

# CAT® ELECTRIC POWER SYSTEMS FOR MINING





**WHEREVER  
THERE'S MINING,  
WE'RE THERE.**

You already know Caterpillar for our unparalleled range of mining equipment for both surface and underground mining. However, when you're considering power generation for your mine, you should know that we're also a leader in electric power solutions with over 70 years of experience and over 245,000 MWs of installed power worldwide.

We can help you at every stage—from prospecting and construction to production and expansion. And we're ready to provide any power solution—from temporary rental power to complete power plants. Let the Cat® team provide your electric power needs that will make your mining operation as efficient and productive as possible through these industry advantages:

- The most complete power range available (7 kW to 200+ MW)
- Traditional fuels such as heavy fuel oil, diesel and natural gas, or sustainable fuels such as coal seam gas and biogas
- The world's largest dealer support network
- Common engine platforms for power generation and mining equipment, providing efficient maintenance and parts utilization
- Technology leadership providing highly reliable and efficient power supply
- Cat mining financial services

We're committed to partnering with you, whether it's providing our trusted equipment or expert consultation and application support—wherever you are in the world.



# AROUND THE GLOBE

**AFRICA:**  
**RANDGOLD RESOURCES' LOULO GOLD MINE**  
uses a combination of 15 Cat 3512B 1500 kVA generator sets, installed in 2003, and eight 8CM32 medium-speed 3.6 MW generator sets, installed in 2008-2011 to bring the total power to 46 MW.

**AUSTRALIA:**  
**BHP BILLITON'S APPIN AND TOWER COAL MINE**  
uses a coal seam gas reciprocating power plant, at a 94 MW capacity. It is powered by 94 Cat G3516 generator sets.

**PERU:**  
**BARRICK GOLD MINE**  
is powered by a high altitude modular power plant, with a 2.5 MW capacity. The power plant relies on two Cat 3516 generator sets.



**AFRICA:**

**SIERRA RUTILE LTD. MINE**

utilizes a 30 MW, medium-speed, heavy fuel oil power plant, powered by four Cat 16CM32 generator sets.

**CANADA:**

**NEWMONT MINING**

is powered by a 9 MW cogeneration base load power plant, run by six Cat 3516B generator sets.

**CHINA:**

**JINCHENG COAL MINE**

captures methane gas to fuel the site's 120 MW power plant and the local grid, run by 60 Cat G3520C generator sets and Cat paralleling switchgear and controls.

**CANADA:**

**DE BEER'S CANADA**

is powered by a 7.65 MW arctic class power plant, comprised of two Cat C175-16 generator sets.





# POWERING EVERY PHASE OF YOUR MINING OPERATION



For each distinct phase of a mining project—finding a site, building it, mining it and growing it—there are unique power needs. And Caterpillar has the people and products to power them all. Custom power plants, mobile power units and various generator configurations offer flexibility to fit your site and your budget. We also provide expert consultation, considering your local fuel sources, climate and energy use, to reduce cost and environmental stress. We're available to assist you during every stage of your mining project.



### **PROSPECTING**

Rely on the Cat team for readily available equipment, turnkey rental options and packaged generator sets for easy transport across rugged terrain and through extreme weather. From setting up camp power with mobile rental units to financing your venture, our experts can get you through the first step of determining your property's technical and financial viability.

### **CONSTRUCTION**

Once your site is ready to go, Caterpillar can assist you in the design and construction of your power system, with capacity ranging from 10 kW to 200+ MW. When it comes to construction, Cat generator sets offer the reliable power you require for the challenges that both building and mine infrastructure present. Whether you utilize Cat Rental Power or choose a more permanent power solution with Cat generator sets, we can customize a package that fits your power and fuel requirements, location and weather conditions.

### **PRODUCTION**

When your operation is up and running, Cat is there too: as the main power source for material processing and handling as well as complete heating, lighting and operational power to your facility. Cat power systems are engineered for long-life operation, providing both continuous and standby power. Further, Cat has the power systems expertise to control and monitor all aspects of your multiple generator set installation, including Cat controls and paralleling switchgear. In addition, Cat electric power solutions can mitigate regenerative loads such as dragline motors, and aid in power factor and transient load response. We're there from start to finish to help you build and operate the right power generation solution for your site, so you can meet the world's demands.

### **EXPANSION**

When your power need has outgrown your power plant capacity or you want to upgrade your operations, we'll help you find a custom solution to expand your power output and reduce operating costs. Working with the location and existing power source, we will help you determine the technology and the type of configuration that can be easily integrated into your current system.

# PUTTING OUR KNOWLEDGE TO WORK FOR YOU

No matter which type of power plant you require for your operation, the Cat team can assist you with everything from an environmental evaluation to onsite construction, supervision, commissioning, operator training, and onsite maintenance and repair. With decades of experience in both mining and electric power, we can provide a complete turnkey power solution backed by the largest service and support network in the world.





## ENGINE POWER PLANTS

Whether you require a modular, high-speed power plant or a medium-speed reciprocating technology power facility, the Cat team offers customized solutions.

- Modular high-speed, engine driven packages from
  - 7 kW to 4300 kW per unit
  - Standby, prime or continuous applications with combined heat and power (CHP)
  - Diesel, natural gas, coal gas, or biogas
- Medium-speed reciprocating engine driven packages from
  - 1.5 MW to 5.7 MW per unit
  - Captive power and power grid supply
  - Heavy fuel oil, diesel fuel oil, natural gas, or dual fuel

## TURBINE POWER PLANTS

For environments where turbine power is most appropriate, Solar turbines offer factory packaged gas turbine-driven generator sets that can be equipped to operate in harsh mining environments from

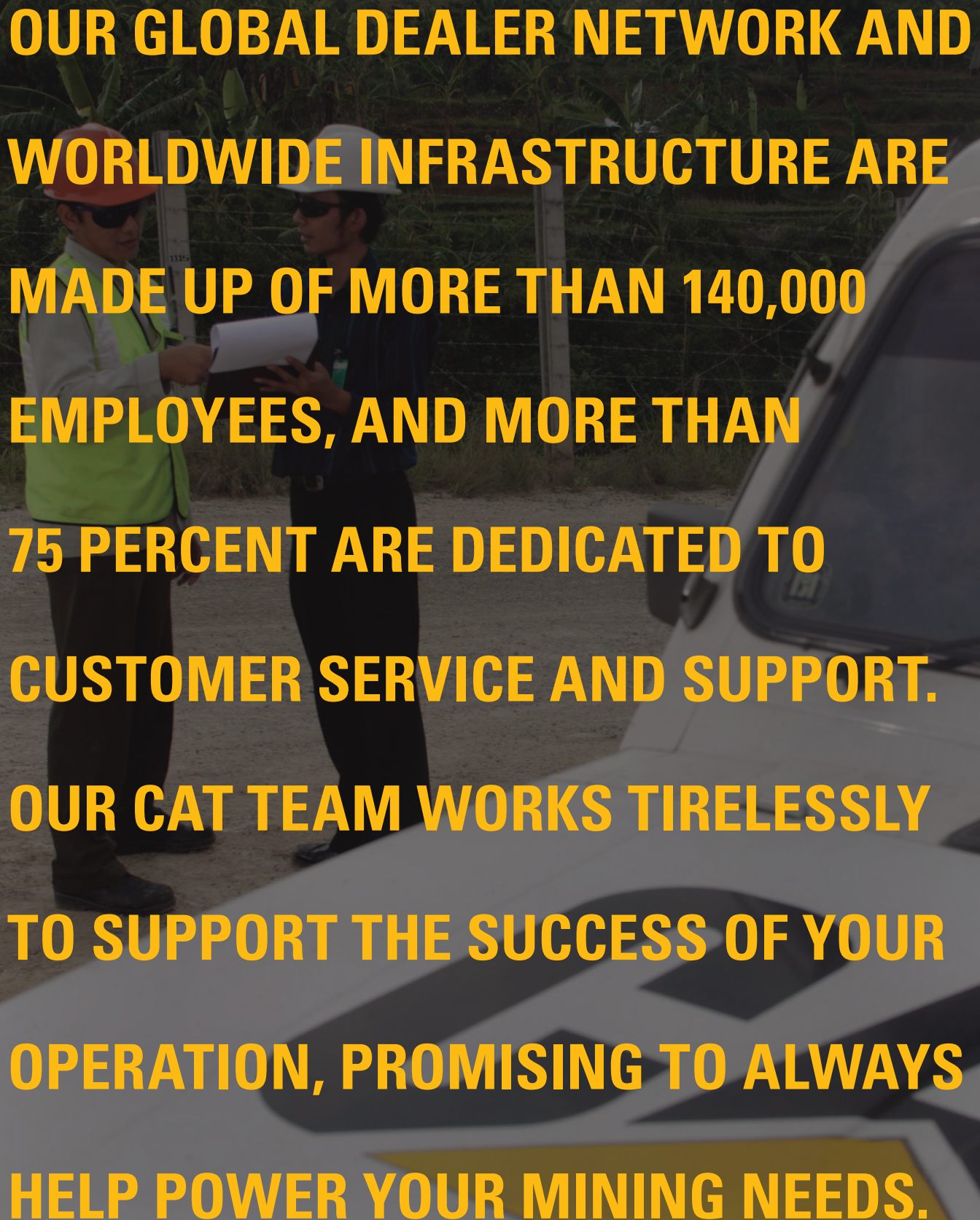
- 1 MW to 22 MW per unit
- CHP
- Diesel, gaseous fuels, or dual fuel

## MOBILE RENTAL POWER

Cat mobile power units run on high-speed engines and are available as single-unit portable power to multi-unit, onsite and turnkey power from

- 20 kW to 2000 kW per unit
- Rapid response, continuous, or standby applications
- Diesel or gaseous fuels



The image shows two men in a field setting. One man on the left is wearing a red hard hat, sunglasses, a white long-sleeved shirt, and a bright green safety vest. The other man on the right is wearing a white hard hat, sunglasses, and a dark suit. They are both looking at a set of papers held by the man in the suit. In the foreground, the hood of a white vehicle is visible, featuring a large, stylized black and yellow logo. The background consists of a dirt road and a field of tall green plants, possibly corn, under a clear sky.

**OUR GLOBAL DEALER NETWORK AND  
WORLDWIDE INFRASTRUCTURE ARE  
MADE UP OF MORE THAN 140,000  
EMPLOYEES, AND MORE THAN  
75 PERCENT ARE DEDICATED TO  
CUSTOMER SERVICE AND SUPPORT.  
OUR CAT TEAM WORKS TIRELESSLY  
TO SUPPORT THE SUCCESS OF YOUR  
OPERATION, PROMISING TO ALWAYS  
HELP POWER YOUR MINING NEEDS.**

## **FINANCING SERVICES**

Cat mining finance services offer you direct access to local dealers, walking with you through financing options that are customized to fit your mine. We offer more industry knowledge than standard banks and lenders to value equipment and structure loans or leases. We offer full financial support from the world's largest company for construction and mining equipment. Dedicated to helping you manage your investments, we can help locate markets in which your excess equipment will be redeemed for its maximum value. Cat finance is working to help guard and grow your mining investments.

## **SERVICE COVERAGE**

You can't wait until tomorrow or the next available appointment for product support. Technical assistance is available 7 days a week, 24 hours a day, with service running on the same schedule as the machines you rely on.

## **ADVANCED ELECTRIC SERVICES**

Cat dealers are equipped with expert knowledge and in-the-field experience to customize and install your power system. And they're dedicated to keeping your system operating at its highest efficiency.

Long-term electrical system maintenance, testing, retrofit and engineering services such as infrared thermography, circuit breaker testing and arc flash studies are examples of how Cat dealers work for the success of your operation—starting with the machines that power it. You can depend on us to be your partner for all electrical power servicing needs before, during and after the installation of your electrical system components.

Cat dealers are in full compliance with global and local regulations to minimize the risk for personal injury or product damage. Proper testing and maintenance from your Cat dealer can minimize your exposure to major financial risks, legal risks and regulatory violations caused by unexpected downtime.

## **EXTENDED SERVICE COVERAGE**

Your Extended Service Coverage offers coverage for all Cat branded electric power equipment, beyond the standard warranty period. Extended Service Coverage protects against unexpected repair bills and is a hedge against rising parts and labor costs by providing 100 percent parts and labor reimbursement for covered components, minus any applicable deductible. Coverage options are customizable to suit the needs of your mining operation, and simple pricing terms make options easy to compare.

## **CUSTOMER SUPPORT AGREEMENTS**

Your Customer Support Agreement helps maintain your system while lowering operating costs, regardless of machine size or age. It's tailored to fit your needs from preventative maintenance kits to total cost performance guarantees. The agreement is between you and your Cat dealer for careful planning with an expert you trust and personal attention to the changing needs of your mining operation.

## **PARTS AVAILABILITY**

Your Cat dealer is equipped with a parts inventory and access to the global Cat parts network. We know that having access to the right parts is crucial to your power system, so we also provide the latest parts information at [www.parts.cat.com](http://www.parts.cat.com). You'll also find videos, reference material and specs on Cat original and Classic™ parts. The website also offers 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.



LEXE0533-03

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