



Eagle Eye Partners with Nuclear Energy Leader to Design Critical Backup Power System for New Power Plants

Customer:

Founded over 130 years ago by electric pioneer George Westinghouse, [Westinghouse Electric Company](#) (WEC) continues its rich legacy of innovation by leading the industry in safe nuclear energy generation, supplying cutting-edge technology to nearly half the commercial nuclear power plants in operation today.

Recently, the NRC has approved fuel load for [the Plant Vogtle Unit 3 AP1000® plant near Waynesboro, GA](#), which is one of the last steps on its way to full commercial operation. This will be the first nuclear power plant built in the United States under the new, simplified, combined construction and operating license program that includes: Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) through the NRC. Vogtle Unit 4 will follow shortly after.

Challenge:

For WEC, one of the many challenges was to find the right proactive battery monitoring solution. After all, there can be no compromising reliability when it comes to enabling a battery-back-up-powered emergency shutdown at a nuclear power plant if and when called upon. The criticality of this application created a series of obstacles throughout the discovery process, including:

- Rigorous testing for both “safety” and “non-safety” (lighting systems, transformers, etc.) batteries
- Addressing a series of additional design specs
- Stringent requirements would demand a completely custom solution

Some of the custom options that needed to be considered were:

- Drawings had to include additional features in a much larger, custom-built enclosure
 - Enclosures would be in the same rooms as safety-related equipment, requiring seismic testing, FAT testing, etc.
 - Although 5 years from operation, pressure was mounting to get systems built, and ongoing support would be crucial over this extended timeframe
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Options:

WEC performed an exhaustive search for a supplier that was willing to take on the risk, investment, and time needed to find the exact right solution for this project. Even after hope was seemingly lost and the WEC team considered keeping everything in house, the team reached back out to Eagle Eye as the only partner that seemed to show unwavering support throughout the entire discovery process.

Ultimately, it was for this willingness to find the right technical solution for all WEC's unique demands, rather than offering up excuses as to why certain aspects wouldn't work, that Eagle Eye was awarded the business.

Solution:

Working hand-in-hand with Eagle Eye, the partnership designed a plan for 60 battery monitoring systems to be installed at the two nuclear plants. This required frequent back and forth communication with Eagle Eye's technical support team, digging into specific component details to make sure it supported each custom operation or feature. Furthermore, a pilot program was not even possible to test the system and application, as it was too late in the design process by the time Eagle Eye became re-engaged.

Implementation:

Years later, WEC continues to call upon Eagle Eye Service technicians to test, troubleshoot, and commission the battery monitoring systems as challenges continue in real time. Having a reliable, flexible service team to count on has proven to be beneficial for WEC throughout the years of planning and installation.

Results:

The global leader in nuclear energy innovation expects to maintain the design developed with Eagle Eye for all future safety and safety-related equipment, setting the standard for backup DC power system configuration in WEC commissioned nuclear facilities throughout the world. Ongoing training through Eagle Eye University is also an added value that is expected to increase over time as WEC's scope of operations expands.

"Eagle Eye has been a pleasure to work with overall. Very easy to communicate with. Plus, any problem we've come up against, they've made it their problem as well. By taking ownership of their work, they helped this first-time project go very well in my eyes."

– Ken Angeletti
Principal Engineer, WEC