

# Recovering Waste Heat for Power Production

*Tom Thompson<sup>1</sup>*

*There are a tremendous number of small gas turbines and reciprocating engines utilized in the transportation and processing of Natural Gas. These turbines and engines generate waste heat which has historically been emitted to the atmosphere. Recent projects have demonstrated the opportunity to develop cost effective heat recovery plants with these facilities using the organic rankine cycle (ORC). TransGas and Found Energy are working together to develop two projects that utilize the ORC process to generate power at two TransGas compressor station facilities: Rosetown and Coleville.*

*The TransGas Rosetown project involves the installation of a 1MW Waste Heat to Power Generation facility. This installation uses an ORC package built by Turboden and a waste heat recovery unit built by the parent company of Found Energy, Innovative Steam Technologies. Found Energy has acted as the EPC supplier of the facility, utilizing Aecon Industrial's construction expertise.*

*The TransGas Coleville project involves the installation of the first of its kind 100 kW Waste Heat to Power Generation package, designed and built by Found Energy. The cycle utilizes a novel expander design by StarRotor and IST has designed a unique direct evaporation heat exchanger for the ORC cycle. This package recovers waste heat from a nominal 1 MW reciprocating engine. TransGas and Found Energy are excited to be working together on this first-of-a-kind installation.*

*TransGas Limited is a high pressure natural gas transmission company with an exclusive franchise to operate within the province of Saskatchewan, Canada. TransGas owns and operates 17,000 km of transmission system and 25 compressor stations and is a wholly owned subsidiary of the provincial Crown Corporation, SaskEnergy. Found Energy is a new power generation business that leverages key capabilities within Aecon. Found Energy will develop waste heat recovery projects by providing turnkey EPCM packages, building, owning and operating assets, or a combination thereof.*

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