BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

In the Matter of the Petition of

PUGET SOUND ENERGY

For an Order Authorizing Deferred
Accounting Treatment for Puget Sound
Energy’s Share of Costs Associated
with the Tacoma LNG Facility

PREFILED TESTIMONY (NONCONFIDENTIAL) OF

DAN’L R. KOCH

ON BEHALF OF PUGET SOUND ENERGY IN SUPPORT OF THE
MULTIPARTY SETTLEMENT STIPULATION AND AGREEMENT ON
REVENUE REQUIREMENT AND ALL OTHER ISSUES EXCEPT
TACOMA LNG AND PSE’S GREEN DIRECT PROGRAM

AUGUST 26, 2022
CONTENTS

I. INTRODUCTION ...................................................................................................1

II. THE SETTLEMENT PROVISION REGARDING ENERGIZE EASTSIDE IS IN PSE’S INTEREST AND THE PUBLIC INTEREST ...............................................................................................................2

   A. Summary of the Key Provisions of the Settlement From PSE’s Perspective .........................................................................................................................2

III. ENERGIZE EASTSIDE IS NEEDED AND SHOULD BE PROVISIONALLY INCLUDED IN RATES ...............................................................................................................4

   A. PSE performed extensive studies to establish the need and considered alternatives for Energize Eastside ...........................................................................6

   B. PSE followed the permitting process for Energize Eastside ......................14

IV. CONCLUSION .....................................................................................................15
PUGET SOUND ENERGY

TESTIMONY (NONCONFIDENTIAL) OF DAN’L R. KOCH

SUPPORTING THE MULTIPARTY SETTLEMENT STIPULATION AND AGREEMENT

LIST OF EXHIBITS

Exh. DRK-27  City of Bellevue Hearing Examiner Decision Excerpt
Exh. DRK-28  City of Newcastle Hearings Examiner Decision Excerpt
Q. Are you the same Dan’l R. Koch who submitted prefiled direct testimony on January 31, 2022, as revised on March, 15, 2022 and March 25, 2022, on behalf of Puget Sound Energy (“PSE”) in this proceeding?

A. Yes.

Q. What is the purpose of your testimony?

A. My testimony addresses PSE’s support for the Multiparty Settlement Stipulation and Agreement (“Settlement”) filed with the Commission on August 26, 2022.¹ This testimony sets forth PSE’s testimony as to why the Settlement regarding the Energize Eastside project is supported by PSE, is in the public interest, and should be approved by the Commission. I also address certain concerns previously raised by intervenor Coalition of Eastside Neighborhoods for Sensible Energy (“CENSE”). I reiterate how PSE’s decision to proceed with the Energize Eastside

¹ The Settlement was entered into by the following parties in this case: (i) PSE, (ii) the regulatory staff of the Washington Utilities and Transportation Commission (“Commission Staff”), (iii) Alliance of Western Energy Consumers, (iv) Federal Executive Agencies, (v) Walmart, Inc., (vi) The Energy Project, (vii) Kroger, Co., (viii) NW Energy Coalition, (ix) Sierra Club, (x) Front and Centered, (xi) Microsoft and (xii) Nucor Steel Seattle, Inc., as of August 26, 2022 (collectively the “Settling Parties”).
project is prudent based on strong technical and engineering analysis and in compliance with NERC transmission planning standard TPL-004-1.

II. THE SETTLEMENT REGARDING ENERGIZE EASTSIDE IS IN THE PUBLIC INTEREST AND SUPPORTED BY PSE

A. Summary of the Settlement regarding Energize Eastside

Q. Mr. Koch, why is PSE supporting the Settlement, specifically the Energize Eastside provision?

A. The Energize Eastside project is an important transmission project that will benefit PSE’s customers through improved reliability for communities on the eastside of Lake Washington and increased electrical capacity as growth and development continues. The need for this project has only increased, and in the past five of six summers the demand has exceeded the transmission study level where the deficiencies identified exist on the Eastside. Customers will benefit from the improved reliability and increased capacity particularly as Washington moves towards increased electrification.

The Settlement reflects a fair and reasonable resolution where the Settling Parties accept that PSE has met its threshold prudence requirement to demonstrate that the estimated costs associated with the Energize Eastside investment should be provisionally included in rates, subject to refund. There is substantial evidence in the record in my direct testimony that PSE prudently initiated the Energize Eastside project to address a developing deficiency of the current eastside area.
transmission infrastructure, considered alternatives including both “wires” and “non-wires” alternatives, and kept its Board of Directors and management informed and involved in the decisions regarding the project in accordance with the prudence standard, which allowed the Settling Parties to reach agreement that a threshold prudence determination is appropriate. By accepting and not challenging that PSE met its threshold prudence requirement, while still allowing parties to challenge the costs of the project when reviewing the investments after the plant is placed in service, the Settlement is a reasonable resolution for a major and needed transmission capital project.

Q. Why is the settlement of the Energize Eastside important to PSE?

A. The Settlement provides an adequate solution to a number of issues about the Energize Eastside project. PSE and the Settling Parties worked together to structure the Settlement to address the prudency of Energize Eastside while allowing review of the costs of the investments once plant is in service. The Settlement provides that PSE should be allowed to provisionally recover for plant in service for a major needed transmission project. Customers receive the benefit of improved reliability and capacity, which addresses a current deficiency that continues to grow with increased customer demand on the eastside. The Settlement also reasonably adjusts the delayed service dates for Energize Eastside, which are assumed to be incorporated into the agreed upon revenue requirement, with the South Phase in service by October 2023 and the North Phase in service by October 2024.
Q. Does PSE think there is a basis for provisional prudence review?

A. Yes. As explained in my testimony and in the testimony of Commission Staff witness Joe Nightingale, the need for the Energize Eastside project was established by PSE and alternatives were considered, and the continued construction of the project is prudent given the need, which is only expected to increase. Furthermore, the alternatives are neither feasible nor cost-effective, and although final project costs are not yet known, 40% of the construction is complete and 63% of the estimated budget has been spent. It is inconceivable that the remaining spend would justify changing course to a hypothetical “alternative” or “shifting need.” Accordingly, the only remaining prudence factor that should remain is whether the construction expenses were prudently incurred given that the final costs are not yet known.

III. ENERGIZE EASTSIDE IS NEEDED AND SHOULD BE PROVISIONALLY INCLUDED IN RATES

Q. Do any parties oppose the inclusion of Energize Eastside provisionally into rates?

A. CENSE did not join in the Settlement, and given its response testimony, I assume it opposes the Settlement with respect to the Energize Eastside investment. CENSE claims the Energize Eastside project is not needed. I address below why CENSE is incorrect.
Q. **Do you or other parties agree with CENSE witness Mr. Lauckart that Energize Eastside is not needed?**

A. No. PSE has demonstrated through multiple studies that the Energize Eastside project is needed. As I explained in my Prefiled Direct Testimony, the need for the Energize Eastside project was initially identified in reliability assessments done on an annual basis as part of the NERC Compliance Enforcement Program, where PSE saw the developing need for transmission reliability to supply the growing region. PSE conducted further studies, including the Eastside Needs Assessment Report in 2013, and the Supplemental Eastside Needs Report in 2015, which both demonstrated the need for the project. Additionally, Staff witness Joel Nightingale, provides additional evidence demonstrating the need for the Energize Eastside project. Mr. Nightingale’s Exh. JBN-2 describes the various studies performed that demonstrate the need, and also provides additional information regarding the planning level load forecasts used for the Energize Eastside project and the Transmission Planning Assessment results specific to Energize Eastside. The NERC Transmission Planning Standard is discussed in further detail below.

Q. **Have any other assessments found there is a need for the Energize Eastside project?**

A. Yes. As discussed in my Prefiled Direct Testimony, the City of Newcastle hired and conducted its own independent third-party assessment of need as part of the

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2 Koch, Exh. DRK-1T at 48-50.
3 Koch, Exh. DRK-3r.
4 Koch, Exh. DRK-4r.
5 Koch, Exh. DRK-1T.
land use permitting proceeding.\(^6\) The City of Newcastle agreed a need exists in
the Energize Eastside area. Furthermore, the Utility System Efficiencies, Inc.
technical analysis,\(^7\) and the Stantec Consulting review memo prepared for
Bellevue, Kirkland, Newcastle, and Renton, Exh. DRK-11, further support and
demonstrate there is a need for the Energize Eastside project.

A. **PSE performed extensive studies to establish the need and considered alternatives for Energize Eastside**

Q. **What is the purpose of the NERC Transmission Planning Standard TPL-004-1?**

A. NERC Standard TPL-001-4, Transmission System Planning Performance

Requirements’ stated purpose is to “establish transmission system planning
performance requirements within the planning horizon to develop a Bulk Electric
System (BES) that will operate reliably over a broad spectrum of system
conditions and following a wide range of probable contingencies.”\(^8\) In essence,
the standard requires utilities to evaluate its transmission system annually under
this broad spectrum of system conditions and probable contingencies to identify
deficiencies where the system is unable to meet the performance requirements and
include Corrective Action Plans addressing how the performance requirements
will be met. This is to ensure that utilities are addressing any foreseeable

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\(^6\) See Koch, Exh. DRK-12.

\(^7\) Koch, Exh. DRK-10.

deficiencies and are adequately planning for the needed infrastructure to prevent
events from occurring.

Q. **Describe the studies PSE performed to determine that a transmission
deficiency would emerge within the ten-year planning horizon stipulated in
NERC TPL-004-1.**

A. PSE has conducted the annual transmission planning study since the TPL
standards became effective in 2005. PSE identified the Energize Eastside need in
the 2009 TPL planning assessment, and since then, each of PSE’s annual
transmission assessments for TPL standard compliance has shown the need for
Energize Eastside. PSE also hired Quanta to perform studies specifically for the
transmission system serving the Eastside area to confirm the results of the
transmission planning assessments PSE had annually performed.9

Q. **Were the studies performed by PSE and Quanta done in accordance with the
requirements of the NERC standard?**

A. Yes.

Q. **Were these studies verified by any other third-party experts?**

A. Yes. The 2013 and 2015 Energize Eastside Needs Assessment studies conducted
by PSE and Quanta have been reviewed by multiple third-party experts. The

9 Koch, Exh. DRK-3r; Koch, Exh. DRK-4r.
reports have been reviewed by: Utility Systems Efficiencies, Inc. (hired by City of
Bellevue)\textsuperscript{10}; Stantec Consulting Services, Inc. (hired for EIS cities)\textsuperscript{11}; and
MaxtETA Energy and Synapse Energy Economics (hired by City of Newcastle).\textsuperscript{12}

Also, as part of the TPL-001-4 R8 standard requirement, PSE shares its annual
transmission planning assessments with its neighboring utilities every year. This
gives an opportunity for PSE’s neighboring utilities to provide comments and
feedback on PSE’s TPL report.

Q. Do you agree with the conclusions of these studies?

A. Yes. I agree with the conclusions that a transmission deficiency exists in PSE’s
transmission system and that Energize Eastside solves this deficiency.

Q. Did PSE rely on MaxETA/Synapse to determine the need for Energize
Eastside as alleged by CENSE?

A. No. MaxETA/Synapse was hired by the City of Newcastle as part of its review of
PSE’s application for a land use permit to verify compliance with the city’s land
use and utilities codes, which include that the applicant demonstrate that the
project is needed. The City of Newcastle hired MaxETA/Synapse to verify this
the need for Energize Eastside. MaxETA/Synapse and the City of Newcastle
affirmed the need for the project.

\textsuperscript{10} Koch, Exh. DRK-10.
\textsuperscript{11} Koch, Exh. DRK-11.
\textsuperscript{12} Koch, Exh. DRK-12.
Q. Does a need for Energize Eastside still exist for PSE’s forecasted winter peak demand?

A. Summer peak continues to be a primary concern and was exceeded in five of the past six years. Furthermore, even though winter peak need has not materialized as quickly as expected, based on the 2021 Transmission Planning Assessment which concluded in December 2021, the assessment still shows an Energize Eastside need for winter peak demand in the ten-year horizon. The First Exhibit to the Prefiled Direct Testimony of Joel B. Nightingale is an excerpt from the TPLs related to the Energize Eastside needs assessments from 2015 through 2021 documenting these results.\(^\text{13}\)

Q. What concerns do you have with the report prepared by Mr. Lauckhart and Mr. Schiffman?

A. There are many concerns with the Lauckhart-Schiffman report and these concerns have been addressed many times by PSE in the course of the siting and permitting of the Energize Eastside project. The hearing examiners of the Bellevue and Newcastle hearings for the south section of the Energized Eastside project, found the Lauckhart-Schiffman study not to be credible\(^\text{14}\). Attached as Exhibits DRK-27 and DRK-28 are excerpts from the Bellevue and Newcastle decisions discussing

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\(^{13}\) Nightingale, Exh. JBN-2 at 7-19.

\(^{14}\) The City of Newcastle Hearing Examiner for Energize Eastside CUP hearing stated that CENSE’s expert witness’s evidence was flawed, inaccurate and not credible. Koch, Exh. DRK-28. The City of Bellevue Hearing Examiner for Energize Eastside CUP found the reports defective and not credible. Koch, Exh. DRK-27 at 4.
the Lauckhart-Schiffman study. The Lauckhart-Schiffman report was also
addressed by FERC in the CENSE complaint to FERC on October 21, 2015.

FERC stated:

Contrary to Complainants’ vague allegations that the
Respondents have violated [Federal transmission planning
regulations], the record before us shows that [PSE] and the
other Respondents have complied with the applicable
transmission planning requirements[].

The primary concerns with the Lauckhart-Schiffman report are that it:

- Fails to stress the electric system as required by federal standards. The
  report implies that only one contingency was studied versus the many
  thousands which are required;

- Uses an incorrect load growth for the Eastside area;

- Erroneously interprets power flows to Canada;

- Confuses planning standards with day-to-day operations;

- Did not perform any summer analysis; and

- Was never independently reviewed.

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15 Coalition of Eastside Neighborhoods for Sensible Energy, et. al. v. Puget Sound
Energy et. al., Dkt. EL15-74-000, 153 FERC ¶ 61,076 at ¶ 61 (Oct. 21, 2015).
Q. Do you agree with Mr. Lauckhart’s assertion that there are not transmission reliability problems on the eastside when PSE’s westside thermal generation is turned on?

A. No. As clearly stated in the independent report prepared by Utility Systems Efficiencies, Inc. (Independent Technical Analysis of Energize Eastside, 2015) that:

Several hypothetical scenarios were studied as part of the Optional Technical Analysis (OTA). Each one showed overloads in the 2017/18 timeframe, indicating project need in order for PSE to meet federal regulatory requirements for system reliability. The OTA results showed that reducing the Eastside area growth from 2.4% to 1.5% per year in the period from winter 2013/14 to winter 2017/18 still resulted in project need. Reducing PSE’s King County growth while keeping the Eastside growth the same similarly resulted in a project need. Turning on additional generation in the Puget Sound area also resulted in a project need.  

Additionally, the report notes the results of the analysis demonstrated that increasing the power output of existing Puget Sound area generation to the levels specified in ColumbiaGrid’s July 2010 “Puget Sound Area Generation Modeling Guideline” eliminated only one of five overloads in the 2017/18 normal winter, but it “did not eliminate project need.”

Q. What alternatives to Energize Eastside did PSE consider, and

A. As shown in my Prefiled Direct Testimony, PSE evaluated a variety of alternatives and concluded Energize Eastside is the best solution. The 2014

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16 Koch, Exh. DRK-10 at 6.
17 Koch, Exh. DRK-10 at 63 (emphasis added).
18 Koch, Exh. DRK-1T at 55-60.
Solutions report\textsuperscript{19} and the Supplemental Eastside Solutions Study Report\textsuperscript{20} considered conservation, additional generation, demand response, distributed generation, energy storage, expansion of transmission substations, and the upgrading of transmission lines and 115kV lines. PSE also conducted a non-wires alternative study that concluded the cost-effective non-wires alternatives were not large enough to provide sufficient load reduction.\textsuperscript{21} The 2015 and 2018 Strategen Eastside System Energy Storage Alternatives Screening Study evaluated battery storage alternatives.\textsuperscript{22} POWER Engineers also studied the feasibility of underground cables.\textsuperscript{23}

\textbf{Q.} Have any recent advancement in technology made these alternatives a viable option?

\textbf{A.} No. PSE’s ongoing and contemporaneous evaluation of energy storage included distributed energy storage and concluded that even if “every customer in PSE’s Eastside area installed a storage system sized comparably to a Tesla Powerwall 2, only about half of the 2019 Eastside transmission capacity deficiency would be met and less than a quarter of the 2027 Eastside capacity deficiency would be met,” referring to the summer-peak demand. Strategen’s 2018 Eastside System Energy Storage Alternatives Assessment estimated that the cost of the distributed

\textsuperscript{19} Koch, Exh. DRK-5r.
\textsuperscript{20} Koch, Exh. DRK-6r.
\textsuperscript{21} Koch, Exh. DRK-7.
\textsuperscript{22} Koch, Exhs. DRK-8 and DRK-9.
\textsuperscript{23} Koch, Exhs. DRK-13 and DRK-14.
batteries, not including the solar panels, would cost in the range of $2.1 billion to $3.1 billion.\textsuperscript{24}

Q. Mr. Lauckhart identifies four alternatives to Energize Eastside. Would these alternatives adequately address the need the Energize Eastside project solves?

A. No. Mr. Lauckhart proposed the following alternatives: (1) a small peaker plant located near the load in Bellevue;\textsuperscript{25} (2) use of the Existing Seattle City Line; (3) a new 230/115 kV transformer at the PSE Lake Tradition substation; or (4) a cocktail of DSM activities such as rate design or battery installations.\textsuperscript{26} All of these alternatives have been evaluated by PSE. The associated analysis for each can be found in the 2015 Supplemental Eastside Solutions Study Report by Quanta/PSE,\textsuperscript{27} the 2018 Eastside System Energy Storage Alternatives Assessment by Strategen Consulting,\textsuperscript{28} and the 2014 Non-Wires Screening Study by Energy Environmental Economics.\textsuperscript{29}

\textsuperscript{24} Koch, Exh. DRK-9.
\textsuperscript{25} PSE understands there is an active dispute among CENSE members as to whether the Bellevue peaker plant is a valid alternative that should be considered.
\textsuperscript{26} Lauckhart, Exh. RL-1T at 27-28.
\textsuperscript{27} Koch, Exh. DRK-6r.
\textsuperscript{28} Koch, Exh. DRK-9.
\textsuperscript{29} Koch, Exh. DRK-7.
B. PSE followed the permitting process for Energize Eastside?

Q. Did PSE follow the correct permitting process for Energize Eastside?

A. Yes. PSE obtained permits and continues to pursue permits for the local jurisdictions where the Energize Eastside project will be built. Engaging with local jurisdictions in the permitting process serves two purposes. First, obtaining permits is a necessary part of large multijurisdictional transmission projects. Second, PSE can engage with the jurisdictions and the public to increase awareness about the project. This is further discussed in my Prefiled Direct Testimony.30

Q. What is the status of permits to construct Energize Eastside?

A. All associated state and federal permits have been issued for the project. Four of the five Conditional Use Permits (“CUP”) have been issued for the project. Only the CUP for the north half of the Bellevue segment remains to be issued. Construction permits have been issued for Renton and the south Bellevue segment, with the construction permits for the Newcastle segment currently under review. PSE is constructing the Energize Eastside project in compliance with the permits issued by each jurisdiction.

30 Koch; Exh. DRK-1T at 76-78; Koch, Exh. DRK-19.
Q. **What is the status of construction for Energize Eastside?**

A. The new Richards Creek 230 kV-115 kV substation is substantially complete and the majority of costs have been incurred. In Renton, the vast majority of the transmission lines construction has been completed and the south Bellevue segment is currently under construction, with completion projected by November of 2022. The Newcastle transmission line segment and the few remaining transmission spans in Renton will be completed in 2023. Finally, the north phase is anticipated to be completed in 2024.

**IV. CONCLUSION**

Q. **Does this conclude your testimony?**

A. Yes.