



Power Chain Management™ Solutions

Product Focus

- Sustainable Building Solutions
- Optimize Energy Usage
- Improve Power Quality
- Increase Reliability

Commitment to Environmental Stewardship





Eaton,

The Energy of Innovation

The world is growing. Construction activity is surging in the United States and is reaching unprecedented levels in China, India and other rapidly developing countries. The world needs energy to power this progress and even on a planet as bountiful as ours, resources are finite.

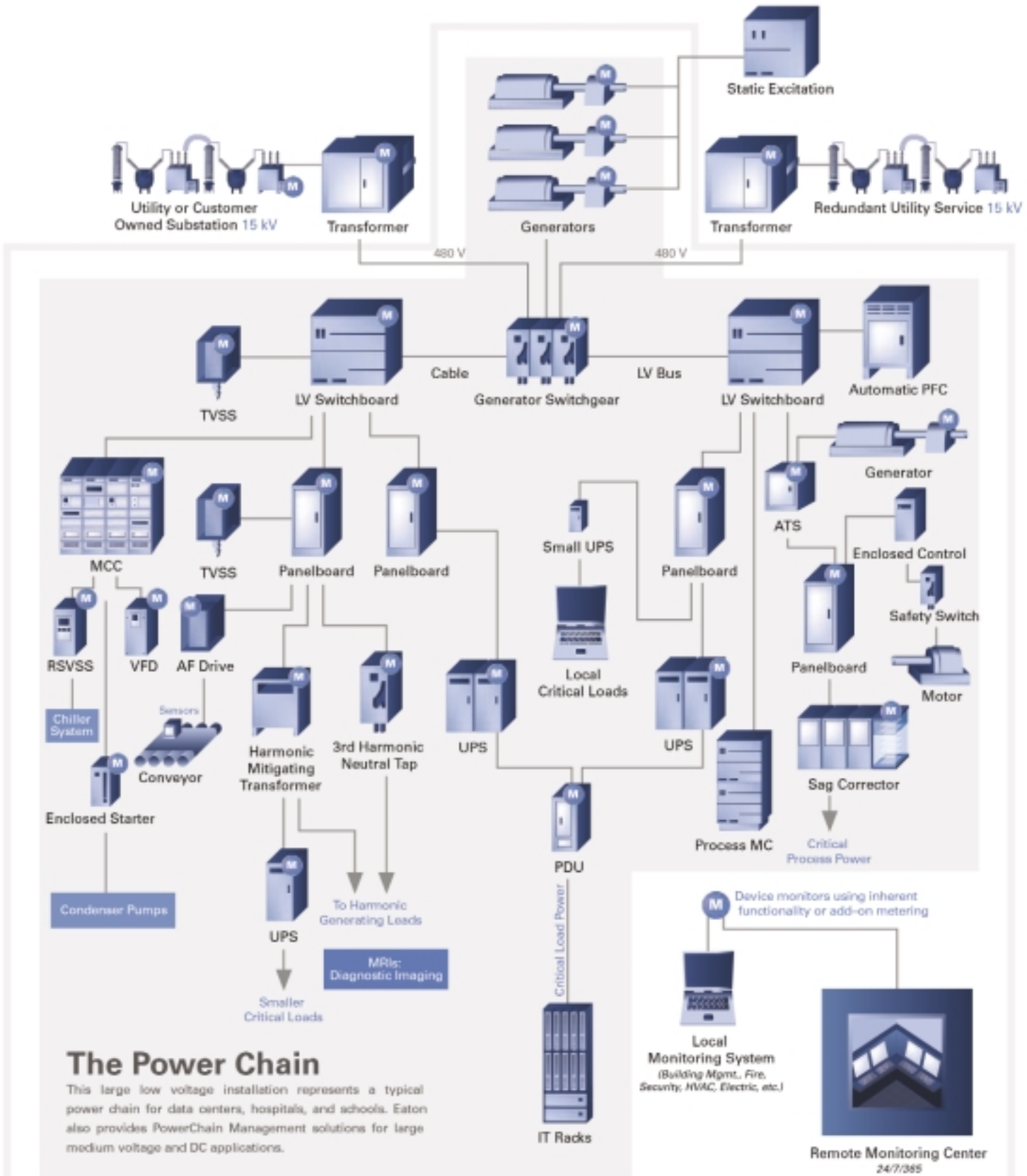
As the designers, stewards and conscience of this global building boom, contemporary architects are at the forefront of a sustainable building movement that focuses on creating beautiful and functional structures for human work and habitation, while establishing building principles and practices that preserve, sustain and protect the environment.

At Eaton, we are here to help. We offer a comprehensive array of electrical products, technologies and services that allow architects and building owners to take a holistic, life-cycle-oriented approach to their electrical generation and distribution systems.

The result is an unparalleled collection of Power Chain Management Solutions that optimize energy usage, reduce energy consumption and enhance the comfort and sustainability of the office buildings, plants, schools, homes and hospitals for which they are specified.

This brochure provides an abbreviated look at a select group of Eaton Electrical products and describes how they can be employed as part of a Power Chain Management Solution that promotes environmental sustainability and delivers bottom-line benefits throughout the life-cycle of a building.





The Power Chain

This large low voltage installation represents a typical power chain for data centers, hospitals, and schools. Eaton also provides PowerChain Management solutions for large medium voltage and DC applications.

The Power Chain.

The Case for Power Chain Management Solutions



The power chain is the complete electrical power system contained within a manufacturing facility, university campus, retail chain, health care center, military base, home or any other entity where electricity must function without interruption. It consists of the power infrastructure – the design of each electrical system, in its individual parts and components, plus the monitors, sensors, communications and computers that monitor analyze and run them.



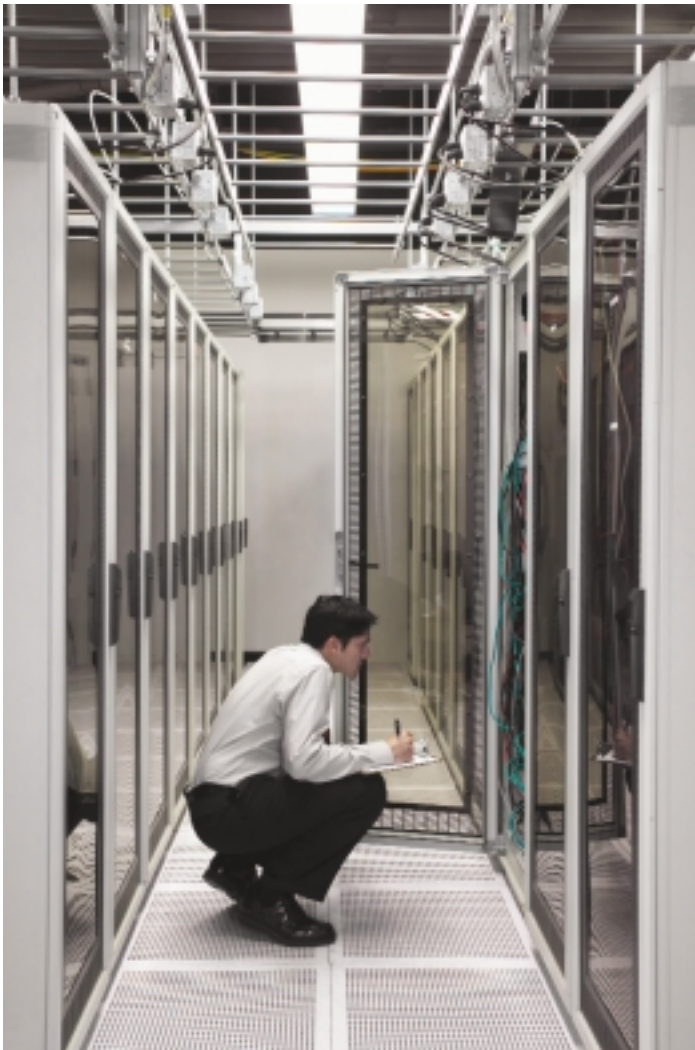
Integrated Facility System™ (IFS)

The Cutler-Hammer Integrated Facility System™ (IFS) is the latest innovation for electrical distribution equipment from Eaton Electrical Corporation. This unique solution integrates Cutler-Hammer electrical distribution equipment into one space-saving switchboard structure while maintaining or expanding the available wiring space.

By incorporating Cutler-Hammer Smart Breaker™ technology into Pow-R-Command™ lighting control products, the IFS provides a high-performance controller that can be used in all major lighting areas. Reliable load control is achieved by integrating the contactor function directly into the circuit breaker. These features make the IFS easier to use and maintain.

Series G® Circuit Breakers

The first true world-class circuit breaker family. The next generation circuit breaker line builds on the success of the Series C line while incorporating numerous enhancements for improved performance and value, especially for MOEM markets. Most notable of these improvements is the size, approximately 30-40 percent smaller than a comparable Series C breaker. Another important feature is that the breakers have global acceptance (UL, CSA, IEC) plus a Kema-Keur mark (the only breaker manufacturer to do so). Lastly, the smaller frames (EG, JG, and LG) have been designed to use common accessories that are field installable.



The Power Chain.

The Case for Power Chain Management Solutions
(continued)



High Efficiency Transformers

Low Temperature Rise Energy Efficient transformers are designed with lower than normal conductor and total losses. As a result, temperature rise is lower, which leads to greatly improved life expectancies and substantial increases in overload capabilities.

Both 80°C- and 115°C-rise transformers can help cut operating expenses for systems requiring unit loading at 80 to 100 percent of the nameplate rating, 24 hours a day, or where load growth is expected. A 115°C-rise transformer can carry a continuous 15 percent overload, and the 80°C-rise can sustain a 30 percent overload, without exceeding the insulation rating or seriously reducing the life expectancy of the transformer.

- NEMA TP-1-1996, ENERGY STAR® Compliant

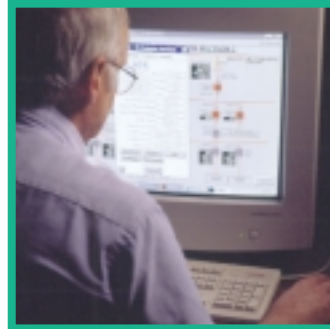


Uninterruptible Power Supply (UPS)

Eaton's Powerware products have been protecting mission-critical operations since the days when mainframes were so big, they needed their own rooms. That's over 40 years of experience in the power quality and backup power protection industry. The result is an expansive product line with advanced solutions for any application, from desktops to data centers.

Powerware solutions include UPSs ranging from 300 VA to more than 4,000 kVA. Our award-winning software and connectivity devices incorporate all the features you need to proactively manage your systems, from basic monitoring and shut-down to predictive analysis and power management. Powerware Integration Services offers complete solutions tailored for the specific requirements of federal, telecom, and commercial markets.

Whatever your industry, Powerware provides answers with customized power management solutions backed with 7/24 Global Services support.



Metering & Monitoring Systems

From the moment power enters your facility to the instant it is used by a process, tenant or equipment, Eaton Electrical's complete family of industry-leading Cutler-Hammer power management products - metering devices, protective relays, communications hardware and PowerNet software - will monitor, analyze, measure and control your power chain.

Eaton Electrical's power management products put you in charge, enabling you to take control and make the informed decisions that will improve operational efficiency, locate problems before they develop and avert them before they grow. Cutler-Hammer power management products also help you manage energy usage, control energy costs, increase reliability and decrease downtime.

Eaton's Foreseer system proactively monitors and manages your critical facilities infrastructure, including HVAC, UPS, power distribution, generator, fire-detection, and security systems from hundreds of manufacturers.

With an intuitive graphical interface, Web enabled, multiple views from global to individual components, multi-level alarm thresholds, and complete asset management capabilities, the Foreseer system provides a much-needed window into the operational state of critical systems.



Power Factor Correction Capacitors

Eaton Electrical products for Power Factor Correction and Harmonic Mitigation correct poor power factor, thereby reducing or eliminating penalties charged by the utility; increasing load capacity; and regulating voltage.

Cutler-Hammer Power Factor Correction Capacitor Banks and Passive Harmonic Filters are available in a wide array of applications, from 240 V AC-115 kV and kvar ratings of 1-15,000.

Because each facility is different and has its unique needs, Eaton Electrical can custom design the most appropriate solution that will help you safely reduce energy consumption and diminish or even eliminate power factor penalties. In most cases, the payback is less than two years. Often, it is less than six months, making our Power Factor Correction products one of your best investments in power quality.



Our Vision.

Environmental Sustainability



Variable Frequency Drives

Eaton's expanded drive offering now covers a complete line of PWM adjustable frequency drives with a full range of options and enclosure types. Drive applications include simple variable torque to more complex industrial applications such as conveyors, mixers, machine controls, HVAC and Oil & Gas.



Intelligent Technology (IT) Soft Starters

Eaton Electrical offers some of the most innovative soft starting solutions in the industry. Whether it's a new installation or a retrofit, we have the answer.

The Intelligent Technologies **IT** Line of Reduced Voltage Soft Starters is very compact, multi-functional, easy to install, and easy to program. Designed to control acceleration and deceleration of 3-phase motors, the line is available for current ranges from 12 amp all the way through 1000 amp applications, and is suitable for mounting in motor control centers or in enclosed control (NEMA 1, 4, 4 X, and 12) applications. The Intelligent Technology **IT** Line of Reduced Voltage Soft Starters includes the Medium Voltage MV801, the S801, and the S752 soft starters - each comes standard with a control interface module.



A Company-Wide Commitment

At Eaton, our commitment to environmental sustainability extends beyond the manufacture of energy-saving electrical equipment. It is central to the vision of our entire organization.

For example, Eaton recently teamed with FedEx Corporation and Environmental Defense to create a hybrid delivery truck that reduces particulate emissions by 96 percent and increases fuel efficiency by 50 percent. The first 18 production models of the vehicle are now in service, and FedEx plans to add another 75 hybrid vehicles to its fleet in the first year.

In addition, Eaton Corporation's Heavy Duty Truck transmission plant in San Luis Potosi, Mexico, has been inducted into the Mexican government's prestigious *Industria Limpia* (Clean Industries) environmental program. In order to receive this honor, Eaton had to demonstrate, through a series of rigorous audits, significant results in reducing and eliminating waste, and to prove that the plant conserves and is respectful of natural resources including water, fuel and energy.

Through these and similar initiatives, including membership in the United States Green Building Council (USGBC), vigorously pursues the protection and preservation of a healthy global environment.

Eaton Electrical Services & Systems

Eaton Electrical Services & Systems provide upfront analysis and design prior to project implementation. Through a Power Chain Management audit, our power system engineers will help you quickly diagnose problems or proactively identify ways to improve your electrical system's performance and operation through ...

- System design engineering
- Power audits and studies
- Arc flash and safety studies
- Energy management
- Consulting support

To learn more about Eaton's energy-saving power chain solutions, or to find an authorized dealer near you, call **1-800-525-2000** or visit www.eatonelectrical.com.

Eaton Corporation is a diversified industrial manufacturer with 2004 sales of \$9.8 billion. Eaton is a global leader in fluid power systems and services for industrial, mobile and aircraft equipment; electrical systems and components for power quality, distribution and control; automotive engine air management systems, powertrain solutions and specialty controls for performance, fuel economy and safety; and intelligent truck drivetrain systems for safety and fuel economy. Eaton has 57,000 employees and sells products to customers in more than 125 countries. For more information, visit www.eaton.com.

Eaton Electrical, Inc.
1000 Cherrington Parkway
Moon Township, PA 15108
United States
tel:1-800-525-2000
www.EatonElectrical.com

EATON



CSA is a registered trademark of the Canadian Standards Association. ANSI is a registered trademark of the American National Standards Institute. UL and cUL are federally registered trademarks of Underwriters Laboratories Inc. Cutler-Hammer is a federally registered trademark of Eaton Corporation. NEMA is the registered trademark and service mark of the National Electrical Manufacturers Association.

© 2005 Eaton Corporation
All Rights Reserved
Printed in USA
Pub. No. BR08701005E
November 2005