

CENTRE VILLAGE RENEWABLES INTEGRATION GRID SECURITY (RIGS) ENERGY ATLANTIC PROJECT

PROGRESSING THE EAST COAST ENERGY TRANSITION AND GRID RELIABILITY WITH DISPATCHABLE GENERATION



MEET THE PROS

TODAY'S PRESENTERS



Mike Alvarado

*Senior Vice President
PROENERGY*

25+
years' experience



John MacIsaac

*President
PROENERGY CANADA*

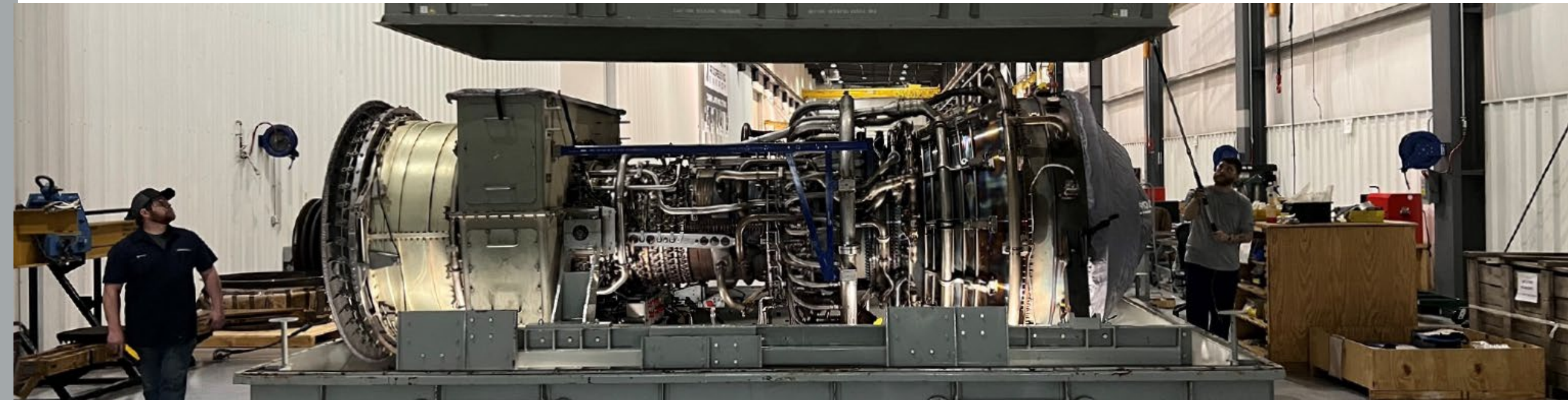
20+
years' experience



Landon Tessmer, P.Eng.

*VP, Commercial Operations
PROENERGY*

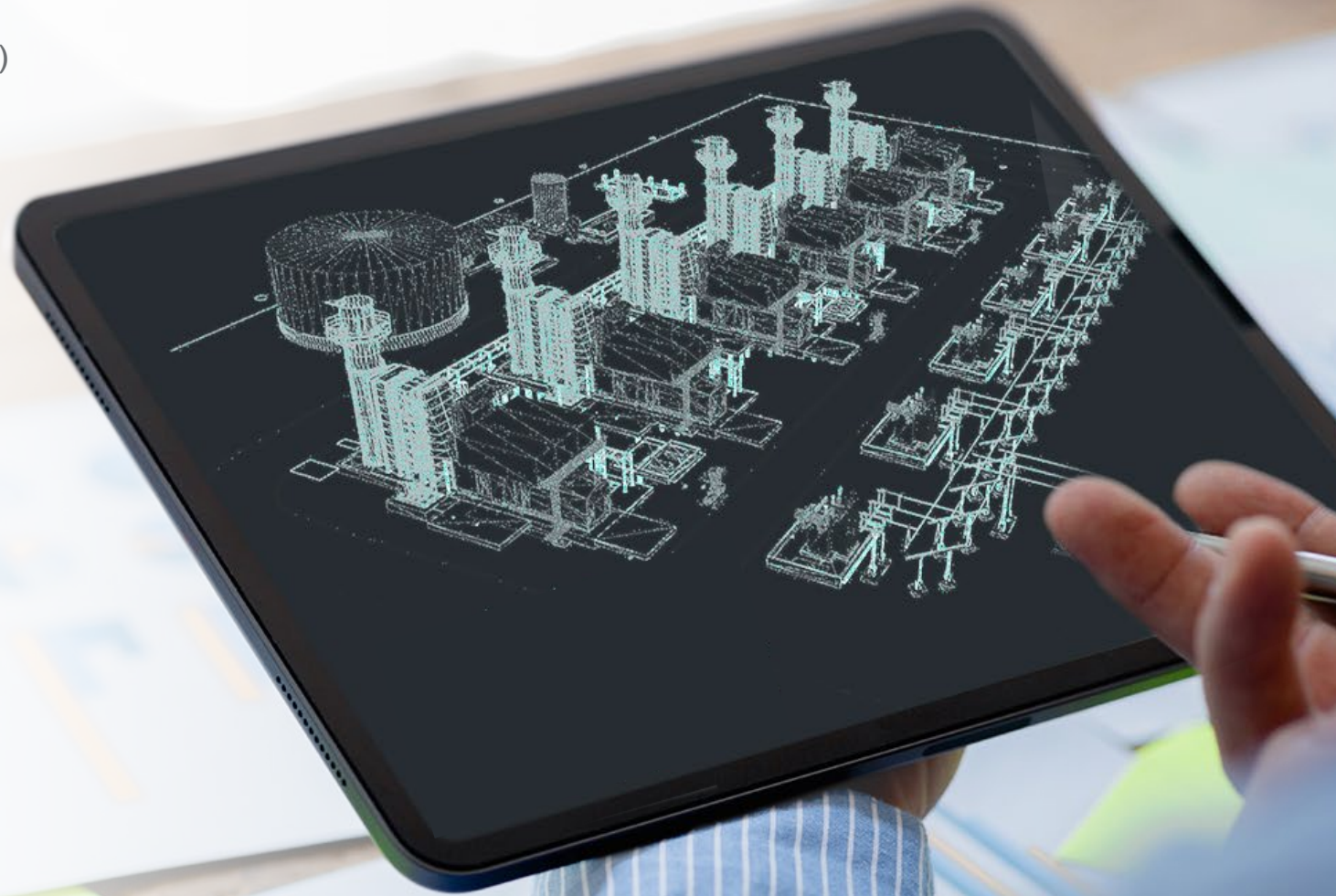
15+
years' experience



RENEWABLES INTEGRATION GRID SECURITY (RIGS)

RIGS ENERGY ATLANTIC PROJECT

- A smart and flexible grid voltage balancing / peak power generation facility
- Cost-effectively enabling reliable and clean energy for New Brunswickers
- Facility will be owned by PROENERGY and the North Shore Mi'kmaq Tribal Council (NSMTC) under a 25-year power purchase agreement with NB Power



ABOUT RIGS

PROPOSED PLANT CONFIGURATION



400 MW

with ability to expand to 500 MW
(~0.5 million homes)

>85% / year

in non-emitting synchronous
condenser mode (balancing grid
voltage variability created by wind
generation)

7% / year

as a back-up generator to the grid
during times of need, avoiding grid
blackouts

>90% less

NOx and CO compared to traditional
technology

ABOUT THE PROJECT

PROPOSED LOCATION

CENTRE VILLAGE, NB

This location was specifically chosen due to:

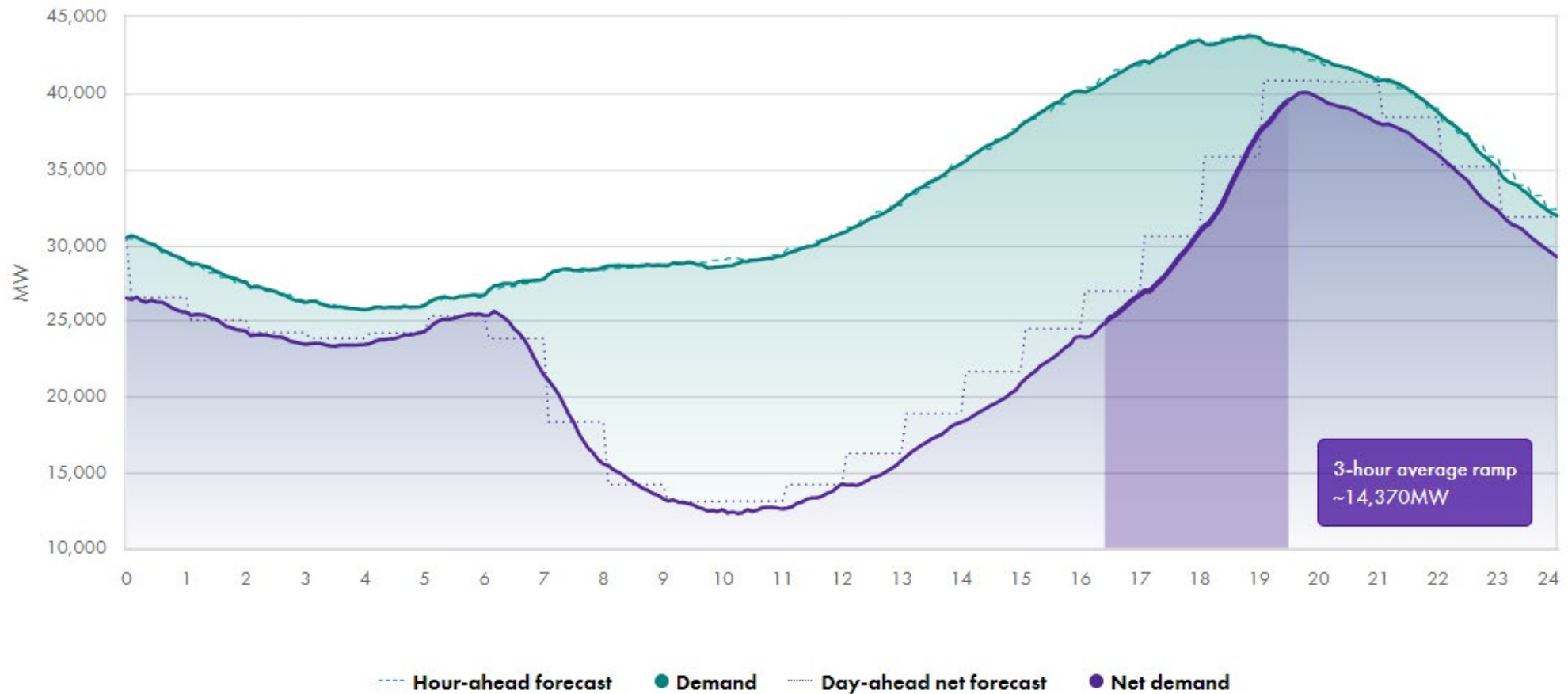
- Proximity to existing transmission infrastructure
- Existing fuel infrastructure adjacent to site
- No fish habitat on site
- Low archaeological potential
- Distance to nearest residence >1 km



CHALLENGES TO CAPACITY

ENERGY TRANSITION BRINGS VOLATILITY TO POWER DEMAND

System demand minus wind and solar, in 5-minute increments, compared to total system and forecasted demand



AERODERIVATIVE GAS TURBINES

A NATURAL FIT FOR TODAY'S CHALLENGES

CYCLING BASELOAD POWER PLANTS



TRANSMISSION BUILDOUT



WHAT ABOUT BATTERIES?

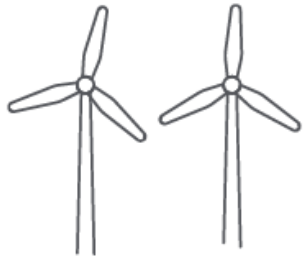


ENABLING ADDITION OF RENEWABLES



RIGS PURPOSE

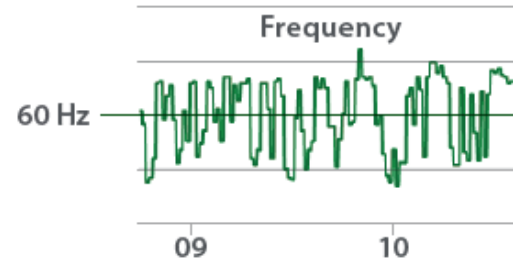
SUPPORTING THE ENERGY TRANSITION



ENABLES THE
ENERGY TRANSITION



MEETS DEMAND COST
EFFECTIVELY



STABILIZES
THE GRID



AVOIDS INEFFICIENT
MINIMUM LOADS



ABOUT THE PROJECT

REGULATORY CONTEXT

- Project is a “designated project” under Impact Assessment Act and an “undertaking” under provincial Clean Environment Act triggering federal and provincial impact assessment requirements
- IAAC to determine if federal impact assessment required
- Environmental Impact Assessment (EIA) Registration submitted to New Brunswick Department of Environment and Local Government (NBDELG) and EIA process is underway
- Will require wetland and watercourse alteration (WAWA) permit from NBDELG prior to construction
- Will require additional approvals from NBDELG related to supply of water, discharge of air emissions and effluent, and storage of petroleum products



ABOUT THE PROJECT

MITIGATION SOLUTIONS

Component	Potential Changes	Key Mitigation Solutions
Vegetation and Wetlands	<ul style="list-style-type: none">• Loss of vegetation• Wetland loss or alteration	<ul style="list-style-type: none">• The Centre Village site was selected because of the minimal presence, 29%, of wetlands.• Permitting as required under Clean Environment Act to alter wetlands.• Initial site constraint study identified it as a non-fish bearing habitat.• Transmission and natural gas infrastructure is already present to minimize disturbance.• Technology used minimizes the footprint of the plant to approximately 15 acres (6 ha).• Clearing and grubbing is restricted to the project footprint.• Erosion and sediment control measures in place.
Fish and Fish Habitat	<ul style="list-style-type: none">• Change in fish habitat	<ul style="list-style-type: none">• The Centre Village site was selected because no watercourses were identified.• A Water Supply Source Assessment (WSSA) will be undertaken in accordance with the Clean Environment Act prior to the drilling of production wells.• Follow up studies were conducted that confirmed non-fish-bearing habitat at the site.• A stormwater management plan will be developed and implemented• No hazardous material is generated or stored at the project.
Heritage Resources	<ul style="list-style-type: none">• Loss or disturbance to archaeological resources	<ul style="list-style-type: none">• The Centre Village site was selected because of no areas of medium or high archaeological potential were determined after an Archaeological Resource Impact Assessment (ARIA) study of the site.

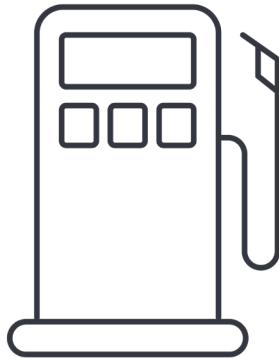
ABOUT THE PROJECT

MITIGATION SOLUTIONS

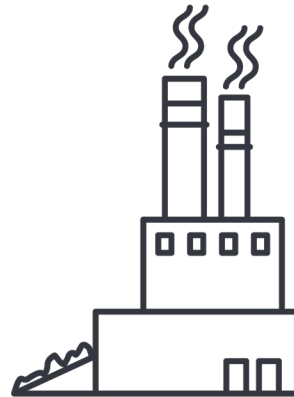
Component	Potential Changes	Key Mitigation Solutions
Socio-Economic Environment	<ul style="list-style-type: none"> • Change in land use • Change in traffic during construction • Increase in employment and procurement during construction 	<ul style="list-style-type: none"> • The Centre Village site was selected due to its rural setting, on secondary two-lane road, requiring 18 km travel through rural farm communities and villages including Upper and Middle Sackville. Nearest rural residence located 1.2 km from main study area (excluding access road). • Transport of heavy machinery in accordance with applicable permits. • Advance notification of potential disruptions to transportation network. • Local and Indigenous contractors, suppliers, and hiring will be prioritized to increase local beneficial economic effects. • The EIA/IPD was reviewed by the Indigenous environmental services group Anqotum [An-goh-tum] (I care for our environment).
Wildlife and Wildlife Habitat	<ul style="list-style-type: none"> • Loss or alteration of habitat • Sensory disturbance • Change in mortality risk 	<ul style="list-style-type: none"> • The Centre Village site was selected because no threatened or rare species were identified. • As noted previously, the equipment used in the project has a small footprint and vegetation clearing and tree removal will be limited to areas for construction and safe operations. • Black Ash (3 in 1 clump) is present. No rare lichens noted at the site. • Wildlife awareness training will be provided for Project personnel. • Clearing of site will avoid core maternity roosting period for bats.
Migratory Birds	<ul style="list-style-type: none"> • Change in habitat and use • Risk of injury or mortality 	<ul style="list-style-type: none"> • Siting of the project infrastructure will avoid areas of importance for migratory birds (e.g., designated critical habitat, overwintering areas, migration stopovers). • Clearing and tree removal will be limited to areas for construction and safe operations and conducted outside of the migratory bird nesting period. • Light intensity of the plant is low, and lights will be angled downward to avoid disorienting birds. • A nesting bird activity survey was completed in the Spring 2025. No pileated woodpecker evidence has been noted. If an active bird nest is found, beneficial management practices will be followed.

REDUCES CO₂ BY 250KT/YR VS. LEGACY GENERATION

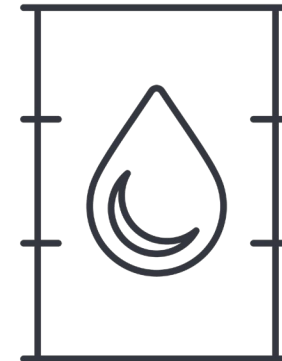
106 million
Litres of gasoline
not used



125 million
kg of coal not
burned



578 thousand
Barrels of oil not
consumed



*Based on the US
Environmental Protection
Agency (EPA) GH
Equivalencies Calculator

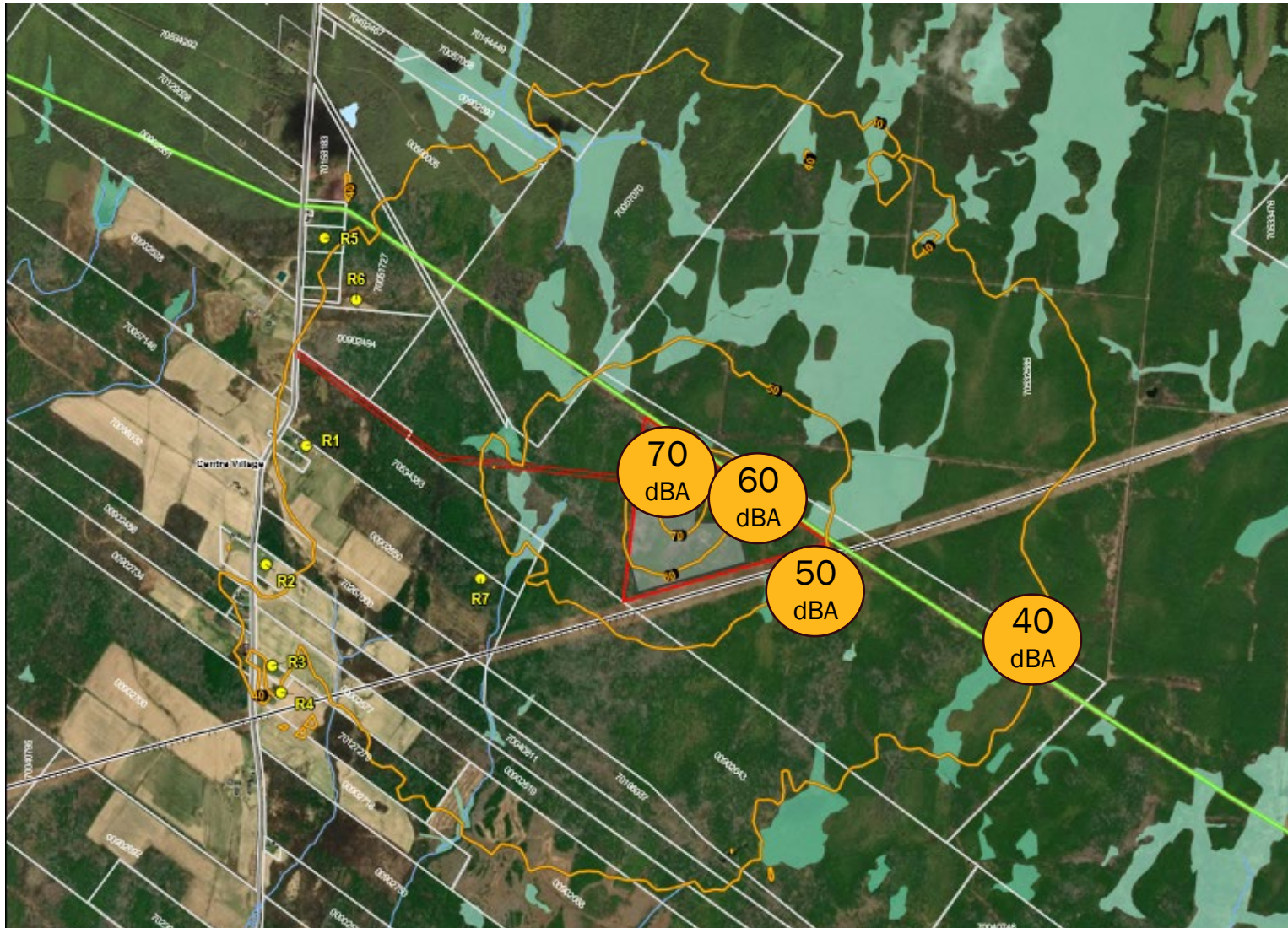
90% Less NO_x

RIGS
2.5 ppm

Traditional
25 ppm

RIGS IMPACT ASSESSMENT SUMMARY

ACOUSTIC ENVIRONMENT



You Are: In the plant
Measure Noise: 70 dBA
Equivalent to a vacuum cleaner

You Are: At RIGS Fence
Measure Noise: 60 dBA
Equivalent to a normal conversation

You Are: 500m Outside RIGS
Measure Noise: 50 dBA
Equivalent to refrigerator hum

You Are: 1,500m Outside RIGS
Measure Noise: 40 dBA
Equivalent to a soft whisper

Source: www.osha.gov/noise; www.oshaedne.com



GROUNDWATER AND SURFACE WATER



Concentrated Well Water Discharge

no oily water or process water discharge

Stormwater Management

ditches, swales, culverts divert to an on-site management pond

Water Treatment

groundwater is purified for use in the air quality systems and turbines

Well Heads

groundwater used only per WSSA and Clean Environment Act approval/permit

WHY PROENERGY IS THE RIGHT CHOICE

SINGLE-COMPANY ACCOUNTABILITY

STANDARDIZATION



LOWEST

INSTALLED COST

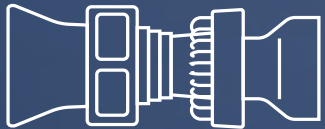
EXPERTISE



PROVEN

RELIABILITY

ENABLEMENT



IDEAL

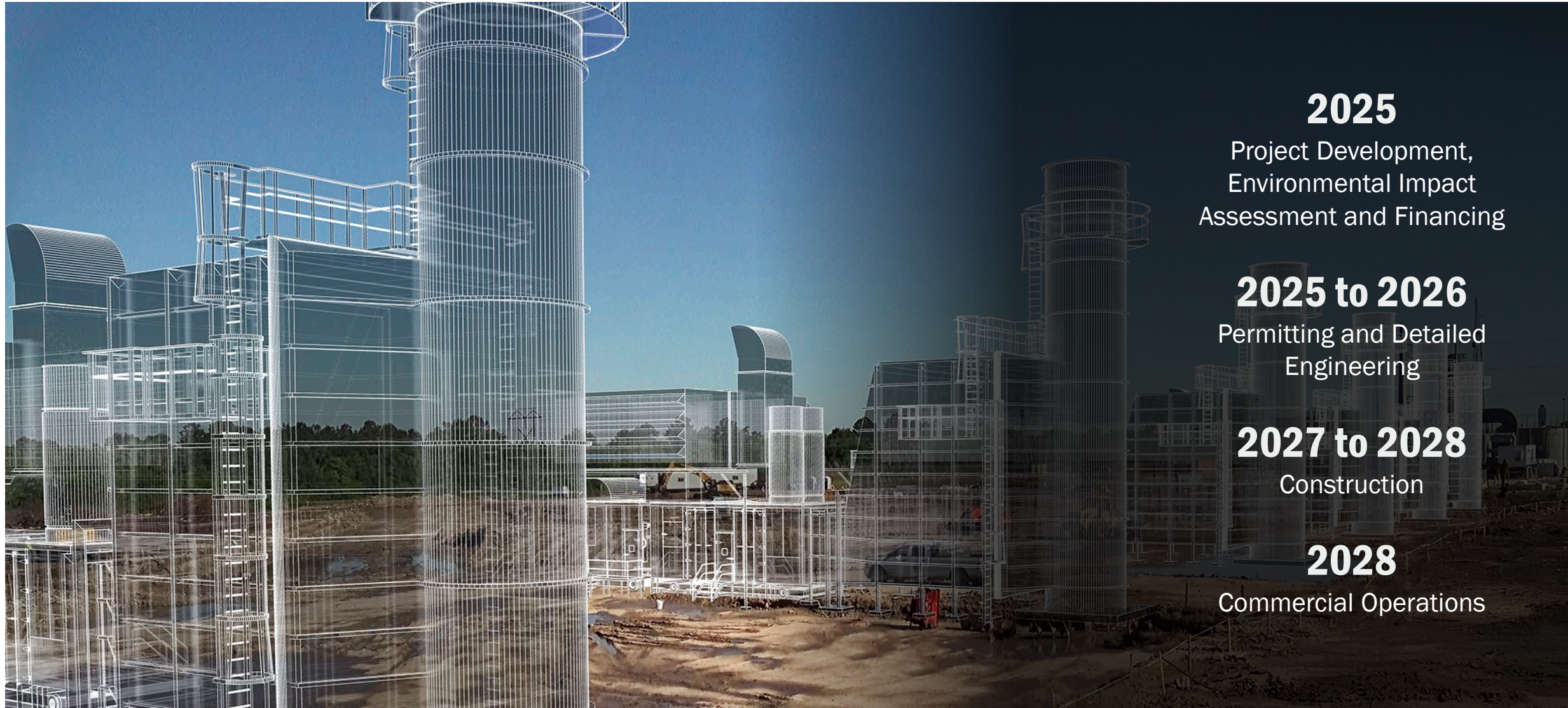
RENEWABLE SUPPORT





RIGS SCHEDULE

PROJECT TIMELINE



2025

Project Development,
Environmental Impact
Assessment and Financing

2025 to 2026

Permitting and Detailed
Engineering

2027 to 2028

Construction

2028

Commercial Operations



THANK YOU

PROENERGY

For more information:

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