

DATA CENTER ELECTRICAL INFRASTRUCTURE UPGRADE

**UPS Installation & Critical Power Distribution
for Mission-Critical IT Systems**



Project Highlights:

- Eaton BladeUPS installation
- Mission-critical power distribution
- New three-phase panelboards
- Dedicated server circuits
- Twist-lock receptacle installation
- Data center electrical infrastructure
- Critical power system upgrade
- Commercial electrical contractor

Project Overview

BD Electrical completed a critical power infrastructure upgrade for a commercial data center, installing a new uninterruptible power supply (UPS) system, power distribution equipment, panelboards, and dedicated branch circuits to support mission-critical server operations.

The project modernized the facility's electrical distribution, providing conditioned backup power and dedicated electrical infrastructure for server racks and network equipment. Every aspect of the installation was designed to maximize reliability, maintainability, and uptime for the customer's IT environment.

Scope:

- Installation of Eaton BladeUPS system
- New critical power distribution equipment
- New three-phase panelboards
- Dedicated server branch circuits
- Twist-lock receptacle installations
- Rack power distribution
- Feeder installation and terminations
- Equipment grounding and bonding
- Testing and commissioning

The Challenge

Data centers require electrical systems that operate continuously with minimal downtime. Unlike standard commercial spaces, server environments demand stable voltage, clean power, and backup power during utility interruptions. The project required installing new electrical infrastructure within an active server room while coordinating work around existing network equipment and maintaining reliable operation throughout the construction process. Space constraints, cable management, and sequencing were all critical to successfully completing the installation.

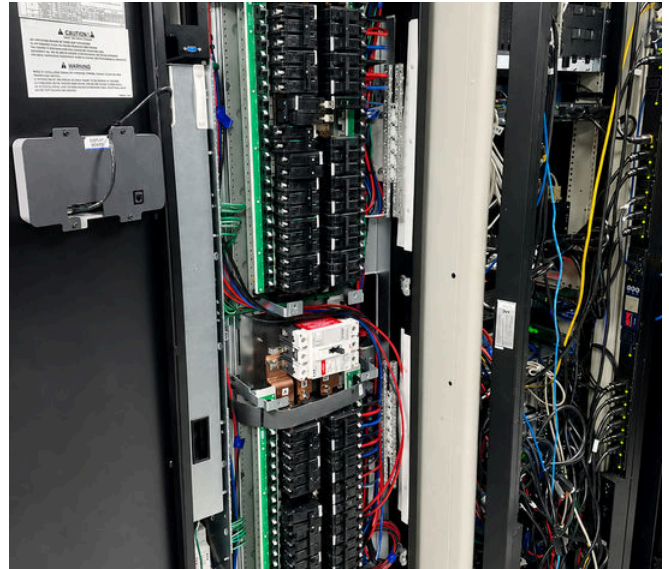
Our Solution

BD Electrical installed a complete critical power distribution system centered around a new Eaton BladeUPS platform.

The project included:

- New UPS system installation
- New distribution panelboards
- Dedicated power circuits for server racks
- Twist-lock receptacles for critical equipment
- New feeders and branch circuits
- Organized cable routing and terminations
- Testing of all critical power systems

The completed system provides reliable backup power while delivering dedicated electrical distribution to mission-critical server infrastructure.



Why UPS Systems Matter

Even a brief power interruption can result in network outages, data corruption, equipment damage, and significant operational downtime.

A properly designed UPS system provides:

- Continuous power during utility outages
- Clean, conditioned electrical power
- Protection from voltage fluctuations
- Time for generator startup or controlled shutdown
- Increased reliability for critical equipment
- Reduced risk of unplanned downtime

For data centers, healthcare facilities, telecommunications, and other mission-critical environments, UPS systems are an essential component of electrical infrastructure.



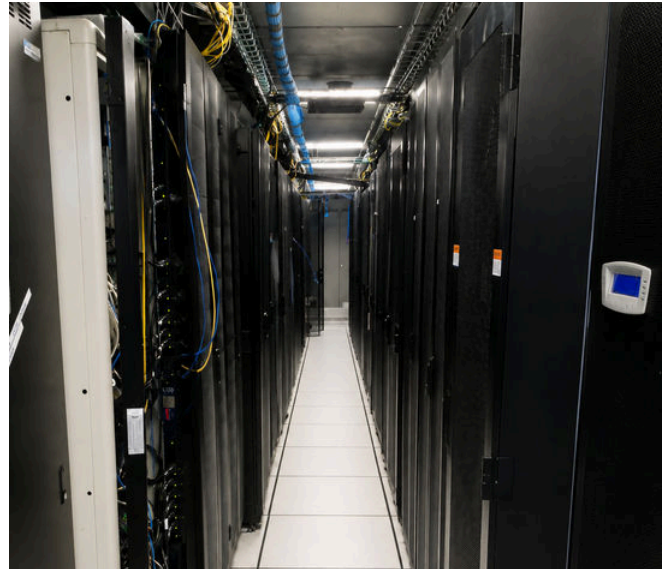
Why Dedicated Server Circuits Matter

Mission-critical equipment should never share electrical circuits with general building loads.

Dedicated circuits help provide:

- Stable power delivery
- Reduced electrical noise
- Improved troubleshooting
- Proper load balancing
- Simplified maintenance
- Increased system reliability

By separating server loads onto dedicated panelboards and branch circuits, facilities improve both performance and long-term scalability.



Why Choose BD Electrical

BD Electrical specializes in commercial electrical systems where reliability is critical.

Our experience includes:

- Data center electrical infrastructure
- UPS installations
- Critical power distribution
- Commercial panelboard installations
- Dedicated IT power systems
- Three-phase electrical distribution
- Laboratory electrical systems
- Commercial service upgrades
- Commercial solar and battery energy storage systems (BESS)

From server rooms to research laboratories, we design and install electrical systems that support facilities where uptime matters.