

Agenda Date: July 28, 2011
Item Number: A3

Docket: PG-110896

Company name: Cascade Natural Gas Corporation

Staff: Lex Vinsel, Pipeline Safety Engineer

Recommendation

Issue an order granting Cascade's request to operate a pipeline at pressures greater than 250 pounds per square inch gauge (psig) up to and including 500 psig subject to the conditions recommended by staff.

Background

Cascade Natural Gas Corporation (Cascade) provides natural gas service to the Kitsap County area from an existing 8-inch high pressure pipeline fed from the Shelton Gate Station near W Deegan Road West and terminates at valve, V-61. The proposed pipeline segment will connect to the existing Shelton Gate Station and Kitsap Transmission Line (Phase 3) located at V-61.

On May 13, 2011, Cascade filed with the Washington Utilities and Transportation Commission (Commission) a petition requesting Commission approval to operate a pipeline at greater than 250 psig up to and including 500 psig.

The Company proposes to construct a 6,000 feet pipeline, 12-inch diameter located in rural Mason County. The proposed Kitsap Pipeline (Phase 6) will be located in an existing easement and parallel to an 8-inch pipeline. The proposed pipeline would be within 100 feet of one existing house and one under construction. The nearest dwelling is 46 feet from the proposed pipeline's centerline.

Discussion

A gas pipeline company must have permission from the Commission to operate a pipeline at greater than 250 psig, up to and including 500 psig, within one hundred feet of certain buildings described in WAC 480-93-020. The Commission has adopted the Code of Federal Regulation, Title 49, Part 192 and 480-93 of the Washington Administrative Code as minimum standards for natural gas pipeline construction.

The proposed pipeline will tie into an existing 12-inch pipeline (Phase 3 at V-61) that will operate at greater than 250 psig up to and including 500 psig, run north approximately 6,000 feet through portion of an existing right of way that includes the current 8-inch pipeline. It will be installed within 100 feet of two structures intended for human occupancy. The segment will be designed and tested for a maximum allowable operating pressure (MAOP) of 500 psig, will be

radiographically examined at 100 percent of all girth welds, and tested to a minimum of one and one-half times the MAOP.

The most restrictive natural gas pipeline safety rules specify that pipelines in a highly populated area (Class 4 Location) be operated at pressures producing a hoop stress of no greater than 40 percent of the specified minimum yield strength (SMYS) of the pipe. Cascade's proposed pipeline route is in a Class 1 location that would allow a pipeline to operate up to 72 percent of the SMYS of the pipeline. Cascade has elected to use a factor of 20 percent of the SMYS as a design factor which is over 50 percent more stringent than the most restrictive Class 4 factor. The pipeline will be constructed for a MAOP of 500 psig or a hoop stress of 16.4 percent of SMYS, less than 22 percent of the 72 percent SMYS allowed for a Class 1 Location.

Recommendation

After examination of the request and giving consideration to all relevant matters, staff recommends the Commission issue an Order granting Cascade's request to operate above 250 psig up to and including 500 psig and subject to the conditions in the Order.