

Frequently Asked Questions

June 2012

Project Need

Why is this project important to Redmond-Kirkland residents and businesses?

Demand for power is growing. The northern Redmond-Kirkland area electric system – referred to as the Moorlands electric system – serves a population of nearly 150,000 residential, commercial and industrial customers. The Moorlands system faces two challenges – capacity (the ability to supply enough power) and reliability (ensuring power is available even when parts of the system are out of service).

The Moorlands system transmission lines currently serve 12 local substations and the system is approaching its capacity limits. This means under certain conditions these transmission lines can overload, resulting in power outages to customers.

To increase capacity and improve service reliability to customers, a new Sammamish-Juanita 115 kilovolt (kV) transmission line will be installed and the Moorlands system will be reconfigured to transfer the electric load of two existing substations to another transmission system that has more capacity; thereby freeing up capacity on the Moorlands system. The new line will improve system reliability by adding an additional transmission pathway to the Moorlands system.

Siting the Project

How did PSE and the advisory group develop the three route alternatives?

PSE and the advisory group used a computer routing model to identify routes for discussion. The computer model balances avoidance areas, such as residential areas, parks and critical environmental areas, while taking advantage of opportunity areas, such as commercial and industrial areas and public rights of ways.

In January of this year, PSE met with the advisory group to use the siting model and incorporate the community's feedback to begin narrowing the route options down. The advisory group narrowed the field from 30 route outputs to three route alternatives. The advisory group asked PSE to review the feasibility of the three alternatives and make minor modifications as necessary.

PSE spent a few months reviewing constructability and feasibility of each route alternative by identifying possible regulatory issues, understanding the existing conditions, and looking for ways to reduce overall project effects. The results of the study included modifications to the route alternatives, which were shared with the advisory group in May.

PSE would like your feedback on the route alternatives. To review the three route alternatives and fill out an online questionnaire, please visit the project webpage at PSE.com/SammJuan115.

When will PSE identify the final route?

Following the June 2012 community meetings, the advisory group will reconvene to incorporate public feedback and help identify a preferred route recommendation. PSE expects to host another community meeting later in the summer to announce the route and gather feedback on the preferred route.

PSE anticipates making the final routing decision late this summer, allowing the project to move into the design and permitting phase. Construction is planned to begin in late 2013 with project completion expected in 2014.

Public Involvement

Why did PSE convene an advisory group to help site the transmission line? Who are the members?

PSE is 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. In an urban area with multiple jurisdictions, there's no easy answer to siting a transmission line. It is important that community and business leaders are involved in the process and an advisory group is one way to do so.

A diverse advisory group, comprised of neighborhood, business and governmental representatives from Redmond and Kirkland, is collaborating with PSE to develop route alternatives and help us better understand community concerns.

How can I get involved in the project?

There are several ways to provide input on the project. We encourage you to:

- Participate in community meetings to review the project's progress.
- Submit comments and/or questions about the project by email to info@sammjuan115.com.
- Complete the route alternatives questionnaire on the project webpage.
- Attend and observe the advisory group meetings and provide input to the advisory group and PSE.
- Visit PSE.com/SammJuan115 for project updates, advisory group meeting information and more.

Other Alternatives

Why doesn't PSE use its own utility corridor which parallels 132nd Avenue Northeast?

PSE's north-south utility corridor east of 132nd Avenue Northeast was considered for the project; however, there are some challenges to using it. PSE's easements (i.e., negotiated agreements) for this corridor only allow for two transmission lines, and the corridor already contains the two permitted lines. While PSE can rebuild the existing lines and/or increase the voltage, PSE cannot add a third transmission line within the existing easements.

To add a third line to the existing corridor, PSE would have to expand the corridor width by at least 50 feet. Looking at this on a map demonstrates that such a corridor expansion would result in impacts to homes, businesses, critical areas and the Olympic Pipeline. Therefore, this north-south corridor is not a viable routing option at this time.

Could PSE share Seattle City Light's existing corridor?

PSE has considered this option. There does not appear to be room for an additional transmission line. Additionally, Seattle City Light would have to determine PSE's line is compatible with their future plans for the corridor. Utilities typically acquire and preserve corridors for future use; therefore, it is unlikely PSE use of this corridor would be acceptable to Seattle City Light.

Why doesn't PSE bury the transmission line?

When it comes to considering installation of underground transmission lines, PSE must weigh the costs, benefits and feasibility of all options. While underground lines are mostly out of sight, have lower vegetation management costs, and typically reduce the frequency of outages, overhead lines are much less expensive to construct and maintain, are much quicker to repair, and are typically less disruptive to the environment.

Depending upon the location, undergrounding transmission lines can require extensive tree removal and/or damage to vegetation root structures, more significant than tree trimming. Additionally, underground lines typically cost 10-times what overhead lines cost to construct, operate and maintain.

For these reasons, PSE favors overhead transmission lines, except where such lines are impractical (e.g., an underwater cable that supplies electricity from a mainland to an island). For more information about underground transmission lines, review PSE's underground transmission line fact sheet at PSE.com/inyourcommunity/PSEConstructionProjects/Documents/UndergroundingFactSheet.pdf.

Design

How will PSE acquire right of way easements?

PSE prefers to site projects in public rights of way or existing utility corridors wherever possible. PSE may need to acquire property or access to and use of private property via easements. When use of private property is required, PSE purchases easements and compensates land owners with the fair market value of the rights acquired.

What will the poles look like?

The type of pole to be used for the project has not been determined. Generally a 115 kV transmission pole averages 65 feet to 75 feet in height depending on topography and distance between poles, which typically ranges from 350 feet to 400 feet.

PSE anticipates using some combination of wood or steel poles. Steel lattice towers will not be used for this project. Figure 1 shows an example 115 kV pole design. To view other examples poles, visit PSE.com/SammJuan115.

How tall can trees grow under 115 kV transmission lines?

Mature tree and vegetation height limits under 115 kV transmission lines generally range from 15 feet to 25 feet depending on the types of poles used. PSE is committed to working with landowners to provide assistance with vegetation management.



Figure 1. Example 115 kV pole design

Other

Why are there two options for Route Alternative 3?

Route Alternative 3 has environmental and building setback restriction issues. The route shown behind the commercial buildings threads the needle between Transfers of Development Rights (TDR) and Natural Growth Protection Easements (NGPE) both of which have construction restrictions.

Transfers of Development Rights (TDR) are areas set aside in easements or tracks to preserve environmentally-sensitive areas, and the property's development rights are permanently transferred to other properties more suitable for development. NGPEs are areas set aside in perpetuity to protect the underlying vegetation and critical areas. Unlike TDRs, development rights within NPGEs are not transferred off of the property, but are clustered elsewhere on the site.

PSE decided to develop a fallback route along Willows Road, which goes through the City of Redmond's designated view corridor, in case unanticipated restrictions are encountered or we are unable to obtain easements on private property. The City's viewshed regulations do not prohibit transmission line construction; however, PSE is trying to be sensitive to Redmond's request to not construct a transmission line within the view corridor. That's why it is shown as a fallback route.

Will the new transmission line cause radio and television interference?

In general, modern overhead transmission lines do not interfere with normal radio or TV reception. It is more common for distribution lines to be a source of radio frequency interference, and if interference is identified then the source can be located and repaired.

Can the electromagnetic fields from the new transmission line affect my health?

All of us depend on electricity to meet basic needs such as heating, cooling and lighting of our homes. Wherever we use electricity, power frequency electric and/or magnetic fields (EMF) are present.

Over the past 30 years, there have been numerous scientific studies conducted to determine if power frequency EMF has any effect on human health. PSE stays up to date on this large body of research and relies on the findings of reputable international and national scientific and public health organizations that have reviewed the research on EMF. To date, no studies have established a cause-and-effect relationship between EMF and any adverse health effects in humans or animals. As a result of these findings, neither the U.S. government nor the state of Washington has established standards for public exposure to power frequency EMF.

At PSE, safety is always our top priority and we are committed to keeping our customers informed. To schedule an appointment to measure EMF in your home or to talk with an EMF expert, please contact PSE's Environmental Services Department at 425-456-2522.

For more details about EMF studies, exposure limits and PSE's approach to EMF, visit PSE.com/safety/ElectricSafety/Pages/Electromagnetic-Fields.aspx.

Will the new transmission line make a lot of noise?

In general, 115 kV transmission lines do not produce noise like some higher voltage lines may. Over the years, transmission line construction improvements have helped minimize the likelihood of audible noises.

For More Information

- Visit: PSE.com/SammJuan115
- Email: info@sammjuan115.com
- Contact: Barry Lombard, Project Manager, at (425) 456-2230