



PROVEN PERFORMANCE

for combined heat and power

Reliable, Flexible Combined Heat and Power

New regulations and changing utility rates make gas engine driven combined heat and power(CHP), more attractive than ever before.

Your local Cat[®] Dealer can help you take full advantage of the emerging combined heat and power market. Cat offers a single source supply for your entire CHP system including:

- Backup power
- Switchgear
- Heat Recovery
- Emissions after-treatment
- Long term operating and maintenance agreements

Whether you're installing a new system or replacing old boilers, you need the best return on investment. You'll get it with a Cat combined heat and power system. It will keep your installation costs low, while delivering affordable, reliable power, year after year.

Contact your Cat Dealer for a combined heat and power evaluation for your facility.

CONVERT WITH CONFIDENCE

Cat gensets are known worldwide for their reliability. The gensets are precision manufactured in factories certified under the ISO 9001 international quality standard. Statistical process control and the latest manufacturing methods ensure consistent quality and reliable performance. High-quality means low operating costs, high uptime, and peak return on your investment.



Continuous, critical processes, like glass making, demand the reliable heat and power you'll get from Cat gas gensets.

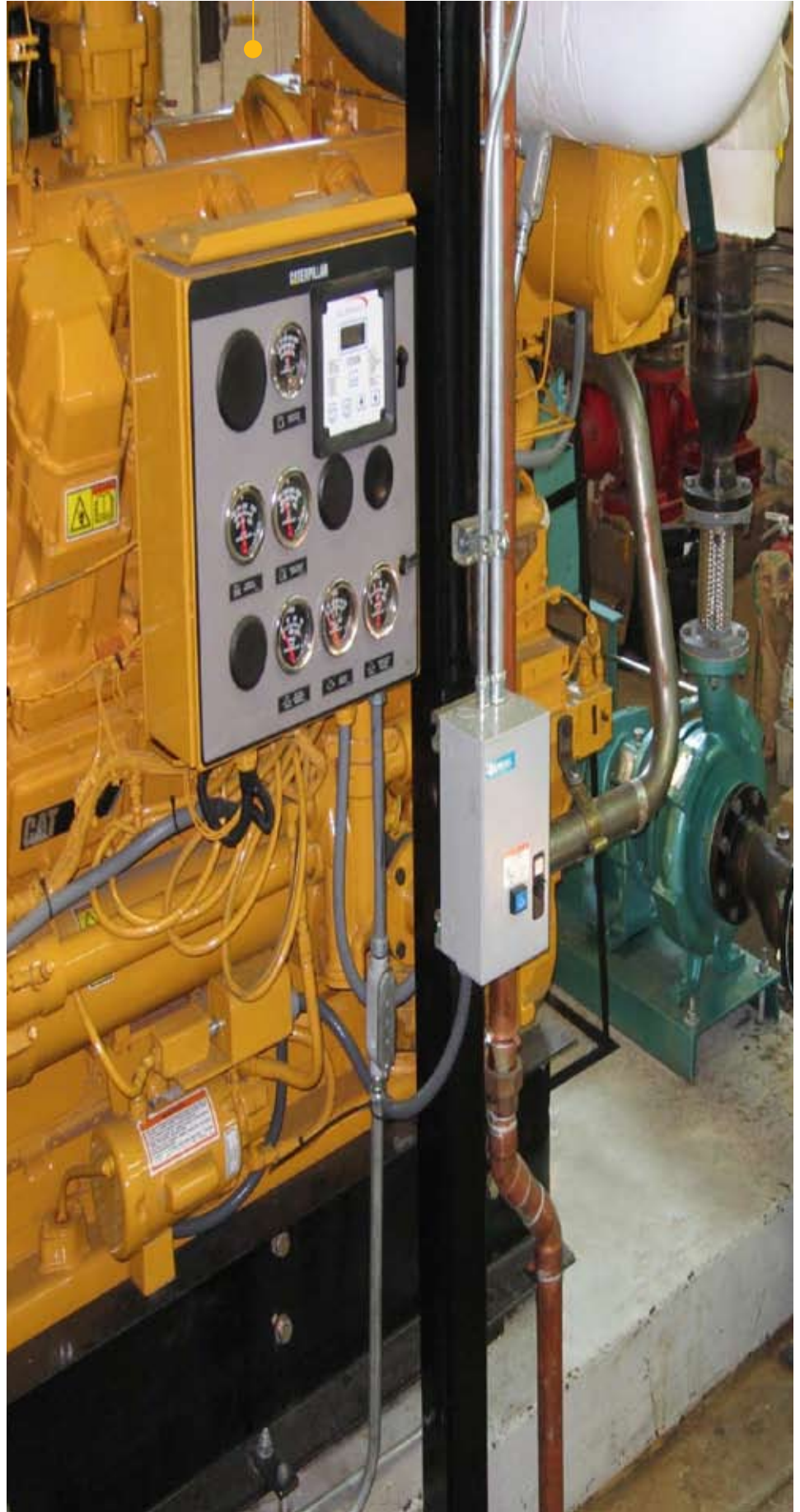
OCTAGON HEALTHCARE

Octagon Healthcare needed a cost effective reliable CHP and standby power generation system for the Norfolk and Norwich Hospital. The local Cat Dealer provided a gas G3516 LE spark-ignited reciprocating engine powered CHP system, plus four 2250kVA standby generator sets to control and supply power to the hospital heating and ventilation ring. Each system is required to work independently of the others, so switchgear and controls systems were required for the job.

Rather than the usual basement plant room, a stand alone energy center was built to give better access for servicing and supplies. The prime power source is a Caterpillar G3516 lean-burn gas engine. Heat is recovered from the engine exhaust, jacket water heater and oil cooler circuits, to provide 1314 kW. This heats the ring's returning medium-pressure hot water before it reenters the boiler, so the CHP acts as lead boiler. When thermal demand is low, excess heat is sent to a remote radiator.

Fueled with clean-burning natural gas, Cat gas gensets meet even the toughest air-quality requirements.

A Dresser-Rand™ Aircogen designed application



FLEXIBLE PERFORMANCE

Cat offers a wide range of power nodes up to 6.5 MW of power in gaseous-fueled gensets.

Pipeline Natural Gas 60 Hz Gen Sets Combined Heat and Power (CHP) Applications

Rating			US Sourced (Lafayette / Griffin)								
RPM			Pipeline Natural Gas					Heat Rej at Full Load (BTU / min)			
900	1200	1800	Sales Model	NOx (g/ bHp-hr)	JW Temp Eng Out (°F)	JW Temp Eng In (°F)	Ex Stack Temp (°F)	JW	A/C 1	O/C	Ex (LHV to 350° F)
		375	G3412C LE	1.9	210	201	700	18,937	N/A	2,994	9,647
	600		G3512 LE	2.0	261	252	752	19,734	N/A	N/A	16,405
	820		G3516 LE	2.0	261	252	801	25,078	N/A	N/A	19,546
		1300	G3516B	0.5	198	189	985	27,834	9,824	9,338	56,262
		1660	G3516C	1.0	210	201	930	30,185	14,800	6,764	60,088
		2055	G3520C	1.0	194	185	909	38,230	21,257	10,089	71,543
2335			G3612	0.7	210.0	201.0	758	28,276	11,126	17,250	80,612
3105			G3616	0.7	210.0	201.0	731	37,444	15,640	22,846	83,403

You can easily move Cat gensets into your current floor plan without having to add costly floor reinforcements or other building modifications as they fit into small, low, or confined spaces.

In general, engine-driven generator sets can produce heat well suited to a variety of needs: space heating, domestic or industrial water heating, absorption cooling, desiccant dehumidification, and light industrial process loads such as in dairy farming, baking, cooking, and pharmaceutical production. A CHP system does not need to serve such loads year-round or 24 hours per day to be cost effective – nor does a facility heat load have to be large enough to use all the heat that can be recovered from the engine.

FUEL EFFICIENCY EQUATES TO COST SAVINGS

Superior engineering has made Cat spark-ignited, gaseous-fueled reciprocating gensets the industry leader in efficiency, reliability and durability.

CLEAN AND SAFE

Cat gas engines meet the most stringent air-quality requirements. And, they operate on safe, low-pressure gas systems. Cat also offers aftertreatment products to help you meet local emission requirements.



MONROE COUNTY / SIEMENS BUILDING TECHNOLOGIES

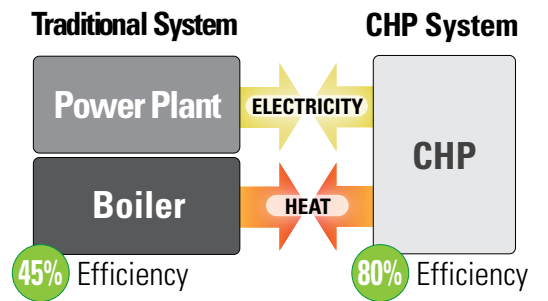
Seven Cat G3516 gensets with heat recovery units will save approximately \$1 million in energy costs per year for a Rochester, New York community college and a county facility. Four of the Cat G3516B gensets provide up to 5.4 MW of power at the Monroe County Community College site. The CHP plants will provide electricity for both facilities, steam for the county campus, and hot water for the college.



ECO-FRIENDLY ENERGY

Combined heat and power is significantly more efficient than utilizing power from the grid alone. By capturing heat from the production of power most CHP facilities are able to save considerable money on fuel.

CHP is becoming more economical and widely accepted as oil and gas prices increase and the world desires to reduce green house gas emissions. Governments are also providing increased incentives for sustainable power resources.



PARTNER

Making Your Investment Pay.

Your combined heat and power system represents a long term investment and Caterpillar Financial Services Corporation can make financing easier by offering attractive finance programs, including special rent/lease arrangements to help you maximize your cash flow. Your local Cat Dealer also offers service contracts which offer peace of mind knowing you have Cat service technicians available 24 hours a day.

Cat gas engines are proven worldwide in countless applications, on pipeline, as well as, landfill, digester, coal seam and propane gas. Thousands are installed worldwide. Generator sets and switchgear are designed and built by Caterpillar, factory-tested under full load before delivery, and installed by your Cat Dealer's engineering staff. Your system is backed by the worldwide Cat Dealer organization, with 1,200 Dealer locations. Your Cat gas engines are easy to service. Most parts are readily available within 24 to 48 hours worldwide. And your Cat Dealer is fully trained and equipped to help you.

Expert Support, Around the Corner.

No one supports you the way Cat Dealers can. For project design, construction management, and regular maintenance and service, your local Dealer is there. Caterpillar offers the most highly trained and technologically supported service technicians in the world.

District heating and cooling and other power projects deliver top return on investment with Caterpillar financing and Cat Dealer support. Your local Cat Dealer utilizes innovations to simplify maintenance and reduce overall operation costs .





CATERPILLAR YOUR LOCAL RESOURCE. WORLDWIDE.

Your Cat Dealer is prepared to answer any questions you may have about Cat Power Systems, as well as customer support, parts or service capability anywhere in the world.

To find your nearest Dealer go to: www.cat-electricpower.com.

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TODAY'S WORK. TOMORROW'S WORLD.™