

## We're being smart about smart grid

### Requesting stimulus funds for smart grid pilot projects

PSE has filed a \$20 million application for federal stimulus funds to deploy advanced technologies focused on increased electric service reliability and the development of new energy efficiency tools in a few test areas. The pilot project's goal is to reduce the frequency and length of power outages, and study new methods of monitoring energy use.

The grant, if approved, would be matched with a \$22.5 million investment by PSE and allow the utility to move up its timeline for implementing pilot projects slated for Bainbridge Island, Mercer Island, Point Roberts and Whidbey Island.

With their unique geography, these communities provide a natural laboratory for accurately measuring the benefits of the proposed new technologies.

If funded, the pilots will test new technologies such as equipment that responds automatically to storms and other events — including providing PSE crews with more detailed and timely information about system damage. In addition, the project would include installation of two-way “smart meters” that provide greater consumer access to information about their energy use.

The U.S. Department of Energy is awarding \$4.5 billion in smart grid grants nationwide as part of the American Recovery and Reinvestment Act of 2009.

A decision on PSE's grant request is expected by the end of the year.

## Smart grid Q&A



*Below are excerpts from an opinion-editorial and presentations on smart grid recently delivered by Bert Valdman, PSE executive vice president and chief operating officer.*

### What is the smart grid?

The smart grid is a way to improve electric system reliability and service and provide customers with tools to become more energy-efficient.

Smart grid technologies use data to manage the flow of electricity and to provide consumers information about their real-time energy use.

### When will the smart grid come to PSE?

Over the last decade, PSE has moved into a number of technologies that fall under the smart grid banner.

- ◆ We installed an automated transmission system that can automatically switch the flow of electricity from another direction to keep the lights on.
- ◆ We converted our work-assignment dispatch system to a mobile workforce, with service crews accessing job and incident-response data through wireless laptops.
- ◆ We converted every one of our 1.1 million electric and nearly 750,000 natural gas customers to a wireless meter reading system.

- ◆ We developed an energy analyzer tool allowing customers to view online their day-to-day energy use based on data collected from the wireless meters.

### How are PSE customers aligned with new technologies?

More than 500 PSE customers are generating their own green power — by producing solar power, as well as wind, hydroelectricity and using dairy anaerobic digester systems and other resources right from their own roofs and backyards. Also, last winter we discovered our customers turned to the Internet to tackle their higher energy bills by comparing their daily energy use — data transmitted through automated meters — to determine ways to be more energy-efficient.

Operating in a region that is home to Microsoft, Boeing, Amazon.com, Expedia and many other technology leaders, PSE has learned that our customers tend to be early adopters of new technologies. More than 500,000 customers are now enrolled in our online services.

Our challenge is to have the discipline not to jump on every trend while recognizing that new technologies lead to new opportunities. New technologies must measurably improve reliability by shortening the duration or frequency of power outages and by enhancing energy efficiency.

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## In Your Community

### Receive up to 10 free CFLs along PSE's Rock the Bulb Tour

We're wrapping up PSE's four-month Rock the Bulb Tour in late October, which means there is still time to get up to 10 free compact fluorescent light (CFL) bulbs in exchange for the same number of old-fashioned incandescent bulbs. Compared to incandescent bulbs, CFLs can last up to 10 times longer and use 75 percent less energy. Visit the following locations to exchange your bulbs, and watch your energy usage drop with earth-friendly lighting.

#### PSE's Rock the Bulb Tour dates and locations

|                |                        |
|----------------|------------------------|
| Sept. 12-13    | Lowe's of Mount Vernon |
| Sept. 19-20    | Lowe's of Bellingham   |
| Sept. 26-27    | Lowe's of Federal Way  |
| Oct. 3-4       | Lowe's of Kent         |
| Oct. 10-11     | Lowe's of Auburn       |
| Oct. 17-18     | Lowe's of Puyallup     |
| Oct. 24-25     | Lowe's of Lacey        |
| Oct. 31-Nov. 1 | Lowe's of Olympia      |



Visit [RocktheBulb.PSE.com](http://RocktheBulb.PSE.com) for a list of available CFL bulb types and recycling locations.

## PSE wind power and wheat: growing together in the Palouse



Already the Pacific Northwest's largest and the nation's second-largest utility owner of wind energy facilities, PSE is now the sole owner of the Lower Snake River Wind Energy Project, which will meet the electricity needs of approximately 350,000 homes. The first phase of the project is expected to go into operation in 2011. The Lower Snake River project is now under initial development in the Palouse region in Southeastern Washington, where wind facilities — such as PSE's Hopkins Ridge Wind Facility in Columbia County (seen here) — give wheat farmers a new crop to harvest along with the wheat and grain they've produced for more than a century.

## Time to get your home ready for winter

Early fall is the perfect time to prepare for cooler weather. Following these simple steps now, including taking advantage of PSE rebates and federal tax credits, can help you manage your energy costs and save up to 15 percent in heating expenses:

- ◆ **Check doors and windows for leaks and drafts.** Make sure doors seal properly, and add weather-stripping or caulk to keep heat from escaping.
- ◆ **Examine heating ducts for leaks.** Repair or replace damaged ducts.
- ◆ **Add insulation to your attic,** and weather-strip and insulate your attic hatch or door to prevent warm air from escaping. PSE offers up to \$1,600 in insulation rebates.
- ◆ **Close the fireplace damper** when it's not in use.
- ◆ **Have the furnace inspected** and serviced to make sure it is in proper working order.
- ◆ **Clean or replace the furnace air filters** at least every two months during the heating season. The furnace will run more efficiently and use less energy.

## Adjustments to bills anticipated for October

In late August, Puget Sound Energy requested a double-digit decrease in natural gas rates and a continuation with a slight decrease in a credit on electric bills. Upon approval by the Washington Utilities and Transportation Commission, both changes are expected to take effect Oct. 1. Here are the highlights:

- ◆ As a result of ample natural gas supplies expected for the coming winter, and reduced demand due to the slowed economy, PSE has locked in lower-priced natural gas supplies to deliver this winter to your home and business. The requested rate decrease for all groups of customers is 17 percent.
- ◆ The effect of the lower energy exchange credit, a pass-through of the federal power benefits supplied by the Bonneville Power Administration given to residential and small-farm customers, will result in a \$7.27 monthly credit on the average household bill.



## We're using social media

We've joined our customers on Twitter and in the blogosphere to keep open another channel of communications. We listen and care about what you have to say about PSE and hope you'll follow us on Twitter at PSETalk (Twitter.com/PSETalk) or visit our blog AskAndy.PSE.com to ask a question or offer advice.

- ◆ **Set the thermostat at the coolest level** you can without making your rooms uncomfortable. For most homes, the heating bill drops by about 2 percent for every degree the thermostat is lowered.
- ◆ **Lower the thermostat** at bedtime or while away during the day. Setting the thermostat to 58 degrees while asleep can cut a natural gas bill by up to 7 percent.
- ◆ **Make sure all heating vents are opened** and not blocked by furniture or other items.
- ◆ **If replacing a natural gas furnace,** install a high-efficiency ENERGY STAR®-qualified unit that could cut your natural gas use by up to 20 percent. PSE has a \$350 rebate for this.



## Receive your PSE bill online, go paperless

We've improved our online Web screen. Log on to PSE.com and register for "My PSE Account" to monitor your daily energy use and pay your bills online. Each month, instead of a paper bill, you'll receive an email outlining how much you owe and the date your payment is due. Look for the "Go Paperless" sign in the upper right hand corner when you log on.



# Construction projects reinforce system to ensure reliability

Our crews took advantage of the construction window during the dry months this summer to repair, replace and extend power and natural gas lines to ensure safe, reliable customer service throughout our service area.

These projects represent a major investment in and upgrade of PSE's energy system. Following are highlights of these reliability projects.

- ◆ **In Bellevue:** We expanded and upgraded the 60-year-old Factoria substation to accommodate higher voltage and provide twice the capacity for greater reliability.
- ◆ **In Bremerton:** We rebuilt and upgraded our aging Bremerton substation to increase capacity and reliability as well as help reduce future power outages.
- ◆ **In South King County:** We're installing six miles of 16-inch-diameter natural gas line between Kent and a gate station near Federal Way to meet current and future needs.
- ◆ **In Blaine:** We're building a new electric distribution substation between Birch Bay and Blaine to meet increased customer demand for electricity.
- ◆ **In Olympia:** We're upgrading five substations from low-voltage to our standard 115 kilovolts (kV).



*Upgraded Bremerton substation and surrounding landscape with decorative fence.*

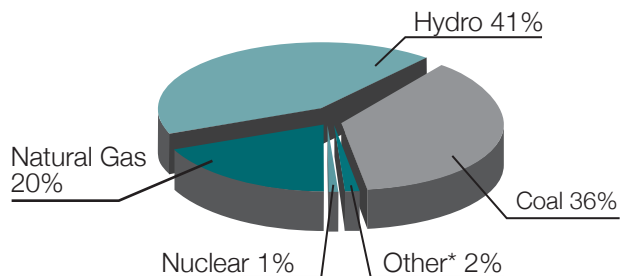
- ◆ **In Skagit and Whatcom counties:** We're rebuilding 23.5 miles of existing 115 kV transmission line and replacing more than 425 poles between Sedro-Woolley and Bellingham.

For more information on these and other projects, please go to [PSE.com](http://PSE.com) and click on In Your Neighborhood under the Community tab at the top of the home page.

## Electricity: Power Supply Fuel Mix

The electricity that Puget Sound Energy delivers to customers is generated using a number of different resources. The fuel mix for these resources for electricity delivered in 2008 are shown in the following table and chart:

| Fuel          | Percentage |
|---------------|------------|
| Coal          | 36         |
| Hydroelectric | 41         |
| Natural Gas   | 20         |
| Nuclear       | 1          |
| Other*        | 2          |
| Total         | 100        |



\* Biomass, landfill gas, petroleum, waste and wind.

Source of data: As reported by PSE to, and published by, the State of Washington Office of Trade and Economic Development, Energy Policy Section, 2008.

Visit our local customer service offices

Most offices are open Monday-Friday, 9 a.m.- 5 p.m.

**Bellingham** – 1329 N State St  
**Burlington** – 1660 Park Lane  
**Ellensburg** – 207 N Pearl St

**Freeland** – 1794 Main St  
**Oak Harbor** – 231 SE Barrington Dr #101  
**Olympia** – 2711 Pacific Ave SE

**Port Townsend** – 181 Quincy St #101  
**Vashon Island** – 18125 Vashon Highway SW

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For information about rates and your rights and responsibilities, please call or visit us online.

