

**EXH. DRK-21
DOCKETS UE-22 ___/UG-22 ___
2022 PSE GENERAL RATE CASE
WITNESS: DAN'L R. KOCH**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

**Docket UE-22 ___
Docket UG-22 ___**

**TWENTIETH EXHIBIT (NONCONFIDENTIAL) TO THE
PREFILED DIRECT TESTIMONY OF**

DAN'L R. KOCH

ON BEHALF OF PUGET SOUND ENERGY

JANUARY 31, 2022




energize**EASTSIDE**

Project Implementation Plan


November 1, 2021

Brad Strauch –Program Manager
Ryan Wieder – Project Manager
Dave Jenness – Project Manager

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Section 1. Document Revision History and Chronological Summary

Revision	Date	Description	Phase
1.0	9/15/2012	Planning Phase PIP	Planning
2.0	12/11/2017	Transmission Line - Planning to Design Phase Gate CSA and PIP Updated	Design
2.1	12/20/2017	Release Steel pole RFP	Design
2.2	1/5/2018	Released Transmission Line RFP	Design
3.0	4/1/2018	Talbot Hill Phase II execution, all other projects in Design phase.	Design
4.0	9/24/2018	Schedule and budget updates via a CSA	Design
5.0	12/18/2018	Multiple sections updated to reflect the remaining project plan.	Design
6.0	7/12/2019	Scope, schedule and budget updates due to permitting progress and an opportunity to operate one of the SAM-RIC rebuilt lines at 115 kV initially (i.e., defer ROS rebuild and some degree of 230 kV bay work at SAM and RIC)	Design
7.0	12/3/2019	Scope, schedule and budget updates due to permitting progress, particularly on RIC construction permits, and potential to build RIC civil in 2020.	Design
8.0	11/1/2021	In 2020 the team continued with permit activities, setting up the pole contract with Myers and developing cost estimates for construction of the new 230kV line. The civil work at Richards creek was awarded to Johanson and started September 2020. In 2021, Wilson Construction was awarded the transmission line work, which started in Renton.	Design/Execution

1.1. Previous Project Managers:

Barry Lombard
 Jim Kearnes
 Leann Kostek
 Jens Nedrud
 Molly Reed (through March 2018)
 Aaron Drake (through September 2019)

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Kelly Purnell (through 2019)
Ryan Wieder
Dave Jenness

1.2. Chronological Summary

2009

During the 2009 comprehensive reliability assessment, PSE determined that there was a transmission reliability supply need developing due to the loss of one of the Talbot Hill Substation transformers. Since 2009, other issues have also been identified which impact this portion of the PSE system. These are discussed below.

2010-2011

The Project Scope and Need documents were being developed and reviewed under what was called the “Lakeside 230 kV” project (*the initial name of the project*).

2012

The Project Implementation Plan was initiated by project manager Jim Kearnes on September 15, 2012, based on 5-year plan. Basic scope needs, risks and opportunities, and the core project team was identified. The updated estimate summary moving into the planning phase totaled \$98,882,000, with \$50,000/year O&M needed between 2016 and 2021 for maintenance and monitoring.


2013

Throughout 2013 the team focused on Needs Assessment Report and further analysis of project scope, routing, risks, opportunities, solutions, and engineering. The Eastside Needs Assessment Report, authored by PSE and Quanta Technology, was published in 2013. In anticipation of public interest and involvement, additionally, analysis was performed to identify potential solutions, routes, and substation sites. As a result, a number of alternatives were evaluated. For the preferred solution, a total of 18 route options were identified as well as 3 substation locations. The scope included upgrading one of the existing 115 kV circuits to 230 kV and rebuilding the other circuit to 230 kV standards, but continue to operate it at 115 kV. The lifetime cost estimate at this time was \$215.5 million. On September 3, 2013, a CSA was approved to enter the Planning Phase.

2014

In January 2014, a Community Advisory Group (CAG) was formed to engage the public in a route decision process. Part way through this process some dissatisfied members formed an opposition group called CENSE, but continued to be engaged in the CAG process. They later signed a dissent document after voting on the recommended route(s) in December.

The CAG recommended the existing corridor, called ‘Willow’, and another corridor which uses most of the existing lines, but minimized changes in the Somerset neighborhood and included new lines in the Factoria area – that route was referred to as ‘Oak’. The Westminster or Lakeside substation sites were feasible options for either recommended route. The estimated cost ranged between \$154 and \$289 million, with a completion date of 2018. On December 17, 2014 a CSA amendment was approved to extend the planning phase of the project to May 2015.

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The 2014 Solution Report was completed and published. This evaluation looked at a number of possible solutions, including demand side reduction, a new generation source, adding only transformers and the transformer and new transmission line alternatives.

2015

In 2015 the affected cities started the State Environmental Policy Act (SEPA) Environmental Impact Statement (EIS) process with the City of Bellevue as the lead agency (partner cities included Renton, Newcastle, Redmond and Kirkland). A two phased DEIS approach was adopted by the partner cities. The Phase 1 DEIS assessed the range of impacts associated with broad options to address the project objectives. Through this process the routes were refined (Willow 1&2, Oak 1&2) and the scope was further analyzed. Non-wire alternatives were also considered during the Phase 1 DEIS process. PSE began collecting information on the recommended routes and began in-depth fieldwork. Through this effort the team was able to collect data on the actual field conditions in the corridor, as well as gain additional knowledge about the properties affected by the project.


The Supplemental Eastside Needs Assessment Report (PSE/Quanta) was published, which once again affirmed the need for the project. Additionally, the City of Bellevue commissioned Utility Systems Efficiencies, Inc. to prepare the Independent Technical Analysis of the Energize Eastside project, which also confirmed the need for the project and responded to numerous questions posed by the public. Concurrently, the 2014 Solutions Report was updated, which confirmed that the Energize Eastside project continued to be the most effective solution. PSE contracted Strategen to assess the viability of large-scale electric storage in combination with other non-wire alternatives. Strategen’s Eastside System Energy Storage Alternatives Screening Study determined that this approach was neither technologically or financially feasible.

Project opposition filed a complaint (June 2015) alleging that PSE was in violation with various FERC orders in regards to the Energize Eastside project. In October, FERC dismissed all claims against PSE.

Due to the initiation of a two phased EIS process, the schedule, after refinement, was pushed and project closeout was projected to be in Q3 2019. On January 27, 2015, a CSA amendment was approved to update the schedule and lifetime cost estimate \$200 million, but with risk, totaled \$350 million and for coordination purposes, included the Talbot Hill (TAL) substation improvements in the overall scope. On January 9, 2015, a CSA was approved for the work at TAL substation to enter the Design Phase. May 27, 2015, a CSA amendment #2 was approved to extend the planning phase to Q1 2016.

2016

In early 2016 the Phase 1 DEIS was published. The Phase 2 DEIS process, field studies, engineering, and community outreach continued throughout the year. The project reached a 60% transmission line design. Several key projects, including Rose Hill (ROS) substation, Lakeside substation (completed 2017), and Talbot Hill Substation (Phase II completed in 2018) were initiated. This system work was designed to take into account the Energize Eastside project to help ensure future system compatibility. Additionally, this work was included within the Energize Eastside WBS to ensure close coordination and continuity of the engineering. The project schedule and budgets were held to previous year levels. On June 10, 2016, a CSA was approved for the Energize Eastside 230 kV project to incorporate Talbot substation 230 kV double bus – double breaker construction into the overall budget and

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scope and approval for the T-line project to enter the Planning Phase. This CSA was also used to document the 115 kV construction at ROS.

Prior to 2016, ROS Substation was fed by two 115 kV taps (one span) that were connected to both SAM-LAK #1 and #2 with an automatic transfer dead bus scheme. As stated earlier, the Lakeside 230 kV project scope prior to December 2016 was to rebuild TAL-SAM #2 to 230 kV and TAL-SAM #1 to 115 kV (built to 230 kV standards).

In 2016, PSE performed work to re-configure the high-side yard of Rose Hill substation for a future 115 kV loop off the easternmost Energize Eastside line (SAM-RIC #1 115kV). PSE elected to perform the work in 2016 as it was outage-dependent, labor-intensive and thought to be favorable to perform in advance of the subsequent transmission phases of the project.

2017

In Q2 2017 the project team announced the final route of the project, Willow 1 (the existing corridor). Additional risks and issues were identified, and another round of fieldwork was completed. Several water mains were located near the Talbot Hill substation, significantly limiting routing options in that area.

Gaps in easement rights have been identified near the Richards Creek (the new 230 kV) substation.

May 2017, Phase 2 DEIS was published. One of the key recommendations, based on the work done by DNV GL was the operation of both transmission lines at equivalent voltages in order to reduce AC interference with the Olympic Pipelines (OPL). Moving forward the project parameters changed from a 230 kV/115 kV, to a 230 kV/230kV configuration.


The design phase began August after Phase 2 of the DEIS was released.

The project took on added scope to convert some 12.5 kV and 120/240v overhead services to underground within the project corridor due to physical conflicts with the 230 kV transmission line rebuild. This is to be permitted separately in each jurisdiction but the work will likely be performed during the 230 kV rebuild effort.

CUP applications for the transmission line were submitted to Newcastle and Bellevue.

Concerns over the projected future loading on the Talbot Hill (TAL) and Sammamish (SAM) substations, increasing use of Corrective Action Plans (CAPs) to manage outage risks to customers in this portion of the PSE system¹, and regional transmission reinforcement needs that were identified by Columbia Grid studies to support the movement of power from existing wind generation and hydroelectric generation across the Cascade Mountains to load centers around the Puget Sound.

¹ CAPs include load shedding starting in summer of 2017.

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2018

A. First Quarter 2018

The FEIS was issued on March 19, 2018. The Renton CUP application was submitted in the first quarter of 2018.

RFP process for a General Contractor/Construction Manager Contract (GCCM) began in the 1Q of 2018 but was stopped just short of bidder selection in order to allow PSE to progress further along in the south segment (TAL- RIC) permitting process (see May 20, 2021 memo for details).

As part of the SAM-RIC design process, in March 2018 future alignment provisions were made to allow for a possible 115 kV alignment between Sammamish Substation and Old Redmond Road [third transmission line]. This resulted in a shift of the SAM-RIC alignment to the east of the corridor. This allows the SAM-RIC project to leave the existing overhead 12.5 kV segment of ROS 21 between Redmond Way and NE 80th St. on topped SAM-LAK transmission poles in the same alignment. No transfers will be necessary [no OMRC].

PSE completed a competitive bidding process for the 230 kV and 115 kV steel poles that would eventually be procured for the Energize Eastside project. Meyer Utility Services was the selected. PSE and Meyer entered into a limited engineering-only contract to perform the pole design and fabrication drawings with the actual procurement dates still pending permit and construction scheduling.

B. Second Quarter 2018


The identified system load level that determined the need for Energize Eastside was exceeded during the summer of 2017. In response. A load shedding plan was finalized and two table-top exercises were conducted. This plan was communicated to external stakeholders over the next several months. The level of need was again exceeded in the summer of 2018.

June 2018 Construction Sequencing update: Due to the eleven month construction window for RIC substation, the 230 kV line rebuild will likely need to be phased over two construction seasons (2020 & 2021). In 2020, once all permits are received, PSE intends to rebuild the TAL-LAK lines to 230 kV standards. Due to the fact that RIC civil work alone will require eleven months under this scenario, the existing 115 kV connections at both LAK and TAL will remain until RIC assembly is completed and we can take the necessary outages to finalize the 230 kV construction and tie in to RIC and TAL (Target spring 2021). Project design at 90%.

C. Third Quarter 2018

Regular correspondence with City staff at Bellevue, Newcastle and Renton has continued as they work on their staff reports for the CUP Hearing Examiner. Several questions have resulted in additional design analysis, technical responses.

The PSE team has also continued to work closely with the steel pole provider Meyer Utility solutions on the pole design for diameters and ground line moments. This was used for the pole foundation design and ultimately the clear-and-grade permit applications. The pole fabrication drawings for each pole type will be prepared by Meyer only after the CUPs are issued and pole finish/coating requirements are known. This decision was made as permit conditions could impact design.

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Project alternatives for energy storage were re-evaluated by Strategen in the Q3 of 2018 which resulted in the same conclusion as their 2015 report. The current transformer and wires solution remained the best option.

The project team re-assessed the total project cost estimate. The major changes included:

1. Transmission pole grounding methods will be typical for steel poles but twenty four of the installations are expected to have vertical ground wells that are at varying depths due to the soil conditions and the proximity of a co-located, third party petroleum pipeline (Olympic Pipeline). The vertical grounding method was chosen as it will have a lower impact to the surrounding environment (mostly landscaped private properties). The vertical ground wells are estimated to cost \$600,000 total.
2. Transmission corridor vegetation removal and replacement estimates are now based on a per-parcel unit average. Updated detail estimates for tree/landscape removal and replacement from an original placeholder of \$3 M to an updated estimate of \$10.8 M.
3. The PSE substation engineering group has started a base isolation program to address seismic risk to transformers. This risk was also identified as part of the EIS process. Due to its location within the Seattle Fault Zone, RIC will be the first of several locations to have the base isolation features added. For design, materials and construction, this will add approximately \$325,000 to the total cost of the substation project.
4. The complex multi-phase EIS and CUP permitting processes has pushed the schedule out 12 months. The budget updates reflect an extended monthly cost of approximately \$525,000 for project support staff 2019 – 2021.
5. Cost estimates were updated for pole excavations and increased quantities of soil export, as the direct embedded poles will need to be deeper than expected based on soil conditions.
6. Design based costs for the Optical Ground Wire and ADSS fiber material and installations have been added.
7. Several smaller reductions were made to the budget to offset these increases listed above including elimination of future cost placeholders and the reduction of contingency.


D. Fourth Quarter 2018

In October 2018, the project team was directed to manage the remaining Talbot Hill substation and Talbot – Paccar 115 kV rebuild project (budget WBS & governance) separately from the group of TAL-SAM and RIC projects (collectively Energize Eastside). Up to this point, all six budget WBS had been grouped together in the budget tables and reports under the program name of “Energize Eastside”. Again, this approach was taken to ensure that the necessary coordination and planning was performed. The 230 kV bays had already been installed by this time; the only remaining work at TAL to support the TAL-RIC 230 kV rebuild is to procure and install 230 kV breakers on the prepped foundations.

2019

A. First Quarter 2019

The City of Bellevue released their Staff Report for the South Conditional Use Permit (CUP) January 24th with the recommendation for approval. The recommended permit approval includes 22 pages of recommended conditions of approval as well. The public hearing began the evening of March 28th, continuing through March 29th, April 3rd,

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and April 8th. After the hearing concluded April 8th the Hearing Examiner issued his decision June 25th. The appeal deadline was set for July 9th, two groups and three individuals appealed the Hearing Examiners decision.

The City of Newcastle continues to review the permit application. The city hired a consultant to again independently confirm the need of the project. The team worked with the consultant in answering their data requests, clarify all the work previously done to confirm the need, and met the consultant on site to answer their questions.

B. Second Quarter 2019

The City of Renton continued to review the permit application. The city hired a consultant to perform an EIS Consistency Analysis. The team continued to work with the city to identify mitigation sites based on the relatively limited impacts.

C. Third Quarter 2019

The Richards Creek Substation construction permit applications were submitted to the City of Bellevue. The team continued to educate the City of Newcastle staff on the details of the project. Numerous staffing changes at the City of Newcastle added review time.

The City of Renton’s consultant for the EIS Consistency Analysis confirmed the project was within the range of alternatives and impacts identified in the EIS. The EIS Consistency Analysis included proposed mitigation measures.

An updated milestone based schedule was created to better track the overall project schedule and more easily update the schedule as changes occur.

D. Fourth Quarter 2019

The City of Bellevue held the CUP appeal hearing on October 16. The City Council heard the five appeals. The Council voted at a meeting on November 14 at which the vote was 6-0 to deny the appeals. On December 2nd the Council passed Ordinance no. 6494 in a 6-0 vote which finalized their decision.


Project opponents appealed the Bellevue decision to King County Superior Court.

2020

A. First Quarter

The Renton CUP Hearing and Decision of Approval was issued and no appeals were filed.

Studies performed by DNV showed that operating the lines at equivalent voltages has lower AC interference effect on the co-located OPL facilities. Additionally, both Bellevue and Renton conditioned their permits so that the transmission lines need to be operated at the same voltage. It was therefore decided to operate the entire corridor at 230 kV/230 kV rather than the initially planned 230 kV/115 kV. This will require work at the SAM substation to accommodate two 230 kV lines. Additionally, the ROS substation will need to have a new 230 kV to 12.5 kV transformer and associated equipment installed. Budget was updated in 2021 to account for ROS improvements as additional work was needed to develop the revised cost estimate. This was documented in ROS PCR #1.

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PCR #10 was approved to increase life time cost of RIC and to start construction of RIC substation civil work. Civil Construction contract for RIC was awarded to Johanson Construction Co.

B. Second Quarter

In June, MaxETA Energy and Synapse Energy Economics, issued their independent Assessment of Energize Eastside Project Study for Newcastle. Their study confirms PSE planning approach aligns with industry standards and the project is needed to meet summer capacity threshold.

Budget increase was made to account for revised construction cost estimate for RIC. This was reflected in the approved May 2020 CSA.

C. Third Quarter

Civil construction at RIC began.

D. Fourth Quarter

Project opponents appealed the King County Superior Court Decision (October), which rejected their appeal on the Bellevue CUP, to King County Court of Appeals.

2021

A. First Quarter

2021 Bellevue and Redmond CUP applications submitted. Project opponents withdrew their appeal of the Bellevue CUP from King County Court of Appeals. Dave Jenness was added to the team as a project manager to allow Ryan Wieder to focus on RIC construction and assist with issuing the RFP for construction of the 230kV Line.

The team also recommended using a traditional design, bid, build contract rather than the GCCM contract the team considered in 2018. (See May 20, 2021 contracting memorandum for details.)

B. Second Quarter

System load again surpasses level of need by more than 600 MW. PSE will need to continue system operation with CAPS that include load shedding until Energize Eastside is fully built. The RFP for construction was issued in June 2021.


Budget was increased to include 230 kV upgrade of ROS (See ROS PRC#1 and 2021 CSA).

C. Third Quarter

The project team recommended Wilson Construction be awarded the transmission Line contract and the contract was executed on August 6, 2021 and full Notice to Proceed was issued on August 19, 2021. Once the NTP was issued PSE and Wilson began putting a schedule together and it was noted that we would most likely get Section 5 in the Renton area completed in 2021. Negotiations with PSE load office began for the outages necessary to rebuild the line to 230kV.

Construction of Segment 5 in Renton began mid-September with foundation drilling and pole assembly.

PSE also received FAA renewal approval for the poles in Segment 5.

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D. Fourth Quarter

RIC PCRs #11 and #12 were prepared to address unforeseen contaminated soils at the site, construction civil bids being higher than the engineers estimate, excessive storm and ground water management, and higher than expected costs for the transformer isolation foundations.

1.3. Project Governance Summary

The Energize Eastside project entails installing a new 230 kV source in the center of the “Eastside” area, with the most efficient place being in Bellevue, adjacent to the existing Lakeside switching station. This undertaking is complex and requires substantial coordination with other proposed projects on the Eastside in order to ensure cost efficiency and system integrity. As a result, the projects referenced below were included for planning and project management purposes.


Table 1	Initiation	Planning	Design	Execution	Close Out
TAL (Talbot Hill) Substation	2009- 2013	9/3/13; Amendment 12/17/14	1/9/15	Phase I Const. 6/10/16 Phase II Const. 3/19/18	Phase I Const. 10/15/16 Phase II Const. 3/19/18
TAL – RIC (Richards Creek) 230 kV*	2009- 2013	9/3/13; Amendment 12/17/14; Amendment 1/27/15; Amendment 5/27/15	3/19/18, 90% 6/12/19 PCR submitted to reflect schedule and budget changes due to permitting delays.	Renton 9/8/21	
SAM (Sammamish) – RIC 230 kV**	2009- 2013	9/3/13; Amendment 12/17/14; Amendment 1/27/15; Amendment 5/27/15	3/19/18, 90% 6/12/19 PCR submitted to reflect schedule and budget changes due to permitting delays.		
RIC New Substation	2009- 2013	9/3/13; Amendment 12/17/14; Amendment 1/27/15; Amendment 5/27/15	3/19/18, 90% 6/12/19 PCR submitted to reflect schedule and budget changes due to permitting delays.	Civil Construction (PCR 10) 3/31/20	
ROS (Rose Hill) Substation - 115 kV Re-alignment - 230 kV Conversion	2009- 2013	9/3/13; Amendment 12/17/14 Amendment 1/27/15 Amendment 5/27/15	3/19/18, 60% Q4 2021; PCR submitted	Phase I Const. 6/10/16	Phase I Const. 10/15/16

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SAM Substation – add 230 kV line bays.	2009- 2013	9/3/13; Amendment 12/17/14; Amendment 1/27/15; Amendment 5/27/15	3/19/18, 30%		
TAL – PCR (Paccar) Reconductor and uprate	2009-2013	9/3/13; Amendment 12/17/14; Amendment 1/27/15; Amendment 5/27/15	3/19/18, 90% (uprate)		

*Includes RIC – LAK 115 kV tie and line relocations for LAK – PHA, LAK – GOO, SHU-LAK & TAL-LTN.

**Includes Willows Creek Wetland Mitigation adjacent to SAM substation.

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Section 2. Project Purpose and Objectives

2.1. Purpose:

The purpose of the project is to increase the transmission capacity in the Eastside area to prevent future overloads, eliminate corrective action plans (CAPs), which include load shedding.


Electricity is currently delivered to the Eastside area through two 230 kV/115 kV bulk electric substations – Sammamish (SAM) substation in Redmond and Talbot Hill (TAL) substation in Renton – and distributed to neighborhood distribution substations using the many 115 kV transmission lines located throughout the area.

Although PSE has made many system improvements in the Eastside area over the years, the primary 115 kV lines that connect the Sammamish and Talbot Hill substations, connecting with the Lakeside switching station located in Bellevue – the backbone of the Eastside electrical system – have not been upgraded in voltage since the 1960s. Since then, the Eastside’s population has grown from approximately 50,000 to nearly 400,000, with growth expecting to continue.

As required by federal regulations, PSE performs annual comprehensive electric transmission planning studies, to determine if there are potential system performance violations, such as transformer and line overloads under various operational scenarios and forecasted electrical use. Studies completed in 2013 and 2015 demonstrated PSE could not meet federal reliability requirements by the winter of 2017/18 and the summer of 2018 without the addition of 230 kV/115 kV transformer capacity in the Eastside area. To respond to the deficiencies identified in the transmission planning studies, PSE launched the Energize Eastside project in December 2013, which entails continued aggressive conservation, installing a new 230kV/115kV electric substation in the central Bellevue area (Richards Creek substation), and upgrading approximately 16 miles of existing 115 kV to 230 kV transmission lines between the existing 230 kV Sammamish substation in Redmond and the existing 230 kV Talbot Hill substation in Renton.

Although the forecasted level of need for winter has not yet been exceeded, the summer level of need identified in the planning studies has been exceeded four of the past five years, putting Eastside customers at risk of load shedding. During these conditions, under certain contingencies identified in the NERC planning standards, system overloads would have impacted the reliable delivery of power to PSE customers and communities in and around Redmond, Kirkland, Bellevue, Clyde Hill, Medina, Mercer Island, Newcastle, and Renton along with the towns of Yarrow Point, Hunts Point and Beaux Arts.

Upon completion of Energize Eastside, the new substation and lines will add 1094 MVA of additional load serving and bulk transmission capacity to the Eastside area.

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2.2. Project Objectives:

1. Compliance: Capacity deficiencies have been identified in NERC-required reliability studies filed with WECC since 2010. The 230-115 kV transmission capacity has been identified as the primary reason for overloads in forward-looking power flow studies.
2. Reliability: Original need data modeling indicated that by the summer of 2018, 68,000 PSE customers are at risk of outages and 10,900 customers at risk of load shedding using corrective action plans (CAPs) to mitigate transmission transformer overloads and remain NERC compliant.
3. On August 3, 2017, the PSE area peak demand exceeded PSE’s summer forecast developed in 2014, one year earlier than projected. This same event occurred in the summer of 2018 exceeding the 2020 forecasted peak.
4. Again, PSE’s system planning studies comply with federal planning standards and use peak area forecasting as an input for the studies. PSE’s planning methodology has been independently verified by the City’s technical experts including an analysis of Eastside-specific electricity demand and as part of the EIS process. This was again independently confirmed in 2020 by a consultant hired by the City of Newcastle. These demonstrate that the Energize Eastside project is needed. Additionally, the Federal Energy Regulatory Commission confirmed that PSE follows the federal transmission planning process.

PSE Integrated Strategic Plan (ISP) Alignment:

ISP Objectives, Mandatory and/or Corporate Risk	Strategy <i>Abbreviated ISP strategy descriptions</i>	Benefit Description <i>Benefit, measurement and/or scorecard affected</i>
Financial	<input checked="" type="checkbox"/> Five-Year Strategic Plan <input type="checkbox"/> Maximize long-term value <input type="checkbox"/> Grow core business <input type="checkbox"/> Grow new business	
Customer	<input checked="" type="checkbox"/> Execute the Customer Experience Intent Statement <input type="checkbox"/> Recognition of PSE role in community <input type="checkbox"/> Customer preparedness & safety <input type="checkbox"/> Ideal customer behaviors <input type="checkbox"/> Listen & dialogue with customers	
Process and Tools	<input type="checkbox"/> Streamline processes to drive effectiveness and efficiency <input checked="" type="checkbox"/> System reliability and integrity <input type="checkbox"/> Safety and security of systems, information and assets <input type="checkbox"/> Extract and leverage value from existing technology and assets <input type="checkbox"/> Optimize product/service portfolio consistent with long-term strategy	Increase the capacity of the bulk 230kV transmission system and improve reliability for all customers on the Eastside.
People	<input type="checkbox"/> Develop/Retain best employees <input type="checkbox"/> Ownership, innovation and continuous improvement	
Safety	<input type="checkbox"/> Educate and train employees on effective safety and wellness strategies	

2.3. Need and requirements:

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Update 2021: System loading and performance continues to be monitored and the project is still needed. During the summer of 2021, the level of need was again exceeded for the fourth time over the past 5 years. [Link to Supplemental Eastside Needs Assessment Report by Quanta Services, 2015 \(PSE\). System Planning is preparing an update to this Needs Assessment based on the 2021 System Forecast.](#)

Electrical System Planning performs annual TPL studies which show the project is needed and that CAPs, that include load shedding, will need to remain in place until the project is put into service.

2.4. Benefits:

Quantitative

1. Failure to implement corrective action plans in time during various contingency scenarios could result in a NERC fine.
2. Completing this project will allow PSE to remove Corrective Action Plans (CAP) that were put in place to compensate for transmission capacity limitations.
3. Increased capacity will relieve transformer loading that could result in outages to as many as 24,000 of the 114,000 customers in the area.
4. Increase the 230 kV capacities between Sammamish and Talbot Hill substations will help to relieve stress on the transmission system between Monroe and Echo Lake.
5. This project will use the existing corridor and two existing substation sites at the south and north terminus. A new 230 kV to 115 kV substation (RIC) will be constructed adjacent to the existing LAK switching station in Bellevue.


Qualitative

- a. It is necessary for PSE to provide power to our customers reliably. It is poor industry practice to operate the system with load shedding as an active CAP. Implementation of the project will accomplish this objective by eliminating the CAPs currently in place.

2.5. Summary of Alternatives:

Various types of non-wire and wire solutions and routes were studied. For more detail see (hyperlink) <https://energizeeastside.com/documents>

Alternative	Pros	Cons	Cost	Duration
Energy Storage	See study documentation	Will not address system need.	See study documentation	See study documentation
Non Wires solutions, efficiency programs, distributed generation	See study documentation	Will not address system need.	See study documentation	See study documentation

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Alternative	Pros	Cons	Cost	Duration
Develop a plan for intentional rolling blackouts to meet federal requirements.	System equipment would not over load.	Plan went into effect in summer 2017 when system load levels exceeded level of need. This could impact more than 130,000 customers until project is completed.	Tens of millions of direct and indirect dollars to the local economy.	High demand peak.
Alternative wire solutions.	See study documentation	See study documentation	See study documentation	See study documentation

ALTERNATIVE 1: Upgrade BPA 230 kV line + Lake Tradition new 230-115 kV transformer

This alternative proposes to loop the BPA Maple Valley-Sammamish 230 kV line into Lake Tradition substation, build a 230 kV breaker and a half bus, and install a 325 MVA 230-115 kV transformer. Two bus section breakers would be required on the 115 kV bus and two of the 115 kV lines would have to be swapped from one bus section to the other.


Additional 17 miles of 115 kV lines would have to be built (1) between Lake Tradition (Issaquah) and Lakeside (Factoria), probably extending the Lake Tradition-Pickering line to Lakeside, and (2) between Lake Tradition and Berrydale (East Kent), probably extending the de-energized line from Lake Tradition to the Lake McDonald tap the remaining distance to Berrydale substation.

PSE would need to enter negotiations with BPA regarding use of its 230 kV line. PSE presently leases the line on a contract that expires in 2018. Power flow studies indicate that the line may overload for some contingencies. The line is rated at 60° C, and an uprate to 100° C may be the best way to achieve the needed additional capacity. BPA’s study process may take a couple of years, following which PSE and BPA would enter an agreement. If additional system upgrades were required on BPA’s system as a result of PSE’s interconnecting a new transmission substation, PSE would be expected to cover all or a portion of them.

There are many challenges with this option. Negotiations with BPA and also siting and building 17 miles of new transmission line are the most significant among them.

ALTERNATIVE 2: Talbot Hill Third 230-115 kV Transformer

This alternative would include installing a third 325 MVA 230-115 kV transformer at Talbot Hill. Adding the transformer would require expanding the substation, extending the 230 kV bus to connect the new transformer, and work on the 115 kV bus to connect the new transformer. The 230 kV bus requires considerable modification in order to make the connection.

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Power flow studies indicate that for north-south regional flows, elements in northern King County can overload during some contingencies with this alternative. While the Project solves the South King County overloads, it creates other stresses in the north.

ALTERNATIVE 3: Sammamish Third 230-115 kV Transformer

This alternative would include installing a third 325 MVA 230-115 kV transformer at Sammamish Transmission substation. Adding the transformer would require extending the 230 kV bus to connect the new transformer, work on the 115 kV bus to connect the new transformer and installation of a new 42 MVAR 115 kV capacitor bank. Some 115 kV lines will need to be re-aligned to connect to the west 115 kV bus.

Power flow studies indicate that for south-north regional flows, elements in southern King County can overload during some contingencies with this alternative. Therefore this alternative does not solve the transmission system deficiencies identified in the Eastside Transmission Needs Analysis Report.

ALTERNATIVE 4: New 300 MW Generator at Cedar Hills

This alternative would include constructing a 300 MW combined cycle gas turbine generating plant at Cedar Hills. In evaluating a site for a gas turbine, proximity to both high pressure gas line and 115 kV transmission lines were necessary. Also, environmental considerations for dealing with emissions and noise were considered.

Within the area in proximity to the Eastside load center, three sites were considered: Lakeside Substation, Lake Tradition Substation and Cedar Hills (near the landfill). Of these three sites, only Cedar Hills was considered acceptable environmentally.

Integrating the generation at 230 kV, as is customary for a generating plant of this size, was not useful to the transmission elements at risk of overload on the 115 kV system in the Eastside Transmission Needs Analysis Report. Increasing the strength of the 230 kV system would put additional pressure on the Talbot Hill transformers and the 115 kV lines local to Talbot Hill. Therefore the generation needs to be integrated to the PSE system at 115 kV to be an alternative for this project.


Connecting the generation at 115 kV will require upgrading 23 miles of existing 115 kV lines and building 22 miles of new 115 kV lines in the South King area. Due to cost, schedule risks and community impacts, this alternative was rejected.

ALTERNATIVE 5: Energy Efficiency and Distributed Generation

This alternative would promote additional energy efficiency and use of distributed generation by customers on the Eastside, in order to reduce load growth by 50 MW over the next 10 years. Initial reviews by PSE’s energy efficiency group indicated that this level of load management would not be feasible.


ALTERNATIVE 6: Energy Storage

In 2015 and again in 2018, Strategen evaluated the viability and cost effectiveness of large scale energy storage solutions to solve the transmission capacity deficiency identified during annual transmission planning studies. Strategen’s March 2015 Study concluded that an Eastside energy storage solution was not practical given the

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unique circumstances of the Eastside transmission system. The study recognized that while energy storage technologies were on the cusp of being commercially viable for some types of large-scale deployments, energy storage is not an effective solution for every type of power system constraint or application. The Energize Eastside constraint is a transmission and distribution (“T&D”) reliability application, which differs from the applications of most energy storage deployments globally to date.


The conclusion of the 2018 analysis was consistent with the conclusion of the original March 2015 Study: energy storage is not a practical solution for the Eastside. Despite the significant commercial and technological progress made by the energy storage industry in recent years, energy storage is still not a practical solution to meet the Eastside transmission system capacity deficiency.

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Section 3. Scope Summary

3.1. 230 kV Line Rebuild within the existing 16-mile Sammamish – Talbot Hill 115 kV to operate at 230kV in the existing corridor. Between TAL and SAM, this will involve the installation of 288,000 Feet of 1590 ACSS Falcon conductor. 111015585 & 111015586 [pre].

- A. SOUTH REBUILD SEGMENT: Talbot Hill - Richards Creek Rebuild TLN-#1 (0346) #2 (0347). 111016747 #1 & 111016749 #2
- B. NORTH REBUILD SEGMENT: Sammamish – Richards Creek Rebuild #1 - TLN-0345 and #2 TLN-0348. 111016750 (#1) APVN; 111016752 (#2) APVN;
- C. Transmission Pole Design
 - 1. The new 230 kV line(s) will be on steel monopoles with configurations that are dependent on the available right-of-way (ROW) width – either single or double circuit configuration.
 - 2. Poles will be galvanized, weathering steel, or powder coated. PSE has prepared pole finish recommendations for the cities to use in their respective staff reports.
 - 3. The monopole structures will need to support and insulate three electrical phases for a single-circuit configuration or six electrical phases for a double-circuit configuration and an optical ground wire [PSE Network Fiber]. In segments where there are two poles, one of the systems will have a 7x#8 Alumoweld for shield wire.
 - 4. The conductor will be a single 1590 ACSS (Aluminum Conductor Steel Supported) Falcon conductor per phase. The diameter of this conductor is 1.545 inches, comprising a stranded steel core and outer layers of stranded annealed aluminum.
 - 5. The type of foundation that will be used to support the poles is dependent upon the structural loading, structural strength of the soil and site accessibility. Typically, steel poles in a tangent alignment are directly embedded into the ground and the poles along a line angle are set on a drilled pier foundation. The drilled pier foundations are constructed by digging a hole and installing anchor bolts and reinforcing steel that is set in concrete.
 - 6. Most of the grounding methods will be typical but approximately twenty-four of the poles will have vertical ground wells that are at varying depths due to the soil conditions and the proximity of a co-located petroleum pipeline. The vertical method is being used will have a lower impact to the surrounding environment (mostly landscaped private properties).
- D. This transmission rebuild will involve restoration on private property for tree removal within the easement area and city ROW. PSE is expecting to plant an estimated 4,000 trees and 5,000 shrubs. This will also involve repair to multiple lawns, and the temporary removal and replacement of fences and other consented structures that are within the transmission easement.

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3.2. Construct a new 230 -115 kV Substation at Richards Creek (RIC, Factoria area) 111019489

- A. Level the site by exporting soil and installing a soldier pile wall.
- B. Install one 325MVA 230-115kV transformer, 230 kV bus work and 230kV circuit breakers in a breaker and a half configuration. Three 230 kV terminals will be required initially for two lines and one transformer, and ultimately four lines and two 230-115 kV transformers.
- C. Loop in a 230 kV line to provide two sources of 230 kV power.
- D. Install fiber optic communication cable to support the protection, security and communications needs of the substation.
- E. Environmental mitigation work includes: Re-establishing tributary to Richards Creek in a new stream channel and associated wetland buffer which will be a mitigation requirement for the project. Part of this work includes a depth adjustment to an existing City of Bellevue 8" water main that is in conflict with the proposed grade changes.
- F. SCHEDULE: RIC Completion is on the critical path with TAL – RIC 230 kV rebuild. The substation construction timeframe is eleven months with seven months of civil work which will begin once permits are received. Once civil construction is completed as the site is stabilized for erosion, assembly may begin and must be completed before the new TAL-RIC lines can be energized at 230 kV. The civil construction is anticipated to be completed in advance of the assembly work. The assembly component is scheduled to be constructed simultaneously with the south transmission line rebuild. However, due to the length of the RIC construction window (11 months), the TAL-RIC 230 kV rebuild will need to be phased over two construction seasons (Target, 2020 & 2021).


3.3. 115 to 230 kV bay conversions at SAM and TAL Substations which are the north and south terminals respectively.

A. Sammamish Substation 111022580

- 1. Scope of work to land the new 230 kV lines associated with Energize Eastside, the bulk of which is associated with installing 2-230 kV bays at Sammamish substation to terminate the end of the new 230 kV transmission line.
 - Install two (2) new dead end towers.
 - Install two (2) new 3000A-230kV breakers.
 - Install six (6) new 3000A vertical break disconnects.
 - Provide new pathway for existing PSE Network Fiber into the SAM control house.
 - Install twelve (12) new 230 kV bus supports and extend the main and aux bus.
 - Drainage improvements.
 - Security upgrades.
 - Cable trench.

B. Talbot Hill Substation 230 kV bays: 111016747 #1 & 111016749 #2

- 1. Install two 230 kV circuit breakers at Talbot Hill substation to terminate the end of the new 230 kV transmission lines.

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- The line bays were installed as part of the TAL 230 kV bus rebuild. Talbot bay “XX” 230 kV breakers, line #2 (In PSE Inventory at TAL now).
- Bay UU breakers, for TAL-RIC line #1 will need to be ordered 9-months in advance of transmission line construction completion.

3.4. 115 kV Relocations

A. 115 kV existing line relocations in the immediate LAK/RIC Sub area for

1. LAK – PHA (part of SAM-RIC scope) 111023929 - Replace poles 0/1 – 0/3 to accommodate the rebuilt SAM-RIC poles
2. LAK – GOO (part of TAL-RIC scope) 111023669, 153003208 Install poles 0/1 – 0/6 to accommodate the rebuilt SAM-RIC poles
3. SHU-LAK (part of TAL-RIC scope) 111024031 - Replace poles 8/7 – 8/10 to accommodate the rebuilt TAL-RIC poles


B. 115 kV existing line relocations in the T-line corridor north of TAL

1. TAL-LTN #1 (part of TAL-RIC scope) 111023808
 - TAL-LAK will swap alignments with Lake Tradition (LTN) to make room for the new 230 kV alignments to RIC. Line length 3,700 feet total; 2,700 feet of existing. Pole replacements at both tie-ins and new conductor stringing up to existing structure TAL-LAK [TAL-LTN future] 0/11. This is to be permitted as part of the Renton CUP and clear and grade permit.


3.5. Install a new RIC – LAK 115 kV tie (3 spans 1,700’ of 1590) between RIC and LAK 111023677 with ADSS [Network fiber].

3.6. Replace the existing 49,000’ long network fiber backbone in between TAL and SAM within an optical ground wire (shield wire) and associated splice locations.

- A. At strategic locations along the TAL-SAM corridor, splice boxes will be installed for OPGW to ADSS = (All-Dielectric Self-Supporting) transition.
- B. OPGW = An optical ground wire (also known as an OPGW or, in the IEEE standard, an optical fiber composite overhead ground wire) is a type of cable that is used in overhead power lines. Such cable combines the functions of grounding and communications. For this project the OPGW includes three fiber tubes each with 72, 72, and a 48 count of strands for a total of 192.
- C. ADSS is the standard fiber conductor for the PSE Network Fiber system.
- D. North Phase (SAM to RIC): 141004008 (ties to 111023668, SAM-RIC #1)
 - Sammamish fiber needs: The OPGW to ADSS splice at SAM will be on Pole 0/2 on the east side of the substation and it will include 192 count. There will be a splice at 0/9 for the northern ADSS tie. From this point, the PSE fiber group will take 144 ADSS going north.


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- E. South Phase (TAL to RIC): 141004009 (ties to 111023667, TAL -RIC #1.)
- BPA Maple Valley – splice location for BPA will be as follows. An OPGW splice needs to be added to pole 0/5 north of TAL. The existing TAL-LAK immediately west of Cedar Ridge Rd. will need to be topped. The new 230 kV alignment will clear it. A splice is not needed at 0/4. The splice for the tie into TAL yard will be from the north 0/1 pole. Conduit has been stubbed toward that location within TAL.
- F. Construction criteria:
1. The PSE Network Fiber system is a critical communication backbone that is used by PSE and on agreement with Bonneville Power Administration. The existing system that is underbuilt on the TAL-LAK and LAK-SAM systems must stay in place and/or be “cut over” to the new system with minimal interruptions. It is assumed that the system will largely stay on topped poles while the new alignment is being constructed.
 - Some key crossings such as the I-90, 520 and Cedar River crossing will likely need to be spliced and cut over at the time of conductor installation. As such, splice boxes have been strategically placed at both sides of these locations for that purpose.
 2. Fiber testing at 1310 Nanometers is highly recommended at several points during installation in order to ensure that the system was installed properly prior to “cut over”.
 3. Installers must use an anti-rotational device for OPGW stringing (damage prevention) as well as cap the bare ends during OPGW pulling to prevent damage.
 4. The PSE fiber group will be performing the ADSS splicing at all locations; a construction contractor will install the OPGW and splice boxes.

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3.7. There are six locations where it will be necessary to perform an underground conversion on existing overhead 12.5 kV distribution and service drops. This can be done under a separate permit by the service provider.

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Distribution Conversion/Relocation Projects	
XMSN Structure	Address
3/3 (TAL-RIC)	3212 NE Sunset Blvd Renton
4/6 (TAL-RIC)	8457 129 th Ave SE Newcastle
5/8-6/1 (TAL-RIC)	128 th Ave SE & SE 68 th PI Bellevue
8/7 (TAL-RIC)	13626 SE 37 th St Bellevue
5/6 (SAM-RIC)	Main St & 136 th Ave NE, Bellevue (Glendale Country Club)
0/3 (LAK-PHA)	13605 SE 24 th St Bellevue

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Section 4. Environmental Mitigation:

To offset environmental impacts to critical areas (*e.g.*, wetlands, streams, steep slopes, and respective buffers) that will result from the proposed construction impacts, PSE has developed mitigation plans at seven sites along the project corridor. These will be detailed in the associated permits and approvals from the respective permitting agencies. This capital work will be charged to the associated transmission line rebuild number ('111') or as indicated otherwise.

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Section 5. Budget Estimating, monitoring and control

A design based construction estimate has been developed and updated as new information is available. The budget uncertainties are listed below. This project has followed the corporate lifecycle governance process that includes the development and regular review of a cost report and scope, schedule and budget request documentation that is updated for approval at phase gates.


Each project within the Energize Eastside Program is managed as a separate budget work breakdown structure as follows:

- A. Transmission Line Rebuild (TAL-RIC and SAM-RIC) 230 kV - R.10005.01.01.07
 - 1. Expense related to the capital work (OMRC) E-Eastside 230 kV-T-lines - R.10005.01.01.12
- B. Richards Creek Substation (RIC) - R.10005.01.01.01
- C. Sammamish Substation 230 kV bays (SAM) - R.10005.01.01.05

5.2. The Current Budget summary is available in the cost report.

5.3. Assumptions & Limitations with this schedule and budget to date:

- A. With the exception of the South Bellevue and Renton CUPs, remaining CUPs and associated construction permits have not been issued. Appeals have been filed and dismissed, but additional appeals are anticipated.
- B. Some long-lead procurements (e.g., north steel poles) have not been made as of yet; cost estimates are based on provider quotations and historic cost for those materials.
- C. Transmission corridor vegetation removal and replacement estimates are now based on a per-parcel unit average. Updated detail estimates for tree/landscape removal and replacement from an original placeholder of \$3 MM to an updated estimate of \$10.8 MM.
- D. Engineering and modeling for steel pole grounding is in progress. The budget allocation for this is partially based on per-foot historic cost for vertical ground wells. Design based costs have not been determined yet.
- E. North segment CUP application packages (north Bellevue & Redmond) have been submitted, but issuance dates are not yet known.

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Section 6. Permitting

6.1. General Permitting Process

Bellevue uniquely split the Environmental Impact Statement (EIS) into two phases of a draft EIS (phases I and II), and the final EIS which was published in March 2018. CUP applications have been made for the south segment (S. Bellevue, Newcastle and Renton). The status of the necessary permits and approvals for the project are provided in Section 6.4 below.

6.2. Environmental Impact Statement (EIS)


The required Environmental Impact Statement (EIS) was in no way a small effort as it required over two years to prepare at a cost of over two million dollars. More details can be found on the following websites.

<http://www.energizeeastsideeis.org/>

[City of Bellevue's EIS web page \(hyperlink\)](#)

6.3. Design Input, SEPA and Permit-Driven Outreach

Design input, SEPA-EIS, and permit-driven outreach includes the processes to gather public comment on design factors, as well as to obtain all required permits and government approvals such that the project can be constructed.

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6.4. Permits Required

City of Bellevue (Lead Agency, publishing EIS) – Bellevue permitting separated by south and north phases. Richards Creek is included in the south segment permitting and construction phase.

- A. SEPA Threshold Determination/FEIS – COMPLETED March 1, 2018.
- B. Conditional Use Permit – South Bellevue ISSUED and all appeals resolved
- C. Critical Areas Land Use Permit – APPROVED
- D. Clear and Grade Permit (Poles)
- E. Clear and Grade Permit (RIC Substation and culvert) – ISSUED
- F. Commercial Building Permit - Richards Creek Sub – ISSUED
- G. Stormwater Permit (RIC) – ISSUED
- H. Utility Extension Agreement (UE) - Storm Drainage and Water Main – ISSUED
- I. Hauling, Noise Variance and Right of way use (road use); RIC – ISSUED; T-LINE – GC may either obtain and/or will be closely involved.

City of Newcastle (TAL-RIC, south phase)

- A. Conditional Use Permit – APPLICATION SUBMITTED
- B. Variance (pole set-back) from the Olympic Pipeline for select poles – APPLICATION SUBMITTED
- C. Code Interpretation for Structures within a Regional Utility Corridor - SUBMITTED
- D. Clear and Grade Permit
- E. Hauling, Noise Variance and Right of way use (road use); GC may either obtain and/or will be closely involved.

King County

- A. Clear and Grade Permit - ISSUED
- B. Hauling, Noise Variance and Right of way use (road use); GC may either obtain and/or will be closely involved.

City of Renton (TAL-RIC, south phase)

- A. Shoreline Exemption (exemption requested; Cedar River crossing) – ISSUED
- B. Conditional Use Permit – ISSUED
- C. Grade and Fill Permit - ISSUED
- D. Hauling, Noise Variance and Right of way use (road use); GC may either obtain and/or will be closely involved.

Washington State Department of Natural Resources

- A. Aquatic Land Lease – Cedar River – APPROVED


City of Redmond (SAM-RIC, north phase)

- A. Conditional Use Permit
- B. Clear and Grade Permit
- C. Right of way use

Washington State Department of Ecology

- A. NPDES (Owner retains the right to transfer permit to Contractor) - ISSUED
- B. Section 401 Water Quality Certification (RIC) – ISSUED

Federal

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- A. US Army Corps of Engineers, Section 404, NWP 12, et al.
 - 1. Willows Creek Mitigation
 - 2. Richards Creek Substation and creek restoration – ISSUED
- B. Coastal Zone Management – ISSUED (for RIC)
- C. Federal Aviation Administration Review (TAL-RIC) – COMPLETED but these permits have expired due to CUP and construction permitting delays requiring extension requests and possible re-submittals. Applications were resubmitted and approvals are now being issued.

Washington State Department of Archaeology and Historic Preservation

- A. Section 106 Review – SUBMITTED

Washington Department of Fish and Wildlife


- A. Hydraulic Project Approval (south and north phases) RIC-ISSUED

Washington State Department of Transportation

- A. Highway Crossing Permit – HWY 520 and I-90 (SR 900, 169 are Cities’ jurisdiction) – ISSUED (for I-90) HWY 520 - SUBMITTED

Construction Contractor shall obtain

- A. All Street-Use, ROW use permits from Cities and King County
- B. Noise variance requests
- C. Haul permits

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Section 7. Real Estate

7.1. Rights Review

- A. PSE Real Estate has performed a rights review of the existing corridor and along corridor access points. Gaps were noted in three locations which are being addressed prior to the start of construction.

7.1. Easement Gaps

- A. PSE has had an easement with the City of Renton to cross the Riverview Park/Cedar River Trail (COMPLETED) with our existing 115 kV system for decades. However, the language limits voltage to 115kV. The lines are located within both the old rail corridor and part of the Riverview Park/Cedar River Trail areas. Cost was approximately \$2,000 to modify the language to allow 230 kV.
- B. The LAK – GOO 115 kV (153003208) (COMPLETED) is double circuited on the TAL-LAK 115 kV alignment and must be rebuilt to double circuit the new TAL-RIC 230 kV from RIC to the north side of I-90. One segment of that new alignment just south of RIC substation crosses over the King County Metro Factoria Transfer Station. PSE will require an asymmetrical 18 – 38 foot wide strip running through the eastern portion of the site in a north-south direction totaling 17,463 square feet. As part of this request, PSE is also seeking a temporary right to access the northern edge of this property for our RIC site development. The appraised value is \$110,000.
- C. Easement with City of Newcastle (COMPLETED) - PSE’s existing system has crossed the City of Newcastle, May Creek Trail corridor for decades based on an original easement with the original property owner (railroad operator). At some point, the land was dedicated to the City and PSE’s rights did not get transferred. Appraisal value is \$25,000 and was charged to 153003249.


7.2. Temporary Construction Easements

- A. The construction firm will require strategically located temporary construction easements for laydown, staging, parking, and possibly supplemental corridor access. PSE has elected to schedule these agreements for when a General Contractor is under contract and can be involved with the decision making around the location, durations and other key factors. This is expected to occur in 2021.

7.3. Crossing permits [BPA & SPU]

- A. At PSE’s southern terminus for the TAL-RIC 230 kV lines, PSE will cross property and easements held by both Bonneville Power Administration and Seattle Public Utilities [water]. These crossings are entering Talbot Hill Substation at a new bay and are in a different alignment than the existing TAL-LAK 115 kV lines. As such, PSE has been in discussions with both BPA and SPU for necessary consents and permits to cross in these locations. These agreements have been finalized.

7.4. Aquatic lease [Cedar River Crossing] WA State Department of Natural Resources – COMPLETED in 2018

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- A. Additionally, in 2018 DNR reviewed the FAA requirements for 20” conductor markers and did not have any concerns.

7.5. Encroachments and Consent

- A. The project team is addressing consent and encroachment issues in a manner that is consistent with company policy, regulatory requirements and past practice. There have been instances of unpermitted habitable structures, fuel storage and other outbuildings noted and the project team is working to address these matters to an acceptable resolution.

7.6. Vegetation Management

- A. As part of our easement rights within the transmission corridor, PSE is exercising the easement right and responsibility to manage vegetation. As part of this project, we have performed an analysis of existing vegetation species and location relative to the future 230 kV line design in order to determine which trees require removal. This is being communicated to property owners in a series of backyard meetings that we are offering. PSE is offering to replace such trees in a comparable ratio (as required by permit conditions) but with a compatible species that will not grow taller than 15’. However, additional tree plantings may be required to meet permit conditions.
- B. As part of this process, the property owners are being encouraged to select the replacement trees from a palette of species.

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Section 8. Procurement Strategy [Long lead]

The project team must make long-lead procurements of materials in order to maintain the overall critical path for construction. See the current schedule for more details.

8.1. Poles and Wire: Engineering and modeling

Following a competitive bidding process in the 1Q 2018, PSE provided Meyer Utility Structures, LLC with a notice of intent to purchase but not a PO due to schedule uncertainties. In the 3Q of 2018 PSE elected to enter into a \$1.5 M engineering contract with Meyer in order to determine the pole design and prepare fabrication drawings prior to issuing a PO for the poles. These charges will be applied toward the purchase of the poles.


Consistent with our standard process, this design information from Meyer will be used by Power Engineers to design the pole foundations and structural grounding systems. This advance work will give us a shorter lead time for the poles overall and shorten preparation time for the clear and grade permit applications in accordance with our schedule.

8.2. Vegetation Procurement

In an effort to ensure that the specific species are available for procurement and planting, the project team will pursue a wholesale purchase contract for advance ordering [reservation] leading to an eventual purchase order as project permits are received and planting is contracted and scheduled. PSE anticipates issuing purchase orders approximately two months prior to planting.

8.3. Substation – Long Lead Purchasing

Long-lead steel for Richards Creek Substation will be ordered 6-8 months in advance of the project need, and will be phased by civil and assembly work. The project team will pursue approval to proceed with a steel POs in accordance with our latest schedule and standard bid process. Purchases for other substation long-lead equipment will follow our standard process.

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Section 9. Contracting


- A. The following includes a listing of contractors and consultants who have provided services on the TAL-SAM 230 kV and RIC substation projects. It is not intended to be an all-inclusive listing but rather a high-level description of the broad range of areas of specialty and services that have been required to complete this project.

Analysis and Reporting of system needs and alternatives

- A. Multiple consultants were hired to study system needs, solutions alternatives and prepare technical summaries, many of which are posted on www.energizeeastside.com.
- B. Outside technical support, originally from Quanta Technology and currently Boston Power Systems, continues to provide technical review of the project

Design

- A. Survey, Technical Studies, Reports and Permitting support
1. Multiple contractors have been hired to support this work. The largest contracts include:
 - **Power Engineers**; transmission design, photo simulations and proprietary use of a GIS mapping and filing system called Power 360. They have provided independent calculations regarding relative EMF gauss strength for design alternatives.
 - **HDR**; development of project maps for access and permitting and Willows Creek Restoration design. Extensive permitting support; development of application packages and code research.
 - **Det Norske Vertias GL**; Analyzed AC interference potential with the co-location of the Olympic Pipeline.
 - **Oak Strategic** staff have provided broad independent perspective regarding overhead transmission design concepts and possibilities; out of region design practices & construction methods; emerging technology & new design possibilities; advise PSE engineers; participate in and guide public discussion re-design possibilities. This firm also provided staff support for permit applications and Hearing support.
 - **The Watershed Co.** (Kirkland): Critical areas delineation & mitigation; liaise with jurisdictions; off-site mitigation opportunities and/or fees in lieu of mitigation; permitting support. Arborist support has included participating in property owner meetings and the development of landscape planting plans for each parcel.
 - **AECOM**: Critical areas delineation & mitigation; liaise with jurisdictions; off-site mitigation opportunities and/or fees in lieu of mitigation; permitting support. (Redmond segment only as they have done previous work for other projects in the area).
 - **GeoEngineers**: Geotechnical Engineering -- Engineering geology; geotechnical engineering assessments and technical reports.

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Electric and Magnetic Fields

- A. Lisa Thatcher Inc. dba Andrew H. Thatcher (Tacoma) -- Provided independent advice and public presentation/discussion related to EMF and EMF health effects; permitting and Hearing support.

Survey and Imagery

- A. Both David Evans and Associates and APS Survey & Mapping provided land surveying services.
- B. Aerial Imagery: GeoDigital (Lompoc, CA) LiDAR, aerial photography & mapping.

Risk Analysis [Golder]

- A. Risk Analysis; facilitation of team-based risk workshops.

Historic Research Associates


- A. Research, field work, archeological and historic architecture services and reporting that is used to satisfy regulatory requirements.

Outreach and communications

- A. EnviroIssues has provided support in multiple ways including:
 1. Provided outreach and engagement support, including preparation of outreach materials, facilitation and staffing of meetings, and managing the public communications inboxes for phone and email.
 2. Providing and supporting the use of a proprietary database called EnviroLytical, which is used to document public interaction.
 3. Coordinating and staffing support for property owner-related notifications and meetings.
- B. Putnam Roby Williamson provides ongoing guidance on the development and execution of a project communications strategy working with the officers, project sponsor and project team.
- C. Sound View Strategies has provided advice and counsel on public education materials that reach additional customer groups through paid ads and social media. SVS measures customer concerns and interests/issues through quantitative research.
- D. Langton Spieth LLC is a communications consultant coordinating and educating concerned customers and key stakeholders.
- E. Washington 2 Associates is a local (Eastside based) company which provides PSE with advice and counsel on educating and communicating with elected officials and other key stakeholders.

Legal Support

- A. Van Ness Feldman and previously, Stoel Rives have provided on-going legal support for permitting process, code compliance and the review of studies, reports and other documentation that is being used for permitting and external communication. Extensive legal support has been required at Hearings and Permit Appeals by project opponents.
- B. Summit Law Group has provided support on Real Estate matters involving easements, fee-owned property and management of encroachments.

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Real Estate

- A. HDR/Pharos (Edmonds) -- Operating rights review; mailing lists.
- B. CommonStreet provides Real Estate assistance through final design, permitting, and the start of construction.

General Contractor:

PSE originally intended to use the General Contractor/Construction Manager (GC/CM) project delivery method for both the transmission and substation scope. This contracting method would have allowed the GC/CM to join the project team during the final phases of permitting and design in 2019 to provide expertise in scheduling, construction phase planning, means and methods, constructability, site logistics and cost estimating.

In the 1Q of 2018, PSE had intentions of hiring a GC/CM in the middle of 2018. Proposals were accepted from four firms who have extensive experience in this type of work. Part way through this RFP process, the team and management elected to defer the GC/CM selection in order to allow PSE to get further along in the CUP permitting process and gain a better line of sight to the remaining preconstruction timeline

The decision was made to go with a standard contract for both the Substation and Transmission line construction. These were bid separately. A separate memo documents the decision process.

A. Transmission Line

- 1. The contracting strategy for the transmission line will be to obtain a contractor selected on best value criteria for both the north and south halves of the project. AWARDED to Wilson Construction.

B. Substations


- 1. The contracting strategy for this will be to obtain a civil contractor for construction of work packages as they become permitted. The primary packages include:
 - [Richards Creek Substation – AWARDED to Johansen Construction](#)
 - [Sammamish Substation](#)
- 2. A Civil bid package will be developed for each of these projects. Our typical approach is that PSE Substation Crews will perform the electrical assembly.


C. Critical Area Mitigation Sites

- 1. PSE elected to bid this work separately due to complex monitoring and plant inventory requirements. Asplundh and Signature Landscaping have been contracted for this work.

D. Landscape and Restoration

- 1. General site restoration will be done by the GC along the transmission line corridor. Landscaping will be performed by a separate contractor.
- 2. We are developing landscape plans for each parcel which will be provided as part of the bid package.

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Section 10. Schedule Management


10.1. The project team is maintaining a comprehensive Gantt schedule for all pre-construction and construction work packages. This schedule is reviewed and updated to reflect new information and baselined at phase gates.

10.2. The permit submittals are being tracked on a separate tracking spreadsheet which is also updated as new information becomes available.

10.3. Detailed Construction Sequencing:


Milestones and Deliverables as of Q4 2021.

Description	Schedule Baseline Date*	Approximate Date (without appeals)
Order long-lead Material	12/13/2017	South – End 3Q 2021 North – End 3Q 2022
All long-lead Permitting completed	8/8/2017	South – End 4Q 2021 North – End 4Q 2022
Select General Contractor	3/1/18	8/1/2021
Detailed Design and issued for construction bid process	4Q 2017	South – 6/31/2021 North – 6/31/2021
Construction Contracts NTP	6/1/18	South – RIC Civil 2Q 2020 T-Line 8/19/ 2021
Construction	6/2018	South – RIC Start 3Q 2020 T-Line 9/8/2021 North – Start 2Q 2023
Commissioning Complete, job orders in service	10/2019	South – Start 4Q 2022 North – Start 4Q 2023

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Total Project Close-Out Complete	12/31/2019	North and south 1Q 2024
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** The complex EIS and CUP permitting process has pushed the schedule out from earlier baselines.*


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Section 11. Change Management

- A. PSE follows a project lifecycle phase methodology. This involves a progression through five phases: Initiation, Planning, Design, Execution and Closeout. The project managers working on this project are responsible for ensuring compliance with this process.
- B. *Current Phase:* This group of projects associated with Energize Eastside are in the design and execution phases. As such, the scope is baselined. Design iterations and elaborations are expected and documented in the project scope statements in this PIP.
- C. *Review Process:* Changes are evaluated for their impact to scope, schedule, budget and risk. They are first evaluated and discussed at regular team meetings, with affected stakeholders and documented in the project record register.
 1. *Minor changes and those covered by contingency:* Changes that involve meeting a new or different “need “criteria due to permitting requirements, issues management, unknown condition, or design accommodation will be memorialized in the project record register.
 - If the change is due to an internal technical recommendation, the change will also be documented by a change form which is signed by the SME who recommended the change and approved by the PM.
 2. *Major Changes that exceed contingency and in-service year:* Changes that involve a lifetime increase that exceeds project contingency or a schedule change that results in a one-year or greater delay of in-service will also be documented in project change governance documentation such as a corporate spending authorization or project change approval form [PCR] and elaborated the PIP.
- D. *Contract Changes:* Some changes impact contractor statements of work and schedule. In these cases if the change exceeds contract contingency, change orders [new cost and schedule] are requested from the contractor and the PM completes a change amendment form which is formally executed with the contractor. This often involves the re-submittal of a purchase request when additional funding is required.
- E. *Construction changes:* In the construction phase, the PSE Construction Manager and Construction Coordinators work closely with the construction firm to ensure adherence to the construction contract. When changes emerge, a Change Approval Request is initiated by either the contractor or PSE and is signed off by the PM, CM and contractor representatives. These are forwarded to PSE Contract Services for processing of a formal amendment to the contract.

11.2. Communicating changes

- A. A key part of the change process is following up with other stakeholders to inform them of the change. Broad changes that may affect the entire team are discussed at the periodic team meetings.

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Section 12. Summary of Risk Assessment and Mitigation Plan

The primary risks on these projects are related to permitting and system outage availability. Conditional Use permit appeals have occurred and are expected to continue which will delay construction permits and the start of construction for up to a year. A thorough risk assessment was prepared with the assistance of a consultant (Golder and Assoc.). PSE is managing a complex permitting process involving four city jurisdictions and multiple state and federal agencies.


12.1. PERMITTING: The conditional-use permits in Redmond, Bellevue, Newcastle and Renton are all separately subject to legal challenge or appeal which would result in adjudication at K.C. Superior court/Court of Appeals for Redmond, S. Bellevue, Newcastle and Renton. The South Bellevue CUP was appealed and denied by the City Council and K.C. Superior court. The South Bellevue CUP was then appealed to the K.C. Court of Appeals; however, CENSE withdrew their appeal prior to hearing. The Renton CUP was not appealed. The Newcastle CUP is expected to be appealed to King County Superior Court. The Bellevue north project footprint lies partially within the jurisdiction of the East Bellevue Community Council (EBCC). Therefore, approval from the City Council and EBCC is required. Appeals are expected and are taken to King County Superior Court.

12.2. SCHEDULE RISK: Construction of this rebuilt transmission line is subject to seasonal and situational outage constraints. The timing of the issuance of all permits and construction mobilization may not align with the ideal start time for transmission construction which is typically March – October each year. Four months of the year November – February, PSE has limitations as the 115 kV #1 and #2 feeds from Renton to Redmond, through Lakeside substation need to stay energized. Constructing RIC civil in 2020 and transmission lines in 2021, 2022, and 2023 is based on permits for RIC civil being issued on time

Risk	Likelihood	Impact of Occurrence	How Monitored	Mitigation
Construction laydown area in south portion of project	Medium Low	Medium	Continue to look for potential laydown areas	Pole yard secured. Have transmission line contractor responsible for acquiring and or coordinating additional laydown areas and materials management
Issues during procurement	Medium	Medium	Communication with vendors for scope, schedule and budget	Competitively select vendors who have the flexible procurement/cancellation options and scheduling flexibility.
Steel pole production hold costs	Medium Low	Medium	Continue to monitor overall project schedule	Poles for south half have been delivered.

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Risk	Likelihood	Impact of Occurrence	How Monitored	Mitigation
Construction laydown area in north portion of project	Medium	Medium	Continue to look for potential laydown areas	Have transmission line contractor responsible for acquiring and or coordinating laydown and materials management
Legal challenge or appeal to project CUP	High	High	PSE’s Public Affairs and Permitting teams work closely together to ensure that interactions with government and permitting authorities are planned and coordinated	PSE has hired legal consultation to review submittals in order to minimize risk of appeal decisions against PSE.
Legal challenge or appeal to project construction permits	High Medium	High	PSE’s Public Affairs and Permitting teams work closely together to ensure that interactions with government and permitting authorities are planned and coordinated	PSE has hired legal consultation to review submittals in order to minimize risk of appeal decision against PSE.
Constructability issues to transmission line	Low	Low	Continue to review design, field work to verify identified questions, bring a transmission line contractor for pre-construction constructability review	Continue to adapt to changing circumstances
Damage to private property within or accessing the T-line corridor	Medium	Medium	This will be a requirement of the construction contractor. PSE plans on continued outreach and close communication with property owners, giving them multiple options to reach PSE staff should something occur.	PSE has hired a construction contractor who has a plan and methods for identifying and managing risk within the corridor. The contract will re-assign risk management to the contractor. PSE will also allocate budget contingency for restoration should any damage occur.
Damage to co-located utilities.	Low	High	Pre-construction coordination with OPL to ensure best practices are identified and communicated. There will be	Utilities have been located; a corridor safety plan has been developed and will be strictly followed. Excavations will be done

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Risk	Likelihood	Impact of Occurrence	How Monitored	Mitigation
			on-site safety representation from OPL and the construction crew will be responsible for developing and following a safety plan.	using methods that are least likely to cause damage to underground utilities. Pre-construction design review and collaborative work with OPL staff.
Budget variance due to materials and contracting	Low	Low	Periodically confirming cost estimates are current with industry standards.	PSE has worked in advance with material providers to get pricing for the long-lead components on this project. Likewise, the construction work costs are based on industry labor costs [IBEW] and labor averages for this industry.
Availability of an estimated 4,000 trees and 5,000 shrubs	Medium Low	Low	Early work with plant brokers in 2019 to ensure plant availability.	Contact secured with plant brokers to ensure plant availability and/or substitutions.
Acquire remaining t-line easements	Medium Low	Low	Two easements remain. Keeping in regular contact with the property owners while we mutually work toward finalizing the terms.	All know easements that are required have been obtained.

12.3. Schedule and Budget Risks/Unknowns [as of 3Q 2021]:

- A. Not all CUP and subsequent construction permits have not been issued. Appeals are anticipated for the remaining CUP permits (Newcastle, North Bellevue, and Redmond).
- B. Franchise ROW and park tree appraisals not been agreed to between the Cities and PSE. Compensation estimates are being developed for the use Bellevue’s preferred ROW tree valuation method (Council of Tree and Landscape Appraisers; “trunk” formula).
- C.

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Section 13. Quality Control Plan

13.1. Design

PSE’s design process follows company standards such as our Transmission Design and Substation Design manual and industry standards and regulations such as NESC. The design prints are reviewed and stamped by a licensed Professional Engineer.

13.2. Materials

The materials we procure meet industry standards [NESC], PSE company standards and other technical specifications.

13.3. Construction


PSE will only hire a highly qualified contractor that has properly trained journeymen [IBEW] and a proven work history of successfully completing work. We also employ an experienced Construction Manager and Construction Coordinators who evaluate the materials and monitor the work on PSE’s behalf.

13.4. Technical Staff

The PSE and contract staff who are in a lead role working on this project are highly experienced and, in most cases, licensed and certified to perform this type of work where applicable. Project practices and the health and status of the project are regularly reported to upper management and frequently reviewed by an internal project practices team at PSE.

13.5. Phase gate governance process

This project follows the enterprise phase-gate governance process that requires management review and approval of project contracting, major purchases, risk management, and strategies that have a direct impact on project quality. The project does not advance unless these elements of the project are following standards and best practices.

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Section 14. Resource Management

The project team is part of a matrixed organization where each member has a project reporting responsibility to the Project Managers but also a formal reporting responsibility to a first-line supervisor. Should a member of the team need to leave, the first-line supervisor will re-assign a new staff member to the team as soon as possible. New team members. Many departments have experienced staff that is able to substitute on a temporary basis when the primary member is out for extended leave.

The project manager maintains an assignment matrix that is part of the project record register. This matrix is reviewed periodically as the project evolves and new tasks emerge.

14.1. Current Project Team


Name	Role Description
Dan Koch	V.P. Operations, Project Sponsor
Brad Strauch	Infrastructure Program Manager
Dave Jenness	PM Transmission Line Rebuilds
Ryan Wieder	PM Substations
Vu Luu	Transmission Engineer
Dennis Griffith	Construction Manager - Transmission
Cody Spence	Construction Manager - Substations
Stan Haralson	PM Vegetation Management
David Meyer (Talbot) & Sylvia Gard	System Planning
Mike Wood	Substation Engineer
Jason Henry and Chris Russell	Civil Engineering lead
Rachel Uslan	Sr. Real Estate Rep
Nat Trager	Sr. Project Controls Specialist
Elizabeth Dubreuil	Consulting Resource Scientist-Cultural
Kelsey Knowles	Sr. Government Affairs Rep.
Mary MacKie	Communications Initiatives Program Mgr

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Pai-Ling Chu	Administrative Specialist
Karen Worcester	Sr. Land Planner
Kelly Stone	Attorney - PSE Legal Support Real Estate
Sara Leverette	Attorney – PSE Legal Support Land Use

External Resources

Name	Role Description
Corey Scrima	POWER Engineers Transmission Engineer
Scott Olson	POWER Engineers Project Manager
Tim Schiffer	POWER Engineers, GIS mapping support and POWER 360 Lead
Tim Roby	Communications Consultants – Putnam, Roby, Williamson
Tony Williams	Government Affairs Consultant
Tom Gentile	Electric System Planning Consultant – Boston Power Systems (previously Quanta Technology)
Marissa Gifford	Land Planner – HDR
Sarah Langton	Government Affairs Consultant
Lowell Rogers	Transmission design consultant – Oak Strategic
Erin Anderson & Clara Park	Attorney – Land-use and permitting support
Allan Vann & Rochelle Stowe	Project Coordinators – EnviroIssues; property owner meeting coordination
Nell Lund, Kyle Braun and Roen Hohlfeld, Katy Crandall; Clover McIngalls; Amber Mikluscak; Greg Johnson, <i>et. al.</i>	The Watershed Company – Arborists support, property owner meetings and vegetation analysis.
Kim Anderson	AECOM

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Section 15. Communications & Stakeholder Management

15.1. Public Affairs (Communications, Outreach and Government Affairs)

PSE’s public affairs approach for Energize Eastside focuses on ongoing education and engagement. Since launching the Energize Eastside project in December 2013, PSE has engaged the Eastside community in a robust public involvement process. This process has included mailings, public meetings and direct outreach efforts to ensure that stakeholders are informed about the project and have had plentiful and diverse opportunities to participate. PSE’s public involvement process, especially with regards to routing, has been conducted over and above formal environmental review and permitting requirements.

Objectives:

- Build awareness of the project
- Educate the community using multiple tools to deliver our messages to the entire community
- Listen to the community and answer questions
- Be a trusted source of project information and counter misinformation

Community audiences:

The team will focus on a variety of audiences, including but not limited to:


- Elected officials of the five permitting jurisdictions (as appropriate by project phase)
- City staff of the five permitting jurisdictions
- Other permitting agencies
- Property owners
- Engaged neighbors
- Civic and business leaders and organizations
- Media
- Tribes
- Broader community that benefit from the project
- County councilmembers and state legislators
- Internal PSE staff
- UTC staff
- Co-located utilities

15.2. Public Affairs Strategy

The team will utilize the below tools to communicate about the project.

a. Communications plans:

The Communications Team will develop detailed communications plans to provide the project team with approved key messaging, and outline specific outreach and communication requirements for the project. These plans will be implemented by Communications, Outreach, Government Affairs and other project staff.

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b. Tools

The team will use a variety of traditional and social media tools to reach customers where they're at using appropriate messaging to educate and point to our website for more detail.

Some specific tools we have or will use include:


- Project-specific website – pse.com/energizeeastside
- Earned media: press releases, interviews, op-eds and editorial board briefings
- Paid media
- Print and online ads
- Local radio
- Digital and social content
- Social media (organic)
- Telephone town halls
- Stakeholder briefings
- Civic and organization briefings
- Neighborhood/HOA briefings
- Participation in community events [tabling]
- Informational materials: Website updates, newsletters, fact sheets, flyers, letters, email updates, videos
- Project-specific email and voicemail
- Property owner materials (in addition to informational): letters, door hangers
- Internal tools: Talking points, Friday Focus articles, internal open house(s)

15.3. Phased Engagement Approach

PHASE 1: PUBLIC ROUTE DISCUSSION (2014)

To analyze and narrow the potential route alternatives to a reasonable number to study in detail and remove routes with considerable constraints, PSE engaged the CAG in 2014 to consider community values when evaluating the route options. The advisory group was comprised of representatives from various interests within the study area, including potentially affected neighborhood organizations, cities, schools, social service organizations, major commercial users, economic development groups, and other interests. The advisory group spent a year learning about the Eastside's electrical system, participating in meetings and workshops and evaluating 18 route options identified by PSE using a Linear Routing Tool. The advisory group looked at the factors used to develop different route options, narrowed the route options based on values and constraints, and prepared route option recommendations for further consideration.

In addition to the CAG, PSE involved the community through public meetings, neighborhood meetings, briefings and comments, which provided Eastside residents opportunities to share their community values and ask initial questions about the project. The details about the advisory group process can be found in the Community Advisory Group Final Report (2015).

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PSE communicated with the public using a variety of tools, including the project website, comment responses, invitations, emails, briefings, newspaper and online advertising, videos, open houses, newsletters, Q&A sessions, online webinar, and the Community Advisory Group process.

PHASE 2: FIELDWORK AND ENVIRONMENTAL REVIEW (2015 – 2018)

In 2015, PSE began collecting field information necessary for design and environmental review. PSE kept stakeholders informed about these fieldwork activities to ensure residents knew when crews were expected to perform surveys near their homes and businesses.

In 2015, the City began its review under the State Environmental Policy Act (discussed in greater detail below). The City of Bellevue is leading the EIS process in cooperation with Newcastle, Kirkland, Redmond and Renton.

PSE has provided supplemental EIS notifications about major milestones and comment periods to keep stakeholders informed and to support community engagement in addition to those provided by the City of Bellevue and other jurisdictions. PSE has also participated in eight scoping meetings and eight draft EIS hearings over the two-phased EIS process where input on EIS alternative solutions and route options was solicited from the public.

During this period, PSE continued to share project information via the project website, newsletters, emails, briefings, letters, door hangers (for fieldwork), comment responses, traditional and social media, videos, and other tools to reach and educate a variety of audiences.

PHASE 3: PROPERTY-OWNER CONSULTATIONS (2016 – TODAY)


As project design progressed, PSE began reaching out to individual property owners to share information and answer questions. In spring 2016, the project team visited neighborhoods along the existing corridor and Factoria area to talk with residents and business owners about the project. This door-to-door outreach was conducted to help inform customers about the project status and to address questions and concerns from property and business owners.

In September 2016, PSE began meeting with property owners and tenants along the existing corridor to discuss property-specific design and tree replacement plans. We shared our current design for that specific property, including pole locations and how we plan to access those locations during construction. These conversations have helped us refine our project design and better understand customer interests and concerns.

In May 2017, PSE began meeting with property owners to begin developing property-specific landscaping and tree replacement plans with property owners. We are currently reaching out to affected property owners about these efforts.

During this period, PSE continued to share project information via the project website, property owner meetings, newsletters, emails, briefings, letters, door hangers (for fieldwork), comment responses, traditional and social media, videos, and other tools to reach and educate a variety of audiences.

PHASE 4: CONSTRUCTION OUTREACH (future)


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Construction is expected to begin after permits are approved. Before construction begins, PSE representatives and members of the construction team will meet with property owners to share updated information about the construction process and confirm next steps for their specific property.

Throughout construction, we will continue to keep property owners and the community informed of Project progress using many of the same tools we've used in the past, including:


- Newsletters
- Email updates
- Letters
- Door hangers
- Online meeting sign-up form
- In-person property owner meetings
- Phone calls
- Work area signage
- Response to inquiries through website and phone

Additional tools may be needed based on permitting conditions.

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Section 16. Coordination with Other Projects

- A. Energize Eastside is a multi-year project that will affect area projects. The Energize Eastside team is working with project teams across PSE to keep those teams updated on status and to coordinate field work, project messaging as well as process for coordinating field work and outage needs.
1. Sammamish-Juanita 115 kV
 - This is a greenfield 115 kV project that has interdependencies on permitting, construction sequencing and transmission outages. The common location is Sammamish substation and the adjacent Willows Creek mitigation site. Several existing 115 kV poles will need to be relocated to accommodate this project as well as the SAM-RIC 230 kV project. PSE is developing a step plan for improved coordination for all of this transmission and related work.
 2. Willows Creek Stream Mitigation
 - This is the proposed compensatory mitigation for both the SAM-RIC 230 kV rebuild and SAM-JUA projects within the City of Redmond.
 3. Talbot Hill – Double Bus/Double Breaker [Completed Fall 2018]
 4. Talbot Hill Current Limiting Reactors
 - This project will allow for full use and benefits of the double-bud-double-breaker improvement at Talbot Hill Substation. It will not affect PSE’s ability to complete the TAL-RIC 230 kV project.
 5. Talbot-Paccar 115 kV reconductor [uprate].
 - When PSE takes TAL-LAK #1 and #2 system off line for an entire construction season for the 230 kV rebuild, the load demand will be shifted to other lines that interconnect to TAL substation. Based on system modeling, TAL-PCR conductor size [capacity] is insufficient to handle this expected load increase.
 - This 115 kV uprate project will increase the transmission capacity on this line in order to allow PSE to take the TAL-LAK #1 and #2 system off line for an entire construction season for the rebuild. Therefore, the TAL-PCR line reconductor must be completed prior to the TAL-RIC construction phase.
 6. Rose Hill Substation Rebuild
 - As part of the permitting process and additional engineering studies for Energize Eastside, the transmission lines need to operate at the same voltage in order to minimize AC interference with the Olympic pipelines. This was made a permit condition of the CUPs in Bellevue and Renton. As a result, since the Rose Hill substation is a 115 kV to 12.5 kV facility, it needs to be rebuilt to 230 kV to 12.5 kV as both transmission lines that serve the adjacent corridor will be upgraded from 115 kV to 230 kV.

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Section 17. Supporting Documentation

The following documents are available for review by contacting the project manager. 17.1 – 17.5 are updated on a regular basis and the latest document is in the project files. For formal routing and review process, the current version of this document will be attached.

17.1. Schedule

17.2. Cost Report

17.3. Risk Register

17.4. Project Record/Change Register

17.5. Lessons Learned Journal

17.6. Project Order Numbers [SAP orders]

17.7. [Project website \[public\] – pse.com/energizeeastside](http://pse.com/energizeeastside)

17.8. [Environmental Impact Statement \(EIS\) Website – www.EnergizeEastsideEIS.org](http://www.EnergizeEastsideEIS.org)