

in that wild territory on the “other side of the meter,” so they depend on customer operations and input. Most importantly, they make customers aware of energy usage, but they may not make them thoughtful.

THE VALUE OF AWARENESS

One alternative to home energy displays is the Internet. Some utilities sponsor Web sites that make energy use information and analytics available to customers who complete online energy audits. Advocates of these online experiences note that they are much more detailed and interactive than a home energy display. We would add that the computer-based experiences can also be more work than glancing at a display.

Let’s not underestimate the value of mere awareness. The home energy display functions at a glance, providing

a little bit of real-time, relevant information. Ideally, it doesn’t make you stop and think. It doesn’t make you work. Rather, it provides a little feedback in a casual conversation.

Customers in home energy display trials reported to us that, most often, they have glanced at the display, and then immediately turned off lights, unplugged an appliance or reset the thermostat. Customers also reported that once intrigued, they have identified the energy used by hair curlers, sound systems and refrigerators.

DON’T JUST STAND THERE

A great deal of household energy usage is mere waste. We leave lights on, ignore little “vampire” lights, open the window when the heat or air conditioning is on or leave appliances running when no one is in the room. The home energy display trials have taught us that consistent energy awareness delivered by

a dedicated little device is helpful, especially if the device is easy to get along with and can show us what thousands of little decisions cost. Months after their home energy displays first arrived, most trial customers reported that they still pay attention to their displays every day or every few days. Most of them would recommend similar devices to their friends.

WORTH A LOOK

Home energy displays may seem like a modest first step on the utilities’ road to the eventual home area network, but they are smart, useful, considerate—and engaging. Home energy displays can repay a little customer attention with a lot of savings and satisfaction.

Craig Boice is a business development consultant who works with energy industry utilities, vendors and financiers.

VISION

STRATEGY

REALITY

More than bits and bytes

+ PSE KEEPS FOCUSING ON STRONG “REAL-WORLD” CUSTOMER RELATIONSHIPS

By Bert Valdman

→ THE ENERGY BUSINESS HAS NEVER BEEN MORE CHALLENGING. UTILITIES must upgrade transmission and distribution infrastructure, produce green energy, drive energy efficiency and remain in compliance with evolving federal and state standards—all while controlling costs and maintaining reliability. That’s a tall order under any circumstance and even more daunting in a turbulent economy.

The smart grid offers many potential utility solutions to this formidable to-do list. New technologies promise better management of how energy is produced and used, gaining efficiencies that have never been possible before. Utilities, though, face two obstacles in making the most of new technologies—and neither of those obstacles has anything to do with the hardware or software that will be used.

First, data and information come from the same family, but the two aren’t the same. Turning data into actionable information comes with a steep learning curve that will likely mean we have to rethink some of our traditional ways of doing busi-

ness. Second, and even more critical, we risk losing touch with our customers if we turn them into bits and bytes and forget there are families, homes and communities that depend on the work we do.

As we move to the digital world, we need to stay part of the real world. Puget Sound Energy (PSE) and our own experience in moving to new technologies has taught us a lot about these issues. Over the last decade, we deployed more than 1.8 million wireless natural gas and electric meters, giving us greater and faster access to data on how our customers use energy. Instead of manually reading these meters every month, we now use a pole-top network to gather the data from the homes and businesses we serve across western Washington.

With a rapidly growing service area, the ability to read the meter remotely is increasingly valuable. Going to wireless data collection allows us to keep closer,

more immediate track of our system and the energy that is being used at a much lower cost, and with greater detail than manual reading allowed. As these first steps lead to a smarter grid, there is tremendous potential to benefit the environment through more efficient energy use.

But what happens to the relationship with our customer? A truck with a utility logo or a familiar meter reader in uniform is a tangible reminder that we live and work in the neighborhoods we serve. This connection is a powerful force in having our customers know us as more than an energy provider, but as a community ally. As an example, a PSE meter reader once saved an elderly man's life after discovering him alone and disoriented in his rural cabin. The incident earned PSE an award from the U.S. Commission on Aging and serves as a reminder that we must be creative in building lasting relationships through new technologies. The good news is we can already see progress.

Today's consumers want transparency, and online tools offer many ways to help them understand the services we deliver and the choices they have. Online energy audits that employ the data gathered by our wireless meter reading network have become very popular with our customers. In addition, we're using the data to communicate more quickly during storms through a new online outage map. Consumers now demand better and localized information, and the smart grid can help us meet that expectation by offering personalized tools tailored to each user's needs.

But even as PSE goes digital, we are also building new community customer service offices. Some of our customers still appreciate a face-to-face conversation when they pay their bill. But the main role of these community offices is to be our eyes and ears in the community—to work with municipalities on energy efficiency programs, provide information to customers who are interested in energy conservation, and offer support and restoration information during major storm-related power outages. We want our customers to know the door is open and we're here to help. For some customers, a Web site is perfect, yet others want to pick up the phone or pull up a chair and chat.

The smart grid won't be a success because of technology, but because of what we do with the information it yields. Keeping our customers front and center will keep us on course as we chart a new future for utilities and the customers and communities we serve.

Bert Valdman is an executive vice president and chief operating officer for Puget Sound Energy.



▲ Bert Valdman

AMI REALITY CHECK

The next two articles go beyond just the AMI vision to discuss some practical considerations. Ed Finamore talks about strategies for better leveraging AMI and smart grid technologies across a utility. William Atkinson discusses the strategy and reality of smart meter maintenance, repair and replacement.

VISION

STRATEGY

REALITY

The AMI centerpiece

+ AMI AND SMART GRID CAN SUPPORT MANY CRITICAL INTELLIGENT UTILITY INITIATIVES
Edmund P. Finamore, P.E.

➔ WEBSTER TELLS US THAT THE DEFINITION OF intelligence is an ability to learn or understand from experience and to acquire and retain knowledge in order to respond quickly and successfully to a new situation. This definition pretty much characterizes the direction that utilities are taking today as they respond to