

Project: Gas Compression Facility, Edna, TX

Developer: Gulf Coast Green Energy

Capacity: 25 – 35 kWe

Commercial Operation: January 2010

Industry: Oil Production

Other Potential Applications:

Natural gas pipelines, crude oil processing, industrial gas compression, CO₂ flooding, power generation using internal combustion engines, co-produced fluids associated with oil and gas production.

Project Description:

ElectraTherm distributor Gulf Coast Green Energy teamed with a natural gas compression services company and a South Texas natural gas field to use the ElectraTherm technology to recover waste heat from an existing gas compressor engine. This project marks the first commercial stationary engine application of the Green Machine, a modular, waste heat to power device that generates fuel-free, emission free electricity utilizing Organic Rankine Cycle (ORC) and proprietary technologies. The installation involves a Waukesha 5794 engine and generates emission-free electricity for use onsite. The waste heat removed by the Green Machine to produce power has the beneficial effect of increasing the engine cooling capacity, allowing the compressor to operate at greater output during the high summer temperatures of West Texas.

Operational Benefits

- Provides a local source of power for oil production equipment
- Decreased cooling requirements for the engine

Economic Benefits

- Reduces the existing plant's retail electric requirements
- Increased engine efficiency through decreased cooling load = fuel savings

Environmental Benefits

- Emission free and fuel free production of electricity. Projects can be up to 65 kW depending on engine size, waste heat capture scheme and ambient conditions.

