

Ignition Gets It Done for Electric, Water, and Sewer

Clarksville Light & Water Sees Versatility of Software

Clarksville Light & Water Co. (CLW) is a very progressive utility. New infrastructure, a fiber optic network, groundbreaking cybersecurity — these are just a few items CLW is using to improve services for its customers in Clarksville, Ark.

Clarksville is home to nearly 10,000 people, but John Lester, general manager of CLW, doesn't think small. "Even though we're a small community, automation is just as important for us as it is for a multi-billion-dollar private utility," said Lester.

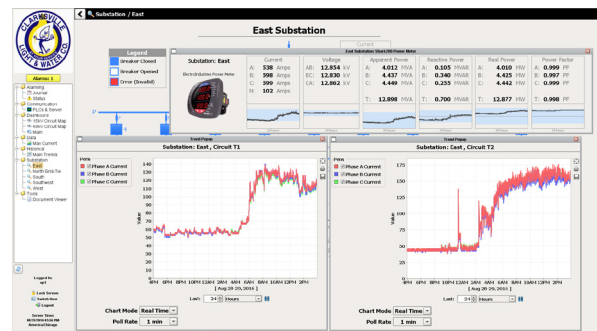
The desire for top-level automation led CLW to Ignition by Inductive Automation®. Ignition is an industrial application platform with fully integrated tools for building solutions in human-machine interface (HMI), supervisory control and data acquisition (SCADA), and the Industrial Internet of Things (IIoT).

Ignition is so versatile, CLW will use it across three departments. It's already working for water and electric, and will be used for waste water too. CLW was introduced to Ignition by systems integrator Brown Engineers.

Success with Water

"The first project was SCADA remote sites for the water utility," said Dee Brown, principal and co-founder of Brown Engineers. "That included all the remote pump stations and tanks, and remote-operated valves. They had new infrastructure in place, but weren't communicating with it yet."

Lester gave Brown 30 days to get the project done. With the aid of Ignition, Brown Engineers was able to get the sites up and running within that timeframe. CLW won an Engineering



New screens go along with new SCADA, new fiber optic network, new controllers, and more.

Excellence Award for the speedy SCADA upgrade. The award came from the American Council of Engineering Companies (ACEC).

Lester inherited a less-than-mature system when he arrived in 2013. "When I moved here, I realized the technology in the marketplace hadn't been fully utilized," he said. "We had some SCADA technologies and control technologies, but they were being used very sparingly. I realized we needed to do a major upgrade."

Another project, which involved Brown Engineers, was a \$10 million expansion of the water treatment plant. The project was completed under budget and on time, in 14 months. CLW won an ACEC award for that project also. The expansion gave the plant a capacity of 16 million gallons per day. "Ignition was a good fit for that project too," said Brown. "We knew it could handle the big increase in I/O points while keeping costs down. Ignition's unlimited licensing was a big benefit for Clarksville."

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– John Lester
General Manager of CLW

Next Up: Electric

“We have a 55-megawatt peak electric utility,” said Lester. “We’re a 100-percent purchaser of our power supply, so the use of that power is critical. There had been no SCADA system before, which is highly unusual for a municipal electric. But it gave us the chance to build from the ground up.”

A unique aspect of the project is the creation of a fiber optic network. That network is part of the SCADA system, but it could support a variety of other uses as well. The fiber loop is nearly 17 miles long. And the cable has 288 strands, so the capacity is huge. “We now have the capacity to do a lot of things to serve the community,” said Lester. “We could create a government network, an education network — and it could be used by business, and public safety. There are many possibilities that can add value to our community.”

The fiber optic network could help the region attract more businesses. “We’re getting a visit soon from the Arkansas Economic Development Commission,” said Lester. “They’ve asked me to make a presentation on this project, and what we’re doing with the SCADA system and the fiber.” Additionally, Brown and Lester were invited to speak about the project at the Smart Industry 2016 conference in Chicago.

Secure Foundation

CLW is also going the extra mile on cybersecurity, installing new cyber-secure controllers from Bedrock Automation. Brown Engineers suggested Bedrock™, and Lester saw the value immediately. “In today’s utility environment, cybersecurity is becoming a big concern,” said Lester. “Whether you’re a small utility or a large one, threats are hammering on your network every day. So we decided to move ahead with the Bedrock controllers.”

CLW also has a new Network Operations Center (NOC) with large-screen displays and a weather-resistant vault for its servers. There is also a plan for continued improvements at the NOC.

The SCADA improvements have helped CLW reduce costs, improve efficiency, and have greater flexibility for the future. “We’ve been very pleased with Ignition,” said Lester. “We really like that we can use it for all three utilities.”

Brown Engineers is based in Little Rock, Ark. The award-winning firm designs mechanical, electrical, fire protection, HVAC and plumbing infrastructure; automation controls; and monitoring systems. For more information, visit brownengineers.net

Bedrock Improves Cybersecurity for Clarksville

Bedrock Automation, based in San Jose, Calif., has created the award-winning Bedrock™ universal control system. It’s a system that’s capable of supporting all traditional PLC and DCS applications. Bedrock features a revolutionary electromagnetic backplane architecture and deeply embedded cybersecurity. It’s an unprecedented solution, one which CLW is using extensively.