

How Tehama helped Guardian Water & Power Provide Reliable Submetering to Hundreds of Mobile Home Parks

Customer:

- Guardian Water & Power
- Industry: Submetering and Utility Billing
- Family-owned, founded in 1983
- Headquarters: Tacoma, WA
- <https://www.guardianwp.com/>



Guardian Water & Power provides submetering and Utility billing services for nearly 200,000 units across the United States. Mobile home parks and townhouses make up 25% of Guardian's business. Guardian supplies, installs, and maintains submeters to monitor water use for each unit. That way utility bills reflect each tenant's actual water use.

Mobile home parks and townhome communities present unique challenges for submetering because water connections are outdoors and span large distances. Keeping a system up and running is especially difficult in extreme weather conditions. Most submeters aren't built to withstand cold, snowy seasons like the North Dakota winters, or the high winds on the Illinois plains. And they didn't work especially well in pits.

"A lot of submetering systems are geared towards indoor-rated applications where the submeter and transmitter are in an apartment, instead of outside as in a mobile home park" explained Chris Apostolos, President of Guardian Water and Power

Severe weather: a challenge for outdoor submetering technology

Challenge:

- System downtime due to harsh weather
- Repairs were difficult and costly
- Cellular technology meant inconsistent data collection

Repairs process difficult and costly

Because lost connections were impossible to predict, the repair process was also inconsistent...and thus costly and frustrating.

When submeters went offline, Guardian employees needed to travel to the property, remove the data collector, ship it back to the manufacturer, wait for a replacement product, and travel back to the property to reinstall the device. "This resulted in a lot of wasted time, as well as unhappy residents and property managers," Apostolos said.

Installers also lacked real-time feedback from the old submetering system. The web interface was not user-friendly, and there was no mobile app. That meant technicians had to add an extra on-site to verify that the newly installed submeters worked properly. "Let's say we thought our guys were going to be done in 4 days. We would schedule 5 for that extra time," Apostolos explained.

Gaps in data frustrated property managers

The old systems presented another problem. When cell towers lost connection, the old cellular-based submetering systems would go offline as well.

Guardian could not access submeter data during these downtime periods, which resulted in unpredictable data gaps. With incomplete data, property managers had to estimate tenant water bills.

This is common practice, but estimated bills leave room for tenants to wonder if their bills are accurate and fair. And when tenants believed a water bill was unfair, they complained to the property manager. The property managers, in turn, complained to Guardian.

"They would get upset with us, for something that we didn't manufacture," Apostolos said. "We didn't have control, but we were still losing customers because of it. It made us look bad. We had gotten to the point where we didn't know if we wanted to be in the mobile home park business anymore."

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Solution

Solution:

- Robust outdoor-rated submetering technology
- Internet-based mobile app updates in real-time
- Feedback light on transmitters shows when units are live
- Pole-mounted solar repeaters

Guardian was looking for a solution when Tehama approached them for a demo. "They reached out to us," Apostolos said. "At the time, we were getting leads for mobile homes...but our old submetering system was not working well," Apostolos said. "So when Tehama filled this niche with their outdoor-rated transmitter we were quick to jump on it."

Tehama's submeters are outdoor-rated and rugged. The transceivers are built with full epoxy potting. That means they are completely submersible, designed to work with pit meters, and have a battery life of ten years.

And they shorten the repair process: a mobile app updates installers in real-time, so they can immediately see whether or not the submeter is functioning. Not only are repairs less frequent, but also the entire repair process is streamlined.

Guardian also installs Tehama's outdoor-rated, UV-resistant solar repeaters.

They are incredibly efficient: after three or four hours in the sun, they can run for a week. "These repeaters save us from having to pull power in odd locations," Apostolos said. "It's convenient to be able to put solar repeaters up on light poles, for example, and it's impressive to the

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Robust construction and mobile app make installation a snap

Severe weather no longer causes problems for Guardian and their clients because Tehama's hardware is robust. Sturdy cases protect the submeters from winds and storms. That means installers no longer need to travel across the country to replace weather-damaged units.

Now, there's almost no system downtime related to weather. The time and cost savings are significant. Installation is easier and faster, and it is activated with the swipe of a magnet. A simple red light/green light system shows when the system is active, and the system updates immediately. The installer in the field can double-check the status with a phone app.

"The feedback lights on the transmitter make it easy for our tech to know when it's working, so he knows when his work is complete at the site," Apostolos said. "It's a huge savings."

Tehama's wireless system is also more reliable because it uses internet rather than cellular data.

"With Tehama's internet-based system, we don't have problems with data collectors going offline anymore. It's a consistent connection."

Consistency saves money because property owners don't need to estimate water use. They have the data. When customers see their real water use, they pay their bills. They're happier, and the property managers are happier.

Outstanding leak detection popular with tenants, property managers

Results:

- Robust technology can withstand rugged outdoor conditions
- Employee time savings estimated at 5%
- Consistent reliable data builds trust
- Best leak-detection system on the market

Tehama's submeters stand out in another way: they are configurable. This means data is available when you want it. Tehama used this feature to write a leak-detection algorithm into their software, which can send alerts to users 24/7. "They have the best leak detection feature for any of the mainstream submitter radio frequency systems out there," Apostolos said.

Leak detection is especially important for mobile home parks because mobile homes leak more often than apartments. When this happens, an alert goes directly to the property manager.

"Our salespeople can tell the property managers and tenants that with Tehama's system they get leak alerts, even in the middle of the night. And they say, 'Sign me up. I want that!'"

With Tehama's outdoor-rated submeters, Guardian Water & Power can provide superior water billing service to mobile home parks. The company now uses Tehama's sensors for 100% of its outdoor submeters. "Tehama's product was a big change for us. Now we have a product that we're confident standing behind."

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