Agenda Date: July 13, 2023
Item Number: A1

Docket: **PG-230289**
Company Name: Cascade Natural Gas Corporation

Staff: Lex Vinsel, Pipeline Safety Engineer
Dennis Ritter, Pipeline Safety Chief Engineer
Scott Rukke, Pipeline Safety Director

Recommendation

Issue an order granting Cascade Natural Gas Corporation's request to construct and operate approximately 31,000 feet of new 4-inch diameter steel pipeline on N. Track Rd, Southwest of Wapato, Washington, as proposed in Cascade's proximity request letter dated June 6, 2023. This replaces the current pipeline that operates at a Maximum Allowable Operating Pressure (MAOP) of 152 psig and will connect to the existing 6-inch Toppenish-Zillah HP pipeline that operates at an MAOP of 400 psig and delivers directly to the Wapato Gate Station. The complete route of this line is depicted on the attached aerial maps located in Appendix A (Page 4-9 of this memo).

Discussion

Cascade Natural Gas Corporation's (Cascade or Company) request for Commission approval to operate a pipeline with a 400 psig MAOP within 100 feet of existing buildings or those that are under construction, pursuant to WAC 480-93-020.

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 the Code of Federal Regulations, Title 49, Part 192 and Chapter 480-93 of the WAC as minimum standards for natural gas pipeline construction and operation.

Cascade is proposing to construct and operate 31,000 feet of new 4-inch diameter steel pipeline with an MAOP of 400 psig. The proposed alignment of this new pipeline will be within 100 feet of 19 existing buildings along N. Track Road in Southwest Wapato, Washington. Cascade is performing this work as identified in the Company's 2023 Integrated Resource Plan (IRP) filing, UG-220131, Appendix I, "Wapato High Pressure Reinforcements" as is required to meet the MAOP Validation Settlement with the Commission.

Cascade looked at connections using alternative routes, as detailed in Cascade's 2023 IRP filing. They were not chosen due to the lack of existing easements, the likelihood of encroachment, and construction 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 400 psig.

b) The project will use API 5L, X52 or Y52 piping, and ANSI 300 fittings which are appropriate for the proposed MAOP.

c) The Class location for the proposed pipeline is Class 3.

d) There are 19 existing structures located between 44 feet and 100 feet of the proposed pipeline. All other buildings along the route are greater than 100 feet from the pipeline.

e) At the proposed MAOP of 400 psig, the stress level of the new pipe and fittings will be a maximum of 9.0 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 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 as required for a Class 3 location.

Conclusion

A review of Cascade's proximity request indicates that it meets the pertinent requirements of Chapter 480-93 of the WAC 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 pipeline 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 400 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 Cascade's operating standard 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 Cascade'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 Pipeline Safety Division via email at least two business days prior to the beginning of the project construction. This email notification shall be sent to Dennis.Ritter@utc.wa.gov or Scott.Rukke@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 CFR Part 192.61.

Appendix A

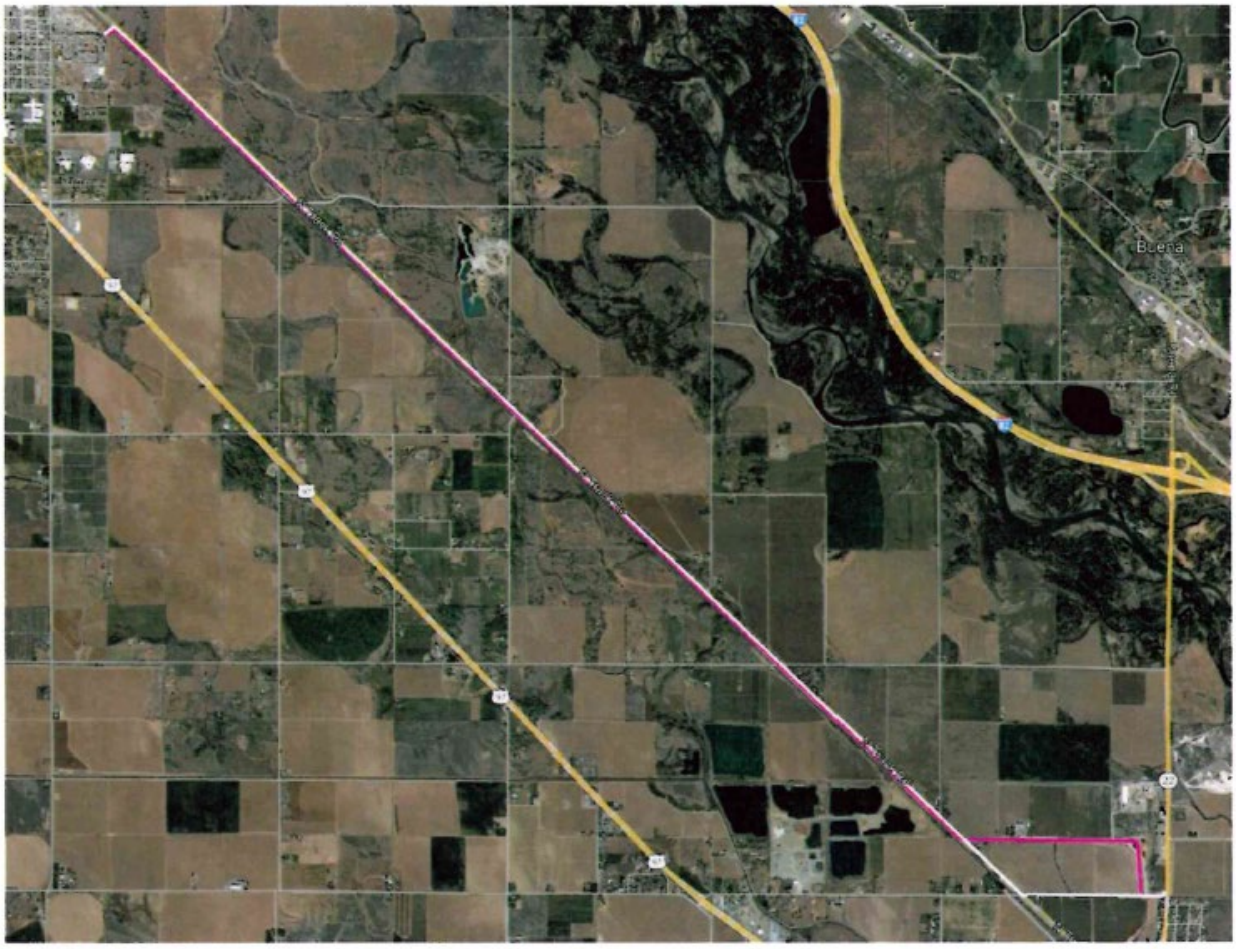

Figure 1: Overall view of the proposed N. Track Rd pipeline replacement (White) and existing line (Pink).


1
2
N Track Rd
3
4

Figure 2: Section of the proposed pipeline showing buildings 1 – 4 within the 100-foot proximity boundary.

Figure 3: Section of the proposed pipeline showing buildings 5 – 9 within the 100-foot proximity boundary.

Figure 4: Section of the proposed pipeline showing buildings 10 – 14 within the 100-foot proximity boundary.

Figure 5: Section of the proposed pipeline showing buildings 15 – 19 within the 100-foot proximity boundary.

Proximity Buildings

Bldg. #	Distance to HP Line (feed)	Bldg. Description
1	83 ft	Residence
2	45 ft	Residence
3	84 ft	Residence
4	100ft	Residence
5	83 ft	Kennel
6	100 ft	Residence
7	91 ft	Shed
8	97 ft	Livestock Shelter
9	100 ft	Livestock Shelter
10	83 ft	Residence
11	91 ft	Residence
12	100 ft	Shed
13	98 ft	Residence
14	98 ft	Residence
15	28 ft	Sub Station
16	83 ft	Residence
17	100 ft	Residence
18	44 ft	Residence
19	85 ft	Residence