



Phase 1 Draft EIS Scoping Report

July 30, 2015

DATE: 07/30/2015

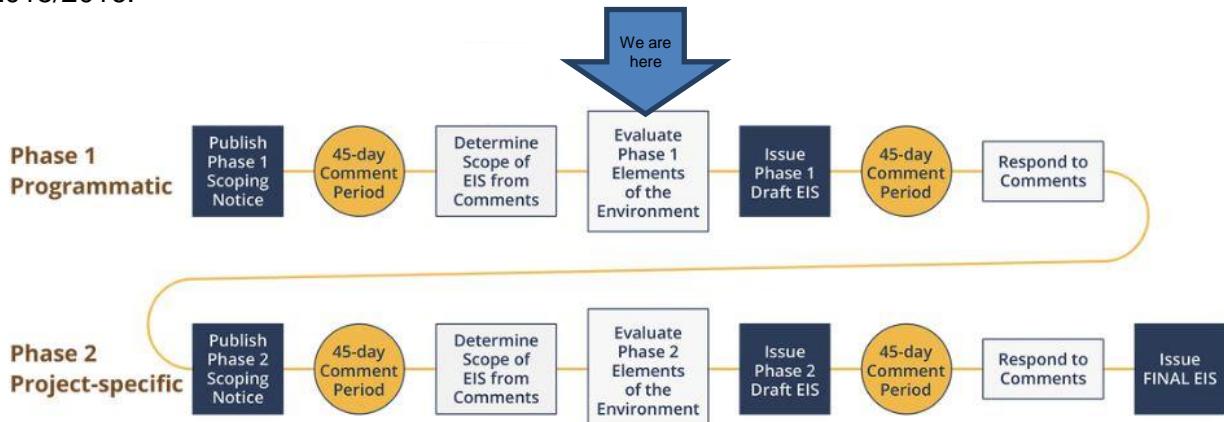
TO: Energize Eastside EIS Process Participants and Interested Parties

FROM: Energize Eastside EIS Project Team & Partner Cities

SUBJECT: July 30, 2015 Issuance of Energize Eastside Environmental Impact Statement
Phase I DEIS Scoping Summary and Final Alternatives

Summary

The Energize Eastside Phase I DEIS Scoping Summary and Final Alternatives report is attached for your reference (see www.EnergizeEastsideEIS.org). This Scoping Summary and Final Alternatives report has been reviewed and approved by each of the EIS partner cities. With the completion of the scoping process for Phase I, the EIS analysis is now underway. The EIS project team, consisting of the project consultants and partner cities, are analyzing potential project impacts in accordance with requirements of the Washington State Environmental Policy Act. A Phase I Draft Environmental Impact Statement (DEIS) will be issued in the winter of 2015/2016.



Project Objectives

As part of the scoping process, the EIS team collaborated with PSE to review and clarify the project objectives. Developing a clear statement and understanding of PSE's objectives, constraints, and technical requirements assisted the EIS team in the review of alternatives proposed during the scoping process. The Project Objectives statement is included as Attachment 1 to the Energize Eastside Phase I DEIS Scoping Summary and Final Alternatives report.

Final Alternatives

Through the scoping process, four alternatives were identified for evaluation in Phase I of the EIS.

- 1) Alternative 1 - New Transformer and 230 kV Transmission Line
- 2) Alternative 2 - Demand Side Reduction/Non-wire Technologies
- 3) Alternative 3 - New Transformers - Existing Substations
- 4) No Action Alternative

Many alternatives were suggested by interested parties for consideration during scoping. Only alternatives that met the parameters of the Project Objectives were retained for analysis with Phase I of the EIS. See the Energize Eastside Environmental Impact Statement Phase I DEIS Scoping Summary and Final Alternatives report for complete details.

Background

PSE has represented that there is a need to construct a new 230 kV bulk electrical transmission corridor and associated electrical substations on the eastside of Lake Washington to supply future electrical capacity and improve eastside electrical grid reliability. Preliminary discussion between potentially affected jurisdictions and PSE indicated that the proposal is likely to have probable significant adverse environmental impacts, and issuance of a SEPA Threshold Determination of Significance was deemed appropriate as outlined in Chapter 197-11-360 WAC.

Following PSE's identification of this essential electrical infrastructure link, and to address the potential for significant environmental impacts, the utility submitted application for processing of an Environmental Impact Statement (EIS) with the City of Bellevue, who assumed the role of lead agency. Subsequent to this initiating action, several steps have been taken to begin processing the required EIS.

- An inter-jurisdictional agreement was formed between the Cities of Bellevue, Redmond, Kirkland, Newcastle, and Renton to govern processing of the EIS.
- Environmental Science Associates (ESA) was brought under contract by the City of Bellevue to support the development of the EIS.
- Background information provided by PSE was analyzed by the partner cities and the consultants.
- An independent project website was created (www.EnergizeEastsideEIS.org).
- A SEPA Threshold Determination of Significance (DS) was issued.
- Notification of commencement of an expanded 45 day public EIS scoping period was issued.
- Notification of five scheduled public scoping meetings was issued.
- Project road signs were installed.
- Five geographically balanced scoping meetings were held.
- Additional independent public stakeholder meetings were held.
- Two public EIS process training meetings were held.
- The 45 day public EIS scoping period was closed.
- Comments and information collected during the scoping period was sorted, analyzed, and summarized in a scoping summary document.
- The project objectives were analyzed and refined through cooperation with PSE.
- The partner cities, supported by the EIS consultants, met to discuss the scope of Phase I of the EIS.
- A final Energize Eastside EIS Scoping Summary and Final Alternatives report was prepared and published.

Next Step

With the Phase I EIS analysis underway, the next visual step in the EIS process will be issuance of the Phase I Draft EIS (DEIS) document. This step includes publication of the DEIS document with formal public notice and hosting of five public meetings (geographically balanced throughout the project area). Publication of the Energize Eastside Phase I DEIS is anticipated in the winter of 2015/2016.

Table of Contents

Eastside Cities Signature Sheets

Exhibit 1: Summary of Phase 1 EIS Public Scoping Meetings

Appendix I Notification Materials

Appendix II Meeting Agenda and Exhibits

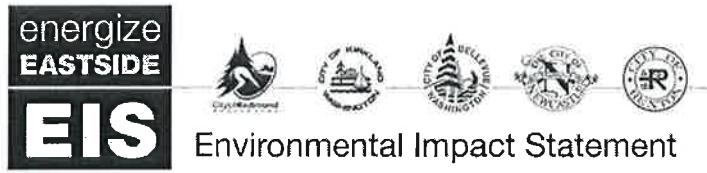
Appendix III Presentation Slideshow

Exhibit 2: Phase I Draft EIS Scoping Summary and Final Alternatives

Attachment 1 PSE's Stated Objectives for Energize Eastside



Eastside Cities Signature Sheets



DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE
BELLEVUE, WA 98009-9012

Environmental Impact Statement

ENERGIZE EASTSIDE ENVIRONMENTAL IMPACT STATEMENT PHASE I DEIS SCOPING SUMMARY AND FINAL ALTERNATIVES

PROJECT NAME: Energize Eastside

PROPOONENT: Jens Nedrud, Puget Sound Energy

LOCATION OF PROPOSAL: Portions of Bellevue, Kirkland, Newcastle, Redmond, Renton, and unincorporated King County between the Sammamish Substation at 9221 Willow Road NE, Redmond, WA 98052, and the Talbot Substation at 2400 South Puget Drive, Renton, WA 98055.

CITY OF BELLEVUE FILE NUMBER: 14-139122-LE **PROJECT MANAGER:** David Pyle

SCOPE OF EIS ANALYSIS: Following closure of the 45 day Energize Eastside Environmental Impact Statement Phase I Scoping Period, the Environmental Coordinator of the City of Bellevue, serving as lead agency, has determined the scope of the Phase I environmental analysis. A summary of the Phase I EIS scoping process, including dates of public notice and a listing of public meetings, is included as Exhibit 1. The Energize Eastside EIS Phase I DEIS Scoping Summary and Final Alternatives report is included as Exhibit 2. Specific project objectives are outlined in Attachment 1 to Exhibit 2.

CO-LEAD COUNTERPARTS: The Energize Eastside EIS program is an inter-jurisdictional effort. The scoping process, including development of the Phase I DEIS final alternatives, has been supported by the co-lead agencies. Issuance of this Phase I DEIS Scoping Summary and Final Alternatives is in following mutual agreement by the program counterpart agencies in accordance with the program inter-jurisdictional agreement.

DRAFTING OF PHASE I DEIS: The Energize Eastside EIS Phase I analysis is now underway. The EIS project team, consisting of the project consultants and partner cities, is analyzing potential project impacts in accordance with requirements of the Washington State Environmental Policy Act. A Phase I Draft Environmental Impact Statement (DEIS) will be issued in the winter of 2015/2016.

PROJECT INFORMATION: During the Phase I DEIS analysis and drafting period, project information will remain available on the Energize Eastside EIS project website (www.EnergizeEastsideEIS.org), by email at info@EnergizeEastsideEIS.org, or by contacting the EIS Program Manager:

David Pyle, Senior Land Use Planner/Energize Eastside EIS Program Manager
City of Bellevue Development Services Department
450 110th Avenue NE
Bellevue, WA 98004
(425)452-2973

Carol V Helland
Carol V. Helland
City of Bellevue Environmental Coordinator

7-30-15
Date



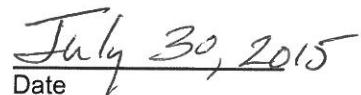
ENERGIZE EASTSIDE ENVIRONMENTAL IMPACT STATEMENT PHASE I DEIS SCOPING SUMMARY AND FINAL ALTERNATIVES

CITY OF KIRKLAND

The City of Kirkland, as participant with the role of SEPA co-lead in the Energize Eastside EIS program in collaboration with the cities of Renton, Redmond, Newcastle, and Bellevue has engaged in the Energize Eastside EIS scoping process (summarized in Exhibit 1) and development of the Phase I DEIS Scoping Summary and Final Alternatives (Exhibit 2). Through agreement with the co-lead partner cities and in support of the City of Bellevue Environmental Coordinator (SEPA Official) the City of Kirkland concurs with the findings of the Energize Eastside Phase I DEIS Scoping Summary and Final Alternatives attached hereto as Exhibit 2.

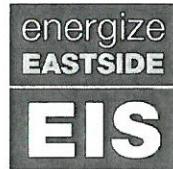


Eric Shields
Director of Planning and Community Development
City of Kirkland



July 30, 2015

Date



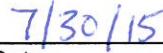
Environmental Impact Statement

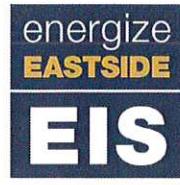
ENERGIZE EASTSIDE ENVIRONMENTAL IMPACT STATEMENT PHASE I DEIS SCOPING SUMMARY AND FINAL ALTERNATIVES

CITY OF NEWCASTLE

The City of Newcastle, as participant with the role of SEPA co-lead in the Energize Eastside EIS program in collaboration with the cities of Renton, Redmond, Kirkland, and Bellevue has engaged in the Energize Eastside EIS scoping process (summarized in Exhibit 1) and development of the Phase I DEIS Scoping Summary and Final Alternatives (Exhibit 2). Through agreement with the co-lead partner cities and in support of the City of Bellevue Environmental Coordinator (SEPA Official) the City of Newcastle concurs with the findings of the Energize Eastside Phase I DEIS Scoping Summary and Final Alternatives attached hereto as Exhibit 2.


for
Tim McHarg
Community Development Director
City of Newcastle


Date



City of Redmond CITY OF KIRKLAND, WASHINGTON CITY OF BELLEVUE, WASHINGTON THE CITY OF NEWCASTLE, WASHINGTON CITY OF RENTON

Environmental Impact Statement

ENERGIZE EASTSIDE ENVIRONMENTAL IMPACT STATEMENT PHASE I DEIS SCOPING SUMMARY AND FINAL ALTERNATIVES

CITY OF REDMOND

The City of Redmond, as participant with the role of SEPA co-lead in the Energize Eastside EIS program in collaboration with the cities of Renton, Kirkland, Newcastle, and Bellevue has engaged in the Energize Eastside EIS scoping process (summarized in Exhibit 1) and development of the Phase I DEIS Scoping Summary and Final Alternatives (Exhibit 2). Through agreement with the co-lead partner cities and in support of the City of Bellevue Environmental Coordinator (SEPA Official) the City of Redmond concurs with the findings of the Energize Eastside Phase I DEIS Scoping Summary and Final Alternatives attached hereto as Exhibit 2.

A handwritten signature in black ink.

Robert G. Odle, Planning Director
City of Redmond

7/30/15

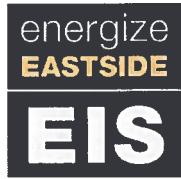
Date

A handwritten signature in blue ink.

Linda E. De Boldt, Public Works Director
City of Redmond

7/30/15

Date

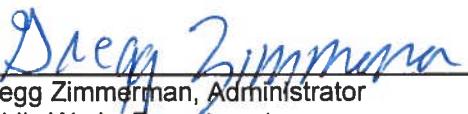


ENERGIZE EASTSIDE ENVIRONMENTAL IMPACT STATEMENT PHASE I DEIS SCOPING SUMMARY AND FINAL ALTERNATIVES

CITY OF RENTON

The City of Renton, as participant with the role of SEPA co-lead in the Energize Eastside EIS program in collaboration with the cities of Newcastle, Redmond, Kirkland, and Bellevue has engaged in the Energize Eastside EIS scoping process (summarized in Exhibit 1) and development of the Phase I DEIS Scoping Summary and Final Alternatives (Exhibit 2). Through agreement with the co-lead partner cities and in support of the City of Bellevue Environmental Coordinator (SEPA Official) the City of Renton concurs with the findings of the Energize Eastside Phase I DEIS Scoping Summary and Final Alternatives attached hereto as Exhibit 2.

CITY OF RENTON ENVIRONMENTAL REVIEW COMMITTEE SIGNATURES:



Gregg Zimmerman, Administrator
Public Works Department

7/30/15

Date



Terry Higashiyama, Administrator
Community Services Department

7/30/15

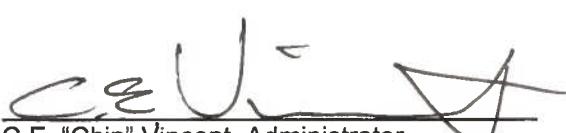
Date



Mark Peterson, Administrator
Fire & Emergency Services Department

7/30/15

Date



C.E. "Chip" Vincent, Administrator
Department of Community & Economic Development

7/30/15

Date



Exhibit 1: Summary of Phase 1 EIS Public Scoping Meetings



Environmental Impact Statement

Summary Phase 1 EIS Public Scoping Meetings

Bellevue City Hall • May 12, 2015 • 6:00 – 9:00 pm

Renton City Hall • May 14, 2015 • 6:00 – 8:00 pm

Kirkland City Hall • May 26, 2015 • 6:00 – 8:00 pm

Newcastle Elementary School • May 28, 2015 • 6:00 – 8:00 pm

North Bellevue Community Center (Redmond) • May 30, 2015 • 2:00 – 4:00 pm

Overview

The City of Bellevue hosted a series of five (5) Phase 1 scoping meetings for the Energize Eastside project proposed by Puget Sound Energy (PSE). The meetings were intentionally designed to be identical in structure, content and purpose. The common meeting materials are provided in appendices attached to this summary. Appendix I includes notification materials, Appendix II includes the meeting agenda and exhibits, and Appendix III includes the presentation slideshow.

The Phase 1 scoping period was intended to assist in identifying technically viable alternatives that address PSE's reported electrical transmission capacity deficiency at a programmatic level. Phase 2 of the EIS process will address project-level construction and operation level impacts of viable alternatives.

Scoping provides an opportunity for agencies, Tribes, and members of the public to comment on the scope of the Environmental Impact Statement (EIS), including alternatives to be considered, topics to be studied, possible adverse impacts and potential mitigation measures. Attendees were asked to tell the City of Bellevue SEPA Official Carol Helland what environmental impacts could occur from the programmatic alternatives at the hearing. A court reporter recorded verbatim testimony given during the public comment period of each meeting. Participants were also offered the opportunity to provide their comments by completing a paper comment form distributed at the meeting, by giving oral comments to the court reporter during the open house portion of each meeting and by providing feedback through e-mail or a web-based comment

SEPA Lead Agencies must meet the basic requirement of WAC 197-11-408 to provide public notice and conduct scoping for an EIS. Every Lead Agency adopts its own specific scoping procedures, consistent with this state requirement and including additional measures as desired. The City of Bellevue as the SEPA Lead Agency for the Energize Eastside project identified and met all of the legal scoping requirements for each of the partner jurisdictions (legal notice in Seattle Times and Renton Reporter, specific electronic postings such as Bellevue's Permit Bulletin, mailings to specific properties and parties of record, and posting notices or signs as required in Renton, Redmond, and Newcastle). Bellevue then engaged in expanded scoping under WAC 197-11-410 to enhance public and agency participation in identifying the EIS scope. Expanded scoping involved an extension of the public review and comment period to 45 days from the standard 21 and working with the partner jurisdictions to host five public meetings at different locations to talk about the project and accept comments, along with disseminating public notice of scoping and the scoping meetings more widely than required via electronic postings, mailings, signs, and paid advertisements in community papers.

form found at EnergizeEastsideEIS.org. To facilitate this last option, four internet-connected computers were available at each meeting for public use.

Each meeting began with a 45-minute open house. Exhibits provided an overview of the proposal and EIS process with schedule, general information about regional electrical infrastructure, a detailed explanation of the State Environmental Protection Act (SEPA) review process and descriptions of the programmatic alternatives to be evaluated in the EIS. Knowledgeable staff at each exhibit enabled participants to ask questions and discuss different aspects of the proposal and review process. PSE representatives staffed a table with exhibits and materials explaining PSE's stated need and proposed solution.

Just prior to the public comment period, a slideshow presentation provided attendees with a project overview, the purpose of scoping and a description of the alternatives under review. The exhibit materials and presentation were posted to the project website at 4:00 pm on May 12, two hours prior to the first public scoping meeting held at Bellevue City Hall.

The informational exhibits addressed the following topics, organized by station.

Station #1 Project Overview

- Welcome + Agenda
- What is the Energize Eastside EIS?
- Process/Schedule

Station #2 Electrical System 101

- Eastside electrical system
- Projected electrical transmission capacity deficiency

Station #3 What is SEPA review?

- What is an EIS?
- What is scoping?
- Guidelines for commenting

Station #4 What is Being Analyzed?

- What programmatic alternatives are proposed for analysis as part of the Phase 1 Draft EIS?
- What issues have been raised before scoping?
- What issues have been raised during scoping? (*made available at Kirkland, Newcastle, and North Bellevue meetings*)

Notification

The Official Scoping Notice and the announcement of the 45-day scoping period and the 5 public scoping meetings were distributed via project signs, legal notices, display ads, postal mail, handbills, email, social media and web sites as outlined below.

DATE	NOTIFICATION	DISTRIBUTION
April 20, 2015	Project signs announcing scoping meetings and comment period	Installed along 26 arterial roads in the cities of Bellevue, Newcastle and Renton
April 23, 2015	Legal notice	Placed in City of Bellevue's Weekly Permit Bulletin and the Seattle Times — newspaper of record for the cities of Bellevue, Kirkland, Newcastle and Redmond
April 23–24, 2015	Message about the legal notice	Sent via email and social media outlets of Principal Jurisdictions — the cities of Bellevue, Kirkland, Newcastle, Redmond and Renton
April 24, 2015	Legal notice	Placed in the Renton Reporter — newspaper of record for the City of Renton
April 27–28, 2015	Official scoping notice	Sent via email and postal mail to the official SEPA mailing lists of Principal Jurisdictions
April 30, 2015	Display advertisement announcing scoping meetings and comment period	Placed in the Seattle Times
April 30, 2015	Official scoping notice	Posted on EnergizeEastsideEIS.org and official web sites of Principal Jurisdictions
May 1, 2015	Display advertisement announcing scoping meetings and comment period	Placed in the Bellevue Reporter, Kirkland Reporter, Redmond Reporter and Renton Reporter
April 30, 2015	Handbill announcing scoping meetings and comment period	Posted at various public facilities in the cities of Bellevue, Kirkland, Newcastle, Redmond and Renton

Meeting Characteristics

People arrived at each meeting early, eager to testify or learn more about the proposal. Many of the participants spent considerable time viewing the open house exhibits and talking with staff; others spent the time talking amongst themselves and preparing to testify. Many people attended and testified at multiple meetings, with a few attending all five. A majority of attendees at the Bellevue and Newcastle meetings wore orange tee-shirts or ribbons at the request of CENSE, the Coalition of Eastside Neighborhoods for Sensible Energy. Another citizen-led organization, CSEE, Citizens for Sane Eastside Energy, was well represented at many of the meetings as well. Despite being held during a period of unseasonably sunny and warm spring weather, all meetings were well attended, some included children. Two horses stabled near the Bridle Trails State Park attended the Redmond meeting, waiting patiently outside while their owners testified.

Participation at each meeting was as follows:

Bellevue	120 sign-ins	~140 attendees
Renton	15 sign-ins	~20 attendees
Kirkland	34 sign-ins	~40 attendees
Newcastle	123 sign-ins	~140 attendees
Redmond	21 sign-ins	~25 attendees

Public Comment Period Highlights

Attendees signed-up to provide comments to a court reporter during public hearing. Individuals giving testimony were randomly selected. To ensure all who wanted were given the opportunity to speak, individuals were allocated 3 minutes each while those representing non-profit or community organizations were allocated 5 minutes each. In cases where individuals were not yet finished when their allotted time expired, all were encouraged to briefly conclude their comments. Some were allowed considerable time to do so and others spoke more than once at a given meeting. In the interest of conserving time to ensure all who wanted had a chance to speak, clapping was discouraged. To show support and appreciation to those giving testimony, participants raised and waved their hands instead. Follow-up questions were answered by the SEPA Official at the conclusion of the hearing. Formal and informal public comment offered throughout the open house and hearing at all five scoping meetings are summarized below.

(Please note that a scoping summary report with more detail about the comments submitted during the 45-day scoping comment period, including comments submitted by email, mail, and website, will be prepared and posted to the project website at www.EnergizeEastsideEIS.org. The report will be available in Summer 2015.)

Need for the Project

- Adequacy of the needs analysis conducted by PSE
- Potential for demand-side reductions to address the need
- Capacity solution far exceeds stated need of Eastside growth—seems scaled to address “cut-through load” between California and Canada
- Importance of reliable power acknowledged
- PSE’s motivation for building the project

Proposed Route Alignment Concerns & Questions

- Concerns about locations
 - in residential areas
 - near community and recreation facilities (i.e., schools, parks, trails)
 - along Olympic Pipeline corridor
 - across major earthquake fault line
 - along the lakefront
 - in areas considered for other public purposes (i.e., light rail)
- Potential to reuse existing utility infrastructure corridors
- Potential to use corridors further east
- Mitigation for negative impacts

Alternative Solutions Proposed

- Batteries
- Demand-side reductions (more energy conservation and efficiency measures)
- Distributed generation and other new technologies
- Underground lines
- Underwater lines
- Upgrades to existing system

Process Requests

- Transparent and equitable decision making that addresses community concerns
- Access to all un-redacted project data and documentation

- Third party evaluations of need assessment
- Need for review under National Environmental Policy Act

Environmental Concerns

- Loss of trees
- Loss of wildlife habitat
- Impact on environmentally sensitive areas, including steep slopes, aquifers, streams and wetlands
- Decreased soil stability from installation of tall poles

Long-term Community Character Impacts

- Tall poles
- Tree removal
- Views
- Industrial blight
- Increased noise

Residential Property Impacts

- Reduced quality of life
- Reduction in property values
- Loss of views
- Increase in electrical discharge noise from overhead wires
- Loss of trees that buffer views and noise from highways and other high-intensity land uses
- Having to provide easement access for utility vehicles
- Compensation or mitigation for impacts incurred for regional benefit

Public Health & Safety

- Health impacts of electric and magnetic fields on people and animals
- Safety of building electrical infrastructure in the same location as 50-year-old Olympic Pipeline company pipelines
- Safety of building electrical infrastructure along an earthquake fault line
- Ability of tall poles to withstand earthquakes and severe weather

Financial Concerns

- Rate increase to pay for project combined with loss in property value places a double burden on adjacent property owners
- Property tax rate increase due to decrease in adjacent property values
- High impacts to Eastside residents for benefit of foreign investors
- Evaluate costs of alternative solutions vs. proposed solution

Copies of written comments and transcripts of oral testimony received will be posted to the project website in Summer 2015.

NOTICE OF DETERMINATION OF SIGNIFICANCE

NOTICE OF ENVIRONMENTAL IMPACT STATEMENT SCOPING PERIOD

NOTICE OF PUBLIC SCOPING MEETINGS/OPEN HOUSES

Project Name: Energize Eastside

Project Proponent: Puget Sound Energy

Location: Portions of Bellevue, Kirkland, Newcastle, Redmond, Renton, and unincorporated King County between the Sammamish Substation at 9221 Willow Road NE, Redmond, WA 98052, and the Talbot Substation at 2400 South Puget Drive, Renton, WA 98055.

City of Bellevue EIS File Number: 14-139122-LE

Description: Construct a new 230 kilovolt (kV) electrical transmission line and substation connecting two existing bulk energy systems as necessary to supply future electrical capacity and improve electrical grid reliability for eastside communities. Complete project description is available in the project file and on the project website at www.EnergizeEastsideEIS.org.

EIS Required: The Environmental Coordinator of the City of Bellevue, serving as lead agency, has determined that this proposal could have a significant adverse impact upon the environment. An Environmental Impact Statement (EIS) is required under the Revised Code of Washington (RCW) 43.21C. This decision was made after the Bellevue Environmental Coordinator reviewed preliminary information about the project provided by the applicant. The applicant has agreed with this finding and has voluntarily entered into agreement with the City of Bellevue for the processing of an EIS.

Approvals required: Local permit review and approval within each affected jurisdiction.

SEPA EIS Scoping and Public Comment:

Agencies, affected tribes, and members of the public are invited to comment on the scope of the EIS. You may comment on alternatives, mitigation measures, probable significant adverse impacts, and licenses or other approvals that may be required. An expanded scoping process is being provided pursuant to the Washington Administrative Code (WAC) 197-11-410, and will include five public scoping meetings at the times and locations listed below.

Public Scoping Meeting/Open House Dates, Times, and Locations:

Tuesday May 12, 2015 6:00 - 9:00 PM: Bellevue City Hall - 450 110th Avenue NE, Bellevue, WA

Thursday May 14, 2015 6:00 - 8:00 PM: Renton City Hall - 1055 South Grady Way, Renton, WA

Tuesday May 26, 2015 6:00 - 8:00 PM: Kirkland City Hall - 123 5th Avenue, Kirkland WA

Thursday May 28, 2015 6:00 - 8:00 PM: Newcastle Elementary School Multi-purpose Room - 8440 136th Ave SE Newcastle, WA

Saturday May 30, 2015 2:00 - 4:00 PM: North Bellevue Community Center - 4063 148th Ave NE, Bellevue, WA

Scoping and Comment Period: The scoping comment period opens April 30, 2015. The deadline for submitting scoping comments is 5:00 PM Monday June 15, 2015. All comment related to project scoping must be submitted by this date. Comments may be submitted orally at the scoping meetings or in writing. A valid physical mailing address is required to establish status as an official party of record.

Written comments may be submitted:

Online at www.EnergizeEastsideEIS.org

By email to Scoping@EnergizeEastsideEIS.org

By mail to:

City of Bellevue
Development Services Department
Attn: David Pyle
450 110th Avenue NE
Bellevue, WA 98004

Applicant Contact: Jens Nedrud, Puget Sound Energy

Applicant Contact Email: jens.nedrud@pse.com

Lead Agency Contact: David Pyle, City of Bellevue

Lead Agency Contact Phone: 425-452-2973

Lead Agency Contact Email: dpyle@bellevuewa.gov



DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE
BELLEVUE, WA 98009-9012

**NOTICE OF DETERMINATION OF SIGNIFICANCE
NOTICE OF ENVIRONMENTAL IMPACT STATEMENT SCOPING PERIOD
NOTICE OF PUBLIC SCOPING MEETINGS/OPEN HOUSES**

PROJECT NAME: Energize Eastside

PROPOSER: Jens Nedrud, Puget Sound Energy

LOCATION OF PROPOSAL: Portions of Bellevue, Kirkland, Newcastle, Redmond, Renton, and unincorporated King County between the Sammamish Substation at 9221 Willow Road NE, Redmond, WA 98052, and the Talbot Substation at 2400 South Puget Drive, Renton, WA 98055.

DESCRIPTION OF PROPOSAL: Construct a new 230 kilovolt (kV) electrical transmission line and substation connecting two existing bulk energy systems as necessary to supply future electrical capacity and improve electrical grid reliability for eastside communities. Complete project description is available in the project file and on the project website at www.EnergizeEastsideEIS.org.

FILE NUMBER: 14-139122-LE **PROJECT PLANNER:** David Pyle

The Environmental Coordinator of the City of Bellevue, serving as lead agency, has determined that this proposal could have a significant adverse impact upon the environment. An Environmental Impact Statement (EIS) is required under RCW 43.21C. This decision was made after the Bellevue Environmental Coordinator reviewed preliminary information about the project provided by the applicant. The applicant has agreed with this finding and has voluntarily entered into agreement with the City of Bellevue for the processing of an EIS. Additional information is available in the project file on request and on the project website at www.EnergizeEastsideEIS.org.

SCOPING AND PUBLIC COMMENT: Agencies, affected tribes, and members of the public are invited to comment on the scope of the EIS. You may comment on alternatives, mitigation measures, probable significant adverse impacts, and licenses or other approvals that may be required. An expanded scoping process is being provided pursuant to WAC 197-11-410, and will include five public scoping meetings at the times and locations listed below.

FOCUS OF PHASE 1 SCOPING: This scoping period is intended to assist in identifying technically viable alternatives that address PSE's reported electrical transmission capacity deficiency. Scoping comments should focus on identification of viable alternatives and associated impacts. Construction and operation level impacts will be addressed with Phase 2 of the EIS process.

PUBLIC SCOPING MEETING/OPEN HOUSE DATES, TIMES, AND LOCATIONS:

Tuesday May 12, 2015 6:00 - 9:00 PM: Bellevue City Hall/450 110th Avenue NE, Bellevue, WA

Thursday May 14, 2015 6:00 - 8:00 PM: Renton City Hall/1055 South Grady Way, Renton, WA

Tuesday May 26, 2015 6:00 - 8:00 PM: Kirkland City Hall/123 5th Avenue, Kirkland WA

Thursday May 28, 2015 6:00 - 8:00 PM: Newcastle Elementary School/8440 136th Ave SE Newcastle, WA

Saturday May 30, 2015 2:00 - 4:00 PM: North Bellevue Community Center/4063 148th Ave NE, Bellevue, WA

Comments may be submitted orally at the scoping meetings or in writing. Written comments may be submitted:

Online at:

www.EnergizeEastsideEIS.org

By email to:

Scoping@EnergizeEastsideEIS.org

By mail to:

City of Bellevue

Development Services Department

Attn: David Pyle

450 110th Avenue NE

Bellevue, WA 98004

For questions about scoping meetings or commenting, email info@EnergizeEastsideEIS.org or contact:

David Pyle, Senior Land Use Planner/Energize Eastside EIS Program Manager
City of Bellevue Development Services Department
425-452-2973

SCOPING AND PUBLIC COMMENT PERIOD: The scoping comment period opens April 30, 2015. The deadline for submitting scoping comments is 5:00 PM Monday June 15, 2015. All comment related to project scoping must be submitted by this date. Comments may be submitted orally at the scoping meetings or in writing. A valid physical mailing address is required to establish status as an official party of record.

DESCRIPTION OF PROPOSAL: The Cities of Bellevue, Kirkland, Newcastle, Redmond and Renton (collectively called the Principal Jurisdictions), will prepare an Environmental Impact Statement (EIS) that will evaluate PSE's proposal (called Energize Eastside) to construct a new 230 kilovolt (kV) transmission line and substation connecting two existing bulk energy systems as necessary to supply future electrical capacity and improve electrical grid reliability for the Eastside, including the Principal Jurisdictions and surrounding areas.

PROJECT BACKGROUND: PSE has determined that projected electrical load growth in the Eastside area of Puget Sound Energy's operating system is outstripping the capacity to deliver reliable sources of electricity to the region. The Eastside area encompasses the area east of Lake Washington between the cities of Redmond and Renton. A detailed description of the electrical system problem is provided in PSE's Needs Report (2012). PSE's transmission system backbone in the Eastside area comprises four transformers that convert 230 kV power to 115 kV. These transformers, under certain operational conditions (for example cold winter days), operate near capacity. System studies and models have shown that they are expected to exceed their designed capacity as early as the winter of 2017/2018. In addition to these transformers at PSE's Talbot Hill (Renton) and Sammamish (Redmond) substations, several 115 kV lines are also subject to overloading.

PSE has determined that these overloads would create operational conditions that do not comply with minimum reliability requirements mandated by the North American Electric Reliability Corporation (NERC) and Western Electricity Coordinating Council (WECC). Building an a new 230 kV transmission line and substation connecting to the Talbot Hill and Sammamish substations is one means of addressing the system deficiency PSE has identified. PSE selected this option as its preferred option.

Project background documentation is available on the project website at: www.EnergizeEastsideEIS.org.

LOCATION OF PROPOSAL: Portions of Bellevue, Kirkland, Newcastle, Redmond, Renton, and unincorporated King County between the Sammamish substation at 9221 Willow Road NE, Redmond, WA 98052, and the Talbot substation at 2400 South Puget Drive, Renton, WA 98055. Note: Alternatives to be considered could extend further east.

LEAD AGENCY: The City of Bellevue is the lead agency under section 197-11-932 of the Washington Administrative Code ("WAC"), and issued a letter of lead agency status to the Principal Jurisdictions on September 15, 2014. Bellevue is the nominal lead and each Principal Jurisdiction is a co-lead agency for the Proposal as permitted pursuant to WAC 197-11-944.

EIS REQUIRED: The lead agency has determined, and the applicant (PSE) has agreed this proposal is likely to have a significant adverse impact on the environment. An environmental impact statement (EIS) is required under the Revised Code of Washington (RCW) 43.21C and will be prepared. Background materials indicating likely environmental impacts can be reviewed at the City of Bellevue Development Services Department or on the project website at: www.EnergizeEastsideEIS.org.

The Energize Eastside EIS is not a permit - it is one of many sets of information permitting agencies will consider as they decide whether to approve the project and issue necessary permits.

PHASED REVIEW: A Phased Environmental Impact Statement (EIS) will be prepared under WAC 197-11-060(5). This first phase will evaluate the environmental impacts of various alternatives for addressing the electrical transmission capacity deficiency identified by PSE as the purpose for the project. The Phase 1 Draft EIS will evaluate the alternatives described below.

The second phase of the project will select among the Phase 1 alternatives and examine project level alternatives, including possible alternate routes for transmission lines. A second opportunity for scoping will be provided and a second Draft EIS will be issued for Phase 2.

Following publication of the Phase 2 Draft EIS, a Final EIS will be issued.

ALTERNATIVES: Four alternatives are proposed to be analyzed in the Phase 1 Draft EIS. Descriptions of the four proposed alternatives follow:

Alternative 1- New Transformer and Transmission Line

Adding a new 230kV to 115kV substation and connecting it with the Talbot and Sammamish substations via a new 230 kV transmission line is PSE's preferred solution. This solution would provide a new 230 kV transmission source and improve reliability for the Eastside area. To provide the greatest system benefit, the new transformer would need to be located somewhere between State Route 520 and Interstate-90.

Alternative 2 – Demand Side Reduction/Non-Wire Technologies

Demand side reduction or conservation measures include energy efficiency, demand response, energy storage, and distributed generation measures. Energy efficiency measures include things such as promoting the installation of more efficient appliances, changing out incandescent light bulbs for LED, updating windows and insulation, as well as numerous others. Demand response entails energy reduction programs where specialized devices are installed that can be used to control customers electrical uses to better accommodate and manage peak usage. Energy storage includes the use of large scale battery systems. Installing roof top solar panels, small scale wind turbines, and waste digesters are all forms of distributed generation.

Alternative 3 – New Transformer – Existing Substation

This alternative includes installing a new 230 KV – 115 KV transformer at an existing substation, such as the existing Sammamish substation, Talbot Hill substation, or Lake Tradition (Issaquah) substation.. It is anticipated that this alternative would not require the installation of new 230 KV transmission lines since all three sites considered currently have nearby 230 KV sources; however, additional new 115kV transmission lines would be required.

Alternative 4 – No Action

This alternative is required under SEPA, as a baseline against which the action alternatives can be compared. Under this alternative, maintenance and certain other activities that do not require state or local government approvals could continue. No new 230 KV line, substation, or major battery storage facility would be built.

PRELIMINARY LIST OF ELEMENTS OF THE ENVIRONMENT: The lead agency has preliminarily identified the following elements of the environment for discussion in the EIS:

Surface Water	Air (Greenhouse Gases)	Plants and Animals
Noise	Electric and Magnetic Fields (EMF)	Energy and Natural Resources
Land and Shoreline Use	Aesthetics	Light and Glare
Recreation	Historic and Cultural Resources	Transportation
Public Services and Utilities		

energize **EASTSIDE**

EIS



Environmental Impact Statement

Scoping Meetings

PUBLIC MEETINGS

Tuesday 5/12/15 6:00–9:00 pm	BELLEVUE	Bellevue City Hall 450 110th Avenue NE
Thursday 5/14/15 6:00–8:00 pm	RENTON	Renton City Hall 1055 South Grady Way
Tuesday 5/26/15 6:00–8:00 pm	KIRKLAND	Kirkland City Hall 123 5th Avenue
Thursday 5/28/15 6:00–8:00 pm	NEWCASTLE	Newcastle Elementary 8400 136th Avenue SE
Saturday 5/30/15 2:00–4:00 pm	REDMOND	North Bellevue Community Center 4063 148th Avenue NE, Bellevue

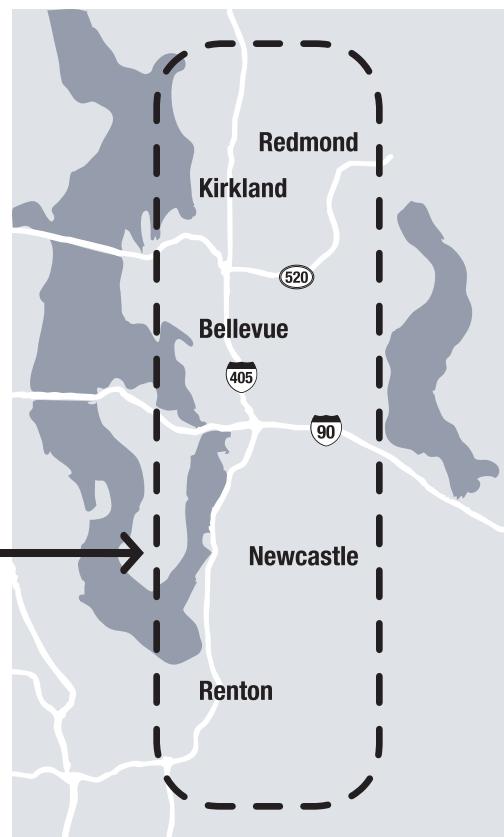
Public Scoping Period • April 30 – June 15, 2015

Energize Eastside EIS is an evaluation of potential significant environmental impacts associated with PSE's proposal to build a new electric substation and approximately 18 miles of high capacity electric transmission lines from Renton to Redmond. PSE's proposed project is intended to address an electrical transmission capacity deficiency and improve electrical grid reliability for Eastside communities.

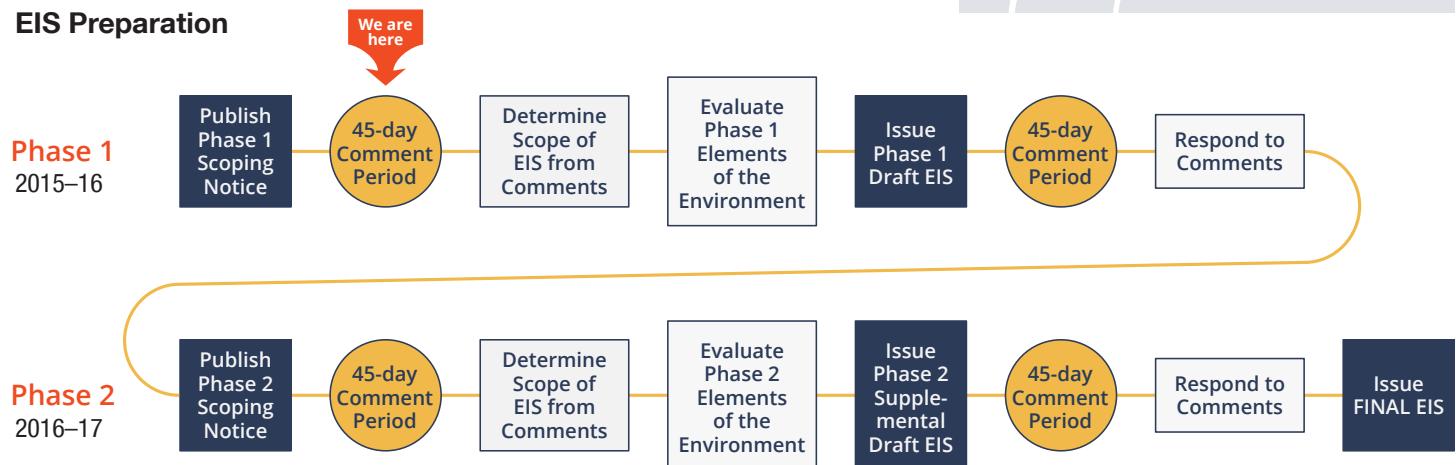
**Bellevue Project File
#14-139122-LE**

Project Contact

David Pyle
Energize Eastside EIS Program Manager
City of Bellevue
(425) 452-2973



EIS Preparation



EnergizeEastsideEIS.org

energize **EASTSIDE**



EIS

Environmental Impact Statement

Public Scoping Period • April 30 – June 15, 2015

Bellevue Project File #14-139122-LE

Project Contact

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energize **EASTSIDE** EIS



City of Redmond
Washington



CITY OF KIRKLAND
WASHINGTON



CITY OF BELLEVUE
WASHINGTON



CITY OF
NEWCASTLE



CITY OF
RENTON

Environmental Impact Statement

Public Scoping Period • April 30 – June 15, 2015

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EIS Environmental Impact Statement

Public Scoping Period • April 30 – June 15, 2015

Bellevue Project File #14-139122-LE

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energize **EASTSIDE**

EIS



Environmental Impact Statement

Scoping Meetings

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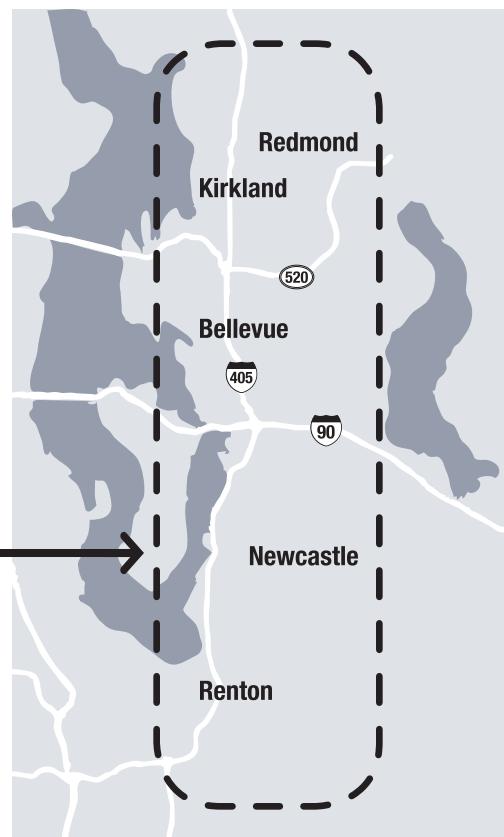
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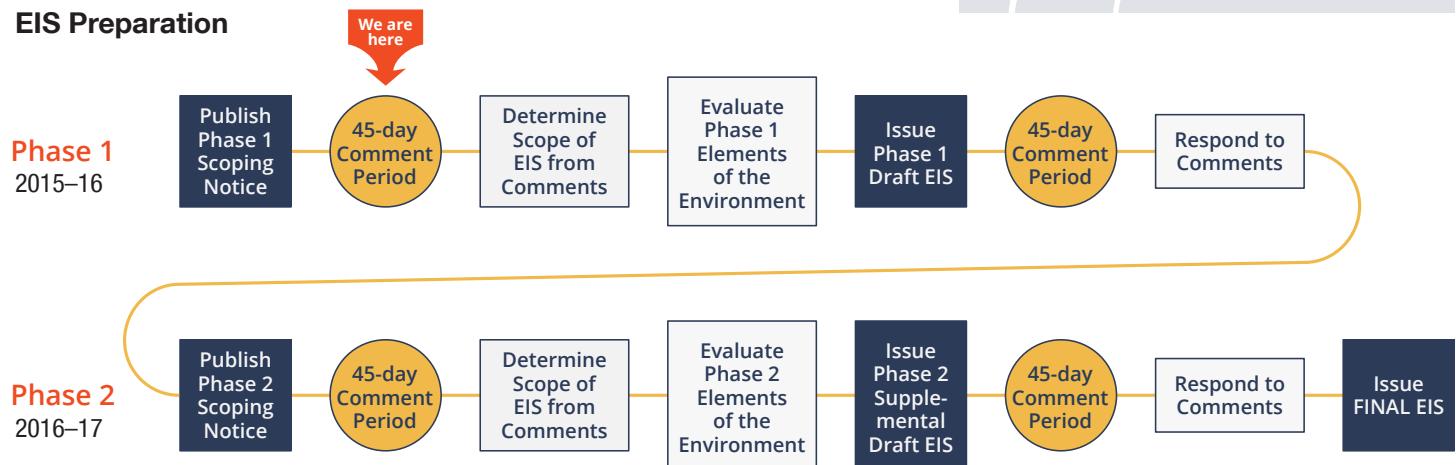
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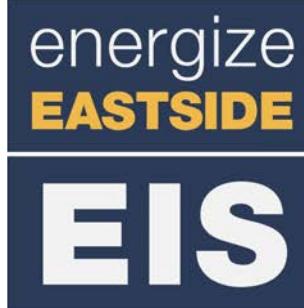


EIS Preparation



EnergizeEastsideEIS.org

Welcome!



Environmental Impact Statement

Agenda

- Open House.....45 minutes
- Presentation15 minutes
- Public Comment Period60+ minutes

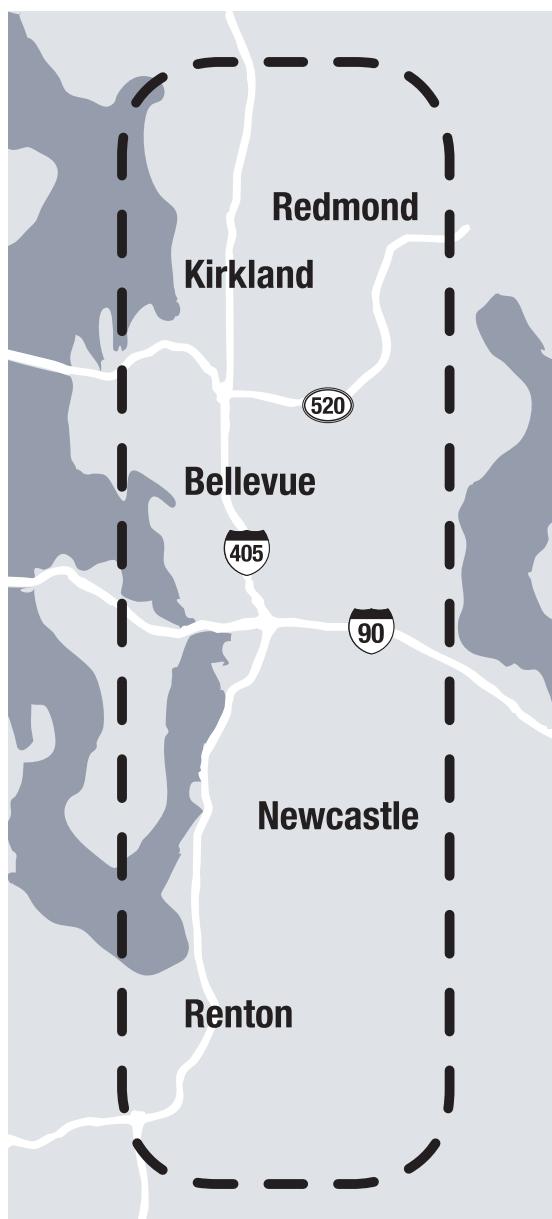
Public Scoping Meeting

Learn about programmatic alternatives and mitigation measures to be considered in the Energize Eastside Phase 1 EIS.

Tell lead and partner agencies — the cities of Bellevue, Kirkland, Newcastle, Redmond and Renton — **what aspects of the environment you want evaluated** in the Energize Eastside Phase 1 EIS.

What is Energize Eastside?

PSE proposes to construct **a new 230 kilovolt (kV) electrical transmission line and substation** connecting two existing bulk energy systems to supply future electrical capacity and improve electrical grid reliability for Eastside communities.



Study Area

Technical Issues

- Projected Eastside load growth is outstripping PSE's capacity to deliver reliable electricity
- On cold winter and hot summer days 4 transformers and several 115 kV lines operate near capacity
- These components could exceed their capacity in the winter of 2017–18

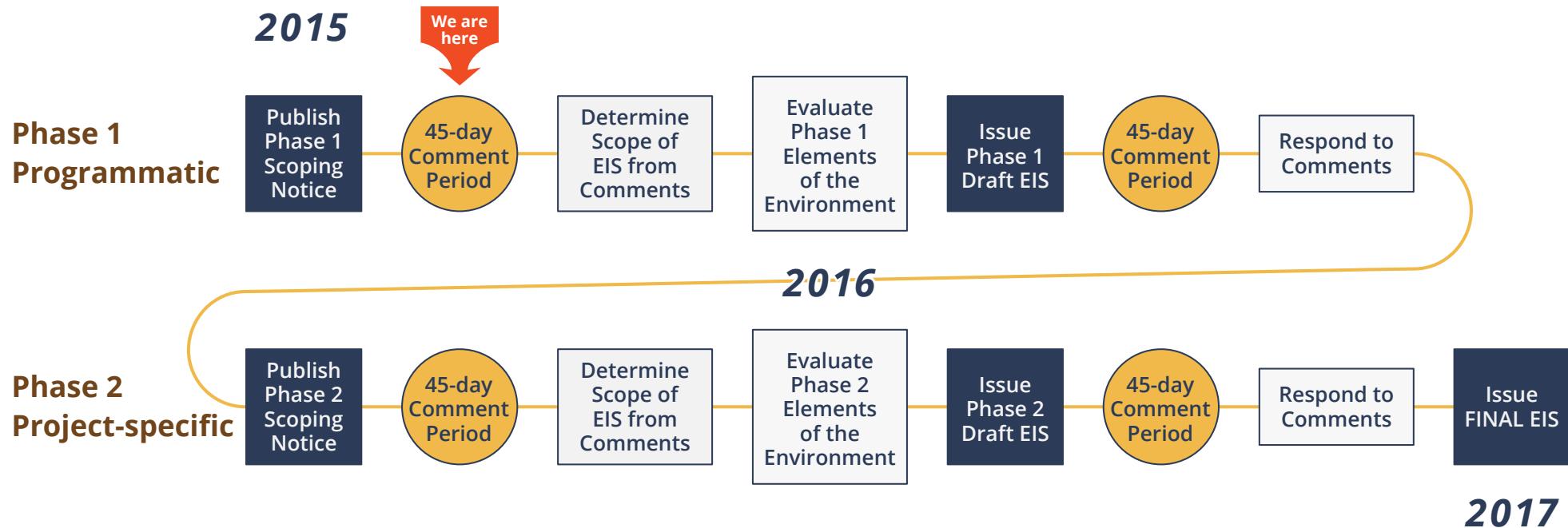
Regulatory Issues

- Projected system overloads do not comply with minimum reliability requirements*
- A new 230 kV transmission line and a new substation is PSE's preferred option
- An EIS must be completed prior to the issuance of permits
- The Phase 1 EIS will evaluate PSE's preferred option and 3 additional alternatives
- After the EIS is completed, permits are required from all affected cities

* as mandated by the North American Electric Reliability Corporation (NERC) and Western Electricity Coordinating Council (WECC)

Phased Review Process

SCHEDULE FOR DEVELOPING THE EIS



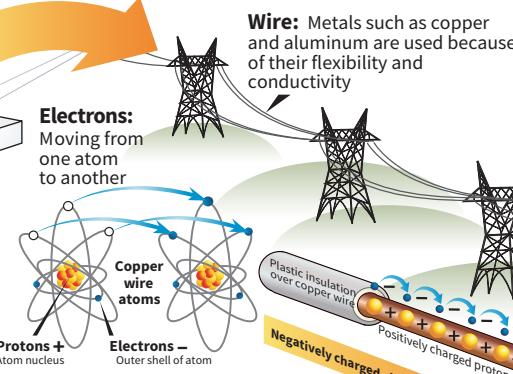
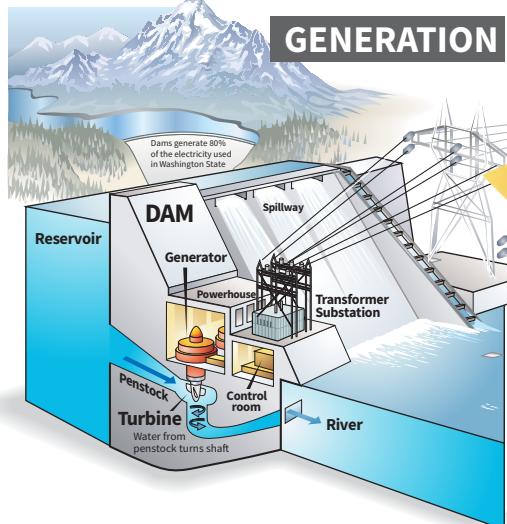
Phase 1: Programmatic Review

- Examination of various ways to address capacity deficiency in Eastside electrical transmission network
- Evaluation of environmental impacts associated with alternative solutions to deficiency problem
- Potential mitigation measures for significant unavoidable impacts

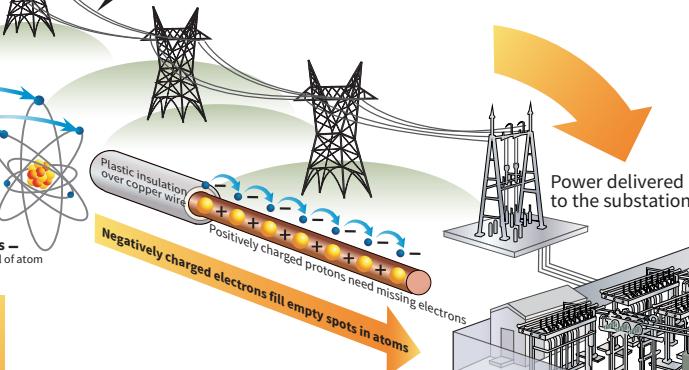
Phase 2: Project-specific Review

- Examination of project-level alternatives, including possible alternate routes for transmission lines
- Evaluation of project-level environmental impacts
- Potential mitigation measures for significant unavoidable impacts

Power Delivery 101



TRANSMISSION



WATTS UP: A guide to energy-speak

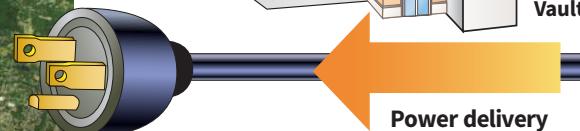
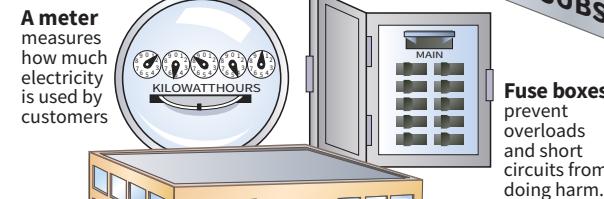
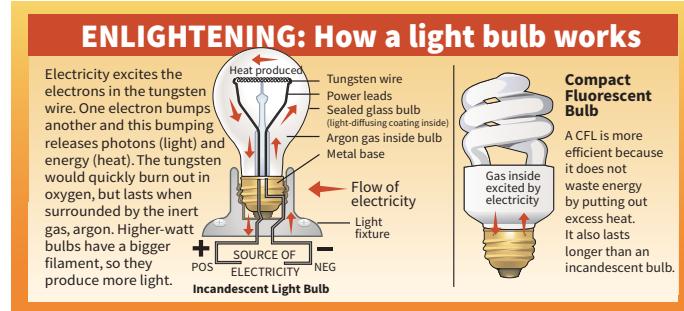
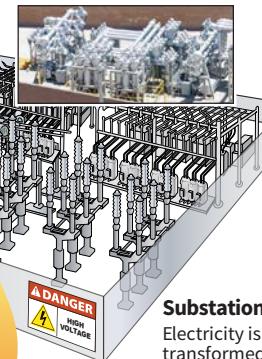
Amps (amperage) measure the AMOUNT of electricity used.

Volts (voltage) measure the pressure, or FORCE of electricity.

Watts (wattage) = amps x volts and measure the WORK that electricity does.

Ohms measure the RESISTANCE to the flow of current

DISTRIBUTION



Power delivery for residential and commercial customers

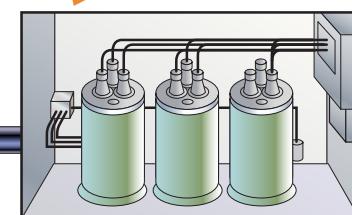


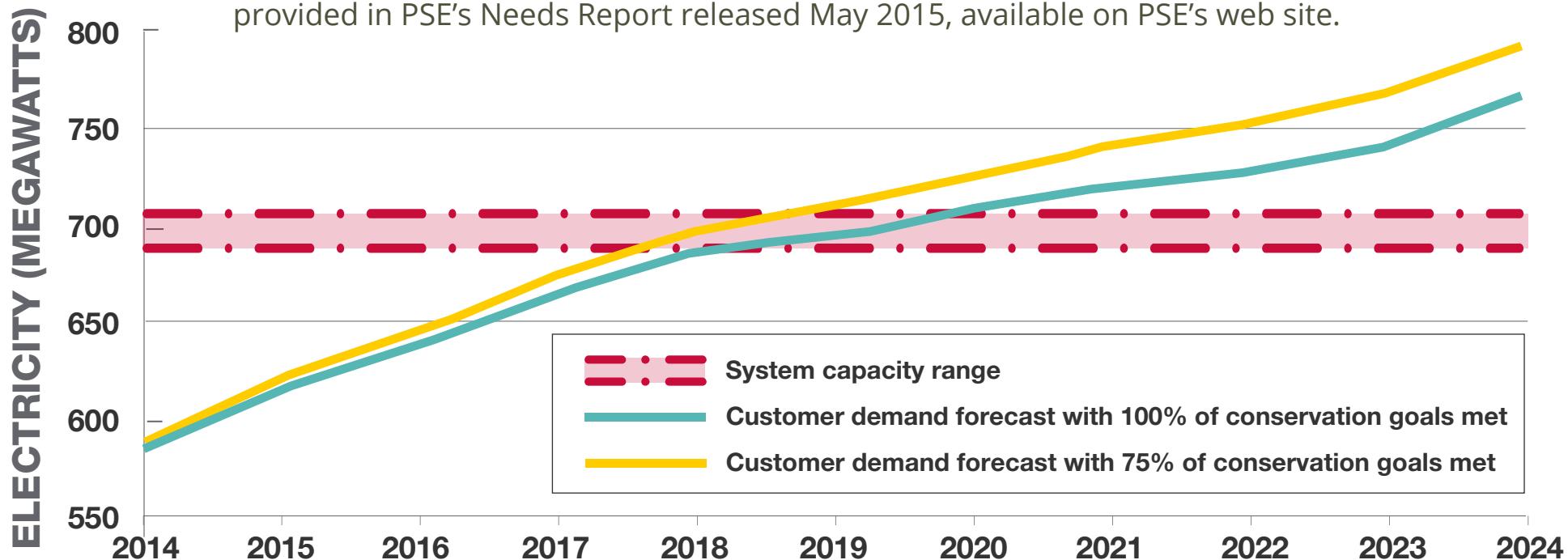
Illustration provided by Seattle City Light and created by Stephenson & Associates Communications

PSE's Eastside Demand Forecast

FOR TRANSMISSION CAPACITY

Purpose & Need for Energize Eastside Proposal

This graph comes from a detailed description of the electrical capacity problem provided in PSE's Needs Report released May 2015, available on PSE's web site.



What is an EIS?

What is SEPA?

The State Environmental Policy Act (SEPA) requires agencies to consider the likely environmental consequences of governmental decisions, including decisions on neighborhood plans and regulatory changes. The SEPA Rules provide detail for the environmental review process, including the EIS process.

What is an EIS and why is it being prepared?

An environmental impact statement, or EIS, is a document that provides an impartial discussion of:

- significant environmental impacts
- reasonable alternatives
- mitigation measures that would avoid or minimize adverse impacts

The Energize Eastside EIS is being prepared because the cities of Bellevue, Kirkland, Newcastle, Redmond and Renton have determined that the PSE proposal has the potential to result in significant adverse impacts.

What is the difference between a draft EIS and a final EIS?

A Draft EIS describes the likely significant adverse environmental impacts of a proposal and alternatives and mitigation measures to reduce impacts. A Final EIS includes all comments received on the Draft EIS and responses from the cities, and may include revisions to the Draft EIS based on comments received and new information learned.

Lead Agency

Through an agreement reached by all the affected jurisdictions—the cities of Bellevue, Kirkland, Newcastle, Redmond and Renton—the City of Bellevue is serving as the lead agency with the other cities serving as co-lead agencies for the preparation of the Energize Eastside EIS.

Phased Review

A Phased Environmental Impact Statement (EIS) will be prepared. This first phase will evaluate the environmental impacts of various alternatives for addressing the electrical transmission capacity deficiency identified by PSE as the purpose for the project.

The second phase of the EIS will select among the Phase 1 alternatives and examine project level alternatives, including possible alternate routes for transmission lines. A second opportunity for scoping will be provided and a second Draft EIS will be issued during Phase 2.

Following publication of the Phase 2 Draft EIS, a Final EIS will be issued.

The Final EIS is not a permit

The EIS is only one of many sets of information permitting agencies will consider as they decide whether to approve the project and issue necessary permits.

What is Scoping?

THE FIRST STEP IN THE ENVIRONMENTAL REVIEW PROCESS

Scoping provides opportunity for agencies, Tribes, and members of the public to **comment on the scope** of the Environmental Impact Statement, including:

- Alternatives to be considered
- Topics to be studied—Elements of the Environment
- Likely significant adverse impacts
- Mitigation measures
- Licenses, permits or other approvals needed

What are the elements of the environment?

As defined in SEPA, **potential** elements of the environment that may be considered include:

the natural environment and **the built environment**

- | | |
|---|---|
| <ul style="list-style-type: none">• earth• air• water• plants and animals• energy• natural resources | <ul style="list-style-type: none">• environmental health• land and shoreline use• transportation• aesthetics• housing• public services• utilities |
|---|---|

Who decides what will be studied in the Energize Eastside EIS?

1. EIS Consultant Team reviews public comments and PSE documents
2. Cities review and make recommendation to the City of Bellevue SEPA Official
3. The SEPA Official makes the final decision about the scope of the EIS

Commenting on the EIS

HOW TO MOST EFFECTIVELY PROVIDE COMMENTS

Expanded Scoping & Public Comment Period

The expanded 45-day comment period opened April 30, 2015. The deadline for submitting your comments is at 5:00 PM on Monday, June 15, 2015. All comments related to project scoping must be submitted by this date — orally at the scoping meetings or in writing.

Web www.EnergizeEastsideEIS.org

Email Scoping@EnergizeEastsideEIS.org

Post City of Bellevue
Development Services Department
Attn: David Pyle
450 110th Avenue NE
Bellevue, WA 98004

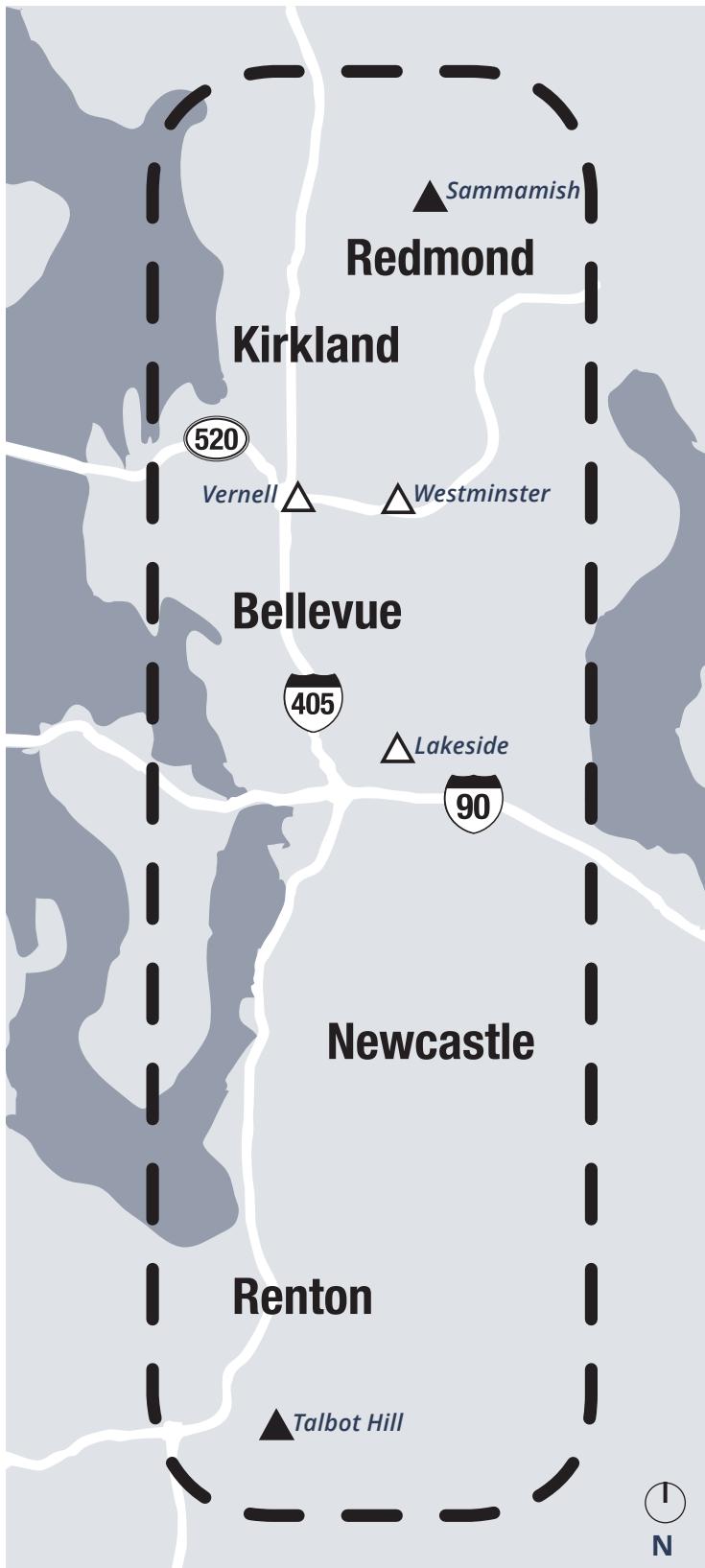
How can I make my comments most effective?

Check out the Department of Ecology Citizen's Guide to SEPA Review and Commenting at EnergizeEastsideEIS.org/sepa-review.

- **Be clear, concise, and organized.** Decide what you need to say before you begin. If you have a number of points, group your comments in a logical order.
- **Be specific.** Give support to your comments by including factual information. For instance, compare how things *were*, to how they *are*, to how you believe they *will be* in the future—and why. Refer to Comprehensive Plans, development regulations, information on similar projects or situations, and other environmental laws or documents. Be as accurate as possible.
- **Identify possible solutions.** Suggestions on reasonable mitigation—conditions to avoid, minimize, or reduce adverse impacts—can help influence how a project is ultimately built. After identifying your concern, suggest possible solutions.

Alt 1 PSE's Proposal

NEW SUBSTATION, TRANSMISSION LINE & CONSERVATION



PSE's preferred solution

- Add a new substation at one of three potential substation sites
- Install a new transmission line connecting the Sammamish and Talbot substations with one of the potential substation sites
- New transmission source and line to improve reliability in Eastside service area
- A new transformer located between SR 520 and I-90
- Energy efficiency measures

LEGEND

- ▲ Existing substation
- △ Potential substation site

Alt 2 Non-Wire Technologies

DEMAND SIDE REDUCTION & NON-WIRE TECHNOLOGIES



Demand response

- specialized devices that control customers electrical uses to better accommodate and manage peak usage



Energy storage

- large scale battery systems



Distributed generation

- roof top solar panels
- small scale wind turbines
- waste digesters

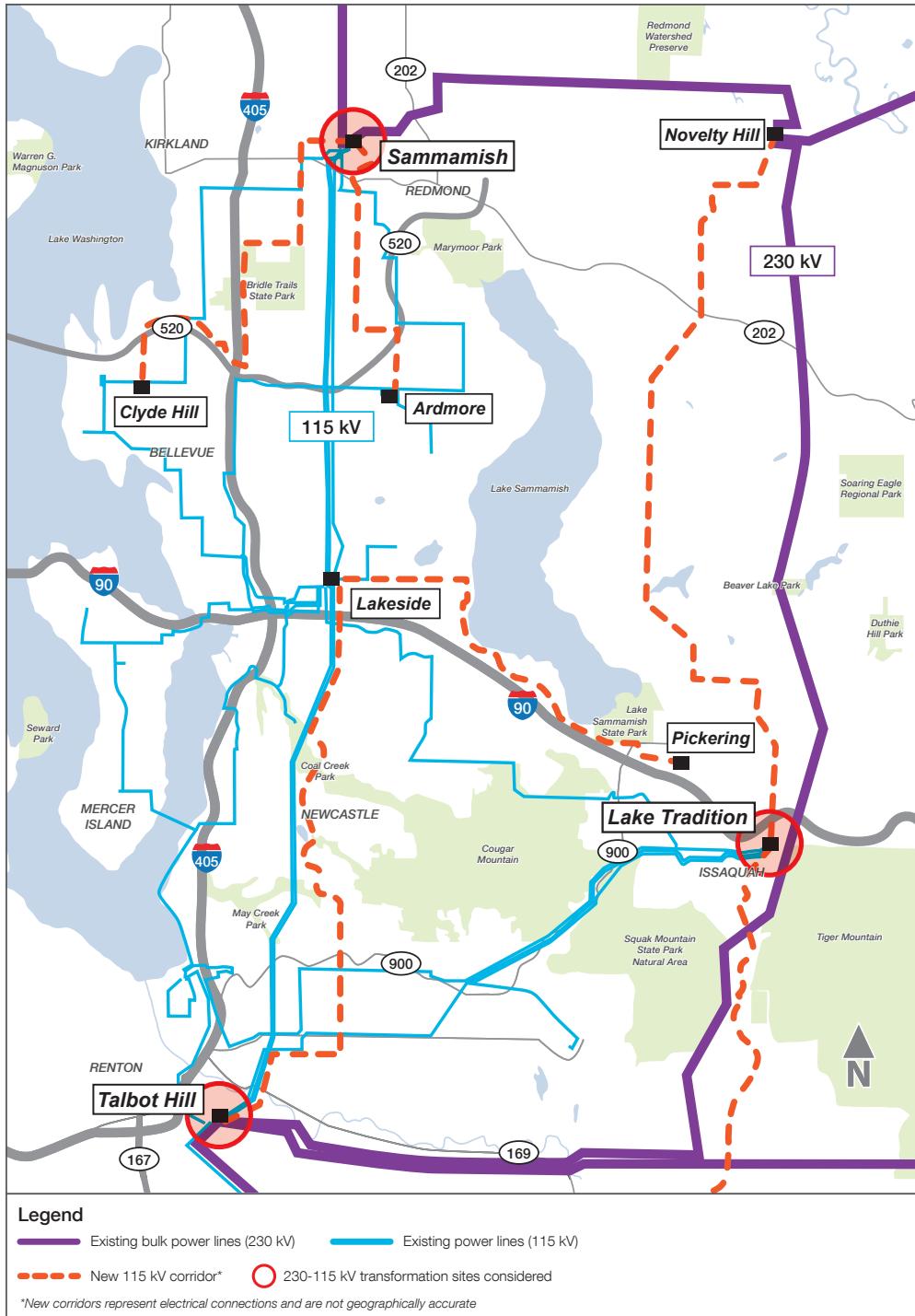


Energy efficiency

- promote the installation of more efficient appliances
- change incandescent to LED light bulbs
- update windows and insulation
- and many others

Alt 3 New Transformers

AT EXISTING SUBSTATIONS



Three new 230 kV–115 kV transformers at

- Sammamish substation and
- Talbot Hill substation and
- Lake Tradition (Issaquah) substation

Requires new transmission lines

Energy efficiency measures



Alt 4 No-Action

BASELINE

Required under SEPA — as a baseline against which the action alternatives can be compared



Maintenance, conservation and certain other activities that do not require state or local government approvals could continue.

No new 230 kV line, substation, or major battery storage facility would be built.

What we've heard to date

Topics	Issues raised
Noise	Anticipated noise sources during construction and general range of impacts Anticipated sources of noise from transmission lines, facilities, maintenance activities, and vehicles to, from and around the facilities
Land & Shoreline Use	Compatibility with existing or expected land uses Potential impacts to property values Conformance of project with plans and policies in Bellevue, Kirkland, Newcastle, Redmond and Renton
Recreation	Potential for impacts to parks, play fields, and other recreational facilities
Public Services & Utilities	Factors driving the project and how alternatives do, or do not, adequately address the need Potential impacts to key public services, Olympic Pipeline and ability of transmission line to withstand hazards
Air Quality & Greenhouse Gases	Anticipated sources of emissions during construction and range of impacts Anticipated greenhouse gas (GHG) emissions if a generation facility is considered
Electric & Magnetic Fields (EMF)	Anticipated EMF levels based from similar facilities Potential for interference with communication equipment Health effects on sensitive uses (schools, residences, recreation, religious institutions)
Aesthetics	Aesthetic impacts, primarily related to: <ul style="list-style-type: none">• Public view protection• Designated scenic corridors• Views from residential areas• Light and glare
Natural Environment: Soils, Plants, Animals & Surface Water	General habitat impacts, including potential effects on listed species, tree canopy, sensitive areas, soil stability Storm water runoff conditions during construction Potential impacts on Lake Washington and Lake Sammamish watersheds
Transportation	Potential transportation impacts during construction and on major roadways that could be affected (e.g., from undergounding transmission lines)
Economics	Potential impacts on rates and cost of undergrounding lines

Energize Eastside EIS Phase 1 Scoping Meetings

CITY OF BELLEVUE

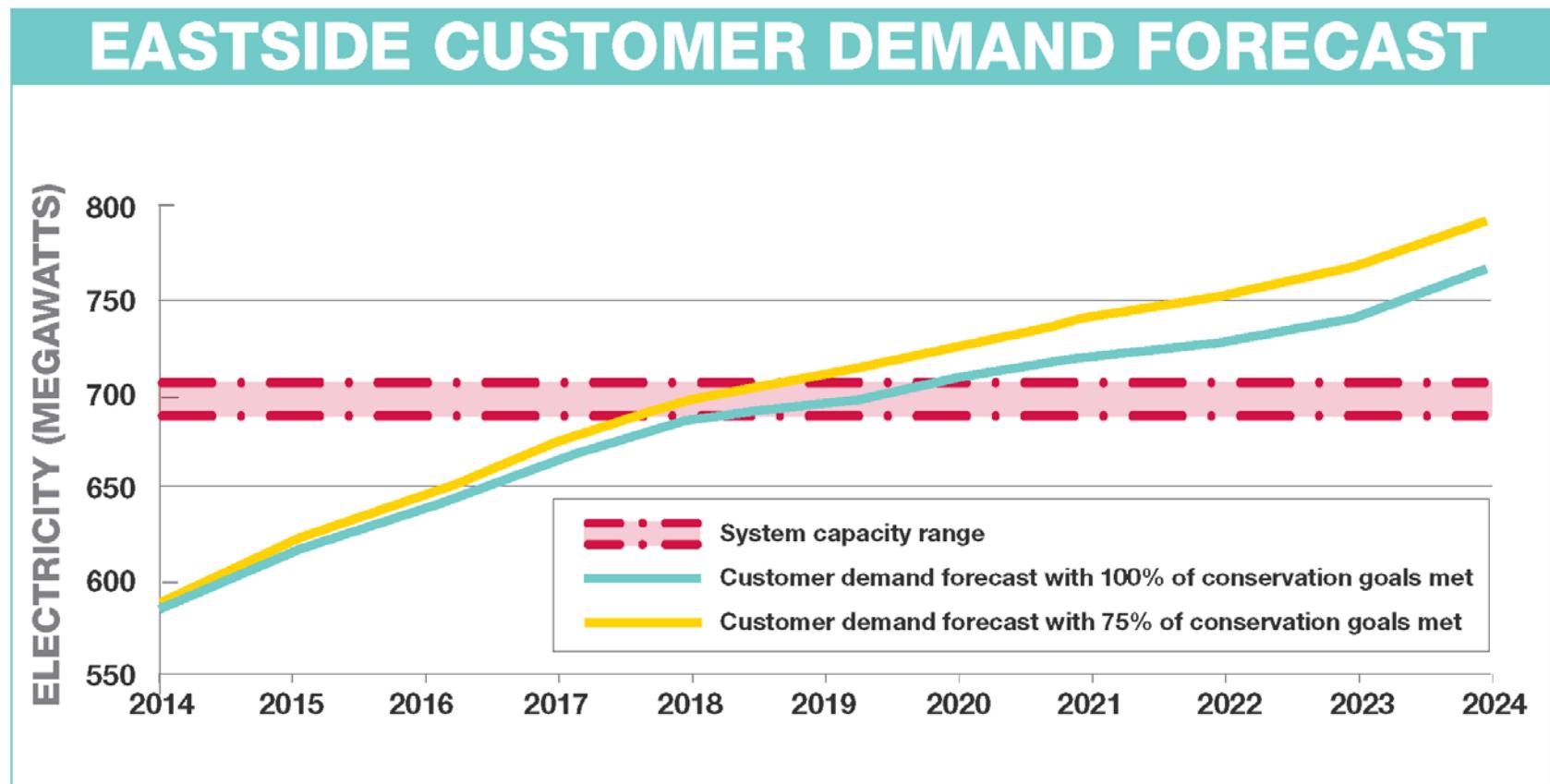
May 12, 2015



Welcome

- Purpose of today's meeting
 - Present alternatives and elements of the environment
 - Listen to your comments

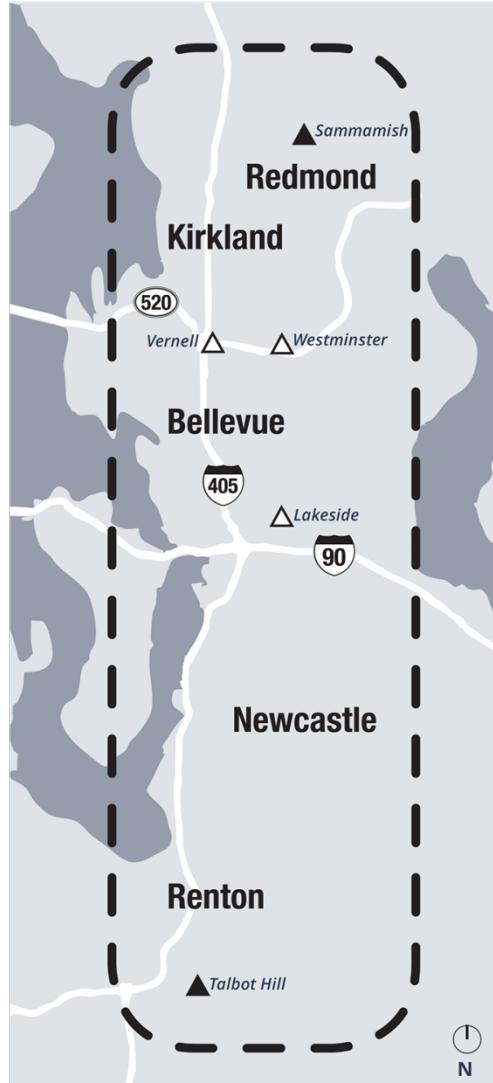
Purpose and Need for Project



Phase 1 and Phase 2 EISs

- Phase 1 EIS will evaluate impacts from various alternatives to meet the project objectives
- Phase 2 EIS will select among the Phase 1 alternatives and evaluate project-level impacts

Phase 1 EIS Alternatives



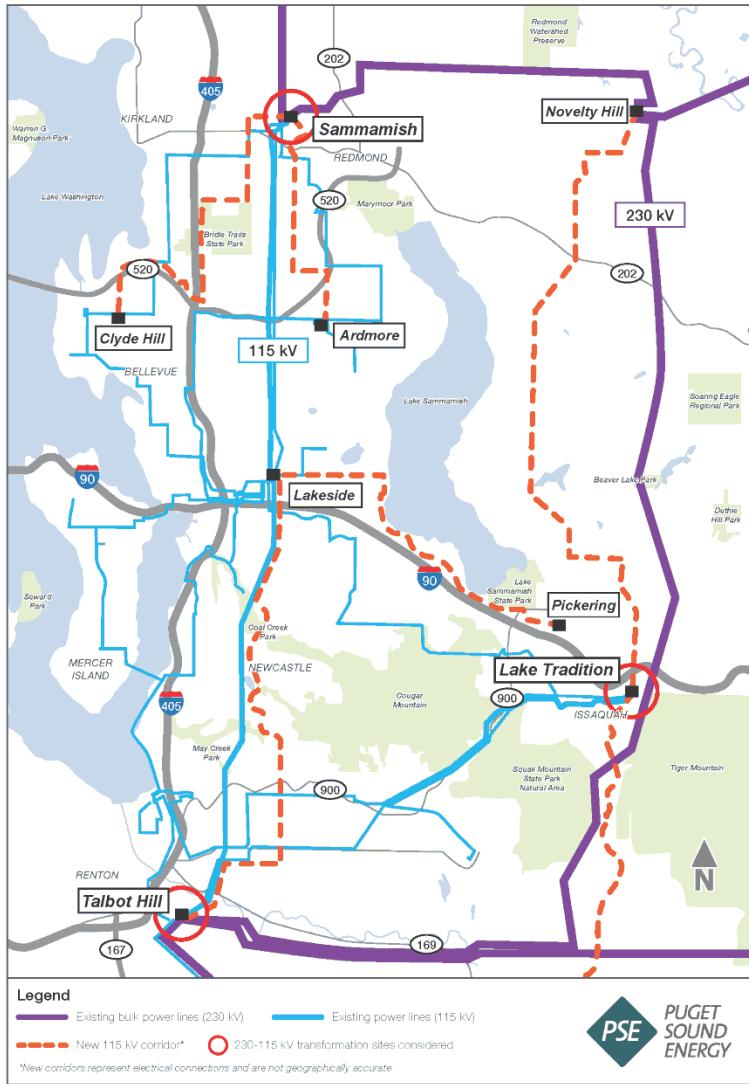
- Alternative 1 PSE's Proposal
 - Install a new 230 kilovolt electrical transmission line
 - Add a new substation and transformer
 - Continue conservation efforts to reduce energy consumption and demand

Phase 1 EIS Alternatives

- Alternative 2 Non-wire Technologies
 - Demand response
 - Energy efficiency
 - Distributed generation
 - Energy storage



Phase 1 EIS Alternatives



- Alternative 3 New Transformers
 - Add new transformer at an existing substation
 - Install new 115 kilovolt electrical transmission lines
 - Continued conservation efforts to reduce energy consumption and demand

Phase 1 EIS Alternatives



- Alternative 4 No Action

- Includes maintenance and conservation measures that PSE can do without requiring state or local approvals
- No new transmission lines, substations or major battery storage facility would be built

When can you comment?

Phase 1 Programmatic



Phase 2 Project-specific



How can you comment?

1. Online: www.EnergizeEastsideEIS.org
2. Email: Scoping@EnergizeEastsideEIS.org
3. Mail: City of Bellevue
Development Services Department
Attn: David Pyle
450 110th Avenue NE
Bellevue, WA 98004
4. Speak at scoping meetings

How can you comment?

- Online comment form and mapping tool

First Name* <input type="text" value="e.g. Henry"/>	Last Name* <input type="text" value="e.g. Yesler"/>	Email <input type="text" value="e.g. email@email.com"/>
Address* <input type="text" value="e.g. 1111 Yesler Way"/>	City* <input type="text" value="e.g. Seattle"/>	Zip* <input type="text" value="e.g. 98103"/>

What category best fits your comment?

-Please Select-

Comment*

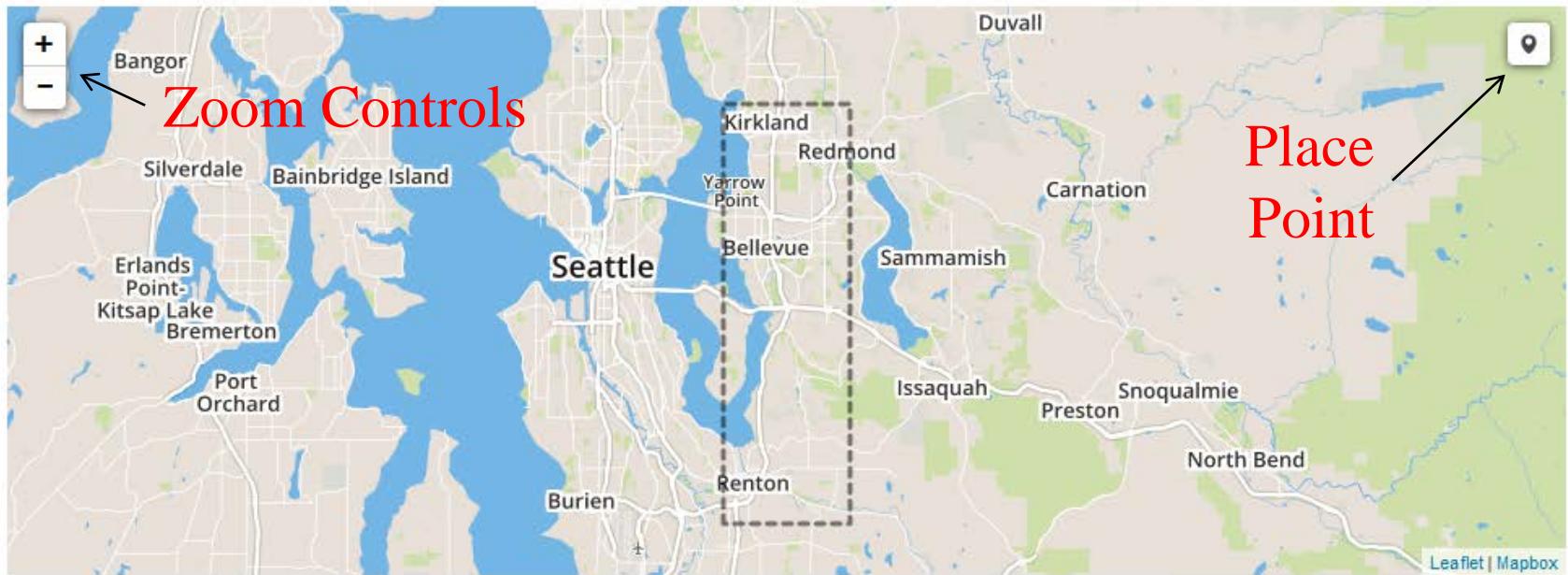
Enter your comment here

Would you like to be kept up to speed?

-Please Select-

How can you comment?

- Online comment form and mapping tool



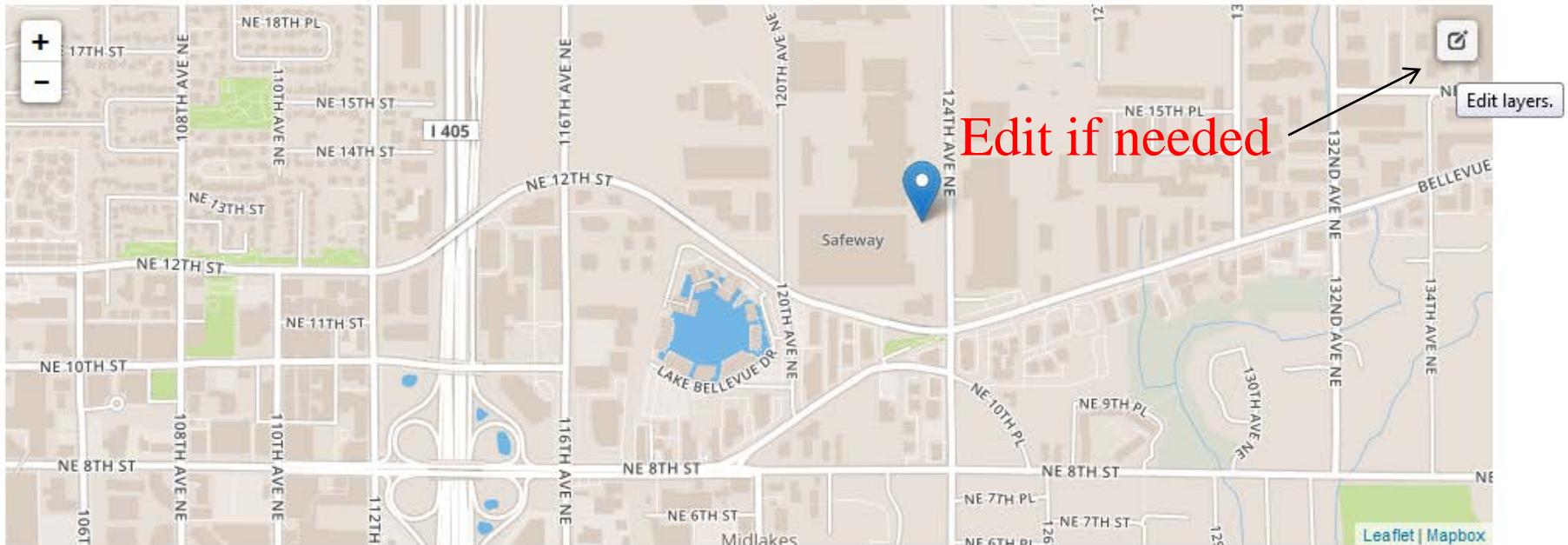
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How can you comment?

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How can you comment?

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How can you comment?

- You are done!

Submit

Public Testimony Tonight

- 3 minute time limit for individuals
- 5 minute time limit for 501(c)3
- Please state your name and address
- Courteous behavior welcomed



Exhibit 2: Phase 1 Draft EIS Scoping Summary and Final Alternatives

Introduction

The City of Bellevue, as the State Environmental Policy Act (SEPA) nominal Lead Agency for Puget Sound Energy's Energize Eastside project, is overseeing preparation of a phased Environmental Impact Statement (EIS) for the proposal. The City of Bellevue is overseeing this process in cooperation with the jurisdictions of Kirkland, Newcastle, Redmond, and Renton (collectively referred to as the Eastside Cities). This report summarizes the public scoping comments received by the City of Bellevue on the Phase 1 Draft EIS, including written comments submitted via letters, EIS project website, and emails and oral testimony provided at five scoping meetings. The written comments received and the transcripts of oral comments were collated and are summarized within this report (see www.EnergizeEastsideEIS.org for the full packet of submitted comments and testimony). Beyond summarizing comments received, this report also documents which issues raised by scoping comments will be addressed in the Phase 1 Draft EIS.

The scoping process under SEPA invites the public and regulatory agencies to help determine the content of an EIS. The purpose of scoping is to narrow the focus of review to significant environmental issues, identify alternatives to be analyzed in the EIS, and identify potential mitigation measures. The scoping process provides the public and interested parties an opportunity to convey input about alternatives and necessary analysis to the Lead Agency. Information previously unknown or not yet considered by the Lead Agency about a proposal's potential impacts may come to light during scoping.

The City of Bellevue determined, and PSE agreed, that an EIS is needed for the proposal. PSE submitted an application for processing of an EIS to the City of Bellevue on August 19, 2014, as that is the jurisdiction where the majority of the proposal would be located. Submittal of this application triggered the start of the SEPA process, and the five Cities with jurisdiction agreed that the City of Bellevue would be the nominal Lead Agency for the SEPA process. The Eastside Cities, supported by the EIS consultant team, identified preliminary alternatives and elements of the environment for inclusion in the Phase 1 Draft EIS as part of the Scoping Notice issued at the start of the scoping comment period. The information in the Scoping Notice was based on PSE's Narrative and Probable Significant Impacts document (see www.EnergizeEastsideEIS.org for a copy of this document).

The scoping period began on April 30, 2015, when the City of Bellevue issued a Determination of Significance and Scoping Notice for the proposal. Washington state and City regulations (WAC 197-11-408(2)(a)(i) and Bellevue City Code 22.02.036.D.1.a) require a mandatory 21-day scoping period. The City of Bellevue conducted "expanded scoping" (WAC 197-11-410) for this project and extended the scoping period to 45 days, ending the scoping process on June 15, 2015.

How can the public continue to stay involved in the EIS process?

The next formal opportunity for public involvement in the SEPA process will occur with publication of the Phase 1 Draft EIS, currently planned for late 2015 or early 2016. The project website will provide up-to-date information on project status and schedule.

Five public meetings were held at different locations throughout the Eastside during the scoping period. Each meeting included an open house with information provided about the project and an opportunity for the public to talk to City and consultant staff, as well as PSE staff; a presentation describing the project, preliminary scoping alternatives, and the EIS process; and a public comment period to take oral testimony on the scope of the EIS. During the public comment period, oral scoping comments were recorded by a court reporter in the form of a hearing transcript. Hearing transcripts have been posted on the EIS project website and a summary document about the public scoping meetings is included as Exhibit 1.

The City of Bellevue received a total of 437 comments in the form of website forms, emails, oral testimony, and letters (see Figure 1) during the 45-day scoping period. The comments represent a total of 278 individuals (many people submitted multiple website forms and/or spoke at more than one scoping meeting) (see Figure 2). Comments were submitted by 24 different organizations (e.g., homeowner associations) and 3 public agencies (see Figure 3). These written and oral comments contained a total of 1,291 individual comments that have been categorized into 25 unique topics or themes. The comments focused around the following 25 topics listed in alphabetical order: access, air quality and greenhouse gas emissions, alternatives, climate change, construction and operational impacts, cumulative impacts, earth impacts, PSE's existing easement, EIS process and content, electric and magnetic fields, energy and natural resources, housing, land use, mitigation, noise, permits, plants and animals, property value and costs, public health and safety, public services and utilities, project purpose and need, recreation, transportation, views and visual resources, and water.

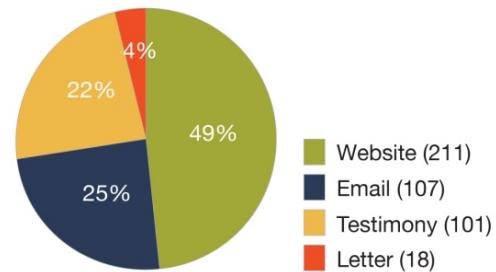


Figure 1. Comment by Type

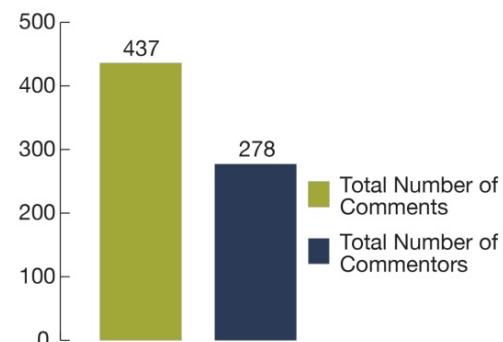


Figure 2. Scoping Comment Summary

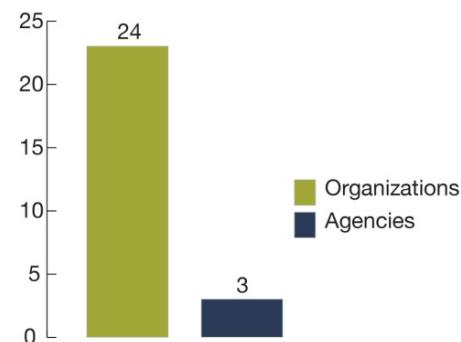


Figure 3. Comments by Origin

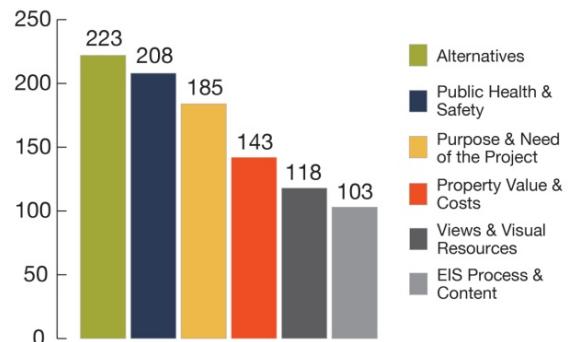


Figure 4. Comments by Major Topic

In general, most comments expressed concern about or opposition to PSE's proposal, although some individuals and organizations did express support. The six unique topics or themes mentioned the most frequently are shown in Figure 4 and include the following: alternatives (with some suggestions for alternative approaches); public health and safety (including construction near the Olympic Pipeline); purpose and need for the project; property values and cost; views and visual resources, particularly related to loss of trees; and EIS process and content (including the level of appropriate detail and questions about the agency decision-making process). More detail about the specific content of the comments is provided below under "*What has the community asked to be studied in the Phase 1 Draft EIS?*"

How do the SEPA rules regulate the content of an environmental impact statement?

SEPA rules, as established in the Washington Administrative Code (WAC), Chapter 197-11, stipulate the content and approach to preparing an EIS. SEPA rules establish specific parameters for identifying alternatives for consideration in the EIS. Alternatives to the project proposal must:

- feasibly attain or approximate a project's objectives;
- have a lower environmental cost or decreased level of environmental degradation; and
- include a no action alternative for purposes of comparison.

Alternatives may also be those over which an agency with jurisdiction has authority to control impacts either directly or indirectly through requirement of mitigation measures. For example, when some component of a project requires a discretionary decision such as a variance or rezone, a jurisdiction could require an alternative that would not need the variance or rezone. For the Energize Eastside project, alternatives that include mitigation measures such as underground or submerged lines may also be included (WAC 197-11-440).

SEPA rules also stipulate which environmental impacts should be evaluated in the EIS. The EIS must evaluate probable adverse environmental impacts that are significant. Discussion of insignificant impacts is not required but, if included, should be kept brief and limited to summarizing impacts or noting why more study is not warranted. Beneficial environmental impacts may be included but are also not required.

The Energize Eastside EIS consultant team and the Eastside Cities relied on the SEPA rules to help identify the alternatives that should be considered in the Phase 1 Draft EIS and the elements of the environment that should be evaluated (more information is included later in this report). They also relied on PSE to identify and articulate the project's objectives that were used to evaluate which alternatives to carry forward into Phase 1. PSE's project objectives are included in Attachment 1 to this report.

What is the Energize Eastside project?

The proposal by PSE is to construct and operate a new 230 kV to 115 kV transformer served by approximately 18 miles of new high-capacity (230 kV) electric transmission lines from Renton to Redmond (see Figure 5). To be an effective part of the electrical system, the transformer would be placed at a substation located near the customers who are generating the demand for electricity. Electrical power would be transmitted to this substation and the voltage lowered or “stepped down” (transformed) for distribution to local customers. This set of facilities is proposed in order to address a deficiency in electrical transmission capacity during peak periods that has been identified by PSE. This deficiency is anticipated to negatively affect service reliability for Eastside customers in the next few years. The project would improve reliability for Eastside communities by creating a more redundant¹ system and would supply electrical capacity for anticipated growth and development on the Eastside. PSE’s analysis indicates that the 230 kV transmission line is needed, rather than a 115 kV or lower voltage line, in order to provide adequate power locally during peak power events. A 230 kV line (as opposed to other voltages higher than 115 kV lines) is being proposed because that is the next highest voltage line that PSE could feasibly install and operate consistent with the regional grid system.

It is worth noting that transmission of electrical power outside of PSE’s service territory is not an objective of the project.

However, as with all of PSE’s transmission equipment, the project would be part of the regional electric power grid and PSE has a regulatory responsibility to keep power moving through the grid.

Why is PSE’s system connected with the regional grid?

PSE’s electrical supply system operates interdependently with other power providers in the region. The interconnected power system, or bulk electric system as it is commonly referred to, is intended to be cost and resource effective by allowing excess power generation in one part of the region to supply load in another. In addition, because of the characteristics of electricity, this interconnected system also increases system reliability, voltage stability, and performance. The Eastside does not generate its own electricity so it must rely on the bulk electric system for power supply.

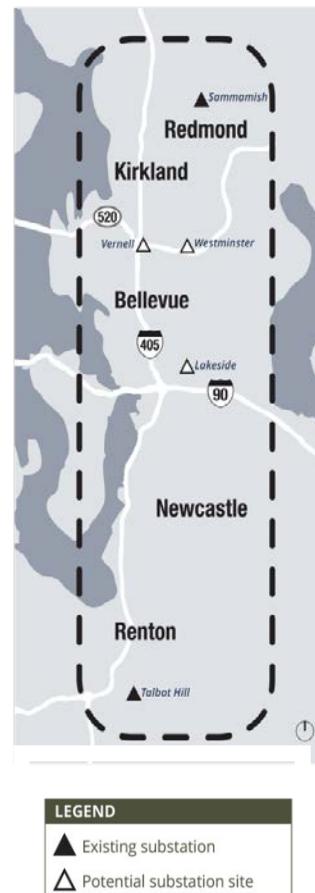


Figure 5. Energize Eastside Project Area

¹ Constructing the 230 kV transmission line and installing a new transformer would allow PSE to better operate and maintain its system. PSE plans for a reasonably redundant system that allows PSE to take equipment or lines offline for maintenance and avoid power outages should accidents (e.g., due to weather or security incidents) damage lines or equipment.

What is the environmental review process for this project?

The Eastside Cities, supported by the EIS consultant and in collaboration with PSE (applicant), determined that a Phased EIS (WAC 197-11-060(5)) would be the best approach to adequately evaluate the proposal. The first phase, for which scoping has now been completed, will programmatically evaluate the potential environmental impacts of various alternatives to be considered for addressing the identified project need. The Phase 1 Draft EIS will broadly describe the types of impacts that the alternatives could have and mitigation that would be available to minimize or avoid such impacts. This broad evaluation is intended to provide decision-makers and community members from the affected jurisdictions with a better understanding of what constructing and operating the alternative methods would mean to the community and how to best evaluate the environmental impacts of more detailed alternatives in Phase 2. The Phase 1 Draft EIS will not analyze impacts associated with specific development at specified geographic locations. The alternatives to be included in the Phase 1 Draft EIS are described below.

Following publication of the Phase 1 Draft EIS, there will be a 45-day comment period (WAC 197-11-455) (see Figure 6). The Eastside cities will evaluate the input received and determine which alternatives should be carried forward into the more detailed Phase 2 Draft EIS, and what elements of the environment will be evaluated. The City of

Bellevue will conduct a second 45-day scoping process (mirroring the scoping process for Phase 1) for the Phase 2 Draft EIS, which will be used to refine the information included in the second Draft EIS. The Phase 2 Draft EIS will include a project-level and geographically referenced review of PSE's proposed transmission route and alternatives.

What is the purpose of an EIS?

An EIS is intended to evaluate the probable significant environmental impacts of a proposed project or program. The EIS does not evaluate whether or not a project is needed, although it does take into account the project objectives in establishing what alternatives should be included. An EIS is not a permit, although it is intended to be used by officials making decisions about whether to approve, deny, or conditionally approve a project. Decision-makers are not required to choose the alternative with the least impacts as identified in an EIS, but the EIS is intended to provide decision-makers with options that could reduce or eliminate some or all of the impacts of the project. An EIS is not intended to be a cost-benefit analysis for a project; rather, an EIS is intended to provide environmental information to be considered alongside economic and other policy considerations in reviewing projects that could significantly affect the environment.

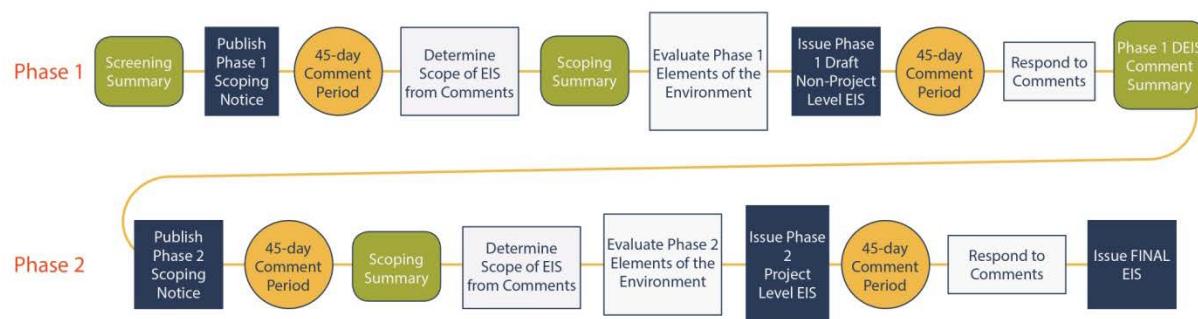


Figure 6. Environmental Impact Statement Process

Following publication of the Phase 2 Draft EIS, a 45-day comment period will be provided. Information from the public and other stakeholders will be used to help improve the EIS before it is finalized. At the close of this comment period, a Final EIS will be prepared that responds to the comments received on the Phase 1 Draft EIS and Phase 2 Draft EIS.

What has the community asked to be studied in the Phase 1 Draft EIS?

The following is a summary of comments provided by the community during the Phase 1 Draft EIS scoping period. The comments are organized around 10 key issues, including the 6 key issues identified earlier.

Issue 1 - Purpose and Need

Comments and questions on the purpose and need of the project focused on three general themes:

1. The question of whether the proposal is intended to address transmission system reliability issues related to recent past and expected growth in the Eastside as PSE has stated, or to increase capacity for other purposes.
 - Numerous commenters requested clarity on the types of situations (actual frequency of outages) the project would address.
 - Questions were raised about which customers in the project area (residential, commercial, and other) are expected to generate the load growth that the project is intended to serve.
 - Commenters suggested the problem was really the need to control growth in general, in which case the project would not be needed.
 - Some statements were made and questions raised about whether there is a direct relationship between BPA and PSE facilities, and whether PSE has appropriately defined the project purpose. Commenters alluded to a PSE objective to transmit and sell electrical power outside of PSE's service area (to Canada and California) and questioned how that expands the project need and scope from PSE's stated project intent.
 - There were also questions about how much of the project's need is based on the ability to participate in additional power wheeling outside the region. Whether the project is partly driven by PSE's financial needs (e.g., a need to achieve a specified rate of return on equity) was questioned.
2. Disagreement with PSE's planning data and assumptions and how they define project need.
 - Comments requested additional independent analysis of purpose and need and/or requested independent documentation of purpose and need, including providing one-line diagrams and detailed assumptions used by Utility System Efficiencies, Inc.

(U.S.E.), an electrical power systems consulting firm chartered by the Bellevue City Council to conduct an independent analysis.

- Comments or questions were submitted about assumptions for the date when the project is needed, customer demand growth and relationship to population growth, and peak usage including likely temperatures and system capacity.
 - Some questions addressed: (a) whether the project needs assessment included plans for eventual retirement of PSE's Colstrip Generating Facility and how electricity would be provided without it; (b) how PSE's practice of turning off all local generation west of the Cascades during power flow simulations affects determination of project need; and (c) statement that PSE needs to update its forecast in line with the other utilities in the Pacific Northwest.
 - Some comments requested disclosure of specific data and information about PSE assumptions, including data that PSE has redacted from publicly available documents, assumptions regarding the planning horizon, and other information.
 - The question was raised of whether U.S.E., as part of the analysis chartered by the Bellevue City Council, had access to independent CEII (Critical Energy Infrastructure Information) data sources and whether Bellevue obtained a thorough, accurate, and comprehensive independent analysis.
3. Concern that PSE is not doing everything possible with regard to demand response initiatives, resulting in PSE overstating the need for the project.
- Some comments included assertions that electrical power needs for population growth could be handled without the need for PSE's proposed project, with tiered pricing enacted by PSE to manage peak consumption during high demand times and other conservation measures.
 - Mention was made that the February 2014 *PSE Screening Study for Energize Eastside*, prepared by consulting firm E3 for PSE, showed conservation measures that could solve the energy needs of the Eastside community without the project. The screening study was intended to assess the potential for demand-side reduction (conservation and alternative energy alternatives) to defer the proposed project.

Issue 2 - EIS Alternatives

Numerous approaches to resolving the projected electrical demand were offered by the community. Some comments were made on the preliminary alternatives introduced in the Scoping Notice, while others suggested new alternatives that should be considered in the Phase 1 Draft EIS.

New Substation and 230 kV Transmission Line

This alternative was presented as Alternative 1 during the scoping period and refers to PSE's preferred approach to resolving the stated transmission capacity deficiency. This option would be to install a 230 kV transmission line along a corridor (location to be determined) between Renton and Redmond. A range of approaches to installing this line (e.g., underground, overhead, etc.) and locations (e.g., using existing corridor, along roadways, etc.) were not yet defined at the time of scoping. This alternative would also require developing a new substation at or near one of three locations – the Vernell, Westminster, or Lakeside substations shown on Figure 5 above -

and continuing to institute conservation measures (also referred to as “demand-side” measures) identified through PSE’s Integrated Resource Planning process². The community recommended that the following alternative routes and approaches should be considered in the Phase 1 Draft EIS:

- Use I-405 corridor.
- Co-locate with Seattle City Light corridor.
- Use Seattle City Light 230 kV line.
- Rely on BPA transmission line east of Lake Sammamish.
- Use PSE’s existing right-of-way between 123rd and 124th Streets.
- Underground lines (and update the tariff law relating to who would pay for the extra cost).
- Use submarine cables in Lake Sammamish and/or Lake Washington.

The majority of comments indicated a lack of support for Alternative 1.

Demand-Side Reduction/Non-wire Technologies

This alternative was presented as Alternative 2 during the scoping period. It refers to a non-wire solution that looks to reduce demand by using demand-response technologies and increased energy efficiency, increasing energy production through distributed generation sources, and storing energy for use during peak periods. The comments received recommended including the following elements as part of this alternative in the Phase 1 Draft EIS:

- **Demand response**
 - Implement demand-response initiatives (e.g., shift load from peak to non-peak hours). Options to evaluate:
 - Incentivize large customers to reduce their electricity use during peak time.
 - Enroll customers to receive messages when the system is nearing capacity, and ask them to turn off unnecessary electric equipment.
 - Increase the price of electricity during peak demand times to reduce demand from growth and keep electricity use at current levels. This should include the use of a tiered pricing model.
 - Upgrade city codes, ordinances, building standards, and zoning rules for both commercial and residential uses (implement LEED standards for all new

² The types of conservation measures anticipated are similar to those already being implemented by PSE and include: (a) providing in-home energy efficiency consultations, tips, and guides; (b) working with local banks and credit unions to institute financing programs for PSE residential energy-efficient equipment retrofits and natural gas conversions; (c) providing incentives for commercial entities to save on energy-efficient equipment and waste-reducing services; and (d) supporting use of renewable resources and providing net metering for customers who generate at least a portion of the electricity they use through these means.

construction, require buildings to retrofit, require retrofits and remodels to comply with LEED or other energy conversation and management standards, require all new construction to be net zero construction).

- Incorporate differential time-of-day and consumer-category rate structures.
 - Provide meter buy-backs (metered units that allow a utility provider to purchase energy generated by a customer).
 - Minimize peak loads during rare peak demand hours using one of many cloud-based control solutions currently available from companies like Opower.
- **Distributed generation**
 - Modernize the grid to better use local rooftop solar.
 - **Energy storage**
 - Purchase Tesla 10kWh Powerwalls (or similar) for each home and business in Bellevue that would amount to approximately 570 MWh of stored energy that could be used to reduce peak load very significantly.
 - Install a dispatchable battery storage system from vendors like AES and Tesla.

Many comments supported Alternative 2 or some aspects of it.

New Transformers at Existing Substations and New 115 kV Transmission Lines

This alternative was presented as Alternative 3 during the scoping period. It refers to installation of 115 kV transmission lines; new transformers at the Sammamish, Talbot Hill, and Lake Tradition substations; and continued implementation of conservation efforts described above for Alternative 1.

Numerous comments expressed opposition to this alternative; however, no changes to the alternative were suggested.

No Action Alternative

This alternative was presented as Alternative 4 during the scoping period and would not include any new transmission lines, substations, or major battery storage facilities. PSE would implement maintenance and the same types of conservation measures described above for Alternative 1, none of which would require local or state approvals. The community recommended including the following elements as part of this alternative in the Phase 1 Draft EIS:

- Notify Cities that electrical capacity is not available for projects in the development application process. Cities would then adjust their growth plans or permit processes to deal with this as one of the realistic possible scenarios. Developers will then be able to find other ways to pay for electrical infrastructure or conserve energy if it is financially worth it to them.
- Request an exception from the federal rule [regarding reliability]. This will allow Cities and states to consider whether this is an option and allow time to create more green building and sustainable technologies to meet the demand.

- Ensure No Action is properly defined to include “operational flexibility.” Comments indicated that Columbia Grid documentation shows that if two major components of other systems were to go out simultaneously,” operational flexibility” would be reduced (as opposed to “lights out” currently described for No Action).

A handful of commenters specifically supported the No Action Alternative.

Upgrade/Adjust Existing Electrical System

Many comments were made suggesting a new alternative approach to upgrading PSE’s existing electrical system to address the problem. This alternative was not presented during the scoping period.

- Avoid providing power for the region (outside of PSE’s service area) when the Eastside needs it during peak periods. Increase the capacity of the one transformer that was identified as overloaded in the U.S.E. modeling exercise or install two transformers.
- Disconnect the north and south sections of the route at a central Bellevue substation in order to prevent non-Eastside load from being carried on this line.
- Rely on BPA action to resolve the Canadian power issue: BPA to build Monroe-Echo Lake #2 project, perhaps plus other smaller, scalable, less expensive solutions by PSE to meet the local needs to support Eastside growth.
- Ask BPA to upgrade its lines to 500 kV.
- Renegotiate Columbia River Treaty with Canada.
- Switch existing 115 kV transmission lines to direct current (DC) to improve capacity.
- Add transformer and upgrade system as follows: (a) Install new large transformers at line termini and keep spares on hand. Transformers could be added “incrementally” as needed to support load growth in the Eastside with a relatively short lead time (2 years). (b) Simultaneously, as appropriate, rewire one or two of the existing 115 kV lines to somewhat larger current carrying capacity, modern “high temperature” wires. (c) In addition, as necessary, install inductors on these lines to limit the amount of “cut-through traffic.”
- Install “self-healing” power lines like Seattle City Light. This allows real-time outages to be detected, the circuit to be isolated, and then instantaneously reroutes the traffic when an outage occurs.
- Increase the load capacity of existing 120 kV lines without going to large power poles, including up-conductoring, installing high-temperature conductors, software modeling of weather conditions to dynamically predict load capacity of lines, installing strain gauges to actually dynamically measure line behavior, etc.

Generation Facilities

Comments were made suggesting that generation facilities would help to solve the problem. This approach was not presented during the scoping period.

- Evaluate upgrading the existing 115 kV line by adding a new gas-powered plant, microgrids and small turbines, and/or grid batteries.
- Install one or more new “peaking generator stations” on the Eastside itself, as near as possible to the biggest loads.
- Create a dispatchable backup generator network on the Eastside similar to the 100 MW system in operation in Portland, Oregon. Many Eastside buildings, like hospitals and data centers, already have backup generators which can be networked together and remotely controlled by PSE to run during rare peak demand events.
- Build a gas-fueled peaker plant next to the Factoria Solid Waste Management Transfer Station right across from the Lakeside substation. Such a plant may run 5 hours out of every 5 years from fuel stored on-site.
- Fully utilize the existing (or an upgraded) PSE-owned “Westside Peaking System” which has approximately 1,400 MW of capacity, during the Eastside’s rare peak demand hours. PSE’s Westside Peaking System consists of multiple, large, natural gas-fired generators which are designed to operate only during rare peak demand events.

Combined Approach/Phased Approach

Comments were made recommending that the project should be phased or alternatives should be combined to address the problem. These approaches were not presented during the scoping period.

- **Phased approach**
 - Allow for battery storage and local generation (such as solar and battery storage) to be adopted quickly as it comes online in the next several years and beyond. PSE should evaluate how to create a plan that allows future demand to be met by these technologies without assuming it will all be met by Alternative 1. Include both large industrial as well as residential users. This could be a hybrid of Alternatives 1 and 2.
- **Combine alternatives**
 - Use Westside Peaking System, install one or more peaking generator stations, and/or create a dispatchable backup generator network and leave 115kV line in place.
 - Increase capacity of existing 115 kV line and/or eliminate power flows to the north or south during rare peak demand events.
 - Install energy conservation and efficiency system; build large dispatchable battery storage projects; and/or implement demand response program, and leave 115 kV line in place.
 - Combine two or more from the above alternatives.

Issue 3 - Public Safety

Many commenters expressed concerns regarding locating the proposed transmission line adjacent to the fuel pipeline operated by Olympic Pipeline Company. Comments were primarily regarding the risk of catastrophic explosions and leaks, both during and after construction. The steel pipeline transports jet fuel, gasoline, and diesel through the Eastside cities from Blaine, Washington, to terminals in Seattle and Portland. Concern was expressed that there was a high risk of damaging the pipeline during excavation because the pipeline is not buried deeply and is quite old (approximately 40 years old). Along the corridor there are signs warning people to not dig anywhere near the pipeline or plant trees. Adjacent residents reported being asked to leave the house for safety purposes during maintenance. They are concerned that they will be asked to leave during construction, due to safety risks; this would not only be inconvenient but is an example of the increased risks.

Further, after construction, commenters expressed concern about the potential corrosive effect of the transmission line on the pipeline. BPA was said to have a policy of not locating their transmission line within a certain distance of a buried pipeline running parallel to a transmission line, and the proposed transmission line would be closer to the pipeline than BPA's stated policy. Arcing to trees, the ground, or structures, as well as the risk of towers falling in storms or earthquakes, were also significant concerns identified by commenters. Small punctures or weaknesses in the pipeline may result in leaks that are hard to detect and could be catastrophic if they are ignited. The large explosion in Bellingham in 1999 which killed three boys along this same pipeline was given as an example many times.

The Eastside cities are located in a known earthquake area. The existing transmission line and the fuel pipeline already cross the Seattle fault, and commenters stated that seismic activity could rupture the pipeline. A bigger transmission line, especially if located adjacent to the Olympic Pipeline, could compound this problem by placing larger structures with deeper foundations that could damage the pipeline if they fell over in an earthquake. Further, larger transmission lines require larger support structures, and commenters expressed concern that in the case of an earthquake, the poles are an increased threat to life and property within their fall zone. This is considered by the commenters as a significant risk to residents adjacent to the corridor as well as the community at large. Risks from solar storms were also cited as a concern.

Issue 4 - Tree Canopy, Parks, and Wildlife

There was great concern regarding the loss of many trees, with many commenters citing the potential removal of 8,000 – 10,000 trees for the transmission line project. Residents value the trees because they provide a unique and “park-like” character to their cities and neighborhoods; they said the loss of the trees would affect their quality of life. Commenters asked the Cities of Bellevue and Newcastle to stand by their mottos of a “City in a Park.” The trees buffer views and noise from highways and other high-intensity land uses. Commenters were also concerned about the loss of trees because they provide wildlife habitat, evapotranspiration, and shade as well as sequestering carbon. Many trees in the Eastside cities are large and provide substantial cover; Bellevue was said to have 36 percent tree canopy and has a new aspirational policy under consideration setting 40 percent as the target. Trees provide habitat for animals and the existing transmission line is considered by commenters as a corridor for the movement of birds and animals. The trees also function to shade and thus cool the cities, and subsequently reduce the

need for air conditioning. Trees uptake carbon through photosynthesis and store it, and tree roots and canopy help stabilize steep slopes and prevent erosion. Commenters stated that these capabilities would not be replaced immediately by replanting young trees, and long-term maintenance and operations would require trees to continually be pruned and removed when seen as nuisances.

Commenters expressed concern regarding loss of trees in Bridle Trails State Park and impacts to other parks. Bridle Trails is a forested, 482-acre park in Kirkland, and contains a number of trees over 100 years old. It also has equestrian trails, provides habitat to many animals, and is valuable to the community. It contains a large wetland in the northwest corner of the park that could potentially be impacted. The existing 115 kV transmission line bisects the park. Concern was expressed that the transmission line through Kelsey Creek Park would decrease the social value of the park and in particular poses a threat or health risk to children using the play structures. A similar concern was expressed for the neighborhood pool in south Bellevue.

Commenters were concerned about the transmission lines' impact on native and migratory bird species, flying insects necessary for pollination, and plant and animal species that are sensitive to heat and nighttime light.

Issue 5 - Views and Visual Resources

Commenters noted that the proposed 230 kV transmission line would negatively impact views from their individual houses as well as negatively change the look of their neighborhoods and cities. Commenters were concerned about the visual impact from the loss of trees and installation of up to 130-foot-tall poles. Residents value the trees not only for the beneficial uses they provide but also for their aesthetic value. Commenters described the transmission line as big, ugly, unsightly, an industrial blight, and not appropriate for residential areas or parks. In addition, commenters felt their property values would be decreased in part by the visual impact (described in more detail under Issue 9 below). Concerns were also expressed about light and glare.

Issue 7 - Noise

Commenters were concerned with an increase in noise from the larger transmission line. Those that commented on noise did not like the current noise from the existing transmission line and felt that the noise from the larger transmission line would be louder and interfere even more with the "peace and quiet" of their neighborhood. People wanted to know how loud it would be on an everyday basis and how loud it could get.

Issue 8 – Health Issues

Concerns regarding electric and magnetic fields (EMF) were expressed. In particular, concerns were for children and pregnant women who may be at a high risk for leukemia and birth defects. Commenters expressed concerns for horses and other animals from EMF. Many stated that although evidence is limited, it is because it is difficult to draw a 1:1 correlation between cause and effect because cancer can take a long time to manifest itself. Commenters suggested that PSE should follow the lead of some European nations which are considering EMF as a legitimate health risk.

Issue 9 – Property Values and Costs

Many commenters were concerned about the project's impact on property values and felt it should be evaluated in the EIS. A frequent comment was that the transmission line would decrease property values at least 10 percent; some said as much as 30 percent. The perceived safety and health concerns as well as visual impacts described above were given as the reasons for impacts to property values. The residential tax base was thought to potentially drop as the result of decreased home values, which in turn would affect overall city revenue for services.

In addition, residents were concerned that they would experience utility rate increases and have to pay for the construction of the transmission line. Some commenters supported the overhead transmission line because they believe it would be the most cost-effective solution and therefore hold down electric rates compared to other options. Some commenters stated that they would unfairly be bearing a cost burden for the benefit of PSE shareholders and energy users in Canada and California. Some commenters stated that PSE is incentivized to build an expensive, oversized solution to the problem because it leads to higher returns on equity. Comments were also received that the project is designed to primarily support development of downtown Bellevue and Bel Red, and residential neighborhoods would be impacted with no benefit to meet the needs of a growing downtown Bellevue and Bel Red areas.

Issue 10 – Land Use and Regulations

Commenters questioned the compatibility of the proposed project with the Cities' comprehensive plans, land use regulations, shoreline regulations, policies, and goals. They questioned how the transmission line fit with the “green” goals of the Eastside cities, specifically how it fits with Bellevue's current downtown livability effort.

Commenters questioned whether the transmission line should be an essential public facility (EPF). They questioned the legal standing as an EPF quoting City code, the Growth Management Act (GMA), State Energy Facility Site Evaluation Council (EFSEC) regulations, Washington Administrative Code (WAC), and a court case between residents in Kittitas County and EFSEC.

What will be studied in the Phase 1 Draft EIS?

The Phase 1 Draft EIS will evaluate three action alternatives and a “No Action” Alternative, as described below. Each alternative includes a range of possible options that will be considered. The preliminary alternatives presented as part of the Scoping Notice and the alternative approaches recommended by the community were evaluated to determine if they would meet PSE's stated objectives (see Attachment 1) as required by SEPA (WAC 197-11-060, WAC 197-11-408, and WAC 197-11-440) and the project's purpose. This evaluation was done with assistance from electrical engineers from Stantec, a consulting firm that is part of the EIS consultant team, and PSE engineers. The criteria in Attachment 1 are considered the fullest expression of the objectives that PSE has in developing solutions for the Energize Eastside project. The EIS consultant team reviewed PSE's criteria and prepared the expanded explanations of the criteria included in Attachment 1. The EIS consultant team also reviewed the need for the project as described in PSE's Needs Analysis (discussed further under *How will the purpose and need of the project be addressed?* below).

Staff from the Eastside Cities and the EIS consultant team discussed the various approaches to resolving the problem and identified the alternatives that should be included in the Phase 1 Draft EIS (see “*Which alternatives will be studied in the Phase 1 Draft EIS?*” below). In identifying the alternatives, the Eastside cities considered PSE’s objectives for the project, which are included in Attachment 1 of this summary. Alternatives that did not meet PSE’s project objectives were not recommended for inclusion in the Phase 1 Draft EIS analysis, consistent with SEPA rules that require EIS alternatives to feasibly attain or approximate a project’s objectives (see more information on SEPA rules above under “*Introduction*”).

The Eastside cities also identified which community concerns expressed during the scoping period should be evaluated as part of the “elements of the environment” in the Phase 1 Draft EIS. The likelihood of potential significant impacts, as required by SEPA, was used to determine which impacts should be studied and which did not warrant study.

How will the purpose and need of the project be addressed?

The EIS consultant team evaluated PSE’s Needs Assessment, the Bellevue City Council’s U.S.E. report, and other PSE supporting background material to consider the consistency of assumptions, data, and methods with adopted industry standards and practices, including PSE’s methods for forecasting the demand and how the project fits in with PSE’s planning horizon.

Based on this evaluation, the EIS will identify the stated purpose and need for the project, PSE’s project objectives (see Attachment 1), forecasted peak electrical demand growth, and the results of PSE’s needs analysis. This will include explanations of reliability (or redundancy) standards and operational needs. Key federal and state rules will also be identified, along with standards established by the North American Electric Reliability Corporation (NERC) and Western Electricity Coordinating Council (WECC) and applicable treaty arrangements. .

The Phase 1 Draft EIS will explain PSE’s electrical system and how it fits into the regional electrical system. Regional electrical needs versus local needs will be described in relationship to the projected megawatt demand identified by PSE. Each Phase 1 Draft EIS alternative will be described in detail and its ability to meet the forecasted demand and PSE’s project objectives. Project costs associated with each alternative will also be characterized along with economic implications for ratepayers.

How was PSE’s analysis used in this process?

PSE and its consultants prepared reports for its system planning that have been provided to the Eastside cities and the EIS consultant team. The computer model used for system planning is one that is used throughout western North America. PSE is one of many utilities that provide baseline information to the model. The consulting firm Stantec reviewed unredacted results from the model in PSE’s Needs Analysis and the Energize Eastside Solutions Reports (2013 and 2015) to ensure that the EIS consultant team had a clear and unbiased picture of the purpose of the project and what types of options are viable for achieving that purpose (Stantec has security clearance). Stantec and other members of the EIS consultant team had questions that were posed to PSE. In some cases this required PSE to do additional calculations. These were reported to the EIS consultant team by email. In each case, Stantec reviewed the analysis for consistency with industry practice and for internal consistency among the various PSE-provided documents.

How were the alternatives selected?

Initially, two action alternatives were identified from PSE’s Solutions Report (2013) that appeared to substantially meet PSE’s objectives and that could have lesser impacts than the proposal. These were described in the Scoping Notice for the project (see Demand Side Reduction/Non-wires Technologies and New Transformer - Existing Substation). PSE’s Solutions Report also included the option of building a large gas-fired generation plant, but this was determined by the Eastside cities to be likely to have greater environmental impacts than the proposal and therefore was not included as an alternative in the Scoping Notice.

As part of the scoping process, citizens and agencies identified different potential alternatives to meeting the projected demand in the Eastside. These potential alternatives were evaluated to determine if they met PSE’s identified project objectives and criteria. Stantec identified whether the potential alternatives identified in the scoping process had been addressed in PSE’s analysis, and if so, identified which criteria were critical in determining whether the option was viable or not. In some cases, the exact alternative had not been addressed, and PSE ran additional analysis to determine whether the alternative would be viable.

For potential alternatives that were not evaluated by PSE in its Solutions Report analysis, Stantec provided a professional opinion as to whether the proposed alternative would meet PSE’s criteria.

Stantec’s findings were reviewed by the EIS consultant team and the Eastside Cities, and the Eastside Cities agreed upon the alternatives to be analyzed. Generally, alternatives that would not meet PSE’s objectives were not included (see section titled “Which alternatives were considered and will not be included” below for more discussion). As described immediately below, however, some aspects of the alternatives will be analyzed that are not perfectly consistent with PSE’s objectives related to security, proven technology, and reasonable cost. These objectives, while important, could be addressed by other means, and the Eastside Cities have determined that the broader purposes of SEPA would be better served by including alternatives that could substantially meet the applicant’s objectives, even if they would have some shortcomings for PSE.

Which alternatives will be studied in the Phase 1 Draft EIS?

The alternatives listed below were shaped by the comments received during the scoping period and have been determined to substantially meet PSE’s stated project objectives and purpose.

Alternative 1 - New 230 kV Transmission Line and Transformer

This alternative includes installing a new transformer that would transform 230 kV bulk power to 115 kV. This new transformer would require either expansion of an existing substation on the Eastside or construction of a new substation. It would also need to be fed by new 230 kV power lines. The Phase 1 Draft EIS will consider a range of 230 kV transmission options to serve the Eastside. The key elements of this alternative will include the following:

- New or expanded substation at or near Vernell, Westminster, or Lakeside substations.
- New 230 kV transmission line from Redmond to Renton, located between Lake Washington and Lake Sammamish, including the following possible options:

- Assume existing right-of-way corridors could be used, including co-location with Seattle City Light and I-405.
- Assume Seattle City Light's 230 kV transmission line could be used along with construction of a new 115 kV line looping the system into the Lakeside substation.
- Assume overhead, underground, and underwater lines are all possible.
- Assume a range of conductor sizes and pole configurations.
- Assume a single-circuit 230 kV line which would result in shorter pole heights than what PSE is currently proposing.
- Ongoing conservation efforts as described in PSE's Integrated Resource Plan.

Alternative 2 – Demand-Side Reduction/Non-wire Technologies

A combination of methods to meet the projected need and PSE's stated electrical criteria would be used such as the following:

- Demand response (e.g., installing specialized devices to control customer electrical usage and help manage peak uses).
- Energy efficiency (e.g., promoting use of LED lightbulbs rather than incandescent, more efficient appliances, and updated windows and insulation).
- Distributed generation (e.g., promoting use of features such as rooftop solar panels, small-scale wind turbines, and waste digesters).
- Energy storage using large-scale battery systems.

Alternative 3 - New 115 kV Transmission Lines and Transformers

Shortly after the scoping comment period closed, PSE evaluated Alternative 3 which was included in the Scoping Notice. This alternative would add the following facilities:

- A new 230 to 115 kV transformer at Lake Tradition;
- A loop in the BPA Maple Valley-Sammamish 230 kV line;
- A third 230 to 115 kV transformer at Sammamish substation;
- A third transformer at Talbot Hill substation;
- Three new 115 kV lines at Lake Tradition;
- Two new 115 kV lines at Sammamish substation; and
- Two new 115 kV lines at Talbot Hill substation.

The seven additional 115 kV lines would total 55 to 60 miles in length. This alternative would not cause any overloads to transformers or transmission lines. However, this alternative is not preferred by PSE because the addition of a third transformer into either Talbot Hill or Sammamish substations violates a security guideline in PSE's Planning Standards and Guidelines described in PSE's stated selection criteria (see Attachment 1). The Federal Energy Regulatory Commission (FERC) requires utility providers to develop and implement security plans and prioritize facilities sized 200 kV and above, and this PSE planning standard is part of

PSE's response to that mandate. However, because it could meet the other electrical criteria, and because alternate security measures such as those employed by other utilities with substations containing more than two transformers could be employed, this alternative will be evaluated in the Phase 1 Draft EIS.

No Action Alternative

As required by SEPA, the No Action Alternative must be evaluated in an EIS. The No Action Alternative will include ongoing maintenance and conservation measures that PSE can do without requiring state or local approvals. No new 230 kV transmission lines, substations, or major battery storage facility would be built. Additional detail on the level of risk and need for load shedding will be provided. An increase in risk by summer 2018 is expected, with a total of 74 MW deficiency increasing to 123 MW deficiency by summer 2024. The need for load shedding in winter begins in 2023 - 2024 in the amount of 133 MW deficiency. Load shedding would be in addition to Corrective Action Plans (CAPs) that could be needed as early as winter 2017 - 2018. PSE does routine maintenance now on all lines and transformers including real-time monitoring of transformer loading, and dissolved gas analysis of transformer oil to monitor breakdowns in insulation. Increasing maintenance frequency would not improve PSE's ability to serve load. If no action is taken, load shedding is expected to be a reality (see Supplemental Eastside Needs Assessment Report Table 3.1 & 3.2, April 2015 for more information).

Which alternatives were considered and will not be included in the Energize Eastside EIS?

The following alternatives were considered through scoping but will not be included for analysis in the Phase 1 Draft EIS.

Using Existing BPA High-Power Transmission Line

Using the existing BPA line east of Lake Sammamish instead of installing a new 230 kV line in the Eastside is not being included in the Draft EIS because this source is outside the area that is in need of more electrical power. To connect this source to the deficiency area would require new 115 kV line construction to marginally support the area. PSE examined several scenarios examining this potential solution. These include the following:

Tapping the BPA Maple Valley – Sammamish 230 kV line and the Seattle City Light SnoKing-Maple Valley 230 kV line, and looping a new 230 - 115 kV Lakeside substation between the tapped lines.

Using the 230 kV BPA Maple Valley – Sammamish Line to loop into Lake Tradition and installing a new 230 – 115 kV transformer at Lake Tradition to serve 115 kV load. The solution also included reconductoring the Seattle City Light Maple Valley – SnoKing 230 kV with high-temperature conductors.

Adding a 230 – 115 kV transformer at Lake Tradition and looping in BPA Maple Valley-Sammamish 230 kV line. Adding a third 230 - 115 kV transformer at Sammamish substation and assuming no new 115 kV lines are added to either substation.

Adding a 230 – 115 kV transformer at Lake Tradition, looping in BPA Maple Valley-Sammamish 230 kV line, and adding a third 230 - 115 kV transformer at Talbot Hill substation. It was assumed that no new 115 kV lines were added to either substation.

Adding a 230 – 115 kV transformer at Lake Tradition, looping in BPA Maple Valley-Sammamish 230 kV line, and adding a third 230 - 115 kV transformer at Sammamish substation. This assumed new 115 kV lines would be constructed to both substations.

Adding a 230 – 115 kV transformer at Lake Tradition and looping in BPA Maple Valley-Sammamish 230 kV line, and adding a third 230 - 115 kV transformer at Talbot Hill substation. This assumed new 115 kV lines would be constructed to both substations.

All of these solutions were found to overload either transmission lines or transformers and therefore would not meet PSE's stated project objectives (see Attachment 1). The solutions that proposed installing a third transformer at existing substations would also violate PSE's Planning Standards and Guidelines (see discussion above under Alternative 3). See Eastside Transmission Solutions Report, October 2013 (updated February 2014), Tables 4.1 and 4.2 and Sections 4.6.3, 4.6.6, 4.6.8, 5.1.1, and 5.1.2 for more information.

Upgrade/Adjust Existing Electrical System

Disconnecting the system from the region or not providing power to the rest of the region during peak periods is not a viable solution for several reasons. First, PSE has statutory and regulatory obligations that come with being interconnected to the electric grid and that cannot be violated without penalties. Those obligations are with the FERC, NERC, WECC, Columbia Grid, and Washington State Utility and Transportation Commission (WUTC).

Second, this solution would also compromise PSE's ability to supply power and maintain reliability in an efficient and cost-effective manner. The generation that is owned and contracted for by PSE is generally outside PSE's service area and requires transmission lines to transport that power to PSE's service area. The diversity of generation mix provides security in the event that one kind of generation becomes limited (e.g., hydroelectricity in a year with low snowmelt or rainfall). Being part of the regional grid allows the dispatch of the least costly generating units within the interconnected area, providing an overall cost savings to PSE customers. Planned outages of generating and transmission facilities for maintenance can be better coordinated so that overall cost and reliability for the interconnected network is more efficient. Being interconnected also allows economies of scale for both transmission and generation facilities. Finally, this solution could reduce the supply of power to the Eastside, necessitating additional conservation, generation, or storage beyond that considered in the other alternatives in the EIS.

Third, disconnecting the north and south sections of the route at a central Bellevue substation in order to prevent non-Eastside load from being carried on this line during peak periods of demand on the Eastside would deprive the Eastside of power supply needed during these periods. Separating the system in central Bellevue from the region at grid would also not meet FERC mandatory reliability standards. This could be a corrective action plan, which is temporary in nature and not a long-term solution, and does not bring a new source or new generation into the deficiency area.

Fourth, relying on BPA projects would not deliver the appropriate amount of power to the Eastside area because the BPA sources are outside the deficiency area and would only address wider regional problems, leaving a deficiency on the Eastside (also see *Using existing BPA high power transmission line* section above).

Fifth, renegotiating the Columbia River Treaty is outside the purview of PSE and the Eastside Cities and would not help solve the problem as described previously.

Sixth, although the switch to DC could potentially address the problem by marginally increasing the capacity of the lines, it would add complexity to the system that would reduce operational flexibility, which could have adverse impacts to the reliability and the operating characteristics of PSE's system. For example, if there was a problem within the DC portion of the system, it would not be possible to switch among other sources, as it is when the entire system is on alternating current (AC). This alternative has not been included because avoiding such adverse impacts to reliability is one of PSE's stated electrical criteria.

Finally, upgrades to the system (such as self-healing lines, up-conductoring, installing transformers and inductors, etc.) would not improve reliability but would shift electrical load onto other components of the system, causing new deficiencies without addressing the transmission problem. Self-healing lines are automated switching systems that are triggered by adverse events in the system. They do not add capacity to the system, just speed in recovery from an adverse event. Inductors perform similarly, shifting load but not adding capacity. PSE examined up-conductoring in their solutions report, and found that increasing capacity of 115 kV conductors led to transformers being overloaded. Conversely, adding transformer capacity led to overloading lines. Combinations were also considered. These solutions either do not meet the need, or they provide a short-term solution that would not meet PSE's performance criteria for serving 10 years or more after construction.

Generation Facilities

For a generation facility or group of facilities to be effective, PSE found that it would have to be located near the center of the Eastside area, such as near the Lakeside Substation. Any such facility would likely have to be gas-fired in order to be capable of producing power reliably whenever it is needed. PSE determined that at least 300 MW of power generating capacity would be needed and the most cost effective way to generate that amount of power would be in a single plant. In its 2013 Solutions Report PSE found that small distributed generation and energy storage would have little impact on the problem unless a large number were developed as described in the Demand-Side Reduction/Non-wire Technologies Alternative. Generation facilities at the 300 MW size would require a gas and water infrastructure that is presently unavailable, and providing this infrastructure would likely entail significant environmental impacts. Facilities of this type typically are large noise generators. In addition, the increased usage of gas-fired plants over time would have difficulty meeting clean air regulations. Even if it were economically feasible to create multiple smaller facilities, they would need to be clustered close to the center of the Eastside and would likely impose similar or even greater impacts than a single plant. This alternative is not included because it does not meet the criterion of being environmentally acceptable to PSE and the Eastside communities.

Backup generators could potentially solve the peak demand; however, PSE did not find enough existing generators or owners willing to connect to the network to meet the projected need. PSE cannot compel owners of generators to connect to a network. In addition, increased usage of diesel generators would not meet present clean air regulations, and such facilities often have considerable noise impacts. This alternative is not included because it does not meet PSE's performance criteria of serving 10 years or more after construction, and being environmentally acceptable to PSE and communities.

The Westside Peaking System is located outside the deficiency area and would require transmission to adequately deliver power to the load area. This alternative is not included because it would not address the deficiency on the Eastside.

Other Approaches

A phased approach would not address the quickly approaching transmission capacity deficiency during peak periods identified in the Eastside.

A combination of alternatives would not address the transmission capacity deficiency during peak periods that has been identified by PSE. Solving the Eastside deficiency requires a reliable alternative composed of one or both of the following:

- A new high-voltage energy source from the outside brought into the deficiency area.
- A new generation source, or energy storage of sufficient size and duration installed within the deficiency area.

The alternatives above that would violate PSE's Planning Standards and Guidelines (such as placing three transformers in a substation) or that could harm other utilities in the region (such as disconnecting the Eastside from the regional grid during peak periods) would not become compliant by combining them with other alternatives. Alternatives that would reduce the availability of power to the Eastside (such as limiting the flow of power from sources outside of the Eastside) would require even greater measures to compensate for the reduced power supply to the Eastside (such as new generation or storage, more conservation, or new transmission capacity) and as such would likely have greater impacts than the alternatives that will be evaluated in the EIS. Among the alternatives suggested, this leaves only the alternatives that will be studied and a few alternatives that provide temporary solutions, such as increasing the capacity of wires and transformers, or temporary rerouting of power during peak periods. Combining temporary solutions with the alternatives that are otherwise included in the EIS does not materially change the range of alternatives for the EIS, although such measures could reduce the severity or risk of impacts under the No Action Alternative.

Reducing the scope to include only Bellevue would require a generation facility within the city limits, which is not included for the same reasons as indicated under Generation Facilities above, or a solution similar to the Demand-Side Reduction/Non-wire technologies Alternative.

Therefore, narrowing the scope to include only Bellevue will not be considered as a separate alternative.

Which alternatives and potential impacts are more appropriate to study as part of the Phase 2 Draft EIS?

Many commenters identified potential for impacts specific to certain transmission line corridors. The Phase 1 Draft EIS will identify the range of potential impacts that could occur within the overall study area, while the Phase 2 Draft EIS will examine the potential for impacts specific to certain route alignments consistent with the alternatives that are carried forward into that second phase. The scoping process for the Phase 2 Draft EIS will be an opportunity for the community to identify impacts specific to certain geographic areas.

Which potential impacts will be studied in the Phase 1 Draft EIS?

Based on the scoping comments and the potential for significant impacts from the proposed alternatives, the following elements of the environment will be included in the Phase 1 Draft EIS. Each element of the environment will be included as its own separate chapter in the EIS. The description below is a summary of the topics to be covered in each chapter, indicating how the scoping comments would be addressed. Each EIS chapter listed below will begin with a description of methods used to identify existing conditions and impacts of the affected environment (study area). The chapters will evaluate potential impacts associated with all EIS alternatives, identify mitigation measures to minimize or avoid impacts, identify the potential for cumulative impacts, and conclude with statements about any potential significant and unavoidable adverse impacts. Mitigation measures, as required by SEPA (see WAC 197-11-660), must be reasonable and capable of being accomplished with the purpose of addressing adverse impacts related to the project proposal.



Air Quality and Greenhouse Gas Emissions

None of the alternatives are expected to generate significant amounts of greenhouse gas during construction or operation. The primary differences among alternatives with regard to greenhouse gases are the degree to which trees would need to be removed (resulting in a loss of carbon storage or “sequestration”) and the lifecycle greenhouse gas cost of materials from which the projects would be constructed. Because the Phase 1 Draft EIS is not a project-level analysis, quantification of these differences would be difficult at this time given the lack of detail about materials and sources that would be used. However, a qualitative comparison will be provided that indicates the likely range of impacts among the alternatives.



Earth

Potential impacts to earth resources will be discussed in this chapter. It will address how each alternative could affect or be affected by geological hazard areas (earthquake zones such as around the Seattle Fault, steep slopes, landslide hazard areas, etc.) that exist in the study area, including those in proximity to petroleum pipelines such as those operated by Olympic Pipeline. This chapter will also include the general potential for erosion, odor and dust related to vegetation clearing and construction of each alternative. Once potential impacts have been identified, mitigation measures will be discussed, including those for any potential erosion impacts during construction and earthquakes during operation.



Water

Surface water and groundwater conditions in the project area including areas with known high groundwater tables will be described in this chapter. The analysis will assess whether construction or operation of the project alternatives could affect surface waters (including wetlands, streams, and other water bodies) or groundwater. The analysis will also discuss applicable regulations for surface waters (including critical area buffers) and groundwater. The chapter will discuss likely stormwater impacts and associated regulations that would apply to the different alternatives. The analysis will consider whether removal of vegetation or other project actions could significantly affect groundwater or surface water movement.



Plants and Animals

The general types of vegetation found in the study area will be described, including existing tree cover, as well as the wildlife habitat provided by the existing vegetation. The chapter will discuss how trees contribute to ecological functions, including air and water temperature modulation (including stream shading, filtering of air pollutants, and reduction of heat island effect), and carbon sequestration. The types of animal species known to be living in or migrating through the project area, including aquatic species, will be described, along with whether any of those species are specifically regulated, requiring special protection. The chapter will describe the likely relative impacts to plants and animals from each alternative, looking at both the direct and indirect impacts of typical construction activities for each (including impacts to the nearshore environment with a potential subsurface transmission line route through Lake Washington or Lake Sammamish, tree canopy functions [as described above], and wildlife habitat migration corridors), as well as their long-term operations.

The chapter will also describe whether and how different light or glare conditions or different types/locations/heights of transmission poles and conductor lines could affect wildlife compared to existing conditions. The analysis will assess whether invasive plant species are likely to move into the area if trees are cleared and how that could be managed. The chapter will also assess the likelihood of windthrow (falling trees) as a result of a potential wind tunnel effect from cleared transmission line corridors. It will assess the relative cumulative contribution of each alternative to regional vegetation loss. The chapter will describe mitigation measures for wildlife that could be used to abate impacts such as from displacement or noise. Finally, the chapter will address how trees that are not being removed could be protected in place during construction.



Energy and Natural Resources

Background information on the natural resources used to generate electrical energy in the Pacific Northwest region will be described and how each of the alternatives would compare in using those resources. The analysis will rely on technical information to be provided as part of the project purpose and need about how electrical power moves and will describe efficiencies lost and gained with the different types of systems and facilities in each alternative. The chapter will address the consistency of each alternative with applicable energy policies, and will discuss whether and how implementing any of these alternatives would affect PSE's ability to change its energy delivery system in the future. The chapter will also discuss whether or how each of the alternatives would affect the need for BPA to develop other transmission facilities (such as the Monroe-Echo Lake project).



Environmental and Public Health (including public safety, hazardous materials, and electric and magnetic fields)

The topics of hazardous materials and electric and magnetic fields (EMF) and other safety issues will be addressed in the chapter. It will describe the potential for impacts on the petroleum pipeline operated by Olympic Pipeline. The EIS consultant team has added new team members with the appropriate technical knowledge to accurately assess potential impacts related to the pipeline. The chapter will also describe any hazardous materials that would be used in operation of each of the alternatives. It will describe what EMF is and how it is generated. The analysis will discuss the state of the science and what is known about the potential for health impacts related to EMF (including specifically pregnant women, children, elderly, and animals), including potential interference with medical equipment (such as pacemakers) and radio

frequencies (such as those used by emergency personnel). The chapter will include information about typical background conditions and levels of EMF and the levels likely to be found in the project area now. It will also describe the presence of corona ions under existing conditions (including how weather affects corona ions) and as a result of the project alternatives. It will evaluate the potential impact of corona ions on human health, including those with respiratory issues, as well as their potential to interfere with police and emergency personnel communication systems. The chapter will assess whether there would be any likely construction or operation impacts to health, including from EMF and corona ions. It will discuss emergency measures and services that could be needed in the event of a pipeline explosion, and safety issues and measures related to removal and installation of power poles and substation equipment. The analysis will address operational safety issues, including abatement of lightning risks, solar storms, and safety standards for installation of new or taller power poles. The chapter will also describe how construction wastes would likely be managed.



Noise

Basic information about how people perceive sound and what constitutes a sensitive receptor will be provided in the chapter. It will qualitatively describe existing noise types and the likely noise levels based on a review of existing land use and other mapping and industry literature, including types and levels of sounds usually emitted from electrical equipment now existing in the study area. The analysis provide background information on how animals have been found to react to different types of noises and whether the alternatives are likely to generate these types and levels of noises. The chapter will discuss how each of the alternatives would likely affect existing noise conditions and how those changes would affect both people and wildlife.



Land and Shoreline Use and Housing

The general types of land use and housing types found in the study area will be described. The chapter will describe goals and policies that relate to the siting and design of electrical systems, including transmission, distributed generation, energy storage, and substations. The chapter will also identify which zoning districts and shoreline management designations would allow the various alternatives as a permitted or conditional land use. The chapter will articulate the state definition of essential public facility along with any Eastside City's guidelines on the criteria used to determine the applicability of essential public facility regulations to each of the alternatives. An evaluation will be made to assess the compatibility of each alternative with the vision statement, goals and policies of all applicable planning documents, including Comprehensive Plans and Shoreline Master Programs, for each of the affected jurisdictions, including a qualitative assessment of how the No Action Alternative could adversely affect the ability to reach growth targets in the Comprehensive Plans if power supply were to become unreliable in the area. Any use limitations in applicable zoning codes will also be identified. The chapter will describe potential land use and housing compatibility issues that could be presented by each of the alternatives, including potential impacts to property values described in more detail under Views and Visual Resources. Such compatibility issues could include the cumulative effects of several different types of impacts, such as aesthetics, noise, and light and glare, on existing or expected land uses. The chapter will describe mitigation measures for land use, shoreline use, and housing that could be used to abate impacts such as from visual changes or noise.



Views and Visual Resources

A qualitative comparison of the relative aesthetic impacts of each alternative will be characterized in broad terms, along with the ability to minimize or mitigate such impacts. Photographs and diagrams of typical facilities of similar scale and character will be included to illustrate the project elements of each alternative being evaluated. A qualitative viewshed assessment will be prepared to characterize areas that could be affected by the alternatives. Potential effects of the alternatives on various land uses will be characterized including impacts on views and visual resources from tree canopy removal. Each alternative will be evaluated for consistency with goals and policies on views and visual resources. The chapter will also include a general discussion of the potential impact the alternatives could have on property value, as a proxy for the potential significance of the visual impacts. Existing reports and analysis that evaluate property value impacts resulting from electrical systems will be described, and their relevancy to the project alternatives clarified. The chapter will discuss the likelihood of impacts on eligibility for home loans to conform to underwriting requirements.



Light and Glare

Potential impacts from light and glare associated with the proposed alternatives will be identified. Lighting needs for each alternative will be described and the effect of such lighting on various land uses will be documented.



Recreation

The active and passive recreational resources in the project area will be identified and described, including Bridle Trails State Park, greenbelts, South Bellevue Community Pool, and others, both public and private. The potential types of impacts to parks, playfields, and other recreational facilities will be assessed and discussed, including whether the alternatives would alter access to or use of those facilities in either the short or long term. The assessment will also consider whether indirect effects to recreational facilities would be likely from possible direct effects to other elements of the environment, such as vegetation and aesthetics. The safety risks to recreational users will also be assessed as a result of the different alternatives.



Historic and Cultural Resources

Historic and cultural resources that can be identified through a literature search for the study area will be described. The potential types of impacts to these resources from construction and operation of each alternative will be described as well as types of available mitigation if any is needed. Note that no scoping comments were received on this topic.



Transportation

The transportation system and resources in the study area will be generally described within the chapter. This will include streets, parking, sidewalks, driveways, and other access points. A general discussion of the anticipated range of construction impacts, major roadways, transit corridors, and non-motorized facilities that could be affected, and potential approaches to mitigation, will be included.



Public Services

An assessment of public services will be made in the chapter, including emergency response, available in the project area. The analysis will address whether any of the alternatives would likely alter or hinder provision of emergency or other public services, or lead

to an increased need for emergency or other public services as a result of an accident associated with construction and operation of each alternative. Based on the potential change to property values described under Views and Visual Resources, the chapter will generally describe the potential range of impacts to tax revenue and how that could impact the affected Cities' ability to continue to provide the same level of public services. The chapter will also describe the implications of the No Action Alternative for disadvantaged communities in terms of interrupted electrical services.



Utilities

The types and location of major known utilities and infrastructure (including water, sewer, stormwater, and electrical facilities), and any plans the utilities have for expansion will be described. The potential short-term and long-term impacts to utilities will be assessed, including whether any impacts would arise from co-location or proximity to other utilities and placement of new transmission lines underground. The discussion will include the types of coordination that would be needed with different utility service providers in order to construct and operate each alternative. The chapter will describe the potential impact to ratepayers based on project costs for each alternative.

Where can interested parties get more information?

The City of Bellevue remains available to answer questions and provide information about the SEPA process for the proposal. Information is available on the project website, hosted by the City of Bellevue on behalf of the five cooperating jurisdictions, at www.energizeeastsideeis.org.

Interested parties may also contact David Pyle, Energize Eastside EIS Program Manager at the City of Bellevue at 425-452-2973 or info@EnergizeEastsideEIS.org.

Additional information about the proposed project can be found on PSE's website at <http://www.energizeeastside.com>.

PSE'S STATED OBJECTIVES FOR ENERGIZE EASTSIDE

The Energize Eastside project is a private project proposal; therefore, the applicant (PSE) is responsible for developing the objectives of the proposal. The following is a list of the criteria from PSE's Supplemental Eastside Solutions Study Report (May, 2015). PSE's criteria are based on regulations for utilities and prudent, safe industry practices. Collectively, these criteria were considered the fullest expression of the objectives that PSE has in developing solutions for the Energize Eastside project. Therefore, these criteria have been used in the Phase 1 Draft Environmental Impact Statement (EIS) scoping process to identify reasonable alternatives for consideration in the EIS.

To clarify PSE's criteria for the layperson (community and decision makers), PSE, the Eastside Cities and the EIS consultant team developed descriptions for each criterion. These descriptions were developed based on PSE documents and the EIS consultant team's familiarity with the power delivery system in western North America, and they have been reviewed for accuracy and completeness by PSE and staff with the Eastside Cities.

Electrical criteria

A. Applicable transmission planning standards and guidelines including mandatory North American Electric Reliability Corporation (NERC) and Western Electricity Coordinating Council (WECC) standards (e.g., NERC TPL-001-4 and WECC TPL-001-WECC-CRT-2)

These federal requirements mandate that PSE "shall demonstrate through a valid assessment that its portion of the interconnected transmission system is planned such that the Network can be operated to supply projected customer demands and projected Firm (non-recallable reserved) Transmission Services, at all demand levels over the range of forecast system demands" under NERC performance categories A, B, and C. Essentially, PSE must plan the system to function even in scenarios where customer demand may be at its highest and/or elements of the system may be out of service. Below are examples of the standards and guidelines used during the PSE planning process.

N-0 Thermal and Voltage Performance – NERC and WECC standards

This refers to system performance with all system components operating normally. The system must perform without violations of thermal and voltage limits with all systems operating and no contingencies occurring.

N-1 Thermal and Voltage Performance – NERC and WECC standards

This refers to system performance with one contingency in the system. A contingency refers to a component that is not operating normally and may be turned off in limited operation, either due to an emergency or as part of scheduled maintenance or system improvements. The system must perform without violations of thermal and voltage limits with one contingency occurring.

N-1-1 & N-2 Thermal and Voltage Performance – NERC and WECC standards

This refers to system performance with two contingencies in the system. This could be due to an emergency, as part of scheduled maintenance or system improvements, or a combination. The system must perform without violations of thermal and voltage limits with two contingencies occurring.

Use of Corrective Action Plans (CAPs) and Remedial Action Schemes (RAS) – NERC and WECC standards

See criteria K and L below.

Substation Planning and Security Guidelines

PSE's Transmission Planning Guidelines state: "Transmission substations should be laid out for ultimate double 230 - 115 kV transformer bank configuration." On November 20, 2014, FERC issued Order 802 Critical Infrastructure Protection (CIP). That order states, "Physical attacks to the Bulk-Power System can adversely impact the reliable operation of the Bulk-Power System, resulting in instability, uncontrolled separation, or cascading failures." On July 15, 2015, FERC issued a follow-up order to CIP-014. Paraphrasing from that order, certain registered entities are required to take steps (or demonstrate that they have already taken steps) to address physical security risks and vulnerabilities related to the reliable operation of the Bulk-Power System. Owners or operators of the Bulk-Power System must identify facilities that are critical to reliable operation. The owners or operators of those identified critical facilities shall develop, validate, and implement plans to protect against physical attacks that may compromise the operability or recovery of such facilities. Following FERC direction, and prudent planning and operating standards, PSE limits the number of transformers at substations to two 230 - 115 kV transformer banks. In other words, based on security threats to the physical electric infrastructure, it is not reasonable or prudent to put "all your eggs in one basket."

B. Within study period (2015 - 2024)

This refers to the 10-year study period during which potential solutions must meet the solution criteria. The study period is defined as the 10-year period between 2015 (the study year of the Solutions report) and 2024 (the final year of the WECC base cases used for the study).

C. Less than or equal to 95 percent of emergency limits for lines

PSE has two thermal operating limits: normal and emergency. The *normal* operating limit is a specific level of electrical loading that a system, facility, or element can support or withstand through the daily demand cycles without loss of equipment life. The *emergency* limit is a specific level of electrical loading that a system, facility, or element can support or withstand for a finite period. The emergency rating is based upon the acceptable loss of equipment life or other physical or safety limitations for the equipment involved. If there is a violation of the emergency limit, a transmission line may not meet applicable clearance, tension, and sag criteria due to overheating.

PSE's operating practice is to shift or shed load or dispatch generation to avoid reaching an emergency limit. PSE utilizes 95 percent of the emergency limit as an indication of when PSE needs to start the process to study and upgrade the system to prevent violations of mandatory performance requirements and equipment loss of life. All PSE lines of any voltage must remain equal to or below 95 percent of the emergency line-loading limit over the study period in order

for a viable alternative to become a potential solution. This includes all periods of the year whether the system is operating under normal or abnormal system configurations, or during light load or peak load conditions. The system operator receives an alarm when the transmission line reaches 95 percent of its emergency limit.

D. Less than or equal to 90 percent emergency limit for transformers

As discussed above, PSE has two thermal operating limits: normal and emergency. If there is a violation of the emergency limit in a transformer, it may overheat, causing a breakdown in internal insulation and leading to a transformer failure or reducing its operational life. Substation transformers are filled with oil to facilitate cooling and insulation. However, if the transformer overheats, the oil may catch fire or explode, which is a serious safety concern. PSE's operating practice is to shift or shed load or dispatch generation to avoid reaching an emergency limit. PSE utilizes 90 percent of the emergency limit for transformers as an indication of when PSE needs to start the process to study and upgrade the system to prevent violations of mandatory performance requirements and equipment loss of life. All PSE transformers of any voltage must remain equal to or below 90 percent of the emergency loading limit over the study period in order for a viable alternative to become a potential solution. This includes all periods of the year whether the system is operating under normal or abnormal system configurations, or during light load or peak load conditions. The system operator receives an alarm when the transmission line reaches 90 percent of its emergency limit.

E. Normal winter load forecast with 100 percent and 75 percent conservation

A normal winter load forecast is a snapshot in time reflecting the highest expected load in winter for the given year of the forecast. This would not be considered an average load, but a peak load. The peak load is used to ensure that the system can withstand the highest estimated loading under all system configurations and still reliably serve customers. A 100 percent conservation level is the amount of reduction in load that PSE estimated could reasonably be attained through energy efficiency, demand response, and distributed generation. The 75 percent conservation level is the estimated amount of reduction in load multiplied by 0.75 to account for the possibility of achieving only 75 percent of the projected conservation, or attaining actual conservation in locations or magnitudes inconsistent with the study model assumptions. Perfect precision cannot be attained without completely accurate data, and the 75 percent conservation level serves as a gauge to help planners understand the ramifications if the model does not precisely mimic a real-world scenario. The normal winter forecast with 100 percent conservation is the peak load forecast for winter minus the 100 percent conservation load amount for winter, and it is the peak expected load used in the study for winter conditions.

Load forecasts and conservation levels (reduction in load) are evaluated in detail in PSE's most recent Needs Assessment report and are based on several parameters such as historical metering data and population statistics. Refer to the Supplemental Eastside Needs Assessment Report dated April 2015 by PSE and Quanta Technology for detailed information.

F. Normal summer load forecast with 100 percent conservation

One major difference between summer and winter peak loads is the different demand levels and use patterns associated with winter heating versus summer cooling. The 100 percent conservation level used in summer is different from the amount of reduction used for a 100 percent winter conservation level. The normal summer forecast with 100 percent conservation is

the peak load forecast for summer minus the 100 percent conservation load amount for summer, and it is the peak expected load to be used in the study for summer conditions. No 75 percent conservation level was evaluated for summer.

G. Adjust regional flows and generation to stress cases similar to annual transmission planning assessment

In the course of conducting a load flow study to determine system constraints, many scenarios must be evaluated to simulate real-world possibilities. This is a requirement of the regional agencies (NERC, WECC, and Columbia Grid) that govern the power grid in order to make sure it functions reliably for all utility customers. To that end, the transmission planning assessment is just one measure of system reliability. The load flow model itself is merely a mathematical simulation of all the components of the interconnected electric system. The model can only represent a snapshot of the system at a particular moment in time. In order to gain a full picture of system performance, many scenarios, sometimes called stress cases, sensitivity cases, or snapshots, must be reviewed. One of the snapshots adjusts regional flows to stress the system and see how it performs. Another snapshot adjusts generation levels. The regional flows and generation levels used are based on a range of possible real-world conditions and are not a theoretical device to overwhelm the system. PSE studied both a minimal generation level case and a case that included an additional 1,000 MW of generation.

In addition, thousands of contingencies are evaluated. Contingencies are similar snapshots of the system that evaluate what happens when a transmission line or a transformer is out of service. The study also evaluates the possibility of two components being out of service at the same time. Light load periods as well as peak load periods present their own peculiar problems, and these too must be evaluated in snapshots. Finally, all of these snapshots begin to paint a picture for the planner of where the strengths and weaknesses of the system reside. This criterion requires that this type of “stress case” assessment be performed for all solutions and a viable solution must work under all stress cases.

H. Take into account future transmission system improvement projects that are expected to be in service within the study period

The transmission system is constantly evaluated by each utility and the regional entities that unite them to ensure its performance and ability to provide electric power to customers. Each utility and regional agency proposes improvements as needed, such as the 230 kV transformer and transmission line PSE has proposed. When a project has been approved for construction, it is the utility or regional authority’s responsibility to accurately report the change to WECC so that it can be reflected in the future load flow models that WECC prepares. It is not only important to know the extent of the project, but when it will be placed in service. One of WECC’s responsibilities is to gather this information and prepare the models. However, it is the PSE or other utility planner’s responsibility to make sure that the models they use are correct and add facilities proposed after the WECC cases are built.

For instance, a Heavy Summer 2020 model was prepared by WECC, but PSE needed to model not only 2020 but also the summer of 2018. Therefore, the planner must make sure the loads are corrected for two years earlier, and any projects that may be included by 2020 may not be complete in 2018 and therefore must be removed. The same is true in the other direction. For example, if a WECC Heavy Summer 2020 model is to be used for 2022, the model must reflect

any additional projects expected to be in service after 2020 that may not be reflected in the WECC 2020 model.

I. Minimal or no re-dispatching of generation

Minimal or no re-dispatching of generation means that in the normal course of study the PSE planner does not adjust the amount of generation coming from various generation sources to solve long-term problems. In a real-time scenario, generation is normally dispatched, which means a particular generation output level is set, based on economic system needs at an instant in time. Therefore, planners do not want a solution that involves ramping generation up or down to solve a long-term problem. In this case, dispatching generation has little or no impact on solving the transformer overloads on the Eastside, since there is no existing generation within the Eastside area, and ramping generation up or down outside of the Eastside area has little impact on Eastside transformer loading.

J. No load shedding

Load shedding is an intentionally engineered electrical power shutdown when electricity delivery is stopped for a period of time, usually during peak load. A rolling blackout, also referred to as rotational load shedding or feeder rotation, is an intentionally engineered electrical power shutdown when electricity delivery is stopped for periods of time over different parts of the distribution region. Load shedding or rolling blackouts are a last-resort measure used by an electric utility company to avoid a larger or more catastrophic outage of the power system. They are a type of demand response for a situation when the demand for electricity exceeds the power supply capability of the network. Load shedding or rolling blackouts generally result from two causes: insufficient generation capacity or inadequate transmission infrastructure to deliver sufficient power to the area where it is needed.

PSE does not utilize load shedding as a solution to meet mandatory performance requirements. While NERC and WECC allow dropping load for certain contingencies, intentionally dropping firm load for an N-1-1 or N-2 contingency to meet federal planning requirements is not a practice that PSE endorses.

K. No new remedial action schemes

A Remedial Action Scheme (RAS) is designed to detect predetermined system conditions and automatically take corrective actions that may include, but are not limited to, adjusting or tripping (shutting down) generation, shedding load, or reconfiguring a system. An RAS may accomplish objectives such as the following:

- Meet requirements identified in the NERC Reliability Standards;
- Maintain acceptable voltages;
- Maintain acceptable power flows; or
- Limit the impact of cascading outages, system instability, or extreme events.

An RAS is normally administered automatically to control regional issues in the power system.

This criterion requires that, to be a viable solution, no additional RASs can be needed. This is because use of RASs complicates the operation of the existing system, which adds risk and

reduces predictability. An RAS is not considered a long-term solution to solve a local transmission deficiency.

L. No corrective action plans

A Corrective Action Plan (CAP) is similar to an RAS. However, CAPs are usually corrective actions made manually by local system dispatchers and are intended to control local problems. In contrast, an RAS is normally administered automatically to control regional issues in the power system.

According to NERC, CAPs are temporary until a permanent solution is put in place. To be a viable solution, no additional CAPs can be needed because they only complicate the operation of the existing system and provide no long-term solution.

M. Must address all relevant PSE equipment violations

PSE will only accept solutions that will solve any existing or future anticipated loading issues of PSE equipment. PSE's normal and emergency thermal operating limits, and potential consequences of violating those limits, are discussed above.

N. Must not cause any adverse impacts to the reliability or operating characteristic of PSE's or surrounding systems

Under NERC and WECC guidelines, PSE cannot propose a project that will adversely affect the region, and it would be counterproductive for the company to introduce a solution that raises other issues within its own system.

O. Must meet performance criteria listed above for 10 or more years after construction with up to 100 percent of the emergency limit for lines or transformers

If the proposed solution is needed by the winter of 2017 - 2018 and the solution is only viable until the end of the study period (2024), then PSE would need to start its next system improvement within a couple of years after the solution is put in service. PSE does not see this as realistic or prudent. A long-term solution must last through 2028, which is considered to be 10 years past the estimated 2018 in-service date. Additionally, the solution must not exceed 100 percent of the emergency limit for lines and transformers. Exceeding the 100 percent emergency limit will incur mandatory performance violations and equipment loss of life.

This criterion is established as a minimum period of time for a solution to be considered a long-term solution. Because of the standardized steps in voltage and equipment sizes (e.g., 115 kV and 230 kV), an alternative may exceed the 10-year minimum. Ideally, the best solution would exceed these minimum longevity requirements by providing options for future needed electric system reinforcements, such as an additional transformer, which could accommodate future growth beyond the 2028 timeframe.

Non-electrical criteria

A. Environmentally acceptable to PSE and communities

For PSE, *environmentally acceptable* means a solution that, through the environmental review process, would be found to minimize, to the extent practicable, the environmental impacts on the affected communities.

B. Constructible by winter of 2017 - 2018

PSE studies show that Eastside customer demand will reach a point when the Eastside's electric transmission system capacity could experience a deficiency as early as winter 2017 - 2018. To be a viable solution, a project must be completed and in service by the identified target need date. For example, PSE's current schedule for the proposed 230 kV transformer and transmission line installation targets construction to begin in 2017, with project completion in 2018. Any delay in the schedule would push the in-service date beyond the 2018 timeframe, which would increase PSE's reliance on the use of CAPs and load shedding. For example, some specialized equipment can take up to three years to procure. Therefore, PSE would not be able to meet the target in-service date. Alternatives must be reviewed to ensure they are reasonably constructible by the 2018 in-service target date.

C. Utilize proven technology which can be controlled and operated at a system level

To PSE, *proven technology* has successfully operated with acceptable performance and reliability within a set of predefined criteria. Proven technology has a documented track record for a defined environment, meaning there are multiple examples of installations with a history of reliable operations. Such documentation shall provide confidence in the technology from practical operations, with respect to the ability of the technology to meet the specified requirements¹.

“Controlled and operated at a system level” means a dispatcher at a local control center can turn resources on/off or reroute resources either manually or automatically from the dispatch center, or a dispatcher can instruct field personnel to do the same. This criterion rules out independent “behind-the-meter” resources that PSE could not call on as needed. Further, it means that PSE would need to conduct maintenance on or inspections of the resources to ensure that they are:

- Operational;
- Providing the capacity they are designed and intended to provide (referred to as *nameplate capacity*); and
- Available to be used when needed.

¹Source: API SPEC 17E, *Specification for Subsea Umbilicals, Upstream Segment, Fourth Edition, October 2010*. Global Standards.

D. Reasonable project cost

PSE has a legal duty to deliver safe, dependable power, and the obligation to do so at a reasonable cost. PSE continually balances these obligations in determining the best solution to solve problems facing the electric system. PSE's regulator, Washington Utilities and Transportation Commission (WUTC), also has the obligation to review all PSE projects to determine if the solution is reasonable and prudent. After a project is complete and before the costs are allowed to be placed into the rate base, PSE must prove to the WUTC that the cost to build a project is prudent and reasonable to ratepayers. This means PSE must research and compare costs and benefits of multiple alternatives that can accomplish the desired objectives. This is not a simple lowest project cost test; it is a holistic review and analysis of factors such as projected duration of solution, risk to the electric system associated with the type of solution (e.g., is the solution an untested technology), impacts to the community, as well as the dollar cost of the project.