

SMART THINKING ABOUT THE SMART GRID

PSE focused on reliability, service and energy efficiency

PSE

PUGET SOUND ENERGY

The Energy To Do Great Things

By Bert Valdman, executive vice president and chief operating officer

Headlines often paint the smart grid as a “some-day” technology. Let me start with a little secret about the smart grid: it’s already happening. And here’s a second secret about the smart grid: we need to think carefully about our next steps in deploying new technologies.

Getting the smart grid right will benefit our economy and environment for years to come, while getting it wrong will mean lost opportunities and lost dollars at a time we can’t afford either. The key to making the smart grid work for our economy and our environment is defining the problem before launching into the latest dazzling solution.

When your business supplies a vital commodity – such as electric power – being practical, reliable and dependable is the ultimate benchmark. If the lights don’t stay on not much else matters. The smart grid has the potential for making power outages less frequent and also shorter, plus it can help homeowners and businesses save energy by providing better information on energy use and cost. Getting there, though, may not be so easy.

A recent *Wall Street Journal* article had this headline: “Smart Meter, Dumb Idea?” The report described how some utilities around the nation had spent as much as \$500 per customer to install new, digital smart meters only to find that the billions spent brought shrugs over how to use the new devices and grumbles about the price tag.

How can we be smart about the smart grid? First, let’s set some goals that will benefit our region. Reliability tops the list, closely followed by energy efficiency.

New technology can reduce the number of outages, and make the outages that do occur shorter. Advanced communications will allow us to have a grid that automatically pinpoints faults and reports trouble faster, giving our service crews better data when a severe storm or other incident has damaged vital equipment. The leap ahead, though, may not be as big as it first seems.

Much of what falls under the “smart grid” label is technology that is already in place on PSE’s large-scale transmission system, which is one of the most advanced in the nation, and could apply to the neighborhood distribution system as well. Our grid already scans for trouble and reports back every four seconds. Right now, a pilot project on Whidbey Island is being put in place to help that windy, wooded area better withstand Puget Sound storms.



PSE’s transmission and distribution systems are already highly automated, with sensors that monitor the electrical grid every four seconds.

Energy efficiency is also a prime target for the smart grid's potential, but again, much of our challenge is separating what can be done with new technology from what should be done with new technology – or even with no technology at all.

Every one of PSE's 1.8 million natural gas and electric customers already have automated wireless meters at their homes and businesses, with data being collected everyday. Customers can login to PSE.com and see details on everything from what day of the week they use the most energy to a simple online energy audit with personalized energy savings tips.

Today, some 30,000 PSE customers take advantage of this technology, but that leaves more than a million others who still haven't tapped into the information gathering capabilities of the grid we already have.



Renewable energy technology is compatible with today's grid. More than 400 PSE customers have solar systems at their home or business.

Some smart grid advocates also point to it as the path toward more widespread use of renewable energy, but PSE is already the second-largest investor-owned utility owner-and-operator of wind energy in the nation, with more wind power now being developed.

Closer to home (perhaps on your own rooftop) more than 420 PSE customers have solar, wind or micro-hydro systems, and today's grid is more than capable of handling these small-scale systems on local homes and businesses. To be certain, our transmission system must grow to handle further use of wind and solar, but it might be more accurate to call for evolution, and not a revolution, in bringing renewable energy online.



PSE is a leader in owning and operating wind power, with generating capacity equal to the electrical needs of approximately 100,000 homes.

Do we need a smart grid, or just smarter use of the grid we have today? The answer is likely both, with careful choices to ensure the right solution is used for every problem. If we all adopt more energy efficient habits, such as changing to compact fluorescent light bulbs, can we have just as big an impact, without a big price tag? Yes, but the long-term will still require advances in technology.

It's an exciting time in the energy industry, with the smart grid offering the potential for helping us live better, boost the economy and preserve the region's natural beauty. The Puget Sound area is a proven innovator, with pioneer efforts in everything from aerospace to medicine to information technology.

We can add the smart grid to this list of achievements, too, provided we stay focused on the goals of greater reliability and energy efficiency.