

CASE STUDY

# CNG Direct



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**TIM ROSE**

*Founder and CEO of systems integration company,  
Western States Controls*



**CNG Direct, an equipment rental and services company, partnered with their integrator Western States Controls to deploy Samsara SCADA for remote monitoring across their fleet of compressed natural gas pods.**

Headquartered in Southern California, CNG Direct is a leader in the sale and transport of compressed natural gas. Whether standing in for a utility company during scheduled repairs or providing fuel for remote agricultural equipment, CNG Direct takes pride in offering continuous, 24-hour delivery of natural gas to any location via their rental fleet of state-of-the-art fuel pods.

In search of a SCADA system for their expansive fleet, they turned to their trusted integrator, Western States Controls, who chose Samsara as the best solution for the job. Now, they can rely on the power of Samsara's easy-to-use dashboards and alarms to reduce refueling times and proactively prevent customer downtime.



samsara

## CNG DIRECT CASE STUDY

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### Optimizing dispatch to save time at the pump

Each of CNG Direct's fuel pods contains a tube trailer that starts out with a pressure between 3600 and 4000 PSI. As the customer uses fuel, this pressure drops and the trailer must be swapped out by one of CNG Direct's drivers. Here, it's crucial that pickups are precisely timed in order to maximize the efficiency of the refueling process.

"Our timing for pickup is critical. If we pick up too late and the pressure drops too low, our drivers end up having to spend several hours longer at a refueling station to bring the unit back up to pressure," said Armando Ruiz, Design Engineer at CNG Direct. "We wanted a system to help make this dispatch process for refueling as efficient as possible—to help us make sure that we're sending out trucks at the right time."

With Samsara, CNG Direct can monitor pressure levels remotely and send notifications to their drivers the second a unit reaches CNG's ideal pickup pressure of 2000 or 1500 PSI. "Using Samsara, we'll be able to save our drivers two to three hours at the pump," said Ruiz. "It can just make the planning process a whole lot easier for us allowing us to determine just how many rotations and trucks we'll need for a job."

### Preventing downtime and customer disputes

While most of CNG Direct's customers opt to have a CNG technician on-site for 24/7 monitoring of fuel levels, CNG relies on customer-reported usage estimates for shorter jobs. "This is where we can run into issues," said Ruiz.

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**ARMANDO RUIZ**

*Design Engineer at CNG Direct*

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Now, with Samsara installed and the ability to read pressure readings remotely, CNG Direct can calculate accurate fuel levels in real-time. “This allows us to double-check if a customer is using fuel at a faster rate than they originally estimated without having to send someone on-site,” said Ruiz. “When our customers get an alarm from Samsara about a low fuel level, they know that we’re being proactive, and that not only helps us avoid disputes, it helps build trust,” said Ruiz.

## A plug and play architecture reduces cost and complexity

The complexity of traditional SCADA architectures using separate PLCs, HMIs, connectivity hardware, software, and servers can be a big barrier to remote monitoring for many rental fleets like CNG Direct.

“While working with CNG, we realized that if we went with the usual approach for SCADA, every radio

would have to be reconfigured anytime the units moved to a new site, so we started to explore cellular options” said Tim Rose, Founder and CEO of systems integration company, Western States Controls. “But even with a cellular gateway the setup was still too complex for many end users to maintain with multiple pieces of hardware in the mix,” said Rose.

That’s when Western States Controls decided that Samsara was the best solution for the job. With PLC functionality and LTE cellular built into the Samsara controller, Western States was able to quickly mount the unit and connect pressure inputs directly from the CNG trailer with no additional hardware to install. “We realized that we could monitor everything we needed using Samsara, with a lot less hardware, and at about 75% less than the cost of using a cellular gateway with traditional PLCs and HMIs.”

“The architecture was completely taken care of,” said Rose. “Because the Samsara system is so simple, we were able to complete the project much faster, and that’s a big advantage for both us and CNG Direct.”

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