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Chelan PUD takes new look at ‘smart’ metering

by Christine Pratt April 16, 2016, 1:29 p.m.



World photo/Mike Bonnicksen

Chelan County PUD employee Chuck Holland reads power meters in the Cherry Manor apartment complex in Wenatchee.



WENATCHEE — How much electricity is your home or business using, right now?

Chelan County residents who have ever wondered that — out of pure curiosity or to track usage for potential ways to save energy — could get their wish by sometime in 2019.

And they won't ever again have to worry about their dogs biting their meter readers every month.

Chelan County PUD officials will this year turn up the heat on a long-simmering discussion about replacing the county's approximately 46,000 electric meters with advanced, two-way meters, also called "smart" or "intelligent" meters.

These are meters that use a radio frequency, cellular service or fiber-optics to continuously communicate power usage from the customer's home or business to a central control center at the PUD.

The communication can happen as often as every 15 minutes. This compares to the once-a-month readings currently taken by the PUD's meter readers, who physically travel from meter to meter to collect usage readings manually or, in some cases, via a drive-by using hand-held computer equipment.

Andrew Wendell, the utility's customer service director, gave commissioners a crash course Monday on the benefits of smart metering. More public discussion and meetings are planned.

Benefits, he said, include:

- Near-real-time energy-usage data available 24-7 to customers via a website "dashboard" that can include current electric usage, whether it's higher or lower than the previous billing period, your energy costs accumulated to date, even the environmental impact of power used.
- Meter readings and connections and disconnections can be done remotely, from a control center at the PUD. This eliminates the need for a PUD employee to access the customer's property. It's also better for the environment, employee safety and the PUD bottom line by reducing vehicle use and employee costs. The utility's two staff meter readers would be reassigned to other duties, not laid off.
- Improved the accuracy of metering and billing. Newly installed smart meters could result in increases or even decreases in some customers' bills, especially those who have the older-style mechanical meters with no solid-state components. These changes, if any, would be small.
- Improved response time in case of power outages — the system could likely notify PUD personnel of an outage before a customer could by phoning the outage in.
- Cost savings for the PUD money. Over the first 20 years of smart-meter usage, the utility would save an estimated \$4.3 million through improved efficiencies.
- Smart meters can increase safety by automatically preventing power generated from a home source, like a solar panel or generator, from entering the grid during a power outage. This protects the linemen working to restore power from possible electrocution.

Advanced smart meters already account for more than half the country's electric meters, according to the federal Energy Information Administration.

New normal

Of the nearly 52 million already in use, nearly 89 percent are in residential installations. Bluebonnet Electric Cooperative, 45 miles east of Austin, Texas, has had automated metering in place for a decade, spokesman Will Holford said Wednesday.

Its meters aren't as advanced as the ones the PUD would be considering, but customers of the Texas cooperative's 89,000 meters across all or parts of 14 counties love the personalized energy-usage information both via its website "dashboard" and mobile usage app.

"We have 65,000 members and 35,000 active users of our website," Holford said. "The dashboard is the most used after the homepage. It has the most hits and most views."

"I would say that AMR (automated meter reading) and the other technology we have implemented has greatly benefited not only the cooperative but, particularly, our members."

Closer to home, Benton County PUD, which serves the Tri Cities area, installed smart meters between 2009 and 2012 to its 50,000 customers.

"We're using them for reading the usage and for disconnect/connect," spokeswoman Karen Miller said Wednesday. "Now we're going through the process of developing a web portal (so customers can view their usage like Bluebonnet's can in Texas).

"We've had very few comments from our customers, but we've definitely had, 'When do I get my portal?'" she said.

Health and privacy

The type of advanced meters under consideration by Chelan PUD would transmit information using a radio frequency, wifi or cell-phone communications methods, in combination with fiber-optics or power lines.

Despite their widespread use across the country, these types of meters — AMI (advanced metering infrastructure) — have raised health and privacy concerns from exposure to the radio frequency radiation or the utility's access to personal data or remotely control appliances.

The AMI meters wouldn't allow the PUD to see which appliances are in use in a home at any given time, unless the homeowner chooses to install "smart" appliances or special monitoring devices, the American Public Power Association reported in its September 2015 newsletter. Laws prevent data sharing without customer authorization, the newsletter said.

Radio frequency radiation is considered "possibly carcinogenic," according to an American Cancer Society website. The radiation emitted by a smart meter is similar to that emitted by a cell phone, cordless phone or residential Wi-Fi router for wireless Internet service within a home or business, the website says.

Even taken together with these other daily sources radiation, the health risk appears to be small, the website says.

PUD officials will look for ways for customers who are concerned about health or privacy to “opt out” of having a smart meter installed on their homes, Wendell said.

The Benton PUD, currently has an opt-out option, but very few customers have insisted on it, spokeswoman Miller said.

A new look

Chelan PUD officials first spoke of buying a smart meter-system in 2007, but postponed the project amid concerns of a looming economic slowdown that proved prophetic when the Wall Street crash happened in late 2008.

With PUD finances currently on track, debt reduced, and the economy recovering, officials have rekindled the discussion.

The utility has already sent up a page on their website to corral information about the upcoming “intelligent meter” discussion.

Public forums, more presentations and employee workshops are planned for this year.

Commissioners will likely decide whether to move forward with the new meters in mid 2017. If they do, funding to cover the estimated \$13.4 million in capital costs will start in 2018, Wendell said, and the county could see the meters installed county wide by sometime in 2019.

Learn more about smart meters

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FAQ: <http://wwrld.us/smartmeterFAQ>

Security: <http://wwrld.us/smartmetersecurity>

Health: <http://wwrld.us/smartmeterhealth>

PUD: <http://wwrld.us/smartmeter2>