SMATER ENERGY
CAT® GAS GENERATOR SETS
COMMERCIAL AND INDUSTRIAL FACILITIES
Reduce operating costs and carbon footprint simultaneously with state-of-the-art technology that provides various forms of process energy, including electricity, heat, steam and cooling with an absorption chiller.

ELECTRIC UTILITIES
Stationary and containerized options available for electric utilities and district energy facilities around the world, meeting both continuous grid support and peak electricity demand.

MINES
Onsite gas power generation can help support greenfield site development, reduce emissions and improve safety for mining operations.

AGRICULTURE AND FOOD/BEVERAGE PROCESSING
Farms around the world utilize biogas, a byproduct of the anaerobic digestion of organic waste, as a renewable fuel resource for electricity generation.

LANDFILLS AND WASTEWATER TREATMENT PLANTS
Instead of destroying or flaring the methane gas produced by landfills or sewers, use this fuel to power generator sets as part of a sustainable energy program.

GREENHOUSES
Gas generator sets help power electricity for lighting, sale to the local grid and hot water for facility heating. Plus, carbon dioxide can be used as an organic fertilizer for increased crop production.

MEETING YOUR NEEDS HAS SHAPED OUR HISTORY
For more than 90 years, our goal has been to deliver the most reliable power generation at the lowest possible cost of ownership and operation. Today, Caterpillar not only manufactures power generation equipment, but we also provide customized project financing via Cat Financial.

THE COMPLETE SOLUTION
From mechanical systems such as gas fuel train and heat recovery systems, to exhaust after-treatment that complies with the world’s most stringent emission requirements, we provide a range of gas-powered solutions to meet your requirements.

LOWER LIFE CYCLE COST
With longer maintenance intervals, better fuel efficiency and competitive repair options, Caterpillar delivers the lowest total owning and operating costs so you can get a strong return on your investment, year after year.
NORTH AMERICA
4,684 units
3,338 MWₚ

SOUTH AMERICA
1,286 units
1,016 MWₚ

EUROPE/AFRICA/
MIDDLE EAST/CIS
6,651 units
7,149 MWₚ

ASIA PACIFIC
3,707 units
4,185 MWₚ
CUTTING COSTS FOR CLOUD COMPUTING FACILITY

The Shanghai Tencent Cloud Data Center (TCDC) is one of the most advanced service platforms for cloud computing and cloud storage infrastructures in the Asia-Pacific region.

SOLUTION

With a capacity of 10 MW, the combined cooling, heat and power (CCHP) of the facility’s Cat G3520H gas generator sets have reduced CO₂ emissions by 48% and NOx emissions by more than 60%, compared with conventional coal-fired power plants.

A NEW WAY TO USE WASTE

More than 1,000 tons of food waste enters landfills in Florida every day. Harvest Power, Inc. uses anaerobic digestion of this waste to produce renewable biogas at its Central Florida Energy Garden.

SOLUTION

The resulting biogas powers two Cat G3520C generator sets, producing 5.4 MW of combined heat and power — enough energy to power more than 2,000 homes each year.
BRINGING POWER TO THE PEOPLE OF MYANMAR

With one of the lowest electrification rates in the world, about 75% of people living in Myanmar in 2012 did not have access to electricity. To help facilitate the increasing need for power, the Ministry of Electric Power invested in plant upgrades at four sites.

SOLUTION

Thirteen Cat CG260 gas generator sets were installed at the Ywama/Yangon facility, producing 50 MW_e of power for the surrounding region and the national power grid.
Whether your energy demand is big or small, we have a range of power generation equipment that can deliver the power you need with a variety of fuel options.

**BIOGAS**

Biogas-fueled generator sets utilize methane gas produced by the breakdown of food waste, animal waste or landfills.

**NATURAL GAS**

Natural gas is one of the cleanest burning fuels, helping you meet strict emission and environmental regulations.

**PROPANE**

Propane is a fuel alternative that can be stored onsite. It burns hotter requiring special engine selection and tuning.

**POWER RANGES**

15,000 kW
10,000 kW
7,000 kW
6,000 kW
5,000 kW
4,000 kW
3,000 kW
2,000 kW
1,500 kW
1,000 kW
500 kW
0 kW

**GENERATOR SET MODEL SERIES**

G3300  DG SERIES  G3400  CG132  CG170  G3500  CG260  GCM34
A FULL RANGE OF ENGINES FOR ALL YOUR NEEDS

A SIZING TOOL AT YOUR FINGERTIPS

Cat SpecSizer recommends the right generator sets for your power needs based on site conditions, load characteristics, required performance and other specifications, giving you accurate and timely technical data, load models and optimized algorithms. SpecSizer evaluates load types and collects load data, organizing the information into easy-to-follow steps, so you can select the best generator set size in both rating and footprint.

G3300 SERIES
50/60hz
70 - 100 kW

DG SERIES
50/60hz
25 - 375 kW

G3400 SERIES
50/60hz
125 - 500 kW

CG132B
50/60hz
400 - 1000 kW

CG170
50/60hz
1000 - 2000 kW

G3500 SERIES
50/60hz
900 - 2500 kW

CG260
50/60hz
3000 - 4500 kW

GCM34
50/60hz
5700 - 10,000 kW
**REDUCING ENERGY COSTS IN MEXICO**

Altos Hornos de Mexico (AHMSA), Mexico’s largest integrated steelmaking company, needed to reduce energy costs as well as meet increasingly strict environmental regulations.

**SOLUTION**
AHMSA implemented a plan to generate 160 MW of power from four separate plants powered by a total of 40 Cat CG260-16 generator sets for its steelmaking operations.

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**BREATH OF FRESH AIR IN UTAH**

Provo Power, a member of the Utah Municipal Power Agency (UMPA), upgraded its 75-year-old facility in an effort to reduce emissions and air pollution for nearby residents.

**SOLUTION**

The facility installed five Cat G3520H generator sets, yielding 13 MW more power annually than the previous equipment and reducing emissions by 97%.
With our comprehensive digital power plant control system, Total Plant and Energy Management (TPEM), Caterpillar redefines the control standard for energy solutions. For many applications, TPEM eliminates the need for additional control systems, as all power plant data for the generator set and plant control are combined in one system. This optimum power plant control enables high economic efficiency, provided from a single source.

**SETUP**
- Custom-tailored technical solutions
- One integrated, flexible control system for all electric power applications
- Multiple functionalities for individual solutions
- One user interface for complete power plant control and setup

**OPTIMIZE**
- Data management and analysis deliver information for optimizing the power plant
- Life cycle history enables the logging of and access to data throughout the life cycle of the generator set and peripherals

**OPERATE**
- High efficiency through optimal power plant control
- Enables remote power plant management and monitoring
- Use the full generator set potential with maximum reliability
- Expanded scope – fully integrated remote access, synchronization, power switch and plant control

**EMCP 4.3 GENERATOR SET CONTROLLER**

The Cat EMCP 4.3 offers fully featured power metering and protective relaying in addition to engine and generator set control and monitoring. Engine and generator set controls, diagnostics and operating information are accessible via the control panel keypads. Diagnostics from the EMCP 4 optional modules can be viewed and reset through the EMCP 4.3.

**FULL RANGE OF ATTACHMENTS**
- Wide range of system expansion attachments, designed specifically to work with the EMCP 4
- Flexible packaging options for easy and cost-effective installation

**WORLDWIDE PRODUCT SUPPORT**
- Cat dealers provide extensive pre- and post-sale support
- Cat dealers have over 1,600 dealer branch stores operating in 200 countries

**FEATURES**
- 480 x 320 pixel, 5.5 inch, white backlit graphical display denotes text alarm/event descriptions, set points, engine and generator monitoring, and is visible in all lighting conditions
- Textual display with support for 16 languages, including character languages such as Arabic, Chinese and Japanese
- Advanced engine monitoring is available on systems with an ADEM™ controller
- Integration with the Caterpillar Digital Voltage Regulator (DVR) and Integrated Voltage Regulator (IVR) provides enhanced system performance
- Fully featured power metering, protective relaying, engine and generator parameter viewing, and expanded AC metering are all integrated into this controller
- Real-time clock allows for date and time stamping of diagnostics and events in the control’s logs, as well as service maintenance reminders based on engine operating hours or calendar days. Up to 40 diagnostic events are stored in the non-volatile memory
- Real-time clock also allows for the creation of a status event log. This log holds the last 500 control events such as ECS Position, Remote Initiate, Load Shed, etc.
ONGOING SUPPORT

Coverage
From a 12-month basic warranty and scheduled oil sampling to a 12-year Customer Value Agreement (CVA), your local Cat dealer can help you select from a range of maintenance and repair options. For generator sets and switchgear, Cat Insurance offers various Extended Service Coverage (ESC) plans to protect against parts and labor costs associated with unplanned repairs after the standard warranty period. In addition, one- to five-year Overhaul Protection Coverage (OPC) is offered on both parts and service associated with an engine overhaul.

Finance
Cat Financial is a full service finance company offering both loans and leases at competitive interest rates and flexible terms on equipment and projects powered by Cat engines. Construction and term project financing is available for up to 80% of the total project cost, including engineering, equipment, permitting and soft costs.

CAT RENTAL POWER
Sometimes temporary electric power solutions are required to meet power demands during major construction projects, utility power shortages, or expansions of commercial or industrial operations. Cat Rental Power offers containerized, mobile generator sets that can operate on natural gas fuel, individually or paralleled together, on a monthly or annual contract basis.

SUPPORT FOR LIFE

Your power system can’t take time off. To maintain your system simply and affordably, your Cat dealer offers several levels of support that can be customized to your specific needs.

Caterpillar is committed to your success, with support for every product we sell. The global Cat dealer network makes sure you have the service and support you need, anywhere in the world. Your Cat dealer has excellent parts availability and expert technicians to keep your system up and running with whatever you need, whenever you need it.
LEARN MORE ABOUT SMARTER ENERGY USING CAT GAS GENERATOR SETS, VISIT: CAT.COM/SMARTERENERGY