



 AssetCare™

CASE STUDY

Natural Gas Company Reduces Outages and Costs at Remote Facility with AssetCare™

A multi-billion North American energy company focused on providing clean and affordable energy to its customers automated its natural gas facilities to enhance efficiencies and performance several years ago.

Lack of visibility into control system health threatened operational efficiency

However, during operations at one of its remote facilities recently, the company began to experience slowdowns and disconnections related to its operational HMIs (Human Machine Interface).

HMI refers to any user interface such as equipment display screens, computer monitors and tablets that enable staff to monitor pressures, temperatures and other important data. During the facility's operations, the team kept getting blank screens.

"Our control system is what runs the entire plant and it's probably more important than any piece of equipment we have," said the facility's maintenance supervisor. "If you aren't monitoring the equipment,

just one small part can malfunction that can have a huge impact on operations."

"Especially in remote facilities, it's critical that our operators know what's happening in the plant at all times to avert any potential issues," he said. "However, when the control system isn't working correctly, the onsite workers do not have the technical expertise and training to solve the problem."

The energy firm decided they needed expert help, and quickly. Fortunately, they had worked with the process industry automation team at mCloud Technologies several times in the past, so they knew who to call.

AssetCare provided needed visibility and predictive maintenance KPIs

Headquartered in Vancouver, Canada, mCloud Technologies leverages advanced

technologies as part of its AssetCare™ portfolio of solutions to help oil & gas operators prevent unplanned outages and avoid other issues at process facilities to enhance productivity.

“mCloud is a highly professional company and have the resources to help with pretty much anything in the industrial world when it comes to control systems technology, data, networking and EIC engineering,” the supervisor said.

Working closely with the firm’s IT technicians to remotely connect to network equipment, the mCloud team conducted an immediate assessment of the facility’s connectivity issues to prioritize the most critical ones and ensure continuing plant safety and production.

mCloud then implemented its AssetCare cloud-based remote asset management solution for real-time monitoring of plant equipment, including network switches, controllers, computers, etc. With AssetCare, if any item rises above its alarm threshold, notifications are sent immediately to the energy firm’s maintenance staff and the mCloud team who can then determine if there’s a critical issue that needs to be addressed.

“We set up thresholds for key performance indicators (KPIs) as well as threshold alerts based on recommendations from equipment manufacturers,” said Wes Babcock, Manager, Process Solutions at mCloud. “We then distilled the data down in a dashboard to provide a real-time health profile of the entire plant.”

Delivering Measurable Results

Shortly after AssetCare was implemented at the plant, the mCloud team received an alert of a network card failure at the plant. mCloud immediately dispatched its own technician to the facility before onsite workers knew there was a problem. A repair project that in the past would have required multiple hours of downtime to resolve instead took minutes to troubleshoot and reduced the outage to less than two hours by the mCloud technician.

“AssetCare was able to predict a potential problem at the facility and investigate the issue before it got out of hand,” Babcock said. “We were able to provide substantial value immediately, dramatically reducing the time usually needed for troubleshooting and repair.”

More recently, the AssetCare system alerted the energy firm’s remote operators to low temperatures in one of the programmable logic controllers (PLCs). The onsite team found someone had left an outside door open to a room housing a PLC.

“Ambient temperatures can get as low as minus 40 at this facility,” according to the supervisor. “So, something as simple as an open door can cause network equipment failure and halt production. The alarm prevented that and saved us from lost productivity and revenue.”

“We look at mCloud as a long-term, trusted partner in the digital transformation of our business.”

Beyond avoiding outages, the mCloud system helps provide data and analytics to support various on-site projects while also identifying many communication, configuration, and design problems that were

unknowingly impacting the performance of the facility’s control systems.

The energy firm said all this has been made possible without having to add a single piece of hardware at the site, eliminating the need for additional maintenance.

Looking to the Future of Digital Transformation with AssetCare

Considering future automation initiatives, the energy firm has begun discussions with the mCloud team about incorporating system enhancements that incorporate artificial intelligence and machine learning.

“We’re looking at mCloud conducting trend analyses of plant data for even better predictive maintenance across all our facilities,” according to the supervisor. “We are also studying the company’s 3D digital twin technology where the entire plant is replicated virtually to enable additional optimization of our assets.”

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