



Case Study

RENEWABLE ENERGY LEADER MODERNIZES MISSION-CRITICAL OPERATIONS ACROSS TWO FACILITIES





ABOUT

One of North America's largest independent renewable energy producers operates tens of thousands of megawatts of wind, solar, transmission, and energy storage projects across the continent and beyond. Managing that portfolio demands continuous, reliable oversight around the clock.

The company operates two mission-critical control room facilities. Its Center of Excellence (COE) in the Chicago suburbs serves as a showcase and training environment. Its downtown Chicago Headquarters is the operational hub for its entire portfolio and where operators carry out the day-to-day work of monitoring and managing renewable energy assets nationwide.

When the time came to modernize both facilities, the company needed a team that could deliver a best-in-class solution at the COE and then replicate it at the operational headquarters where the stakes are highest.

CHALLENGES

Operators managing a distributed renewable energy portfolio don't have the luxury of a slow response. Conditions change fast, and the control room needs to keep pace.

Previously, operators at both locations managed information across multiple systems without a shared view or common operating picture. Supervisors had to physically look over operators' shoulders to see what was on their screens.





At the downtown headquarters, the urgency was compounded by aging infrastructure. The existing system was running on slim spares, end-of-service was approaching, and it was clear that a planned upgrade was needed.

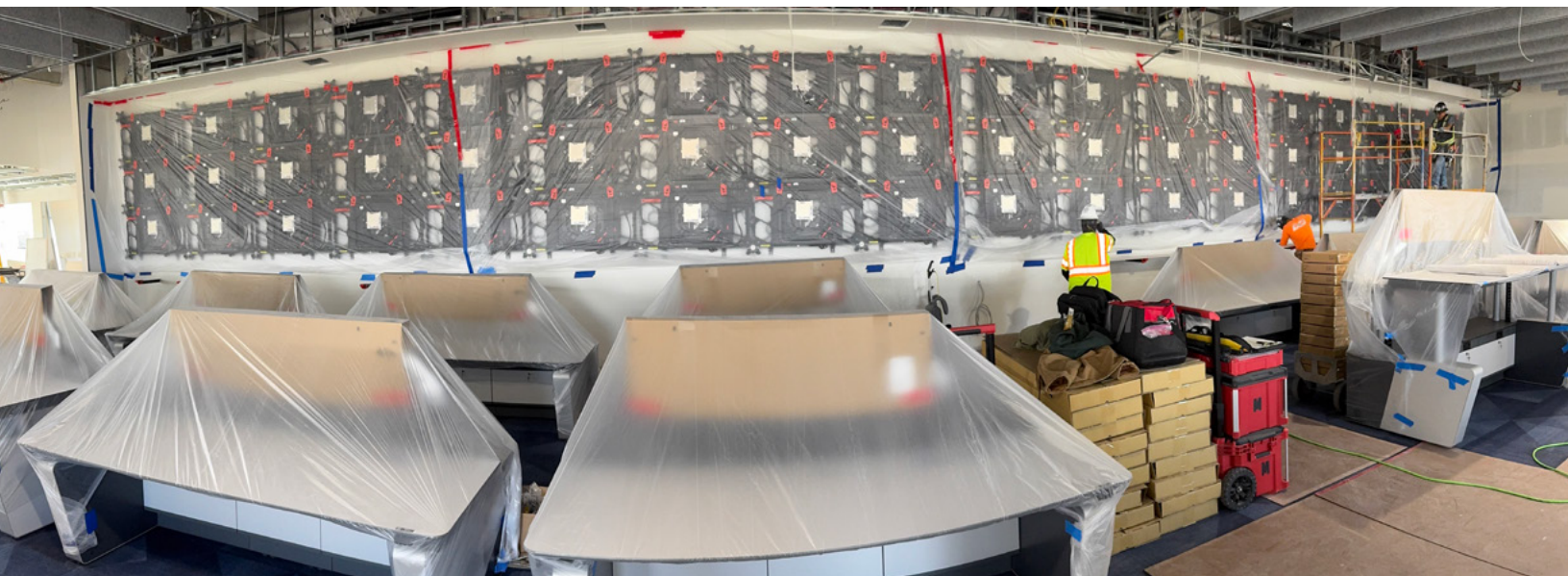
Solving for these challenges went beyond technology. The locations also had to meet the North American Electric Reliability Corporation's Critical Infrastructure Protection standards (NERC CIP). These guidelines govern the security and reliability of the U.S. power grid and shape everything about how a control room is designed, from physical access controls to network segmentation to how information moves between systems.

"NERC CIP isn't something you bolt on at the end. It has to be designed in from day one, and that means the integration team has to know these compliance requirements

before they walk in the door," said Mike Scott, Executive Account Manager at FORTÉ. "That's not something you learn on the job at a high-impact facility."

Meeting the client's goals within a NERC CIP framework required assembling the right team from the start. The project brought together ARCO/Murray, a national design-build general contractor; Kinectrics, an engineering and regulatory compliance consultancy; Barco, a best-in-class technology manufacturer; and FORTÉ as the systems integrator.

"Everyone involved was completely aligned in our approach and our mindset. And it wasn't something we had to schedule a meeting to establish," said Neil Lipner, Director of Engineering at Kinectrics. "We all just came to the table focused on the client."



FORTÉ

SOLUTIONS

FORTÉ's Mission Critical Group took ownership of the AV design and integration, coordinating with the full project team throughout every phase of design and deployment.

Overview wall: At the front of the control center stands a 30-panel, 10-wide-by-3-high video wall built with 55-inch Barco UniSee II LCDs. Bezel-less and virtually seamless, the UniSee II carries TUV Eye Comfort certification, which matters in a room where operators spend long shifts in front of large-format displays.



Barco UniSee video wall technology provides exceptional image quality to help mission-critical teams with visualization demands.



The Barco CTRL platform provides operators with intuitive access to critical information and systems through a unified KVM environment.

Processor: Behind the wall, Barco's CTRL platform gives operators KVM control across multiple segregated networks from a single keyboard and mouse, meeting NERC CIP requirements while dramatically simplifying how operators work. Any content from any source can be pushed to the overview wall instantly.

"In utility environments, security and usability often sit on opposite ends of the spectrum," said Jon Wheeler, Sr. Technical Sales Manager at Barco. "The true power of the Barco CTRL platform is how it bridges that gap. We designed it to support strict NERC CIP compliance and cybersecurity standards without building a wall between operators and their data. The result is a highly secure, yet incredibly intuitive workflow that allows operators to maintain absolute situational awareness when conditions change fast."

The solution was designed to be repeatable. When the downtown headquarters project followed, the same architecture was deployed there, replacing aging legacy infrastructure with a current, fully compliant system that matched the COE in both capabilities and standards.



FORTÉ built and tested both configurations before arriving on-site, and the team maintained a single thread of accountability by handling every detail of the implementations without subcontractors. “We’ve built a knowledgeable and experienced team that stays sharp through regular training with key partners like Barco,” said Scott. “That’s what allows us to take full ownership of projects like this from start to finish.”

RESULT AND HUMAN IMPACT

Both control centers are fully operational, NERC CIP compliant, and running 24/7. Operators now have a unified view of the company’s renewable energy assets on a single seamless display wall, without toggling between machines or navigating disconnected systems. The CTRL platform makes managing complex, multi-network environments intuitive, and any information can be shared across the room in seconds.

When conditions escalate, supervisors can walk in and immediately share their view alongside operators without interrupting the

“FORTÉ brought the true meaning of integrator to this project. They came up with a custom solution that fit the client’s needs in short order, met the budget, beat the timeline, and delivered something that didn’t even exist yet when the project started.”

Colin Flynn, Project Manager
ARCO/Murray

workflow or requiring anyone to stop and brief them.

The TUV Eye Comfort-certified displays and purpose-built workstations also address the unique challenge of working in a control room environment. Designing a room to reduce cognitive and physical load over a long shift is a different kind of investment than a standard technology upgrade.

The Center of Excellence came first. When the project was delivered on time, within budget, and to the compliance standard the facility demanded, the client didn’t go back to market for the downtown headquarters. They came back to FORTÉ.

Partners:

General Contractor: ARCO/Murray

Visualization & Processing: Barco

Engineering & Compliance: Kinectrics

Systems Integrator: FORTÉ