

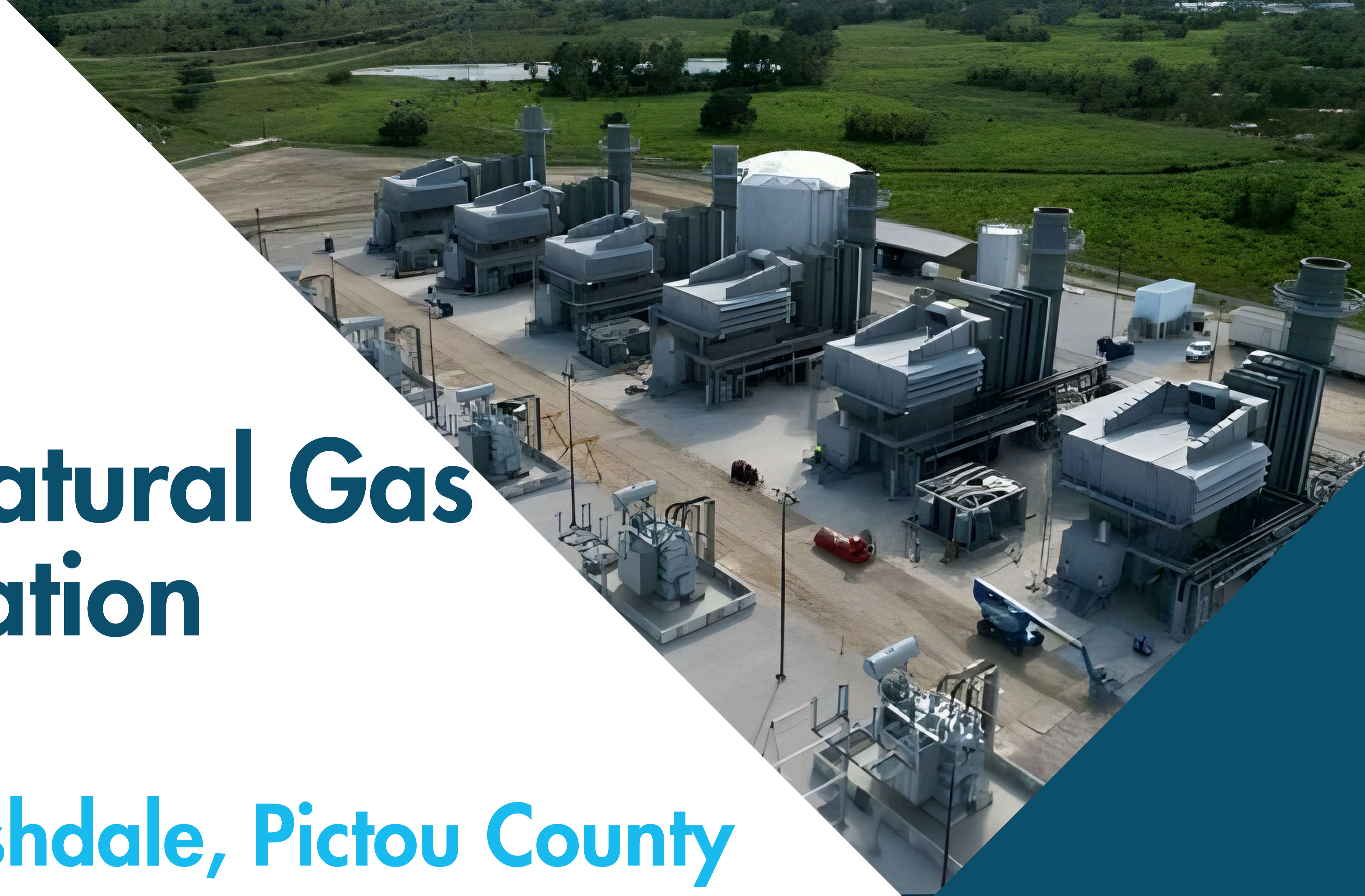


# Fast Acting Natural Gas Power Generation Open House

## Proposed for Marshdale, Pictou County

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IESO Nova Scotia respectfully acknowledges that its work takes place in Mi'kma'ki, the ancestral and traditional territory of the Mi'kmaq People, covered by the Peace and Friendship Treaties. The ongoing relationship of the Mi'kmaq with these lands and waters is recognized and honoured.





# Introduction to IESO Nova Scotia

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IESO Nova Scotia is a new independent non-profit responsible for planning and operating Nova Scotia's bulk electricity system. Beginning in 2025, it will gradually take over these roles from Nova Scotia Power, including resource planning, energy procurement, system operations, and supporting a fair, transparent transition to clean energy.

IESO Nova Scotia is committed to delivering on the Clean Power Plan by achieving 80% renewable energy and retiring coal-fired electricity by 2030.

To ensure reliable, stable electricity when renewables are not available, IESO Nova Scotia will procure new generation focused on reliability and affordability for ratepayers. The first procurement will support up to 300 MW of fast-acting natural gas power, with future rounds to include batteries, hydrogen, and other emerging technologies.



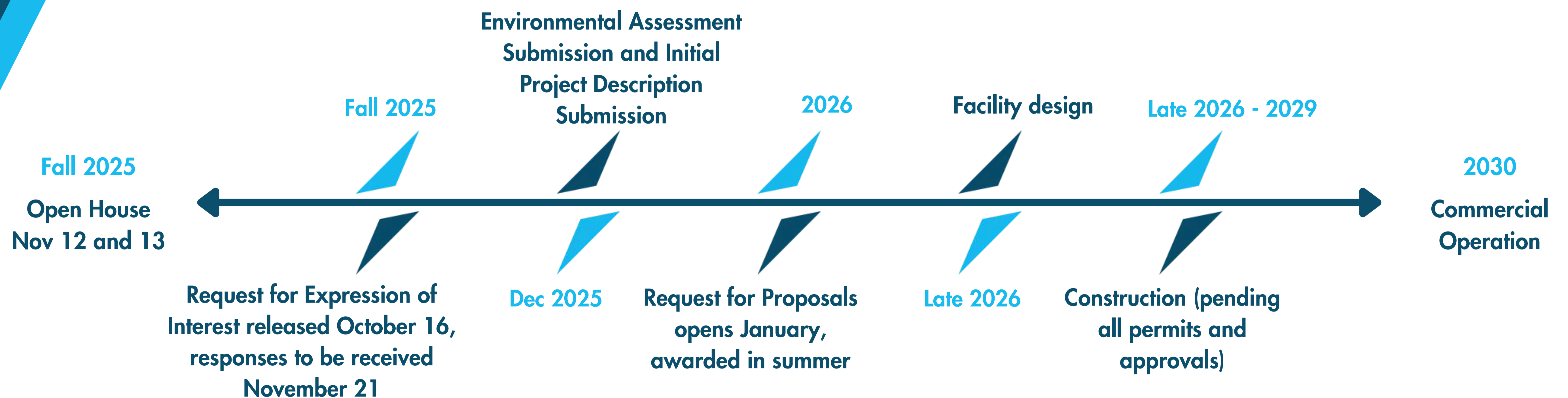
# Need For The Project

## ► Clean Energy Transition

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.

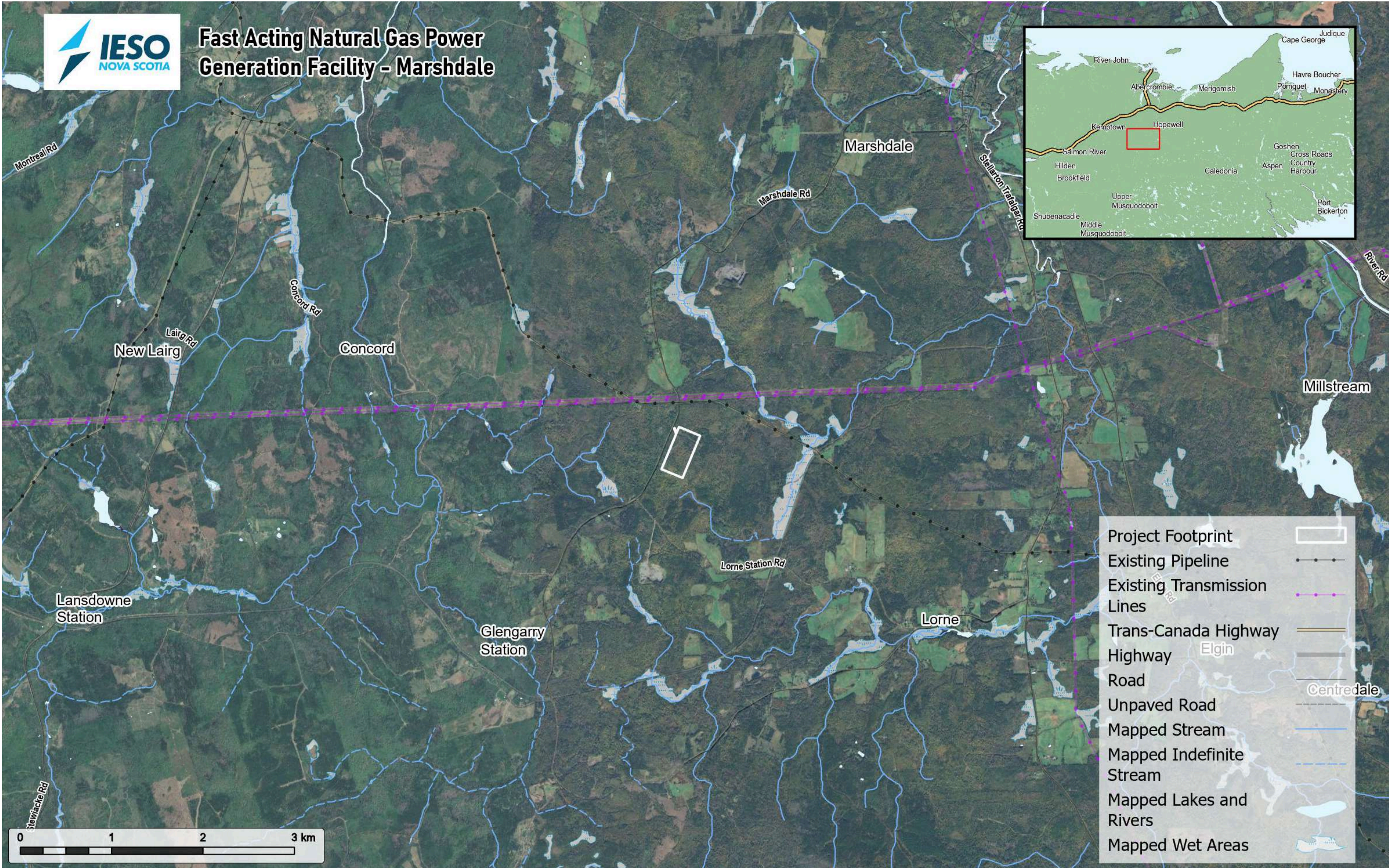
Nova Scotia's Clean Power Plan will phase out coal-fired electricity by 2030 and deliver 80% of power generated from renewables.

To maintain a reliable and affordable electricity system, Nova Scotia needs dependable fast acting energy sources available when renewables like wind and solar are unable to meet demand.

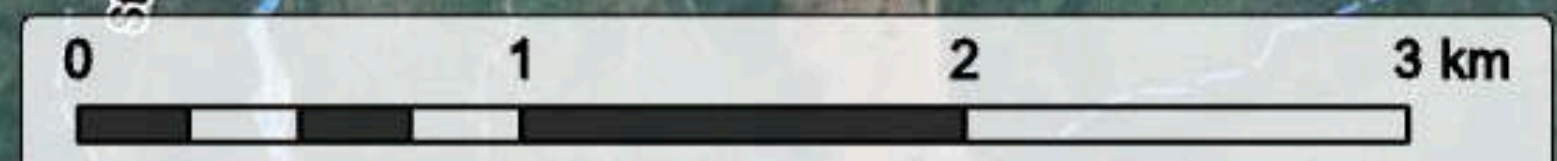




# Fast Acting Natural Gas Power Generation Facility - Marshdale



- Project Footprint 
- Existing Pipeline 
- Existing Transmission Lines 
- Trans-Canada Highway 
- Highway 
- Road 
- Unpaved Road 
- Mapped Stream 
- Mapped Indefinite Stream 
- Mapped Lakes and Rivers 
- Mapped Wet Areas 



# Project Description



Aerial photograph of a similar Facility

The Project consists of an up to 300 megawatt (MW) power plant known as the Fast Acting Natural Gas Power Generation Facility – Marshdale, located near the community of Marshdale in the Municipality of Pictou County.

The proposed facility will operate only when the power grid requires additional supply. It will play a critical role in ensuring a reliable electricity supply, integrating more renewables in the future, and is designed to transition to low-carbon fuels like hydrogen and biofuels.

## PRIMARY COMPONENTS



### Fast Acting Power Generation Equipment

Facility will include multiple turbine generators up to 300 MW total capacity, each supported by an air inlet filtration unit, start-up system and exhaust stack.



### Electrical Grid Interconnection

Powerline connections to existing transmission lines.



### Fuel Supply

Natural gas supply from existing natural gas pipeline. Light fuel oil will be trucked to site and stored in tanks with fail safe secondary containment. Facility will be designed for conversion to hydrogen or biofuels in the future.



### The Facility

The Project will have water storage and processing facilities. There will be winterized buildings for controls and instrumentation.



Rendering of the Proposed Facility

# Community and Mi'kmaq Engagement



Feedback received from the public and the Mi'kmaq of Nova Scotia will be considered in Project design, construction, operations, and benefits.

We want to be good neighbours. We will continue to engage with landowners, residents, community groups, elected officials, and the Mi'kmaq of Nova Scotia to hear your feedback and address your questions and concerns.

## BENEFITS

**Jobs:** 100–125 construction jobs and 10–15 operational jobs per 300 MW facility.

**Local Hiring:** Support local hiring through developing a “local business directory”, hosting job fairs, and actively advertising jobs locally.

**Training:** Potential for operations training to develop skills related to energy operations, maintenance, and safety.

**Local Sponsorship:** Support for local events, community groups and infrastructure.

**Economic Spin-offs:** Increase spending at local businesses, contractors, gas stations, and restaurants.

**Municipal Tax Revenue:** Tax revenue based on facility size, road upgrades, commercial rate, and other comparable facilities.

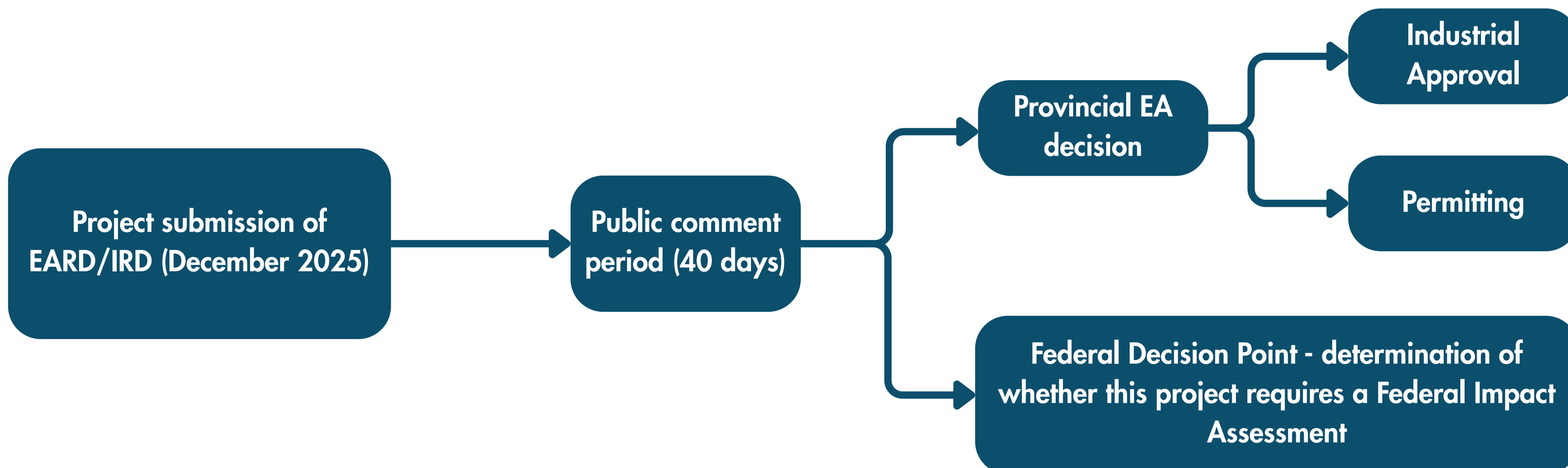
Interested in getting involved and staying fully informed? Join the Project's Community Liaison Committee! Sign up sheet on-hand.

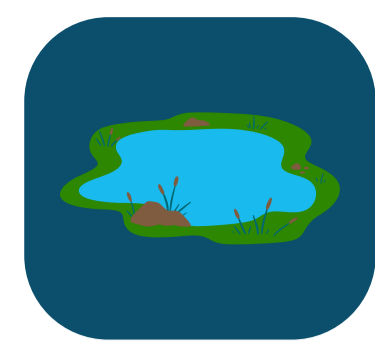
Are you a local business or have skills to offer the Project? Talk to us or tell us more in the open house comment form.

# Environmental Assessment

The project is subject to provincial and federal EA, with a coordinated provincial environmental assessment registration document (EARD) and a federal initial project description (IPD) planned for submission in December 2025. Once submitted, the regulators will confirm required regulatory pathway(s).

-  Air Quality
-  Greenhouse Gases
-  Indigenous Peoples of Canada
-  Groundwater
-  Surface Water and Fish Habitat
-  Wetlands
-  Terrestrial Flora
-  Terrestrial Fauna
-  Avifauna
-  Archaeological Resources
-  Socioeconomic Environment
-  Sound Environment





# Surface Water, Fish Habitat and Wetlands

Eight wetlands and four watercourses were identified during field assessment.

## Direct Impacts:

- Three wetlands will be altered, totaling 1.75 ha
- All watercourses have been avoided

## Indirect Impacts:

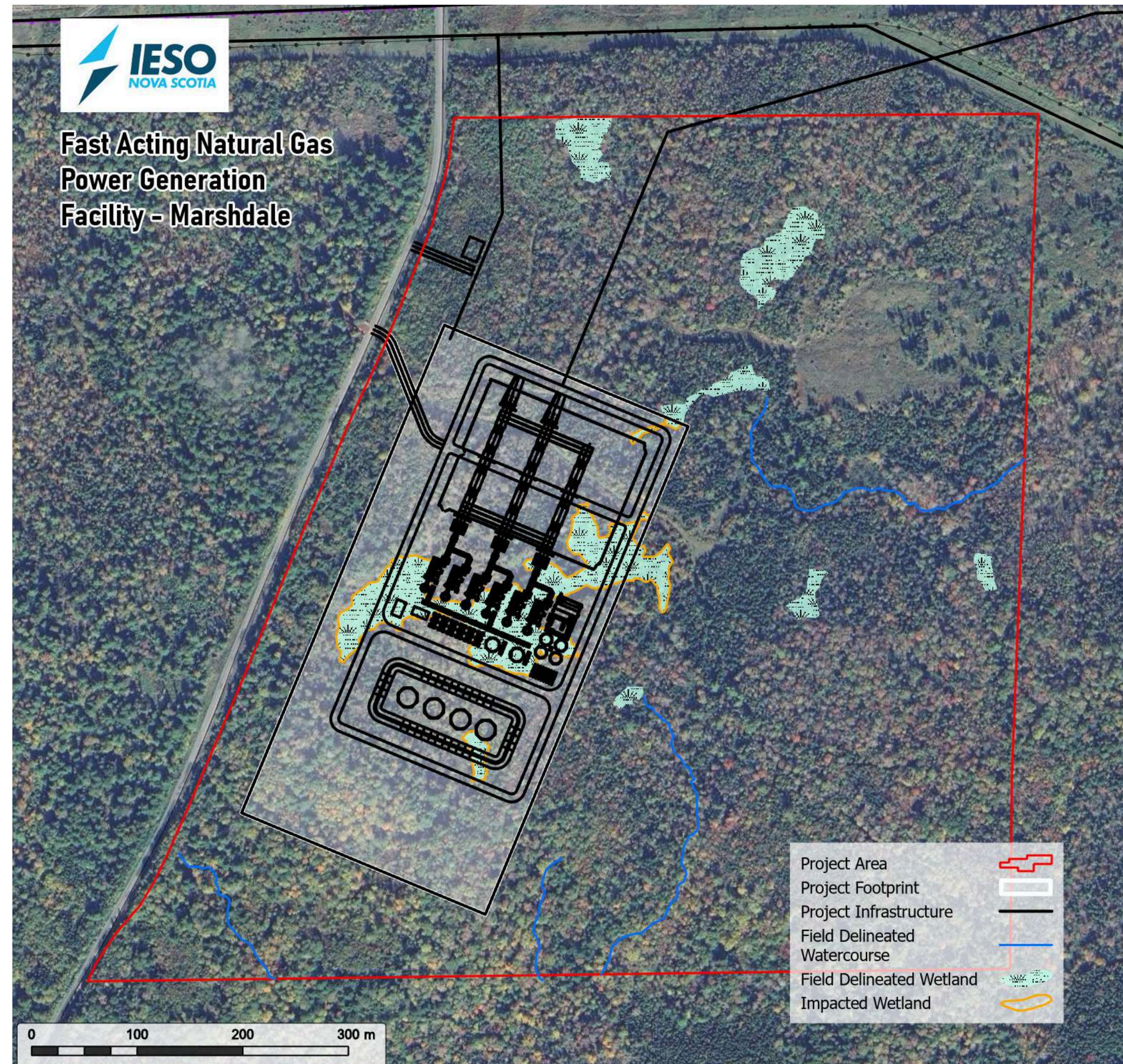
- Potential hydrological effects
- Potential changes in surface water quality
- Potential erosion and sedimentation
- Introduction of invasive species

## MITIGATIONS

- During 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.

## MONITORING

- Post-construction wetland monitoring with adaptive management will be conducted for potential indirect impacts.
- An Erosion and Sediment Control Plan will be implemented to mitigate potential impacts to wetlands and watercourses.
- A Surface Water Monitoring Plan will be implemented to ensure discharged water meets regulatory water quality requirements.



# Terrestrial Flora, Fauna and Avifauna

## Terrestrial Flora:

- The Project contained diverse vegetation communities, but most areas showed signs of previous disturbance from forest harvesting.
- Four black ash trees identified within the Project Area will be avoided.

## Terrestrial Fauna:

- Trail camera photos and incidental observations identified white-tailed deer, coyote, bobcat, red squirrel and black bear. No evidence of mainland moose or wood turtle was observed.

Potential Project impact is approximately 12 ha.

## Avifauna:

- Survey methods included spring and fall migration, breeding, and nightjar, with all surveys conducted within their respective seasons in 2025.
- Observations across all surveys observed 638 birds representing 57 species, including two species at risk:
  - Canada warbler
  - Eastern wood-pewee



## Key Mitigations and Monitoring

- Avoid impacting observed species at risk locations.
- Minimize project traffic to reduce wildlife collisions and stress.
- Implement lighting and noise controls (e.g., mufflers) on all machinery during construction and operation.
- Conduct clearing outside of breeding bird season (April - August).
- Consult with Department of Natural Resources if unexpected SAR is encountered. If encountered, additional mitigations may be implemented.
- A site-specific post-construction wildlife management plan will be developed in consultation with regulators and other relevant parties.



# Water Usage



The Project requires the extraction of groundwater to supply process water needs during operations. Water is used for:

- Emissions control, specifically  $\text{NO}_x$
- Intermittent compressor washing
- Potable water usage for staff

Water will be sourced from new groundwater wells drilled near the site.

- ▶ Overall, a 300 MW facility uses about the same amount of water each year as 750 average rural homes.
- ▶ Most of this water becomes harmless water vapour, the remaining amount is safely treated before being gradually released in accordance with environmental standards.
- ▶ The final facility design will depend on sustainable groundwater yields for each site. Hydrogeological studies, including groundwater modeling, are ongoing.



# Greenhouse Gases

- Although there are some direct GHG emissions, this Project is expected to offset the current use of coal to meet grid requirements and facilitate the ongoing expansion and renewable power capacity leading to an overall decrease in the GHG emissions intensity of Nova Scotia's electrical grid.
- The Project is expected to emit approximately 326 kt/annually of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) of greenhouse gases (GHG), equal to 2.4% of Nova Scotia's emissions and 0.05% of Canada's emissions.
- 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.
- This Project will have approximately 55% less GHG emissions than coal fired power plants.

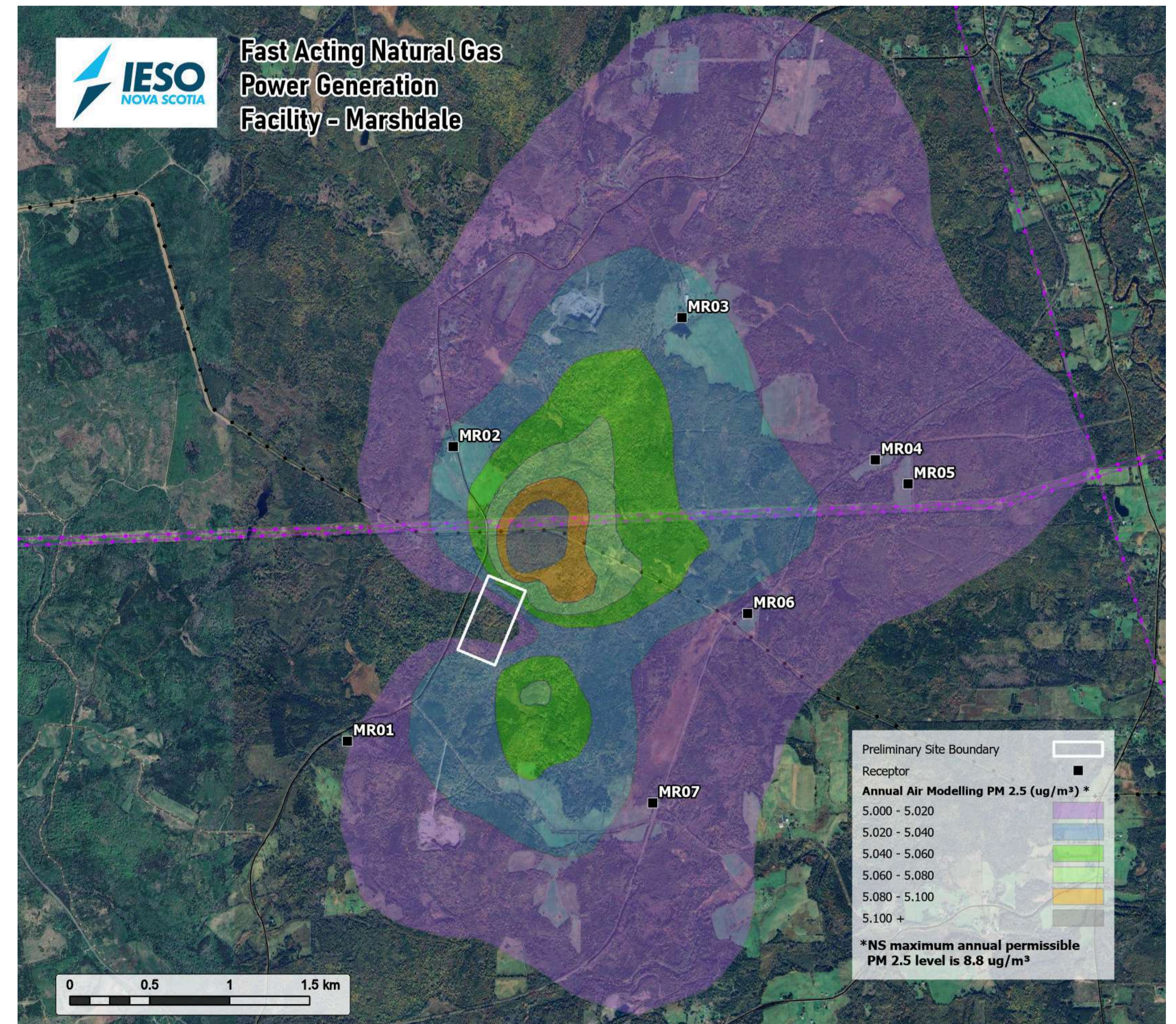
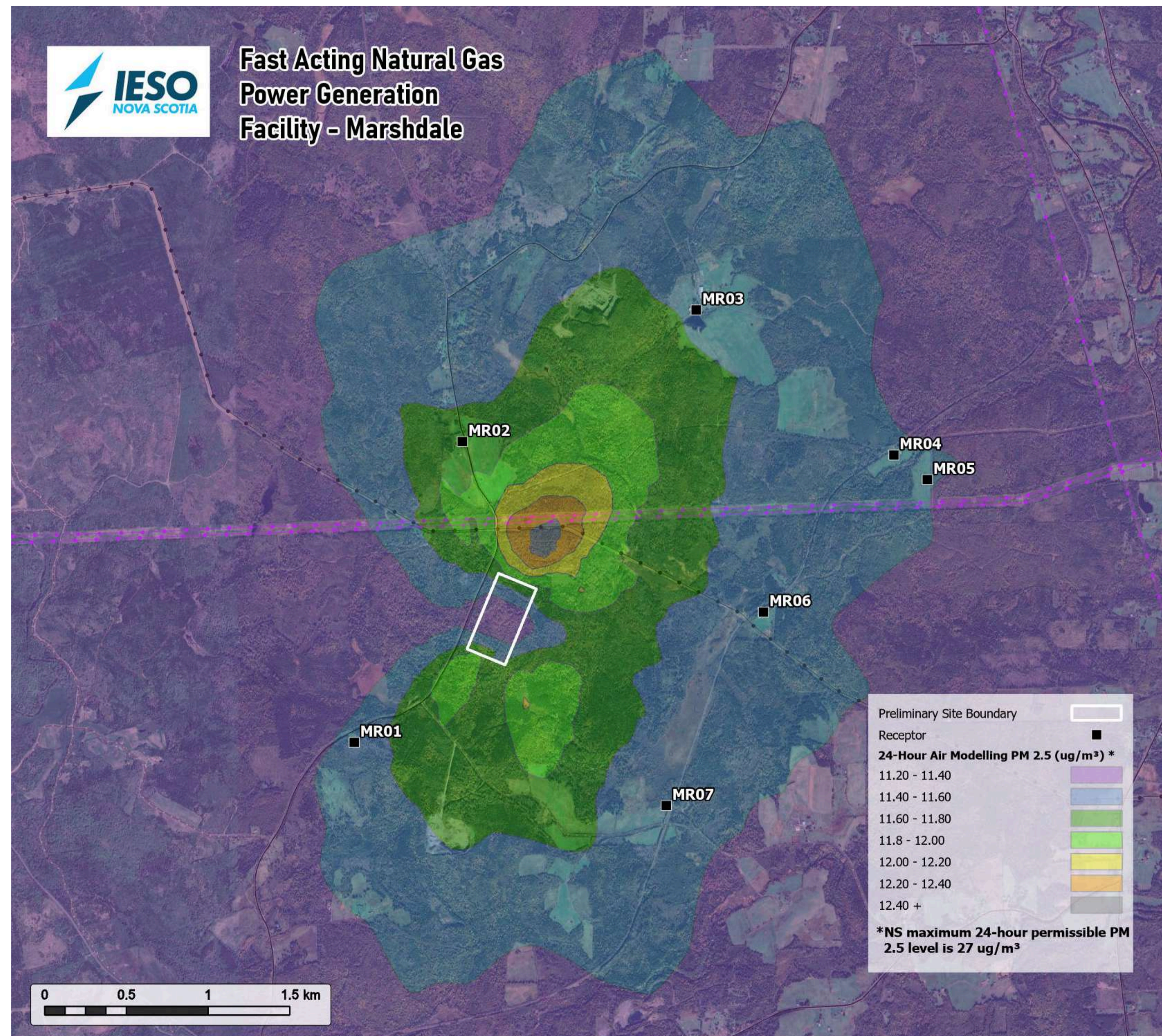




# Air Quality

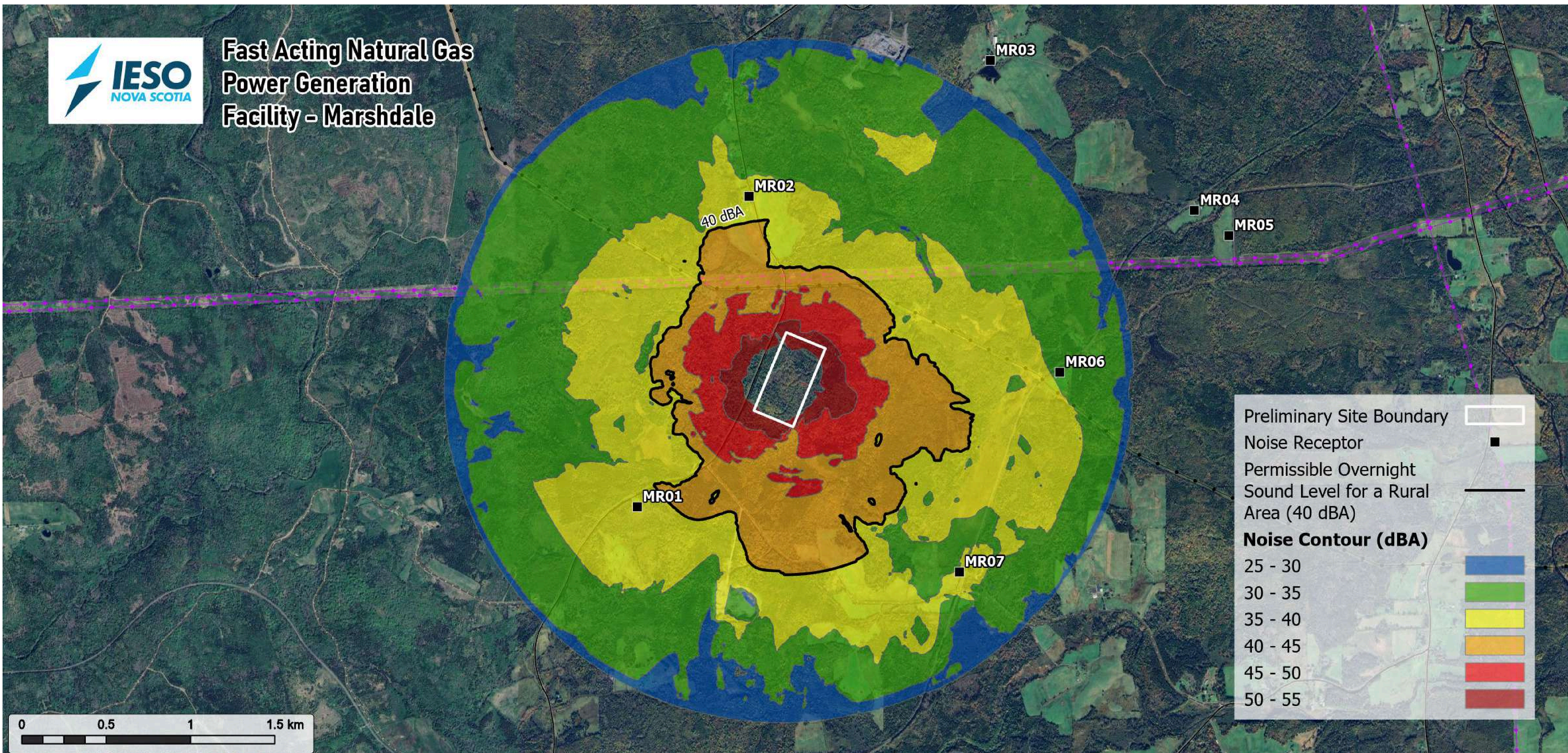


- No exceedances of regulated limits for  $\text{NO}_2$ ,  $\text{CO}$ , or  $\text{PM}_{2.5}$  are expected at ground level based on preliminary modeling.
- No exceedances of regulated limits are expected at nearby residences.
- The Project uses advanced emissions control (low  $\text{NO}_x$  Combustion, Continuous Emissions Monitoring System, Water/Steam Injection).
- Ongoing monitoring and regulatory reporting will be required during operations.





- A study was conducted to model cumulative noise effects generated by the Project on nearby receptors, including residences. Noise levels will be below the permissible sound levels.
- The Project will implement a Complaint Response Plan to address concerns raised by the local residences as needed.





# Cultural and Heritage Resources

An Archaeological Resource Impact Assessment was completed in September 2025 to identify any potential for archaeology or cultural findings.

The assessment identified low potential for archaeological resources across most of the Project Area. Three potential archaeological resources within one area of high potential were observed.

## Mitigations and monitoring includes:

- Maintain a 30 m buffer for Project development and ground disturbance activity on the three sites of high archaeological potential.
- If future Project engineering or design requires development or ground disturbance within the 30 m buffer zone, conduct confirmatory shovel testing in areas of development/disturbance.
- Conduct additional archaeological assessment if, during the detailed design phase, it is determined that ground disturbance is required in areas not previously assessed.
- Develop a chance find procedure related to the potential unexpected discovery of archaeological items or sites, or human remains, during construction.

A Mi'kmaq Ecological Knowledge Study is underway and will be completed in 2026.



Example of a confirmatory shovel test



# THANK YOU FOR ATTENDING

We welcome your feedback - please fill out a comment form on your way out.

## LET'S STAY IN TOUCH



[community@ieso-ns.ca](mailto:community@ieso-ns.ca)



[www.ieso-ns.ca](http://www.ieso-ns.ca)