

Keeping Alabama Warm

How Control Room Visualization is Helping Alabama Gas Corporation Enhance Information Sharing and Implement Best Practices

Alabama Gas Corporation, more commonly known as Alagasco, is the largest natural gas distributor in the state of Alabama. With a history that dates back more than 160 years, the utility has over 24,000 miles of pipe that deliver natural gas to approximately 425,000 homes and businesses.

Delivering “Good Heat” to Alabama Cities and Communities

“We provide natural gas throughout Alabama,” says Eric Rigdon, Birmingham Control Room Manager. “We obtain the gas from transportation companies and handle distribution to a wide range of customers ranging from large power plants to individual homes.”

For Rigdon and his staff, a typical day starts early in the morning as customers begin their day and Alagasco’s distribution network becomes active. As system activity ebbs and flows, the distribution controllers monitor Alagasco’s distribution network via their SCADA system, making necessary changes and dispatching personnel into the field to check on and make adjustments to equipment. At the same time, they track daily usage and forecast their needs for the next day. The control room staff is continuously monitoring the distribution network to ensure smooth operations, handling incidents as they occur and ensuring safe, uninterrupted service.

A New Control Room

In an effort to enhance system operations, Alagasco began planning for a new operations center. The goals for the new facility were two-fold: creating an improved job environment where employees could work corroboratively in a new, modern up-to-date facility and building an operations center that enhanced employee efficiency in how they responded to customer needs while providing safe and reliable service. For Rigdon, the new operations center represented an opportunity to create a modernized control room that increased operational efficiencies and followed industry best practices.

“The old control room was small and had a single display,” explains Rigdon. “We could only view one source of information on it and there wasn’t any information sharing. The distribution controllers worked at two separate partitioned consoles. In order to share information, they had to walk back and forth between the two workstations. There really wasn’t an area where we could share information so that everyone in the control room could view it.”



The plan was to design a control room that incorporated current best practices for control room operations including compliance with recent regulations regarding information sharing (API RP-1168). The distribution controllers would have the adequate access to the information they needed in order to ensure operational efficiency. The new control room would foster collaboration by removing barriers and would feature three open, accessible consoles. The room would also employ technology that allowed distribution controllers to share information with everyone in the control room.

“We were looking for the new control room to be a step up from our old facility,” says Rigdon. “We also wanted to create an environment where we would be prepared for the future.”

Finding a Solution for Alagasco’s Operational Needs

Rigdon knew that a video wall would help to accomplish many of the goals that he and his team had set for the new control room. The chosen solution had to integrate with the company’s system maps and SCADA system. It also had to allow the distribution controllers to access live news and weather reports. To assist them in the selection of a control room visualization solution that met all these requirements, Alagasco hired a consultant. The consultant ultimately

recommended Activu, a software and integration company that specializes in collaborative visualization solutions for the control room environment in the energy sector.

“We looked into other alternatives,” explains Rigdon. “However, after researching all the possibilities, Activu, which had come highly recommended, offered us the greatest flexibility and 24-hour, 365 day durability.”

After Rigdon and his team explained their requirements, Activu recommended a display wall using four 55” LG Ultra Narrow Bezel LCD displays powered by Activu software installed on an HP server. The display wall would provide a 4.5’ high by 8’ wide area where controllers can display any number of information sources in a wide range of layouts. As part of an initiative to extend situational awareness beyond the control room, Activu would install a single 46” NEC LCD display in an adjacent exercise room.

Present Day Operations

Alagasco’s control room display wall is dedicated to providing the distribution controllers with an overall view of their distribution network, SCADA system, news and weather reports and system maps. The SCADA system allows staff to monitor and control the pipeline system while obtaining a clear picture of what is happening within the system.



Distribution controllers using the exercise equipment can see alarms or alerts, so they can quickly return to the control room and handle any incidents.

“Our control room was designed to be flexible,” says Rigdon. “It needed to be capable of operating with just one distribution controller during times when our workload isn’t high while also allowing us to support multiple distribution controllers and other employees during incidents or high-volume periods. The Activu system allows us to have that flexibility. We can share information when there are multiple people present. When we only have one controller on shift, they have access to the information they need whether they’re in the control room or the exercise room.”

“We regularly monitor the news and weather,” says Rigdon. “It’s critical that we know about any events that are occurring which may disrupt operations and ultimately affect delivery to our customers.”

The system maps, which distribution controllers frequently access and display, graphically show where facilities are located and how the system operates.

“Our system maps are reference documents,” explains Rigdon. “They support the SCADA system, allowing us to see how the system operates and what it does. Depending on the situation, we may display them in a large format on the video wall or place them in a smaller window in the corner of the display so that we can refer to them as we need them. Ultimately though, everything revolves around the SCADA system.”

The 46” NEC LCD display that was installed in an adjacent room allows the distribution controllers to access the SCADA system, news and weather reports and other information even when they are not in the control room. This secondary space, which is set up with exercise equipment, provides a place for control room staff to exercise and combat fatigue. Since Activu’s solutions allow users to share information to other locations (in this instance Alagasco’s exercise room), staff have access to the same information that they do in the control room.

Putting Activu to the Test

Not long after the installation was completed, Alagasco put their new Activu solution to the test with a field simulation of a significant event.

“We had everyone present in the control room,” says Rigdon. “Activu’s information sharing and visualization capabilities allowed the staff to easily view, analyze and discuss what was occurring during the exercise.”

“We were able to collaborate together, diagnose the issue and find a solution,” he adds. “The simulation was a fair representation of how we plan to use the system during events.”

Future Plans

In August of 2014, Alagasco was acquired by Spire Inc. (formerly The Laclede Group), a public utility holding company headquartered in St. Louis, Missouri, whose primary business is the delivery of natural gas service to more than 1.56 million residential, commercial and industrial customers across Missouri and Alabama.

Spire has more recently announced plans to purchase Energy South, Inc., the parent company of Mobile Gas

in Alabama and Wilmot Gas in Mississippi, for additional distribution systems in Alabama and Mississippi. Looking ahead to when the sale is finalized, Rigdon is hoping to use the Activu system to share information and collaborate with his counterparts at Energy South.

Even with all the changes and upgrades to the control center, Alagasco is not content to rest on its laurels. In an effort to even further improve operations and service,

Rigdon and his team have another project they've undertaken. This one is the replacement of their aging SCADA system with a new one.

"The new SCADA system will integrate with the Activu system," says Rigdon. "Once the new SCADA system is installed, we expect the Activu system to provide us additional opportunities to collaborate and share information more broadly across the company."