

# What is Electrical Equipment Modernization?

The process of upgrading or renovating existing electrical equipment to enhance its performance, efficiency, reliability, and safety. It involves making improvements to various types of electrical equipment used in power generation, transmission, distribution, and utilization systems.

## **Types of Modernization Offers**

### MV and LV Switchgear

Upgrade of equipment that is now obsolete and rebuilt to current safety standards. This can be with the use of factory designed replacement solutions or field modified custom installations.

### Circuit Breakers

Removal and replacement of existing circuit breakers in order to update to modern standards. This can be completed with direct replacement as well as custom engineered solutions.

### **Switchgear Doors**

New replacement switchgear doors prewired for modern relays, switches and protective devices. Prewire wired doors greatly reduce the downtime necessary to make these upgrades.

### **Safety Features**

Installation of Energy Reduction Maintenance Settings system. As well as remote racking and remote control devices and systems. Controls Upgrades

### Relays

Replacement of outdated protection relays with Advanced Communication and Automation protective relays.

### Metering

Update or add meters to existing infrastructure to meet sustainability goals.

### **Disaster Response**

Custom built switchgear to fit the footprint of failed equipment.

## **Project Lifecycle**



## **Benefits**

Modernizing electrical equipment offers several advantages over completely replacing it with new equipment. Here are some benefits of modernizing electrical equipment instead of installing new replacement equipment:

Cost Savings: Modernization is often more cost-effective than full equipment replacement. Upgrading specific components or systems within the existing equipment can be significantly cheaper than purchasing entirely new equipment. It allows you to leverage the existing infrastructure while still achieving improved performance and functionality.

Extended Lifespan: Modernizing electrical equipment can help extend its lifespan. By upgrading critical components and implementing advanced monitoring and maintenance techniques, you can enhance the reliability and performance of the existing equipment. This can postpone the need for complete replacement and maximize the return on investment.

Minimized Downtime: Modernization projects typically involve shorter implementation timelines compared to full equipment replacement. This means less downtime and disruption to operations.

Improved Performance and
Efficiency: Modernizing electrical
equipment allows you to incorporate
the latest technologies and
advancements to improve performance
and efficiency. Upgrading components
such as control systems can result in
energy savings, increased productivity,
and better overall system performance.

Enhanced Safety: Equipment modernization often includes safety enhancements, such as the installation of advanced protection devices, improved insulation systems, and arcflash detection systems. These upgrades help mitigate electrical hazards, protect personnel, and ensure compliance with safety standards and regulations.

#### Flexibility and Scalability:

Modernizing equipment provides flexibility and scalability options. You can tailor the modernization process to address specific needs, prioritize critical areas, and adapt to changing requirements. It allows for incremental improvements and future upgrades as technology advances or operational demands change.

Environmental Sustainability: By modernizing existing equipment, you can contribute to environmental sustainability. Upgrading components for better energy efficiency reduces power consumption, lowers greenhouse gas emissions, and minimizes waste associated with disposing of old equipment.

Compliance with Regulations and Standards: Modernizing equipment helps ensure compliance with the latest industry regulations and standards. By implementing upgrades to meet current safety, efficiency, and performance requirements, you can avoid penalties and potential legal issues.