



SMARTER ENERGY

CAT[®] GAS GENERATOR SETS



INSTALLED CAPACITY OF 8,462 MW_e WORLDWIDE*

*Installed gas generator sets within the last 10 years.

No matter the industry or application, Caterpillar provides the latest power generation technologies to business ventures, municipalities and other customers around the globe. See why Cat[®] gas generator sets can deliver the power, efficiency and reduced emissions you need to keep your business running.

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 providing prime and standby power are available for electric utilities and district energy facilities around the world, meeting both continuous grid support and peak electricity demand.

MINES

On-site 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 LIFECYCLE 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

1,454 units
1,726 MW_e

SOUTH AMERICA

417 units
679 MW_e

**EUROPE/AFRICA/
MIDDLE EAST/CIS**

2,027 units
3,513 MW_e

ASIA PACIFIC

1,660 units
2,543 MW_e



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_e, 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_e 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 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.



POWER RANGES

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

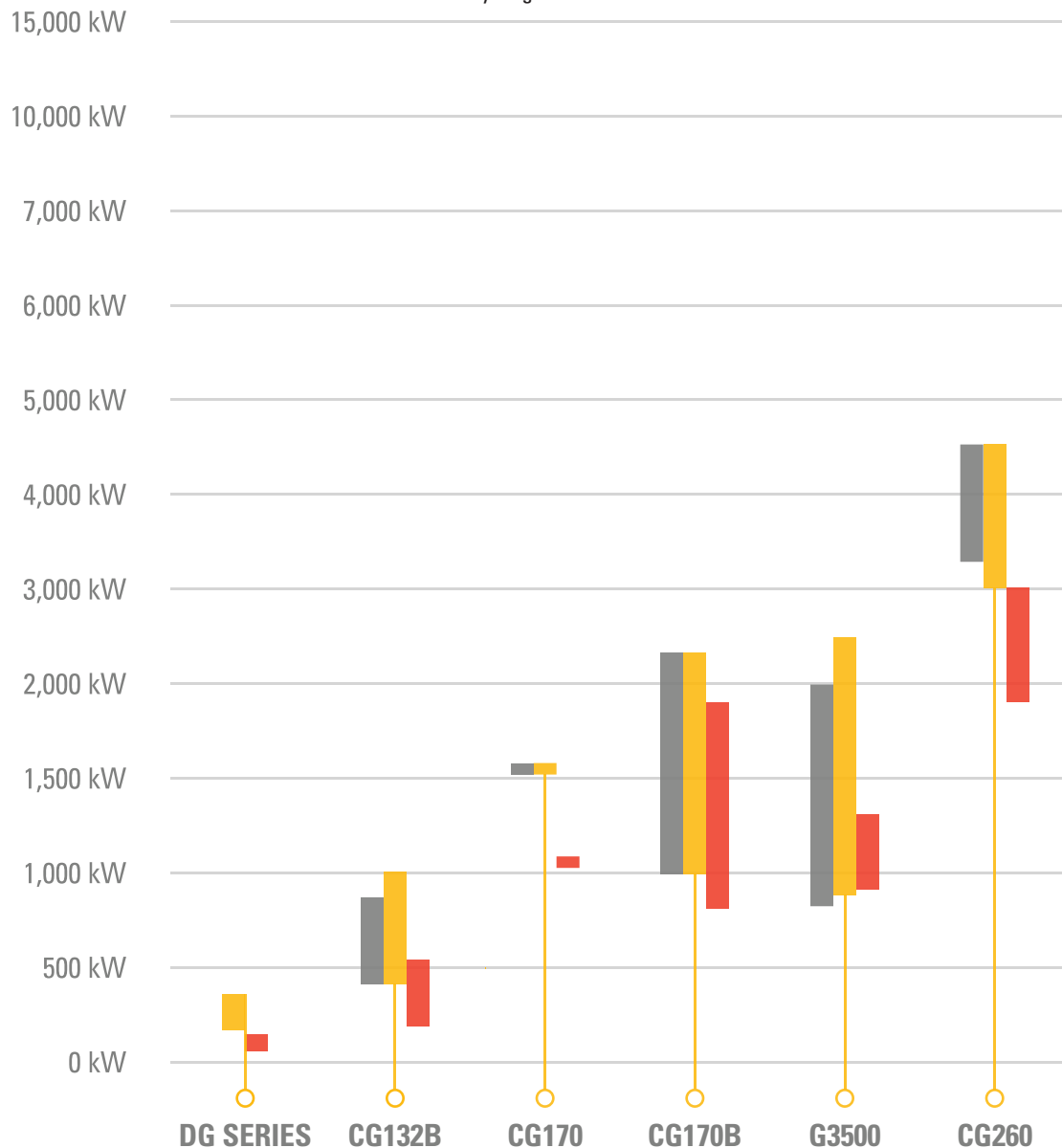
Natural gas is one of the cleanest burning fuels, helping you meet strict emission and environmental regulations.

PROPANE

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

HYDROGEN

Renewable hydrogen and blends of hydrogen and natural gas are among several alternative fuels to help achieve sustainability goals. Cat engines sold today have the ability to run on 5 to 25% hydrogen mixtures.



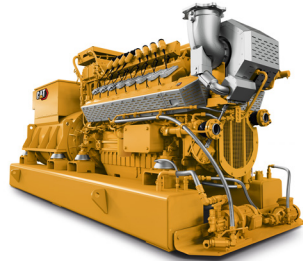
GENERATOR SET MODEL SERIES

A FULL RANGE OF ENGINES FOR ALL YOUR NEEDS



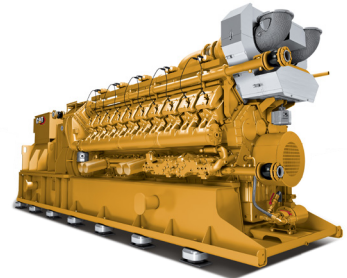
DG SERIES

50/60hz
25 - 375 kW



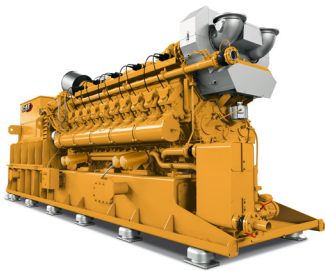
CG132B

50/60hz
400 - 1000 kW



CG170

50/60hz
1075 - 1560 kW



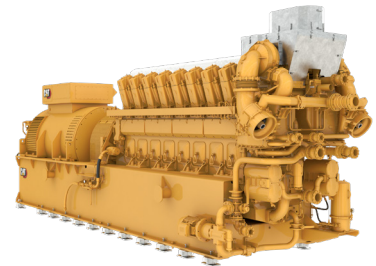
CG170B

50hz
700 - 2300 kW



G3500 SERIES

50/60hz
900 - 2500 kW



CG260

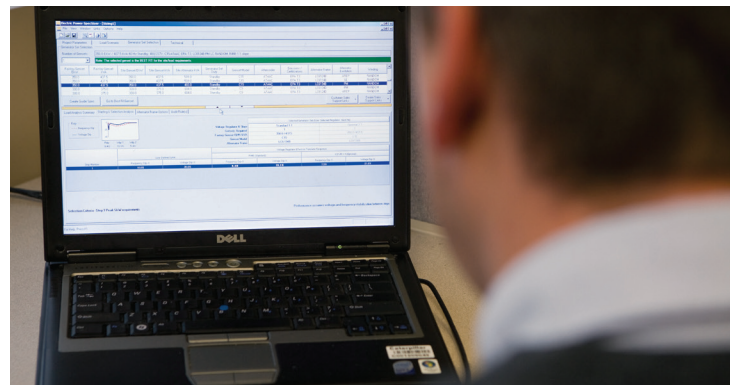
50/60hz
3000 - 4500 kW

CAT ELECTRIC POWER SPECSIZER



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.





Provo, Utah, USA



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%.



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.



Monclova, Mexico



FROM WASTE TO ENERGY IN NEW JERSEY

The Cumberland County Improvement Authority, the only landfill operator in the state to operate a microgrid, wanted to find a way to reduce emissions while creating economic value.

SOLUTION

The Authority had three Cat G3520 gensets installed at its partner-owned Solid Waste Complex. Fueled by methane gas, the units produce enough electricity to power 1,600 homes while reducing 15,000 tons of carbon dioxide emissions annually.



PEAK SHAVING AND SAVING IN TENNESSEE

Volunteer Energy Cooperative (VEC), one of the largest rural electric cooperatives in the U.S., sought to ensure reliable standby power in the event of an outage or disruption due to facility maintenance.

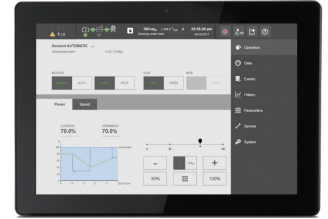
SOLUTION

By running a Cat G3412 gas generator set behind its headquarters for an average of four to six hours per month, VEC saves \$5,000 to \$8,000 per month in energy costs. To ensure backup power at other locations, VEC added two G3512s and another G3412.



TPEM. THE DOOR TO THE DIGITAL AGE.

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
- Lifecycle history enables the logging of and access to data throughout the lifecycle 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 GENERATOR SET CONTROLLER

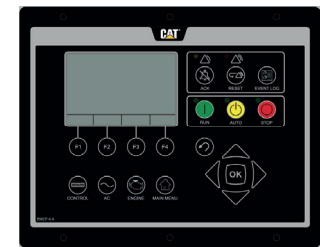
The Cat EMCP offers fully featured power metering and protective relaying in addition to engine and generator set control and monitoring. Engine and generator set controls, diagnostics and operating information are accessible via the control panel keypads. Diagnostics from the EMCP 4 optional modules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

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.

ENERGY AS A SERVICE (EaaS)

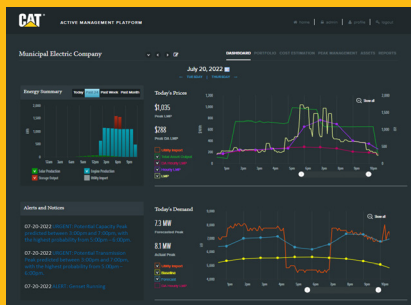
MAXIMIZING ECONOMIC OPPORTUNITIES

Distributed Energy Resources not only build resiliency but also drive revenue. Distributed Energy Resource Management Systems (DERMS), as part of Caterpillar's new EaaS capabilities, boost efficiency, lower energy costs, and empower users to participate in demand response and other energy market programs for added monetization.



POWER IN YOUR HANDS

- Monitor and manage all on-site assets with distributed energy management technology.
- Anticipate grid conditions and monitor changes in demand across utility service areas with distributed asset monitoring software.
- Automatically dispatch on-site assets for power generation and storage during peak demand times for optimal savings.
- Export power to the grid to receive compensation from utilities.
- Increase revenue and ensure energy supply without disrupting operations.



DERMS Monitoring

LONG-TERM VALUE FOR YOUR INVESTMENT

- No upfront capital costs
- Recurring savings and revenue
- End of contract asset ownership

SERVING DIVERSE INDUSTRIES

- Investor-owned and municipal utilities
- Large commercial and industrial customers
- Data centers
- Mining operations
- Retail energy providers

DISPATCHING ON-SITE ASSETS

- On-site generators (natural gas or diesel)
- Energy storage
- Microgrids
- Solar installations

OPTIMIZING ENERGY SYSTEMS

- System-wide transparency
- Better utilization of generation assets
- Enhanced ability to reduce charges

Meet with energy experts to develop an EaaS offering, customized to your unique operation. Learn more today and get in touch with the experts at [Cat.com/EaaS](https://cat.com/EaaS) or scan code.



ONGOING SUPPORT



COVERAGE

From a 12-month basic warranty and scheduled oil sampling to a 12-year Customer Support Agreement (CSA), 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.

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