PSE electrical system
Puget Sound Energy (PSE) serves customers across western Washington. We generate electricity from a variety of sources, which includes hydropower, coal, natural gas and wind facilities, and move it through an electrical system to serve our individual customers (see Figure 1).

Demand for power is growing – our customers use more electronics and there are more and larger homes and businesses in the communities we serve. As demand grows, we are reaching the capacity limits for portions of our electrical system.

We are using a number of tools to help meet these challenges, such as building new infrastructure, expanding or rebuilding existing infrastructure and integrating non-traditional solutions, such as energy efficiency programs, alternative energy and energy storage.

Northern Redmond-Kirkland area issues and solutions
We are working to improve the electrical system in the northern Redmond-Kirkland area. The electrical system, known as the Moorlands system, is comprised of the Sammamish, Moorlands and Cottage Brook substations, and 12 other local substations, which are all served by three local 115 kV transmission lines (refer to Figure 2).

The Moorlands system serves over 57,000 residential and commercial meters and faces two problems – capacity (being able to supply enough power) and reliability (ensuring we can...
provide power even when parts of the system are out of service for any reason). Currently, our local transmission lines are approaching their capacity limits. Under certain conditions, the existing system can be overloaded, resulting in loss of service to our customers. We need to increase capacity to accommodate existing and growing demand for power in order to continue to provide reliable service to our customers. As such, we are focusing on three Moorlands system projects which will simultaneously increase system capacity and improve service reliability.

The Moorlands system projects include:

- **Cottage Brook-Moorlands Project** – We will rebuild the existing transmission line between the Cottage Brook and Moorlands substation to replace small gauge wire and aging poles with higher-capacity wire and new insulators and poles. This project is in the planning and permitting stage, and we anticipate construction will begin in 2012 and the project will be in-service by 2013.

- **Moorlands-Vitulli Project** – Similar to the Cottage Brook-Moorlands Project, we will rebuild the existing transmission line between the Moorlands and Vitulli substations. We anticipate working on planning and permitting in 2012-2013, beginning construction in 2013-2014, and having the project in-service by 2014.

- **Sammamish-Juanita-Moorlands Projects** – The existing Moorlands system serves 12 local substations and the load is higher than existing capacity. We plan on increasing capacity and improving reliability by building a new transmission line between the Sammamish, Juanita and Moorlands substations in two phases. Phase 1 is our current project - the Sammamish-Juanita 115 kV transmission line. Phase 2, likely years in the future, is the Juanita-Moorlands 115 kV transmission line.

**Sammamish-Juanita 115 kV Transmission Line Project**

By building the new Sammamish-Juanita 115 kV transmission line we can move two substations off of the Moorlands system thereby increasing available capacity within the system and improve system reliability by adding an additional transmission pathway to the Moorlands system.

This project has been under consideration for a while and in the past we have asked for public feedback on some initial route options. We have decided to take a step back, and reconsider our options by using a transmission line siting model to develop a new set of route alternatives. The model incorporates community input along with many other factors, and will produce route alternatives based on all these factors.

![Figure 3. Project study area](image)
Public involvement process
Our community involvement plan for the project has four major facets – a stakeholder advisory group, public meetings, local jurisdiction outreach, and landowner outreach.

We have convened a stakeholder advisory group to help us develop a preferred route that reflects community input. Over the next few months, the advisory group will be asked to give input into the model that produces route options, provide feedback on route options, review community input on route options, and work with PSE to select a preferred route.

As the stakeholder advisory group progresses, we will share the resulting potential route options at a community meeting later this year and a preferred alternative in February 2012. In addition, we will continue to keep jurisdictions and community groups up to date about the project, and as we narrow down alternatives we will be talking with any potentially affected property owners.

We are committed to working with the community to better understand the issues to consider as we select the route alignment that will meet the needs of PSE’s customers, the local community and PSE.

Project schedule

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<thead>
<tr>
<th>2011</th>
<th>2012</th>
<th>2013</th>
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<td>Summer</td>
<td>Fall</td>
<td>Winter</td>
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- Stakeholder advisory group meetings
- Community meetings
- Routing analysis and decision
- Design and permitting
- Construction
- Completion

Learn more
For more information about the project:

- Email [info@sammjuan115.com](mailto:info@sammjuan115.com).
- Call Barry Lombard, PSE Project Manager, at 425-456-2230.