

Agenda Date: October 10, 2024
Item Number: E1

Docket: PG-240575
Company Name: Cascade Natural Gas Corporation

Subject: Cascade's request for Commission approval to operate a pipeline with a MAOP of 500 psig within 100 feet of existing buildings or those that are under construction, pursuant to WAC 480-93-020.

Staff: Jason Hoxit, Pipeline Safety Engineer
Dennis Ritter, Pipeline Safety Chief Engineer
Scott Rukke, Pipeline Safety Director

Recommendation

Issue an order granting Cascade Natural Gas Corporation's (Cascade or Company) request to construct and operate approximately 4,373 feet of new 8-inch diameter steel pipeline. This will connect to the existing Terrace Heights Gate Station at regulator station 032-R-098 that operates at a maximum allowable operating pressure (MAOP) of 500 pounds per square inch gauge (psig) and the existing 8-inch Yakima HP pipeline at the intersection of Terrace Heights Drive and South 17th Street that operates at an MAOP of 200 psig. This project replaces a section of the existing pipeline between regulator station 032-R-098 and South 17th Street and installs a new regulator station at South 18th Street to regulate the pressure of the new pipeline down to 200 psig before it connects to the existing pipeline. The complete route of this line is depicted on the attached aerial maps located in Appendix A.

Discussion

As described in Washington Administrative Code (WAC) 480-93-020, a gas pipeline company must receive approval from the Washington Utilities and Transportation Commission (Commission) to operate a pipeline at greater than 250 psig, up to and including 500 psig, within 100 feet of an existing building not owned by the gas pipeline company. The Commission has adopted Title 49 Code of Federal Regulations (C.F.R.) Part 192 and WAC Chapter 480-93 as minimum standards for natural gas pipeline construction and operation.

Cascade is proposing to construct and operate 4,373 feet of new 8-inch diameter steel pipeline with an MAOP of 500 psig. Cascade is proposing to connect to the existing Terrace Heights Gate Station at regulator station 032-R-098 off Terrace Heights Drive and install a new regulator station at South 18th Street to regulate the pressure of the new pipeline down to 200 psig before it ties into the existing 8-inch pipeline at the intersection of Terrace Heights Drive and South 17th Street (Appendix A). The proposed alignment of this new pipeline will be within 100 feet of 12 existing buildings along Terrace Heights Drive in Yakima, Washington, as shown in Appendix A. Cascade is performing this work to satisfy the Settlement Agreement (Docket PG-150120), maintain core customer needs, and have the ability for future growth.

Cascade looked at connections using alternative routes as detailed in Appendix B. These routes were not chosen because of constructability and protection challenges. Commission staff (Staff) reviewed the proposed proximity request and calculations. As the pipeline will be new, there are no existing records to review. Staff notes the following facts:

- a) The proposed MAOP of the new pipeline is 500 psig.
- b) The project will use API 5L specification, X52 grade piping, and ANSI Class 300 fittings which are appropriate for the proposed MAOP.
- c) The class locations for the proposed pipeline are Class 1, Class 2, and Class 3.
- d) The approximate distance from the pipeline to 12 existing structures ranges from 7 feet to 100 feet. All other buildings along the route are greater than 100 feet from the pipeline.
- e) At the proposed MAOP of 500 psig, the stress level of the new pipe and fittings will be a maximum of 12.88 percent of the specified minimum yield strength (SMYS).
- f) As the hoop stress of the line is under 20 percent SMYS, the proposed pipeline is considered high-pressure distribution. Lines at or over 20 percent are considered transmission.
- g) The proposed pipeline and fittings will be pressure tested to a minimum of 750 psig with nitrogen for 8 hours in accordance with the Company's procedures prior to operation. This test pressure is at least 1.5 times the MAOP of the pipeline, which is above the requirements for Class 1 and Class 2 locations. This allows for future growth in the area if any class locations change to Class 3.

Conclusion

A review of Cascade's proximity request indicates that it meets the pertinent requirements of Title 49 C.F.R. Part 192 and WAC Chapter 480-93 and that the selected route of the new pipeline has the least impact on surrounding population densities.

The Commission's proximity rule, WAC 480-93-020, allows Staff to review proposed high-pressure pipelines in close proximity to structures to address safety considerations. Staff's recommended conditions described below appropriately minimize the public safety risk associated with the proposed pipeline.

For these reasons, Staff recommends that the Commission issue an order approving Cascade's request to install and operate a pipeline with a MAOP of 500 psig, subject to the following conditions:

- a) For underground installations, Cascade must electrically inspect (jeep) the pipe coating and repair any coating defects in accordance with the Company's operating standards prior to backfilling.
- b) For underground installations, Cascade must apply backfill material around the pipe to protect the pipe and coating. The material around the pipe must be free of any sharp rocks or other objects with a maximum particle size of one-half inch and must contain a large percentage of fines, such as sand, native soil, or soil-based select materials.
- c) Where feasible, Cascade must non-destructively test 100 percent of all welds. Cascade must remedy defects in the welds in accordance with the Company's operating standards and procedures. Cascade must non-destructively test all repaired welds to ensure pipeline integrity and compliance with existing standards.
- d) Cascade must install cathodic protection within 90 days after the pipeline is installed.
- e) Cascade must provide notification to the Commission's Pipeline Safety Division via email at least two business days prior to the beginning of project construction. This email notification shall be sent to pipelineprogram@utc.wa.gov.
- f) Cascade must contact building occupants within 100 feet of the new pipeline prior to the Commission's open meeting and inform them of the project construction and any additional information consistent with the public awareness requirements in Title 49 C.F.R. § 192.616.

Appendix A



Figure 1: Overall view of the proposed 8" Yakima HP Replacement (Red) pipeline alignment.



Figure 2: Section of the proposed pipeline showing buildings 1-12 within the 100-foot proximity boundary.

Proximity Buildings

Bldg. #	Distance to HP Line (feet)	Bldg. Description
1	88	Utilities – Natural Gas
2	47	Utilities – Natural Gas
3	52	Utilities – Natural Gas
4	7	Utilities – Natural Gas
5	100	Commercial
6	64	Manufacturing - Food
7	61	Manufacturing - Food
8	93	Commercial
9	82	Warehouse
10	53	Service - Commercial
11	19	stream gage monitoring building
12	80	Commercial

Appendix B



Figure 4: Route alternatives.