FREEWAVE

FAULCONER ENERGY
Case Study

End-of-life Total Flow Alarming System Takes Faulconer Energy to the Edge

EXECUTIVE SUMMARY

Challenge

- Faulconer Energy needed a reliable IIoT solution to collect, organize, and use field data generated from its assets.
- Faulconer's existing management and analysis approach no longer met their needs.
- New state and Federal environmental regulations mandated a need for change.

Solution

- FreeWave ZumLink™ 900 Series radios provides secure collection, transport, and control of data in rugged industrial environments.
- Faulconer used its existing FreeWave system, adding Edge capabilities to existing radios through a software upgrade.
- Out-of-the-box, built-in software lets Faulconer add new capabilities seamlessly through software updates as their IIoT needs evolve.

Results

- Faulconer has 30 sites installed with FreeWave radios resulting in reduced labor burden.
- The new system simplifies radio deployments and delivers real-time operations data for improved efficiency.
- By implementing FreeWave solutions, Faulconer eliminated recurring service costs and transformed its operations.

FreeWave's Edge platform with edge polling and alarming, future-proofs systems lowers costs and minimizes operational failures.

Faulconer Energy reached a critical communications tipping point when its leased operational expenses continued to climb from a current and soon-to-be end-of-life third-party alarming system.

They had two primary options.

1. **Leverage their existing system instead of exploring a new solution with a potentially heavy initial investment.**
2. **Make a low CAPEX network upgrade to alleviate a growing LOE burden.**

"Finding a way to alleviate our escalating monthly service costs was a key factor in evaluating not only our current alarm system but any new system we would ultimately deploy," said Mike Halladay, Faulconer Energy Production and Automation Foreman. "The fact that components of our current system were nearing end-of-life and would no longer be supported by our current vendor certainly forced our hand to find a more economical solution to support a necessary system migration."

A long-time FreeWave customer, Faulconer already has a centralized SCADA radio system deployed across the company with an integrated web dashboard at its headquarters.

The current system uses FreeWave radios to retrieve data from their ABB Totalflows over the air every two hours during daylight hours to monitor approximately 300 solar-powered remote wells – and once at midnight when solar power isn't available.

Their end-to-end network generates a lot of data daily, but the inability to get real-time data delayed Faulconer's efforts to address issues in its field operations proactively.

A Growing, Pervasive Need

The need for reliable IIoT solutions is becoming pervasive across the oil and gas industry, driven by the rapid adoption of increasingly cost-effective 'smart' sensors and devices developed to withstand rugged operating environments.

In turn, more data is being generated in the field than ever before – even at the extreme edge of industrial operations – with many remaining unconnected or siloed, making data retrieval cumbersome.

The challenge is that many companies, like Faulconer, rely on a centralized approach to collect and analyze their distributed assets' data. As a result, networks struggle to move significantly larger data volumes, and in turn, the vast majority of new insights end up left behind.

To take full advantage of IIoT's transformative value, Halladay recognized it needed to push Faulconer's computing capabilities to the edge, where the data is created, as part of an inter-operable framework that ensures all insights are accessible and actionable by everyone and everything that needs them – anywhere they are.

Not only was this a company imperative, but also a regulatory imperative. New state and Federal environmental regulations require oil and gas producers to monitor and submit reports detailing pressure value functions, emissions, etc., monthly.

Many long-term shut-in wells have little automated reporting capabilities; however, with evolving operational requirements and technology limitations, many companies are now pushed to a critical investment tipping point.

The Solution

After being exposed to the capabilities of FreeWave's Edge Platform, Halladay recommended Faulconer upgrade their alarming system to leverage ZumLink 900 radios with Edge alarming.

Because they already have an existing FreeWave system in place, they could add Edge capabilities to existing radios via a simple software upgrade.

Additionally, their current data retrieval process did not require a change to reap the immediate benefits of the new system capabilities.

"FreeWave and Totalflow are the bread and butter that keep Faulconer operations running smoothly," said Halladay. "We now have about 30 sites installed with the new FreeWave radios and are already seeing huge positive impacts on labor costs," said Halladay. "The new system delivers simplified radio deployments, provides almost instant real-time data on operations, and allows us to make decisions faster and work smarter."

FreeWave's ZumLink 900 Series is designed for the secure collection, transport, and control of data in rugged industrial environments. In addition, these radios provide a long-range, low-power solution for remote wireless communications.

Out-of-the-box, built-in software allows new capabilities to be seamlessly added through straightforward software updates as IIoT requirements evolve.

In fact, the entire ZumLink 900 Series and Fusion Platforms are software upgradeable to include the FreeWave Edge Data Platform, an application for data collection, analytics, and control for remote industrial equipment.

Immediate, Measurable Results

The benefits were immediately apparent as Faulconer began to bring the new FreeWave Edge platform online.

"From the beginning, we saw immediate gains in alarming speed," said Halladay. "We just recently replaced a compressor, and Totalflow computers are talking to the panels – suction, RPM, run status – and the new Edge software pulls that data into a real-time dashboard, and alerts are sent immediately to the responsible operator/ technician. The new system is a huge efficiency gain which is lowering our labor costs and overall operational costs. I love it."

But data collection and integration speed are only part of the benefit story. Basic failures across the system require significant investments in labor and thus costs.

"Recurring service costs don't exist with the FreeWave system, and the new efficiencies are already transforming operations," emphasized Halladay. "If communication between meters is interrupted or if there is an issue in the field, the system alarms, and we get the exact nature of the failure instantaneously, so we can address. The web interface is also so easy to configure and very responsive. FreeWave has been a tremendous asset throughout the ongoing upgrade process and has invested a lot of time with us to get this right. They are awesome."

To tackle migrating your current systems or to learn how FreeWave can help you solve your network and data connectivity issues, contact us today.

ABOUT VERNON E. FAULCONER, INC.

Vernon E. Faulconer, Inc. is a privately held acquisition and production company that specializes in enhancing the production of marginal gas wells. Organized in 1981, the company has steadily grown to include operations in five states.

ABOUT FREEWAVE TECHNOLOGIES

For nearly 30 years, we've helped connect the unconnected with a reliable ecosystem of edge intelligent radios, and solutions — manufactured in the U.S. Our recent joint venture with ModuSense makes global innovation, agility and turn-key industrial IoT edge solutions a reality, accelerating our ability to bring fully integrated, plug-and-play IIoT solutions to the market quickly and cost-effectively.

With deployments in 39 countries, we've helped solve thousands of customer challenges across multiple industries; we can help transform and future-proof your operation now. Visit freewave.com to get started.

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