



**LIFE IS PRECIOUS.
EXTEND IT.**

**Cat® Switchgear
Life Extension Solutions**



YOU'RE MAINTAINING MORE THAN JUST EQUIPMENT

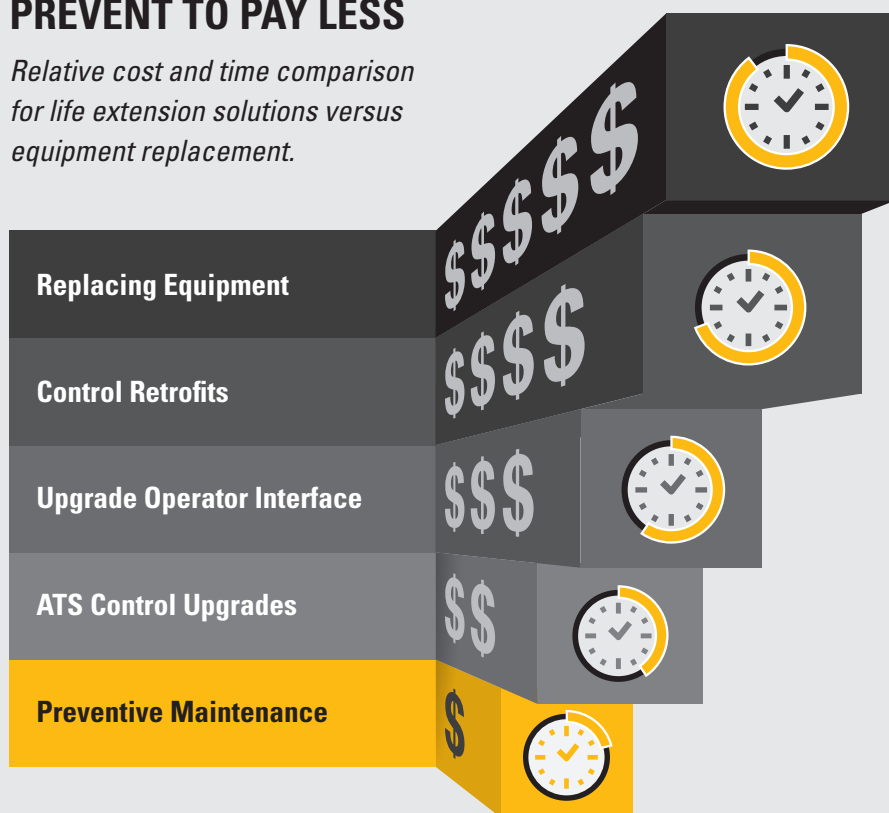
There's so much at stake in your facility. With more than 20 years' experience in Cat® switchgear, our engineering managers can help solve complex problems and provide cost-effective solutions to enhance your system with faster processing and improved functionality. We're committed to helping you protect your team with the equipment, technology, and training they need to stay running and do their critical work.

If you want to improve or maintain your facility's performance, consider requesting preventive maintenance and upgrading or retrofitting outdated or obsolete components that will help:

- **Avoid system failure and plant shutdowns**
- **Improve the performance of your power system**
- **Extend the life of your power system**
- **Reduce the expense of emergency repair**

PREVENT TO PAY LESS

Relative cost and time comparison for life extension solutions versus equipment replacement.



ALL WORK COMPLETED BY CAT TECHNICIANS

TIERPOINT DATA CENTER



PARALLELING SWITCHGEAR IS KEY TO 100% UPTIME

At TierPoint's data center in Lenexa, a standby power system anchored by two Cat diesel generator sets is controlled by two identical switchgear rooms to ensure power redundancy. When engineers from Caterpillar Switchgear found components that were nearing obsolescence, TierPoint opted for an upgrade to modernize its switchgear that allows for faster processing and improved functionality.

Read more on cat.com.

TIFT REGIONAL MEDICAL CENTER



EMERGENCY BACKUP POWER RUNS LIFE-SAFETY SYSTEMS

Because Tift Regional Medical Center (TRMC) offers a full line of specialty medical services, it's not an option for backup power equipment to stop working. To guarantee the campus has continuous power, TRMC worked with Cat dealer Yancey Power Systems to develop a customized standby power solution with upgraded paralleling switchgear to control its three generators.

Read more on cat.com.

MAINTENANCE, TESTING & THERMOGRAPHY SERVICES

PREVENTIVE MAINTENANCE

Your Cat dealer technician is familiar with your power system. We suggest having them complete a comprehensive audit of your power system to:

- Determine the overall condition of your system
- Identify areas of risk and opportunities for upgrades in performance, safety, and communications
- Provide details for all concerns
- Recommend options for maintenance, upgrades, and retrofits
- Suggest best practices for ongoing maintenance



CRITICAL POWER SYSTEM BATTERY TESTING

Battery failure is a leading cause of unscheduled downtime with critical backup power systems. Avoid system failure with maintenance performed by a Cat service technician who will:

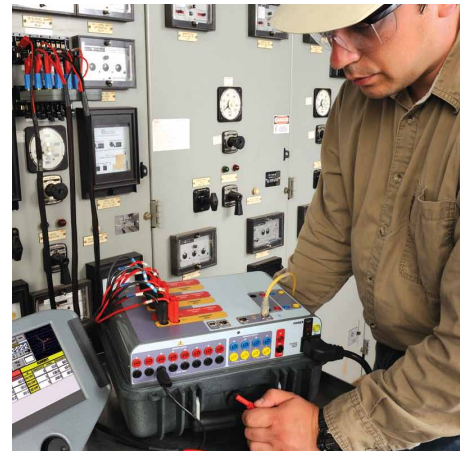
- Make sure industry standards are met
- Ensure your battery will perform when necessary
- Provide a comprehensive report on the condition of your battery system



PROTECTIVE RELAY MAINTENANCE AND TESTING

Periodic relay maintenance and testing is critical for employee safety, for avoiding unplanned electrical outages, and for proper operation of critical power systems found in hospitals, data centers, and industrial plants. Caterpillar or your local Cat dealer can provide:

- Studies that prove that a comprehensive inspection, maintenance, and testing program is the only way to assure correct relay operation
- Local service technicians who are familiar with your relays and are trained according to industry standards
- A detailed report to verify the settings and proper operation of your relays



CIRCUIT BREAKER MAINTENANCE AND TESTING

Inadequate circuit breaker maintenance is a leading cause of unscheduled power outages. Power circuit breakers need regular maintenance and testing to ensure electrical system reliability, employee safety through validation of proper equipment operation, and compliance with industrial regulations and standards to ensure against litigation and loss of productivity. Caterpillar or your local Cat dealer can provide:

- Local service technicians who are familiar with your power supply system circuit breakers and are trained according to industry standards
- Cat dealer technicians who can conduct primary and secondary injection testing, insulation resistance testing, contact pressure testing, and trip unit operation verification
- A detailed comprehensive report on the condition of your circuit breakers

THERMOGRAPHY

The use of thermal imaging programs has revolutionized predictive maintenance inspections for various electrical components. Thermal imaging can provide substantial cost savings by:

- Reducing the risk of unscheduled downtime
- Identifying potential electrical safety hazards before they happen
- Providing condition monitoring for your power system
- Helping you manage risk by complying with insurance requirements



UPGRADES & RETROFITS

SWITCHGEAR RETROFIT

A switchgear retrofit by Cat technicians can help improve your power system's overall performance. A retrofit can include a software update, hardware retrofit, or complete overhaul of your electrical power system. If any of the below apply to your equipment, it's time for a retrofit:

- Outdated switchgear
- Decreased system performance
- A sequence of operations not working as designed
- Changes to site configurations



COMPLETE SYSTEM RETROFITS

In some cases, your Cat dealer technician may recommend a complete retrofit of your switchgear system. This involves replacing and upgrading your controls while keeping the system operational. These services include:

- Updates with the latest Cat controls
- A temporary control package during upgrades
- New, prewired, tested control doors and panels
- Tap box integration
- Automatic transfer switch (ATS) retrofits
- Generator and switchgear control upgrades
- Power systems sequence of operation changes
- Remote communication upgrades and integration
- Optional site operation simulator

ATS CONTROLS RETROFIT

Your Cat technician can help minimize downtime during an outage and ensure a seamless transition between your main power and backup power with a retrofit of your ATS controls. Caterpillar or your Cat dealer can provide services to:

- Enhance the operation and function of your switch
- Update control, monitoring, and communication
- Eliminate concerns about legacy component availability



OPERATOR INTERFACE AND COMMUNICATIONS UPGRADE

Many sites use non-supported operating systems and outdated analog gauges, annunciators, etc. that are often burned out or do not function properly. Upgrade to the latest operating system and communications equipment and implement modern touchscreen control to enhance your system's monitoring capability.



SITE OPERATION SIMULATORS

Consider a software-based simulator that can be retrofitted into existing Cat systems and used as a training aid to help facility managers operate their paralleling system.

BREAKER UPGRADES

If your breakers are outdated, replace them with new ones to:

- Improve overcurrent selectivity
- Eliminate concern about the availability of parts for future repairs
- Access new options and accessories



PROGRAMMABLE LOGIC (PLC) UPGRADES

Our devices are the latest factory-supported units replacing obsolete and non-supported units. Upgrade your controls to the latest technology with minimal program interruptions or changes to:

- Improve equipment function and performance
- Accommodate advanced communications



YOU NEED IT TO KEEP WORKING

We can help you maintain, protect, and update your electric power system for life, so unplanned outages don't happen. You can rely on Caterpillar to be your partner through it all.

WE CAN HELP YOU DO THE WORK IN THESE INDUSTRIES:

- Agriculture
- Airports
- Cogeneration/Combined Heat and Power (CHP)
- Commercial Business
- Construction
- Data Centers
- Greenhouses
- Healthcare
- Landfills
- Manufacturing
- Microgrids
- Mining
- Municipalities/Wastewater Treatment Plants
- Nuclear
- Power Plants
- Rental Power
- Telecom
- Utilities

SUPPORT BEYOND EQUIPMENT



LET US ELEVATE YOUR EQUIPMENT OWNERSHIP EXPERIENCE

There's a support system behind every Cat equipment owner, inspiring you to do the work every day. Your local Cat dealer offers that same level of support for your critical power system, helping you finance the latest equipment and protect and maintain your investment for the long haul. Because you're not just powering things. You're powering life.

Cat dealers have years of experience and offer local support and service by highly trained technicians for your emergency or standby life extension needs.

They can help you with:

- A Customer Value Agreement (CVA)
- Cat Extended Service Coverage (ESC Policy)
- Site-specific replacement parts
- Training services
- Site operation simulators and more.

Contact your local Cat dealer for more information
www.cat.com/dealer-locator

LET'S DO THE WORK.™

LEXE1595-00

© 2020 Caterpillar. All Rights Reserved. CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, "Caterpillar Corporate Yellow", the "Power Edge" and Cat "Modern Hex" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

