

Automatic transfer switch case study

Always-on: New medical center calls on Eaton to power the future of healthcare

Healthcare organizations demand resilient and flexible power to provide exceptional patient care. That means having an infrastructure that can support around-the-clock operations, safe and efficient maintenance, and the ability to scale for future demands.

By working with Eaton to develop a power distribution system for its new medical center, a healthcare provider in the Northeastern U.S. standardized on compact prefabricated assemblies that accelerated the project timeline and modern transfer switches that maintain uptime during NFPA® 99 preventive maintenance procedures.

Summary

- **Challenge:** Streamline the design of a new power distribution system for critical uptime and ease of maintenance to support safe, resilient and flexible healthcare.
- **Solution:** A scalable solution consisting of Eaton [bypass isolation automatic transfer switches \(ATSs\)](#), prefabricated Eaton [integrated facility systems \(IFS\) switchboards](#), and switchgear assemblies for normal and emergency power.
- **Results:** A fully integrated electrical distribution system that consolidates traditionally separate components into space-saving, factory-assembled lineups with the ability to maintain power to critical loads during routine maintenance.

Challenge

Streamline the design of a new power distribution system to support safe, resilient and flexible healthcare for the needs of today and tomorrow.

When the Northeastern medical provider embarked on the construction of its new \$330 million healthcare facility, Eaton won the contract to develop an innovative electrical system that would:

- Support critical uptime levels needed in healthcare environments
- Mitigate the need for planned downtime when performing essential electrical system maintenance prescribed by NFPA 99 and 110.
- Standardize on prefabricated and factory-assembled solutions to minimize onsite labor and simplify serviceability
- Ensure future scalability to power the future of the hospital



Powering Business Worldwide

Solution

Prefabricated and factory-assembled switchboard assemblies with Eaton bypass isolation ATSs for the ultimate in compact footprint, uptime and serviceability.

To meet the customer's needs, Eaton centered the power distribution system around 45 of its prefabricated IFS switchboards. The factory integrated solutions consolidate traditionally separate electrical distribution components, assemblies and control equipment into a single, space-saving package. By using the prefabricated IFS switchboards, Eaton was not only able to reduce the floorspace required for electrical distribution equipment by as much as 50 percent, but also condensed the project timelines through a single, coordinated shipment and dramatic reduction in jobsite complexity.

For ease of installation, the Eaton IFS switchboards include a pre-configured, customized wiring unit that eliminates the cost and labor of lengthy wiring jobs. Additionally, the IFS solution can be configured for nearly any application, with the ability to control lighting or HVAC systems and provide enterprise-wide monitoring to reduce energy consumption and costs.

To maximize operational reliability and redundancy, the customer standardized on Eaton's bypass isolation ATS. Although the healthcare organization evaluated many different transfer switch options, Eaton's design stood out for its ability to help facility management teams perform routine maintenance without impacting the uptime of critical systems.

Eaton's bypass isolation ATS incorporates an automatic bypass switch and an ATS within a single assembly to provide fully redundant, automatic power backup and uninterrupted power to critical loads during maintenance. This design allows service personnel to safely bypass power around the automatic transfer switch to ensure critical loads remain powered when performing [regular maintenance, inspection and testing](#) on the essential electrical system as required by code such as NFPA 99 and 110.

Providing additional flexibility to streamline the project, Eaton factory-installed 8 of the transfer switches directly into IFS lineups prior to delivery to further reduce onsite labor and electrical system footprint.

Eaton rounded out the power distribution system with a double-ended, 12 kV, service switchgear lineup and a 4,160 V paralleling emergency power switchgear lineup to provide reliable electricity to the hospital from its remote substation located 3,000 feet away.

Results

A prefabricated, fully integrated and modern electrical distribution system capable of maintaining power to critical loads during routine maintenance.

A holistic approach to power system design empowers hospitals to focus more efforts on patient care and safety. By working with Eaton, the healthcare organization was able to rely on a single supplier to deliver a modern power distribution system with a wide range of benefits, including:

- Project completion five months earlier than comparable hospital projects — thanks in part to Eaton's prefabricated electrical assemblies
- Room for operations to grow with compact, integrated electrical lineups that help reduce electrical system footprint by up to 50 percent
- The ability to safely perform essential electrical system maintenance without the need for planned downtime

To learn more about how we can help you meet healthcare industry needs with on-time project construction and game-changing power management, visit

Eaton.com/bypassATS



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