



With SurvalentONE DVR, Consolidated Electric Cooperative is able to react faster to outages and get resources moving to restore power to customers sooner.

## Case Study



**Survalent.**

## Savings from SurvalentONE DVR Paid for SCADA System at Consolidated Electric Cooperative

Consolidated Electric Cooperative is a member-owned electric utility located several miles north of Columbus, Ohio. One of 24 electric cooperatives in the state and a participant in the wholesale electricity market managed by PJM Interconnection, the utility delivers electricity to 17,000 meters across eight counties. Consolidated Electric receives its supply of electricity from Ohio's generation and transmission cooperative, Buckeye Power, and distributes it via 16 substations.

In 2010, the utility replaced its traditional meters with advanced metering infrastructure (AMI) technology supporting a broader range of information collection, including accurate end-of-line voltages. Shortly thereafter, Consolidated Electric built a high-speed fiber optic communication network out to its substations as part of a regional middle-mile initiative for broadband Internet connectivity. With these foundational systems in place, the utility was in a strong position to introduce further network improvements and incrementally increase operational efficiency.

After due consideration, Consolidated Electric decided that its next step should be to implement a SCADA solution with comprehensive voltage regulation capabilities. Up until that time, the utility had monitored and controlled its network at the substations manually, regulating voltages as needed. So whenever Buckeye Power sent out a peak alert, Consolidated Electric had to dispatch a field crew to lower the voltage at each substation; after the alert was over, the crew had to return and restore the voltage to its normal setting. The utility knew that an automated, centralized voltage regulation system would make a world of difference in dramatically improving operational efficiencies.

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### Deploying SurvalentONE DVR

Following an exhaustive review of solutions from three ADMS vendors, Consolidated Electric determined that SurvalentONE SCADA, coupled with the company's SurvalentONE Dynamic Voltage Regulation (DVR) application, was the best choice. The new system was commissioned and tested in 2014, with Survalent setting up the database and creating the network graphics (e.g., single-line drawings).

"Initially our main focus was to get the SurvalentONE DVR system up and running," recalled Tim Applegate, Vice President of Engineering and Operations at Consolidated Electric.

"If we could reduce demand by lowering the voltage, we could start saving money for our members right away."

The utility has created several scripts that allow the DVR system to run unattended 24/7, maintaining voltages at or just above the standard minimum limit. Consolidated Electric regulates voltage at the bus level in all but two of its substations, which are equipped to regulate each feeder individually.

"We set thresholds based on each substation's monthly historical peak," said Applegate. "When the demand threshold is reached, the DVR System is activated and continues to run until demand falls below that threshold."

The utility is now deriving more value from its investment in AMI by using it to help regulate the network.

“Our AMI system is tied directly to SurvalentONE DVR,” said Applegate. “We poll the meters and bring end-of-line voltage readings into the system so we can accurately adjust the voltage at either the feeder or bus level.”

Over the last three years, the team at Consolidated Electric has developed confidence in their new voltage regulation system but remain committed to a regime of continuous improvement.

“For the most part, SurvalentONE DVR is now set,” said Applegate, “but we do monitor it to see if we’re getting the voltage down as low as it will go.

“Consolidated Electric’s four SCADA operators, along with members of the management team, are able to remotely monitor the status of the network on their laptops and mobile devices through a view-only web portal provided by SurvalentONE WebSurv and SurvCentral applications.”

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### **Saving Money & Working More Efficiently**

As a not-for-profit cooperative organization, Consolidated Electric’s primary objective is to deliver maximum value to its members at the lowest possible cost. According to Applegate, Survalent software has helped the utility maintain this commitment.

**“We’re confident that the savings we’ve achieved with SurvalentONE DVR have paid for the installation of our entire SCADA system,” he said. “Now the utility can monitor everything — currents, voltages, status of breakers — from a single software suite. Field crews can focus on doing line work instead of running out to change a setting at a substation.”**

“With SurvalentONE DVR running continuously, we’ve been able to level off our demand curve and conserve energy throughout the 24-hour cycle of each day, not just during peak periods,” added Applegate.

Since SurvalentONE SCADA and SurvalentONE DVR are now an integral part of daily operations, the team at Consolidated Electric is looking ahead to see how they can build on these solutions to improve network reliability and decrease outage response times.

“The Survalent system has allowed us to react faster and get resources moving in the right direction to restore power sooner,” said Applegate. “What we’re looking at next is distribution automation — being able to switch out a substation without dispatching a field crew.”

## Control your critical network operations with confidence

With Survalent, you can control your critical network operations with confidence. We're the most trusted provider of advanced distribution management systems (ADMS) for electric, water/wastewater, gas, and transit utilities across the globe.

Over 600 utilities in 30 countries rely on the SurvalentONE platform to effectively operate, monitor, analyze, restore, and optimize operations. By supporting critical utility operations with a fully integrated solution, our customers have significantly improved operational efficiencies, customer satisfaction and network reliability.

Our unwavering commitment to excellence and to our customers has been the key to our success for over 50 years.

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- Consolidated Electric Cooperative

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