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## Meter installations get customer nod

by RICK NORTON, Associate Editor  
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Customer acceptance of the new Automated Meter Reading units that will provide Cleveland Utilities with cost savings, quicker response to isolated power outages and the ability to bill based on TVA's new time-of-use rates is going smoothly, according to local public utility leaders.

To date, 6,571 AMR units (also called "SmartMeters") have been installed by CU crews and contractors, according to Bart Borden, manager of CU Operations.

By the time the three-year campaign is completed, CU will have changed out 30,000 meters.



The initiative is actually several years in the making, but came to a head only recently when TVA announced its intent to convert to a time-of-use, peak-demand system of rates. Once public utilities like CU begin to bill retail customers using the new system, electric rates will be based on time of use. Peak-demand periods like early morning and late afternoon will be the most expensive rates.

The new billing practice is being handed down by TVA to its public utility partners as a major cost-savings

initiative. Retail billing to individual customers will begin gradually over the next two to three years. It is not yet in place; at least, not to Cleveland Utilities customers.

By launching the AMR initiative, CU will be prepared to accommodate time-of-use billing, according to Tom Wheeler, general manager.

As previously reported, and included in last week's installment of this Monday series, implementation of AMR units is not a new practice.

"People have been putting in these meters for the last 10 years," Wheeler said. AMRs, which also go by the name Advanced Metering Infrastructure, or AMIs,

were introduced in the 1970s.

Their popularity has grown over the past few years as the U.S. has explored new ways to find independent sources of energy to help pull away from its strong dependence on foreign oil. The initiative reached its highest crescendo four years ago when President George W. Bush signed the Energy Independence and Security Act of 2007.

Although customer acceptance of AMRs in Cleveland has been strong overall, isolated pockets of opposition have been given a face — and voice — through the local tea party. A handful of members have attended at least two Cleveland Board of Public Utilities meetings to oppose the project. Opponents point to the potential for health risks associated with radio frequency waves, as well as concerns about a Big Brother-like invasion of privacy and allegations that the AMR can control power use inside private residences.

Wheeler has countered Tea Party opposition with assurances that the AMR units are not intended for ulterior practices nor do they constitute health risks. Wheeler also stressed that AMRs are coming in response to the Bush administration's policy on energy independence, and that the administration of President Barack Obama was not involved in its design nor development. Misinformation about SmartMeter technology is being fueled to a degree by political misgivings, he cautioned.

Since the start of an installation test phase earlier this year, CU has worked to keep the public informed about the AMR initiative and the reasons behind its implementation. Literature about the AMR meters is being left with every homeowner or business once a new meter is installed.

Wheeler believes this procedure is helping CU customers to better understand the initiative and how the new meters are intended. The dissemination of misinformation about the AMRs — intended or otherwise — can be confusing to customers, he said.

One twist of irony behind the AMRs is that many have been in operation in Bradley County for three years. Volunteer Energy Cooperative installed a version of SmartMeters throughout its 17-county region three years ago, and this included VEC customers in Bradley County.

“A bunch of people in Bradley County have already had these meters in their homes,” Wheeler said. Their installation then was treated as just a new meter whose intent was to allow for remote reading, thereby saving cost on manual meter reading, the CU leader explained.

The AMR and/or AMI literature that CU customers will receive as their meters are installed provides a detailed Q&A which highlights some of the most commonly asked questions about the SmartMeters and some that are not so frequently asked.

Literature also provides a definition and description of how the meters operate.

“... The [AMR] system uses operations similar to that of a cellular telephone,” a CU brochure cites. “The communication device embedded in each meter (generally located outside the building) will communicate with data collection equipment mounted on utility poles at various points in the community. Communication between the [AMR] meter and data collection points will be transferred over the 900 Mhz spectrum with an anticipated power output of .25 watts of power. The transfer of data gathered at various collection points will then be transmitted to CU via a communication infrastructure. [AMR] technology is sometimes referred to as smart meters.”

Literature specifies, “All CU electric customers — residential and commercial — will receive [AMR] meters. As with any new technology, the old meters will soon be obsolete as there will be no more meter readers to read the traditional electric meters.”

Another frequently asked question about AMRs is their impact on equipment inside a home or business. The literature cites, and has been addressed by Wheeler in previous public meetings, “All communications equipment meets criteria set by the Federal Communications Commission and should not interfere with any equipment inside a home or business.”

The brochure also addresses the question of privacy.

“Only meter numbers, energy usage readings and diagnostic information will be transmitted through encrypted signals. Personal data will not be transmitted so your information will remain private and secure,” the literature states.

The brochure also specifies installers will knock on each door in an attempt to notify the homeowner or business of the meter change-out, because it will require a brief power interruption.

Literature also specifies once the AMR is operational, meter readers will no longer visit homes or businesses to take meter readings; however, for the time being, CU is continuing to take dual readings — manual meter readers and AMR remote readings — in order to verify accuracy. Dual readings eventually will be discontinued.

One Q&A specifically addresses health risks. The question reads, “Are there any potential health concerns with the radio frequency (RF) signals?” The answer specifies, “Several studies have been made on low-power RF transmissions that [AMR] uses, but no negative health impacts have been found. The [AMR] system we are deploying meets all applicable FCC requirements.”

In another related Q&A about RF signals, the literature points out, “[AMR] meters use the same FCC-approved frequencies that have been used for many years in devices such as baby monitors, portable phones, remote-controlled toys and medical monitors. RF fields from [AMR] meters have been studied and found to emit very low fields and then only intermittently. Any exposure to humans would be extremely small. There are no known adverse biological effects

from these small fields. To provide some perspective, under typical operating conditions, an individual meter on average would transmit 1.6 seconds every four hours.”

This is one of the points of contention by opponents such as the tea party who cite other reviews that claim SmartMeters could be a long-term health hazard because of the RF signals.

As for when the AMRs will be read, the literature explains, “At CU, meters can be read at a variety of times in a 24-hour period to obtain a history of usage information. For billing purposes, the customers’ monthly billing cycle will remain the same as was previously. The only change will be a more consistent 30 or 31-day interval between meter readings except for the month of February.”

Literature also addresses questions about any AMR impact on interior appliances by asking, “Will the [AMR] meter control appliances inside my home?” The answer is, “The homeowner will have the same control over their usage inside their home as they presently do. The installed [AMR] meter will not have any control over a customer’s usage.”

The brochure also specifies that CU electric rates will not increase due to AMR installation. Much of the installation cost will be offset by accompanying reductions in manual meter-reading expenses.

Questions about the AMR installations or the three-year initiative may be directed to CU at 423-472-4521 or visit [www.clevelandutilities.com](http://www.clevelandutilities.com).

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