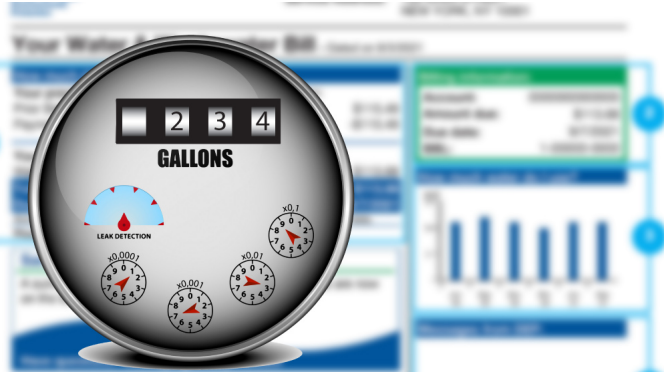**New metering tech to save money, improve utility service**

Written by By Holly J. Wagner Sun Correspondent
Friday, 20 January 2023 03:03

Imagine how much easier moving would be if you could have your water and power disconnected and reconnected instantly, with the flip of a switch. Or how much you would save if a utility could alert you to a water leak or electric connection burnout before it happens?

That's the promise of a new utility management system that could save the city and the public plenty of money and headaches.

Gallupians won't notice any difference for about a year, because that's how long it will take to install new electric meters for all customers and information transmission nodes onto a couple dozen utility poles around town.

Right now, the city is operating under the Automated Meter Reading system that requires city staff to drive by customers' electric and water meters to collect the usage data with a receiver. That's time consuming, subject to human error and it runs up the fuel bills.

The new system from a British Columbia-based company called Tantalus is designed to transmit information directly from meters and service points in the field to the city's central control system, in real time.

"We will bring in hundreds of thousands of intervals of data all day long. We'll use that to be proactive to make the system better, stronger and safer," Andrew Mitchell, director of utility

solutions for Tantalus, told the city council in a presentation Dec. 13. "It is really powerful to be able to see this kind of data on a day-by-day, hour-by-hour basis, from a customer service perspective."

Staff will be able to see exactly what's happening in the city's water and electric systems, from impending system failures to when an individual property's water system has a leak or a meter connection is about to fry, all the way down to electric service "blinks."

"It will formulate a grid that turns from green to red [to show] those areas that our electric department specifically needs to target," Deputy Electric Director Chuck Nourse said. "Right now our system is reactive."

Staff will be able to connect or disconnect service and create payment plans for customers who fall behind from a computer dashboard. The system will effectively eliminate estimates, which come up when AMR field data is not available for a customer account.

The department will also be able to alert individual customers if their water or power use suddenly spikes. Instead of sticker shock from a higher-than-usual bill, the department will be able to call a customer the day the drain shows up in the system, so they can catch a leak or fault before it racks up big bucks.

About 95% of the city's water and power meters will be connected. That's about 8,000 new smart electric meters; the system will work with the 10,000 existing water meters around town.

The new smart meters will be built around computers using the Linux operating system. At installation they will only use about 25% of their capacity, so the city can upgrade to offer features like load management, streetlight control and distribution automation to self-heal the grid, and new capabilities as they become available.

"We simply push it out over the airwaves and your old meter becomes a new meter pretty much instantaneously," Mitchell said.

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"This will require a large up-front cost, but can be completed in about one calendar year," Nourse told the council.

The whole system will cost about $2.2 million for equipment, installation and training, plus $60,000 a year after that for ongoing use.

The new system will be a boon to the Electric Department, which has been working with about half staff since the pandemic began, Nourse said.

"We're already in the process of reclassifying them and adding duties," he said. "This is going to reduce their time in the field by about 80%."

When they do have to go out into the field, techs will know what they're looking for based on information in the central system.

"It will greatly assist our crews in locating and detecting problems," Nourse said. "Every blink, outage – whatever the cause that some of these happen, like if it comes from tree branches rubbing lines – they create something like an electrical signature. We can tell the crews to 'specifically look around for this' when they go on a call."

Possibly the best part for employees and customers is avoiding angry confrontations over higher bills or service disconnections, which will be more efficient and safer all around.

Tantalus has more than 245 utility customers and 3 million endpoints deployed, Mitchell said. The company is publicly traded on the Toronto Stock Exchange under the symbol GRID.

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