EXH. DJL-6
DOCKETS UE-240004/UG-240005
2024 PSE GENERAL RATE CASE
WITNESS: DAVID J. LANDERS

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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

FIFTH EXHIBIT (NONCONFIDENTIAL) TO THE PREFILED DIRECT TESTIMONY OF

DAVID J. LANDERS

ON BEHALF OF PUGET SOUND ENERGY

FEBRUARY 15, 2024

PUGET SOUND ENERGY

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I. PIPELINE RELIABILITY, MONITORING, AND ALTERNATE FUELS READINESS PROGRAMS

A. Overview

Q. Please briefly describe Puget Sound Energy's ("PSE") pipeline reliability, monitoring, and alternate fuel preparedness investments presented in this case.

A. PSE is expected to provide a firm level of service to customers on an extreme cold weather day by maintaining a reliable gas system. Pipeline reliability investments support the reinforcement of the high and intermediate pressure natural gas system to meet customer demands and continuity of service on a peak hour design day. Monitoring investments support pipeline modernization by providing faster identification of issues, real time monitoring and response, and the replacement of antiquated monitoring equipment. Alternate fuels readiness investments support Washington's decarbonization strategy.

Q. Please describe how investments are managed through the pipeline reliability, monitoring, and alternate fuel preparedness programs.

A. The pipeline reliability, monitoring, and alternate fuel readiness programs are broken down into three specific business plans. Most of these investments are

managed programmatically, meaning that a portfolio of individual projects are designed and built to support a common objective. The basis for future investments is extrapolated from historic trends and current investment plans based on anticipated needs.

Q. Please provide PSE's planned capital investments relating to these three programs over the rate period presented in this case.

A. Table 1 provides the planned capital investments from January 1, 2025 through December 31, 2026, which are estimated based on historic trends and programmatic plans.

Table 1: Summary of total program capital investments by year.

Program ($ millions)	Rate Plan Year 1 2025	Rate Plan Year 2 2026
Pipeline Digital Monitoring	2.7	2.7
Pipeline System Reliability	12.6	17.1
Alternate Fuel Readiness	1.5	1.5

Q. Are there operations and maintenance ("O&M") cost reductions that are expected to result from these program investments?

A. Yes. O&M expense reduced by these programs is approximately $375,000 annually from avoiding manual system adjustments during cold weather. System reliability projects eliminate the need for cold weather actions and manual field adjustments during cold mornings. These O&M expense reductions help to relieve the increasing O&M expense pressures discussed in Exh. DJL-1T.

Q. Please describe the benefits that PSE's pipeline reliability, monitoring, and alternate fuel readiness program investments will deliver for customers through the rate plan.

A. The primary benefits of these programs are avoided customer outages, reduced response time, and reduced carbon emissions. The total benefit of the pipeline reliability, monitoring, and alternate fuel readiness programs presented in this rate plan is $190.4 million based on quantification of benefits using PSE's Investment Decision Optimization Tool ("iDOT") to evaluate portfolio benefits, including both quantitative and qualitative benefits.

Q. Please describe the performance metrics that these programs investment impact.

A. The key corporate performance metric these programs benefit is SQI #7 – Gas Safety Response Time, by decreasing the number of leaks that must be responded to over time.

Q. Please describe how cost estimates are developed that support these programs.

A. PSE's Project Delivery organization provides planners with cost estimating tools that generally provide average costs based on historical projects and unit pricing contracts. Planners estimate using these tools based on a planning level scope of work. These tools are updated periodically as necessitated by the effects of

negotiated changes in contract unit pricing, changing labor rates, and inflationary pressure on the cost of materials and equipment.

Q. Please describe cost controls deployed to efficiently deploy capital investments.

A. The cost controls deployed by PSE for these programmatic and specific investments are discussed in the Prefiled Direct Testimony of Roque B. Bamba, Exh. RBB-1T.

B. Equity

Q. Please describe how PSE has considered equity in these pipeline reliability, monitoring, and alternate fuel preparedness program investments.

A. As discussed in my prefiled direct testimony, Exh. DJL-1T, selection and prioritization of pipeline reliability and monitoring projects are identified through analysis of system reliability parameters, augmented by new geospatial information system (GIS) tools enabling localized customer and community equity data to inform project needs identification. Optimization of programmatic portfolios is accomplished through the use of iDOT, and the process is conducted

in a manner such that a targeted equity benefit threshold for named communities is met or exceeded.

C. Digital Monitoring Program

Q. Please describe PSE's Digital Monitoring program and core objectives and priorities.

A. The Digital Monitoring program core objective is to modernize PSE's monitoring and response tools to provide faster identification of issues, provide real time monitoring and response, and allow for replacement of antiquated monitoring equipment. The program will continue to evaluate greater use of new technologies such as remotely controlled equipment and electronic monitoring to provide real time response and control where needed. This program is supported by the Corporate Spending Authorization ("CSA") – Pipeline Mod: Digital Monitoring, provided in Appendix A and accompanying business plan, which describe program background, statement of need, scope, benefits, cost estimate, alternatives, and funding risk.

Q. Please provide PSE's actual and planned Digital Monitoring program capital investments and work over the rate period presented in this case.

A. Table 2 provides the planned capital investments from January 1, 2025 through December 31, 2026, which are estimated based on historic trends and programmatic plans.

Table 2: Summary of Digital Monitoring program capital investments by year.

Plan	Rate Plan Year 1 2025	Rate Plan Year 2 2026
Digital Monitoring Capital investment ($ Millions)	2.7	2.7
Assets (#)	40 – 45	40 – 45

O&M expense related to construction ("OMRC") is minimal for this this work in accordance with FERC property accounting rules.

Q. Please describe the basis for the forecasted Digital Monitoring program investments.

A. This programmatic investment is based on equipment and installation estimates for upgrading monitoring equipment. This investment supports real time data acquisition and improved system control to meet Transportation Security Administration ("TSA") cyber security requirements. The Digital Monitoring Business Plan, Appendix A to this testimony, provides additional background on the basis for the forecasted investment.

Q. Have benefits been realized from the Digital Monitoring program?

A. Yes. Confidence in future plan benefits can be based on historical benefits realized. From 2022 through 2023, five remote telemetry units were upgraded to reduce cybersecurity risks as required by TSA. Additionally, 15 analog paper chart recorders, requiring routine physical collection of records from the field were upgraded to digital equipment providing remote real-time access to system performance data.

Q. Please describe the benefits that the Digital Monitoring Program will deliver for customers through the rate plan.

A. The primary benefit is improved system reliability and safety by enhancing PSE's operational awareness, which reduces elapsed time between occurrence of an issue and its discovery and resolution. Digital monitoring reduces site visits associated with paper chart change outs and allows near real time access to information, compared to manual collection of data every one to two weeks, enabling an abnormal operating condition to be detected sooner, before it becomes an emergency (i.e., over pressure, losing pressing, failure of equipment). Table 3 provides the number of reduced site visits per year for retrieval of records.

Table 3: Summary of Digital Monitoring program benefits by year.

Type of Benefit	Rate Plan Year 1 2025	Rate Plan Year 2 2026
Reduction in Number of Site Visits for Records Retrieval	390	390

D. Pipeline System Reliability Program

Q. Please describe the key program plans included in the Pipeline System Reliability program.

A. The Pipeline System Reliability program focuses on reinforcements required to the system to meet customer demand on a peak hour design day. PSE currently has constraints on thirteen areas of the gas Delivery System that require manual interventions, known as cold weather actions ("CWA") consisting of real-time adjustments to field equipment or injection of supplemental gas into the Delivery System during peak loads to maintain reliable service to customers. The Pipeline System Reliability program addresses current pipeline constraints to reduce reliability and operational risks. For example, should inclement weather create conditions such as icy roadways preventing an injection truck from arriving at a CWA location on time, or operational issues be encountered during manual adjustments of the Delivery System, customers will be placed at risk of losing gas service. Furthermore, PSE is limited by the number of CWAs that can be deployed simultaneously due to training, staffing, and the large extent of service area requiring action on the coldest of days. If the ability to cover all peak system loads via CWAs is exhausted, the next action will be to intentionally isolate and

shut off portions of the gas system as the system approaches peak demand. System reinforcements help avoid these situations and guarantee PSE can provide reliable service to firm customers. This program will provide that the gas high pressure and intermediate pressure system infrastructure, and regulating stations and equipment, are adequate to serve load on a peak hour design day and is supported by the CSA – Pipeline Mod: System Reliability, provided in Appendix B along with the accompanying business plan which describes program background, statement of need, scope, benefits, cost estimate, alternatives, and funding risk.

Q. Please provide PSE's planned Pipeline System Reliability program capital investments and work over the rate period presented in this case.

A. Table 4 provides the planned capital investments from January 1, 2025 through December 31, 2026 which are estimated based on historic trends and programmatic plans.

Table 4: Summary of System Reliability program capital investments by year.

Plan	Rate Plan Year 1 2025	Rate Plan Year 2 2026
System Reliability Capital investment ($ Millions)	12.6	17.1
Projects (#)	3 (2.1 miles)	5 (3.2 miles)

O&M expense related to construction OMRC is minimal for this this work in accordance with FERC property accounting rules.

Q. Please describe the basis for the forecasted Pipeline System Reliability program investments.

A. Long range system studies are performed to identify pipeline system reinforcement projects and other investments to support the system. The program annually addresses Pipeline System Reliability and is programmatically optimized utilizing iDOT. Project costs are based upon historical project costs adjusted for inflation and other cost escalators.

Q. Have benefits been realized from the System Reliability program?

A. Yes. Confidence in future plan benefits can be based on historical benefits realized. From 2022 through 2023, completed projects provided system performance improvements verified through real time monitoring, reducing risk of customer outages by 500 customers during a system peak time. The improvements align with expected outcomes from modeling software. In addition, cold weather actions are being eliminated as a result of this plan.

Q. Please describe the benefits that the System Reliability program will deliver for customers through the rate plan.

A. Through this program, customers can receive continuous and reliable firm tariffed service on a peak hour design day by reducing risk of an overextended cold weather action plan that would place reliable service in jeopardy. Table 5 provides the reduction in customer outages over the rate period achieved through investments of the System Reliability program.

Table 5: Summary of System Reliability program benefits by year.

Type of Benefit	Rate Plan Year 1 2025	Rate Plan Year 2 2026
Reduction in Customer Outage Risk per System Peak Occurrence(#)	2,850	2,700

E. Alternate Fuels Readiness Program

Q. Please describe PSE's Alternate Fuels Readiness program and core objectives and priorities.

A. PSE's commitment to decarbonizing the Delivery System requires natural gas system readiness to accept alternate fuels including clean hydrogen and larger amounts of renewable natural gas. PSE is actively reviewing its design, construction, and maintenance plans so that the pipeline system is ready to accept any blend of fuels needed in the future. Preliminary analysis identified seven preferred system locations to explore and pilot operations with a blend of various percentages of hydrogen gas mixed with natural gas to lower the carbon impact of pipeline energy. The objective of the program is to perform demonstrations and pilots in test environments, subsequently extending to portions of the Delivery System to determine workforce operational readiness, customer impacts including communication and specific appliance impacts, and long-range system improvements required for increased percentages and distribution of blended fuels. Most importantly, this program focuses on ensuring current pipeline investments, including materials and design, will support a decarbonized future energy supply. This program also seeks to remove identified obstacles to

decarbonization and streamline alternate fuels interconnection processes and studies. This program is supported by the CSA – Pipeline Mod: Alternative Fuel Readiness, provided in Appendix C, and its supporting business plan, which describe program background, statement of need, scope, benefits, cost estimate, alternatives, and funding risk.

Q. Please provide PSE's planned Alternate Fuels Readiness program capital investments and work over rate period presented in this case.

A. Table 6 provides the planned capital investments from January 1, 2025 through December 31, 2026, which are estimated based on programmatic plans.

Table 6: Summary of Alternate Fuels Readiness program capital investment by year.

Plan	Rate Plan Year 1 2025	Rate Plan Year 2 2026
Alternate Fuels Readiness Capital investment ($ Millions)	1.5	1.5
Demonstration projects (#)	1 – 2	1 – 2

Q. Please describe the basis for the forecasted Alternate Fuels Readiness program investments.

A. This new programmatic plan is based on estimates for pilots, including labor and materials and potential partnerships that will need refinement as each pilot is scoped. PSE intends to manage pilot scope and subsequent actions within the total budget of $3 million over the rate plan.

Q. Have benefits been realized from the Alternate Fuels Readiness program?

A. Confidence in the plan is founded on the successful completion of the first demonstration of blended hydrogen fuel in 2021, which began the evaluation of operational and customer benefits. The demonstration engaged engineering and field personnel, expanded the understanding and skill of PSE's workforce, broadened PSE's understanding of the pipeline impacts associated with blended hydrogen, and affirmed that this operating approach is attainable.

Q. Please describe the benefits that the Alternate Fuels Readiness program will deliver for customers through the rate plan.

A. Customers will benefit from these demonstrations and pilots as PSE learns and develops a transformation plan for the pipeline system that provides safe and reliable energy delivery with lower carbon impact. Table 7 provides the carbon reduction potential to be tested by alternate fuels pilots planned over the rate period.

Table 7: Summary of Alternate Fuels Readiness program benefits by year.

Type of Benefit	Rate Plan Year 1 2025	Rate Plan Year 2 2026
Carbon Carbon reduction from customer end use (at pilot test locations).	Up to 5% CO_2 reduction	

II. CONCLUSION

Q. Does this conclude your testimony?

A. Yes, it does.