subject to provincial and federal emissions thresholds.</p>
<p>What will be the impact on air quality in the area? How will this be monitored?</p>	<p>Air quality modelling was completed as part of the EA and results of that modelling found no exceedances of regulated limits for NO<sub>2</sub>, CO, or PM<sub>2.5</sub> expected at ground level and as such, no exceedances of regulated limits are expected at nearby residences.</p> <p>The Project uses advanced emissions control (low NO<sub>x</sub> Combustion, Continuous Emissions Monitoring System, Water/Steam Injection) and ongoing monitoring and regulatory reporting will be required during operations to ensure compliance.</p>
<p>Are there health impacts associated with this type of Facility?</p>	<p>Given the results of the sound and air quality modelling, health impacts are expected to be minimal and mitigated through stringent design and monitoring. Ultimately, the Project will comply with conditions and constraints outlined by NSECC and any required reporting to this effect.</p>



Key Issues	Proponent Response
<p>How will the Facility impact my water well and how will you ensure it doesn't run dry?</p>	<p>Prior to construction, local wells will be tested for water quantity and quality to gather baseline data. This data will inform facility design and help ensure that impacts to the local aquifer and wells are minimized.</p> <p>A groundwater withdrawal permit will be required from NSECC. As part of permitting requirements, the Proponent will undertake ongoing and comprehensive monitoring of water resources and usage to detect any changes. If needed, additional mitigation measures will be put in place.</p> <p>In support of design and permitting, an aquifer test well and pump test will be completed in December 2025.</p>
<p>Concern about amount of water needed in facility operations.</p>	<p>Water will be used at the facility for controlling air emissions, boosting power output when needed, and cleaning equipment. Water usage will be reduced to the extent possible, and a groundwater withdrawal permit will be required from NSECC. The permit will include ongoing and comprehensive monitoring of the water resources and usage.</p> <p>Most of the water used during operations turns into steam and is released safely through the turbine exhaust. The process of boosting power output – called power augmentation – involves spraying a fine mist of water into the air that feeds the turbines. This cools the air, making the turbines run more efficiently and produce more electricity. Boosting power output will mainly occur on very hot days or when electricity demand is high. Boosting power output is optional, which provides flexibility to best manage the Facility's overall water use. Overall, a 300-megawatt Facility uses about the same amount of water each year as 750 average rural homes.</p>
<p>How will water be discharged from the Facility and will the water be treated before being released to the local environment?</p>	<p>All process water will be treated, neutralized, and tested before controlled release to existing surface water sources, ensuring compliance with government regulations. No hazardous effluent will be discharged and adaptive management will be applied.</p>
<p>What happens if the water treatment system breaks? What mitigation measures are in place to ensure the water is not contaminated?</p>	<p>The facility will include treatment systems, continuous monitoring, and alarms to detect system failures. Immediate shut-off and repair protocols will be in place, along with contingency plans for operations during repair.</p>
<p>Will the Facility be brightly lit during night-time hours?</p>	<p>Artificial lighting may be used during the construction and decommissioning phases of the Project. During the operations phase, artificial lighting will be present long term at the Facility and along the associated access roads.</p>

Key Issues	Proponent Response
Will the lighting be bird-safe/friendly?	During the operational phase, the lighting on-site will be minimized and localized to the Facility and access road. Mitigation measures are recommended to be implemented to reduce the impacts of lights on birds in the Project Area (e.g., motion-activated lighting, lasers, shielding, LEDs, shades of light, etc.).
Concern that environmental disturbances are being measured against environmental regulations. Would like to see thresholds to exceed current regulations.	The EA process includes setting mitigation thresholds based on best-available science and provincial standards.
Concern regarding wetland impacts.	<p>Eight wetlands were identified during the EA field assessment, with three to be altered totaling 1.75 ha.</p> <p>During the detailed design phase, further efforts will be made to microsite Facility infrastructure away from wetlands. Provincial wetland permitting will be completed and necessary compensation for lost wetland habitat will be implemented. A 30 m buffer prohibiting activities like refueling and vegetation removal will be maintained on watercourses and wetlands where possible.</p> <p>Post-construction wetland monitoring with adaptive management will be conducted for potential indirect impacts and an Erosion and Sediment Control Plan will be implemented to mitigate potential impacts to wetlands and watercourses. A Surface Water Monitoring and Management Plan will also be implemented to ensure discharged water meets regulatory water quality requirements.</p>
Concern regarding impacts to black ash and the Mi'kmaq.	<p>Four black ash trees identified within the Project Area will be avoided.</p> <p>The Mi'kmaq will continue to be engaged on the Project to ensure rights and title are protected and Mi'kmaq feedback is received.</p> <p>A MEKS is currently underway and will be finalized in early 2026.</p>
Interest in installation of nest boxes within the Project Area.	If appropriate, the Proponent may consider installing nest boxes within the Project Area.
Recommendation to avoid rat poison for on-site pest control given secondary poisoning and biomagnification.	The Facility will implement an Integrated Pest Management approach prioritizing non-chemical methods. If chemicals are needed, only low-risk options that do not threaten wildlife will be used, and no second-generation rodenticides.
Who conducted the Environmental Assessment?	The Proponent retained Strum Consulting to support the development and submission of the EARD and IPD.

Key Issues	Proponent Response
How will fuel be safely stored on-site?	Fuel storage will follow industry best practices with secondary containment, spill control systems, leak detection, and certified tanks. Design will comply with Nova Scotia Petroleum Storage Site Licensing requirements.
How will the Proponent respond to leaks, spills or other incidents and will local first responders receive training related to fire or other incidents on the site?	<p>Natural gas facilities have been operating safely across North America for many years. The proposed Facility will follow these same proven safety practices. It will have detailed emergency and environmental plans in place to protect people and the surrounding land and water.</p> <p>Although the risk of spills or accidents is very low, the facility will include advanced monitoring and automatic shut-off systems to quickly detect and contain any issues. Staff will also work closely with local emergency responders and take part in regular training exercises. In the unlikely event of an incident, clear steps are in place to keep people safe, limit environmental impacts, and restore the area as quickly as possible.</p>
Concern regarding increased vehicle traffic on Marshdale Road during construction which would add to quarry and logging traffic and increase safety risk, dust, and wear and tear on the road.	A Traffic Management Plan will be developed with local authorities to schedule construction deliveries, minimize heavy truck use during peak hours, and ensure safe road access. Any road wear will be monitored, and repairs will be coordinated with the municipality if needed
What are the operating hours of the Facility?	<p>During the construction phase, work is anticipated to take place between 7:00 am – 9:00 pm.</p> <p>When operational, the nature of a 'fast-acting' Facility means that it will operate only during electricity demand gaps. Typical generation will be infrequent and largely during the day and during peak electrical demand in the winter.</p> <p>The Facility will have personnel on-site 24/7.</p>
What is the Facility lifespan?	The lifespan of the Facility is anticipated to be 30 years and may be extended if required.
Which other energy projects require the natural gas Facility to be approved before they are approved?	The natural gas power generation facility is foundational to integrating new renewables like wind and solar onto the Nova Scotia electricity grid. It provides system reliability needed before hosting additional large-scale wind or solar installations as well as future battery storage and alternative-fuel power projects.
Is this Project replacing the Trenton coal power plant?	The Project will play a role in phasing out coal power plants such as the one in Trenton, helping with the implementation of Nova Scotia's Clean Power Plan by 2030.

Key Issues	Proponent Response
<p>Interest in grid-scale batteries or hydrogen-based power instead of a natural gas power plant.</p>	<p>IESO Nova Scotia will be undertaking an Integrated Resource Planning (IRP) exercise in 2026. It is anticipated that future procurement of grid-scale batteries, hydrogen-based power and other alternative fuels will be discussed in the IRP and may become part of future rounds of IESO Nova Scotia's energy procurement. There is broad support for an accelerated implementation of fast-acting generation from regulatory and planning stakeholders in Nova Scotia, which justifies the development of the Project at this time.</p>
<p>Expressed support for the Project and its ability to help Nova Scotia transition off coal, support renewables, and add economic opportunities locally.</p>	<p>Nova Scotia's electricity system is undergoing a major transformation – driven by population growth, more homes and vehicles are using electricity instead of gas or oil, and the need to move away from Nova Scotia's current use of coal for electricity. Under Nova Scotia's Clean Power Plan, the province must stop using coal fired electricity by 2030 and have 80% of electricity come from renewable sources. Putting in place new cleaner sources of energy must be done in a way that's sustainable. Critical to reliability is ensuring foundational energy sources, such as fast acting natural gas power generation, are available when renewable energy sources, like wind and solar, aren't available or able to meet demand.</p>
<p>Why was this location chosen for the Project?</p>	<p>The site was chosen based primarily on proximity to existing electrical transmission lines and pipelines, minimizing the need for new energy infrastructure. In addition, environmental, landownership, and community-based factors have played a key role in site selection.</p>
<p>Who will own the Project property as well as build and own the facility itself?</p>	<p>Ownership of the Project land has not yet been determined. Either IESO Nova Scotia may exercise its option to own the land, or, following a rigorous public procurement process with careful consideration and due diligence, the successful proponent selected to design, build, own, and operate the facility may assume land ownership.</p> <p>A RFP will be launched in January 2026, and the competitive process will result in a proponent being selected by summer 2026.</p>

Key Issues	Proponent Response
What is the Project timeline?	<p>Community and Mi'kmaq engagement: ongoing through life of the Project</p> <p>EA submission – December 2025</p> <p>RFP – Launch early 2026, successful proponent announced summer 2026</p> <p>Facility design – late 2026</p> <p>Construction could begin in late 2026 with anticipated operation by 2029.</p> <p>Should the Project be screened into the federal process by IAA, the Project Timeline will adjust to accommodate the IAA process.</p>
What approvals does the Project require?	This project requires several municipal, provincial, and federal approvals. Please see section 2 for more detail.
Where are the closest similar facilities?	Tufts Cove Generating Station (500 MW), commissioned in 1965, originally running on oil, started using natural gas in 2000 and has similar combustion turbines to the Project. The equipment for this Project differs from Tufts Cove in that it will have a smaller footprint and shorter stacks.
What is the source of the natural gas to be used in the Facility? Is fracking involved?	The Project will make use of a reliable supply of natural gas from the North American grid through the existing Maritimes and Northeast Pipeline that already runs through Pictou County. There are no current plans to procure fuel for the facility by hydraulic fracturing.
Expressed preference for Canadian / local source of natural gas and fuel oil.	<p>The nearby Maritimes &amp; Northeast Pipeline will deliver natural gas to the Facility. At this time, there are currently no domestic supplies of natural gas (onshore or offshore), therefore the facility will purchase natural gas supplies from the market. Light fuel oil (diesel) will be used as a secondary fuel.</p> <p>The Facility may use domestic supplies of natural gas if such supplies become available in the future. The supply of hydrogen, renewable natural gas and other sustainable fuels will be reviewed for blending potential as those domestic supplies mature.</p>
What is the Project's total annual carbon tax liability at peak rates and how does that affect electricity rates?	The Project is an essential addition to the grid, enabling the Province to achieve a portfolio emissions rate below 1 megatonne of GHGs annually, as outlined in the 2030 Clean Power Plan. This represents a 90% reduction from 2005 levels and aligns with the latest Integrated Resource Plan, which prioritizes reliable electricity supply at the lowest overall cost – including carbon tax considerations.

Key Issues	Proponent Response
<p>What is the risk of this Facility becoming a stranded asset and who bears that financial risk?</p>	<p>The Project is a critical element of the 2030 Clean Power Plan and aligns with the latest Integrated Resource Plan recommendations. This fast-response generation facility is consistently identified as a preferred option across multiple planning scenarios, which account for varying electricity demand growth and advancements in alternative technologies. Because the Project frequently appears in least-cost system planning analyses, the likelihood of it becoming a stranded asset – and thus posing financial risk to ratepayers – is very low.</p>

### **3.5 Ongoing Engagement Activities & Future Engagement Plans**

The Proponent is committed to ongoing engagement and will continue to engage through development, construction, and operational phases of the Project.

Engagement activities are ongoing and will continue including future open houses, regular CLC meetings, meetings with residents as requested, and Project updates shared via website, newsletter, and email. The Project Team will continue to review and address any concerns raised by government representatives, stakeholders, members of the public and the Mi’kmaq of Nova Scotia throughout the duration of the Project.

## **4.0 ENGAGEMENT WITH INDIGENOUS COMMUNITIES**

### **4.1 Mi’kmaq of Nova Scotia**

The Mi’kmaq of Nova Scotia have established Aboriginal and Treaty rights, including the right to fish for a “moderate livelihood” which flows from the Peace and Friendship Treaties, and Aboriginal rights to hunt, fish, and gather for food, social, and ceremonial purposes, more broadly referred to as “traditional” purposes. Mi’kmaq rights are communal rights and therefore shared amongst all members of the Mi’kmaq Nation in Nova Scotia.

The Crown has a duty to consult with the Mi’kmaq of Nova Scotia, which is achieved in accordance with the Mi’kmaq-Canada-Nova Scotia Consultation Terms of Reference. As per Supreme Court of Canada instruction and subsequent guidance from governments, such as the Updated Guidelines for Federal Officials to Fulfill the Duty to Consult (INAC, 2011) and the Proponents' Guide: The Role of Proponents in Crown Consultation With the Mi’kmaq of Nova Scotia, the Crown may delegate procedural aspects of consultation to proponents (OLA, 2012). However, the duty to consult, and ultimate decision-making authority, remains with the Crown. The results of the Proponent’s Mi’kmaq of Nova Scotia engagement program and EA development is expected to be considered by the provincial government in the EA decision-making process.

For the purposes of consultation, 11 of the 13 Mi’kmaq communities are represented in consultation by Kwilmu’kw Maw-klusuaqn Negotiation Office (KMKNO), which reports to the

Assembly of Nova Scotia Mi'kmaq Chiefs. At this time, Millbrook First Nation, and Sipekne'katik First Nation represent their own communities in consultation through their elected Chiefs and Councils.

As an integral component of any project development activity in Nova Scotia, the Proponent engaged with various Nova Scotia Mi'kmaq communities and organizations, starting in September 2025.

The Proponent has notified the Mi'kmaq of Nova Scotia, provided current Project information, extended offers to meet, and will continue to provide opportunities to engage on the Project. The Proponent has notified the following Mi'kmaq communities, regulatory bodies and groups regarding the Project:

- OLA
- KMKNO, NCNS
- Pictou Landing First Nation
- Millbrook First Nation
- Paq'tnkek Mi'kmaw Nation
- Membertou First Nation
- Sipek'nekatik First Nation

The engagement process has been documented (Table 4.1) per the Proponents' Guide: The Role of Proponents in Crown Consultation with the Mi'kmaq of Nova Scotia (OLA, 2012).

Given proximity to the Project Area, the Proponent prioritized direct engagement with the communities of Pictou Landing, Millbrook, and Paq'tnkek. Engagement with Sipekne'katik was also sought in recognition of its independent consultation process. Membertou was initially contacted under the assumption that it was outside of the KMKNO consultation framework; it has since been clarified that Membertou participates within that process.

In addition to engaging with local communities, the OLA, KMKNO, and the NCNS, the Proponent has also met with Wskijnu'k Mtmot'atnuow Agency Limited (WMA Ltd.), the investment and economic development entity owned by the 13 First Nations of Nova Scotia, to explore potential economic opportunities related to the Project. During these discussions, the Proponent provided WMA Ltd. with Project information, including regulatory requirements, timelines, and supporting materials such as a background presentation and open house poster boards. These resources outlined key aspects of the Project at a conceptual level, including the need for EA studies, engagement plans, and anticipated benefits, reinforcing the Proponent's commitment to transparency and collaboration.

This engagement reflects a broader priority: advancing economic reconciliation. The Mi'kmaq of Nova Scotia are already significant participants in the energy sector and are expected to continue playing a vital role as the sector expands. Investments by Mi'kmaw organizations

contribute positively to the energy transition and represent an important component of reconciliation in Nova Scotia – an approach IESO Nova Scotia seeks to advance, in addition to encouraging proponents to maximize Mi'kmaw benefits through employment, contracting and procurement.

#### **4.2 Overview of Engagement Activities Carried to Date**

As an integral component of any project development activity in Nova Scotia, the Proponent engaged with various Nova Scotia Mi'kmaq communities and organizations, starting in September 2025. The Proponent has notified the Mi'kmaq of Nova Scotia, provided current Project information, extended offers to meet, and will continue to provide opportunities to engage on the Project.

The Proponent has notified the following Mi'kmaq communities, regulatory bodies and groups regarding the Project - the OLA, KMKNO, NCNS, Pictou Landing First Nation, Millbrook First Nation, Paq'tnkek Mi'kmaw Nation, Membertou First Nation, and Sipek'nekatik First Nation - and has documented the engagement process (Table 4.1) per the Proponents' Guide: The Role of Proponents in Crown Consultation with the Mi'kmaq of Nova Scotia (OLA, 2012).

Given proximity to the Project Area, the Proponent prioritized direct engagement with the communities of Pictou Landing, Millbrook, and Paq'tnkek. Engagement with Sipekne'katik was also sought in recognition of its independent consultation process. Membertou was initially contacted under the assumption that it was outside of the KMKNO consultation framework; it has since been clarified that Membertou participates within that process.

**Table 4.1: Engagement with the Mi'kmaq of Nova Scotia**

<b>First Nation / Organization</b>	<b>Representative(s)</b>	<b>Contact Details</b>	<b>Identified Concerns</b>
<b>Organizations</b>			
Kwilmu'kw Maw-klusuaqn Office - KMKNO	Twila Gaudet (Director of Consultation) Patrick Butler (Senior Energy & Mines Advisor) Tracy Menge (Benefits Officer) Greg Hart (Engagement Coordinator)	September 15, 2025 - The Proponent sent a letter to Ms. Gaudet via email with introduction to IESO Nova Scotia and meeting request.  September 16 – October 7, 2025 - The Proponent communicated with KMKNO staff regarding meeting planning.  October 16, 2025 - The Proponent met virtually with Patrick Butler, Tracy Menge, and Greg Hart to share Project information, engagement completed, and answer questions.	KMKNO expressed interest in shaping language in the Request for Proposals (RFP) outlining Mi'kmaw benefits.  KMKNO asked about ARIA and MEKS completed for the Project.



First Nation / Organization	Representative(s)	Contact Details	Identified Concerns
		<p>October 31, 2025 - The Proponent emailed a Project information package.</p> <p>November 17, 2025 - The Proponent requested a follow up meeting to provide a Project update and requested assistance with coordinating a meeting with Mi'kmaw communities.</p>	
OLA	<p>Beata Dera (Director of Consultation)</p> <p>Melissa Slauenwhite (Consultation Advisor)</p>	<p>September 10, 2025 - The Proponent emailed OLA to introduce IESO Nova Scotia and request meeting.</p> <p>October 3, 2025 - The Proponent met with OLA virtually and provided an introduction to IESO Nova Scotia, Project overview, and update on Mi'kmaw engagement.</p>	No concerns identified.
NCNS	Chief Lorraine Augustine	<p>September 15, 2025 - The Proponent sent a letter to Chief Augustine via email with introduction to IESO Nova Scotia and meeting request.</p> <p>October 29, 2025 - The Proponent met with NCNS in person and provided an introduction to IESO Nova Scotia, Project overview, and Mi'kmaw engagement and benefits. A discussion was held on the Mi'kmaq Ecological Knowledge Study, the Archeological Resource Impact Assessment, and Project open house.</p>	<p>No concerns identified.</p> <p>Interest in employment and economic development opportunities related to the Project and IESO Nova Scotia's future procurements.</p>
<b>First Nations</b>			
Pictou Landing First Nation	<p>Chief Tamara Young</p> <p>Linda Ritcey (Director of Communications)</p>	September 15, 2025 - The Proponent sent a letter to Chief Young via email with introduction to IESO Nova Scotia and meeting request.	Questions from Pictou Landing First Nation Chief and Council included:

First Nation / Organization	Representative(s)	Contact Details	Identified Concerns
		<p>September 17 – November 5, 2025 - The Proponent communicated with Chief and staff regarding meeting planning.</p> <p>November 10, 2025 - The Proponent presented to Chief and Council at an in-person council meeting. The presentation included an introduction to IESO Nova Scotia, Project overview, as well as Mi'kmaw engagement and benefits.</p>	<ul style="list-style-type: none"> <li>• Type of fuels used on the site and source of natural gas.</li> <li>• EA timelines</li> <li>• Consultation trigger</li> <li>• Financial aspects of the Project</li> <li>• Environmental impacts – air, sound, water (supply and treatment)</li> <li>• Nature of electricity market being served – local vs. province-wide</li> <li>• Status of land ownership</li> <li>• Effect of added infrastructure on consumer price</li> <li>• Collaboration with neighbouring provinces</li> <li>• Facility relationship with other renewable projects</li> <li>• Request to share EA studies and MEKS</li> </ul>
Millbrook First Nation	Chief Bob Gloade	<p>September 15, 2025 - The Proponent sent a letter to Chief Gloade via email with an introduction to IESO Nova Scotia and meeting request.</p> <p>September 17, 24; October 15, 2025 The Proponent left voicemails with Chief Gloade's assistant regarding meeting request.</p> <p>October 29, 2025 - The Proponent sent email to Chief Gloade regarding meeting request.</p>	N/A

First Nation / Organization	Representative(s)	Contact Details	Identified Concerns
Paq'tnkek Mi'kmaw Nation	Chief Cory Julian Krista Thompson (CAO)	<p>September 15, 2025 - The Proponent sent a letter to Chief Julian via email with an introduction to IESO Nova Scotia and meeting request.</p> <p>September 17 and 24, 2025 - The Proponent left voicemails for Chief Julian regarding meeting request.</p> <p>October 15, 2025 - The Proponent left voicemail with CAO Krista Thompson regarding meeting request.</p> <p>October 21, 2025 - The Proponent sent email to Chief Julian regarding meeting request.</p>	N/A
Membertou First Nation	Chief Terry Paul	<p>September 15, 2025 - The Proponent sent a letter to Chief Paul via email with an introduction to IESO Nova Scotia and meeting request.</p> <p>September 17 and 26, 2025 - The Proponent spoke with Chief Paul's assistant regarding meeting request.</p> <p>September 29, 2025 - Chief Paul's assistant emailed to schedule meeting for October.</p> <p>October 15 and 21, 2025 - The Proponent sent follow up email to Chief Paul's assistant regarding meeting request.</p>	N/A
Sipekne'katik First Nation	Chief Michelle Glasgow Dr. Roger Lewis (Director of Consultation)	<p>September 15, 2025 - The Proponent sent a letter to Chief Glasgow via email with an introduction to IESO Nova Scotia and meeting request.</p> <p>September 17, 2025 - The Proponent left voicemail with Chief Glasgow's</p>	N/A

First Nation / Organization	Representative(s)	Contact Details	Identified Concerns
		<p>assistant regarding meeting request. An email was also sent to Dr. Roger Lewis with Project information and meeting request.</p> <p>September 26 and October 15, 2025 The Proponent left voicemails for Dr. Roger Lewis regarding meeting request.</p> <p>October 29, 2025 - The Proponent sent email to Dr. Roger Lewis regarding meeting request.</p>	

In addition to engaging with local communities, the OLA, KMKNO, and the NCNS as outlined in Table 4.1, the Proponent has also met with WMA Ltd., the investment and economic development entity owned by the 13 First Nations of Nova Scotia, to explore potential economic opportunities related to the Project. During these discussions, the Proponent provided WMA Ltd. with Project information, including regulatory requirements, timelines, and supporting materials such as a background presentation and open house poster boards. These resources outlined key aspects of the Project at a conceptual level, including the need for EA studies, engagement plans, and anticipated benefits, reinforcing the Proponent’s commitment to transparency and collaboration.

This engagement reflects a broader priority: advancing economic reconciliation.

The Mi’kmaq of Nova Scotia are already significant participants in the energy sector and are expected to continue playing a vital role as the sector expands. Investments by Mi’kmaq organizations contribute positively to the energy transition and represent an important component of reconciliation in Nova Scotia – an approach IESO Nova Scotia seeks to advance, in addition to encouraging proponents to maximize Mi’kmaq benefits through employment, contracting and procurement.

### **4.3 Summary of Key Issues Raised by Indigenous Communities**

Key issues and areas of interest identified through engagement were related to the following:

- Economic benefits
- Request to receive Environmental Assessment
- Request to receive MEKS

The Proponent will ensure collaboration with the Mi'kmaq on key areas of interest and any additional matters that arise throughout the life of the Project. The Environmental Assessment and Mi'kmaq Ecological Knowledge Study (MEKS) (once finalized) will be shared with all groups that have requested them. Furthermore, the Proponent will review the recommended mitigations offered in the MEKS, and work to implement recommendations wherever possible. In addition, the Proponent will work closely with Mi'kmaq communities to ensure economic benefits can be maximized through follow-up engagement and meetings focused on opportunities related to the Project.

#### 4.3.1 Mi'kmaq Ecological Knowledge Study

A MEKS presents a thorough and accurate understanding of the Mi'kmaq of Nova Scotia's use of the land and resources within an area. It is a report of gathered, identified, and documented ecological knowledge which is held by individual Mi'kmaq people. In addition, the MEKS report provides information on proposed Project activities that may impact the traditional land and resources of the Mi'kmaq.

The MEKS for this Project will be developed by Membertou Geomatics Solutions and will be geographically scoped to include an evaluation of the Project Area along with a 5 km buffer surrounding the Project Area (referred to as the "Study Area" in the MEKS report).

MEKS considers the land and water areas in which the proposed Project is located to identify what Mi'kmaq traditional use activities have occurred or are currently occurring within the "Study Area"; and what Mi'kmaq ecological knowledge presently exists with respect to the area. This process will be completed in accordance with the Mi'kmaq Ecological Knowledge Protocol, 2nd Edition ("Protocol"), which was established by the Assembly of Nova Scotia Mi'kmaq Chiefs and speaks to the process, procedures, and results that are expected of a MEKS. Per the Protocol, a copy of the MEKS will be provided to KMKNO for review. All MEKS' must be reviewed by KMKNO on behalf of the Assembly to ensure consistency with the Protocol. KMKNO will review the MEKS and advise if the requirements have been met, or if the MEKS must be amended. When this review is completed by KMKNO, a copy of the MEKS will be provided directly to the required reviewers under separate cover.

The MEKS consists of two major components:

- Mi'kmaq Traditional Land and Resource Use Activities
  - Considers both past and present uses of the area.
  - Uses interviews as the key source of information regarding Mi'kmaq use.
- A Mi'kmaq Significance Species Analysis
  - Identifies species in the area and considers resources that are important to Mi'kmaq use (food/sustenance resources, medicinal/ceremonial plant resources, and art/tools resources).

- Considers resource availability/abundance in the area (along with adjacent areas or in other areas outside), their use, and their importance, with regards to the Mi'kmaq.

Membertou Geomatics Solutions is undertaking a MEKS for the Project, with completion expected in early 2026.

#### **4.4 Future Engagement Plan**

The Proponent is committed to sustained, meaningful engagement and economic reconciliation with the Mi'kmaq of Nova Scotia throughout all phases of the Project. Engagement will be structured as an ongoing, two-way process that includes regular updates and opportunities for feedback to ensure transparency and responsiveness.

The Proponent will collaborate with Mi'kmaw organizations and communities to identify opportunities for participation by Mi'kmaw businesses and skilled labour. Guidance will be sought from each community and organization regarding preferred methods of engagement to ensure approaches are respectful, culturally appropriate, and community driven.

In addition, the Proponent remains committed to minimizing potential impacts on Mi'kmaq rights and interests while generating positive economic and environmental benefits. This commitment includes the development of a Mi'kmaq Communication Plan to support consistent engagement and partnership throughout the life of the Project.

A plan for future engagement will include follow-up meetings with the following groups during the first quarter of 2026 to share additional Project details and to discuss benefits to the Mi'kmaq of Nova Scotia:

- KMKNO
- Native Council of Nova Scotia
- Pictou Landing First Nation
- WMA

Furthermore, the Proponent will continue to attempt to meet with the following groups during the first quarter of 2026 to discuss the Project and benefits to the Mi'kmaq of Nova Scotia:

- Paq'tnkek Mi'kmaw Nation
- Millbrook First Nation
- Sipeknekatik First Nation
- Confederacy of Mainland Mi'kmaq
- Union of Nova Scotia Mi'kmaq

## **5.0 RELEVANT STUDIES OR REGIONAL ASSESSMENTS CONDUCTED**

---

As of the date of this documents' publication, the Project is not taking place in an area with a previously completed Regional Assessment, according to the Canadian Impact Assessment Registry (IAAC, 2025).

## **6.0 RELEVANT STRATEGIC ASSESSMENTS CONDUCTED**

---

The Strategic Assessment of Climate Change (Government of Canada, 2020), conducted under Section 95(2) of the *Impact Assessment Act*, S.C. 2019, c. 28, s. 1 is applicable as the Project is a designated activity under the *Physical Activities Regulations*, S.O.R./2019-285. The Strategic Assessment of Climate Change has been considered in Project development and design, including potential alternative means of carrying out the Project and preliminary estimates of greenhouse gas emissions associated with the Project.

## PART B: PROJECT INFORMATION

---

### 7.0 PURPOSE AND NEED FOR THE PROJECT

---

The purpose of the Project is to generate electricity from natural gas to provide a reliable source of electricity to meet the growing future demand of Nova Scotia's electricity system.

Nova Scotia's electricity system is undergoing a major transformation - driven by population growth, more homes and vehicles using electricity instead of gas or oil, and the need to move away from Nova Scotia's current use of coal for electricity. Under Nova Scotia's Clean Power Plan, the province must stop using coal fired electricity by 2030 and have 80% of electricity come from renewable sources. Putting in place new cleaner sources of energy must be done in a way that's sustainable and beneficial for all Nova Scotians. Further, critical to reliability is ensuring foundational energy sources are available when renewable energy sources, like wind and solar, are not available or able to meet demand.

The Clean Power Plan identifies the need for at least 300 MW of new, fast acting, dispatchable, power generation by 2030, designed with the ability to use multiple sources of fuel to support grid reliability and resiliency. The Project is being designed to run as needed to meet peak demand, provide dispatchable generation and ancillary grid services required from the introduction of increased variable renewable power sources. As such, the Project plays a critical role in implementing the province's Clean Power Plan and provides the benefit of reliable and secured electricity to the grid to support the ongoing integration of new renewable power generation capacity and overall reduction of Nova Scotia's greenhouse gas (GHG) emissions from electricity generation.

The Proponent is committed to sharing economic opportunities with the local community throughout the Project's development and lifespan. This will be done by using local skills and labour where possible with on-the-job training. Engagement with local groups has been ongoing to support both community and Project development.

### 8.0 PHYSICAL ACTIVITY

---

The Project is a designated project under the *Impact Assessment Act*, S.C. 2019, c. 28, s. 1 as it meets item 30 under the *Physical Activities Regulations*, S.O.R./2019-285: "The construction, operation, decommissioning, and abandonment of a new fossil fuel-fired power generating facility with a production capacity of 200 MW or more." Therefore, the EARD/IPD has been prepared to meet the requirements of an IPD for submission to the IAAC. The requirement for an Impact Assessment will then be determined by IAAC through their Screening Decision. The designated project is not a component of a larger project that is not listed in the *Physical Activities Regulations*.



The Project will be subject to emissions limits under the *Clean Electricity Regulations*, S.O.R./2024-263 (CER) enacted under the *Canadian Environmental Protection Act* (CEPA), S.C. 1999, c. 33, as it meets the following criteria, defined in subsection 5(1) of the CER:

- The Project has an electricity generation capacity of at least 25 MW.
- The Project generates electricity using fossil fuels.
- The Project is connected, directly or indirectly, to an electricity system.

The Project is a standalone project and is not a component of any larger project listed on the IAAC Registry's Project list.

## 9.0 ACTIVITIES, COMPONENTS, & INFRASTRUCTURE

As the purpose of the Project is to generate electricity as required to meet power grid demands, the major process of the facility is electrical power generation.

### 9.1 Infrastructure & Components

#### 9.1.1 Size of the Designated Project Footprint

A Project Area was established to inform field and technical surveys and to facilitate preliminary Project design. The Project Area includes the boundaries of the private land parcel (i.e., PID 910307) on which the Project is proposed (Table 9.1, Drawing 2, Appendix A). A Project Footprint was subsequently established, which includes the physical areas where direct disturbance can be expected to occur in relation to the Project, associated with both temporary and permanent components (Table 9.1).

**Table 9.1: Areas of Study**

Area of Study	Area (ha)
Project Area	55.95
Project Footprint <sup>(1)</sup>	12.55

<sup>(1)</sup>Area (ha) is an estimate of the temporary and permanent footprint of the Project Area and is subject to change upon final engineering design. Following the final engineering design, the area will be refined.

#### 9.1.2 Project Features

The operation of the Project will be accomplished using several technologies and approaches. The main production stages for the Project include:

- Detailed design of the natural gas power generation facility
- Construction
  - Site preparation and construction of the natural gas power generation facility
  - Development of the production well field necessary to provide water to the facility for processing
  - Interconnection with the natural gas pipeline\*
  - Interconnection with the electrical transmission grid\*

- Operations
- Decommissioning

\*Interconnection to natural gas pipeline and the new electrical transmission lines are incidental activities required to operate the Facility but excluded from the EARD/IPD as they will be undertaken by a third party. These interconnections will be designed and permitted as applicable separately from the natural gas power generation facility.

### 9.1.3 Project Components

A series of specific components will be finalized through the front-end engineering design (Pre-front-end engineering design ) prior to commissioning. A list of Project components and the description associated with Project development are summarized in Table 9.2 and shown on Drawing 2 (Appendix A).

**Table 9.2 Project Components and Description**

<b>Project Component</b>	<b>Description</b>
Access road	One driveway connected to inner Facility defined vehicular routes to allow for product loading, unloading, maintenance, and workforce access.
Natural gas-fired combustion turbine	Combined nominal capacity up to 300 MW, consisting of a combustion turbine generator, air inlet filtration unit, exhaust stack, start-up system, and instrumentation and control system. Designed with synchronous condensing capabilities.
Liquid fuel storage system	Includes storage tanks, piping, fuel unloading equipment and secondary containment.
Electrical systems	Includes generator step up transformers, 230 kV grid interconnection and protection, and auxiliary station services.
Water supply and storage	Drilled wells to supply raw water to the site. Raw water will be stored on the site.
Water treatment for emissions and cooling	Raw water will be demineralized through a water treatment system. Demineralized water will be stored on the site.
Residual Process water treatment	Concentrated water with elevated mineral content will be residual to the water treatment process. The concentrated water will be neutralized, tested for quality, and stored in a settling pond for a controlled release.
Stormwater retention ponds	Site drainage water will be collected and tested prior to controlled release.
Administration building	Building for staff administration and comfort station.
Fire suppression	Install fire suppression systems. Installation of a firewater storage tank may be required.
Septic system	Install a septic system. Based on the final engineering design, a sanitary wastewater treatment plant may be required.
Temporary laydown and construction facilities	Temporary facilities needed to build/combine various Project components.

### *Production Inputs*

The following sections describe the main inputs required for operation of the Project: natural gas, light fuel oil, and fresh water. The facility is forecasted to be operational approximately 25% of the year based on electrical grid demand for electricity supply and grid support. The production inputs have been described conservatively at full capacity for a 24-hour day. The average daily consumption will be well below these quantities.

### *Natural Gas*

Natural gas will be the primary fuel used to operate the power plant. Natural gas will be supplied through an underground pipeline connected to the existing transmission pipeline. The plant will require a compressor station to supply the natural gas to the combustion turbines at the required pressure.

The facility will use approximately 60,000 dth/day of natural gas when operating 24-hours at full capacity. This converts to 1.70 million cubic meters of natural gas per day.

### *Light Fuel Oil*

Light fuel oil will be the secondary fuel source and is forecasted to be used for less than 20% of the annual operating hours. Light fuel oil will be delivered to the site via trucks and will be stored at the site. The facility will use approximately 75,000 litres of fuel oil per hour when the Facility is generating at full capacity, and the power plant shall be capable of storing a 5-day supply of light fuel oil, which requires approximately 9 million litres of fuel storage. Storage tanks suitable for the total volume required for five days of full-load operation will be located within the Project Footprint in proximity to an existing natural gas pipeline as shown on Drawing 2 (Appendix A). The fuel storage system will include a multi-tank arrangement with the total quantity and location of storage tanks to be determined during detailed engineering. Fuel storage tanks will include secondary spill containment, an oily water separator for processing rainwater collection, and a testing and monitoring system.

Fuel turnover should take place every 6 to 12 months and long-term fuel storage measures should include monitoring, testing, and fuel treatments for fuel stored longer than 12 months.

### *Freshwater*

A sustainable groundwater supply will be required for power plant operation. Preliminary desktop investigations estimate a peak raw water consumption of 175 m<sup>3</sup>/hr, and average annual consumption of 23 to 31 m<sup>3</sup>/hr based on the expected power plant operation. Reduced water consumption rates are estimated during colder seasonal conditions and natural gas operation. Raw water tanks are shown on Drawing 2 (Appendix A).

Raw water is expected to be supplied by groundwater wells installed in or near the Project Area. Raw water will be used for the demineralized plant, potable water services, and the fire water system.

Eight hours of raw water will be stored on the site to be used as service water and supply to demineralized water production. Fire water will also be stored on the site, and a two-hour supply will be available. It is anticipated that there will be two 1,500 m<sup>3</sup> raw water/fire water tanks that may be considered in combination with the four 750 m<sup>3</sup> tanks for demineralized water in the final design.

Based on expected average demand, the Project will require a range from 9-12 wells (based on predicted yield) supplemented by water storage to support the project. Water storage will be required to meet the expected peak demand periods. Water recycling, alternate technologies and alternate water supplies (rainwater harvest system) will also be considered to reduce overall water needs.

A hydrogeological study will be completed to inform the number, location, and design of groundwater production wells necessary to achieve a sustainable yield.

A demineralization plant will be required to supply demineralized water for plant use. Demineralized water will be stored in four 750 m<sup>3</sup> demineralized water tanks, which will supply the combustion turbines through a distribution system. Demineralized water is required for emissions control, specifically NO<sub>x</sub>, and intermittent compressor washing.

The demineralization water system will include the following:

- Multimedia Inlet Filter
- Water Treatment System
- Polishing demineralizer
- Demineralized water storage tanks
- Demineralized water pumps

At peak operation, effluent release from the demineralized water plant is expected to be 50 m<sup>3</sup>/hr.

Wastewater and stormwater management systems will ensure water discharge and runoff from the site meet Canadian Council of Ministers of the Environment (CCME) Guidelines. These systems include:

- Oil/water separator system to process rainwater drainage from the fuel storage tank containment.
- Oil/water separator system to process drainage from other areas where oil and fuel products are handled and there is the potential for spillage to the drainage system.
- Neutralization system and wastewater property monitoring system for demineralized water treatment plant wastewater.
- Settling pond to receive stormwater and wastewater and manage release rates.

Water release rates must be controlled to ensure there are no adverse impacts to receiving points or watercourses such as erosion or effects on aquatic life.

#### *Production Pathway*

A fast-acting natural gas power generation facility is designed to provide rapid, flexible electricity supply to support grid stability during periods of high demand or fluctuations in renewable energy output. The Project involves simple-cycle gas turbines fuelled by natural gas supplied by the Maritimes & Northeast Pipeline, or by light fuel oil trucked into the Project Area. When the grid operator indicates a need for the facility to operate, this Facility can rapidly respond with high ramp rates, meaning the facility can start, stop, or adjust power output in short order.

A summary of operations is provided herein:

- Fuel Delivery: Natural gas is delivered to the power plant through underground pipelines or light fuel oil is available at on-site storage. The natural gas interconnection is ancillary infrastructure not assessed in the EARD/IPD.
- Combustion: The natural gas is burned in a combustion chamber, which produces hot gases. This process releases energy in the form of heat. Demineralized water is used to control flame temperatures during combustion.
- Turbine Operation: The hot gases rotate a turbine, as they expand across the turbine blading, similar to how wind turns a windmill. This rotating motion is converted to electricity.
- Electric Generator: The turbine is connected to a generator. As the turbine spins, it turns the generator, which converts the mechanical energy into electrical energy.
- Cooling and Exhaust: After passing through the turbine section the exhaust gases are safely released through a stack.
- Electricity Transmission: The electricity produced is sent through power lines to homes, businesses, and industries. The electrical transmission is ancillary infrastructure not assessed in the EARD/IPD.
- Control and Monitoring: Operators monitor the entire process to ensure normal, safe, and efficient operation. Systems are in place to adjust operations based on the power demand and environmental conditions.

#### 9.1.4 Existing Infrastructure

There are no existing structures, or related activities, present in the Project Area that will be used for the Project.

## 9.2 Physical Activities Incidental to the Project Within the Proponent's Control

Activities that are incidental to the Project's construction and operation that are within the Proponent's control include:

1. Construction and operation of the power plant.
2. Construction and maintenance of the access road from the power plant to Highway 4.
3. Water supply for the power plant.

## 9.3 Physical Activities Incidental to the Project Outside the Proponent's Control

Activities that are incidental to the Project's construction and operation that are outside of the Proponent's control include:

1. Construction and maintenance of the transmission interconnection between the power plant and substation.
2. Maintenance and upgrading of the existing Highway 4.
3. General telecommunications in the Project Area.
4. Construction and operation of the substation and any upgrades to the transmission line that will provide electrical interconnection between the plant and the existing transmission line
5. Construction and operation of the third-party pipeline routed underground to the site that will provide natural gas from an existing M&NP gas pipeline.

## 9.4 Project Expansion

The Project is a new facility and neither a component of, nor expansion of, another project.

## 10.0 MAXIMUM PRODUCTION CAPACITY

---

When fully operational, the Project will be capable of producing up to an estimated maximum power output of 300 MW, which is above the threshold of 200 MW set out in the *Physical Activities Regulations*, SOR/2019-285, Section 30. The Project production process involves producing electricity via single cycle power plant consisting of one natural gas-fired combustion turbine.

## 11.0 ANTICIPATED CONSTRUCTION, OPERATION, & DECOMMISSIONING SCHEDULES

---

Details regarding estimated Project timelines and major milestones are provided in Table 11.1. The Project is expected to have a lifespan of approximately 30 years.

If the IAAC deems an Impact Assessment is required, Project timelines are anticipated to extend approximately three to five years beyond the dates provided in Table 11.1.

**Table 11.1: Project Timelines**

Task	Date	Duration
EARD/IPD Registration	Q4 2025	
Detailed Engineering Design	2026 to 2028	2 years
Commissioning	2029	
Operation	2030 to 2060 (may extend up to 2075)	30 years (up to 45)
Decommissioning or Refurbishment	At conclusion of Operation – 1 to 2 years	2 years

Q = Quarter

## 12.0 ALTERNATIVES TO THE PROJECT

The Proponent has identified this Project as the most viable option to add fast-acting electricity supply, security, and reliability to the Nova Scotia electricity grid. Project alternatives that can be considered in parallel to this Project may include:

- Grid-Scale Battery Energy Storage
  - Batteries provide fast response with zero direct atmospheric emissions
  - Clean Power Plan has targets to deploy 300 MW of battery energy storage systems
- Additional wind power
  - Clean Power Plan has targets of 1,000 MW of new wind power supply by 2030
  - Additional solar power
  - Clean Power Plan targets increasing the solar power production by 300 MW by 2030
- Increased extra-provincial electricity imports

While these alternatives each partially contribute to the overall functioning and decarbonizing of the Nova Scotia electricity grid, they do not provide the new capacity required to support the phase out of expensive and carbon-intense coal-fired facilities nor do they provide the quick-response required to support the significant build-out of variable production renewable resources. Project alternatives were thoroughly evaluated and modeled in recent Integrated Resource Plans filed with the Nova Scotia Energy Board, demonstrating the need for the Project, which is also specifically referenced in the 2030 Clean Power Plan.

The Proponent has considered alternative fuel sources for the Facility, ultimately deciding that a dual-fuel configuration is optimal, allowing the Facility to operate on natural gas and light fuel oil (diesel). Coal was not considered as the goal of the Project is to reduce reliance on high-GHG sources. Hydrogen fuel is considered as a future fuel source should it become available in the province. The combustion turbine design shall allow for operation on blended hydrogen and natural gas fuel based on blend ratios that have been fully tested and demonstrated for

commercially available combustion turbine models and shall allow for a future transition to 100% hydrogen fuel with minimal retrofitting. The primary fuel for the combustion turbines is natural gas, supplemented by light fuel oil when necessary. Each unit shall be capable of starting on either natural gas or light fuel oil and performing online fuel transfer between natural gas and light fuel oil seamlessly. This flexibility ensures uninterrupted operation and enhances the plant's ability to respond to fuel supply variations.

Other potentially viable locations for a fast-acting natural gas power generation facility have been considered as part of the initial project planning by NS Power, but were not progressed due to environmental, social, cultural, site control, and/or electrical grid interconnection factors.

Alternative means of carrying out the Project have been considered by the Proponent. For the purpose of the EARD/IPD, General Electric's LM6000 combustion turbine generator model is being considered. This model is a flexible and synchronous condensing capable aeroderivative combustion turbine generator with a startup time and ramp rate well suited to the needs of the Project.

In summary, the Proponent has considered alternative sites, alternative means of completing the Project, and alternatives to the Project. Given the alternatives considered, the Project as proposed represents the most economically and technically feasible option for supplying Nova Scotians with safe and reliable electricity.



## PART C: LOCATION INFORMATION & CONTEXT

### 13.0 PROJECT LOCATION DESCRIPTION

The Project is located on private land within MOPC approximately 12 km southwest of New Glasgow, near the communities of Lorne and Hopewell, Nova Scotia (Drawing 1, Appendix A).

#### 13.1 Geographic Coordinates

The center of the Project is located at:

- Latitude: 45.4439°N
- Longitude: 62.7397°W

#### 13.2 Site Maps

Please refer to the Project Drawings (Appendix A):

- Drawing 1: Regional Project Location
- Drawing 2: Project Area
- Drawing 3: Nearest Non-Participating Receptors
- Drawing 4: Mi'kmaq of Nova Scotia Communities

#### 13.3 Legal Land Description

A Project Area was established to inform field and technical surveys and to facilitate preliminary Project design. The Project Area includes the boundaries of the private land parcel (i.e., PID 910307) on which the Project is proposed (Table 13.1, Drawing 2, Appendix A).

A Project Footprint was subsequently established, which includes the physical areas where direct disturbance can be expected to occur in relation to the Project, associated with both temporary and permanent components (Table 3.1).

**Table 13.1: Areas of Study**

Area of Study	Area (ha)
Project Area	55.95
Project Footprint <sup>(1)</sup>	12.55

<sup>(1)</sup> Area (ha) is an estimate of the temporary and permanent footprint of the Project Area and is subject to change upon final engineering design. Following the final engineering design, the area will be refined.

#### 13.4 Proximity to Residences

The Project's geographical location in relation to proximity to nearby non-participating receptors is detailed on Drawing 3. The nearest non-participating receptor to the Project (MR02) is approximately 833 m from the Project Footprint

A selection of civic addresses was chosen to represent non-participating receptors nearest to the Project Footprint. These modelled receptors and civic address are shown on Drawing 3 (Appendix A). This list, in some cases, identifies representative receptor groupings, while each individual receptor is not modelled individually (Table 13.2).

**Table 13.2: Summary of Modelled residential Receptors and Associated Civic Addresses**

<b>Modelled Receptor Number</b>	<b>Associated Civic Addresses</b>	<b>Distance to Project Footprint (m)</b>
MR01	2262 White Hill Road	894
MR02	2731 White Hill Road	833
MR03	416 Marshdale Road	1969
MR04	1646, 1648, 1651 Culloden Road	2340
MR05	42 Grant 2 Road	2489
MR06	342 Grant 2 Road	1402
MR07	359, 360, 361 Lorne Station Road	1316

### **13.5 Proximity to Indigenous Lands**

The nearest Mi'kmaq community is the Boat Harbour West Indian Reserve No. 37, which is part of the Pictou Landing First Nation. This is approximately 23.5 km from the center of the Project (Drawing 4, Appendix A).

### **13.6 Proximity to Federal Lands**

The Project is not located on Federal Lands under administration and management by the Government of Canada. The nearest parcel of Federal Land is located in Pictou Landing First Nation approximately 25 km north of the center of the Project Area (Drawing 4, Appendix A).

## **14.0 PHYSICAL & BIOLOGICAL ENVIRONMENT**

### **14.1 Valued Components**

EA is a planning tool used to predict the environmental effects of a proposed project, identify measures to mitigate adverse environmental effects, and predict the significance of any residual effects after applying mitigation measures. The effects assessment completed was developed to meet the requirements of the EARD, and Section 14 of the Information and Management of Time Limits Regulations (SOR/2019-283) (IAAC, 2024).

The EA focuses on Valued Components (VCs). VCs are specific components of the biophysical and human environments that, if altered by the Project, may be of concern to regulators, the Mi'kmaq of Nova Scotia, stakeholders, and/or the general public. The EA scope for this Project includes:

- Identify VCs that the Project may interact with (by activity and phase) within established spatial and temporal boundaries
- Establish the existing conditions for VCs
- Identify potential interactions between the Project and the VCs
- Assess the potential effects that could occur from the interactions
- Identify mitigation measures to reduce or eliminate those effects
- Evaluate the significance of the residual environmental effects using VC-specific criteria
- Identify monitoring or follow-up programs to verify predictions and/or evaluate the need to implement adaptive management, if required

The following VCs were identified based on the experience of the Project team and through engagement with regulators, the Mi'kmaq of Nova Scotia, and the public.

- Atmospheric Environment:
  - Atmosphere and Air Quality
  - Greenhouse Gases
  - Sound
- Geophysical Environment
- Aquatic Environment
  - Surface Water, Fish and Fish Habitat
  - Wetlands
- Terrestrial Environment
  - Terrestrial Flora
  - Terrestrial Fauna
  - Avifauna
- Socioeconomic environment
  - Economy
  - Land use and Land Value
  - Archaeological and cultural resources
- Species at risk (considered in the appropriate VC section, as necessary)

Details of the desktop and baseline field surveys, the potential effects of the Project, and the mitigation measures for each VC are summarized in the following sections.

VCS requiring specific consideration under IAA are described in Part E.

## **14.2 Atmosphere and Air Quality**

### **14.2.1 Baseline Conditions**

The Project Area experiences a mild climate typical of Nova Scotia's Northumberland Lowlands, with average annual temperatures around 6.4°C and annual precipitation of approximately 1,235 mm. Winds are predominantly from the southwest, with occasional strong

gusts during seasonal storms. Ambient air quality in the region is generally good, based on data from the nearest monitoring stations in Pictou and Halifax. Measured concentrations of key pollutants – carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), and fine particulate matter (PM<sub>2.5</sub>) – are well below Nova Scotia Ambient Air Quality Standards (NSAAQS) and Canadian Ambient Air Quality Standards (CAAQS).

#### 14.2.2 Potential Effects

During construction, activities such as site clearing, grading, and vehicle movement will generate fugitive dust and particulate matter (PM), along with exhaust emissions from heavy equipment. These impacts are expected to be short-term, intermittent, and low in magnitude because non-participating receptors are located at a considerable distance from the site. Similarly, during decommissioning, comparable activities will occur, but only for a limited duration.

Operational impacts will primarily come from stack emissions produced by the combustion turbines. These emissions include CO, nitrogen oxides (NO<sub>x</sub>), and PM<sub>2.5</sub>. Air dispersion modeling predicts that concentrations of these substances will remain below NSAAQS at and beyond the facility boundary. While these emissions are considered adverse, they are low in magnitude, intermittent, and confined to the operational phase of the project.

#### 14.2.3 Mitigation Measures

During construction, dust suppression techniques such as water spraying will be used, and exposed ground will be revegetated promptly. Equipment will be maintained in proper working order, and idling will be restricted to minimize exhaust emissions.

For operations, the facility will incorporate advanced low-NO<sub>x</sub> combustion technology and continuous emissions monitoring systems (CEMS) to track real-time concentrations of pollutants. Regular inspections and maintenance of emissions control systems will ensure compliance with provincial and federal air quality standards.

After mitigation, residual effects on air quality are expected to be not significant. Construction-related emissions will be short-term, reversible, and intermittent, while operational emissions will be medium-term, reversible, and intermittent. Overall, the project is designed to meet stringent environmental standards and minimize its impact on air quality throughout its lifecycle.

### 14.3 **Greenhouse Gases**

#### 14.3.1 Baseline Conditions

The baseline scenario for GHG emissions is based on Nova Scotia's current reliance on coal-fired electricity generation. Under this baseline, generating the same amount of electricity as the Project (approximately 657 million kWh per year) from coal would produce about 690,000 tonnes of CO<sub>2</sub> equivalent (tCO<sub>2</sub>e) annually.

#### 14.3.2 Potential Effects

The Project is anticipated to replace coal-fired electricity generation facilities within Nova Scotia. Although the Project will generate GHGs during operation, it is expected to reduce emissions compared to the coal-fired electrical generation it will replace. The following effects assessment will isolate and evaluate the GHG emissions from the Project's activities.

The Facility is anticipated to produce 56,152.81 tCO<sub>2</sub>e during the construction phase. When considering these construction-related GHG emissions over the Facility's lifespan (30 years), the annual GHG emissions from construction amount to 1,784.29 tCO<sub>2</sub>e annually. These emissions are not anticipated to be significant on an annualized basis over the Project's lifetime and are therefore excluded from the quantification of their magnitude.

During operation, the Project is expected to generate 325,594.00 tCO<sub>2</sub>e annually. The Project's operational emissions are compared to the baseline emissions scenario to determine the percent change from the baseline conditions (i.e., coal-fired generation). Compared with coal-fired generation, the Project is expected to achieve a 52.8% reduction of GHG emissions annually.

Over the Project's lifespan, the Facility is expected to reduce approximately 10,931 kilotonnes of CO<sub>2</sub>e compared to the baseline scenario (coal-fired electricity).

#### 14.3.3 Mitigation Measures

Mitigation measures to reduce the Project's contributions to GHG emissions, thus reducing the overall impact of climate change, include:

- Use locally sourced materials, where possible, to reduce emissions associated with transport.
- Incorporate the shortest construction and transportation routes where possible to minimize the use of fossil fuels during construction.
- Recover and recycle construction and demolition/decommissioning waste, where possible
- Minimize deforestation during land clearing by only clearing the area that will be needed.
- Plan construction activities to reduce the double handling of materials, reducing GHG emissions associated with heavy equipment operations.
- Require that Project equipment meets all applicable provincial and federal emissions standards.
- Maintain engine and exhaust systems according to the manufacturer's specifications and applicable maintenance schedule.
- Remove from service malfunctioning equipment or equipment generating excess amounts of smoke, odour, or noise until an assessment and necessary repairs can be completed.

- Require that construction equipment with an improperly functioning emission control system not be operated.
- Require that regular equipment maintenance is undertaken to maintain good operations and fuel efficiency.
- Require that equipment containing coolant (i.e., air conditioning units) undergoes preventative maintenance and inspections (i.e., leak testing).
- Hire from a local labour force to reduce emissions associated with workforce transportation.
- Dispose of halocarbon-containing substances at an approved hazardous waste facility per applicable regulations and in compliance with local requirements.
- Require that trucks removing waste from or bringing materials to the Project are filled to the maximum allowable capacity where practical (dependent on the truck size and load weight) to reduce transportation requirements and limit the number of trips.
- Implement an anti-idling policy to limit GHG emissions from vehicles and equipment and limit the use of fossil fuels.
- Incorporate energy-efficient infrastructure where feasible to limit GHG emissions and the use of fossil fuels resulting from standard equipment (e.g., diesel-powered generators or light stands).
- Incorporate domestic supplies of clean fuels such as green hydrogen, renewable natural gas and biodiesel as such local supply chains mature.

## **14.4 Sound**

### **14.4.1 Baseline Conditions**

Sound will predominantly be generated by construction equipment and heavy machinery, such as cranes, backhoes, excavators, dump trucks, graders, and vehicles. The range of decibels anticipated for the Project's construction activities will be between 77 dBA to 115 dBA from a single piece of equipment within 15 m from the source. Approximate sound levels experienced at incremental distances through construction activities for the Project were modelled.

The Community Noise Impact Assessment (2025a), completed by Hatch, identified seven representative non-participating residential receptors surrounding the Facility. These seven receptors were then modelled to determine the sound-emission characteristics of the Facility. The most conservative (worst-case) modelled comprehensive sound levels at these receptors were below the permissible sound levels outlined, for daytime (53 dBA), evening (48 dBA) and nighttime (40 dBA) at all receptors.

### **14.4.2 Potential Effects**

The Facility will be located in an industrial area within a rural setting, near existing industrial operations to the northeast and northwest of the Project Area.

During construction and decommissioning, operation of mobile equipment and hand tools is expected to generate noise. The sound attenuation rate presented does not account for local landscape/topography, or for buildings/trees. It therefore represents a “worst-case” or most conservative scenario for sound levels produced by a single piece of equipment. The anticipated median equipment example would indicate that sound levels are expected to be compliant with the permissible sound levels during daytime hours within 960 m of the emission source, provided there is a broken line of sight between the receptor and the emission source. The maximum sound level scenario assessed shows elevated sound at a distance of 960 m. The closest receptor (identified as MR02) is located approximately 833 m from the Project Footprint. However, with a broken line of sight, as anticipated, given the forested buffer between the Project Area and the receptor, construction sound levels are expected to be further attenuated, although it may still be discernible at the receptor. Finally, construction-related sounds are considered a temporary, intermittent source generated by the Project. Activities producing higher levels of sound, such as handheld air tools, will be less frequent and of shorter duration.

The closest modelled receptor (MR02) is approximately 833 m from the Project Footprint, and none of the modelled receptors are considered sensitive (e.g., schools, daycares, etc). During operations, worst-case modelling results show that comprehensive sound levels are expected to remain within regulatory limits, for daytime (53 dBA), evening (48 dBA), and nighttime (40 dBA) for all receptors (Hatch, 2025a).

#### 14.4.3 Mitigation Measures

To minimize construction and operational sound and the potential to disturb receptors during construction and operation, the following general mitigation/protective measures will be implemented:

- Limit vehicle idling.
- Conduct construction activities within the recommended daytime hours where feasible.
- Post and maintain speed limits for on-site transportation and mobile equipment.
- Design Project with sound suppression technologies as necessary to maintain compliance with regulatory thresholds
- Create a Complaint Resolution Plan to address sound-related issues during Project construction and operation.

Throughout all Project phases, activities will be designed to meet occupational health and safety guidelines and regulations related to sound levels and applicable exposure limits.

## 14.5 Geophysical Environment

### 14.5.1 Baseline Conditions

The Project Area lies within the Central Uplands Ecodistrict of the Nova Scotia Uplands Ecoregion and is underlain by silty till. Within the Project Area, there are “Medium-Risk” and

“High-Risk” areas for Karst topography, and there are no occurrences of sulphide-bearing slates (i.e., acid-generating rocks). There are no active licences for mineral exploration or abandoned mine openings present within the Project Area.

No groundwater water wells are located within the Project Area. The closest groundwater well to the Project Area, according to the well logs database, is located approximately 581 m west of the Project Footprint (Drawing 2, Appendix A); however, no building was identified during desktop review at the well location. Desktop groundwater quality indicates naturally elevated concentrations of arsenic and manganese, which are common in several regions of Nova Scotia due to local geology.

#### 14.5.2 Potential Effects

The geophysical environment will be disturbed within the Project Area during the site preparation and construction phase, and again during infrastructure removal and site decommissioning phases. At this time, blasting is not expected to be required but will be confirmed through geotechnical investigations. During operations, groundwater quality may be impacted through fuel and chemical handling (e.g., spills). However, the primary pathway of effect on the geophysical environment is through continued water withdrawal from groundwater wells to support the Facility's operations.

To assess the potential impact of groundwater withdrawal on nearby wells, a calculation for a groundwater drawdown radius of influence (ROI) was performed based on worst case water withdrawal needs from one well located at the center of the Project Area. This resulted in a ROI of approximately 650 m; however, this calculation includes conservative assumptions, like a constant pumping rate which is unrealistic for the facility. The Project is likely to require multiple wells to support the Facility; the number and spacing of wells required will be advised by groundwater yield assessments (pump testing) and geotechnical investigations. The ROI estimate will be reevaluated. Based on current modelling, the nearest groundwater well (according to the well logs database) and receptor fall outside of the calculated ROI. The ROI will be reassessed upon the completion of invasive groundwater testing.

Groundwater withdrawal can also impact surface water features through reduction in baseflows. For a scenario with a well located 482 m to 803 m from the watercourses, estimations indicate that 18% to 42% of the pumping rate could be supplied by reduced streamflow over the first year of operation. However, the estimation method assumes a fully connected stream and aquifer. Wells required for the facility would be expected to be sufficiently deep below the ground surface in an aquifer confined and disconnected from nearby surface water features. Future invasive groundwater testing will assess the actual interconnectedness of the aquifer with surface water features.

#### 14.5.3 Mitigation Measures

Detailed geotechnical investigations will be conducted before construction to confirm karst occurrences and identify acid-generating rock. Erosion and sediment control measures such as



silt fences, sediment basins, and prompt stabilization of disturbed soils will be used throughout construction. Surface water management systems, including diversion ditches, vegetated swales, and settling ponds, will be installed to control runoff and prevent sediment transport. Vegetated buffer zones of at least 30 meters will be maintained around unaltered wetlands and watercourses to protect aquatic habitats. If blasting is required, a blasting management plan will be developed to minimize vibration and sedimentation impacts. Monitoring programs, including a surface water monitoring plan, will verify compliance with water quality standards during construction.

To protect groundwater, the Project will implement several measures throughout construction and operation. Hydrogeological studies and test wells will be completed to confirm sustainable withdrawal rates and proper well spacing. Observation wells will be installed to monitor groundwater levels, and regular sampling will check water quality against baseline conditions.

Fuel and chemical storage areas will be equipped with secondary containment and impermeable surfaces to prevent leaks, while sealed transfer systems, drip trays, and automatic shutoff valves will reduce spill risks. A comprehensive spill prevention and emergency response plan will be in place, supported by trained staff and on-site spill kits.

Routine inspections and maintenance of tanks, piping, and containment structures will help detect and address issues early. If any changes in groundwater quality or quantity occur at nearby wells, the project will provide an alternative water supply of equal or better quality and quantity to affected landowners.

These measures, combined with ongoing monitoring, are designed to minimize impacts and ensure groundwater remains safe and reliable throughout the project's lifecycle.

## **14.6 Surface Water, Fish and Fish Habitat**

### **14.6.1 Baseline Conditions**

The Project Area is located within the East/Middle/West (Pictou) primary watershed, and the East River Pictou secondary watershed. Four watercourses were identified within the Project Area through field surveys. WC1 and WC2 are ephemeral features. WC1 emerges near the western boundary of the Project Area and flows southeast, exiting the southern boundary of the Project Area. WC2 emerges from a slope and flows south, exiting the southern boundary of the Project Area. WC3 is an intermittent feature that originates from WL6 and flows south, eventually exiting the southern boundary of the Project Area. WC4 is an intermittent feature that emerges in the northeast portion of the Project Area and flows east, eventually exiting along the eastern boundary of the Project Area.

Aquatic species that are more likely to be present within suitable habitats within the Project Area include brook trout (*Salvelinus fontinalis*) and American eel (*Anguilla rostrata*); these species have wide freshwater ranges and are known to inhabit intermittent headwater systems (Petty et al., 2012; Shepard, 2015). Of these species, two (American eel and brook trout) are considered SOCI. No evidence of mussels was noted during field surveys.

#### 14.6.2 Potential Effects

Destruction of fish habitat and the death of fish have been avoided through the siting of the Project Footprint.

Indirect impacts to surface water, fish, and fish habitat may be realized through earth moving activities within the Project Area during the site preparation and construction phase, and again during infrastructure removal and site decommissioning phases. Changes to water quality as a result of fuel or chemical spills and erosion and sedimentation are not expected based on the implementation of best management practices. Blasting is not currently expected to be required; this will be confirmed through planned geotechnical investigations.

No impacts to water quality or water temperature are expected from the release of treated process water. The facility will be equipped with stormwater and wastewater management systems as needed to protect surface water, fish, and fish habitat and ensure any water discharge or run off from the project site meets local environmental regulations. All discharged water will be tested to ensure CCME Guidelines for the Protection of Freshwater Aquatic Life (FWAL) and NS Tier I Environmental Quality Standards (EQS) are met before being released from the settling pond at a controlled rate into the receiving environment.

During operations, the primary pathway of effect on the aquatic environment is through continued water withdrawal from groundwater wells. Groundwater baseflow can directly support life processes of fish, particularly cold-water species like brook trout. By lowering the water table, cold-water seepage areas in nearby watercourses may be reduced, impacting the habitat's capacity to support one or more life processes of fish. Watercourses within the Project Area could expect a greater magnitude of baseflow depletion than estimations presented in Section 14.5.2 as it is anticipated to be closer to well locations. As noted in Section 14.5.2, however, the baseflow depletion estimation method used makes conservative assumptions that are likely not realistic based on the water needs of the facility. Baseflow depletion estimates will be further refined through a groundwater-surface water interaction assessment to ensure groundwater withdrawal does not negatively impact fish habitat and its capacity to support fish.

#### 14.6.3 Mitigation Measures

Stormwater and wastewater management systems will be implemented to protect surface water, fish, and fish habitat and ensure any water discharge or run off from the project site meets local environmental regulations. Maintaining natural drainage patterns, erosion controls, and sediment management will help safeguard surface water features and fish and fish habitat during project construction and operations.

Wastewater discharge will be treated as necessary to meet CCME FWAL guidelines and NS Tier I EQS prior to being released. All discharged water will be tested to ensure these guidelines are met before being released from the settling pond at a controlled rate into the receiving environment. Temperature will also be measured within the settling pond prior to release, and within the receiving environment.

Hydrogeological studies and test wells will be completed to confirm sustainable withdrawal rates. A groundwater-surface water interaction assessment will be completed to ensure groundwater withdrawal does not negatively impact fish or fish habitat.

If blasting is required, controlled blast designs, monitoring programs, and post-blast inspections will be implemented. A Blasting Management Plan will be designed to ensure that appropriate setback distances are maintained, or mitigations are implemented to protect fish and fish habitat from the potential impacts of blasting.

Fuel and chemical storage areas will be equipped with secondary containment and impermeable surfaces to prevent leaks, while sealed transfer systems, drip trays, and automatic shutoff valves will reduce spill risks. A comprehensive spill prevention and emergency response plan will be in place, supported by trained staff and on-site spill kits.

## **14.7 Wetlands**

### **14.7.1 Baseline Conditions**

Field surveys completed during 2025 identified eight wetlands within the Project Area. Four of the eight identified wetlands were treed swamps, and four were shrub swamps. Based on the results of field and desktop evaluations, three wetlands have been identified as potential Wetland of Special Significance (WSS).

### **14.7.2 Potential Effects**

Project activities, primarily those that involve earth moving or vegetation removal, have the potential to impact wetlands through habitat removal, disruptions to hydrology, and/or displacement of sediment. Groundwater withdrawal during operations may also impact wetlands by reducing groundwater discharge into nearby wetlands.

A total of three wetlands within the Project Area are expected to be impacted by Project development, including one partial and two complete infills to facilitate Project development for a total impact area of 1.7 ha. One of these wetlands (WL4) is a potential WSS and is expected to be altered.

### **14.7.3 Mitigation Measures**

Impacts to wetlands have been avoided and minimized wherever possible in the initial Project siting. Detailed engineering may allow further reduction to the impacts to wetlands. Prior to altering any wetlands, the Proponent will obtain all necessary permits from NSECC and will compensate for lost wetland habitat and functions.

A hydrogeological field study will be conducted at the permitting stage and a groundwater-surface water interaction assessment will be included to ensure groundwater withdrawal does not negatively impact wetland habitat. Wetland alterations will be designed to maintain hydrologic functions.

Potential effects from erosion and sedimentation will be mitigated with the implementation of an Erosion and Sediment Control Plan. All wetlands will be flagged and buffers will be maintained on wetlands wherever possible.

A site-specific post-construction wetland monitoring plan will be developed and will be provided to NSECC as part of the wetland alteration permitting process, which will include detailed monitoring and spot checks to ensure wetlands outside of impact areas are functioning as expected.

## **14.8 Terrestrial Flora**

### **14.8.1 Baseline Conditions**

The Project Area is comprised of several vegetation types within the mixedwood, spruce hemlock, tolerant hardwood, floodplain, and wet deciduous forest groups, as well as wetlands and cutover/disturbed areas. The vegetative communities identified within the Project Area are common in the surrounding landscape and the province. Of the forest groups identified in the Project Area, the floodplain, tolerant hardwood and spruce hemlock forest groups are the most likely to host elevated species diversity and/or rare species.

A total of 119 vascular plant and one lichen species were identified during field surveys (including targeted flora surveys and incidental observations). Of these, one vascular plant SOCI (American beech; *Fagus grandifolia*; S3S4), one vascular plant SAR (black ash; *Fraxinus nigra*; COSEWIC and ESA Threatened, S1S2) and one lichen SOCI (appressed jellyskin lichen; *Scytinium subtile*; S3S4) were identified in the Project Area.

### **14.8.2 Potential Effects**

Vegetation communities will be impacted by land clearing and ground disturbance for the Project. Overall, it is expected that approximately 12.55 ha of land will be cleared for the Project Footprint, with much of this area observed to have been previously disturbed by forest harvesting (including access roads and trails). The main cover type that will be cleared within the Project Footprint is mixedwood forest, which is relatively common within the surrounding environment.

Impacts to intact and sensitive flora habitat will be minimized by the placement of the Project within an area that has been previously disturbed by recent forest harvesting. No land clearing is expected to occur in the southeastern portion of the Project Area where mature, intact forest stands were identified.

A loss of flora individuals due to the Project will mainly occur during activities requiring ground disturbance and vegetation clearing. The results of the desktop review and subsequent field surveys were used to select the location of Project Footprint to maximize avoidance of field-observed priority flora species. The flora SAR observed in the Project Area includes black ash, and flora SOCI include American beech and appressed jellyskin lichen. Direct loss of all known

occurrences of flora SAR and most occurrences of flora SOCI have been avoided through placement of the Project Footprint.

One of the two occurrences of appressed jellyskin lichen is located within the Project Footprint (near WL3) and is expected to be lost due to vegetation clearing for the Project. The second occurrence is located at the edge of the Project Area (over 300 m from the Project Footprint) and will not be impacted by the Project.

The four field-observed occurrences of American beech are in the southern portion of the Project Area and > 40 m from the Project Footprint. All of these occurrences will be avoided by the Project.

An occurrence of black ash (a flora SAR) consisting of four individual trees was observed in a field delineated wetland in the northern portion of the Project Area. The trees were observed to have several dead branches and be in moderate health. Individual black ash and their host wetland (plus a buffer) will be avoided by the Project. No impacts to surface water flows are expected to result from the Project, and, as direct impacts to the wetland containing black ash will be avoided (plus a buffer), it is expected that the existing hydrological regime will largely be maintained. Water withdrawal and effluent release associated with the Project will be designed to prevent impacts to this black ash and its associated habitat.

No SAR species protected under either the federal Species at Risk Act (Canada, 2002) or the provincial Endangered Species Act (Nova Scotia, 1998) are expected to be directly impacted by the Project.

While direct impacts to flora SAR and most flora SOCI are being avoided through placement of Project Infrastructure, vegetation clearing within the Project Footprint will result in the loss of non-priority flora individuals. Aside from flora SAR and SOCI, the range of flora encountered within the Project Area are common to the region and can be expected to occur in areas of similar habitat within the surrounding environment.

#### 14.8.3 Mitigation Measures

To minimize potential effects to terrestrial vegetation communities and flora, the following mitigation measures will be implemented.

- Continue to maximize the use of previously disturbed areas during the detailed design phase, including previously harvested forests and existing roads/trails.
- Avoid direct impacts to flora SAR and supporting habitat.
- Maximize avoidance of flora SOCI to the extent possible.
- Educate Project personnel about flora SAR and SOCI in the Project Area, particularly black ash, including the locations of known occurrences.
- Consult with NSNR and NSECC if an unexpected flora SAR is encountered during construction activities.

- Re-vegetate disturbed areas and exposed soils using native seed mixes, where feasible.
- Implement an Erosion and Sedimentation Control Plan (ESCP) to help limit the spread of invasive species.
- Mitigate for dust creation using best management practices such as reduced speed limits and dust suppression (e.g., road watering)
- Inspect and clean equipment of debris to prevent the introduction and spread of non-native species.
- Minimize the use of herbicides as much as possible.

## 14.9 Terrestrial Fauna

### 14.9.1 Baseline Conditions

#### *Mainland Moose*

Mainland moose (*Alces alces americana*) use wetlands for thermal refuge in summer, and aquatic plants such as pondweed (*Potamogeton* spp.) and yellow pond lily (*Nuphar lutea*) provide important nutritional foraging options. Wetlands, particularly isolated areas surrounded by water, are also important calving areas as they provide protection and nutrients for calves and cows.

Seven wetland features were delineated within the Project Area during wetland assessments, consisting of treed and shrub swamps. All of these are located near road features and/or disturbed areas and are not expected to be suitable calving habitat (no isolated areas or wetlands surrounding by open water were identified during field assessments). No evidence of mainland moose was observed during any biophysical assessments.

#### *Bats*

During flora surveys, a large, hollowed tree (American beech) in the southern portion of the Project Area was as noted having potential to serve as bat roosting habitat. The tree was visually inspected to the extent possible, and no bats or bat signs were observed. No bat signs or other areas of suitable maternity roosting habitat for bats were noted during biophysical surveys.

#### *Wood Turtle*

Wood turtles (*Glyptemys insculpta*) require deep, clear, pooling water for their overwintering habitat and sand or gravel banks of rivers or streams (with intense sun exposure) for their nesting habitat. No herpetofauna species or signs thereof (e.g., nests, eggs, shell fragments) were observed in the Project Area during biophysical surveys, and no suitable areas of overwintering or nesting habitat for wood turtles were observed.

### *Invertebrates*

There were no observations of invertebrate SAR or SOCI were recorded during the field assessments. No milkweed plants (*Asclepias incarnata*) were observed during botany surveys, indicating a lack of suitable habitat for monarch butterflies (*Danaus plexippus*).

#### 14.9.2 Potential Effects

During the site preparation and construction phase, impacts to habitat used by terrestrial fauna will result from vegetation clearing and ground disturbance within the Project Footprint. Vegetation clearing has the potential to remove habitat used by wildlife for various life history stages such as nesting, breeding, calving, amongst others. Some species will be more tolerant of these changes. For example, bears (*Ursus americanus*), which have been observed in the Project Area, are tolerant of some human activity but will avoid features when frequency of human use is too high.

It is likely that wildlife that currently use habitat within the Project Footprint will be displaced by the Project into the surrounding environment. The main forest cover types within the Project Footprint are abundant in the surrounding area suggesting that vegetation clearing for the Project will result in a low level of habitat loss relative to the surrounding area. The results of the desktop review, field assessments, and potential habitat modelling also suggest that the Project Area does not contain a large amount of suitable habitat for terrestrial fauna SAR (e.g., mainland moose, bat species, wood turtles, or monarchs).

The Project is likely to result in an increase in forest edges and decreased forest quality for species that rely on interior forest conditions. The creation of edge habitat may lead to increased predation of young terrestrial fauna species as these areas provide low quality cover. Edge habitat is already present throughout the Project Area and surroundings in the form of roads, pipelines, and harvested areas, such that new edge habitat due to the Project is expected to represent a small increase.

Terrestrial fauna will likely experience sensory disturbance due to the Project. Potential sources of disturbance include anthropogenic noise and lighting, which may occur during all Project phases (but to varying degrees). The effects of sensory disturbance on fauna may include increased stress, avoidance, and other changes in fauna behaviour.

#### 14.9.3 Mitigation Measures

To address the abovementioned effects to terrestrial fauna, the following mitigation measures will be implemented:

- Maintain existing vegetation cover whenever possible and minimize overall areas of disturbance.
- Implement plans to protect fauna and their habitat from accidental spills.
- Store hazardous and non-hazardous waste in designated areas, in appropriate containers to reduce potential for spills and to prevent attracting wildlife.

- Revegetate or allow for natural revegetation of cleared areas to the extent possible.
- Target clearing activities outside the active bat window if possible (May 1 to October 31).
- Use noise controls (e.g., mufflers) on machinery, equipment, etc. during the site preparation and construction phase.
- Limit use of lighting to the amount necessary to ensure safe operation within the Project Area, with the recognition that excessive lighting can be disruptive to wildlife.
- Maximize the use of motion activated lighting, where possible.
- Install traffic signs to alert site users of project speed limit.
- Provide wildlife awareness training to site personnel to reduce interactions between personnel and wildlife.
- Prohibit harassment and feeding of wildlife by Project personnel.

## 14.10 Avifauna

### 14.10.1 Baseline Conditions

Two rounds of spring migration point count surveys were completed at four point count (PC) locations on April 11 and May 14, 2025. A total of 161 birds were observed across all survey rounds representing 30 species. No SOCI or SAR were observed. A notable observation was a small migrating flock of Canada geese (*Branta canadensis*).

Two rounds of breeding bird surveys were completed at the four PC locations on June 6 and July 3, 2025. In addition to the PC surveys, 3.5 km of breeding bird area searches were also completed in the PA. A total of 233 birds were observed representing 37 species across all rounds. The only SOCI observed was Cape May warbler (*Setophaga tigrine*). SAR observed were two Canada warbler (*Cardellina canadensis*) and one Eastern wood-pewee (*Contopus virens*).

Three rounds of fall migration PC surveys were completed at the four PC locations between August 21 and October 23, 2025. A total of 180 birds were observed across all survey rounds representing 33 species. No SOCI were observed, and the only SAR was Canada warbler.

### 14.10.2 Potential Effects

The Project will cause direct impacts to bird habitat, including that of SAR. This will include cutover, forest and riparian forest, open areas (e.g., meadows, fields), open wetlands (e.g., open-water marshes, bogs), closed-canopy wetlands, and urban and developed areas. The construction, operations, and decommissioning of the power generating facility will introduce higher levels of human disturbance than what currently exists to the Project Area, as currently only low-level human activity was observed throughout the Project Area (e.g., ATV trails, small-scale forestry activities). Habitat will be eliminated gradually over the power generation facility development timeframe. Site preparation through clearing and grubbing will remove vegetation; thus, reducing the quantity and quality of avifauna habitat that currently exists in and around the Project Area.



Habitat loss and alteration within the Project Area are anticipated to be low to moderate and will primarily impact forest and treed swamps. Alterations will contribute to an increase in edge habitat and open-water habitat through the creation of storm- and wastewater management ponds. Proper management of storm- and wastewater ponds can reduce impacts to birds. Edge effect will likely have low impact on bird species as it will not alter large tracts of intact forest habitat within the greater area. Edge effect may increase the number of habitat generalist birds within the Project Area whilst decreasing the number of forest-dependent and light-sensitive birds. Finally, in terms of SAR, breeding Canada warbler may be impacted through reduced or altered wetland habitat, which may increase competition for resources for this species within the greater area.

#### 14.10.3 Mitigation Measures

The primary mitigation for avifauna is avoidance of preferred habitats in the siting of infrastructure, including siting Project infrastructure within areas with existing disturbances, such as existing roads and historically cleared areas.

Mitigations to reduce effects on avifauna include:

- Allow disturbed areas to naturally revegetate, where vegetation maintenance is not required during operations.
- Minimize use of herbicides for vegetation management during operations.
- Minimize, as much as possible, removal of large diameter decaying trees (>40 cm diameter at breast height).
- Consider installing nest boxes to replace removal of snags and decaying trees.
- Consider restoration of natural breeding cavity sites through mechanically created tree hollows.
- Minimize wetland alterations to the extent practicable.
- Wetland compensation fees may be used to assist with funding wetland-dependent avian research, especially regarding Canada warbler that is found in relatively high densities within the PA.
- Perform vegetation clearing outside the migratory bird nesting period (mid-April to end of August) unless unavoidable. Where activities may result in risk of harm to migratory bird nests during this period, a qualified biologist will complete a pre-activity nest survey in accordance with federal guidelines.
- If an active bird nest is found, beneficial management practices will be followed, including applying an appropriate setback and timing restriction, and NSNR and/or Canadian Wildlife Service (CWS) will be consulted, as appropriate.
- Conduct a pileated woodpecker nesting cavity survey as part of breeding bird nest sweeps in the PF and the PA prior to any clearing. Implement set-back distances from known and identified avifauna nests within the PA, such as pileated woodpecker and raptors. Set back distances should be agreed upon in conjunction with NSNR and/or CWS.
- Minimize lighting, to the extent possible during operations. Where possible, implement the use of LED lights, strobe lights, lasers, shielding to prevent light escaping above

the horizontal plane, and motion-activated lighting when applicable (i.e., for employee safety).

- Add strobe lights on the stacks to reduce avian collisions.
- Adhere to ECCC guidelines on clearing windows for nesting migratory birds (i.e., outside of the April 15 to August 31 nesting window), where possible. If vegetation and tree clearing activities during the nesting/breeding season cannot be avoided, nest sweeps and area searches will be conducted by a qualified avian biologist to search for any confirmed breeding bird evidence which must be avoided (i.e., active nests and recently fledged juveniles).
- Manage borrow pits, stockpiles, and exposed sedimentation banks to reduce the attraction of ground and burrow-nesters such as bank swallows.
- Equip the exhaust stack with a custom-fitted spike collar to deter birds from perching on the stack.
- Install bird deterrents id/as necessary at wastewater and stormwater ponds to deter birds from landing.
- Establish speed limits within construction areas for vehicles to mitigate the effect of vehicle-avifauna collisions. Traffic signs will be installed to alert road users of speed limits and the presence of wildlife in the area.

## **15.0 HEALTH, SOCIAL, & ECONOMIC CONTEXT**

---

The Project is in Pictou County, near the communities of:

- Lorne (approximately 3.2 km southeast of the Project center)
- Hopewell (3.6 km north)
- Concord (4.3 km west)
- White Hill (4.5 km north)
- Eureka (6.8 km north)
- Glengarry Station (7 km south)

The Project is also approximately 12 km from New Glasgow, which is the largest metropolitan area within MOPC. The Project is in the Pictou Subdivision B census subdivision (Pictou Subd. B) and this census subdivision was used to summarize statistics throughout this chapter. Notably, Pictou Subd. B does not include New Glasgow, which was considered when summarizing the subdivision.

The population of the largely rural Pictou Subd. B has decreased slightly between 2016 and 2021, contrary to the large increase seen in the provincial trend. As most population growth occurred in larger economic centres, it is expected that New Glasgow received most of the MOPC's population growth. Pictou Subd. B has a much lower population density than the provincial population.

Median housing costs and median household total incomes in 2020 for Pictou Subd. B were compared to the provincial, and national values. The median total income for Pictou Subd. B is \$36,400, \$1,600 less than the provincial median income and \$4,600 less than the national median income (Statistics Canada, 2023). Similarly, the median dwelling value of Pictou Subd. B was \$80,000 less than the provincial value, which itself is less than half the national median.

Examining the relative value of median total income and median dwelling value across the jurisdictions demonstrates that housing is more affordable for those on a median income in Pictou Subd. B than in Nova Scotia or Canada as a whole (Statistics Canada, 2023). This is corroborated by the percent of provincial and national owner and tenant households spending over 30% of their income on shelter costs, although this figure may be skewed by legacy homeowners or renters in Pictou Subd. B who either own their property outright or have longstanding leases lower than regional averages.

Most residents in Pictou Subd. B (99.3%) use English as their first official language spoken (Statistics Canada, 2023). Because of this, all public outreach and communication for the Project has been and will continue to be in English. There is some knowledge of other languages, though no communication has been requested in other languages.

The nearest fire station to the Project Area is the Eureka Fire Department, approximately 7.2 km north of the Project Area on Stellarton Trafalgar Road. East River Valley Fire Department is also nearby, approximately 9.9 km east of the Project Area on East River East Side Road.

Health and emergency services also exist in the area and are accessible to Project workers if the need should arise. The closest location is the Aberdeen Hospital in New Glasgow, approximately 15.6 km north of the Project on East River Road.

Statistics indicate that the unemployment rate in 2021 for Pictou Subd. B was 12.3%, which is slightly lower than the provincial rate of 12.7% (Statistics Canada, 2023). The employment rate for Pictou Subd. B was 49.5%, which is also slightly lower than the provincial employment rate of 51.9% (Statistics Canada, 2023).

The top five industries in the province in 2017 were compared with the top industries in Pictou Subd. B, as categorized under the North American Industry Classification System (Statistics Canada, 2023). The highest proportion of workers in Pictou Subd. B fall into the “retail trade” and “health care and social assistance” categories (17.8% and 16.7%, respectively). Other significant industries include “manufacturing” and “construction” (Statistics Canada, 2023).

New Glasgow is the closest economic centre, located approximately 12 km north of the Project and offered a range of business services. Aside from the immediate New Glasgow area, the communities of Stellarton, Trenton, Plymouth, Pictou, and others surrounding New Glasgow are also dependent upon for a variety of shops and services. All surrounding areas near the

Project all generally dependent on New Glasgow for health care facilities, including emergency services and inpatient care. Many residents of the communities surrounding the Project Area would commute daily to New Glasgow or the greater New Glasgow area for employment purposes.

The valuation of economy incorporates the employment rate, income of residents, industry characteristics and services offered with a given area. As a result of construction and operation activities associated with the Project, the following effects to the economy are anticipated:

- An increase in employment opportunities for the local community, Mi'kmaq of Nova Scotia and equity-seeking groups.
- An increase in economic prosperity within the local community.
- Local businesses may experience increased sales and/or patronage.
- An increased demand for short-term accommodation.
- An increased demand in the food services, construction, health care and social assistance, and retail trade industries.
- An increase in essential services to meet demand.
- An increase in employment opportunities, especially in the areas of accommodation and food services, education, health care, and social assistance sectors.

The Proponent is committed to sharing economic opportunities with the local community throughout the development and lifespan of the Project via the use of local skills and labour where possible (e.g. jobs, training), and via municipal tax revenue. While the specific municipal tax revenue amount has not yet been determined, the amount will be based on facility size, road upgrades, commercial rate, and comparable local and provincial facilities.

The Project Team has and will continue to engage the community, local businesses, business groups (e.g. Pictou County Chamber of Commerce, Pictou County Partnership), and municipal staff and leaders to help identify Project-related opportunities and benefits for the local community. Further, the Proponent will compile a local business directory to identify local skilled people and businesses that can contribute to Project construction and operations activities. The directory will then be shared with the independent proponent who will design, build, own and operate the facility to facilitate the use of local resources to the extent possible.

The Proponent understands the importance of finding a suitable project development team to execute the final design and construction of the Project to the values as indicated by the Proponent, through the RFP Process to be initiated in January 2026. This RFP process offers the opportunity for an independent project development team to design, build, own, and operate this facility, with the permitting process already underway. Project design conducted by the project development team will be committed to adhering to all permitting conditions that follow from the EARD/IPD submission. Elements of project design and job creation throughout the lifespan of the Project may include the following:

- Project Development: During the development phase of the Project, Nova Scotian professionals have and will continue to deliver services in a variety of areas, including civil and electrical engineering, geotechnical engineering, legal, environmental, and biological surveys, archaeological, land and community relations, and many others. Dozens of professionals within Nova Scotia will render their services as part of the development of the Project.
- Construction: Throughout the construction phase of the Project, a workforce will be required that will fluctuate throughout the construction period. Much of the construction employment will come through contracting and subcontracting of Canadian, and where possible, Nova Scotian construction firms and specialized service providers. It is estimated that the Project will require approximately 100 to 125 short-term jobs for varying scope and duration throughout the construction period. The largest construction scopes of work are anticipated to be:
  - Civil installation, that is, land clearing, grubbing, road construction, and foundation installation, which includes:
    - Excavating
    - Rebar supply and installation
    - Forming
    - Concrete supply and pouring
    - Grouting
  - Electrical installation, that is connection to the NS Power grid and/or other power supplies, which includes:
    - Underground and overhead installation
    - Cable terminations
    - Electrical testing
    - Instrument installation and testing
- Operations and Maintenance: The operational Facility will require long-term operations and maintenance technicians to be located either on-site or within short driving distance of the Project. It is generally anticipated that an on-site operations manager will be required to run the day-to-day operations. This individual will work closely with local service providers who will carry out maintenance work. In all, it is anticipated that there will be 10 to 15 long-term positions and additional casual employment opportunities associated with the Project, including the maintenance technicians described above. The employment associated with operations and maintenance is long-term, local, stable, and well-paying jobs requiring skillsets such as experience managing facilities.
- In addition to operations and maintenance of the Project, there will be a variety of facility activities that will require on-going resources such as snow removal and road surface maintenance, administrative support, inventory/materials management, shipping, scheduling, and coordination of maintenance inspections to accommodate the facility's operation (i.e., power collection system, electrical substation inspections, etc.).

In addition to the direct investments that the Project would bring to Nova Scotia's economy, the Project will result in indirect and induced economic benefits that will be realized by governments, local businesses, communities, and residents. Workers that are directly involved with the development, construction, and operations would contribute to the local economy by redistributing wealth to a variety of goods and services such as hotels, restaurants, and grocery stores (NREL, 2016).

## PART D: FEDERAL, PROVINCIAL, TERRITORIAL, INDIGENOUS & MUNICIPAL INVOLVEMENT

---

### 16.0 FEDERAL FINANCIAL SUPPORT

---

The Project does not include any proposed or anticipated federal financial support.

### 17.0 FEDERAL LANDS USED FOR THE PROJECT

---

No federal lands will be used for the Project or associated activities for the purposes of carrying out the Project, nor will there be any granting of interest in federal land required.

### 18.0 FEDERAL, PROVINCIAL, LEGISLATIVE OR OTHER REGULATORY REQUIREMENTS

---

The Project is a “designated project” under Section 30 of the federal *Physical Activities Regulations*, SOR/2019-285, and the operation of the Project will also be regulated under the *Regulations Limiting Carbon Dioxide Emissions from Natural Gas-fired Generation of Electricity*, SOR/2018-261. TransAlta intends the Project to meet the “planned unit” designation as defined under the *Clean Electricity Regulations*, SOR/2024-263.

While no permits or approvals are expected to be required under the following federal legislation, general compliance may apply to the Project:

- *Fisheries Act*, R.S.C. 1985, c. F-14
- SARA, S.C. 2002, c. 29
- MBCA, S.C. 1994, c. 22

Other regulatory requirements are summarized in Section 3.2.

## PART E: POTENTIAL EFFECTS OF THE PROJECT

---

### 19.0 IMPACTS TO ENVIRONMENTAL COMPONENTS

---

The Proponent has prepared a list of potential effects to the following components of the environment that are under legislative authority of Parliament as a result of the carrying out the Project:

- Fish and fish habitat as defined in subsection 2(1) of the *Fisheries Act* (Canada, 1985)
- Aquatic species, as defined in subsection 2(1) of the SARA (marine plants) (Canada, 2002)
- Migratory birds, as defined in subsection 2(1) of the MBCA (Canada, 1994)

#### 19.1 Fish & Fish Habitat

The Project is not anticipated to directly impact fish and fish habitat (as defined under section 2 of the *Fisheries Act*) as the Project has been sited to avoid direct impact to all field verified fish habitat.

The Project will require the extraction of groundwater to supply process water needs. A hydrogeological field study will be conducted to support a provincial application for groundwater withdrawal. The application will incorporate key protective hydrogeological study elements such as sustainable yield, and a groundwater-surface water interaction assessment will be included as required to ensure groundwater withdrawal does not negatively impact water quantity (and quality) of nearby aquatic features that support or have the potential to support fish and fish habitat.

No impacts to fish or fish habitat as a result of treated process water discharge is anticipated. Treated process water from the demineralized water plant is expected to be discharged into WC4, as it is the largest of on-site watercourses. Investigations are ongoing to determine how the water needs of the facility can be reduced, including the use of recycled water or alternative Project technology with less water demand. Treatment and release of process water will be described in an Operations Management Plan, to be developed in consultation with NSECC and DFO. With the implementation of these mitigation and monitoring strategies, Harmful Alteration, Disruption, or Destruction (HADD) of fish habitat is not expected. No change in water quality is anticipated. Consultation with DFO and NSECC will be conducted during the permitting stage to ensure permitting requirements are met.

At this time, blasting is not expected to be required, however this will be confirmed through geotechnical investigations planned to occur within the Project Area. Should blasting be required, guidance outlined by Wright and Hopky (1998) will be used to develop a Blast Management Plan. The Blast Management Plan will be designed to ensure that appropriate setback distances are maintained, or mitigations are implemented to protect fish and fish habitat from the potential impacts of blasting.



## **19.2 Aquatic Species at Risk**

SARA defines aquatic species under subsection 2(1) as “wildlife species that are fish as defined in section 2 of the *Fisheries Act*, or a marine plant, as defined in section 47 of that Act”. Potential effects to marine plants are not anticipated as the Project is over 14 km from the marine environment.

No fish or fish habitat will be lost (destruction of fish habitat) as a result of Project construction. Potential indirect effects (harmful alteration or disruption) to habitat for aquatic species as a result of water withdrawal needs, discharge options, and blasting are described in Section 14.6. Furthermore, the Project is not anticipated to result in death of fish by means other than fishing.

## **19.3 Migratory Birds**

Project impacts on migratory birds correspond to impacts described in Section 14.10, and include habitat loss and alteration, sensory disruption, and mortality and injury.

Some migratory birds may be affected as a result of habitat loss (12.5 ha) or alteration (43.4 ha) during Project construction. Specifically, removal of forests and open areas within the Project Footprint could alter migration patterns via reduction of stopover areas and negatively affect food availability and abundance. Furthermore, habitat loss could reduce potential breeding habitat for species protected under the Migratory Bird Regulations, such as pileated woodpecker (one record of probably breeding evidence).

After the implementation of mitigation measures, the magnitude of effects on habitat loss and alteration during the construction is expected to be low and will be localized to the Project Area. Clearing will be scheduled to occur outside of breeding season, to the extent possible, to lessen stress on birds during their nesting period, and construction will employ best management practices to avoid unnecessary wildlife disturbance or interaction. If vegetation clearing must occur during the breeding and nesting season (typically April 15 to August 31), a pre-disturbance nest sweep/area search will be included as a mitigation strategy to avoid the disturbance or destruction of migratory bird nests that may be present during the breeding season. Setback distances will be implemented from known and identified avifauna nests within the Project Area such as pileated woodpecker and raptors.

Potential sensory disturbance (e.g., sound, light) may also cause migratory birds to avoid the localized area. Conversely, some birds may choose to nest near noisy areas which can impact hatching success. Artificial lighting will be minimized to lighting required only for safety and security of the site during the construction and decommissioning phases of the Project as these activities are not expected to occur at night. During the operational phase, the lighting on-site will be minimized and localized to the facility and access road. Mitigation measures are recommended to be implemented to further reduce the impacts of lights on birds in the Project Area (e.g., motion-activated lighting, lasers, shielding, LEDs, shades of light, etc.).

The risk of bird mortality from collisions with equipment during construction and operations is anticipated to be low and infrequent as it is expected that bird species will avoid the Project Area due to physical and sensory disturbance. Still, mortalities and injuries will not be completely avoided due to accidental collisions with Project infrastructure, vehicles, and heavy machinery. Injuries and death from exhaust emissions may also occur. Best management practices to reduce harm (e.g., speed limits, netting over ponds, maintaining good housekeeping practices) and specific deterrence techniques for exhaust stacks will be employed to mitigate these effects.

Overall, the residual effects of avifauna habitat loss and alteration, sensory disturbance, and mortality and injury are not anticipated to be significant as they are localized and would impact a low number of migratory birds.

## **20.0 POTENTIAL ENVIRONMENTAL IMPACTS ON FEDERAL LANDS, IN OTHER PROVINCES, OR OUTSIDE OF CANADA**

---

### **20.1 Federal Lands**

No federal lands will be used for the Project, nor will there be any granting of interest in federal land required. No federal protected areas are located within 10 km of the Project boundaries. Due to the distance of federal land from the Project, no direct changes to the environment will occur on federal lands because of the Project.

Potential air emissions from the Project were evaluated to comply with regulatory requirements at non-participating residential receptors and will be monitored quarterly for the first year of operation. In addition, sound from the Project was evaluated to meet provincial guidelines (NSECC, 2023). Therefore, indirect changes to the environment on federal lands, such as through increased noise or reduced air quality, will also not occur due to the distance of the Project from federal lands.

### **20.2 Other Canadian Provinces**

The Project will not have any environmental impacts to any other Canadian provinces as the Project Area is located approximately 56 km to Prince Edward Island, and 127 km to the Nova Scotia-New Brunswick border.

Given the size of the Project and the localization of effects to environmental components, the Project is not anticipated to have any adverse environmental effects outside of Nova Scotia.

### **20.3 Outside of Canada**

Given the size of the Project and the localization of effects to environmental components, the Project will not have any environmental impacts outside of Canada as the Project Area is located approximately 350 km east of the Canada (New Brunswick) – United States (Maine) border.

## **21.0 POTENTIAL ENVIRONMENTAL IMPACTS ON INDIGENOUS PEOPLES**

---

Discussion on potential Project effects to human health, social factors, and economic factors for Indigenous groups are presented in the following sections. The Project is located within the traditional lands of the Mi'kmaq, the founding people of Nova Scotia, within the district of Epekwitk aq Piktuk (Parks Canada, 2025). This Project is anticipated to affect only Nova Scotia; therefore, the conversation relating to the Indigenous Peoples of Canada is focused on the Mi'kmaq of Nova Scotia. The Proponent has initiated a MEKS with Membertou Geomatics Solutions to identify current and traditional Indigenous land use within the regional area. The MEKS Report is scheduled to be available in 2026.

### **21.1 Physical & Cultural Heritage**

The environmental effects of the Project's construction and operation of the Project are expected to be minimal and localized. Changes to the environment, including air quality, noise, land use, vegetation, soil, wildlife, and heritage resources are expected to be localized in or near the Project Area, and therefore, potential impacts to the Mi'kmaq are anticipated to be localized to the Project Area and directly surrounding lands.

The Project Area consists of historically cleared agriculture or pastureland, regenerating forest, and wetlands. The Project Area is 55.95 ha, of which 12.55 ha is expected to be directly impacted by the Project. Background research and engagement conducted as part of the ARIA indicated that there were no reported archaeological sites, cemeteries, or other cultural heritage features in the vicinity of the Project Area but noted that the Project Area had not previously been subjected to archaeological investigation.

The landscape within the Project Area consists of topography that is stoney, undulating to steeply sloped, and exhibits shallow soils and significant modern disturbance related to field clearing agricultural use. The ARIA notes that these factors, along with permanent wetland habitat, would have been a deterrent to both wildlife and human land use in the area, resulting in an ascription of low archaeological potential (CRM Group, 2025). The Project Area contains no navigable watercourses that may have served as transportation corridors, or other unique landscape features (e.g., look-offs, escarpments, etc.).

Within the Project Area, there is one trail network providing access through the property and is used for recreational purposes by the landowner. Access within the Project Footprint will be restricted during construction and operations as required for site safety and Project security.

The Project has been strategically sited based on proximity to natural gas supply (i.e., Maritimes & Northeast Pipeline), proximity to the electricity grid, maximizing use of previously disturbed areas, and accessibility of land parcels (i.e., road infrastructure), among other factors. The Project team continues to engage with the Mi'kmaq to continue to build knowledge relating to the physical and cultural heritage of the Project Area and surrounding lands and

anticipates the completion of the MEKS will provide additional context relating to the physical and cultural heritage of the Project Area.

## 21.2 Current Use of Lands and Resources for Traditional Purposes

The Project is located on private forested land. To date, engagement with the Mi'kmaq has not demonstrated that this area is actively used by the Mi'kmaq of Nova Scotia, especially given it is privately owned. The Project team continues to engage with the Mi'kmaq to continue to build knowledge relating to if and how the Mi'kmaq uses this land for traditional purposes. Furthermore, the Project team anticipates the completion of the MEKS to provide additional insight into the use of these lands for traditional purposes.

### 21.2.1 Hunting and Trapping

Current land use within and adjacent to the Project Area suggests limited use for hunting and trapping by Mi'kmaq communities. Given the existing features and level of disturbance outlined below, hunting and trapping activities are considered unlikely. The Project Area is located adjacent to a natural gas pipeline corridor and transmission line, along White Hill Road and Lorne Station Road, with the Project Footprint consisting of clear-cuts, ATV trails, and old harvester trails. An active rail line (Cape Breton & Central Nova Scotia Railway) is located within 1 km of the Project Area's eastern boundary. Residential properties are located nearby, with the closest residence approximately 650 m (MR02) north of the closest Project Area boundary on White Hill Road.

### 21.2.2 Plant Gathering

The Project Area is located on private forestry land. Evidence of recent forest harvesting was documented throughout the Project Area, including much of the Project Footprint, where planted forest stands, young regeneration, and access trails regenerating trees were noted. Forest cover was observed to be more intact in the southern section of the Project Area.

Plants of significance to the Mi'kmaq were identified throughout the Project Area during vegetation surveys, including species traditionally consumed (e.g., sugar maple, yellow birch, American beech, cucumber root, red raspberry, etc.) and species traditionally used for medicinal purposes (balsam fir, wild sarsaparilla, white turtlehead, goldthread, bunchberry, etc.). An occurrence of black ash, or Wisqoq in Mi'kmaq, consisting of four individual trees, was identified in the northern portion of the Project Area. Black ash is a SAR and culturally significant species for its use in basketry (NSNR, 2015).

Impacts to intact flora habitat are local and have been minimized by the placement of the Project within an area that has been previously disturbed by recent forest harvesting. Individual black ash and their host wetland will be avoided by the Project. The Project will result in impact to flora species within the Project Footprint (12.55 ha). The location of the Facility was selected primarily to avoid black ash and suitable habitat, as a SAR and culturally significant species. Species within the Project Footprint are common species and available within the Project Area and likely other surrounding lands; therefore, impacts to traditional plant gathering are expected to be minimal.

### 21.2.3 Fishing

There are four small watercourses within the Project Area which range from ephemeral to intermittently flowing streams in heavily forested areas - they are not expected to directly support Mi'kmaq fishing activities. All watercourses will be avoided by infrastructure placement. Surface water management measures will be applied to ensure any discharged water will meet water quality guidelines and be protective of the receiving environment, so that water quality and quantity will be maintained. Therefore, no impacts to traditional fishing practices are expected within any fishing locations outside of the Project Area.

### 21.2.4 Use of Navigable Waters

The Project and associated infrastructure will not interact with navigable waters.

### 21.2.5 Recreational Use

The Project is located on private land with no current recreational use documented by the broader public.

### 21.2.6 Commercial Use of the Lands by Indigenous Communities

The Project is located on private forestry land with no commercial outfitting or other commercial use in place.

## 21.3 **Sites & Structures of Historical, Archaeological, Paleontological, or Architectural Significance**

The Project's ARIA was reviewed to highlight potential sites and structures historical, archaeological, paleontological or architectural significance within the Project Area (CRM Group, 2025). According to the ARIA, there are three potential archeological features within the Project Area; these are not Mi'kmaq in nature based on historic literature and findings recorded in the field. Areas with archaeological features have been avoided and a 30 m buffer will be maintained for Project development and ground disturbance activity. No additional areas of high archaeological potential were identified within the Project Area.

A chance find procedure will be developed related to the potential unexpected discovery of archaeological items or sites, or human remains, during construction. This would include halting any work immediately upon discovery of suspected resources and contacting NSCCTH.

## 22.0 **POTENTIAL HEALTH, SOCIAL, OR ECONOMIC IMPACTS ON INDIGENOUS PEOPLES**

---

### 22.1 **Health & Social Impacts on Indigenous Peoples**

The Project is not expected to impact the health, social conditions, or overall well-being of the Mi'kmaq of Nova Scotia. The Community Noise Impact Assessment determined that the Project is expected to comply with the provincial Guidelines for Environmental Noise Measurement and Assessment (NSECC, 2023). Similarly, the air quality assessment confirmed that air emissions from the facility will be below regulatory limits at receptors under a conservative modeling approach (worst-case emission scenario).

No ingestion or inhalation pathways that could trigger the need for a Human Health Risk Assessment are anticipated. The emissions (air and noise) from the Project during operations will be compliant with provincial regulations and will decrease with distance from the Project.

There is limited potential population growth associated with the Project given the number of anticipated long-term positions (10 to 15). Therefore, there would be almost no increased pressure for social or medical services, or other local health care service providers, or any disproportionate impact on the health and social services to the Mi'kmaq of Nova Scotia.

The Proponent will continue to engage the Mi'kmaq of Nova Scotia and will provide updates regarding the Project's permitting, construction, operation, and decommissioning schedules and related activities.

## **22.2 Economic Impacts on Indigenous Peoples**

The Project will have positive economic impacts due to economic stimulus during construction primarily, and to a lesser extent during operations and decommissioning. In addition to the potential economic output, potential benefits to the Mi'kmaq of Nova Scotia as a result of the Project may include support for economic reconciliation. As noted in Section 4, the Proponent has met with WMA Ltd., the investment and economic development entity owned by the thirteen First Nations of Nova Scotia, to explore potential economic opportunities related to the Project. During these discussions, the Proponent provided WMA Ltd. with Project information, including regulatory requirements, timelines, and supporting materials such as a background presentation and open house poster boards. These resources outlined key aspects of the Project at a conceptual level, including the need for EA studies, engagement plans, and anticipated benefits, reinforcing the Proponent's commitment to transparency and collaboration.

This engagement reflects a broader priority: advancing economic reconciliation. The Mi'kmaq of Nova Scotia are already significant participants in the renewable energy sector and are expected to continue playing a vital role as the sector expands. Investments by Mi'kmaw organizations contribute positively to the energy transition and represent an important component of reconciliation in Nova Scotia – an approach the Proponent seeks to advance, in addition to encouraging proponents to maximize Mi'kmaw benefits through employment, contracting and procurement.

Ultimately, the Proponent is committed to sharing economic opportunities with the Mi'kmaq throughout the development and lifespan of the Project and will continue to engage the Mi'kmaq on how best to maximize such opportunities.

## **22.3 Summary of Potential Health, Social and Economic Impacts on Indigenous Peoples**

Based on the studies completed to date, the EA indicates that the Project is expected to result in low adverse environmental and human health effects. This conclusion is supported by the

results of multiple technical studies, including environmental baseline investigations, an air quality assessment, and a sound assessment. These studies demonstrate that predicted emissions and noise levels are below applicable regulatory thresholds and are not expected to result in adverse effects on surrounding communities.

While effects are predicted to be low, the proponent remains available and open to engage with Mi'kmaw communities should concerns be identified. If required, the proponent will work collaboratively with Mi'kmaw groups to identify and implement additional, mutually agreed-upon mitigation measures. Opportunities for Mi'kmaw participation in environmental monitoring programs during construction and operation may also be explored.

The proponent will continue discussions with Mi'kmaw communities and organizations regarding potential project benefits, including employment, training, and capacity-building opportunities, with the objective of providing meaningful benefits to the Mi'kmaq of Nova Scotia. Mi'kmaw representation may also be invited to participate on the Project's Community Liaison Committee, providing an ongoing forum for communication and engagement.

## **23.0 GREENHOUSE GAS EMISSIONS ESTIMATE**

---

The GHG assessment considered emissions from construction, operation, and decommissioning, expressed in tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e). The GHG assessment followed federal and provincial guidelines and used modeling completed by Hatch (2025b). It evaluated sources such as fuel combustion in turbines, construction equipment, and material production and transport. The Project will also be subject to federal GHG reporting requirements under the Greenhouse Gas Reporting Program (GHGRP).

- Construction Phase (2 years):
  - Emissions from heavy equipment, concrete and steel production, and transportation are estimated at ~56,153 tCO<sub>2</sub>e in total. This includes approximately 19,935 tCO<sub>2</sub>e from mobile equipment, 22,996 tCO<sub>2</sub>e from concrete, and 13,222 tCO<sub>2</sub>e from steel.
- Operation Phase (30 years):
  - Annual operational emissions are estimated at ~325,594 tCO<sub>2</sub>e/year, primarily from fuel combustion in turbines. Over a 30-year lifespan, this equates to ~9.77 million tCO<sub>2</sub>e. Despite these emissions, the facility will reduce overall grid emissions by replacing coal-fired generation, achieving a 52.8% reduction compared to coal for equivalent electricity output.
- Decommissioning Phase (1–2 years):
  - Emissions during decommissioning are expected to be similar to construction but slightly lower, likely in the range of ~40,000–50,000 tCO<sub>2</sub>e, due to equipment use and material disposal.

Across all phases, the maximum cumulative GHG emissions are estimated at:

- Construction + Decommissioning: ~95,000–105,000 tCO<sub>2</sub>e
- Operation (30 years): ~9.77 million tCO<sub>2</sub>e
- Grand Total: Approximately 9.87 million tCO<sub>2</sub>e over the full lifecycle

## **24.0 EMISSIONS, DISCHARGE, & WASTE**

---

The construction and operation of the Project will result in atmospheric emissions, stormwater and wastewater, industrial wastewater, and general domestic and operational waste.

### **24.1 Atmospheric Emissions**

#### **24.1.1 Operational Emissions**

The identified sources of emissions from the Facility are the combustion turbine stacks. Maximum operational emission rates from the Facility were determined by Hatch (2025b) and are presented in the Air Quality and GHG Assessment report.

Based on the modelling results from the Air Quality and GHG Assessment Report, Facility emissions alone or cumulatively are not expected to contribute to the exceedance of the applicable NSAAQS limits at ground levels anywhere within 10 km of the center of the Project and the modelling is conservative assuming continuous operations of the Facility by light fuel oil (worst-case emission scenario). No exceedances are predicted at any receptors. To monitor air emissions associated with the Project's processes, all equipment will be designed and maintained in accordance with the latest codes and regulations. The Project will also be equipped with an emission monitoring system to track real-time concentrations of CO and NO<sub>x</sub>. Additional parameters may need to be monitored based on the conditions of permitting approvals.

#### **24.1.2 Fugitive Dust**

Fugitive dust emissions and PM may be generated from open-air activities such as soil disturbance, wind erosion, and increased traffic. Fugitive dust emissions comprise soil minerals but may include salt, pollen, spores, and rubber tire particles associated with construction and operation equipment.

The Project will implement appropriate dust suppression measures on roads, work areas, transportation and loading routes, or on soil piles or exposed soil surfaces prone to wind and water erosion, as necessary. The decision to control dust will be made at the field level and will depend upon site conditions, level of activity, and worker health and safety.



### 24.1.3 Tailpipe/Exhaust Emissions

Construction of the Facility is expected to take two years and result in increased combustion residuals and/or tailpipe exhaust emissions from vehicles (i.e., travel by Project personnel and transport/delivery activities) and heavy equipment, primarily PM, NO<sub>x</sub>, sulfur dioxide (SO<sub>2</sub>), and CO. The forested buffer, which separates the Project from the closest non-participating receptor, is anticipated to reduce the impacts of tailpipe exhaust. Idling of equipment will be restricted where feasible to reduce exhaust.

### 24.1.4 Noise

During construction, heavy equipment, machinery, and light vehicles will emit sound into the surrounding environment due to activities associated with the construction of the Facility, as well as the subsequent assembly and commissioning of the combustion turbines. During the Project's operational phase, the combustion turbines (air intake, exhaust stack, fin fan, coolers), as well as associated infrastructure (transformers), will emit sound to the surrounding environment, and these impacts were modelled to predict sound levels at sensitive receptors, primarily residential homes surrounding the proposed facility.

Sound modelling including proposed sound mitigations (i.e., procuring fin fan coolers and turbine intakes with sound power levels below 101 dBA and 102 dBA, respectively), shows that noise levels are expected to be within permissible sound levels at all receptor locations. Throughout all Project phases, activities will be designed to meet occupational health and safety guidelines and regulations related to sound levels and applicable exposure limits.

Sound levels and related impacts from blasting activities are not included in this assessment as blasting requirements have not been confirmed. If blasting is determined to be required during construction, the Proponent will notify NSECC and apply for any required permits and approvals.

The Proponent will have a Complaint Resolution Plan to address any sound-related issues during Project construction and operation.

## **24.2 Stormwater and Wastewater Treatment**

The Facility will be equipped with stormwater and wastewater management systems to protect the surrounding environment and community and ensure any water discharge or run off from the Facility meets local environmental regulations.

Treated process water discharge will be treated as necessary to meet CCME Water Quality Guidelines for the Protection of Freshwater Aquatic Life (FWAL) prior to being released. Typical treatment system designs include neutralization systems to ensure process water is safe to discharge. All discharged water will be tested to ensure CCME FWAL guidelines and NS Tier I EQS are met before being released from the settling pond at a controlled rate.

During operations, stormwater will be managed by directed runoff into a settling pond through diversion and collection ditches, roadside drainage channels, and/or vegetated swales. Wastewater will also be released into the settling pond after going through a neutralization system. Stormwater will be treated to ensure CCME FWAL guidelines and NS Tier I EQS are met, then released at a controlled rate.

Sewage will also be generated during construction, operations, and reclamation of the Project. On-Site Sewage Disposal Approval will be acquired prior to the installation of any on-site sewage disposal systems as set out in the On-site Sewage Disposal Systems Regulations, N.S. Reg. 317/2015.

### **24.3 Industrial Wastewater**

Demineralized water will be required for combustion turbine systems and emissions control. Water will be demineralized through a water treatment process, which includes the following components:

- Multimedia Inlet Filter
- Reverse Osmosis System
- Polishing demineralizer
- Demineralized water storage tanks
- Demineralized water pumps.

The demineralized water tank will be stainless steel and will be provided with insulation and immersion heaters to prevent freezing. The plant demineralized water pumps and service water pumps will be housed indoors.

Wastewater discharge will be produced during operations. Based on the power plant configurations with a high range of water consumption (i.e., reasonable conservative estimates for water consumption), peak water demand for operation of the demineralized water plant is 175 m<sup>3</sup>/hr. At peak operation, effluent release from the demineralized water plant is expected to be 50 m<sup>3</sup>/hr. A neutralization system and wastewater quality monitoring system will ensure wastewater is safe to discharge, then, wastewater will be directed to a settling pond and is planned to be discharged at a controlled rate after being tested and treated to meet CCME FWAL guidelines and NS Tier I EQS for water.

### **24.4 Domestic Waste**

All domestic and industrial garbage is disposed using approved refuse containers for hauling and disposal at an approved landfill. Bear proof containers will be used on location for holding domestic and industrial garbage as necessary.

Any halocarbon-containing substances or other hazardous substances will be disposed of at an approved hazardous waste facility per applicable regulations and in compliance with local requirements.

## **PART F: SUMMARY**

---

### **25.0 INITIAL PROJECT DESCRIPTION SUMMARY**

---

This Initial Project Description Summary (in both English and French), has been submitted to IAAC alongside the Initial Project Description. A summary of all non-negligible impacts identified is provided in the EARD/IPD.

## **26.0 CLOSURE**

---

This EARD/IPD Plain Language Summary was completed by Strum Consulting, an independent, multi-disciplinary team of consultants with extensive experience with submissions of EARD/IPD for undertakings within Atlantic Canada. A list of the Project Team and their associated roles is provided below.

### Senior review and oversight

- Meghan Johnston, MES, Vice President, Environmental Assessment and Approvals

### Project management and technical oversight

- Melanie Juurlink, MREM, Senior Ecology Lead and Project Manager
- Ryan Hearn, MSc., Senior Project Manager

### Environmental Assessment Authors

- Alex Scott, BSc., Environmental Scientist
- Amber Stoffer, MREM, Aquatic Specialist
- Carrie Jardine, BSc. H, Terrestrial Specialist
- Emily MacLean, BSc., Environmental Scientist
- Emma Davis, PhD., Terrestrial Specialist
- Emma Posluns, MSc., Terrestrial Specialist
- François Gascon, P. Eng, Environmental Engineer
- Kathryn Smith, EIT, PhD Candidate, Water Resources Engineer in Training
- Melanie Smith, MES, Vice President, Environmental Assessment and Approvals
- Polly Nguyen, MREM, Environmental Scientist
- Sasha Chilibeck, BSc., Environmental Scientist

### Geomatics

- Peter Opra, MSc., Remote Sensing Scientist
- Kerry Wallace, BSc. H and Adv. Dip, GIS Specialist

### Sub-consultants

- Karim Meghari, Hatch, Global Managing Director, Thermal Power
- George Cooper, Hatch, Senior Engineer, Thermal Power
- Christopher Lyons, Hatch, Air Emissions Modelling
- Evangeline Bhaskar, Hatch, Air Emissions Modelling
- Mervyn Choy, Hatch, Noise Impact Modelling
- Maedot Andargie, Hatch, Noise Impact Modelling
- Mohamed Khafagy, Hatch, Water Resource Assessment
- Warren Hoyle, Hatch, Water Resource Assessment
- Kiersten Green, BA, Cultural Resource Management Group Limited, Heritage Permit Holder and ARIA author

## 27.0 REFERENCES

---

Canada. (1985). *Fisheries Act, R.S.C. 1985, c. F-14*. <https://laws.justice.gc.ca/eng/acts/F-14/FullText.html>

Canada. (1994). *Migratory Birds Convention Act, 1994, S.C. 1994, c. 22*. <https://laws-lois.justice.gc.ca/PDF/M-7.01.pdf>

Canada. (1999). *Canadian Environmental Protection Act, S.C. 1999, c. 33*. <https://laws-lois.justice.gc.ca/eng/acts/c-15.31/page-1.html>

Canada. (2002). *Species at Risk Act, S.C. 2002, c. 29*. <https://laws.justice.gc.ca/eng/acts/s-15.3/page-1.html#h-434501>

Canada. (2019, August 28). *Impact Assessment Act, S.C. 2019, c. 28*. <https://laws.justice.gc.ca/PDF/I-2.75.pdf>

CRM Group. (2025). *Heritage Research Permit Report A2025NS175 – Salt Springs Project Screening & Reconnaissance 2025*. Cultural Resource Management Group Limited.

Hatch. (2025a). *Community Noise Impact Assessment*. Hatch Ltd.

Hatch. (2025b). *Nova Scotia Independent Energy System Operator Combustion Turbine Power Plant OE - Air Quality and GHG Assessment*. Hatch Ltd.

IAAC. (2024, September 18). *Information and Management of Time Limits Regulations SOR/2019-283*. Minister of Justice. <https://laws-lois.justice.gc.ca/eng/regulations/SOR-2019-283/page-2.html#h-1193965>

IAAC. (2025). *Canadian Impact Assessment Registry*. <https://iaac-aeic.gc.ca/050/evaluations>

INAC. (2011, March). *Aboriginal consultation and accommodation—Updated guidelines for federal officials to fulfill the Duty to Consult*. Indigenous and Northern Affairs Canada. <https://www.rcaanc-cirnac.gc.ca/eng/1100100014664/1609421824729>

Municipality of Pictou County. (2025a). *Municipality of Pictou County Land Use Bylaw*. <https://munpict.ca/assets/LUB-Approved-PNS-Published.pdf>

Municipality of Pictou County. (2025b). *Municipality of Pictou County Municipal Planning Strategy*. <https://munpict.ca/assets/MPS-Approved-PNS-Published.pdf>

Nova Scotia. (1998). *Endangered Species Act, SNS 1998, c. 11*. <https://www.canlii.org/en/ns/laws/stat/sns-1998-c-11/latest/sns-1998-c-11.html>

NREL. (2016). *Interpreting JEDI results*. National Renewable Energy Laboratory. <https://www.nrel.gov/analysis/jedi/results.html>

NSECC. (2009). *Guide to addressing wildlife species and habitat in an EA registration document*. Nova Scotia Environment and Climate Change.

<https://novascotia.ca/nse/ea/docs/EA.Guide-AddressingWildSpecies.pdf>

NSECC. (2023). *Guidelines for environmental noise measurement and assessment*. Nova Scotia Environment and Climate Change. <https://novascotia.ca/nse/air/docs/guidelines-environmental-noise-measurement-and-assessment.pdf>

NSECC. (2025a). *A proponent's guide to environmental assessment*. Nova Scotia Environment and Climate Change. <https://novascotia.ca/nse/ea/docs/environmental-assessment-proponent-guide-en.pdf>

NSECC. (2025b). *Nova Scotia Class I environmental assessment checklist*. <https://novascotia.ca/nse/ea/docs/environmental-assessment-checklist-class-I-en.pdf>

NSNR. (2015). *Recovery and Action Plan for Black ash (Fraxinus nigra) in Nova Scotia*. Nova Scotia Natural Resources. [https://novascotia.ca/natr/wildlife/biodiversity/pdf/Black\\_Ash\\_Recovery\\_Plan\\_Nova\\_Scotia.pdf](https://novascotia.ca/natr/wildlife/biodiversity/pdf/Black_Ash_Recovery_Plan_Nova_Scotia.pdf)

OLA. (2012). *Proponent's guide: The role of proponents in crown consultation with the Mi'kmaq of Nova Scotia*. Office of L'nu Affairs. <https://www.novascotia.ca/nse/ea/docs/ea-proponents-guide-to-mikmaq-consultation.pdf>

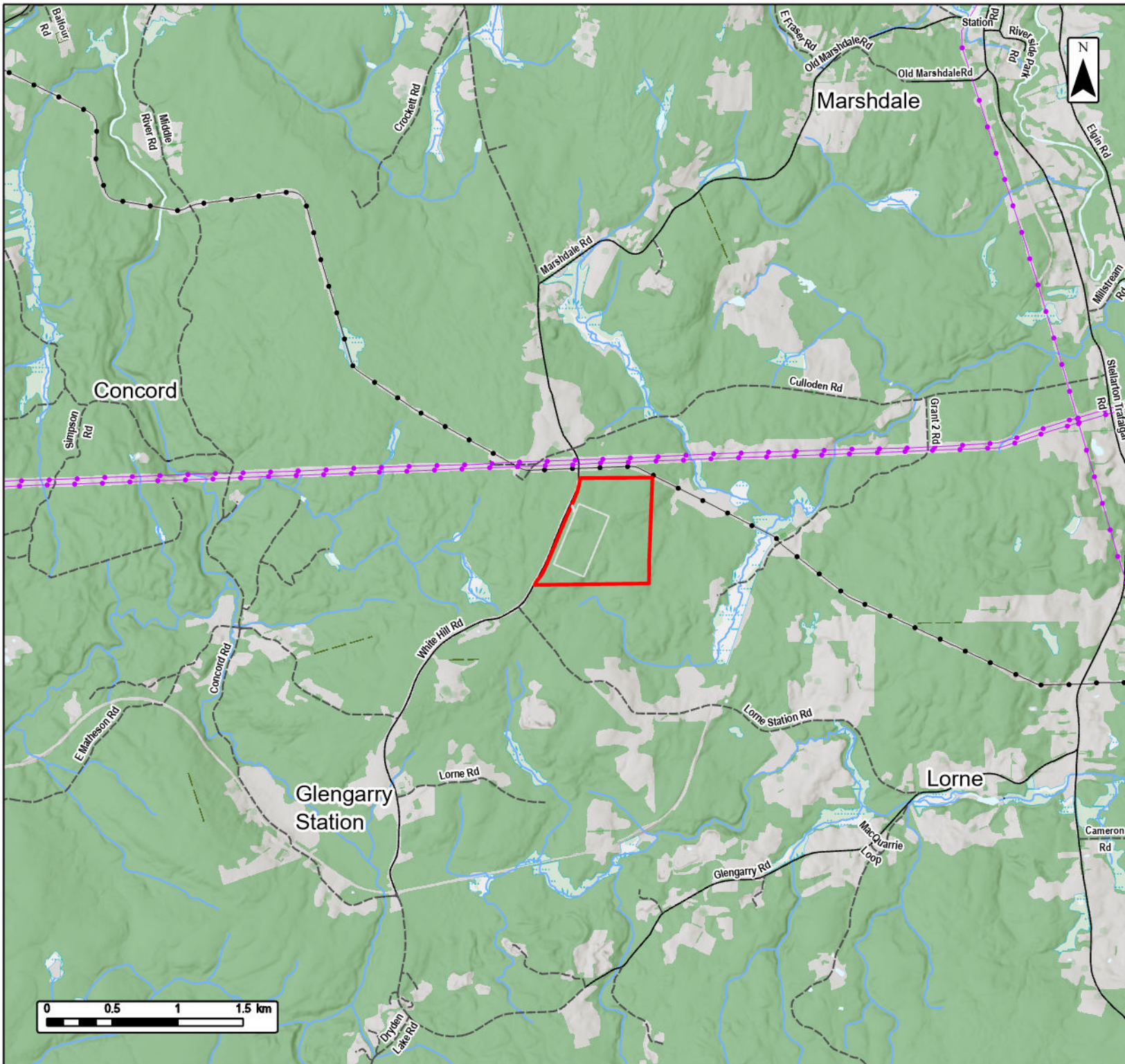
Parks Canada. (2025, February 17). *Map of the districts of Mi'kma'ki (Kjipuktuk aq Mi'kma'ki)*. <https://parks.canada.ca/lhn-nhs/ns/fortanne/culture/autochtone-indigenous/carte-mikmaki-map>.

Statistics Canada. (2023, November). *Census profile, 2021 census of population*. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E>

Wright, D. G., & Hopky, G. E. (1998). *Guidelines for the use of explosives in or near Canadian fisheries waters*. <https://publications.gc.ca/collections/Collection/Fs97-6-2107E.pdf>

APPENDIX A  
PROJECT LOCATION DRAWINGS

---



**Fast Acting Natural Gas Power Generation Facility - Marshdale**  
Regional Project Location



Project Area	
Project Footprint	
<b>Utilities (line)</b>	
Existing Pipeline	
Existing Transmission Lines	
<b>Transportation</b>	
Road	
Unpaved Road	
<b>Water Features</b>	
Mapped Watercourse	
Mapped Lakes and Rivers	
Mapped Wetland	

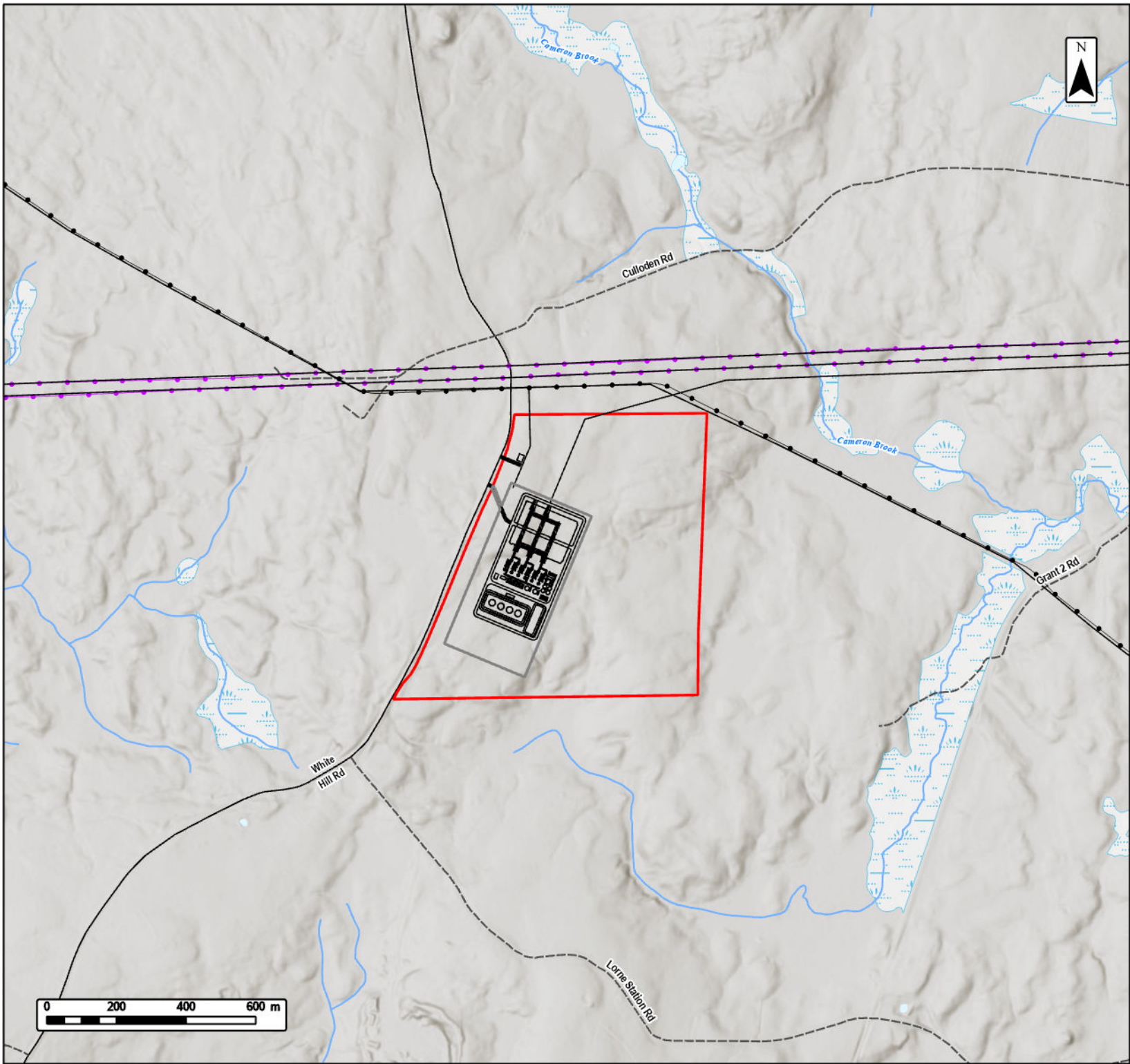


Coordinate System: NAD 1983 CSRS UTM Zone 20N  
Source: Esri, NASA, NOAA, USGS, Service Nova Scotia, GeoNOVA, SNSB, NENRR, ACCDC, IBA Canada, CNVI, HERE, Garmin, USGS

Date:	2025-12-11	Project #:	25-12222
Scale:	1:40,000	Drawing #:	<b>1</b>
Drawn By:	K. Wallace		
Checked By:	M. Juurlink		







**Fast Acting Natural Gas Power Generation Facility - Marshdale**  
Project Area

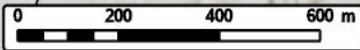


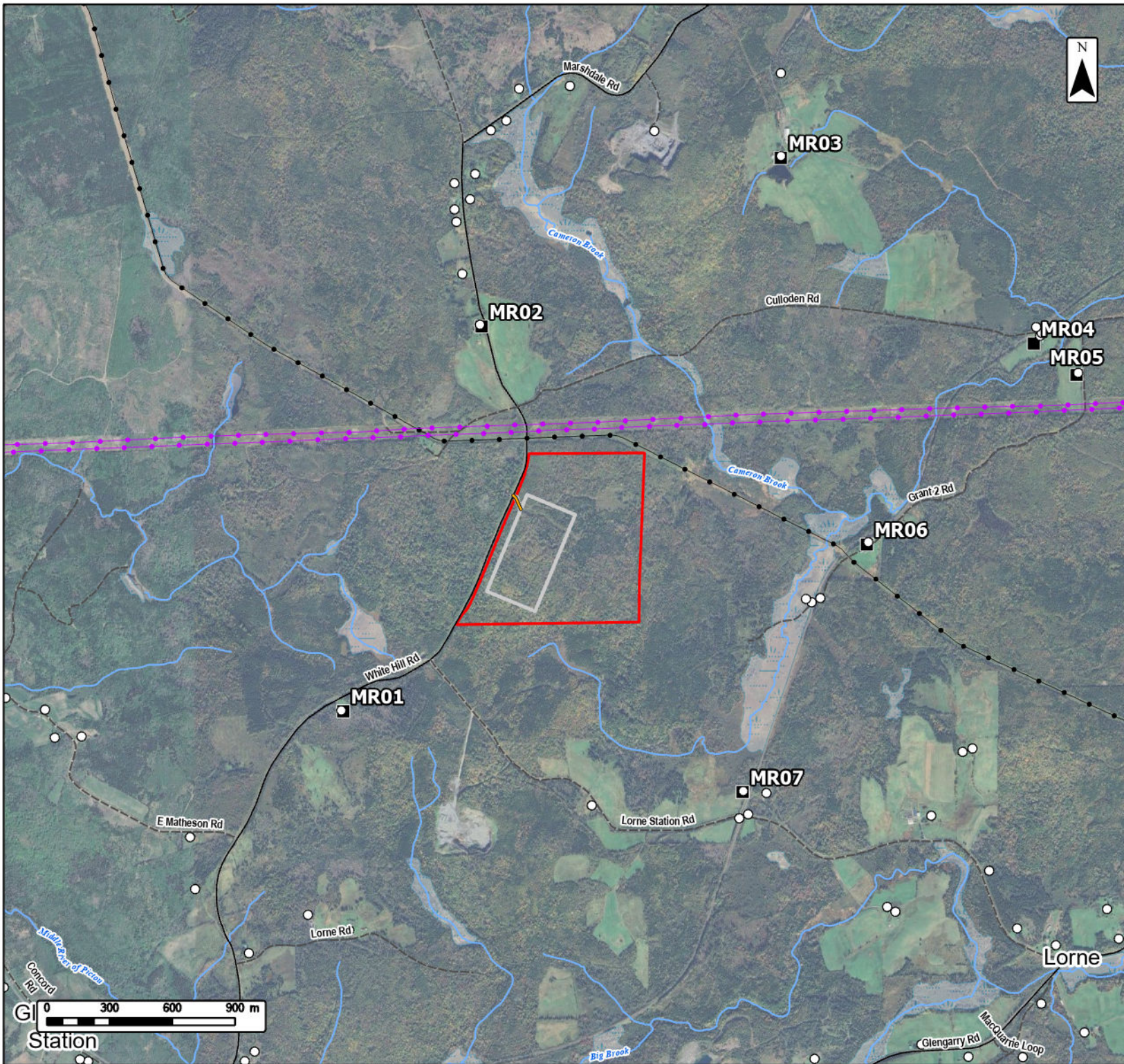
- Project Area
- Project Footprint
- Infrastructure
- Utilities (line)**
- Existing Pipeline
- Existing Transmission Lines
- Transportation**
- Road
- Unpaved Road
- Water Features**
- Mapped Watercourse
- Mapped Lakes and Rivers
- Mapped Wetland



Coordinate System: NAD 1983 CSRS UTM Zone 20N  
Sources: Esri, NASA, NGA, USGS, Esri, HERE, GeoNOVA, BNSIS, NSNRR, ACCDC, IBA Canada, CNWI, HERE, Garmin, USGS

Date:	2025-12-11	Project #:	25-12222
Scale:	1:15,000	Drawing #:	<b>2</b>
Drawn By:	K. Wallace		
Checked By:	M. Juurlink		





**Fast Acting Natural Gas Power Generation Facility - Marshdale**  
 Nearest Non-Participating Receptors



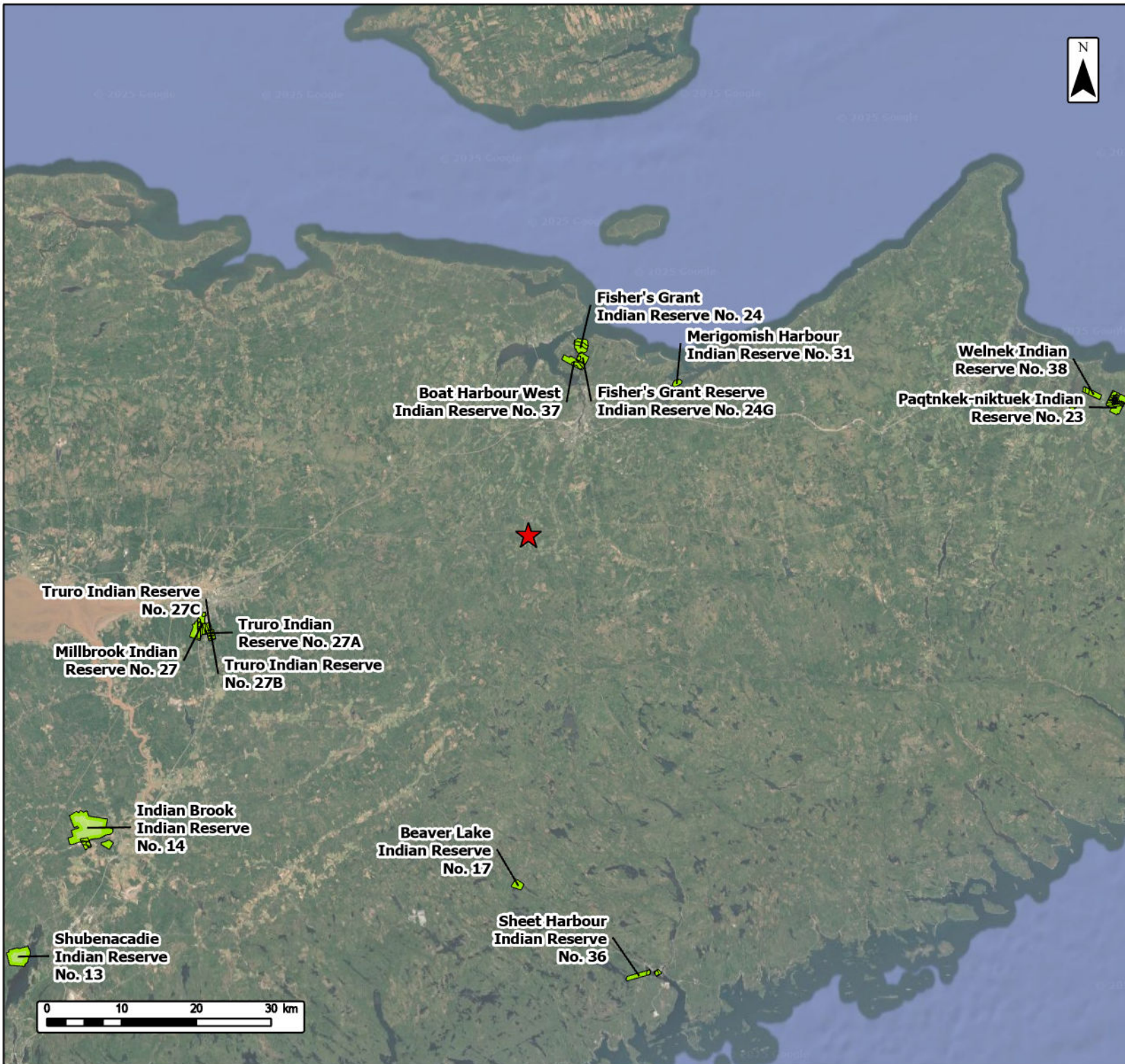
Project Area	
Project Footprint	
Receptor	
Modelled Receptor	
Access Road	
Utilities (line)	
Existing Pipeline	
Existing Transmission Lines	
Transportation	
Road	
Unpaved Road	
Water Features	
Mapped Watercourse	
Mapped Wetland	



Coordinate System: NAD 1983 CSRS UTM Zone 20N  
 Source: © OpenStreetMap (and) contributors, CC-BY-SA, GeoNOVA, SNSIS, NSNPR, ACCDC, ISA, Canada, CNMI, HERE, Garmin, USGS

Date:	2025-12-11	Project #:	25-12222
Scale:	1:25,000	Drawing #:	<b>3</b>
Drawn By:	K. Wallace		
Checked By:	M. Juurlink		





**Fast Acting Natural Gas Power Generation Facility - Marshdale**  
 Mi'kmaq of Nova Scotia Communities



Project Location



Mi'kmaq of Nova Scotia Communities



Coordinate System: NAD 1983 CSRS UTM Zone 20N  
 Source: © OpenStreetMap (and) contributors, CC-BY-SA, GeoNOVA, SNSIS, NSNRR, ACCDC, ISA, Canstar, CNWI, HERE, Garmin, USGS

Date: 2025-12-11	Project #: 25-12222
Scale: 1:700,000	Drawing #: <b>4</b>
Drawn By: K. Wallace	
Checked By: M. Juurlink	

