EXH. SJS-1CT
DOCKETS UE-240004/UG-240005
2024 PSE GENERAL RATE CASE
WITNESS: STEVEN ST. CLAIR

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 (CONFIDENTIAL) OF

STEVEN ST. CLAIR

ON BEHALF OF PUGET SOUND ENERGY

REDACTED VERSION

FEBRUARY 15, 2024

PUGET SOUND ENERGY

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I. INTRODUCTION

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

A. My name is Steven St. Clair, and my business address is 355 110th Ave. NE, Bellevue, Washington 98004-5591. I am Manager, Resource Development for Puget Sound Energy ("PSE" or the "Company").

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

A. Yes. Please see the First Exhibit to the Prefiled Direct Testimony of Steven St. Clair, Exh. SJS-2.

Q. What are your duties as Manager, Resource Development for PSE?

A. As Manager, Resource Development for PSE, I am responsible for the evaluation, financial analysis, diligence review, and acquisition recommendation for electric generating resource facilities to meet PSE's energy and capacity requirements as required by the Clean Energy Transformation Act ("CETA") and other electric supply portfolio needs. The facility candidates that I review are those which come to PSE's attention outside of a formal resource Request for Proposal ("RFP"), and

may present timing, locational, technology, financial, or other opportunities that may not be available if the evaluation is delayed until the next formal resource RFP. My responsibilities also include development of electric generation projects where PSE may have a pre-existing interest and/or a self-build opportunity, such as expanding or repowering of existing facilities.

Q. What topics are you covering in your testimony?

A. This prefiled direct testimony discusses PSE's execution of a tolling agreement with Frederickson Power L.P. to secure an additional 132.5 MW of capacity from a natural gas-fired electricity generation facility located in Pierce County, Washington (the "Frederickson Tolling Agreement" or "Tolling Agreement"). The Frederickson Tolling Agreement encompasses the remaining 50.15 percent interest in a power generation facility already partially owned by PSE, and is effective for a five year term from October 1, 2025 to September 30, 2030. As discussed below, this Tolling Agreement will add dispatchable, reliable, and affordable capacity to PSE's electric supply portfolio as a short-term "bridge" or transitional resource to meet immediate capacity needs, as PSE transitions its supply portfolio to zero-carbon resources.

Below, I provide: (i) an overview of the Frederickson facility and Tolling Agreement; (ii) PSE's decision to enter into the Frederickson Tolling Agreement; and (iii) cost recovery for the Frederickson Tolling Agreement.

Q. What is PSE requesting of the Commission?

A. The purpose of this prefiled direct testimony is to obtain a determination of prudence for the Frederickson Tolling Agreement.

II. FREDERICKSON TOLLING AGREEMENT

A. Overview of the Frederickson Tolling Agreement

Q. What is an electric power tolling agreement?

A. Generically, a tolling agreement is a contract between an electric power generator (here, Frederickson Power L.P.) and a purchaser (here, PSE) wherein the purchaser provides the fuel supply and the generator converts that fuel into electrical energy for delivery to the purchaser. The electric power generator owns the facilities and manages its workforce, permit obligations, operations, and maintenance services. No ownership of the facility is conferred to the purchaser nor does the purchaser have operational oversight of the facility beyond periodic dispatch instructions as specified in the contract.

Q. Generally, what are the advantages of a power tolling agreement?

A. Tolling agreements offer several advantages to both the power generator and the purchaser:

- Purchasers can access electrical capacity and energy on demand without the need to invest in building, staffing, permitting, operating, or maintaining a power generation facility on a long-term basis.

- Purchasers can diversify their energy sources by entering into tolling agreements with generators to spread risk across technologies, enhance system reliability, and fill short-term needs in their supply portfolio. This can be especially important during periods of market instability or changes in the availability of supply-side resources.

- Power generators benefit from a steady revenue stream, as the purchaser commits to reserving plant electrical capacity for its own planning and use. This reduces the power generator's exposure to market price fluctuations and demand uncertainty.

- Tolling agreements can provide access to the power generator's infrastructure, such as transmission lines, interconnections, and fuel transportation which may be otherwise costly for the purchaser to develop for a new facility.

Tolling agreements are beneficial to both parties by allowing the purchaser to access reliable electrical energy or capacity and the power generator to stabilize its revenue stream. Both parties benefit from cost savings, risk mitigation, and flexibility in their operations.

Q. Can you describe the history of the Frederickson 1 facility?

A. Frederickson 1 (the "Facility") is a natural gas-fired electricity generation plant located in Frederickson in Pierce County, Washington - approximately 3 miles southwest of Spanaway, Washington. The physical address of the Facility is 18610 - 50th Ave East, Tacoma, Washington 98446.

The Facility was originally developed by Tenaska Washington Partners ("Tenaska") to supply electricity to the Bonneville Power Administration

("BPA") as part of BPA's 1991 Competitive Acquisition Program. The two parties entered into a power-purchase agreement in April 1994. Construction of the plant commenced in September 1994 with the intent of completing the project by fall 1996. However, in June 1995, after only 40 percent of the project was completed, construction was suspended when BPA withdrew from its agreement to purchase power from Tenaska. After protracted litigation and subsequent arbitration, Tenaska transferred the partially completed project to BPA in March 1998. The plant was then mothballed until 1999, whereupon it was sold in a bid process to Westcoast Energy Inc., who then formed a joint venture with EPCOR Utilities, Inc. ("EPCOR") to develop the project under a jointly owned Washington limited partnership—Frederickson Power L.P.

In 2002, Duke Energy Corp. acquired Westcoast Energy, Inc. Simultaneously, EPCOR agreed to purchase Duke Energy Corp.'s 60 percent portion of the project, and EPCOR became the sole owner of the Facility. EPCOR began commercial operation on August 19, 2002.

In October 2003, PSE agreed to purchase a 49.85 percent share of the 249 MW Facility from EPCOR for [redacted] and completed the purchase in April 2004. PSE's acquisition and inclusion of costs associated with this transaction were presented to the Washington Utilities and Transportation Commission ("Commission") for prudence review and related ratemaking treatment in Docket

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No. UE-031725.[1] Transmission service from BPA was granted by letter dated March 17, 2004. The current owner of the remaining 50.15 percent interest in the Facility is Capital Power of Edmonton, Alberta, Canada.

Q. What is PSE's current interest in the Facility?

A. In April 2004, PSE acquired a 49.85 percent ownership interest in the Facility and a 23.5 percent ownership interest in the Scott Lateral Natural Gas Pipeline. Most recently, on September 20, 2023, PSE executed a tolling agreement with Frederickson Power L.P. to secure the electrical capacity of the remaining 50.15 percent share (132.5 MW) of the Facility for a five-year period from October 1, 2025 to September 30, 2030.

Q. What is the status of transmission service for the Frederickson Tolling Agreement?

A. PSE has secured 138 MW of BPA transmission for the Tolling Agreement. This transmission service starts October 1, 2025 and has a five-year contract term, aligning with the term of the Tolling Agreement.

[1] *WUTC v. Puget Sound Energy*, Docket UE-031725, Order No. 12 Granting Regulatory Approvals for Frederickson I Acquisition; Resolving Disputed Gas Price Issue (April 7, 2004).

B. PSE's Decision to Enter Into the Frederickson Tolling Agreement is Prudent

Q. Does PSE have a need for energy and capacity resources?

A. Yes. Significant needs for peak capacity to achieve resource adequacy targets were identified in PSE's 2023 Electric Progress Report ("EPR"). The Prefiled Direct Testimony of Joshua J. Jacobs, Exh. JJJ-1T, and the Prefiled Direct Testimony of Ronald J. Roberts, Exh. RJR-1T, provide a detailed discussion of PSE's capacity and energy needs based on analyses from the 2023 EPR.

Q. Briefly, what are PSE's known capacity needs based on the 2023 EPR?

A. Due to market reliance assumptions used in the 2023 EPR, portfolio modeling indicates PSE could begin to experience a peak electrical capacity shortfall starting in 2024.[2]

The peak capacity need from the 2023 EPR is the amount of effective capacity required to maintain the resource adequacy target – the need after applying the effective load carrying capacity ("ELCC") of different resources. Table 1 below is a summary of PSE's known peak capacity need by year from 2024 through 2030.

[2] *See* Second Exhibit to Josh Jacob's Prefiled Direct Testimony, Exh. JJJ-3 (2023 Electric Progress Report at Chapter 8, Section 3.1).

Table 1 – PSE's Peak Capacity Need After Market Reliance (in MWs)

Year	Peak Load Forecast (Demand Forecast + Planning Margin) (a)	Effective Peak Capacity of Existing Resources (b)	Total Need (c) = (a) - (b)	Market Reliance (d)	Net need after Market Reliance (e) = (c) - (d)
2024	5,845	4,602	1,243	1,069	174
2025	5,869	4,548	1,321	855	465
2026	5,909	3,931	1,978	642	1,336
2027	5,965	3,690	2,275	428	1,848
2028	6,000	3,690	2,310	214	2,096
2029	6,030	3,690	2,340	0	2,340
2030	6,096	3,690	2,406	0	2,406

Table 1 shows the difference between (a) PSE's load forecast (the demand forecast plus the required planning margin) and (b) PSE's total peak capacity available from existing resources, which equals (c) PSE's total net estimated need for each year between 2024 and 2030.

The 2023 EPR assumes PSE will acquire additional capacity through market purchases, as indicated in column (d). PSE's net need after market reliance is summarized in column (e), which indicates a peak capacity shortfall of 465 MW starting in 2025 growing to 2,406 MW in 2030. This is the time period covered by the Frederickson Tolling Agreement.

A full discussion of the resource adequacy analysis with planning margin and resource ELCCs is available in PSE's 2023 EPR, which is the Second Exhibit to Joshua Jacob's Prefiled Direct Testimony, Exh. JJJ-3.

Q. How does the Frederickson Tolling Agreement address this known peak capacity need?

A. As noted above, the 2023 EPR indicates a peak capacity shortfall of 465 MW starting in 2025, and growing to 2,406 MW by 2030. The Frederickson Tolling Agreement would partially address this shortfall by adding reliable capacity to PSE's portfolio of diverse resources during this period of time.

More specifically, the 2023 EPR assumes that capacity shortfalls will be managed by PSE on a short-term basis, and the Frederickson Tolling Agreement will provide 132.5 MW of dispatchable portfolio capacity, closing the 2026 deficit by 9.9 percent and the 2029 deficit by 5.7 percent. In this way, the Frederickson Tolling Agreement directly addresses identified capacity needs, and improves PSE's ability to provide customers with a reliable and affordable energy resource in the short-term while PSE transitions its supply portfolio to zero-carbon resources.

Q. Does this Tolling Agreement reduce supply risk for PSE?

A. Yes, the Frederickson Tolling Agreement reduces supply risk for PSE by addressing a peak capacity shortfall with a short-term, firm, dispatchable source of capacity from a complete and operational facility (in which PSE is a part owner) with a history of high operational availability. By providing a firm wholly-controlled source of dispatchable power, the Frederickson Tolling

Agreement provides firm resources for system reliability, reduces power supply costs, and allows time to develop and deploy long-term storage resources.

In the long term, as discussed in the Prefiled Direct Testimony of John Mannetti, Exh. JM-1CT, PSE plans to transition its capacity resources to include additional energy storage options such as batteries, hydro pumped storage, hydrogen, or with other technologies. But these new storage options have largely not been completed yet, and new longer duration energy storage options are still in the technology development/demonstration phase. As with any new technology and/or new construction, there are execution risks not present with the Frederickson Tolling Agreement (e.g., financial risk, permitting/environmental risk, supply chain risk, technology risk, interconnection risk, construction risk, ownership risk, etc.) The Frederickson Tolling Agreement is based on an existing facility that has operated reliably since 2002—thus, the risks associated with developing new projects or new technologies are not present for capacity provided by this Tolling Agreement.

In sum, the Frederickson Tolling Agreement reduces supply risk for PSE by providing a reliable and cost-effective bridge resource to address capacity needs in PSE's supply portfolio during its term from an already-operational facility, while allowing time for the technology development and broader commercial availability of long-duration storage options.

Q. What other comparable capacity resource options did PSE consider?

A. PSE reviewed the Frederickson Tolling Agreement against short-term market-based capacity resources using current cost and capacity information. PSE also compared known longer term capacity options with the Frederickson Tolling Agreement to validate that its price was consistent with other resource opportunities. From a cost standpoint, the Frederickson Tolling Agreement compares favorably to other capacity resources. Table 2 below summarizes how the Frederickson Tolling Agreement compares with short-term market capacity resources and other resources based on cost per MW-year.

Table 2 – Frederickson Tolling Agreement Capacity Cost Comparison

Capacity Source	$/MW-Yr
[redacted]	[redacted]

As shown in Table 2, when compared against other capacity resources, the Frederickson Tolling Agreement is cost competitive. The Tolling Agreement also has the advantage of being dispatchable and available during a sustained system event regardless of season, and being operational and available today.

Q. Did PSE do any other analysis to assess the Tolling Agreement?

A. Yes. PSE monitors and manages supply risks using multiple analytical models

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and tools, including a probabilistic risk system that models how different PSE natural gas and power portfolios will perform under various weather, hydroelectric, price, and unit performance conditions. The Frederickson Tolling Agreement was analyzed using this probabilistic model against the existing energy supply portfolio, where dispatch of each resource is determined independently depending on market conditions. Put another way, the model analyzes how a particular asset—like the Tolling Agreement—will (or will not) be dispatched in different scenarios which are grouped (i.e., "binned") in accordance with their probability.

Q. What did the probabilistic analysis show?

A. The probabilistic analysis shows that the Tolling Agreement provides an average portfolio benefit of [redacted] million over the five-year term. This means that on average, the Tolling Agreement will be dispatched enough across the various scenarios to reduce portfolio costs by [redacted] million. The Second Exhibit to the Prefiled Direct Testimony of Steven St. Clair, Exh. SJS-3C, provides more detailed results from the probabilistic modeling program. The results are also partially summarized in Table 3 below.

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Table 3 – Summary of Results from Probabilistic Risk Analysis for Frederickson Tolling Agreement

Valuation Scenario (probability bin)	50.15% Frederickson Tolling Agreement
0.05	[redacted]
0.2	[redacted]
0.3	[redacted]
0.4	[redacted]
0.5	[redacted]
0.6	[redacted]
0.7	[redacted]
0.8	[redacted]
0.95	[redacted]
Mean	[redacted]

Q. How was this probabilistic risk analysis performed?

A. For this analysis, the two main variables are gas prices and electric prices. For gas prices, PSE used the Sumas gas price. And for electric prices, PSE used the Mid-Columbia hub power price. The model used forward gas and electric prices as of September 14, 2023 and applied a distribution of those prices based on historical realized prices from June 30, 2015 to June 30, 2022. Beyond electric and gas market prices, the model also assumed the 2023 Washington Carbon Allowance traded price as of September 15, 2023, which was $63.16 for 2025, and $64.83 for 2026 and beyond. This was an included cost when the Facility was dispatched. Major maintenance expenses were escalated at 3 percent annually.

The model simulations were run 1,000 times. In each simulation, the model first

calculated what the energy prices would be for that case, then determined whether to dispatch the Tolling Agreement. The simulation scenarios varied in probability of occurrence. A P 0.95 valuation scenario is one that likely had a high electric price, low gas price, and/or a combination of the two—resulting in higher likelihood of the Tolling Agreement being dispatched. By contrast, a P 0.05 valuation scenario likely had a low electric price, high gas price, and/or a combination of the two—resulting in a lower likelihood of the Tolling Agreement being dispatched.

In general, more dispatch of the Tolling Agreement resulted in a greater portfolio value. In Table 3 above, negative numbers indicate that the Tolling Agreement was not dispatched enough to offset costs for a particular "bin" of scenarios. Positive numbers indicate the Tolling Agreement was dispatched sufficient times to offset costs plus add additional value.

Q. Can you summarize the Company's assessment of the financial benefits of the Tolling Agreement?

A. Based on the analysis summarized in Table 2, the Tolling Agreement is cost competitive to other dispatchable capacity resources available in the market. And based on analysis summarized in Table 3 and Exh. SJS-3C, the Tolling Agreement offers a net benefit beyond its average fixed cost of [redacted] and variable cost of operations annually in a wide range of probable market price scenarios.

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Q. Did PSE evaluate the impact of the social cost of greenhouse gas emissions on this transaction?

A. Yes. PSE is required to consider the social cost of greenhouse gas ("GHG") emissions when engaged in resource planning, evaluation, and selection of resources, per RCW 19.280.030(3). The cost values per metric ton of carbon dioxide equivalent emissions are shown in Table 4 below:

Table 4 - Social Cost of GHG Emissions

Year in Which Emissions Occur or Are Avoided	Social Cost of GHG Emissions (in 2007 $/mTon)	Social Cost of GHG Emissions (in 2018 $/mTon)	PSE escalated Social Cost of GHG Emissions (in nominal year $/mTon)
2010	$50	$60	$61.42
2015	$56	$67	$68.79
2020	$62	$74	$76.16
2025	$68	$81	$83.53
2030	$73	$87	$89.67
2035	$78	$93	$95.81
2040	$84	$100	$103.18
2045	$89	$106	$109.33
2050	$95	$113	$116.70

The 2007 and 2018 cost values in Table 4 are set forth in WAC 194-40-100. But social cost values must be adjusted for inflation, using the implicit price deflator for gross domestic product published by the United States Department of Commerce. For purposes of this analysis, PSE escalated the social cost of GHG at a steady rate of 2.3 percent, as reflected in the results in the last column of Table 4.

Using these cost values, the Company then compared the social cost of GHG emissions of the Tolling Agreement against unspecified market purchases for the relevant time period—2025 to 2030. Table 5 below summarizes that comparison.

Table 5 – Comparison of Tolling Agreement Emissions vs. Unspecified Market Purchases

		Tolling Agreement		Unspecified Market Purchases		
Year	Modeled Tolling Agreement Production (MWh)	Tolling Agreement GHG Emissions at 140 lbs. / MMBTU (mTons)	Estimated Social Cost of Tolling GHG Emissions ($)	Market GHG Emissions at 0.437 mTons/MWh (mTons)	Estimated Cost of Market Purchases GHG Emissions ($)	Social Cost of GHG Impact of Tolling Agreement ($)
2025	205,001	84,728	$7,077,322	89,585	$7,483,057	$(405,736)
2026	734,775	303,686	$25,740,464	321,096	$27,216,138	$(1,475,674)
2027	743,176	307,159	$26,412,580	324,768	$27,926,786	$(1,514,206)
2028	753,498	311,425	$27,162,467	329,278	$28,719,663	$(1,557,196)
2029	793,752	328,062	$29,013,803	346,869	$30,677,135	$(1,663,332)
2030	594,366	245,655	$22,027,853	259,738	$23,290,687	$(1,262,834)

The annual production from the Tolling Agreement shown in Table 5 is calculated from the probabilistic modeling. Assuming a plant heat rate (inverse of efficiency) of 7,100 BTU/KWh, the fuel quantity burned multiplied by the carbon content of natural gas of 117 lbs. / MMBTU + 23 lbs. / MMBTU for upstream emissions provides Tolling Agreement GHG emissions in metric tons ("mTons"). The carbon prices from Table 4 are then multiplied by the GHG emissions to determine the social cost impact of these emissions.

For the sake of comparison, a similar calculation was performed based on unspecified market purchases in the same energy volume as the Tolling Agreement. Unspecified market purchases have an assumed GHG emission

profile of 0.437 mTons/MWh. Applying this emissions rate to the production from the Tolling Agreement (effectively an offset of unspecified market purchases) and subtracting from the Tolling Agreement social cost of GHG impact results in the difference shown in the last column of Table 5. The social cost of GHG impact of the Tolling Agreement is negative, meaning that the Tolling Agreement has a lower GHG impact than unspecified market purchases of approximately $1.6 million per year.

Q. Does the Frederickson Tolling Agreement impact PSE's ability to reach clean energy targets?

A. No. PSE remains obligated to meet CETA's clean energy requirements, and executing the Frederickson Tolling Agreement to meet peak capacity needs does not replace CETA resources nor will it hinder PSE's goals of reaching its CETA targets in the longer term. CETA requires PSE to not only meet clean energy targets, but also to maintain safe reliable operations, and to consider equity in the transition to clean energy. Although Frederickson is a gas-fired facility, this five-year tolling agreement supports and complements PSE's clean energy goals by: (1) reducing peak capacity needs in the short-term; (2) reducing PSE's reliance on unspecified and volatile market purchases; (3) allowing PSE to dispatch the Facility more efficiently once the Tolling Agreement takes effect (since PSE will be in control of both halves of the Facility); and (4) providing a bridge to the deployment of new non-emitting and renewable energy storage technologies for

the benefit of customers. The Frederickson Tolling Agreement terminates in September 2030.

Q. Did PSE inform and involve its Energy Management Committee in this resource acquisition process?

A. Yes. PSE sought and received approval for execution of the Frederickson Tolling Agreement from the Energy Management Committee on September 19, 2023. Please see the Third Exhibit to the Prefiled Direct Testimony of Steven St. Clair, Exh. SJS-4C, for the presentation to the Energy Management Committee.

As PSE's procurement process does not require Board of Directors approval for contracts of the Tolling Agreement's size, the final approval was obtained from the Energy Management Committee.

Q. Did PSE consider energy justice in relation to the Frederickson Tolling Agreement?

A. Yes. As described in the Prefiled Direct Testimony of Troy A. Hutson, Exh. TAH-1T, PSE acknowledges energy justice as a priority in its energy operations and is committed to pursuing energy justice, as defined by the Commission in the final order of Cascade Natural Gas Company's 2021 general rate case.[3] Pursuant to that final order, PSE has evaluated the Frederickson Tolling Agreement in light

[3] *WUTC v. Cascade Nat. Gas Corp*., Docket UG-210755, Final Order 09, ¶ 56 (August 23, 2022).

of the four tenets of energy justice: recognition, distributional, procedural, and restorative justice.

The Frederickson Tolling Agreement will not alter the existing power generation infrastructure. It does not alter existing community impacts, and will not negatively impact the economics of the community. The Facility will continue to support its existing workforce and provide associated tax revenues to the City, County, and State. While PSE is cautious about the broader impacts and implications of gas-fired generation on its supply portfolio, PSE is also cognizant of the technical and reliability risks that may be imposed on customers with alternative capacity resources. PSE will assess future integration possibilities with commercially mature technologies, and will evaluate the restorative attributes of proposed alternatives.

Q. Did PSE analyze equity as it relates to CETA requirements?

A. Yes, PSE is also committed to ensuring that all customers benefit equitably from the transition to clean energy, as required by CETA.[4] The Frederickson Tolling Agreement was analyzed in relation to two CETA equity-related Customer Benefit Indicators: (1) energy and non-energy benefits; and (2) energy security and resilience.

[4] *See* RCW 19.405.040(8).

Q. What are the energy and non-energy benefits of the Frederickson Tolling Agreement?

As a capacity resource, the Tolling Agreement is priced lower than most other available resource candidates (e.g., batteries, biofuel peakers, pumped storage). And, as an existing operational resource, it presents lower technology, permitting, transmission, or construction risk than green-field alternatives. To the extent that customers in the Facility's vicinity or greater PSE service territory are experiencing an energy burden, this Facility and the Tolling Agreement will stabilize fluctuations in energy costs and minimize that additional burden.

The Frederickson Tolling Agreement improves PSE's ability to meet customers' energy needs with a reliable and affordable supply of energy - in this way, it helps "individuals [to] have access to energy that is affordable, safe, sustainable, and affords them the ability to sustain a decent lifestyle."[5]

Q. What are the energy security and resilience benefits of the Frederickson Tolling Agreement?

A. The Frederickson Tolling Agreement provides energy security and resilience benefits by adding reliable capacity to PSE's portfolio of diverse energy resources in the short-term. Specifically, by providing 132.5 MW of dispatchable portfolio

[5] *WUTC v. Puget Sound Energy*, Dockets UE 220066 and UG-220067, Final Order 24; *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*, Docket UG-210918, Final Order 10, ¶ 268 (Dec. 22, 2022).

capacity, the Tolling Agreement closes the 2026 capacity shortfall by 9.9 percent and the 2029 shortfall by 5.7 percent. As PSE transitions its supply portfolio to zero-carbon resources, the Tolling Agreement provides PSE with the needed capacity to strengthen its electricity supply and operate efficiently during peak periods (both summer and winter) or in the event an unforeseen circumstance (e.g., a natural disaster) causes regional shortages to one form of power generation.

Q. Did PSE keep contemporaneous records of its evaluation and decision-making process that led to its decision to execute the Tolling Agreement?

A. Yes. PSE reviewed the Frederickson Tolling Agreement with its officers during its analysis of capacity needs and during development of the commercial structure that is reflected in the Tolling Agreement. The completed Frederickson Tolling Agreement was presented to the Energy Management Committee on September 19, 2023 as a decisional item for approval. Approval was secured from the Committee. Please see the Fourth Exhibit to the Prefiled Direct Testimony of Steven St. Clair, Exh. SJS-5C, for a copy of the executed Frederickson Tolling Agreement.

Q. How will the Tolling Agreement benefit customers?

A. As noted above, PSE has well-documented capacity needs as it seeks to reduce market reliance, transition from coal-fired power generation facilities to CETA-compliant resources, and increase the integration of intermittent resources like

wind and solar. Non-emitting and renewable capacity resource technologies will ultimately prove reliable and contribute to reductions in GHG emissions in the years ahead. The Frederickson Tolling Agreement provides a necessary short-term bridge that will enable PSE to maintain safe, reliable, and affordable electric service to customers. The Tolling Agreement is cost-competitive with other resources, provides needed electrical capacity, is dispatchable on demand, and has the ability to provide portfolio benefits for long-duration needs.

Q. Can you summarize any additional benefits associated with the Frederickson Tolling Agreement?

A. Yes, this Tolling Agreement provides a number of short- and long-term benefits to PSE and its portfolio:

- The Facility is operational, so there are no development, permitting, interconnection, transmission, or construction risks associated with this Tolling Agreement.
- The Tolling Agreement addresses near-term capacity issues with the loss of Colstrip coal-fired generation, Centralia coal-fired generation, and an overall reduction in market reliance for capacity.
- The Tolling Agreement helps to reduce PSE's energy supply and capacity costs and there are direct cost-savings for PSE's customers when compared to alternatives such as building a brand new peaking facility or adding storage resources (which are limited in duration and may provide partial coverage for extended duration events).

- Operational risk is low, and as a part owner, PSE is well-versed in this mature and commercially-proven facility, which is well-managed and maintained by long-term Facility employees.

- With the Tolling Agreement, PSE can establish and manage the heat rate at which natural gas is converted to electric power, thus helping reduce market volatility risk.

C. Cost Recovery for the Frederickson Tolling Agreement

Q. What are the primary financial terms of the Tolling Agreement?

A. The Frederickson Tolling Agreement is structured with 3 primary cost streams: (1) a fixed monthly capacity payment of [redacted] (2) a variable cost per unit of electricity generated of [redacted] and (3) start-up charges [redacted] assessed after the first [redacted] starts requested by PSE annually.

The fixed cost is the only cost stream that is due and payable regardless of runtime and is essentially a reservation fee to hold the capacity for PSE's exclusive use. The variable cost stream is payable only if the Tolling Agreement has been dispatched for service and is payable based on the MWh produced in a given month. The start-up cost is payable after the first [redacted] annual starts and is divided into cold, warm, and hot starts. The fee associated with each start after the first [redacted] is intended to recognize the long-term maintenance cost implications

of frequent starts and the degradation of major components when starting from cold, warm, or hot conditions.

Q. Will PSE incur any other costs associated with the Tolling Agreement?

A. In addition to these costs in the Tolling Agreement, PSE will also provide natural gas fuel of sufficient quality and quantity to dispatch the Facility in accordance with its system needs. That cost will be determined at the time of Facility dispatch and used to validate the economics of operation at then-current market conditions.

Q. How is PSE expecting to recover these costs associated with the Frederickson Tolling Agreement?

A. PSE proposes to recover the costs of the Frederickson Tolling Agreement in power costs. Please see the Prefiled Direct Testimony of Brennan D. Mueller, Exh. BDM-1T, for additional modeling and portfolio impacts of the Tolling Agreement.

III. CONCLUSION

Q. Does that conclude your prefiled direct testimony?

A. Yes, it does.