

If your facility has cooling needs an absorption chiller can be used and will be more efficient than a traditional HVAC system.

Cost savings: 20% of energy costs

Typical System Costs:

\$2.5M for 1 MW system – heating only

\$3.5M for 1 MW system – heating and cooling

\$1.25M for 385kW biogas system – waste processing



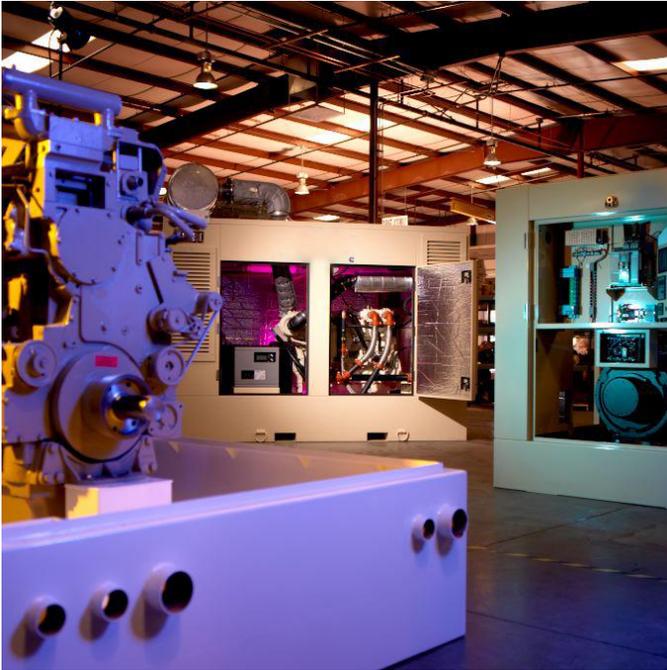
Cogeneration:

- Takes waste heat from an engine and turns it into usable energy for heating boilers and industrial processes
- Saves money through high efficiency
- Reduces energy usage and carbon footprint
- Best candidates are hotels, hospitals, casinos, food processors, universities, wastewater treatment, livestock/crop waste, large office buildings, government facilities, airports
- If you can use waste heat all the time cogeneration can save you money



Why E3 NV?

- All units are extensively tested
- Caterpillar engines which provide the best durability and return on investment
- E3 has many years of experience with a diverse portfolio of projects and solutions
- US-based manufacturing, tight quality control and supply line management
- Pioneered remote engine control software
- Able to build for any harsh conditions
- E3 will negotiate with your utility company of your behalf so you can resell electricity



On the right you can see an example for a 750 kW cogeneration system. This system would include three 250kWe gensets(engine/generator set), balance radiator, boiler integration, a 120mph wind rated enclosure, sound attenuation, engine silencer, emissions control. This also includes services such as engineering, 24/7 monitoring, maintenance and installation.

If you are interest in more info please contact us at:

E3 NV, LLC
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Thank you for your time!



BASIC COGENERATION ECONOMICS – 750 kW
Energy Consumed by Cogeneration Equipment

Btu/hr	8,360,460	
Therms/hr	52.5	
\$/hr	\$28.88	(assumes \$0.55/therm for cogeneration gas)
\$/kWh	\$0.0385	(assumes \$0.55/therm for cogeneration gas)

Energy Output from Cogeneration Equipment

Kilowatts efficiency	750	30.6 %
Hot water – Btu/hr	4,573,020	54.7% efficiency
Total plant efficiency		85.3%

Savings on Electricity Production (assumes average price from utility \$0.12/kWh)

Old cost		750 kW x \$0.012 x 8,322 hr/yr = \$748,980 per year from electric utility
New cost	Gas	\$28.88/hr for cogeneration x 8,322 hr/yr = \$240,339/yr
	O&M	750 kW x 8322 hr/yr x \$0.025/kWh = \$156,037/yr
Savings		\$748,980 - (\$240,339 + 156,037) = \$352,604/yr

Savings on Gas Costs (avoided purchase of natural gas for heating by using cogeneration hot water)

4,573,020 Btu/hr hot water x \$0.60/therm x 70% boiler efficiency x 8,322 hr/yr ÷ 905 Btu/SQF x 100 SQF/therm = \$360,442 in avoided gas purchases

Total Annual Savings

\$352,604 + \$360,442 = \$713,036/yr

Payback Period

\$1,875,000 for cogeneration (\$2,500/kW)
Payback in 2.6 years