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WND EXCLUSIVE

WATCHING OUT FOR GOVERNMENT'S 'OTHER PURPOSES'

Smart-meter technology distrusted for expense, privacy, health concerns

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by **STEVE ELWART** [Email](#) | [Archive](#)

Steve Elwart, P.E., Ph.D., is the executive research analyst with the Koinonia Institute and a subject matter expert for the Department of Homeland Security. He can be contacted at steve.elwart@studycenter.com.

***Editor's Note:** This article opens a series on smart meters and the technology that critics fear could allow utilities and government to monitor how and for what reason energy is used inside homes.*

Smart meters were a source of contention even before President George W. Bush signed the [Energy Independence and Security Act of 2007](#), which aimed to “move the United States toward greater energy independence and security ... and for other purposes.”

It was those “other purposes” that pushed the smart grid and smart meters into the forefront of controversy.

The bill authorized a “demonstration” of the Smart Electrical Grid and smart meters, the meters being singled out as the “integration of ... smart metering technology.”

Proponents for the meters say they make it easier for customers to balance their electrical usage by monitoring usage and moving demand to off-peak hours. For example, a homeowner may decide to do laundry very early in the morning or late at night rather during the middle of the day when electrical usage and rates are higher.

Pacific Gas & Electric already implemented the smart meter system, which includes natural gas as well as electrical metering.

PG&E is one of the largest combination natural gas and electric utilities in the United States. The utility provides natural gas and electricity to over 10 million customers in most of the northern two-thirds of California, ranging from Bakersfield to the Oregon border.

Their trademarked “SmartMeter” system collects electric and natural gas usage data from both homes and businesses and transmits the information back to the utility company via wireless communication. The gas usage is reported every 24 hours while the electrical usage and the usage billing rate is sent to the utility company every 15 minutes. Future plans call for fully automated home energy management systems as well.

For customers who do not wish to have smart meters installed in their home or business, PG&E is offering a [SmartMeter Opt-Out program](#). For an initial charge of \$75 and \$10 per month, customers can have their meters read manually.

That PG&E even offers the program is a measure of the level of concern some people have with the program. In July 2012, PG&E CEO, Tony Earley acknowledged that PG&E had “lost its way” and needed to regain the trust of its customers.

In early 2011, PG&E issued a report of the results of the program. For the period of 2007-2010, the benefits of the PG&E SmartMeter program were estimated to be \$125 million, while the project cost was estimated to be more than \$2 billion.

PG&E and others justify the costs a number of ways. The biggest reason is “anthropogenic (man-made) global warming.” Those who believe there is an increase in the average temperature of the earth, and that man is the cause, believe a reduction of electrical usage can stop the warming of the planet. Electricity is generated primarily by natural gas and coal fired power plants that emit CO₂, which some believe contributes to global warming.

Others justify the costs based on the elusive goal of total energy independence from foreign energy sources. Smart meters are just part of a grand plan to reduce dependence on foreign oil by using less electricity in homes and businesses and using the extra power plant capacity to power electric cars.

PG&E is not the only company that is touting the advantages of smart meters. Utility companies across the country, as well as Europe, are moving ahead with plans to install smart meters throughout their respective systems.

The smart-meter program, though, has its critics, and they are both numerous and vocal as an earlier [WND article](#) outlined.

One of the concerns is the cost.

Proponents of smart meters say that giving immediate information to utility customers on their energy usage will make them more aware of their energy consumption and will consume less power as a result.

That information, however, doesn't come cheap. As can be seen from the PG&E example, a smart meter program may take decades before it pays for itself.

That payback figure may take even longer than expected due to recent natural gas finds in the United States. Energy companies have found themselves in a natural gas glut that has depressed prices to the lowest levels in a decade. These depressed energy prices should reduce electricity costs for consumers, making smart meters less attractive.

In addition, in most cases, the customer would have to bear the cost of setting up a home network to access the information in the meter and monitor their power consumption. The utility company is interested in harvesting the billing information for the electricity coming into the house. They are not interested in how it is used, at least for now.

The argument for using smart meters to stem global warming is also losing its appeal as doubts have arisen about the entire global warming issue, and it is taking a back burner to the economic problems in the country.

There is also a concern among both customers and utility companies about the security of the meters. At this year's Black Hat computer hacking conference, two smart meter hacking tools were demonstrated. While these "hacks" could be used to check for smart meter vulnerabilities, such as password strength levels, they could also be used by a customer or a third party to commit fraud.

According to Spencer McIntyre, a member of a team that developed the hacking tools, "Our tool is framework-extensible by the community: It's completely open source. ... Being able to write and read from a meter ... could be used for fraud, which is a large concern for power companies."

Other privacy advocates are worried that smart meters and smart home networks may be used for more than just monitoring energy usage. Power companies (and governments) may use the meters to cut power to home with a series of keystrokes.

Insurance companies are another source of concern for utility customers. If the data gathered by smart meters is obtained by insurance companies, they could use that information to generate a profile of a person's living habits. For example, if a customer shows a spike in their electricity usage at 2 a.m. on a regular basis, an insurance company could infer that the customer stays out late at night in a bar and could be driving home drunk. Their insurance rates could increase accordingly, unbeknownst to the customer, who actually works the night shift at a local factory.

If someone installs a smart network in their home with smart meters on their electrical appliances, even more detailed information could be obtained about the customer.

The largest concerns however, are the health and safety effects of the meters.

Several lawsuits have been filed over the safety aspects of these meters. Cases have been reported in which the meters have burst into flames. One complaint stated that the meters have defective components, can overheat to the point of failure and have defective internal components that can lead to combustion.

Other, more serious complaints revolve around the negative health effects of the meters.

Electric customers with smart meters have complained about having health problems. Among them are difficulty sleeping, headaches, ringing in the ears, disorientation and unexplained stress.

One person has complained: “I have been suffering since the (smart meter) installation of three meters in my (apartment) complex ... I now have fatigue and headaches, nausea unexplained and nosebleeds at the oddest times for no other reason. ... Our entire country ... is now a sea of massive radiation from the thousands of smart meters now installed.”

Another customer reported: “I am plagued with various health issues because of the smart meters, such as insomnia, constant headaches, blurred vision and ringing in my ears, and other various aches and pains. I understand that others are suffering from various health issues throughout the state and country as well. I do not want this device on my home or in my neighborhood. ... I want this smart meter removed now!”

While government officials, power company representatives and researchers all discount the relationship between physical ailments and smart meters, the number of widespread complaints about smart meters warrant further investigation.