PUGET SOUND ENERGY

# energizeEASTSIDE

frequently asked questions

## What is Energize Eastside?

The Energize Eastside project will build a new electric substation and higher capacity transmission lines to serve homes and businesses on the Eastside. This effort will upgrade our existing transmission system and provide dependable power for all Eastside communities for many years to come.

The new substation will provide additional capacity to ensure the local electric system can accommodate our customers' growing energy usage, while the transmission lines will ensure we can deliver that additional capacity to the Eastside communities that need it the most. The transmission lines will extend from an existing substation in Redmond to one in Renton.

### energizeEASTSIDE

- Will construct a new electric substation and approximately 18 miles of transmission lines from Redmond to Renton
- Will ensure the Eastside's power system can continue to support the area's dramatic growth

**What's new**

- Community Advisory Group makes final route recommendation
- PSE is moving forward with additional analysis and fieldwork of the Lakeside substation site and the two transmission line routes recommended by the Community Advisory Group
- Environmental review occurring now; construction expected to begin in 2017

## Why do we need it?

The Eastside is growing faster than any other region in Washington. You can see it everywhere – from Renton to Redmond, cranes are up and traffic congestion is increasing. World-class businesses are moving in and job growth is on the upswing.

While this growth is good news for our region, it is straining our existing electric system. Growth studies project that demand for reliable power will exceed capacity as early as winter 2017/2018. This doesn't mean the lights will go out, but without substantial electrical infrastructure upgrades and aggressive conservation efforts, the Eastside's power system will lose redundancy, increasing the possibility of outages for as many as 60,000 customers.

## Can we conserve our way out of needing this project?

Over the last 30 years, Puget Sound Energy (PSE) has taken significant steps to get the most out of the electric system. In fact, through upgraded lighting, appliances and equipment, increased weatherization, and energy-efficient building technologies, PSE customers helped us save enough electricity to power 30,000 homes in 2012. Despite these aggressive conservation efforts, studies show demand is dramatically outpacing supply.

Conservation alone is not enough to keep up with our region's growth.

## What is the best solution to meet the Eastside's electricity needs?

PSE's planners and engineers analyzed a variety of approaches to address the Eastside's growing energy needs, including reducing demand through conservation, increasing the capacity of our existing transmission lines, generating energy locally, and building new infrastructure. After a comprehensive review, PSE and independent experts determined that a combination of continued conservation and infrastructure upgrades – a new substation and higher capacity transmission lines – is the best way to reliably meet the Eastside's growing energy needs.

## How did PSE develop the route options for the new transmission lines?

PSE's engineers and third-party experts identified potential substation sites and transmission line routes that, if selected, would meet the Eastside's energy needs. Many of the transmission line routes have existing 115 kV transmission lines along them. We considered several factors to develop the potential route options, including geography and land use.

PSE contracted with an industry leader in computer-based route evaluation to collect and analyze geographic information system (GIS) data for factors like topography and environmentally sensitive areas. We categorized the GIS features into opportunities and constraints, and then used a computer model to identify the best balance of these factors. The model produced 16 route segments, which our engineers verified to ensure they were constructible. These segments comprise 18 route options that were evaluated by the Community Advisory Group.

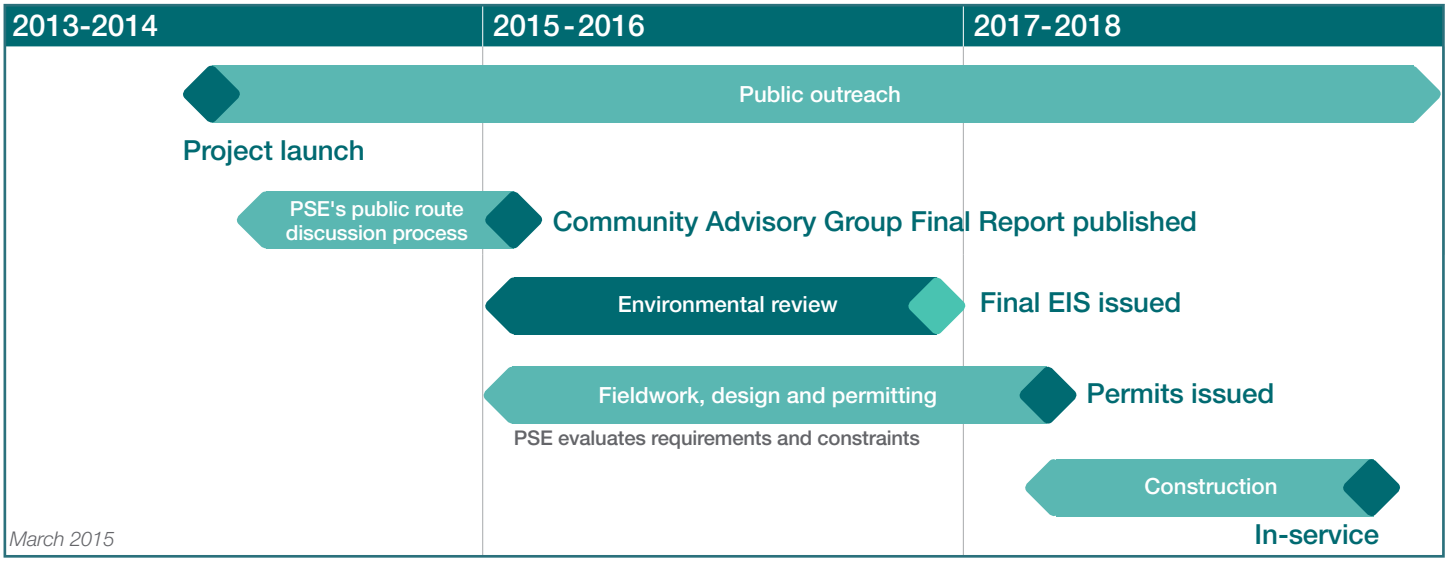
## How has the public been involved?

In order to provide a forum that would generate robust input from diverse community stakeholders, PSE convened a Community Advisory Group comprised of 24 representatives from various interests across the Eastside. The Community Advisory Group's goals were to help identify and assess community values in the context of evaluating which route the new transmission lines should follow, and to develop a route recommendation for PSE's consideration.

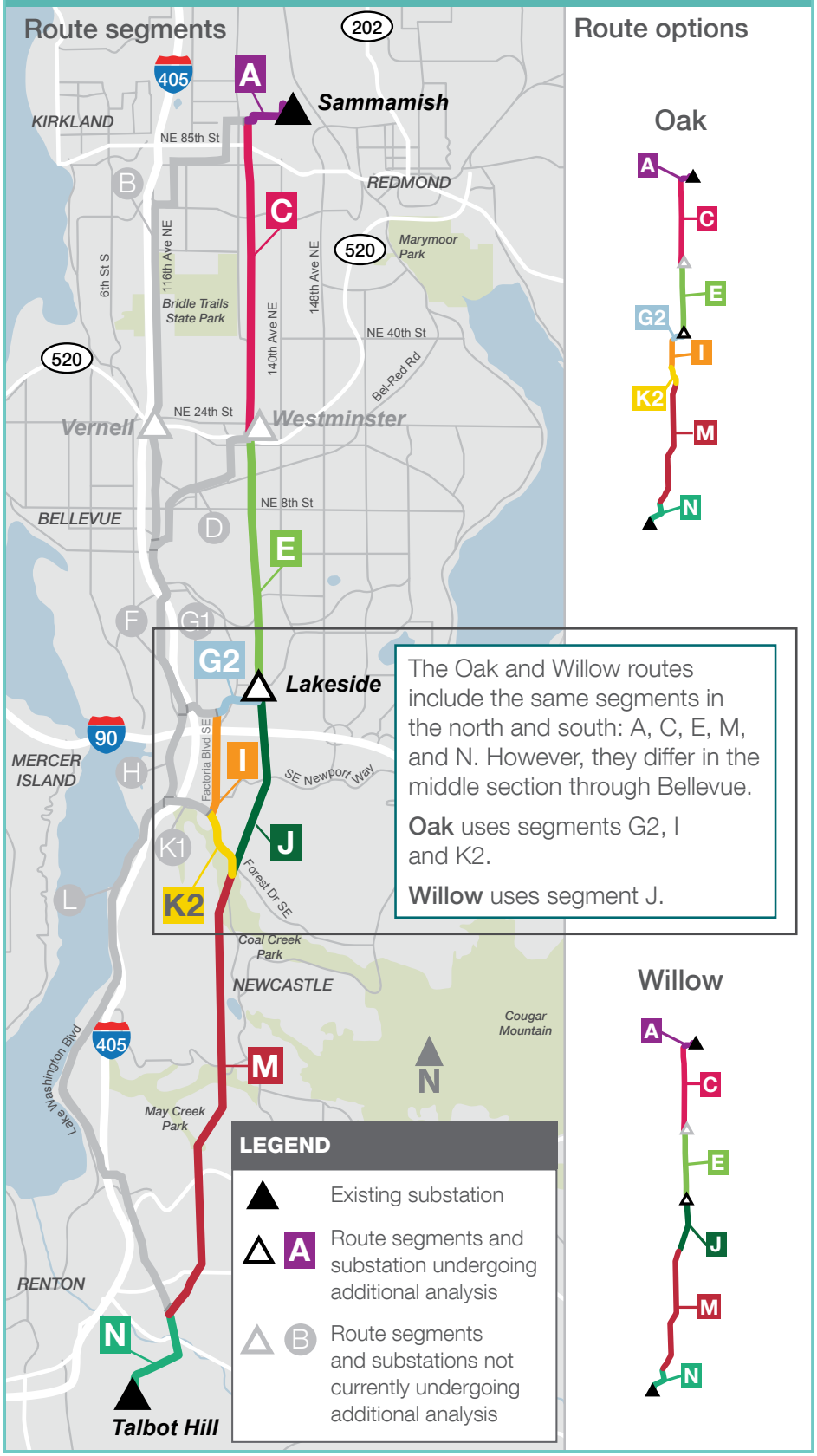
The advisory group spent a year learning about the Eastside's electrical system, participating in meetings and workshops, and evaluating the 18 route options identified by PSE. The advisory group completed their work on Dec. 10, 2014 and selected routes Oak and Willow as their final recommendation for PSE's consideration.

The Community Advisory Group process was supplemented by broad and ongoing community outreach, including public meetings, workshops, briefings and correspondence about the project. At outreach events, the community learned about outcomes of the advisory group process to date and submitted feedback that the advisory group considered in their discussions and route evaluations.

## Project schedule



## Route segments and options currently under evaluation for Energize Eastside – Spring 2015




## What routes are being considered?

Following this year-long public route discussion, PSE is moving forward with additional analysis and fieldwork of the Lakeside substation site and Oak and Willow, the two transmission line routes recommended by the Community Advisory Group (see map on page 3 for reference). Both the Oak and Willow routes include the same segments in the north and south: A, C, E, M, and N. However, they differ in the middle section through Bellevue: Oak uses segments G2, I and K2, while Willow includes segment J.

## What are the next steps for the project in 2015?

### Environmental review

The Energize Eastside project is now moving into the environmental review stage. The environmental review process will be led by the City of Bellevue in cooperation with Kirkland, Newcastle, Redmond, and Renton, and will include preparation of a Washington State Environmental Policy Act Environmental Impact Statement (EIS). The EIS provides an unbiased discussion of significant environmental impacts, reasonable alternatives, and mitigation measures that would avoid or minimize adverse impacts.

The EIS process will include opportunities for public comment. Through the EIS process, other alternative solutions may be identified and reviewed. For more information on the EIS and opportunities for public comment, visit **EnergizeEastsideEIS.org**.

### Fieldwork

PSE is also collecting field information to inform the environmental review process, project design and future permit applications. In order to gather additional information about the routes, PSE and our contractors



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will conduct fieldwork activities, including a pipeline co-location survey, wetland delineations, land surveys, tree inventories, historic and cultural resources surveys, and geotechnical investigations.

We are committed to keeping property owners, tenants and neighbors informed when our crews will be working in their area, and we will give affected property owners advance notice.

### Design

Stay tuned for more information about how you can provide feedback on project design, which may include pole height, finish and other design considerations. In order to develop design options to share with the community, we need to gather and review field data and identify points of flexibility, which the project team will be working on in 2015.

## Can PSE put the lines underground?

PSE can build underground transmission lines; however, overhead transmission lines are PSE's first option for their combination of reliability and affordability – both of which are important to our customers. While undergrounding is an available option, the biggest challenge to underground transmission lines is cost.

The construction costs for an overhead transmission line are about $3 million to $4 million per mile, versus $20 million to $28 million per mile to construct the line underground.

When a new line is constructed overhead, project costs are distributed evenly between PSE's 1.1 million customers and paid for over time. If a transmission line were to be constructed underground, PSE can't justify asking customers across its entire service territory to pay the significant cost increases.

That's why, per state-approved tariff rules, the requesting party, often the local jurisdiction, must ultimately decide whether to make this investment. The requesting party would then be responsible for paying the difference between overhead and underground costs.

In addition to cost, there are other factors to consider such as environmental and neighborhood impacts.

- Underground transmission lines require an easement 30 feet to 50 feet wide, which, unlike with overhead lines, must be completely free of trees.
- Underground transmission lines require large (20 feet x 30 feet) access vaults every quarter mile which can be very disruptive to adjacent neighborhoods and the environment.
- Repairs can take much longer and be more difficult with underground lines. While overhead lines can be repaired within hours or days, underground transmission line repairs can take days or even weeks.

## How much will the project cost?

We don't yet know the total cost of the project, but estimates range from $150 million to $300 million. We expect the average monthly bill increase for residential customers to be about $1 to $2 per month. Once we determine the final design and alignment, we will have a better idea of the total cost.

## What about electric and magnetic fields (EMF)?

Electric and magnetic fields, or EMF, are found wherever there is electricity – in household wiring, electrical appliances, computers or power lines. Over the past 45 years, there have been many scientific studies conducted to determine if EMF has any effect on human health. To date, the scientific community has concluded that current evidence does not support the existence of any health consequences from exposure to EMF.

At PSE, safety is always our top priority and we are committed to keeping our customers informed. We understand that local residents may still wish to learn more. PSE has hired Drew Thatcher – an independent, board-certified health physicist – to address more specific EMF questions. If you or your neighbors would like to ask questions of Drew, the Energize Eastside team would be happy to connect you with him for more information.

## Staying involved

For more information on the EIS and opportunities for public comment, visit **EnergizeEastsideEIS.org**.

For background information on the Energize Eastside project and to view route options on an interactive map, please visit the project website at **pse.com/energizeeastside**.

**Thank you for your interest in Energize Eastside.**

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