

Managing Electricity Costs with Kiosks and Advanced Metering

Self-service technology, in combination with a smart grid, can change the utility purchase model.

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The traditional billing model for a utility company involved customers getting a bill each month, after the service had been provided. Because customers were unable to track how much electricity they were using, some budgeted poorly, forcing them to carry balances or simply not pay at all, costing the utility company money.

New technology is changing that paradigm. Customers are gaining control of electricity costs, thanks to “smart meters,” advanced electric meters that allow customers to track their electricity usage and monitor fluctuations in the cost of a kilowatt to better manage their utility bills.

In many cases, billpay kiosks are an integral part of that change.

“It is really an exciting time for an industry that has really been very boring for many years,” said Charley Plowman, manager, smart meter field deployment at Oklahoma City-based Oklahoma Gas & Electric. “This has the capability of changing the model.”

Oklahoma Gas & Electric’s smart grid program

Oklahoma Gas & Electric, the state’s largest utility, began deploying smart grid technology in 2010, starting with smart meters. As of September 2010, approximately 100,000 meters are installed. The company plans to install smart meters for all of its almost-800,000 customers by the end of 2012.

OG&E recruited approximately 3,000 customers in Norman, Okla., who, in addition to the smart meter, received one or all of the following smart grid technology: an in-home display device (IHD), a programmable communicating thermostat (PCT) and a website address, all providing customers with information about the cost of electricity and how much they are using.



Oklahoma Gas & Electric is using smart meters to help customers control energy costs.

The IHD shows the customer's current energy use, the estimated month-to-date usage and a projected end-of-month bill. Customers assigned to a Web portal have access to much more information related to their energy usage and how it compares to their community, including their energy use in 15-minute intervals.

Two dynamic price plans also are being tested, which require OG&E to notify customers a day ahead of peak pricing so they can make more informed choices about their energy use.

“By using this technology, customers can see, for example, that the price of electricity between 2 p.m. and 7 p.m. the next day is going to be low, medium or high,” Plowman said. “With that information, they can make the choice not to run their clothes drier until after 7 p.m. in order to save money.”

The PCT allows customers to preprogram their temperature setting depending on the cost of electricity.

“From the standpoint of the company, if we can get enough customers to shift their load from peak power periods to off peak, it helps to level our loading of the power plants and enables us to avoid having to spend, and include in our rates, millions of dollars to build more power plants in the future,” Plowman said. “We can provide an enhanced customer experience and build better relationships because we are providing [customers] with much more information for greater energy efficiency.”

Kiosks and the smart grid

In university communities, OG&E sees a disproportionately high number of electricity connection and disconnection



Billpay kiosks and smart meters could allow customers to prepay their utility bills, controlling costs.

requests by students. Smart meters and the smart grid secure wireless communications system allow OG&E to handle those tasks remotely, eliminating the need to send a utility company employee and vehicle to the customer's residence or business.

Because many students are on a tight budget and sometimes find it difficult to pay a deposit or to keep up with their bills to prevent disconnection, OG&E is looking at the feasibility of a prepaid electricity product supported by smart grid technology. The concept is simple. Customers could pay for their energy usage in advance, and smart meters would enable both them and OG&E to keep track of their usage and to update their balances.

It's a concept that cell phone companies,

tote-the-note car lots and rent-to-own furniture stores figured out a long time ago.

OG&E has more than 100 billpay kiosks located throughout its 30,000-square-mile service territory, which could be an integral part of a prepaid product offering. The kiosks, designed by Tulsa, Okla.-based billpay kiosk provider U.S. Payments, are located in grocery stores, convenience stores, cable company offices and similar locations around the state and accept payment by cash, check or credit card.

“In the past, if a customer’s service was disconnected, they had to talk to a customer service agent, make a payment and call back so we could verify that the payment was made. That was all very expensive,” Plowman said.

“With the kiosks, on the other hand, if a customer goes in and makes a payment it automatically posts to our system in near-real time,” he said. “In turn, our system sees that a payment has been made and automatically issues a remote reconnect order.”

“It is a great deal for us, because people who have a prepaid account pay much more frequently than those who have a postpaid account,” said Jim Bennett, CEO of U.S. Payments. “The net result for us is that we get a lot more transactions, and the customer saves a lot of money in disconnect and reconnect fees.”

According to Craig Hutson, chief technology officer with Dallas-based Exceleron Software, “Kiosks have a very unique role in this smart grid prepaid world because people would much rather make payments at their convenience and in a more convenient location such as a grocery store, as opposed to having to

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drive to the utility company office.”

Exceleron is a developer of prepaid solutions for electric, gas and water service providers. Exceleron’s prepaid account management system is used by several utility companies around the country, including Mid-South Synergy of Navasota, Texas, and Delta Electric Power Association of Greenwood, Miss.

Customers can pay as much or as little as they are comfortable with, to either continue their service or get their service reconnected quickly, Hutson says, and they don’t have to see someone face-to-face, which often can be embarrassing.

They also can make payments at any time of the day or night via billpay kiosks.

According to Hutson, in areas where prepaid metering is offered, utilities see about a 7 to 10 percent adoption rate.

Along with helping customers to better manage their utility costs, there’s a benefit for the utility companies as well. It’s a well-known fact in the utility industry that 10 percent of customers incur 90 percent of customer service costs.

Those customers are prime candidates for prepaid service.

“The people who sign up for prepaid are typically the ones who are causing the most grief to the utility in the first place,” Hutson said. “They are the ones who call and complain and who typically want to make payment arrangements. One of the benefits to the utility is that they see that their inbound phone calls drop dramatically once they start those customers on prepaid.”

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