Powering Up with Precision: Blue Ridge Ensures Safe, Seamless Energization at New Food Plant

When a new food manufacturing plant needed to energize its full electrical distribution system—ranging from incoming utility service down to 480V panels—Blue Ridge was brought in as the owner's representative to lead the process. With safety, efficiency, and long-term performance as top priorities, BR applied its deep expertise in electrical engineering to develop and manage a phased energization strategy that delivered a smooth, incident-free transition to full operational power.

Project Overview

The electrical distribution system at the new facility was robust and complex. Two 12.47kV utility feeds—one normal and one alternate—served an M-T-M medium voltage vacuum breaker switchgear.

These in turn fed dual MV switchgear lineups powering 15 step-down transformers (two with 4160V secondaries and 13 with 480V). The transformers distributed power to a range of MCCs and distribution panels throughout the plant.

As the owner's representative, Blue Ridge was responsible for ensuring that all electrical systems were safely energized, properly tested, and ready to meet the operational demands of the plant.

Objectives

BR focused on achieving three core goals:

1. **Ensure personnel safety** during all phases of the energization process.
2. **Minimize electrical issues** through detailed pre-checks and coordinated planning.
3. **Validate system readiness** to meet the owner's operational expectations with confidence

Process and Procedure

BR implemented a comprehensive checklist system to guide every stage of the process—from third-party verifications and pre-energization checks to post-energization validation.

The energization process began with formal requests submitted by the electrical contractor, including:

- **A scope overview with marked-up single line diagrams**
- **A detailed task description**
- **A list of qualified personnel and support staff**
- **An emergency preparedness plan (fire, CPR, alarms, etc.)**
- **Factory and field test reports**
- **Electrical studies (arc flash, short circuit, coordination)**

Blue Ridge's Role

As the owner's representative, BR led a thorough multi-step review and approval process:

Scope & Design Review

BR reviewed the electrical design, scope of work, and associated documentation against owner expectations.

Compliance Check:

Test results, field installation, and equipment settings were reviewed for compliance with design specs and standards.

Walkthrough Inspections:

BR conducted detailed site inspections, documented deficiencies, and captured photo evidence where applicable.

Coordination Verification:

Overcurrent settings and protection coordination were validated in the field.

Every energization request required BR's formal approval before proceeding. A living checklist was maintained to track progress, note corrective actions, and ensure every item was resolved before sign-off.

Results

By energizing the system in a controlled, step-by-step sequence, BR and the contractor team mitigated risk and prevented potential issues. All equipment was brought online successfully and operated as intended.

BR's early involvement in the design process, structured approval system, and hands-on project management ensured a seamless, safe, and reliable startup. Their work gave the owner confidence that the plant's electrical infrastructure was energized to perform—both now and for years to come.

Ready to Elevate Your Power System?

Whether you're upgrading for safety, reliability, or future growth, Blue Ridge Automation brings the engineering expertise to make it happen.

From reducing arc flash risk to modernizing infrastructure, our solutions are designed to keep your people protected and your operations powered.

Let's design smarter, safer systems—together.

833-527-4343

www.blue-ridge-inc.com

info@brautomationinc.com