

# LNG-TO-POWER ADDS STABILITY TO ISOLATED GRID

## delivering lower cost, lower emission power to balance renewable energy



### Background

Yukon Energy Corporation (YEC) is a publicly owned electric utility responsible for most of the generation and transmission of electricity across the remote Yukon territory of Canada. The company's isolated grid mainly is supported by a series of hydropower dams as well as a few peaking thermal generation facilities.

Nearly a decade ago, YEC began looking for ways to reduce the overall carbon footprint on its grid by replacing some of its aging fleet of backup diesel generator sets. After a detailed evaluation of its options, YEC chose a cost-effective liquefied natural gas (LNG) solution that offered greater operational efficiency and lower emissions: Enerflex's LNG-to-Power solution based on INNIO Group's high efficiency Jenbacher J624 cogeneration technology.

### Solution

Engineering and fabrication for Canada's first-of-its-kind LNG-to-Power plant actually took place in Austria, and the modular power generation facility then was transported to the Yukon territory. During the cold and dark winter months of 2015, the new plant—centered on two of INNIO Group's high efficiency containerized Jenbacher J624 engines, each with a capacity of 4.3 MW of electrical output—was reassembled at the Yukon site.

Enerflex, INNIO Group's authorized Jenbacher distributor in Canada, delivered the complete facility, including all engineering, installation, and commissioning of the modular power plant solution. Enerflex even planned for the challenge of snow buildup around the plant ventilation system. With their louver baffle blockers, the Enerflex modules were designed to deal with very low temperatures, and the engine room has a pre-heater for the ventilation ducts.

## Results

As part of its clean energy strategy, YEC was able to reduce its emissions by switching from diesel peaking power to LNG. The plant also is equipped with heat recovery equipment to generate the required thermal energy needed to regasify the LNG into the natural gas that fuels the Jenbacher gensets.

The first phase of the project, which included two Jenbacher J624 gensets, was so successful that YEC awarded Enerflex the additional turnkey scope of work to build and deliver a plant expansion for a third Jenbacher J624.

After seven years of operation, this advanced technology LNG-to-Power facility still is providing Yukoners with secure, lower emission peaking power that covers shortfalls in hydropower during the winter months.



## Key technical data

Installed engines	3x J624
Electrical output	13.2 MW
Thermal output	7.5 MW
Energy source	LNG
Year of commissioning	2015



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## Customer benefits

- Whether in extreme hot desert or arctic cold locations, INNIO Group is a global leader at providing gas-fueled power generation solutions that support remote communities around the globe with secure power.
- Jenbacher J624 two-stage turbocharger technology provides a highly efficient alternative to traditional diesel power for remote communities.
- Switching from diesel to LNG-based power represents a clear pathway for reducing greenhouse gas emissions while also improving air quality for local communities. INNIO is empowering industries and communities to transition to net zero.

### About INNIO Group

INNIO Group is a leading energy solution and service provider that empowers industries and communities to make sustainable energy work today. With its product brands Jenbacher and Waukesha and its digital platform myPlant, INNIO offers innovative solutions for the power generation and compression segments that help industries and communities generate and manage energy sustainably while navigating the fast-changing landscape of traditional and green energy sources. INNIO is individual in scope, but global in scale. With its flexible, scalable, and resilient energy solutions and services, INNIO enables its customers to manage the energy transition along the energy value chain wherever they are in their transition journey.

INNIO is headquartered in Jenbach (Austria), with other primary operations in Waukesha (Wisconsin, U.S.) and Welland (Ontario, Canada). A team of more than 4,000 experts provides life-cycle support to INNIO's more than 55,000 delivered engines globally through a service network in more than 100 countries.

In March 2023, INNIO's ESG rating ranked first out of more than 500 companies worldwide in the machinery industry assessed by Sustainalytics.

For more information, visit the INNIO website at [www.innio.com](http://www.innio.com).

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