



April 2009

### Puget Sound Energy to improve electric system reliability in south Whidbey Island

#### What is the project?

Puget Sound Energy plans to construct a new 25 megavolt (MV) substation and move sections of our 115 kilovolt (kV) transmission line to a new location along State Route 525 (see map). The new substation will serve the south Whidbey Island communities of Langley, Clinton and Freeland. It will also increase reliability to the Island by serving as a back-up to our Brooks Hill and Langley substations. Re-routing of the line will provide better access for repair crews and gain more protection from tree-related outages. PSE will also install distribution feeders underground to connect our Brooks Hill and Langley substations (near Langley and Clinton, respectively).

#### Why is PSE constructing a new substation?

PSE is constructing a new substation at the south end of the Island and moving our transmission line to improve reliability to south Whidbey Island, as well as serve as a back-up to Brooks Hill and Langley substations. The south end of Whidbey Island has historically been hard hit by power outages because of the combination of high winds and the abundance of trees around our power lines. The existing Brooks Hill and Langley substations, located at the southern-most end of the Island, are frequently impacted when fallen trees interrupt multiple transmission feeds.



#### How will this benefit you and your community?

The Useless Bay substation will increase electric capacity and reliability to customers in south Whidbey now and in the future.

#### What will the work entail?

##### Transmission line re-builds

- Trimming and removing vegetation along the route
- Installing new transmission poles and associated electrical equipment
- Stringing transmission line
- Site restoration, including landscaping

### **Substation**

- Site work (clearing and grading) to prepare for expanded substation construction
- Installing concrete, transformers and associated electrical equipment
- Installing underground distribution feeders
- Connecting the substation to existing transmission lines
- Site restoration, including landscaping

Construction will be confined to normal daytime working hours during the week, with the possibility of some work on Saturdays. Much of the work will be in roads along public rights-of-way. When working in or along roads, signs and flaggers will help direct traffic. Construction of the transmission line portion of the project is expected to take about six months, and the substation portion of the project about four months.

### **Project Schedule**

- Permitting: transmission line spring 2009
- Permitting: substation spring 2009
- Transmission re-build is expected to be completed fall 2010
- Construction of the substation is expected to begin fall 2010

### **What can I expect to see or hear during construction?**

Typical construction equipment will be used including track hoes, bull dozers, trucks and cranes. Construction will involve vegetation removal and installation of new transmission poles and conductors. Site grading may be necessary to accommodate the expanded substation and new electrical equipment. Concrete foundations will be installed, followed by electrical equipment, enclosures and fencing. The area around the substation will be landscaped for screening and site enhancement.

### **Why are substations necessary?**

Substations are critical links in the electricity distribution system that switch, change or regulate electric voltage. Once it is generated via dams, wind, solar, natural gas or biomass, electricity is carried by high-voltage transmission power lines to the areas where it is needed. Before reaching homes and businesses, the high-voltage power is transformed at the substation to lower voltages that can be safely distributed to customers.

### **Why are transmission lines necessary?**

Transmission lines are key links in the electrical distribution process. The lines safely transport high voltage electricity from power sources, including hydroelectric dams and wind farms, to substations in local communities. Transmission normally takes place at voltages of 115 kV and higher. Transmission lines supply high-voltage power to substations where the power is then transformed to lower voltages that can be safely distributed to customers.

### **PSE's commitment**

PSE remains focused on our vital mission to provide essential energy for our customers. At the same time, the company works hard to keep people informed of scheduled activities in their communities, and to ask for suggestions and opinions as those activities are being planned.

### **For additional information or questions, please contact:**

Dom Amor  
Local Government and Community Relations Manager  
Puget Sound Energy  
425-424-6795  
[dom.amor@pse.com](mailto:dom.amor@pse.com)

Heather Brickey  
Project Manager  
Puget Sound Energy  
425-462-2848  
[heather.brickey@pse.com](mailto:heather.brickey@pse.com)