Renewable Integration Grid Security (RIGS) Project

The RIGS project is an important part of our strategic plan in transitioning to a cleaner and greener energy supply while ensuring customers have the energy they need, when they need it.

What is RIGS?

The RIGS project is a new proposed generation facility designed to maintain a stable and reliable energy grid. It consists of dual-fuel combustion turbines and grid-stabilizing synchronous condensers.

Why do we need this?

Renewable energy from sources like wind and solar is a priority, but they are not always available. The RIGS facility will only run when we don't have access to renewable resources like when the wind isn't blowing, or the sun isn't shining. It can also be used on extremely cold days when we can't get power from our neighbours who might be dealing with their own high energy demands.

New Brunswick's population has grown significantly since 2021, especially in the southeastern part of the province which has led to an increased demand on our system.

Why is it called a "Renewable Integration" project?

The RIGS facility serves two purposes:

1. **to provide essential back-up energy when needed**
2. **to help integrate more renewable energy in the grid**

Renewable sources like wind and solar are naturally intermittent and to maintain a reliable grid, technology is needed to manage fluctuations. This is called voltage support.

Why combustion turbines?

- **Quick response:** They offer dispatchability, meaning they can start up quickly to respond to rapid changes in electricity demand.
- **Grid stability:** They provide voltage support to help balance the grid, which is especially important when integrating intermittent power sources like wind and solar.
- **Emergency power:** They are reliable for responding to emergencies and during extended outages.

Why natural gas?

Natural gas is a clean-burning and fast acting fuel that can ramp up to full production in as little as 10 minutes. This facility will use natural gas now but can transition to cleaner fuels, like hydrogen or biodiesel, when they are available.

In contrast, a facility like Coleson Cove, which uses fuel oil, requires a longer startup time and needs to burn for 30 hours before it can produce even one MW of power.

Why not batteries?

The cost to build a battery storage facility with enough capacity to power the province for an entire day is estimated to be in the tens of billions of dollars. This is a massive investment that would ultimately be passed on to customers.

Battery storage can only put energy on the grid for a short period of time. This limits their ability to backstop renewables and provide reliable peaking capacity during extreme weather events, which can last for several days and batteries do not provide the level of voltage support needed.

Why Centre Village?

We evaluated numerous locations in the southeast of the province based on population and economic growth and proximity to existing natural gas and electrical transmission infrastructure.

We selected Centre Village as our preferred location because it offers the best opportunity for timely project delivery and cost savings over other potential locations. A number of criteria were evaluated including wetlands, watercourses, protected species and archaeological potential.

The Scoudouc site was also a viable location for development, however the presence of fish bearing watercourses on the property would require obtaining a Fisheries Act Authorization under the Federal Fisheries Act, a permit that takes a minimum of 18 months to acquire. This combined with archaeological potential, significant wetland impact and the presence of protected species on the site puts a 2028 operational timeline in significant jeopardy.

Why PROENERGY?

ProEnergy was selected as the successful bidder after a rigorous and transparent Request for Expressions of Interest process that included evaluations against key criteria including competitive pricing, a demonstrated ability to meet critical project timelines, and a strong track record of experience with similar facilities. This process was conducted over the summer of 2024 and resulted in ProEnergy being selected as the lowest cost bidder.

Énergie NB Power