

## An Energy Efficient Heat and Power Solution



### What is microCHP?

The micro-cogeneration system provides heat and electrical power in a cost effective and environmentally friendly manner. Using a natural gas or propane fueled Marathon Engine, the system captures thermal energy for space heating or domestic hot water. Electricity produced by the generator is either consumed on-site or excess can be sold back to the grid if net metering is available in your state.

### How the system works.

The mCHP uses heat generated by an internal combustion engine to produce between 13,000 - 47,000 BTU of heat per hour while simultaneously co-generating 1.2 - 4.4kW of electricity per hour.

The system is thermally driven. It anticipates the heat demand from sensors located in the house, buffer tank or outside and varies its output to satisfy the demand. It will modulate (slow down or speed up) to run at a level to maintain a constant heat requirement in order to keep the engine running as long as possible, ensuring maximum electrical generation.

### Applications

Applications are endless, but the greatest savings coincide with installations that have larger heating loads. Installations have included residential, commercial and industrial settings.



# Benefits & Features

- Provides heat & electrical power
- Long maintenance interval
- Lowers energy bill
- Parallel operation for larger installs
- Reduces CO<sub>2</sub> emissions
- Ultra-quiet
- Powered by a long-life engine
- Self-modulating system

**Provides heat & electrical power:** ecopower produces 13,000 - 47,000 BTU's per hour of heat and generates 1.2 - 4.4kW per hour of electricity.

**Lowers energy bill:** use the electricity created on site, reducing your utility bill, or send excess electricity back to the grid.

**Reduces CO<sub>2</sub> emissions:** the mCHP produces extremely low emissions compared to purchasing electricity from a conventional power plant.

**Powered by a long-life engine:** the Marathon Engine is rated for 40,000+ hours.

**Long maintenance interval:** maintenance is every 4,000 hours and includes changing the oil, oil filter, air filter, spark plug and spark plug cable.

**Parallel operation for larger installs:** up to four units can be installed in parallel to provide more thermal and electrical output.

**Ultra-quiet:** at 55 dB (A) the microCHP system is about as quiet as a dishwasher.

**Self-modulating system:** a unique feature of the mCHP, the system speeds up or slows down to stay running as long as possible.

## Conventional Power Plant



Waste Heat: 58%  
Power Generating Efficiency: 42%  
**Overall Efficiency: 42%**

## microCHP System



Heat Recovery: 68%  
Power Generating Efficiency: 25%  
**Overall Efficiency: 93%**

