

CATERPILLAR CONSULTING ENGINEER RESOURCES

A man wearing a white hard hat and safety glasses is shown in profile, interacting with a control panel. He is wearing a blue long-sleeved shirt with a patch that says "EST. 1900 CAT". The control panel features a small screen, several buttons, and a digital display showing "498 9827 5687". The background shows industrial equipment.

**PUT THE EXPERTS
TO WORK FOR YOU**



BUILD YOUR EQUIPMENT KNOWLEDGE

Make the most of your equipment with the best training and support for the life of your products. Your Cat® dealer is your partner in meeting your needs with an extensive library of power systems technical training seminars. Factory and dealer experts will come to your office to help you increase efficiency and productivity.

FREE SEMINARS AVAILABLE:

TIER 4 FINAL EMISSIONS REGULATIONS FOR ELECTRIC POWER

An in-depth explanation of U.S. stationary diesel emissions standards. Learn about the different scenarios in which diesel generator sets can be used, and how it impacts their emissions requirements.

RATING DEFINITIONS & LOAD FACTOR

Electric power products can be applied in different applications, which use different ratings. Discuss the ISO8528 ratings definitions and learn about Caterpillar ratings to support different applications. Discussion would also include uptime institute, ratings' relation to emissions requirements, and an overview of the concerns related to the underutilization or overutilization of a rating.



PARALLELING STRATEGIES

Identify applications that are suitable for a specific paralleling strategy. This overview shows the value, key benefits, and differences of various specific paralleling solutions.



GENSET CONTROLS TECHNOLOGY

Learn about Cat product generator set controls, their capabilities, and how to decide what requirements are needed for any project.

IBC SEISMIC AND WIND LOAD COMPLIANCE FOR NON-STRUCTURAL BUILDING COMPONENT

Learn about special inspections, life safety systems, responsibilities, special seismic requirements, and OSHPD Certification.

EMCP 4.4 – ON PACKAGE PARALLELING CONTROLS

Onboard paralleling can be a perfect option for many projects, but may not fit the requirements for all. Learn about Cat product EMCP 4.4 onboard paralleling features and functionality, and what applications it is best suited for.

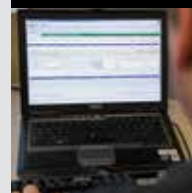
DISASTER PREPAREDNESS & MAINTENANCE CONSIDERATIONS

Learn how to make sure that your standby power system functions when it is needed most with preventive maintenance practices.

SPECSIZER 101: GETTING STARTED

The Cat SpecSizer program can help you accurately size generator sets to a projects specific loads.

This discussion gives an overview of the tool and will prepare a user to get started quickly.



Earn CEU credits and build relationships while you make sure your customers get the best training and support for the life of their products.

Contact your local Cat dealer to schedule training near you. **Visit cat.com/dealers**

ATS BASICS

This course is an introduction to the Automatic Transfer Switch (ATS), discussing definitions, functions, physical elements, basic transfer types, how we transfer loads, standards and certifications, and different modes of operations.

COOLING GENSETS

This course is an application-level look at diesel engine cooling systems and radiators. It describes and explains methods of managing engine heat for various engine applications.



MICROGRID OVERVIEW

This course introduces renewable energy microgrids: common components and comparison of industry technologies, designing and specifying microgrid systems, and an off-grid facility case study.

MICROGRIDS: SOLAR RADIATION AND SUNLIGHT

This course is an introduction to the relationship between the Earth and the Sun and the factors that affect the energy we receive on a solar array.



MICROGRIDS: PHOTOVOLTAICS AND MODULES

This course covers how we take the energy from the sun and, using a photovoltaic module, convert the solar energy into electricity that we can use.

MICROGRIDS: PV SYSTEM DESIGN

PV system design and the various distributed generation solutions that are available with the Cat photovoltaic product.



GAS GENSETS IN STANDBY APPLICATIONS

This seminar explores high-level differences between gas and diesel generators used in standby applications, gas gensets beyond emergency, and gas genset maintenance considerations.

GENERATOR BASICS

This is an introduction to electrical generator basic theory, alternating electrical generator overview, and generator characteristics.



APPLICATION & INSTALLATION OF DIESEL GENSETS

This is a general discussion of genset engine room design: air intake and systems, exhaust systems, fuel systems, engine room ventilation, and foundations and isolation.

CATERPILLAR CONSULTING ENGINEER RESOURCES

Cat Spec Sheets:

http://www.cat.com/en_US/products/new/power-systems/electric-power-generation.html

Any size or shape. In any regulatory environment. When you need power, Caterpillar is equal to the challenge. Our generators are used in a variety of applications.

SpecSizer:

http://www.cat.com/en_US/articles/solutions/power-systems/electric-power-specsizer.html

Caterpillar Electric Power is excited to introduce you to our latest generator set sizing software, Cat Electric Power SpecSizer.

Considering factors such as site conditions, load characteristics and required performance, SpecSizer provides accurate and timely technical data, robust load models and optimized algorithms to assist in specifying a properly sized generator set to best meet your power needs.

Several new features set SpecSizer apart as a revolutionary tool in generator set sizing, including its ability to evaluate load types such as air conditioners, elevators, ultraviolet lights, single-phase NEMA, and single-phase IEC motors.

SpecSizer offers a unique Application Wizard that collects data on the user's loads, then organizes the loads into steps, considering voltage dip and load demands, to assist in selecting the best generator set size in terms of both rating and footprint.

Cat White Papers:

http://www.cat.com/en_US/by-industry/electric-power-generation/electric-power-industries/white-papers.html

Caterpillar has over 30 white papers dedicated to the electric power industry. From generator sets, to paralleling, to microgrid technologies, these resources can help to simplify and inform engineers on a variety of topics.

Cat Brochures:

http://www.cat.com/en_US/by-industry/electric-power-generation/electric-power-industries/brochures.html

Cat Electric Power supports a variety of markets. Learn about our capabilities and products built to support them.



CUSTOMER, CAT DEALER, CATERPILLAR

This partnership is a commitment to you to get the best product, service, and support for your investment. Your Cat dealer is committed to maximizing your success, helping you get the most out of your operations. Take advantage of these training opportunities to build your business and your relationships.

BUILT FOR IT.™