

RELIABLE POWER WHEREVER YOU ARE



Electric Power Generation from Caterpillar



FULLY INTEGRATED SYSTEMS

- Powered by Cat® engines for reliability
- Easy to specify, permit, install, and test
- Meet most worldwide emission standards
- Supported by the Cat dealer network

Caterpillar has decades of experience and unmatched expertise. Whatever your business, our experts are ready to help you design a system to your specifications and stand by your side for the life of your equipment.

You'll have the support of the global Cat dealer network and all the products, coverage, financing options, parts, maintenance, and anything else you need.



PARALLELING SWITCHGEAR

Cat switchgear provides paralleling and customized sequence of operations capability for multiple generator sets, with single or multiple points of utility connection. It also provides a single point of monitoring and control of your complete systems, including an automatic transfer switch (ATS) to give you an integrated solution that meets your unique requirements. Typical systems perform synchronization, power factor control, load sharing, and system monitoring through a human machine interface (HMI). Automation can be integrated within switchgear at available voltages up to 38 kV.



- **The Emergency Transfer Load Manager (EXL)** combines standard paralleling controls with an informative graphical interface and a data access point for a user's building management system. The EXL controls can also be integrated into a switchgear lineup to provide a complete factory-tested solution. The EXL allows for operating generator sets in pre-configured emergency standby, prime power, and parallel with utility configurations for single generator/single utility applications.



- **The Engine Paralleling and Integration Control (EPIC)** system allows for modular application of paralleling controls. The EPIC master panel provides a graphical interface to the generator sets, optional tie breaker, and optional utility. Flexible control options allow for a variety of analog or high-speed network control of generators, making the EPIC system an ideal choice for generation expansion projects where there is need to parallel new generators with existing units.



- **Customizable Switchgear and Controls** solutions enhance your ability to perfectly match your power generation capacity with the precise control your systems and process demand. Caterpillar will design and provide a power generation, automation, and distribution system specific to your electrical needs. Your needs for customized sequence of operation, diverse monitoring and dispatch, or any specific power control needs you have can be automated and integrated into our graphical operator interface.



CAT SYSTEM PRODUCTS

AUTOMATIC TRANSFER SWITCH (ATS)

Caterpillar offers a broad range of transfer systems and ATS products, which can be arranged to suit any application from simple to highly complex multiple ATS/generator set switchgear systems.



- Available in sizes from 30 to 5000 amps in 2-, 3-, and 4-pole configurations
- Contactor and circuit breaker-based solutions for flexible coordination
- Open, closed, and delayed transition designs available
- ATS and bypass mechanisms rack in/out with door closed
- Load is not interrupted during bypass operation
- Full automatic mode functionality is maintained with ATS in bypass

CONTROLS FOR POWER SYSTEMS

EMCP 4.4 is a scalable control platform designed to ensure reliable generator set operation, providing extensive information about power output and engine operation. These systems can be further customized to meet your needs through programming and expansion modules.



- **The supervisory control panel (SCP)** provides supervisory level control and monitoring for generators equipped with EMCP 4.4 controllers, allowing system level monitoring and control of up to 16 generator sets.
- **The master control panel** serves as a system level controller for generators equipped with EMCP 4.4 controllers, allowing system level monitoring and control of up to eight generator sets and adds utility paralleling capability to the EMCP 4.4 control system.

CAT CONNECT

Cat Connect combines technology and services to boost your business performance. Using the data from technology-equipped assets, you'll get more information and insight into your equipment and operations than ever before.

- Control costs
- Improve performance
- Reduce risk



LINK



HEALTH



GRADE



COMPACT



PAYLOAD



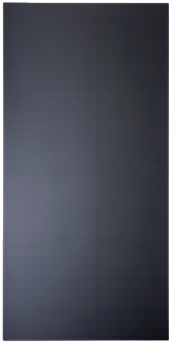
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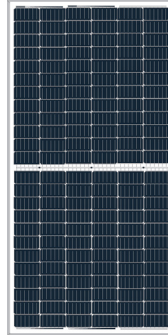
COMMAND

CAT SYSTEM PRODUCTS

HYBRID ENERGY SOLUTIONS WITH CAT MICROGRID TECHNOLOGY



- **Thin Film Photovoltaic** – Cat thin film high-efficiency modules provide a proven performance advantage over conventional crystalline silicon solar modules. Generating more energy than competing modules with the same power rating, Cat photovoltaic modules deliver superior performance and reliability.
 - Higher annual yield in hot climates
 - Lower power loss in humid environments
 - Backed by a 25-year power output warranty



- **Mono Crystalline PERC Photovoltaic** – Cat mono crystalline panels provide a proven performance advantage over conventional crystalline silicon solar modules. Generating more energy than competing modules with the same power rating, Cat photovoltaic modules deliver superior performance and reliability.
 - Innovative shingled design eliminates many of the reliability challenges from front contact panels
 - Independently tested and named a top performer in thermal cycling, damp heat, humidity-freeze, dynamic mechanical load, and potential induced degradation
 - Backed by a 25-year product and power output warranty



- **Energy Storage Modules** – Cat energy storage modules are designed to easily integrate into a hybrid system. Grid stability modules are designed to provide 30 minutes of power for short duration events. Energy time shift modules are designed for up to 10 hours of energy for capturing the over-production of renewable energy for use when renewable sources are not available.
 - Pre-engineered containers shipped as a single unit for rapid deployment
 - Applications: Grid forming, grid stabilization, peak shaving, energy shift, transient assist

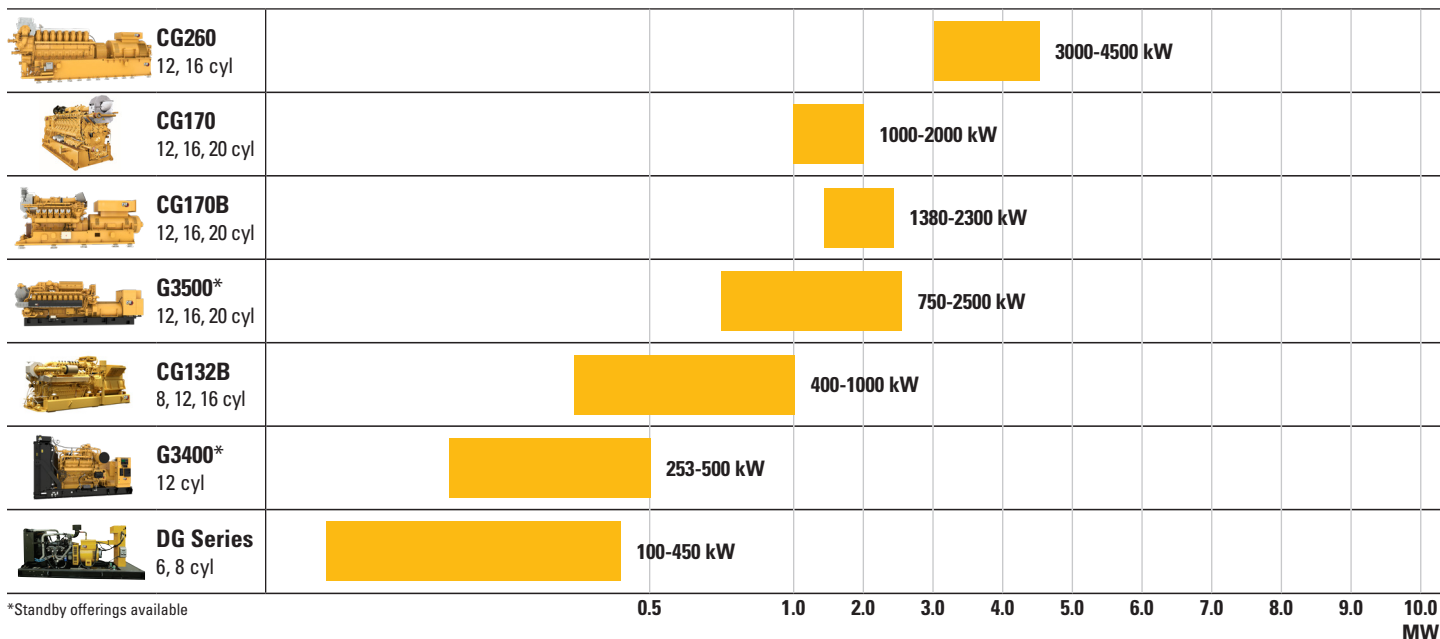


- **Microgrid Master Controller (MMC)** – The Cat MMC integrates a variety of traditional and renewable energy sources to provide overall monitoring and control of all connected microgrid assets.
 - Graphical user interface for monitoring and control of complete microgrid system
 - Asset optimization to minimize the cost of energy
 - Grid import/export control when connected to the local utility service

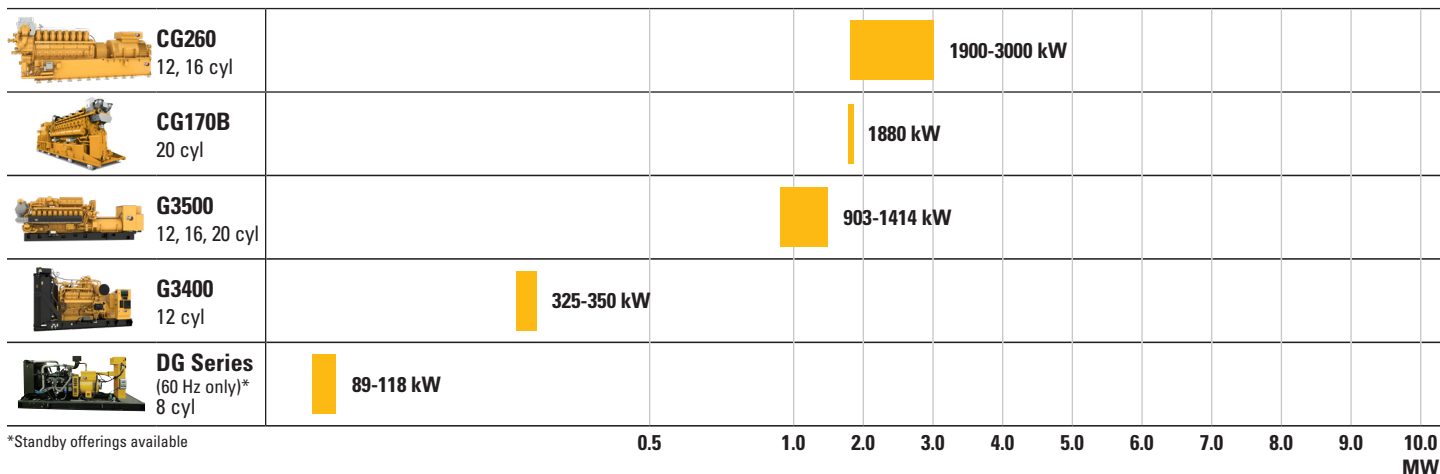


GAS GENERATORS

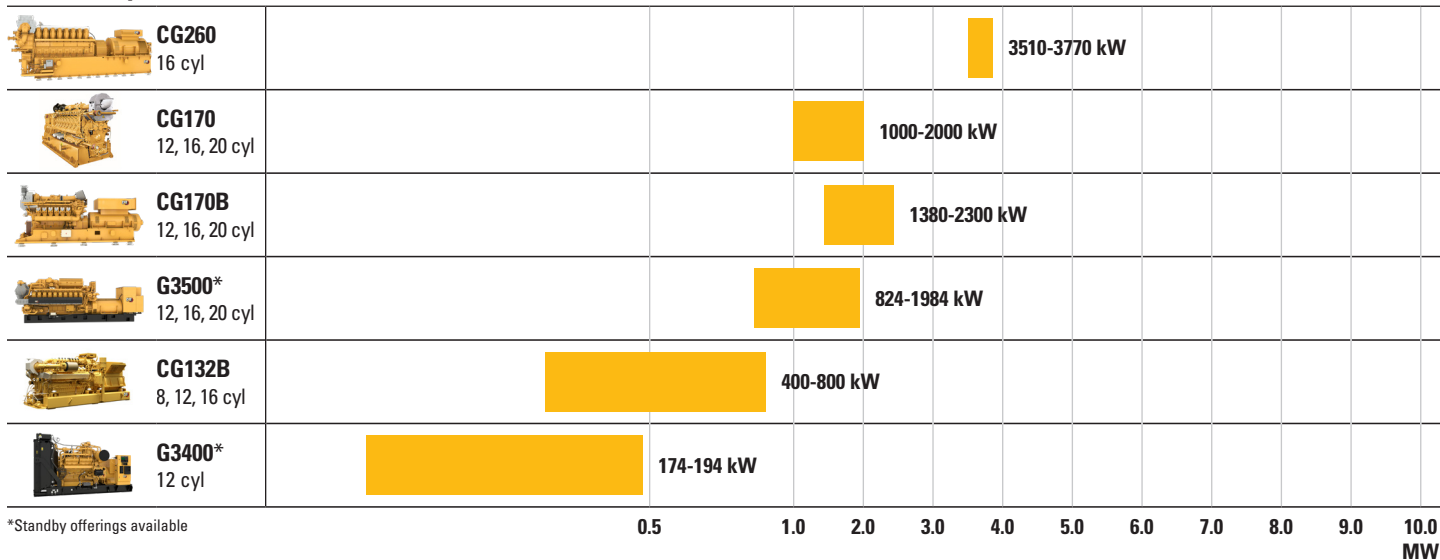
NATURAL GAS GENERATORS 50-60 Hz



PROPANE GAS GENERATORS 50-60 Hz



BIOGAS/LANDFILL GAS GENERATORS 50-60 Hz



RENTAL POWER

THE PERMANENT SOLUTION FOR YOUR TEMPORARY POWER NEEDS

Cat Rental Power is hard at work around the globe providing single-source access to all product and accessory needs, including continuous power systems, cooling systems, and air compressors.

WIDE RANGE OF POWER

Rental power is available in fully self-contained, mobile gas and diesel, from 20 to 1900 ekW.

SUPPORT

Experts available every step of the way to help you design a system, deliver equipment, provide technical support, service, maintenance, and training programs for rental projects.

RESPONSE

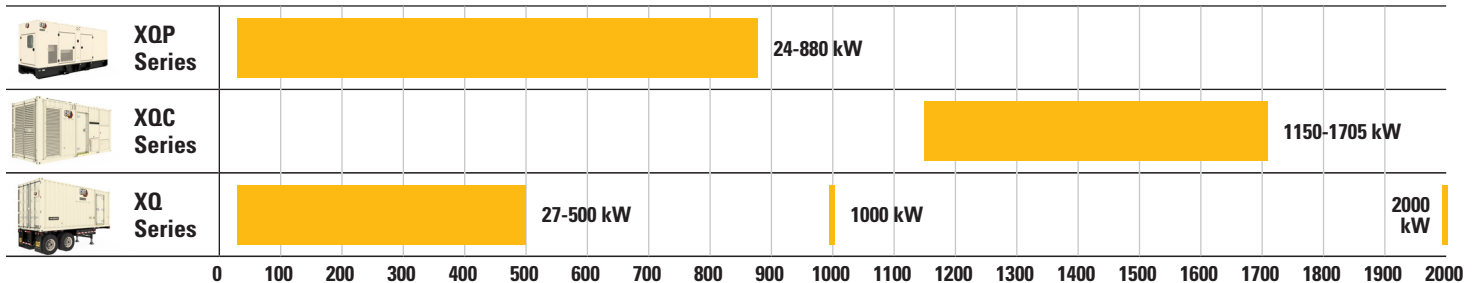
Supported by our network of rental power experts in the field, we can immediately outfit your system, deliver it (with all the ancillary equipment included), provide the connection, fuel, start-up, service, and maintenance, and can remain on-site to provide support when necessary.

ENVIRONMENTAL CONSIDERATIONS

Our units are specially engineered to produce lower gas/diesel emissions and meet or exceed local emission standards, and we offer options such as sound attenuation for sensitive environments. All units come with standard fuel containment.



DIESEL RENTAL POWER RATINGS 50-60 Hz



GAS RENTAL POWER RATINGS 50-60 Hz



CUSTOM POWER SOLUTIONS

POWER SYSTEMS TO MEET YOUR NEEDS

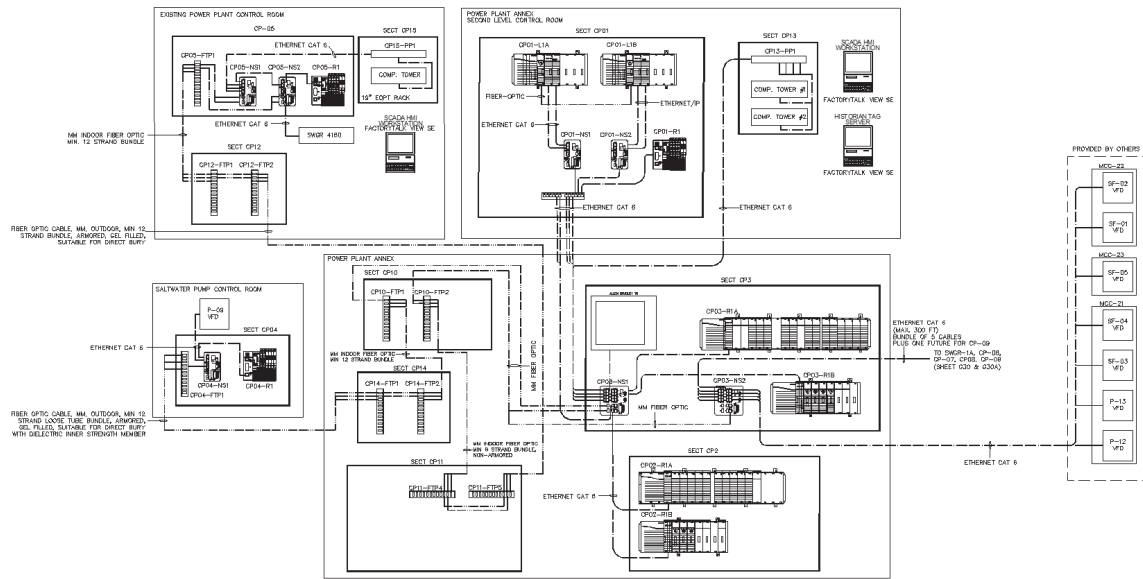
No application is too challenging – complex control systems, high voltage, extreme ambient conditions – we have what you need. Caterpillar experts work with you to design a system to meet your individual power needs. We tailor each component to develop a system with attachments and performance options to match your specific application and regional standards. It's a fully customized, factory-tested power generation package with full Caterpillar warranty.

When purchased as a complete generator set package, Caterpillar systems architects can integrate the generator controllers, switchgear, and programmable logic controller (PLC) into one seamless modular design, with the ability to witness test the complete integrated package in the factory.

This is a one-of-a-kind, single-source system. Our capabilities and experience help us deliver a market-leading product, from sales support and conceptual design, to detailed design and production, to lifetime support for your customized Cat power solution.



CUSTOM POWER SOLUTIONS



Enclosures

Sound-attenuated and weather protective enclosures are built specific to your needs and come assembled with your generator set, minimizing on-site installation.

Continuous Power Module (CPM)

The Cat CPM provides constant power protection against surges, sags, and power interruptions that can disrupt operations or cause loss of valuable data or system capacity.

Custom Control Systems and Switchgear

Complete solutions can be customized for the control and monitoring of generators and associated switchgear in applications where complex control philosophies are employed.

Custom Voltage Generators

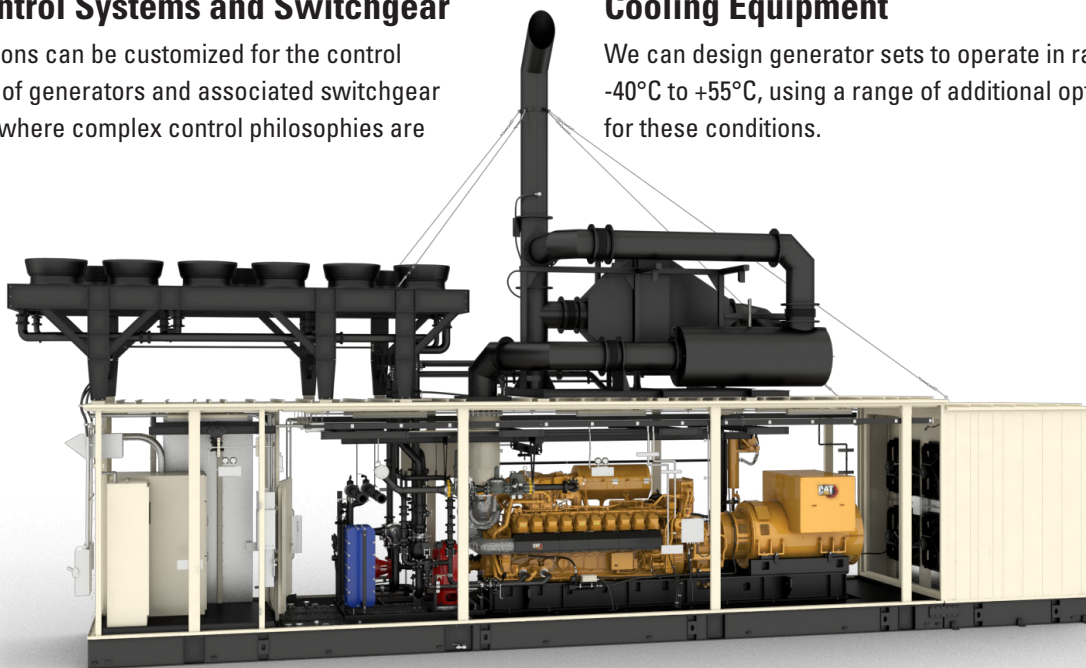
Our engineers will source the alternator that meets your needs and fit it to your Cat generator set in one of our Caterpillar manufacturing facilities.

Ancillary Equipment

Designed to work with your Cat generator set, we offer remote cooling groups, air start systems, heavy duty air intake filters, fuel filtration systems, special exhaust silencer systems, exhaust aftertreatment, and more.

Cooling Equipment

We can design generator sets to operate in ranges from -40°C to +55°C, using a range of additional options designed for these conditions.



COMPREHENSIVE RESOURCES AND SUPPORT

Global Dealer Network

Every Cat machine is backed by our global dealer network, long recognized as the best in the world for parts, service, and equipment. You expect more from the industry leader, and we are proud to set the standard with comprehensive programs to improve jobsite safety, train your employees, manage maintenance, and help you grow your business.

Flexible Financing and Maintenance Programs

You can count on Cat Financial to provide the best financing solution for your business. Whether you want to finance a piece of construction equipment, a boat with a Cat engine, or a power supply backed by a Cat generator, our finance representatives understand Cat products across all industries. We will help you expedite your purchase and get your equipment on the job fast, with quick and easy financing and customized payment plans. You chose Cat equipment for reliable, productive, and powerful equipment. Now, choose Cat Financial to help grow your business.

Extended Service Coverage

Your extended service coverage offers transferable coverage beyond the standard warranty period for all Cat branded electric power equipment. It protects against unexpected repair bills and offers a hedge against rising parts and labor costs by providing 100% parts and labor reimbursement for covered components, less any applicable deductible. The broad range of coverage options can be customized to suit your individual needs and simple pricing terms, giving you confidence and peace of mind about your power system's performance.

Customer Value Agreement

Your customer value agreement is an individualized arrangement between you and your Cat dealer that helps you maintain your products while lowering your cost per unit of production, regardless of the size or age of your product. Agreements are tailored to fit your business needs and can range from simple preventive maintenance kits to total cost performance guarantees. No matter which option you choose, your Cat dealer will help you design your agreement and provide ongoing attention to ensure your success.

Parts Availability

Your Cat dealer is equipped with a parts inventory and access to the global Cat parts network to fulfill 98% of parts orders within 24 hours from the time of order. We know that having the right parts on hand is crucial to keep your power system running, so we also provide 24/7 access to information at parts.cat.com. Here you will find videos, reference material, and specs on Cat original, classic, and remanufactured parts, as well as information on repair and maintenance parts for your Cat electric power products, all manufactured to original equipment specifications and recommended by Caterpillar.



EVERYONE HAS A STORY

Wherever in the world you live and in whatever industry you work, you have a story.

Take a look at a few of our customer stories on the pages that follow. They're worth the read. Plus, get expert tips that can help your business.



AGRICULTURE

Power to Sustain Your World – and Your Operation

Our standby and rental emergency generators help agricultural operations run smoothly during costly power outages. In addition to traditional power systems for agriculture, biogas-fueled generator sets turn what used to be waste into cost-saving fuel. Byproduct gases from agricultural, food processing, and industrial processes are captured to fuel generator sets, cutting input costs and reducing the release of harmful gases.



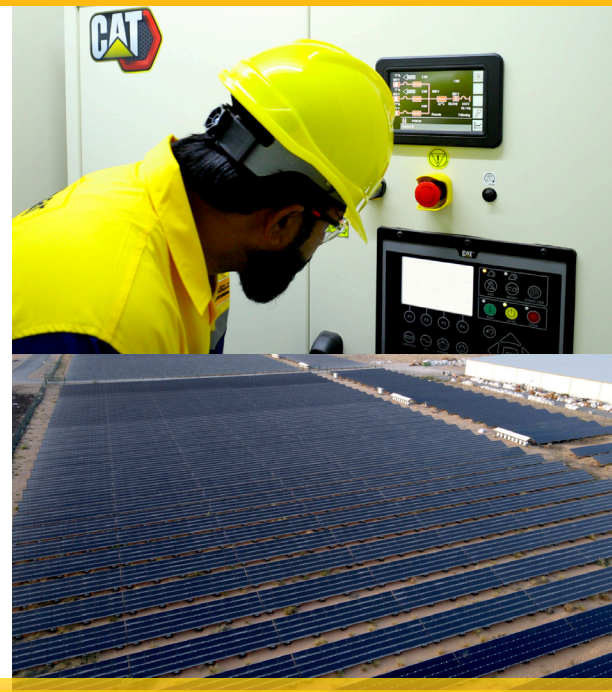
CUSTOMER STORY: SHARJAH, UNITED ARAB EMIRATES

Hybrid Microgrid for Reliable Power

Themar Al Emarat Hydroponic Farm wanted to meet sustainability and productivity goals at its off-grid agricultural facility. To grow produce efficiently, the hydroponic farm enlisted a hybrid microgrid system integrating power generation, control, and monitoring technologies. The system generates solar power in daylight hours, and enclosed diesel generator sets supply power at night or in cloudy conditions.

SOLUTION

A hybrid energy solution featuring 23,000 Cat PVT117 photovoltaic modules, five Cat 3412 diesel generator sets, and a 286 kWh/250 kW grid stability module with energy storage ensures steady power.



COGENERATION/COMBINED HEAT AND POWER (CHP)



○ CHP

Energy Efficiency Up to 90%

Reduce operating costs by implementing a Cat CHP system. Using clean pipeline natural gas as a fuel source, Cat gas generator sets can provide electricity for electrical loads plus energy for heating requirements. And with renewable biogas, the energy you generate is nearly free power for your facility.

○ CUSTOMER STORY: ORLANDO, FLORIDA

Renewable Energy From Food Waste

Harvest Power generates biogas using an anaerobic digester, converting it into renewable energy and using the excess heat created. Digested organic material creates fertilizer, which is sold to area farmers and retail outlets to grow more food. It's a closed loop – instead of going to the landfill, organics become renewable energy, then fertilizer and nutrients go back into the ground.

SOLUTION

Two Cat G3520C generator sets were supplied to consume the biogas, ultimately creating 3.2 MW of electricity. The power plant uses 20% and sells the rest back to the local utility.





CONSTRUCTION

Start With Solid Power

You're building the future. Projects expand, regulations change, and deadlines shorten. In a changing industry run on consistency, run on Cat power. Our generators for the construction industry offer low owning and operating costs and have a record for performance. Don't let power supply stop you from getting a job done right, on time, and on budget.

CUSTOMER STORY: CHARLOTTESVILLE, VIRGINIA

Powering a National Treasure

Thomas Jefferson's home, Monticello, holds one of the country's oldest and largest collections of historic artifacts. This landmark relies on emergency backup power systems for the main house and two ancillary buildings plus added protection during the ongoing upgrades of Monticello.

SOLUTION

Two Cat C15 diesel generator sets and four automatic transfer switches supply backup power, with a sound-attenuated, weather-protected enclosure to minimize noise and safeguard the house and its possessions in the event of an unexpected power loss.



DATA CENTERS



DATA CENTERS

Data Delivered When and Where You Need It

It's your job to supply power to networks and systems so they can seamlessly manage the data that keeps our world moving. Discover Cat generator sets for continuous, standby, and temporary power, integrated with ATS and switchgear customized to fit your needs.

CUSTOMER STORY: SHANGHAI, CHINA

Dependable Power for Data Center

The Shanghai Tencent Cloud Data Center requires more power than the local state grid can provide and depends on a natural gas-fueled combined cooling, heat and power (CCHP) system, an efficient and cost-effective solution for demanding data center requirements. The complex system requires an integrated energy management system incorporating advanced natural gas engine generator sets and lithium bromide absorption chiller technologies.

SOLUTION

Two Cat G3520H gas generator sets power the cutting-edge system and provide efficiency and emission reduction.



EDUCATION

Power for Learning

Cat generators cost-effectively power the places people study. With world-class fuel efficiency, a permanent or temporary Cat solution will meet your power demands and help you cut costs with cogeneration technology. From a backup system to a custom power plant, we'll help you keep power production efficient so you can focus on educating your part of the world.



CUSTOMER STORY: ST. CATHARINES, ONTARIO

Cogeneration Solution Provides 100% of Campus Power

Brock University is a public research university within a UNESCO Biosphere Reserve, an ecosystem that promotes the conservation of biodiversity through sustainable use. Twenty-five years ago the university commissioned a 6.4 MW district energy plant for heating, cooling, and electricity, all from one fuel source. They decided to make the plant even more sustainable.

SOLUTION

Brock replaced eight Cat engines with four 2 MW Cat 3516H engines, now providing 100% of campus energy. The plant is 20% more efficient and reduces NO_x emissions by 95% and CO₂ by 93%.



GREENHOUSES



GREENHOUSES

Generator Sets That Grow Business

Get power engineered to cut costs and boost plant health. Cat CHP systems produce electricity for your operation while heating your facility. Fueled by natural gas, our CHP generator sets run at an efficiency of more than 90%. A Cat aftertreatment system filters exhaust gas, rich in carbon dioxide, to be used as plant root fertilizer. You can even sell excess energy to your local grid with our utility grade paralleling switchgear and controls.

CUSTOMER STORY: STĘŻYCA, POLAND

Europe's Largest Producer of Orchids

Family-owned JMP Flowers wanted to expand with a new greenhouse for state-of-the-art orchid cultivation. Working with Eneria Cat, they chose a high-efficiency cogeneration unit to provide continuous lighting and air temperature in the greenhouse. The solution minimizes greenhouse gas emissions and produces oxygen, which has a positive impact on the environment.

SOLUTION

A Cat CG260-16 generator set produces 4.5 megawatts of electric power and a thermal output of 5.25 megawatts, with a total efficiency over 90%. Simultaneous generation of electricity and heat from gas reduces energy cost and reaches a payback time of 3-to-4 years.



HEALTHCARE

Designed to Be Trusted

You power the machines that sustain lives. Cat generator sets are powering some of the world's largest hospitals. It's essential to have a backup generator you can trust when the power goes out. We'll configure a power system to match the ongoing demands of your facility or additional temporary power in emergencies.



CUSTOMER STORY: DUBAI, UNITED ARAB EMIRATES

Integrated System for Emergency Backup and Facility Power

The American Hospital Dubai (AHD) took on a massive expansion and needed a reliable, high-quality power supply for the hospital facilities and emergency backup power. AHD already had a strong relationship with their local Cat dealer and felt it was logical to select them to provide the power for the project. The Cat integrated system plays an integral role in ensuring the hospital provides quality, uninterrupted care, even during a power loss.

SOLUTION

Two Cat C175-16 diesel generator sets as standby power and a 300 Series UPS (250 kVA) ensure continuous power generation in the event of an extended power outage.



INDUSTRIAL AND COMMERCIAL



INDUSTRIAL AND COMMERCIAL

Power That Works As Hard As You Do

You're trusted to power the places people work, and our commercial generators offer world-class fuel efficiency and low lifecycle costs. Whatever your facility needs, we can customize a solution.

CUSTOMER STORY: SÃO PAULO, BRAZIL

CHP Reduces Energy Costs, Improves Reliability

In São Paulo, large commercial facilities needed to reduce their grid electricity consumption to avoid rolling blackouts. When Rochavera opened a major commercial office and retail complex, they turned to Ecogen and the support of local Cat dealer Sotreq. Rochavera's unique CHP system saves 6 million kW hours of energy consumption each year while reducing demand on the local grid.

SOLUTION

Two Cat G3520C gas generator sets rated at 2,055 kW of electrical power each and one 1,500 kW Cat 3512B diesel generator set for standby or peaking power.





○ **LANDFILLS**

Unexpected Fuel for Everyday Power

Power your world with sustainable practices. Cat generator sets are designed to collect, clean, and run on harmful gases produced by landfills. It's reliable power that's sustainable. Rather than eliminating landfill gas by simply burning it off, you can turn it into a renewable fuel with gas-fueled engine generators that can produce electric power from landfill gas. Sell the power produced to your electric utility with our switchgear, including programmable logic controller (PLC)-based controls, paralleling your generator sets to the local grid.



○ **CUSTOMER STORY: MARION, IOWA**

Multiple Benefits With Cat Gas Generator Helps Growing Landfill

The Cedar Rapids Linn County Solid Waste Agency accepts about 180,000 tons of municipal waste annually. Landfill gas is typically made up of 50% methane, 50% carbon dioxide, and trace amounts of various hazardous air pollutants known as non-methane organic compounds (NMOCs). The EPA requires large landfills to control these emissions.

SOLUTION

A G3520C gas generator set uses the methane as fuel to run the engine and rotate the generator to produce electricity and consume 500,000 cubic feet of gas daily. The electric power produced is sold back to the local utility, and captured thermal energy heats the agency's resource recovery building.



SolidWaste
Cedar Rapids ▲ Linn County
Agency

MANUFACTURING



MANUFACTURING

Matching Supply With Demand

When your lines aren't moving, you're not making money. You need power that will keep you in production and keep you efficient. Cat standby generators run with low owning and operating costs so you can maximize profit by minimizing electrical expenses.

Find permanent or temporary power systems to keep up with your manufacturing or planned outage schedule. Our team will make installation and preventive maintenance easy – giving you the power to improve how you work.

CUSTOMER STORY: JOHOR, MALAYSIA

Genset Meets Power Demand While Local Grid Stabilizes

SDP Packaging needed a reliable power system when the local utility company could not meet power demand. While the grid was projected to stabilize in a few years, SDP urgently needed a reliable power system to run their machines safely and to ensure uninterrupted production.

SOLUTION

A Cat 1100 kVA C32 diesel generator set provided prime power for the facility's eight-hour shift, six days a week. They also added a customer value agreement for regular servicing.



MINING

Power You Can Run into the Ground

When you need reliable continuous power, temporary power, or a combined heat and power system far from any available grid power, count on Cat generator sets to keep your mining operation running. From the largest mining operations to the smallest quarries, your Cat dealer will customize and install a system for your specific application. We engineer our generator sets to keep your operation running efficiently, while protecting the health of your crew and our environment.



CUSTOMER STORY: QUEBEC, CANADA

On-site Power Generation – a Win-Win Deal

The Stornoway Diamond Corporation worked with Toromont Cat to install Cat generators powered by liquefied natural gas (LNG) rather than diesel. The results have shown significant cost reductions, four months net payback, and reduction in greenhouse gas emissions, nitrogen dioxide, and sulfur dioxide.

SOLUTION

Eight Cat G3520C generators power the plant, producing total installed power of 16 MW, plus a standby temporary peaking station with three Cat 3516B diesel generator sets that can produce up to 6 MW of standby power to provide emergency power for all facilities on site.



NUCLEAR

NUCLEAR

Producing the Safest Nuclear Power

For more than 90 years Caterpillar has been providing emergency and standby power generator sets. Decades of experience and the industry's broadest product range allow us to customize emergency and standby power to fit the specific needs of your nuclear power plant. Our nuclear industry experts advise, plan, engineer, deliver, install, and ensure continuous support. To ensure operation before and after a seismic disturbance, we perform certified tests and analysis to meet your most stringent nuclear standards. And we'll provide any necessary documentation and witness testing opportunities.



CUSTOMER STORY: CZECH REPUBLIC

Czech Republic Improves Nuclear Plant Safety

CEZ, operator of the nuclear power plants in the Czech Republic, had to add new independent sources of emergency power following the post Fukushima stress test. Requirements like significant mechanical impact resistance, seismic qualification, and resistance against electromagnetic pulse had to be met. By installing Cat generator sets in customized containers in the Temelin and Dukovany NPP, CEZ benefited from significant cost savings and a very short and reliable implementation schedule. All four generator sets were installed and ready to operate less than one year after the order was placed, meeting stringent nuclear standards.

SOLUTION

Four C175-20 Cat generator sets protected by a customized container mounted on a concrete base, which was manufactured, delivered, and installed in less than 12 months.



POWER PLANT

Power Wherever You Need It

Caterpillar is ready to help you design your power plant anywhere in the world. Our electric power generator sets bring you systems and controls for emergency, standby, prime, peak, and continuous power, with proven durability and low operating costs combined with flexibility and dependability in the most demanding applications.



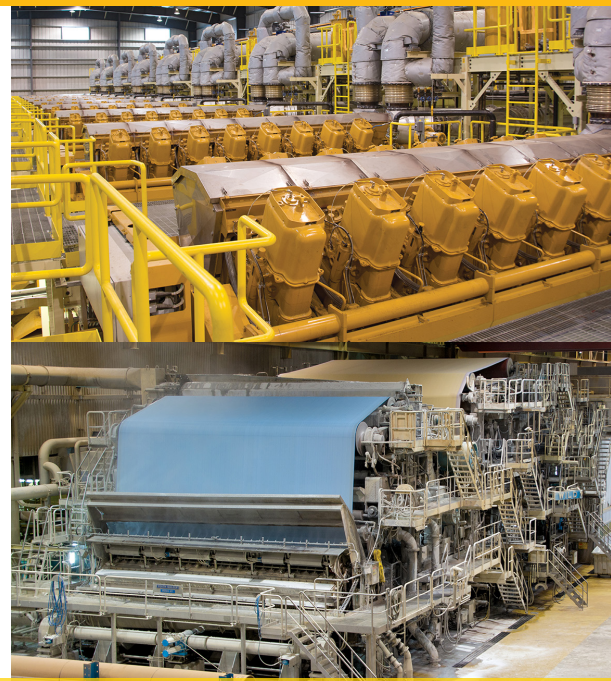
CUSTOMER STORY: ALBERTA, CANADA

Flexible Power and Diversified Strategy Nets Profits

Demand for newsprint has decreased, but Alberta Newsprint Company (ANC) continues to thrive with a diversified strategy and lean workforce. The rising cost of grid power prompted ANC to build its own power plant. When the price of power is high, the mill uses less power from the grid and excess power generated on site is sold back to the grid at the higher price.

SOLUTION

The Cat power plant runs about 25% of the time, ramping up quickly to meet demand, netting ANC a profit.



RENEWABLE ENERGY



RENEWABLE ENERGY

Hybrid Energy Solutions

Whether you are looking to minimize your costs of energy, improve reliability, or increase your resiliency, Cat hybrid energy solutions has the answer. Caterpillar and your Cat dealer have experience in designing hybrid systems that include diesel and gas generator sets, photovoltaic modules, and energy storage systems. Photovoltaic modules will lower the costs of energy from utility or generator sets, while also reducing carbon emissions. Smart energy storage can also be added for short duration grid stabilization or longer duration renewable time shifting, enabling the renewable power generated during the day to be used when sunlight is not present.

CUSTOMER STORY: REPUBLIC OF NAMIBIA

B2Gold Selects Cat Photovoltaic Solar Modules

Cat dealer Barloworld supplied a full Cat PV system for the Otjikoto Mine in the Republic of Namibia. Caterpillar supplied the original 25 MW of power capacity to the Otjikoto Mine when it opened in 2014 through four Cat 12CM32 HFO medium-speed engines and three Cat 3516B high-speed generator sets. The addition of Cat photovoltaic modules provides a scalable, sustainable power solution that significantly reduces fuel consumption while delivering reliable power to support mining sites.

SOLUTION

Engineering, procurement, construction, 7 MW of solar power services, and integration with the existing generator sets to reduce reliance on the heavy fuel oil power plant.



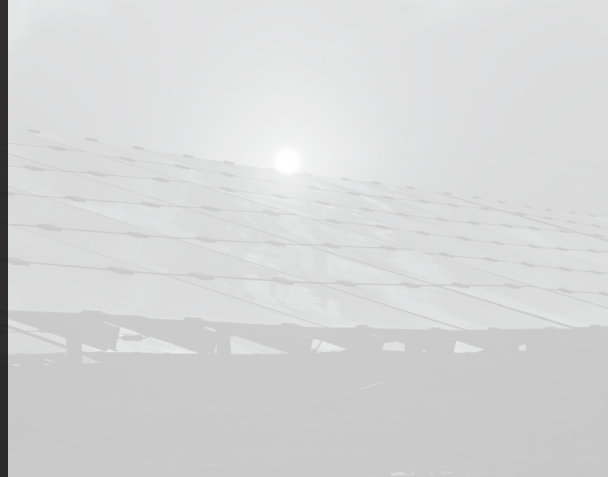
RURAL ELECTRIFICATION



RURAL ELECTRIFICATION

Taking Power Where It's Needed

Today, more than 1.3 billion people lack access to electricity, and billions more need a reliable grid for basic human needs, including access to clean water, healthcare, lighting, and education. For 90 years, remote industry sites, villages, rural communities, and islands have depended on the power of Caterpillar for reliable energy, grid backup, and sustainable, continuous power.



CUSTOMER STORY: MADAGASCAR

Bringing Power to 100 Rural Villages

In Madagascar, only 15% of residents are connected to electricity. In rural areas, connectivity is only 4%. When Madagascar launched an initiative to supply state-of-the-art microgrid solutions at an affordable rate for villagers, local Cat dealer Henri Fraise Fils & Cie was a key part of the solution. In the village of Belobaka, despite an intense rainy season and unreliable roads, the team completed a solar microgrid installation in an impressive five months.

SOLUTION

The microgrid provides 83 kW of power at peak operation and has a 315 kW battery with a 110 kVA generator set for backup, bringing power to 5,000 people and 800 homes.



TELECOM



TELECOM

Engineered for Extremes

With unmanned operations in remote locations, you need a system you can rely on and easily access. Cat power generation equipment is made for non-stop power and customized by your Cat dealer team to meet specific site requirements. Our modular sound attenuated enclosures meet noise level regulations, deter fuel theft, offer protection from the elements, and still allow for easy repair and installation.



CUSTOMER STORY: NAIROBI, KENYA

Uninterrupted Coverage Across East Africa

Nairobi-based Alan Dick East Africa serves Kenya, Tanzania, Rwanda, Burundi, Uganda, and Sudan, an area of more than 4 million square kilometers. The company has built thousands of mobile sites in the region. Because of the nature of the sector, zero-downtime is essential. Cat dealer Mantrac was selected to supply power generation equipment based on their extensive experience, the reputation of Cat equipment, and excellent product support.

SOLUTION

More than 600 diesel generator sets of various sizes from 8 kVA to 700 kVA, all in sound attenuated enclosures.



TEMPORARY POWER

TEMPORARY POWER

Customized Solutions for Any Application

From power failures to special events, count on Cat Rental Power dealers for temporary power. With expertise in system design and operational support, our generator units offer exceptional power density and output, require minimal space and setup, and meet or exceed local emissions standards. Our experts in the field will assess your situation, create and deliver a customized solution, and provide connections, fuel, start-up, service and maintenance, and on-site support.



CUSTOMER STORY: THE GULF COAST

Cat Rental Power Solutions Provide Relief During Widespread Blackout

When Winter Storm Uri struck in February 2021, it caused power grid failure across the United States. At least 4.5 million people were left without electricity in subfreezing temperatures as the storm damaged electricity infrastructure and caused massive outages for more than a week.

SOLUTION

Cat dealer Energy Rental Solutions (ERS Cat) dispatched Cat generator sets, 203 air compressors, and 40 dehumidifiers to support the Houston Zoo, local water and wastewater treatment plants, and grocery stores. When natural gas pipelines froze around the Gulf Coast, ERS Cat delivered four 1,000,000 BTU heaters to thaw them and restore heat to residents and businesses in Louisiana and Texas.



UTILITIES



UTILITIES

Exceptional Power for Everyday Needs

You supply power to meet life's needs – lighting schools, powering homes, keeping offices in business. Cat stationary or temporary generator sets are cost-effective, reliable power to meet spikes in demand and ensure power quality for your customers.

CUSTOMER STORY: MANTI, UTAH

More Control Means More Power

After a host of electrical issues, the Utah Municipal Power Agency (UMPA) contacted Cat dealer Wheeler Power Systems to design and install a comprehensive overhaul of the Manti Upper Plant. Mostly unmanned, the hydroelectric plant required remote visibility and the ability to detect any faults on the electrical system which could bring the hydrogenerator down.

SOLUTION

After implementing 12,470V 1200A Cat switchgear with M1E modicom controls and custom screens with automation into the hydroelectric plant, Wheeler trained Manti City Public Works on the new components, provided a maintenance schedule, and worked through simulations. With new controls capable of electrical fault detection, operators are alerted of potential problems and are able to schedule additional power to ensure a water supply for the area.



WASTEWATER TREATMENT PLANTS



WASTEWATER TREATMENT PLANTS

Using Waste Gas for Power Production

Gas generated by wastewater digesters used in the water treatment process can be captured and used to provide the plant with electricity and heat for the digester or other thermal loads. Methane-to-energy increases energy efficiency, reduces electricity costs, and decreases environmental impact. Cat low-energy fuel generator sets have a specialized tolerance to the contaminants in sewage gas fuels, and your Cat dealer will help you design, install, and maintain your power plant.



CUSTOMER STORY: GRESHAM, OREGON

Biogas Leads to Self Sufficiency

Gresham Wastewater Treatment Plant uses fats, oils, and grease (FOG) from restaurants to boost electrical generation. Increased biogas production nets about \$1 million in annual savings with avoided utility costs and using genset jacket water heat to heat buildings. A byproduct, Class B biosolids are used as fertilizer at no cost to area farmers.

SOLUTION

Two G3508 gas gensets, C9 diesel genset, and paralleling switchgear (480V) with a Cat dealer Peterson Power Systems customer support agreement.





CATERPILLAR, CAT DEALERS, CUSTOMERS – A REPUTATION OF TRUST

Caterpillar is committed to your success, with lifetime 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. From expert consultation and design, optimized efficiency, and ROI to installation, commissioning, warranty, parts, and Cat financing options – we're built to keep the power on.

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