Agenda Date: April 10, 2020
Item Number: A2

Docket: **PG-200087**
Company Name: Cascade Natural Gas Corporation

Staff: Dave Cullom, Pipeline Safety Engineer
Darren Tinnerstet, Pipeline Safety Engineer

Recommendation

Issue an order granting Cascade Natural Gas Corporation's (Cascade or company) request to install a pipeline and regulator station which will operate at 500 psig MAOP and is within 100 feet of existing buildings or those that are under construction. Cascade is performing this work to reach an area of growth that has very few future reinforcement options.

Discussion

A gas pipeline company must have permission 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, as described in Washington Administrative Code (WAC) 480-93-020. The commission has adopted the Code of Federal Regulation, Title 49, Part 192 and 480-93 of the WAC as minimum standards for natural gas pipeline construction.

Cascade is proposing to install a new six-inch steel, 1.6-mile lateral starting from an existing 500 MAOP pipeline to accommodate current and future growth considerations. Included in this proposal is the construction of a new regulator station. The new regulator station and associated pipeline necessary for its installation will be designed with a minimum component rating of 720 psig and will be pressure tested to a minimum of 750 psig for the requested 500 MAOP. This proposal is referred to as the Badger Road high-pressure pipeline by Cascade in its proximity request.

Commission staff (staff) reviewed the proposed proximity request and calculations. As the facility is an existing pipeline, staff reviewed historical records. Staff notes the following facts:

(a) The proposed MAOP of the Badger Road high-pressure pipeline will be 500 psig.

(b) The proposed piping and all fittings are commensurate with the proposed MAOP.

(c) The proposed MAOP is commensurate with the current class location, which is Class 3.

(d) The Badger Road high-pressure pipeline will be within 100 feet of 9 structures.

(e) It is not feasible to increase the distance between the pipeline and the other buildings. Cascade considered alternate routes which ultimately had higher installation difficulties and would have increased the number of structures within the 100 foot proximity limit.

(f) At the proposed MAOP of 500 psig, the maximum stress level of the pipe would be 11.38 percent of the specified minimum yield strength (SMYS). Pipelines that operate under 20 percent of SMYS are considered low-stress lines and pose a lower risk than pipelines operating above 20 percent of SMYS.

(g) The proposed pipeline and fittings will be pressure tested to a minimum of 750 psig 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.

(h) Cascade will repair any leaks found on the system during the annual leak survey.

Conclusion

A review of Cascade's proposed construction plans indicate that it meets all the pertinent requirements of the Code of Federal Regulation, Title 49, Part 192 and 480-93 of the WAC and that the selected location of the new pipeline has the least impact on surrounding population densities.

The commission's proximity rule, WAC 480-93-020, is one such rule that allows pipeline staff the opportunity to review construction plans of 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 pressure increase.

For these reasons, staff recommend that the commission issue an Order approving Cascade's request to install a pipeline and regulator station which will operate at 500 psig MAOP on the new Badger Road high-pressure pipeline 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) Cascade must non-destructively test 100 percent of all new construction welds on all newly installed pipe operating above 250 psig. Cascade must remedy defects in the welds in accordance with Cascade's operating standards and procedures. Cascade must non-destructively test all repaired welds on all newly installed pipe operating above 250 psig 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 via email to pipelineprogram@utc.wa.gov at least two business days prior to the beginning of project construction.

(f) Cascade will submit ESRI Shapefiles and final construction specifications to the commission within 90 days of project completion.

(g) Cascade will conduct leak surveys on the Badger Road high-pressure pipeline in accordance with the company's standards. The pipeline will be leak surveyed annually when it operates at 500 psig. Cascade will conduct leak surveys near high occupancy structures or areas – no less frequently than annually, not to exceed fifteen months between surveys unless additional surveys are required by commission rules.

(h) Cascade will notify the affected public no less than 14 days prior to the open meeting date to allow the public an opportunity to comment or have questions answered by staff.

(i) Cascade will bury the pipeline with a minimum of 48-inches of cover. Where 48-inches of cover cannot be achieved, a minimum of 36-inches of cover will be maintained