Adding a Green Machine to a biogas engine creates a significant value and helps meet thermal requirements for various incentives.
ElectraTherm’s award-winning Green Machine utilizes low grade heat sources to make electricity with:

- No fuel requirement
- 20-year design life
- Minimal footprint
- Low maintenance
- Zero emissions
- Attractive payback

Standard Features and Specifications

- Fully automated controls with remote monitoring and operating capabilities
- Induction generator with power factor correction for easy grid connection
- Simple maintenance, with no gearbox or oil changes
- Closed loop air cooled condensing option results in zero water consumption
- NEMA 3R / IP 54 compliant enclosure for outdoor use

Steps in the Process

1) Working fluid is pumped to higher pressure and transferred to the evaporator.
2) Heat captured by the evaporator boils the working fluid into pressurized vapor.
3) The vapor flows through the twin screw expander, spinning an electric generator to produce power.
4) The vapor is cooled and condensed back into a liquid in the condenser to repeat the cycle.

This is Smart Power™

A biogas plant that uses the Green Machine converts excess engine heat into valuable electricity and reduces existing on-site electrical cooling loads for the engine. The Green Machine increases biogas plant efficiency and lowers fuel requirements for the biogas engine. This means increased revenue for the biogas plant.

All of this is done with zero emissions.

An Organic Rankine Cycle that is optimized for biogas plants
Additional benefits include:

- 20-foot container can be placed directly on level, compacted gravel; No concrete pad is required
- Air cooled condenser plumbing is included with equipment
- Simple electrical connections
- In-out flanged connections provided at end of container for plumbing connections
- Enhanced serviceability
- Easy access to all components and control panels
- Lower installation material and labor costs
- Available in water cooled and air cooled condensing versions
- Geothermal specific models also available

ElectraTherm, Inc. is a clean energy company headquartered in Reno, Nevada. ElectraTherm’s product, the Green Machine, generates fuel-free, emission-free power from low temperature waste heat using the Organic Rankine Cycle (ORC) and patented technology. Our machines are modular, robust, low maintenance power generators.