SaskEnergy, TransGas

50,000 Miles of Pipeline Monitored with AirLink® Gateways



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SaskEnergy is a Crown-owned natural gas utility with a mandate to operate in the province of Saskatchewan, Canada. The corporation serves more than 90per cent of Saskatchewan through its 343,000 residential, farm, commercial and industrial customers in more than 500 communities. SaskEnergy and itstransmission and storage subsidiary TransGas jointly manage 80,000 kilometers of distribution, gathering and transmission pipeline, with ties to supplier anddelivery systems in Alberta, Manitoba and the United States. The TransGas network of deep underground storage caverns allow SaskEnergy to meet thepeak winter load demands of Saskatchewan’s harsh climate, while allowing both the utility and its transportation customers to purchase gas when prices arelow and ship in high demand periods, cushioning commercial and residential customers from seasonal price fluctuations.

BUSINESS CHALLENGE

“Our SCADA system is the company’s cash register, monitoring the amount of gas brought in from producers,” said Dean Hickey, an engineering technologistin TransGas’ Pipeline & Facility Automation group. To ensure accurate daily measurement via real-time polling, TransGas relies heavily on cellulartechnology to implement monitoring solutions across 50,000 miles of pipeline. TransGas’ hundreds of metering, control and storage facilities in highly remotelocations, monitor both gas quantity and quality. Stringent specifi cations for primary and backup data transmission include temperature, intrinsic safety classifi cations and power consumption.

“We use cellular communication to monitor areas where we can’t quickly or easily install telephone or dedicated data lines,” explained Alan Yurkowski,supervisor of SCADA Communications in TransGas’ Pipeline & Facility Automation group. “In Saskatchewan you can’t run copper data lines betweenOctober and May – but work doesn’t stop just because there’s snow on the ground.”

“For us, reliable, secure data management is critical,” continued Yurkowski. “Our systems provide near-real-time measurement data to customer informationsystems, with customers looking on an hourly basis to decide how much gas to buy based on daily measurement values.”

SIERRA WIRELESS AIRLINK® SOLUTION

TransGas uses the AirLink® enterprise grade one-to-many remote management tool, to resolve network issues, such as remotely implementing requiredresets for specifi c network devices. It also enables TransGas to schedule regular status checks on its equipment to check system health and proactively discover and report any tower communications issues.

“The AirLink products have been extremely good,” Yurkowski said. “We are often able to identify problems before our network provider can; we usually call them to notify their support teams of network issues.”

RESULTS

“Cellular data provides fl exibility in the solutions we have available,” concluded Yurkowski. “The ability to do things quickly with high reliability is critical.Implementing a solution in a timely fashion is pretty diffi cult when you have to wait until spring to install it.”

“There’s also a lot of pressure for us not only to monitor the volume of gas but also gas quality,” added Hickey. “The industry is starting to get away fromcharging by volume and is instead charging by energy quality. For us to be able to access that information is critical.”

The Sierra Wireless AirLink gateways running on advanced 3G networks have provided TransGas with the following benefits:

- Cost savings – Remote, two-way wireless communication reduce:
    - Overall costs: Lower-cost alternative to landline circuits. Also, if facilities are relocated, cellular hardware can easily be reused, incontrast to the tens of thousands dollars spent for dedicated copper circuits.
    - Service costs: Cellular service fees with the AirLink gateways is merely $35/month, where as dedicated landline cost $1300.
    - Support costs: Minimize fi eld service to monitor and control devices.
- Time savings – Easy and quick setup and confi guration to meet last minute deployment demands.
- Rugged specifi cations – Built and certifi ed for harsh and hazardous environmental conditions fulfi lls TransGas’ strict temperature, power consumption, and safety needs.

APPLICATION: PIPELINE MONITORING

CUSTOMER CRITICAL CHALLENGE:

- Hundreds of metering, control,and storage facilities located in highly remote locations require SCADA system monitoring for real-time measurement data for acquisition & provisioning decisions

SOLUTION:

- AirLink® gateways that meet Class I Div 2 certifi cation for intrinsic safety, power and temp. requirements

BENEFITS:

- Reduce cost of support, service and overall solution costs
- Quick confi guration to meet tight deployment schedules

- Remote access and troubleshooting

- Enhanced customer service with on-demand access to accurate measurement data