EXH. RJR-1T
DOCKETS UE-240004/UG-240005
2024 PSE GENERAL RATE CASE
WITNESS: RONALD J. ROBERTS

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY,** **Respondent.**	**Docket UE-240004** **Docket UG-240005**

PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF

RONALD J. ROBERTS

ON BEHALF OF PUGET SOUND ENERGY

FEBRUARY 15, 2024

PUGET SOUND ENERGY

PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF RONALD J. ROBERTS

CONTENTS

PUGET SOUND ENERGY

PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF RONALD J. ROBERTS

LIST OF EXHIBITS

PUGET SOUND ENERGY

PREFILED DIRECT TESTIMONY (NONCONFIDENTIAL) OF RONALD J. ROBERTS

I. INTRODUCTION

Q. Please state your name, business address, and position with Puget Sound Energy.

A. My name is Ronald J. Roberts, and my business address is 355 110th Avenue NE, Bellevue, Washington 98004. I am the Senior Vice President of Energy Resources for Puget Sound Energy ("PSE").

Q. Have you prepared an exhibit describing your education, relevant employment experience, and other professional qualifications?

A. Yes, I have. Please see the First Exhibit to the Prefiled Direct Testimony of Ronald J. Roberts, Exh. RJR-2, which describes my education, relevant employment experience, and other professional qualifications.

Q. What are your duties as Senior Vice President of Energy Resources?

A. As Senior Vice President of Energy Resources, I am responsible for all electric generation facilities and natural gas storage facilities owned by PSE, long-term resource planning, utility-scale resource acquisition, and the energy supply merchant function – which is responsible for PSE's wholesale energy supply activities including dispatch of electric generation assets and contracts, merchant

transmission acquisition and optimization, wholesale power and gas trading and commodity hedging programs, resource adequacy, and integrating new generation assets.

Q. Please summarize the purpose of this prefiled direct testimony.

A. The purpose of this testimony is to provide an overview of how PSE is adapting its energy supply portfolio to meet statewide decarbonization requirements under the Clean Energy Transformation Act of 2019 ("CETA") while delivering reliable and cost-effective energy to serve customer demand.

Section II of this prefiled direct testimony presents an update to PSE's resource mix and the challenges PSE faces to continue delivering safe, reliable, and affordable energy in light of the requirements of CETA and changing regional energy market dynamics.

Section III describes actions taken by PSE's energy supply function to address a near-term capacity deficit and reduce reliance on increasingly volatile wholesale energy markets to meet peak demand.

II. PSE IS ADAPTING ITS ENERGY SUPPLY TO ACHIEVE CLEAN ENERGY TARGETS WHILE PROVIDING SAFE, RELIABLE AND AFFORDABLE SERVICE TO MEET CUSTOMER DEMAND

A. Overview

Q. Will PSE need to acquire new electric resources to reliably serve demand and achieve the state's decarbonization goals codified in CETA?

A. Yes. PSE must acquire an unprecedented volume of new electric resources to meet CETA requirements, serve projected growth in customer demand, and continue to provide reliable electric service. As outlined in the Prefiled Direct Testimony of Joshua J. Jacobs, Exh. JJJ-1T, in March 2023 PSE filed its 2023 Electric Progress Report[1] ("2023 Report") with the Commission. In that report, PSE projected that it must acquire resources with combined nameplate capacity of over 6,700 megawatts ("MW") by 2030 and nearly 15,000 MW by 2045. In the shorter-term, PSE is working to meet immediate capacity needs, achieve interim clean energy targets, and replace approximately 750 MW of baseload capacity from Colstrip Units 3 & 4 and the Centralia Coal Transition Power Purchase Agreement which will be removed from PSE's portfolio at the end of 2025.

[1] Puget Sound Energy, *2023 Electric Progress Report* (Mar. 31, 2023), https://www.pse.com/-/media/PDFs/IRP/2023/electric/chapters/00_EPR23_ChapterBook_Final.pdf?modified=20230331180618).

Q. How much clean energy does PSE project it will need to procure in the coming years to stay on course to meet CETA goals?

A. To meet CETA goals, PSE's need will grow from 1.5 million MWh in 2024 to 6.3 million MWh in 2030, as discussed in more detail in the Prefiled Direct Testimony of Joshua J. Jacobs, Exh. JJJ-1T. This represents an unprecedented volume of resources that PSE will need to acquire over the next two decades, more generation resources than PSE has amassed in its 100-plus year history. These staggering numbers underscore the speed and scale of the change facing PSE as it works to meet the goals codified in CETA.

Q. How much capacity is PSE projecting it needs to meet resource adequacy requirements between now and 2030?

A. PSE's capacity needs are seasonal in nature (i.e., peak capacity needs are identified separately for summer and winter seasons). As discussed in the Prefiled Direct Testimony of Joshua J. Jacobs, Exh. JJJ-IT, PSE must also procure electric resources to fill PSE's currently open transmission capacity.[2]

In the near and intermediate-terms,[3] PSE projects that it will need to acquire:

- 174 MW in winter peak capacity by 2024, plus 1,069 MW open transmission capacity for a total of 1,243 MW,
- 465 MW in winter peak capacity by 2025, plus 855 MW open transmission capacity for a total of 1,320 MW,

[2] *See also* 2023 Report, *supra* note 1.

[3] PSE generally defines "near-term" as a period less than 12 months and "intermediate-term" as less than five years when referring to electricity transactions.

- 1,336 MW in winter peak capacity by 2026, plus 642 MW open transmission capacity for a total of 1,978 MW,
- 1,848 MW in winter peak capacity by 2027, plus 428 MW open transmission capacity for a total of 2,275 MW,
- 2,096 MW in winter peak capacity by 2028, plus 214 MW open transmission capacity for a total of 2,310 MW, and
- 2,340 MW in winter peak capacity by 2029.[4]

PSE also projects that it will need to acquire:

- 167 MW in summer peak capacity by 2024, plus 1,048 MW of open transmission capacity for a total of 1,216 MW,
- 534 MW in summer peak capacity by 2025, plus 839 MW of open transmission capacity for a total of 1,372 MW,
- 1,415 MW in summer peak capacity by 2026, plus 629 MW of open transmission capacity for a total of 2,044 MW,
- 1,906 MW in summer peak capacity by 2027, plus 419 MW of open transmission capacity for a total of 2,325 MW,
- 2,177 MW in summer peak capacity by 2028, plus 210 MW of open transmission capacity for a total of 2,387 MW, and
- 2,770 MW in summer peak capacity by 2029.[5]

The electric resource supply needs discussed above directly inform PSE's Energy Supply function on the type and volume of electric resources it pursues for acquisition in the near- and intermediate-term periods.

[4] Prefiled Direct Testimony of Joshua J. Jacobs, Exh. JJJ-IT.
[5] 2023 Report, *supra* note 1.

Q. What is PSE doing to meet these needs?

A. PSE is pursuing a resource acquisition strategy that focuses on long-term acquisitions and relies upon near- and intermediate-term resource acquisitions to bridge capacity and renewable needs. The near- and intermediate-term resource acquisitions are complementary to the long-term acquisition process and meet capacity and renewable needs during the period before the long-term resources achieve commercial operations.

Please see the Prefiled Direct Testimony of Craig J. Pospisil, Exh. CJP-1T, for a discussion of PSE's bridging and long-term electric resource acquisition strategy. Please see the Prefiled Direct Testimony of Joshua J. Jacobs, Exh. JJJ-1T, for a discussion of why these near-, intermediate-, and long-term resource acquisitions are necessary for PSE to continue providing safe and reliable electric service.

Q. Please elaborate on the steps PSE is taking to meet long-term resource acquisition needs.

A. PSE is pursuing and evaluating long-term resource acquisition opportunities to meet projected new resource needs. These include power purchase agreements ("PPAs"), new PSE-owned resources, and demand side solutions. Please see the Prefiled Direct Testimony of Colin P. Crowley, Exh. CPC-1HCT, for a discussion of certain PSE long-term resource acquisitions, such as the Vantage Wind PPA, the Beaver Creek Wind Project, and other proposed projects that may commence operation during the multiyear rate plan period. Additionally, please see the

Prefiled Direct Testimony of Zacarias C. Yanez, Exh. ZCY-1CT, for a discussion of a new long-term power sales agreement that secures clean, hydroelectric generation from Public Utility District No. 1 of Chelan County, Washington ("Chelan PUD").

The Prefiled Direct Testimony of James P. Hogan, Exh. JPH-1CT, discusses construction and execution of major capital projects scheduled to commence operations during the multiyear rate plan period that will support PSE's long-term need.

Q. Please elaborate on steps PSE is taking to meet near-term and intermediate-term electric resource needs.

A. PSE's Energy Supply Merchant function generally fulfills PSE's resource acquisition activities to fill near-term and intermediate-term electric resource needs. The Prefiled Direct Testimony of Philip A. Haines, Exh. PAH-1CT, addresses near-term and intermediate-term electric supply resources and transmission contracts that will be effective during some or all of the multiyear rate plan period. The Prefiled Direct Testimony of Steve J. St. Clair, Exh. SJS-1CT, addresses an intermediate-term contract intended to bridge capacity need ahead of long-term acquisitions.

Q. Does PSE's resource acquisition strategy include demand response and distributed energy resources?

A. Yes. The Prefiled Direct Testimony of Gilbert Archuleta, Exh. GA-1T, discusses demand response contracts that PSE has entered to address resource adequacy needs via demand side programs.

The Prefiled Direct Testimony of Aaron A. August, Exh. AAA-1T, provides an update on PSE's pursuit of thirty-four shortlisted distributed energy resources resulting from PSE's 2022 Distributed Solar and Storage Request for Proposals. The Prefiled Direct Testimony of Brennan D. Mueller, Exh BDM-1T, addresses PSE's proposal for cost recovery for distributed energy resources that achieve commercial operations during some or all of the multiyear rate plan period.

Q. What actions is PSE's Energy Supply function taking to decarbonize generation resources and maintain reliable electric service?

A. PSE's Energy Supply function participates in the effort to decarbonize operations by managing the transition away from coal-fired resources, procuring renewable and nonemitting electric generation resources and reliable capacity through near- and intermediate-term PPAs and market transactions, and coordinating with PSE's long-term resource acquisition function to integrate new electric generation resources into PSE's electric supply operations.

Q. How are decarbonization efforts affecting electricity generation and reliability?

A. PSE faces both market and resource adequacy challenges as it works to expand the acquisition and implementation of new resources to meet CETA goals. As discussed in the Prefiled Direct Testimony of Joshua J. Jacobs, Exh. JJJ-1T, these goals include serving at least 60 percent of PSE's retail electric load with renewable and nonemitting electric generation resources by 2025.[6] For the first compliance period under CETA (calendar years 2030-2033), PSE must plan to serve at least 80 percent of PSE's retail electric load with renewable and nonemitting electric generation resources, and PSE must plan to serve all retail electric load with renewable and nonemitting electric generation resources by calendar year 2045.

Similar efforts across the region to replace baseload fuel supplies with renewable and nonemitting electric generation resources have contributed to an increase in regional electric market price volatility, capacity shortfalls, and scarcity of firm transmission rights. These developments add to uncertainty regarding implementation costs associated with achievement of the state's decarbonization goals.

[6] Prefiled Direct Testimony of Joshua J. Jacobs, Exh. JJJ-1T.

Q. How is PSE continuing to provide safe and reliable electric service to meet customer demand?

A. PSE is taking several steps to continue to provide safe, reliable, and affordable service for retail customers, but challenges remain. As presented in the Prefiled Direct Testimony of Joshua J. Jacobs, Exh. JJJ-1T, PSE's projected resource need provided in the 2023 Report already includes an increase in projected need relative to the 2021 Integrated Resource Plan ("2021 IRP") and the 2021 Clean Energy Implementation Plan (the "2021 CEIP"). Factors that influence this increased need include implementation of CETA requirements, an approximately seven percent increase in forecasted demand relative to earlier forecasts,[7] a regional capacity deficit, variability in renewable energy production, and longer lead-times associated with the development and procurement of new resources. Compounding PSE's long-term resource planning challenges, a shift in fundamentals of regional electricity market supply and demand limits PSE's ability to secure reliable supply via wholesale market purchases during periods of high demand.

PSE's Energy Supply function is proactively addressing these market and resource adequacy challenges by:

(i) reducing reliance on wholesale spot market transactions by securing near- and intermediate-term PPAs,

[7] *See* Puget Sound Energy, *2023 Biennial Clean Energy Implementation Plan Update* (Nov. 20, 2023), at 2.10-2.11, https://www.pse.com/-/media/PDFs/CEIP/2023/001_BU23_Chapters_Final.pdf.

(ii) participating in regional resource adequacy programs,

(iii) exploring new day-ahead market options, and

(iv) maintaining availability of PSE's gas-fired generation fleet to mitigate projected capacity shortfalls.

The Prefiled Direct Testimony of Philip A. Haines, Exh. PAH-1CT, discusses in more detail how PSE's Energy Supply function is addressing near- and intermediate-term energy and resource adequacy needs and managing its evolving resource portfolio. And the Prefiled Direct Testimony of Mark A. Carlson, Exh. MAC-1CT, discusses operation and maintenance of PSE's gas-fired generation fleet in more detail.

B. PSE's Resource Mix and Path to a Decarbonized Portfolio

Q. What is PSE's existing supply-side resource mix and portfolio?

A. PSE owns supply-side resources that include 1,742 MW of renewable resources, including 773 MW of wind generation, 244 MW of hydroelectric power, 0.5 MW of solar generation, and 2 MW of battery storage power.[8] Thermal resources owned by PSE total 2,275 MW, which includes 1,663 MW of baseload thermal resources and 612 MW of combustion turbine peaking resources.[9] PSE will lose 370 MW of company-owned baseload thermal capacity at the end of 2025 when Colstrip Units 3 & 4 are removed from the resource portfolio.

[8] *See* 2023 Report, *supra* note 1, at Appx. C (Existing Resource Inventory), at Table C.4: Total Renewable Resources.

[9] *See id*. at Table C.9: Total Thermal Resources.

PSE's supply-side resources also include long-term PPAs with independent power producers and other utilities. Approximately 1,880 MW of electric capacity is supplied to PSE pursuant to long-term PPAs. These include over 1,375 MW from renewable and nonemitting generation resources and 380 MW from the Centralia Coal Transition PPA. The Centralia Coal Transition PPA expires at the end of 2025.

Q. What challenges does PSE face as it works to meet both its clean energy and resource adequacy requirements?

A. PSE is rapidly transforming its business model and developing the expertise necessary to support the development and acquisition of renewable and non-emitting electric generation resources and carbon-free, dispatchable resources. Many electric generation technologies that could meet both CETA and resource adequacy requirements are not yet mature and will likely not be commercially available for some time. In addition, there are limited options in terms of existing dispatchable resources that PSE can add to its near-term portfolio, which adds to the complexity of an accelerated clean energy transformation.

Q. What new resources is PSE adding during the proposed multiyear rate plan period that would contribute to CETA and resource adequacy requirements?

A. Although meeting PSE's CETA and resource adequacy requirements will be a challenge, PSE is moving forward with new utility-scale assets scheduled to become operational during the multiyear rate plan period. The Prefiled Direct Testimony of Colin P. Crowley, Exh. CPC-1HCT, discusses PSE's acquisition of

the Beaver Creek Wind project located in Stillwater County, Montana, with an expected nameplate capacity of 248 MW, projected to be in service August 2025. He also discusses the Vantage Wind Power Purchase Agreement, which is a 15-year PPA beginning in October 2025. The Prefiled Direct Testimony of Philip A. Haines, Exh. PAH-1CT, discusses several new power supply resources as well as new and renewed transmission contracts. The Prefiled Direct Testimony of Zacarias C. Yanez, Exh. ZCY-1CT, discusses PSE's renewal and extension of the power sales agreement with Chelan PUD, which provides PSE with a 25 percent share of the output of the Rocky Reach and the Rock Island Hydroelectric Projects. And, as previously discussed, the Prefiled Direct Testimony of Gilbert Archuleta, GA-IT, presents several demand response PPAs.

C. Energy Supply Challenges

1. Policy Drivers

Q. How are decarbonization policies adding complexity to the wholesale electricity sector?

A. Decarbonization efforts are transforming the regional resource supply stack, adding complexity and uncertainty in the wholesale electricity sector. Additions of variable renewable resources combined with retirements of traditional coal and gas-fired resources are contributing to increased volatility in market electricity prices and generally higher net power supply costs, at least in the near term. Limited availability of and competition for CETA-compliant renewable and nonemitting electric generation resources drive up the cost for these resources.

The cost to acquire flexible, dispatchable renewable resources, such as hydroelectric products in the Pacific Northwest, have increased markedly over the past few years.

The "Cap-and-Invest" program established under the state's Climate Commitment Act ("CCA") adds additional challenges for power supply operations in the region and likely increases the net cost of power supply for PSE's retail electric customers. Details regarding Cap-and-Invest program rules are still evolving, but PSE understands that the program will only provide no-cost allowances for emissions from electric generation resources used to serve PSE's retail electric demand. This means that PSE will have to purchase allowances for any emissions associated with wholesale market sales and/or reduce the volume of power sold into the wholesale markets. Because wholesale sales revenue is a reduction to the net power supply costs paid by retail customers, any loss of wholesale sales revenue increases these net costs. Other potential CCA risks include uncertainty and volatility in the price of compliance instruments (allowances), complex reporting requirements, and how the rules will be reflected in the operation of organized markets like the Western Energy Imbalance Market or potential day-ahead market structures.

Q. How is PSE's Energy Supply function addressing the CCA Cap-and-Invest program in its power supply operations?

A. Despite uncertainty regarding the Department of Ecology's implementation of the CCA Cap-and-Invest program, PSE has adjusted its operations in order to

minimize the likely impact of Washington's CCA on retail electric rates. Please see the Prefiled Direct Testimony of Brennan D. Mueller, Exh. BDM-1T, for a discussion of how PSE's Energy Supply function is addressing the CCA Cap-and-Invest program in its power supply operations and the impacts to forecasted power supply costs in this proceeding.

2. Market Challenges

Q. What are the market challenges currently facing PSE?

A. A region-wide transition toward carbon-free electric energy supply has accelerated the deployment of intermittent resources, namely wind and solar resources. The rapid expansion of intermittent resources coupled with widespread divestment and decommissioning of traditional baseload resources, like coal, in conjunction with more frequent, climate change-related extreme weather events, have resulted in tightened and more volatile energy supplies and a sharp rise in electric market price volatility.

For many years, the western energy market had enjoyed a capacity surplus, and reliance on short-term market purchases to meet peak demand proved a cost-effective way for PSE to plan and operate. With the rapid expansion of intermittent renewable resources and decrease in dispatchable, baseload generation, however, the western energy market faces unprecedented resource scarcity and significant capacity shortfalls. As discussed in PSE's 2023 Electric Progress Report, recent studies about resource adequacy in the Northwest

conducted by respected industry-based organizations are consistent and aligned in finding that near-term risks to grid reliability are growing as loads drastically increase and baseload, dispatchable resources retire.[10] The Western Electricity Coordinating Council ("WECC") put it most directly, stating: "As early as 2025, all subregions (of the WECC) will be unable to maintain 99.98 percent reliability because they will not be able to reduce the hours at risk for loss of load enough, even if they build all planned resource additions and import power."[11] And the most recent study by the Pacific Northwest Utilities Conference Committee ("PNUCC") finds that if no new resources are built beyond those already under construction as of publication of the study, there is a 46 percent loss-of-load probability by 2027, as compared to the 5 percent loss-of-load probability that PNUCC sets as the threshold for power supply adequacy. In other words, this change in regional market supply and demand fundamentals both increases energy prices and threatens reliability for PSE and other regional load-serving entities seeking to meet electric load demand.

[10] 2023 Report, supra note 1, at 7.16-7.18; *see also* North American Electric Reliability Corporation ("NERC"), *2021 Long-term Reliability Assessment*, https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2021.pdf; Western Electricity Coordinating Council, *2021 Western Assessment of Resource Adequacy*, https://www.wecc.org/Administrative/WARA%202021.pdf; Pacific Northwest Utilities Conference Committee ("PNUCC"), *Pacific Northwest Power Supply Adequacy Assessment for 2027*, https://www.nwcouncil.org/fs/18158/2023-1_adequacyassessment.pdf.

[11] WECC, *2021 Western Assessment of Resource Adequacy*, *supra* note 10, at 4.

Q. Have any recent events resulted from the changes to regional supply and demand fundamentals described above?

A. Yes. In January 2024, the Pacific Northwest experienced sustained record cold weather that triggered extreme spot market electricity prices and threatened electric system reliability, with PSE and three other load serving entities declaring Energy Emergency Alerts ("EEA"). The most significant impact to PSE occurred between January 11 and January 16, with peak electric demand reaching nearly 5,000 MW and exceeding the previous historical peak.

Limited energy supply relative to demands drove prices up to and even above the $1,000 price cap for much of the seven day period. PSE was able to secure sufficient energy supply to meet January's record customer demand, but at a high cost. This latest severe weather event emphasizes the necessity of acquiring new capacity and regional coordination programs like the Western Resource Adequacy Program ("WRAP") as well as the risk of relying on the wholesale spot market during periods of peak demand.

3. Capacity and Resource Adequacy Shortfalls

Q. Is PSE currently facing a capacity and resource adequacy shortfall?

A. Yes. After 2025, PSE's resource portfolio used to provide electricity to retail electricity customers will no longer include nearly 750 MW of coal-fired baseload generation from Colstrip Units 3 & 4 and the Centralia Coal Transition PPA. The

loss of these baseload resources compounds existing market capacity and resource adequacy challenges faced by the region in general and PSE in particular.

Q. Is the projected capacity and resource adequacy shortfall unique to PSE?

A. No. As discussed above, in PSE's 2023 Electric Progress Report,[12] and in recent regional planning assessments by WECC, NERC, and PNUCC,[13] PSE's capacity needs and projected capacity shortfalls reflect a broader, regional trend stemming from a shift to a higher concentration of intermittent resources in the energy supply mix and simultaneous phasing out of traditional baseload generation resources, which directly and indirectly contributes to market price volatility.

Q. Is PSE investigating utility-scale carbon-free dispatchable, baseload generation technologies?

A. Yes. PSE is investigating utility-scale carbon-free dispatchable, baseload generation technologies, such as electric generation fueled by renewable hydrogen. This class of resource, however, is not yet commercially available. Until carbon-free technologies can replace traditional baseload generation resources, PSE is supplementing a near- and intermediate-term regional baseload generation deficit with its existing gas-fired generation fleet. Please see the Prefiled Direct Testimony of John Mannetti, Exh. JM-1CT, for an overview of PSE's investigation of emerging carbon-free technologies.

[12] 2023 Report, *supra* note 1, at 7.16-7.18.

[13] NERC, *2021 Long-term Reliability Assessment*, *supra* note 10; WECC, *2021 Western Assessment of Resource Adequacy*, *supra* note 10; PNUCC, *2022 Northwest Regional Forecast*, *supra* note 10.

Q. How does PSE plan to address these near- and intermediate-term needs?

A. PSE expects to use its existing gas-fired generation fleet to meet reliability and resource adequacy requirements and to fill a region-wide deficit of baseload generation resulting from the removal of coal-fired generation. Without an adequate supply of dispatchable generation, PSE and load serving entities throughout the region will not be able to serve customer demand reliably. Please see the Prefiled Direct Testimony of Brennan D. Mueller, Exh BDM-1T, for a discussion of the forecast of increased near- and intermediate-term use of PSE's owned gas-fired generation resources.

This projected near-term reliance on existing dispatchable, baseload gas-fired resources will subsequently increase operations and maintenance ("O&M") costs for these resources. Please see the Prefiled Direct Testimony of Mark A. Carlson, Exh. MAC-1CT, for a discussion of O&M costs associated with PSE-owned gas-fired generation.

4. Need for Timely Recovery of Costs

Q. How do capacity constraints and CETA and CCA compliance requirements affect PSE's power supply costs?

A. The complexities of changing market fundamentals involve myriad resource need issues, such as climate change related extreme weather events, reduced baseload capacity, transmission constraints, increased deployment of intermittent renewable resources, and uncertainty of costs related to CETA and CCA

compliance. All of these factors contribute to broad electricity market challenges, diminished reliability in multi-year supply cost forecasts, and a resulting increase in power cost variability for PSE.

Q. Why do market volatility and policy implementation challenges validate the need for a continued annual power cost update?

A. PSE's need to acquire significant new resources and clean energy, coupled with power cost under-recoveries, necessitates timely recovery of investment and O&M costs. PSE is working to realize the state's decarbonization goals codified in CETA. This work represents an unprecedented clean energy transformation and is a large, accelerated, and costly undertaking. Continuation of the annual power cost update approved by the Commission in the settlement of PSE's 2022 multiyear rate plan[14] is necessary for PSE to continue its work to meet the state's decarbonization goals. Aligning customer rates with the timely recovery of power costs is essential for PSE to meet the decarbonization goals in CETA and continue to provide safe and reliable energy to meet customer demand. The Prefiled Direct Testimony of Brennan D. Mueller, Exh. BDM-1T, discusses a proposal for routine annual updates to the power cost forecast included in customer rates. The proposal seeks to ensure that customer rates reflect the most current estimate of the costs and benefits of PSE's actual resource supply portfolio, given the rapid

[14] *See WUTC v. Puget Sound Energy*, Docket UE-220066 et al., Order 24/10, Appx. A at ¶¶ 28-30 (Dec. 22, 2022).

evolution of that portfolio combined with increasingly volatile wholesale market conditions.

Please see the Prefiled Direct Testimony of Daniel A. Doyle, Exh. DAD-1CT, for an overview of PSE's financial fitness and proposals to improve PSE's position and cash-flow necessary to supply customers with clean, reliable energy.

III. PSE'S EFFORTS TO REDUCE RELIANCE ON SHORT-TERM MARKET TRANSACTIONS

Q. How is PSE's Energy Supply function reducing its reliance on short-term market transactions through increased market coordination?

A. PSE is shifting away from its reliance on short-term bilateral market purchases, in-part, through participation in regional coordinating opportunities. PSE aims to reduce price volatility risk and address capacity and transmission constraints by exploring participation in a day-ahead market and the WRAP.

Q. Which day-ahead markets is PSE considering?

A. Currently, PSE is considering both the California ISO Extended-Day Ahead Market (the "CAISO EDAM") and the Southwest Power Pool ("SPP") Markets+ program. The CAISO EDAM program would extend participation in the day-ahead market to participants in the CAISO Energy Imbalance Market in a framework that does not require full integration into the California ISO balancing

area.[15] The SPP Markets+ program would offer services to centralize day-ahead and real-time unit commitment and dispatch and seek to integrate renewable generation reliably.[16]

The CAISO EDAM and SPP Markets+ programs are currently under development, and PSE has not yet committed to participation in either. Indeed, PSE does not anticipate that it would begin participation in either day-ahead market program before or during the proposed multiyear rate plan period. Much work remains to be done in the development of these day-ahead market programs, and PSE will continue investigating these developing programs.

Q. Has PSE joined the WRAP?

A. Yes. PSE has joined the WRAP, which allows the Northwest Power Pool ("NWPP") d/b/a Western Power Pool ("WPP") to implement a regional resource adequacy planning and compliance program in the Western Interconnection. The intent of the WRAP is to ensure that participants, such as PSE, have sufficient capacity resources available to serve their loads and that excess capacity is held back for potential use by participants who do not have sufficient resources to serve their loads in real-time.[17] The WRAP should help address the resource adequacy trends and challenges faced in the west by allowing for a coordinated, regional framework to enhance reliability tailored to the western electricity

[15] *See generally* California ISO, *Initiative: Extended Day-Ahead Market*, https://stakeholdercenter.caiso.com/StakeholderInitiatives/Extended-day-ahead-market.
[16] *See generally* Southwest Power Pool, Markets+, https://www.spp.org/western-services/marketsplus/.
[17] *See generally Northwest Power Pool*, 182 FERC ¶ 61,063 (Feb. 10, 2023).

markets. In approving the WRAP Tariff, the Federal Energy Regulatory Commission found that

> the WRAP has the potential to enhance resource adequacy planning, provide for the benchmarking of resource adequacy standards, and more effectively encourage the use of western regional resource diversity compared to the status quo.[18]

Q. How does increased market coordination strengthen PSE's capacity and resource adequacy position?

A. Regional coordination, required for both a day-ahead market and the WRAP, would offer a cost-effective method for PSE to acquire resources necessary to meet the state's decarbonization goals in CETA and PSE's preexisting capacity needs. Please see the Prefiled Direct Testimony of Philip A. Haines, Exh. PAH-1CT, for a discussion of PSE's decision to join the WRAP and an update on PSE's investigation of day-ahead market programs.

IV. CONCLUSION

Q. Does that conclude your prefiled direct testimony?

A. Yes, it does.

[18] *Id*. at ¶ 28.