Agenda Date: August 10, 2023
Item Number: E2

Docket: **PG-230419**
Company Name: Puget Sound Energy

Staff: Scott Rukke, Director Pipeline Safety
Anthony Dorrough, Pipeline Safety Engineer

Recommendation

Issue an order approving Puget Sound Energy's (PSE or Company) 2024-2025 Pipeline Replacement Program Plan (Plan) filed on June 1, 2023. PSE's Plan is consistent with the Commission Policy addressing elevated risk pipeline facilities in Washington.

Background

On December 31, 2012, the Washington Utilities and Transportation Commission (Commission) issued a Policy Statement entitled "Commission Policy on Accelerated Replacement of Pipeline Facilities with Elevated Risk"[1] (Policy Statement). Pursuant to the Policy Statement, each investor-owned gas pipeline utility company filed a Master Plan in 2013 for replacing pipe that represents an elevated risk of failure. The Policy Statement also requires that PSE file a Two-Year Plan that specifically identifies the pipe replacement program goals for the upcoming two-year period.

On June 1, 2023, PSE filed its Two-Year Plan for 2024-2025. Commission staff (Staff) finds that the Company's 2024-2025 Two-Year Plan meets the requirements of the Policy Statement, with respect to pipeline safety.

I. Plan Requirements

Under the Policy Statement, the sixth Two-Year Plan was to be filed by June 1, 2023,[2] covering planned pipeline replacement through 2025. The Plan has three parts: (1) a Master Plan for replacing all facilities with an elevated risk of failure; (2) a Two-Year Plan that specifically

[1] "Commission Policy on Accelerated Replacement of Pipeline Facilities with Elevated Risk (December 31, 2012) (Policy Statement) (Docket UG-120715).
[2] Subsequent plan filings are to be filed by June 1 every two years thereafter (*i.e.,* June 1, 2015, 2017, 2019, etc.). "If the gas company makes no changes to its Master Plan, it need file only the Two-Year plan in each filing after June 1, 2013. If the company makes a material change either to its Master Plan, its Two-Year plan or its Pipe Location Plan, it should file plan changes with the commission within 30 days." Policy Statement at 11, ¶ 43.

identifies the pipe replacement program goals for the upcoming two-year period; and if applicable, (3) a Pipe Location Plan for identifying the location of pipe or facilities that present an elevated risk of failure.[3]

Each Plan must also:

- Target pipe or facilities that pose an elevated risk of failure.
- Be a measured and reasonable response in relation to the elevated risk, and the program must not unduly burden ratepayers.
- Be in the public interest.[4]

II. Commission Staff Review of PSE's 2024-2025 Two Year Plan

A. Overview

PSE's Plan indicates that the following types of gas pipe with an elevated risk of failure are present within its natural gas service area: DuPont Aldyl "HD" Plastic Pipe (DuPont pipe), Buried Meters, Sewer Cross Bores and No Record Facilities (New). PSE's Plan contains a Master Plan, a Two-Year Plan, and a Pipe Identification Plan for each of these types of facilities. The facilities described in PSE's Plan are consistent with the Distribution Integrity Management Plan (DIMP) model and data collected during the last two-year cycle.

B. Evaluation of the Required Plan Elements

1. Whether the Company's Plan Targets Pipe that Poses an Elevated Risk of Failure

The four types of facilities in PSE's Plan each pose an elevated risk of failure.

- PSE has identified DuPont pipe as having an increased risk of brittle-like cracking due to slow crack growth (SCG). PSE began installing this pipe in the 1970's and early 1980's and initially estimated there to be approximately 400 miles remaining in service as of 2013. Due to additional discovery, this number increased to 435 miles prior to any pipe replacement completed under the Plan. In PSE's experience, SCG is caused by rock impingement, squeezing and other stress concentrations. PSE's experience is similar to industry experience, which is highlighted by a safety recommendation from the National Transportation Safety Board (NTSB) on April 30, 1998[5].

[3] Policy Statement at 11, ¶ 42
[4] Policy Statement at 12-14, ¶¶ 45-56.
[5] NTSB Safety Recommendation P-98-019

- PSE has identified an increased risk on meter set assembly (MSA) piping where pipe, fittings, or equipment intended for above ground exposure are unintentionally buried. These types of facilities are referred to as "Buried Meters" and can occur when a property owner makes alterations to the ground elevation near the MSA, which may result in hazardous leaks due to corrosion occurring at or near a building wall. In 2010, PSE's DIMP identified buried meters as a moderate risk but since that time PSE has seen an increase in the number of hazardous leaks due to corroded meter set components and an increase in the number of buried meter reports. Due to these increases, PSE's DIMP has identified buried meters as a high risk.

- The threat of sewer cross bores was identified through DIMP as an elevated risk to certain pipe installations. A sewer cross bore is a gas pipeline that has accidentally been installed through a sewer pipe. Sewer cross bores pose an elevated risk of failure due to the higher consequence that would result if damage to the pipe occurs, and gas were to leak into the sewer and nearby buildings. Since 2013, more than 871 sewer cross bores have been discovered in PSE's system.

- PSE has identified an increased risk involving no record facilities. No Record Facilities (NRF's) are services that are shown as being active in the mapping system, but the aboveground portion of the service is not able to be located during leak surveys and patrols, then the facility is mapped as "NR" to indicate that no record exists for the cut and cap. NRF's were predominately identified through the SKIP program starting in 2016 where the inspection was "skipped" when nothing was found. The remaining ones were identified through the Deactivated Gas Line Inspection Program (DGLI). Through SKIP and DGLI inspections, many NRF's were investigated and found to be live idle risers in very difficult locations or intentionally bent over and buried. Many of these facilities may still be active and in unknown condition, which poses an elevated risk for Outside Force Damage, and Corrosion adjacent to the building wall.

2. **Whether the Pipe Replacement Program Plan contains a plan for identifying the location of pipe that presents elevated risk of failure**

   PSE's Plan outlines their strategy for identifying the location of all four types of facilities listed.

   - DuPont pipe location is continually identified through Exposed PE Pipe Reports whenever plastic pipe is exposed during routine operations and maintenance activities. PSE's initial identification effort confirmed 2,700 original installations

that had some amount of DuPont pipe. These installations were determined through historical data and targeted excavations

- Buried meters are determined through annual leak surveys and patrol data. The current list is approximately 40,000 buried meters in PSE's system with approximately 5,000 new reports each year.

- PSE utilizes a computer-based risk model to develop a prioritized and systematic approach to identifying and alleviating the elevated risk that sewer cross bores pose. PSE has identified 8,500 locations with a high consequence and 51,500 with a lower consequence.

- The original population of 3,000 NRF's was identified based on the results of SKIP and DGLI inspections. The ongoing identification of NRF's will also be from the SKIP program when aboveground piping cannot be found during leak survey.

3. Whether the Pipe Replacement Program Plan is a measured and reasonable response in relation to the elevated risk

Based on Staff's review, PSE's plan is a measured and reasonable response in relation to the elevated risk. The plan adequately addresses facilities with an elevated risk of failure. Staff has previously audited PSE's DIMP[6] and found that it addresses all known threats and implements accelerated actions that adequately addresses those threats. PSE's plan is consistent with their DIMP.

C. Impact on Rates

In accordance with Paragraph 64 of the Commission's Policy Statement, PSE may submit information for a Cost Recovery Mechanism (CRM). Should this occur, Regulatory Services staff will present the CRM in a separate filing.

On January 21, 2021, PSE announced its Beyond Net Zero Carbon pledge, setting an aspirational goal to reach net zero carbon emissions for natural gas sales by 2045, with an interim target of a 30 percent emissions reduction by 2030. PSE's 2021 Pipeline Replacement Plan was expanded to include actions that aid in the reduction of methane emissions as envisioned by RCW 80.28.420. Subsequently, PSE was approved for a multi-year rate plan (MYRP) beginning in 2022 and is no longer using the Cost Recovery Mechanism (CRM) allowed in the policy statements. The methane emission programs that were included in PSE's 2021 Pipeline

[6] Inspection number 8624, July 2023.

Replacement Plan are incorporated in the MYRP. PSE's 2023 Pipeline Replacement Plan removes the methane tactic and reports on the pipeline assets and programs with the highest risk of failure. The methane tactics are being addressed outside of the Pipeline Replacement Plan.

There is no immediate incremental impact on rates from this plan as PSE is not asking for a cost recovery mechanism for the identified programs. While there is no immediate impact on rates, PSE states that future impacts could occur due to identification and replacement of pipelines with an elevated risk of failure and would be incorporated into a future Multi-year Rate Plan.

III. Conclusion

PSE is remediating elevated risk pipeline facilities according to their Master Plan. The 2024-2025 Two-Year Plan has been updated to reflect newly added projects and completed projects. Since initiation of the replacement program, PSE has replaced over 210 miles of DuPont pipe, remediated 24,476 buried meters, and has cleared 24,505 potential sewer cross bores segments in their system. PSE predicts 3,000 Planned No Record Facilities Remediations in the first five years of the program Staff recommends approval of PSE's 2024-2025 Two-Year Plan as filed on June 1, 2023.