

FLARE GAS UTILIZATION PROJECT

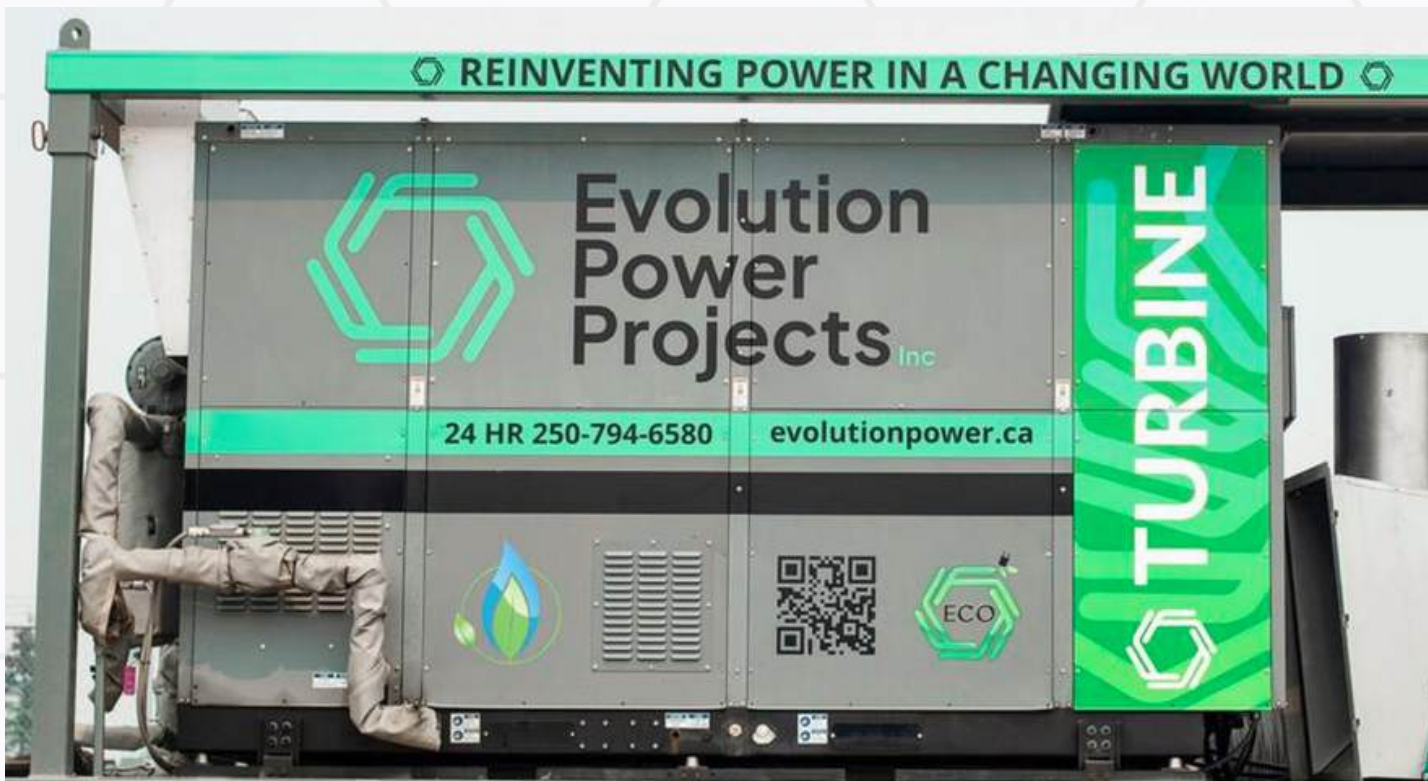
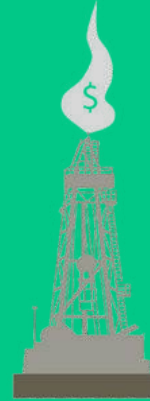


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OVERVIEW

Utilizing surplus natural gas production in regions limited by insufficient infrastructure can be advantageous. Evolution Power Projects (“EPP”) is introducing advanced turbine technology to Operators and Midstreamers as an innovative solution to effectively comply with stringent flaring and emissions regulations.

BACKGROUND

A prominent Canadian oil and gas producer has selected EPP to install and operate Natural Gas Turbines in Central Alberta to combust flare gas at one of their production facilities. In October 2024, EPP successfully deployed three 333kW Natural Gas Turbines. The Alberta Energy Regulator (AER) and British Columbia Energy Regular (BCER) have imposed stringent flaring restrictions as well as emission rules and regulations in a quickly changing Canadian Energy emission landscape. Independent testing has definitively shown that not only do the turbines meet the stringent air quality regulations, but they also exceed these standards significantly, with actual emissions recorded well below the regulatory limits (refer to AER – Directive 60 and BCER – Fugitive Emissions Management Guideline).

SOLUTIONS

Enterprise Group, along with its wholly owned subsidiary, Evolution Power Projects (“EPP”), is excited to announce the early success of a flare gas utilization project currently underway in North Central Alberta with a new client. Desmond O’Kell, President of Enterprise Group, highlighted the importance of this milestone, stating, “Firstly, it enables us to assist a client in harnessing excess natural gas production in areas with limited infrastructure. Secondly, our state-of-the-art turbine technology provides Operators and Midstreamers with an innovative approach to effectively meet strict flaring and emissions regulations.” This initiative underscores our dedication to offering environmentally friendly, low-emission mobile power systems, proving their effectiveness in delivering cost-efficient and advanced solutions for remote power requirements. This project further enhances our growing portfolio of clients who are committed to efficient and sustainable energy solutions.



RESULTS

The table below summarizes the Emissions report based on 100% Turbine Output for the Operator:

Desired Conversion Pollutants	ppmV-dry, (Corrected to 15% O2)	Emissions measured (ppmV)	gm/KW-hr	gm/GJ	gm/hp-hr	lbm/h p-hr	lbm/MW-hr	kg/MW-hr	lbm/h p-hr	lbm/hr	ton/yr
NOX	25.0	12.9	0.5000	138.89	0.373	1.102E-03	1.10	0.5011	0.000822	0.339	1.486
CO	50.0	25.9	0.6089	169.15	0.454	1.342E-03	1.34	0.6102	0.001001	0.413	1.810
UHC (VOC's)	5.0	2.6	0.0349	9.69	0.026	7.689E-05	0.08	0.0349	0.000057	0.024	0.104
SOX	0.0	0.0	0	0.00	0.000	0.000E+00	0.00	0.000	0.00000	0.000	0.000
CO2						1.4027	1402.79	638		431.8	1891.478

Engine:

Total Compressor Flow Rate	4.647	lbm/s
Total Fuel Flow Rate	158.16	lbm/h
Engine Electrical Output (Net)	308	kW
Exhaust Flow Rate	4.690	lbm/s

Run %	Days/Year Hrs
100.0%	365

Color Legend:

Blue	Manual Inputs
Yellow	Outputs



Diesel vs. Natural Gas Cost Comparison (Remote Sites)

350kW Diesel Generator		333kW Natural Gas Turbine (with compressed 3rd party gas)		333kW Natural Gas Turbine (with site gas, fuel gas, etc.)	
Load	100%	Load	100%	100%	
Volume	2400 litres/day	Volume	74.7 mcf/day	74.7 mcf/day	
Price	\$1.60/litre*	Price	\$21/mcf**	\$0.00/mcf***	
Total	\$3840/day	Total	\$1,569/day	\$0/day	
Diesel Costs for 90-day Project		Nat Gas Costs for 90-day Project		Nat Gas Costs for 90-day Project	
Total	\$345,600	Total	\$141,210*	Total	\$0.00**

The transition noted in this table indicates ~60% savings in fuel costs.

Notes:

*The indicated cost in the table of \$1.60 is for diesel (can vary due to market pricing).

**The indicated cost in the table of \$21/mcf is for 3rd Party Compressed Natural Gas supply.

***The indicated cost in the table of \$0.00/mcf is for clients that have made available their own gas supply being produced on site (natural gas, source/site gas, fuel gas, dry flare, etc.).

Diesel vs. Natural Gas Emissions Data

350kW Diesel Generator		333kW Natural Gas Turbine		Total Reduction
Pollutant	Emission Rate	Pollutant	Emission Rate	
Particulate matter less than 2.5 microns in diameter (PM2.5)	9.59 kg/d	Particulate matter less than 2.5 microns in diameter (PM2.5)	0.34 kg/d	-96.4%
Inhalable particulate matter (Bad for lungs) (PM10)	9.59 kg/d	Inhalable particulate matter (Bad for lungs) (PM10)	0.34 kg/d	-96.4%
Sulfur oxides / acid rain / air poll (SOX)	8.93 kg/d	Sulfur oxides / acid rain / air poll (SOX)	0	-100%
Nitrogen oxides / acid rain / air poll (NOX)	135.11 kg/d	Nitrogen oxides / acid rain / air poll (NOX)	16.53 kg/d	87.8%
Volatile organic compounds (Gases from process) (VOC)	10.96 kg/d	Volatile organic compounds (Gases from process) (VOC)	0.11 kg/d	99.0%



SUMMARY

In conclusion, the Natural Gas Turbines combusted approximately 10 decs of gas each day. The emissions data indicates a notable reduction in pollutants, well beneath the limits established by Canadian and Provincial regulatory authorities.

OUTLOOK

Emission pressure around the world is changing the way the Energy Industry Operates. Natural Gas is emerging as a cleaner, more cost-effective, and efficient power source. Natural Gas Turbines, available in various sizes, are increasingly replacing Diesel-driven power solutions, such as reciprocating engines. Natural Gas Turbines allow Operators to:

- Combust Flare Gas
- Power sites with Natural Gas or their own fuel gas
- Achieve lower operational costs compared to Diesel
- Reduce emissions
- Minimize site noise
- Prevent downtime



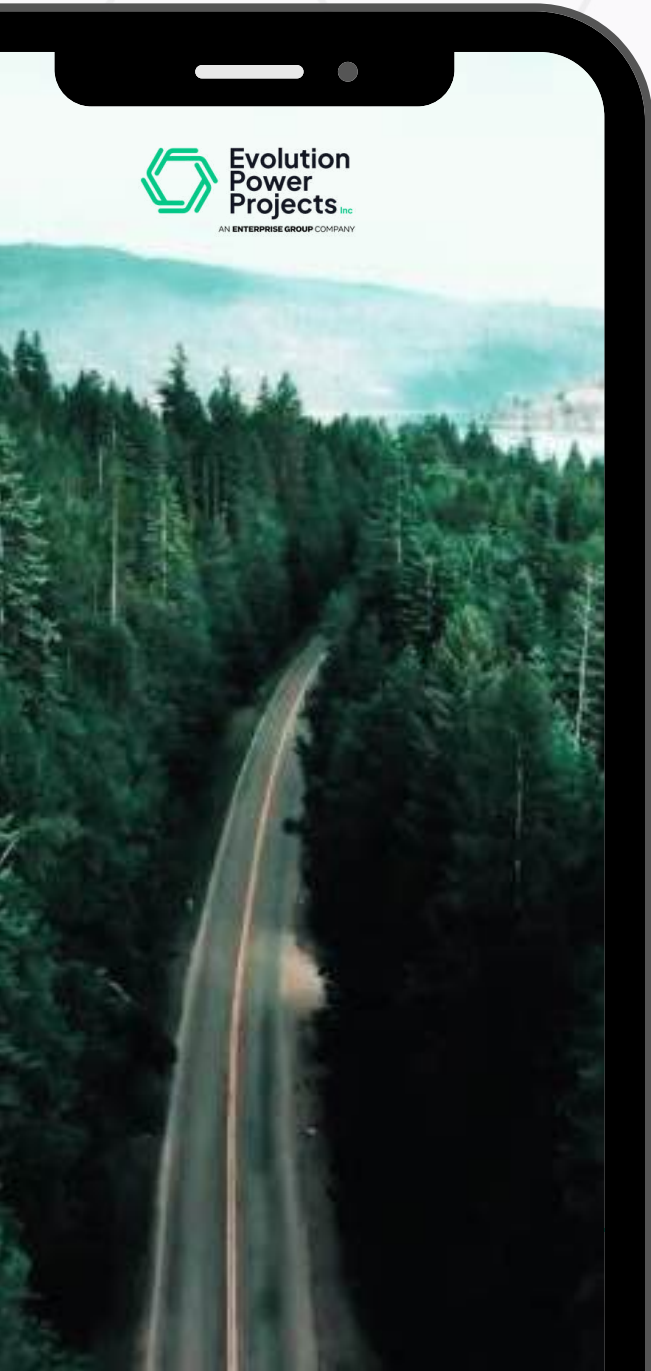
INNOVATION

EPP's mobile turbine power generation units, recognized for their industry leading fuel tolerance, are now harnessing the client's surplus gas production to generate approximately 1 megawatt of continuous power daily. This energy is now easily accessible for a range of on-site applications, such as enhancing production, advancing field development, and addressing other local infrastructure requirements. EPP considers this flare gas solution to be extremely advantageous for the industry as regulations pertaining to flaring have tightened significantly in recent years.

ABOUT

Evolution Power Projects is reinventing the way mobile power is provided on site. Our goal is to enhance efficiency, simplify generator rental management, support essential services, and advocate for natural gas alternatives.

With our Concept to Completion Approach, we help customers assess their total power needs while providing innovative, low-carbon, and environmentally friendly solutions.



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