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SmartMeters key in U.S. campaign eyeing foreign oil

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Launching a three-year campaign to convert 30,000 conventional electric meters to the new Automated Meter Reading units is a meticulous Cleveland Utilities strategy to accomplish two primary local objectives.

One, CU wants to deploy the remote-reading AMRs (also known as “SmartMeters”) in order to cut manual meter-reading costs.

Two, completing the conversion will allow CU to meter the new Time-of-Use Electric Rate structures that will soon be implemented on a retail level, and which are already being implemented wholesale by TVA which bills its public power partners like

Cleveland Utilities using wholesale levels.

But it’s not all about operational cost-cutting nor is it just modernizing — and simplifying — CU’s meter-reading process. It’s also about playing a role in reducing the country’s dependence on foreign oil, a campaign whose momentum picked up four years ago with President George W. Bush’s historic signing of the Energy Independence and Security Act of 2007.

“It is important to note that these meters are being deployed under the provisions of the Energy Independence and Security Act of 2007,” said Tom Wheeler, Cleveland Utilities general manager. “This act was passed by the Bush administration in 2007 to help cut our dependence as a nation on foreign oil, reduce our greenhouse emissions and modernize our national electric grid.”

In explaining the enhanced national grid, Wheeler pointed out, “One major component of the Smart Grid is that this type of grid would create a system that would allow the use of distributed generation instead of the present concept of only central power plant production of electricity.”

Wheeler specified that “distributed generation” could include other forms of electricity production like solar, wind and biomass.

A White House press release dated Dec. 19, 2007, is included in a package of Cleveland Utilities materials that are used to help customers understand the intent behind the AMR units and their energy independence origin. It is also used to help ease misgivings by individuals or organizations that are suspicious about the

AMRs, which are also known as SmartMeters.

Such suspicions have arisen in Cleveland.

The Cleveland Board of Public Utilities in past sessions has fielded questions from members of the Bradley County Tea Party who allege the SmartMeters are an invasion of home privacy, that they can be used to control the timing and frequency of use of energy-burning appliances and that they could be a long-term health hazard.

In a brief address before signing the energy act four years ago in the White House, President Bush specified that two years earlier he had signed the first major energy security legislation in more than a decade, but that he realized the 2005 plan was not aggressive enough. So he proposed a strategy to reduce oil consumption of gasoline by 20 percent over 10 years.

In the 2007 signing, the president called the Energy Independence and Security Act a “major step.”

“We make a major step toward reducing our dependence on oil, confronting global climate change, expanding the production of renewable fuels and giving future generations of our country a nation that is stronger, cleaner and more secure,” Bush said.

In his address, the president pointed to dependence on foreign oil as “one of the most serious long-term challenges facing our country.”

In presenting his case and justifying his signature, the president said of America’s oil dependency, “Because this dependence harms us economically through high and volatile prices at the gas pump; dependence creates pollution and contributes to greenhouse gas [emissions]. It threatens our national security by making us vulnerable to hostile regimes in unstable regions of the world. It makes us vulnerable to terrorists who might attack oil infrastructure.”

The president detailed the act’s reasoning by pointing out it will increase the supply of alternative fuel sources and will also reduce the country’s demand for oil by increasing fuel economy standards.

The 2007 act also improves energy efficiency in lighting and appliances while requiring federal agencies to lead by example in efficiency and renewable energy use. The president said new technologies supported by the act will “bring about a new era of energy.” He mentioned by name electric vehicles and new battery technologies to power plug-in hybrids, as well as expanded opportunities for solar and nuclear power.

Title 13 of the 2007 energy act specifies in detail the establishment of the nation’s Smart Grid of which automated meter readers are a part. The section is titled, “State of Policy on Modernization of Electricity Grid,” and identifies the objectives of such a high-tech system. Its purpose is “... to support the modernization of the nation’s electricity transmission and distribution system to

maintain a reliable and secure electricity infrastructure that can meet future demand growth and to achieve each of the following, which together characterize a Smart Grid.”

Paraphrased, some of these features include 1) increasing the use of digital information and control technology; 2) dynamic optimization of grid operations and resources with full cyber-security; 3) deployment and integration of distributed resources and generation; 4) deployment of “smart” technologies (real-time, automated, interactive technologies that optimize the physical operation of appliances and consumer devices) for metering, communications concerning grid operations and status, and distribution automation; 5) integration of “smart” appliances and consumer devices; 6) development of standards for communication and interoperability of appliances and equipment connected to the electric grid, including the infrastructure serving the grid; and 7) identification and lowering of unreasonable or unnecessary barriers to adoption of smart grid technologies, practices and services; as well as others.

A couple of the Smart Grid features, and their wording, have likely created some of the concerns expressed about the so-called SmartMeters, but Wheeler offered Cleveland Utilities customers assurances about the intent of the new AMR units.

“The meters we are installing do not have the ability to control our customers’ appliances and equipment,” the CU general manager stressed.

At last report, CU electric crews and a paid contractor have installed more than 5,000 units.

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