



energize**EASTSIDE**

construction overview

June 2018

Through the Energize Eastside project, Puget Sound Energy (PSE) will build a new substation, upgrade existing transmission lines from Redmond to Renton, and continue aggressive conservation efforts to keep Eastside lights on and foster economic development for years to come.

We need to build Energize Eastside in two construction phases to keep the backbone of the existing transmission system online and serving customers. We'll begin construction of Energize Eastside once we have our permits. We anticipate constructing the project in 2019.

Construction activities for transmission lines typically include:

- Pre-construction surveying
- Site preparation and access
- Construction of the new poles and removal of old poles
- Stringing the conductors (wires)
- Demobilization, clean-up and restoration

Working with property owners

As we approach construction, we'll meet with affected property owners to discuss our construction plans. We will work with property owners to minimize impacts during construction as much as practicable.

Pre-construction surveying

PSE began collecting field information in early 2015 to inform the current environmental review process, as well as project design and future permit applications. The fieldwork conducted included a variety of surveys completed by PSE crews and industry experts investigating on-the-ground characteristics of a particular location.

Identifying access and pole locations

Crews routinely access the corridor today for inspections, maintenance and other needs. Where possible, construction crews will generally use the same access paths used today. In some situations, crews may need to establish new access



points. If any new access is necessary, PSE will meet directly with affected property owners to discuss changes and use best construction methods to minimize impacts.

We won't know the exact pole locations until the permitting process is complete and we begin construction, but the new poles will typically be in the same or similar locations as existing poles.

PSE considers a variety of factors when siting poles, including:

- **Safety and technical considerations**, including electrical clearances, varying terrain, structural loading, and code requirements
- **Critical areas**, like wetlands or streams
- **Other utility uses in the corridor**
- **Property lines and easement locations**
- **Property owner considerations**

Site preparation

Prior to construction, crews will stake the right of way and critical areas, construct access routes to the pole sites, and trim or clear vegetation on the right of way. Vegetation within a utility corridor must be compatible with federal requirements to ensure safe, reliable power.



Where necessary, crews will construct temporary access routes to pole sites.

Construction

During construction, work on individual properties will take place in phases. The construction team may visit a property for up to a few days at a time over several weeks or months before construction is complete.

Construction will entail installation of new, longer-lasting equipment and fewer poles. The hole for each pole will be excavated using a vactor truck or an auger. Once the hole is excavated, a crane will set the pole in place. Depending on the topography and location, other methods may be required to set the pole.



Typically, each new pole will be installed directly into the ground or placed on a concrete foundation, such as a drilled pier foundation or a self-supporting foundation. This will be determined by the structural loading, soil strength, and accessibility of each pole site. Installing drilled pier foundations will involve placing a reinforced-steel cage into the excavated hole and covering the cage with concrete.

The concrete will cure for approximately 28 days before the pole is ready to be installed. During construction of the new poles, the existing poles will likely remain in place, depending on the construction plan.

Installing new lines

"Stringing" is the term used for installing new wires along a transmission line. For Energize Eastside, we may transfer the existing wires to the new poles and use them to pull the new wires into place.

When installing the new wire using this method, specialized vehicles are used to tension the wire. Pulling and tensioning sites may be needed every couple of miles along the corridor during construction and would typically be in the existing corridor. Once the new lines are set, the existing wooden poles will be removed.

Demobilization, clean-up and restoration

Once construction is complete in an area, crews will remove equipment and materials from the construction sites and staging areas and begin restoring and replanting the corridor as agreed to with the property owner or per permit conditions.

PSE will work to restore property affected by construction to its previous or an improved state, as practical. When restoration is not possible, PSE will work with property owners to determine other options.

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