



City Spotlight!

Volume 2, Issue 7

July 2025

Inside this issue:

- **Electric Meters**

"Blank Display? No Way! Yuma's High-Tech Meter Moments"

In the world of utility management, accurate and efficient meter reading is crucial. Vision electric meters are at the forefront of this technology, offering advanced capabilities that extend beyond simply measuring electricity usage. One notable feature of Vision meters is their ability to read other brands of electric and water meters equipped with ERT (Encoder Receiver Transmitter) technology.

ERT technology, developed by Itron, allows meters to encode usage data and transmit it wirelessly. This technology is widely adopted across various utility meters, making it a common standard in the industry. Vision meters are designed with compatibility in mind, enabling them to interact seamlessly with these ERT-equipped devices.

The City of Yuma incorporated Itron meters into its electric department starting in 2008. Around 2016, the city extended the use of the ERT radio read model to the water department. The implementation of the radio read system in the electric department significantly reduced labor costs, cutting down the effort from two men working eight hours a day for a week each month to one man reading all 1,600 electric meters in just three hours. When the water meters' ERT system was fully implemented, it enabled reading both electric and water meters in less than four hours.

Building on this success, Yuma has now moved forward with the Vision Meter system for remote reading, starting with electric meters. This advanced system allows meters to be read remotely and automatically download usage data into the city's billing software. Vision meters have the added capability of remote disconnect and reconnect, and they are being installed in phases as the budget allows.

The Vision meter system uses a gateway to facilitate communication between the meters and the central system. The City of Yuma has strategically installed these gateways on the main street water tower and on a tower structure next to the light plant. These gateways serve as the receiving components of the Vision system, capturing data transmitted by the meters and relaying it to the central billing software.

Currently, Yuma has enough Vision meters placed throughout the city to read all of the electric meters and many of the water meters. However, since water meters equipped with ERT are at ground level, they require Vision meters to be in closer



proximity to ensure effective communication. While water meters cannot utilize the remote disconnect/reconnect functionality, they still benefit from automatic data downloads into the existing billing software. The city aims to have the water department fully metered with this system by 2026.

It is important to note that all of Yuma's electric and water meters are factory-calibrated and tested. Occasionally, meters may sustain damage to their covers and display panels, but they continue to accurately register usage, which can be retrieved through other devices. Because of the way these meters calculate usage, it is highly unlikely and almost impossible for an electric or water meter to measure and record more usage than what was actually consumed. In rare instances, they might record less than the actual usage, but not more.

Here's how the process works:

1. **Compatibility with ERT Signals:** Vision meters are equipped with receivers that can detect and interpret ERT signals. These signals are standardized, ensuring that any meter using ERT technology can be read by devices capable of receiving these signals.
2. **Wireless Data Transmission:** ERT-equipped meters, whether they are electric, water, or gas meters from different brands, transmit their usage data wirelessly at regular intervals. The Vision meter, equipped with a compatible receiver, captures these transmissions.
3. **Data Collection:** The Vision meter's receiver collects the encoded data transmitted by the other meters. This data includes detailed usage information that the ERT-equipped meter has recorded.
4. **Integration and Display:** Once the Vision meter receives the data, it decodes the information and integrates it into its own system. This allows the Vision meter to display the usage data from the other meters on its interface, providing a consolidated view of consumption across different utilities.
5. **Reporting and Monitoring:** Utility companies benefit from this integration as it simplifies the data collection process. Instead of deploying multiple devices to read various meters, a single Vision meter can gather comprehensive usage data. This not only improves efficiency but also enhances the accuracy of billing and monitoring.
6. **Customer Transparency:** For customers, this technology offers greater transparency and convenience. They can receive a unified bill that reflects their total utility usage, reducing confusion and making it easier to manage their consumption.

To illustrate, consider a household with an Itron water meter and a Vision electric meter. The water meter transmits its usage data via ERT. The Vision electric meter, with its ERT-compatible receiver, captures this data along with its own electricity usage data. The integrated information is then sent to the utility company via the gateways installed on the main street water tower and the tower structure next to the light plant, ensuring accurate and efficient billing.

In summary, Vision electric meters are designed to read other brands of electric and water meters equipped with ERT technology through their ability to receive and decode standardized wireless transmissions. This interoperability enhances utility management, providing accurate, consolidated data and improving customer service. The City of Yuma's phased implementation of Vision meters, following successful experiences with Itron meters, reflects a commitment to leveraging advanced technology for efficient and reliable utility management. The use of strategically placed gateways ensures seamless communication and integration of meter data into the city's billing system, further streamlining operations and improving service delivery.

