



ECO-MAX

ENERGY INDEPENDENCE PACKAGE

Technical Support:
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eco-maxchillers.com

PREMIUM EFFICIENCY ELECTRICITY, HEATING, AND COOLING

Job Name:	Location:	Date:
Submitted to:	Approval:	Date:



200 kW Microturbine

Performance

Nominal Capacity (kW)	200
Fuel Type:	Natural Gas
<small>Fuels available include: NG, Propane, Diesel, Bio-Diesel, Aviation, Landfill Gas, Kerosene, and Ethanol (with Ancillary Equipment).</small>	
Elevation (ft)	0
Design Ambient (Hot, °F)	95
Electrical Output (kW)	180
Design Ambient (Cold, °F)	0
Electrical Output (kW)	200

Options:

- Dual Mode (Grid-tied + Stand-alone)
- Natural Gas Fuel

Exhaust Gas Heat Recovery (High Eff)

Hot Water Heating Performance (140 F Inlet):

Design Ambient (Hot, °F)	95
Flow Rate (gpm)	138
Thermal Output (BTU/hr)	1,221,000

Design Ambient (Cold, °F)	0
Flow Rate (gpm)	138
Thermal Output (BTU/hr)	806,000

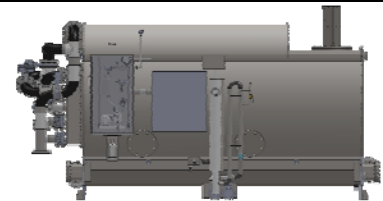
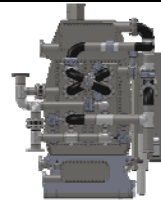
Tri-Gen Performance (180 F Inlet):

Design Ambient (Hot, °F)	95
Flow Rate (gpm)	138
Thermal Output (BTU/hr)	1,023,000

Options:

- 3" Insulation
- SS Exterior Shell
- Sound Attenuation
- 316 SS Steel Tubes
- SS Exhaust Gas Bypass

*All data is preliminary and subject to change without notice.



ECO-MAX Adsorption Chiller Options

Cooling Output (Tons) Unit Size: AD3- Chiller COP	47	56	60
	D-50	D-75	E-100
	0.55	0.65	0.7

Chilled Water Flow

Inlet Temperature (°F)	55	55	55
Outlet Temperature (°F)	45	45	45
Flow Rate (gpm)	114	135	145

Condenser Water Flow

Inlet Temperature (°F)	85	85	85
Outlet Temperature (°F)	95	95	95
Flow Rate (gpm)	321	342	352

Hot Water Flow

Inlet Temperature (°F)	195	195	195
Outlet Temperature (°F)	180	180	180
Flow Rate (gpm)	138	138	138

Options:

- Containerization
- Phoenix Contact PLC
- On-board Air Compressor

Hydronic Package

	Qty	Starter
Chilled Water Pumps	2	VFD
Hot Water Pumps	2	VFD
Condenser Pumps	2	VFD

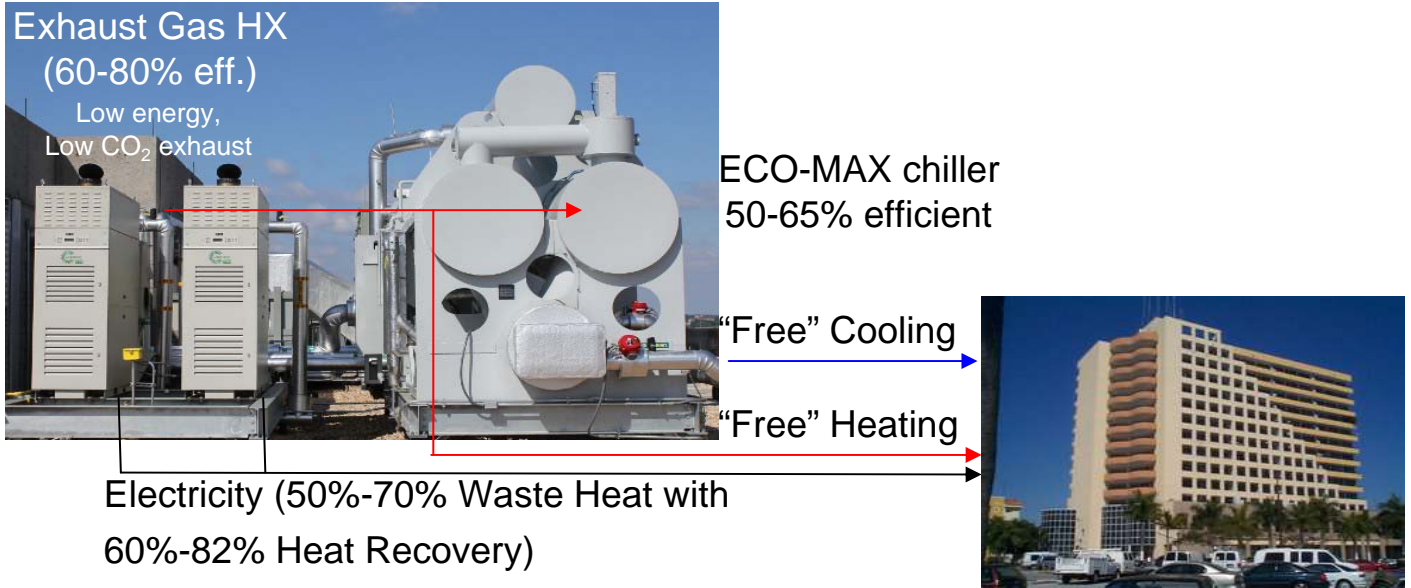
Options:

- Skid Mounting
- Hot W. Buffer Tank
- H.W. Buffer Tank
- Standard Cooling Tower
- VFD for Cooling Tower Fan
- Check Valves
- Flowmeters
- P/T Gauges

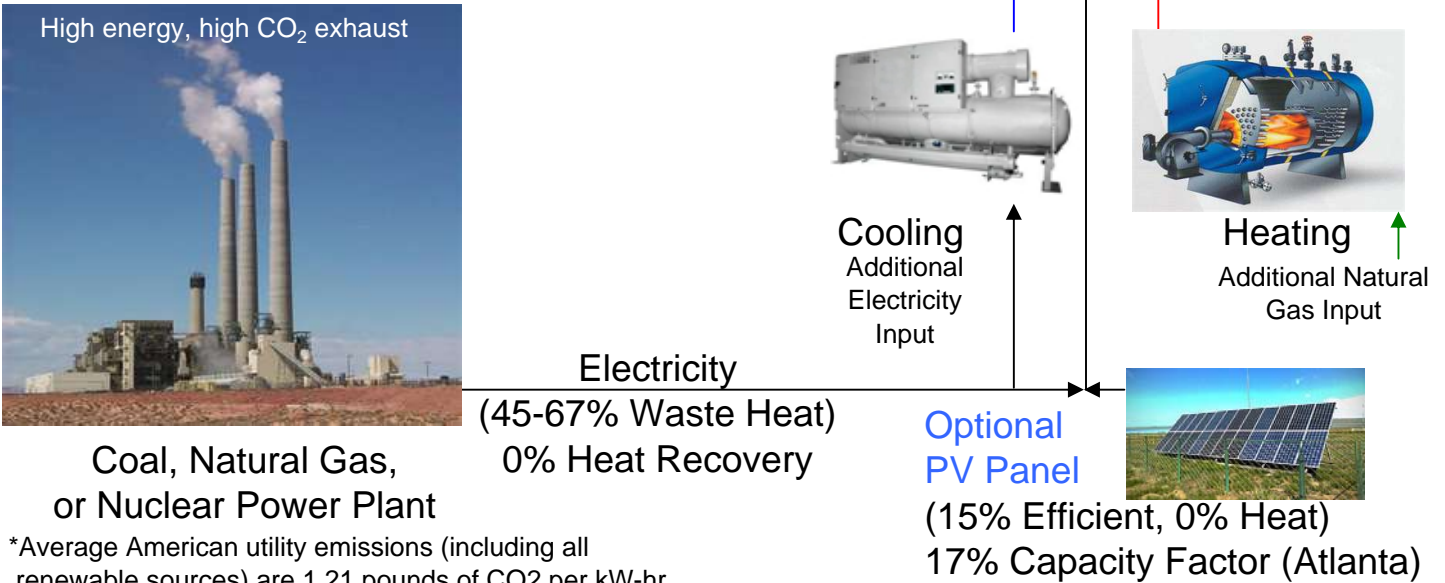
Up to 92% efficiency in heating mode!

TRIGENERATION: FREE HEATING AND COOLING

On-Site Tri-Generation Package



Grid Power with Chiller and Boiler



*Average American utility emissions (including all renewable sources) are 1.21 pounds of CO₂ per kW-hr

1000 kW, 250 TR Chiller, 1 MW Boiler	Annual Fuel Cost (Dollars)	Annual Maintenance (Dollars)	Capital Cost (Dollars)	Annual CO ₂ Emissions (Pounds)	Straight Payback (Years)	Investment Incentives Available?
Tri-Generation	\$ 724,585	\$ 70,000	\$ 2,800,000	10,599,600	6.2	Yes
Solar PV + Grid	\$ 1,007,141	\$ 45,000	\$ 5,500,000	13,183,800	47.7	Yes
Grid	\$ 1,121,021	\$ 35,000	\$ 550,000	15,067,200	-	No

*Assumes \$0.10 / kw-hr, \$0.80 / therm, 0.65 kW/ton, 82% eff boiler

*if renewable methane is used, there will be Zero net CO₂ emissions for a trigeneration package