

Agenda Date: October 30, 2012
Item Number: A2

Docket: Docket PG-131838

Company Name: Cascade Natural Gas Corporation

Staff: Joe Subsits, Chief Pipeline Safety Engineer
Dennis Ritter, Pipeline Safety Engineer

Recommendation

Issue an Order approving Cascade Natural Gas Corporation's pipeline replacement plan filed on May 31, 2013. CNG's plan is consistent with the Commission Policy and adequately addresses 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 plan for replacing pipe that represents an elevated risk of failure (plan).

The Commission contemplated that each company's plan would likely be tied to the company's Distribution Integrity Management Plan² (DIMP), its Transmission Integrity Management Plan³ (TIMP), if any, and certain other pipeline safety requirements found in Washington Administrative Code.⁴

On May 31, 2013, Cascade Natural Gas Corporation (CNG) filed its plan with the Commission. Below is Commission Staff's review of that plan. With the revisions and changes filed by CNG, Staff finds CNG's plan meets the requirements of the Policy Statement.

¹ "Commission Policy on Accelerated Replacement of Pipeline Facilities With Elevated Risk (December 31, 2012) (Policy Statement) (Docket 120715).

² Title 49 CFR, Part 192, Subpart O.

³ Title 49 CFR, Part 192, Subpart P.

⁴ WAC 480-93.

I. Plan Requirements

Under the Policy Statement, the first plan was to be filed by June 1, 2013,⁵ covering planned pipeline replacement through 2015. 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 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.⁶

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.⁷

II. UTC Staff Review of Cascade Natural Gas Corporation's plan

A. Overview

CNG's plan contains the required three sections:

Section 1-Master Plan

Section 2-Two Year Plan

Section 3-Plan for Identifying the Location of Pipe that Present Elevated Risk of Failure.

Additionally, the plan includes a Special Pipe Replacement Program Cost Recovery Mechanism (CRM).

CNG's original plan did not contain sufficient information to allow staff to conclude that CNG's prioritization of replacement projects corresponded with priorities identified by the DIMP model. CNG revised its plan, giving more explanation to the selection process, which includes revising the DIMP model weighting factors to focus on material related risks (corrosion, age, welds, etc.) and adding district level expertise (subject matter experts) to give a "boots on the ground" prioritization to pipelines and/or distribution areas which are equally at risk.

⁵ 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.

⁶ Policy Statement at 11, ¶ 42

⁷ Policy Statement at 12-14, ¶¶ 45-56.

CNG also added graphics showing all elevated risk pipeline facilities to the Master Plan and Two Year Plan. Finally, CNG revised its Plan for identifying the location of pipe that presents an elevated risk. The Company now includes a program that captures missing information critical in establishing maximum allowable operating pressure (MAOP) and details new operating standards in order to capture missing data. Through its revised processes, CNG's updated DIMP contains information required to both identify pipe with elevated risks and prioritize replacement activity. CNG will modify its plan in the future if it finds other facilities that present elevated risk of failure.

B. Evaluation of the Required Plan Elements

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

According to CNG's plan, facilities in its system exposed to the highest risk are "pre-CNG steel pipe". "Pre-CNG" means pipe that became part of the Company's system when it acquired other systems.

This pre-CNG pipe is either bare or coal tar wrapped steel. These pipelines were originally installed to transport manufactured gas in distribution systems prior to natural gas being introduced to the Pacific Northwest. These systems were installed prior to 1955 and prior to CNG ownership. CNG acquired these systems from the late 1950s through the 1960s. This pipe has an elevated risk of failure because of its age (60 years or greater) and because it lacked cathodic protection until the early 1970s.⁸

Based on its DIMP, CNG already has a program in place to replace pre-CNG pipe, the majority of which is in western Washington in the cities of Longview, Shelton and Anacortes. This program is now part of the plan.

After Staff reviewed CNG's DIMP,⁹ CNG revised it and validated it.¹⁰ The plan uses CNG DIMP modeling to identify higher risk pipeline facilities based on the following threats:¹¹

- Corrosion
- Natural Forces
- Excavation Damage

⁸ CNG's Plan, page 2.

⁹ 2012 CNG Natural Gas Distribution Integrity Management Program Inspection.

¹⁰ CNG Response to 2012 Natural Gas Distribution Integrity Management Program Inspection Letter, November 19, 2012.

¹¹ DIMP Table D3.1: Current Weight Factors.

- Other Outside Forces
- Material Failure
- Weld or join Failure
- Equipment Failure
- Incorrect Operation
- Missing Values

For the plan modeling, CNG modified the DIMP model to eliminate threats which are outside the control of CNG (Natural Forces, Excavation Damage).¹² This allows the model to assign risk relative to material failure only, per the above list.

The following is a classification of facilities that pose an elevated risk of failure, based on CNG's refined DIMP analysis¹³:

- Bare Steel or poorly coated steel--age and corrosion. CNG has scheduled most of its highest risk steel (pre-CNG pipe) in Washington to be replaced by the end of 2015;¹⁴ The Company has a combined total of 62 miles of cathodically protected bare steel or poorly coated steel pipe in its system;¹⁵
- Pre-1980 steel pipe with welds which do not meet current, more stringent standards and which have a leak history;
- Certain valves used on steel pipelines and high pressure services with limited maintenance;
- High pressure steel pipelines with missing pipeline data necessary to confirm the maximum allowable operating pressure.¹⁶

Note: CNG does not have any of the following pipeline materials in Washington:¹⁷

- Cast Iron;
- PVC;
- Aldyl-A PE.

¹² CNG's plan, pp 3

¹³ DIMP Table D3.1: Current Weight Factors

¹⁴ CNG plan, Section 2 Two-Year Plan, pp 4-5

¹⁵ Tina Beach, CNG Manager Standards and Compliance, October 14, 2013, Kennewick WA

¹⁶ Note: Staff found missing data during standard inspections of CNG facilities in 2013. As a result, Pipeline Safety required CNG to analyze all of their high pressure pipelines (high pressure lines are exclusively steel) and determine exactly what information is missing for each pipeline segment. CNG completed this review in September, 2013 and formulated a program to obtain the missing information for MAOP confirmation. This program is incorporated into the DIMP model as missing data. The model treats missing data as a threat (like corrosion, poor welds, bad valves etc.) and assigns more risk to those pipelines.

¹⁷ DIMP Table C5.1: Non-Applicable Threats/Unused Records

2. Pipe Location Plan

CNG's plan contains Pipe Location Plans. These plans are specific to an individual city or town, based on the location of the highest risk weighting factors. The DIMP model assigns higher risk to steel pipe that is bare or poorly coated. It then adds additional weighting factors (or more risk) based on other factors - age, leak history, materials, high consequence areas, etc.

The outputs are location maps within CNG service areas which are most at risk and in the following rank order: Longview/Kelso, Anacortes, Shelton, Wenatchee, Zillah, Moses Lake, Mt. Vernon, Yakima. The revised DIMP model color codes the highest risk pipe; red is highest risk, followed by orange, yellow and green, which represents low risk. Within each service area, CNG uses local district personnel experience, other company personnel and other factors such as permitting issues, to further subdivide distribution areas into the actual projects listed in the Two Year Plan.

3. Whether the Company's Plan is a Measured and Reasonable Response in Relation to the Elevated Risk

Based on Staff's review, CNG's plan is a measured and reasonable response in relation to the elevated risk. The plan adequately addresses which facilities with an elevated risk of failure will be replaced. Staff has reviewed CNG's DIMP and found that it addresses known threats and assigns appropriate risk. The plan uses the DIMP output to address pipeline replacements and also implements accelerated actions to obtain missing data for these higher risk pipelines.

4. Special Pipe Replacement Program Cost Recovery Mechanism

Impact on Rates

In accordance with Paragraph 64 of the commission's policy statement, Cascade submitted information for a Cost Recovery Mechanism (CRM) with its plan. Regulatory services staff will present the CRM in a separate filing in Docket No. UG-131959.

The effect of the CRM is an increase in annual revenues of \$1,042,730 (0.50 percent). The monthly impact of the CRM filing on the average residential customer using 54 therms per month is an increase of \$0.21, resulting in a change to the average bill from \$45.41 per month to \$45.62.

Rate impacts in future years are unknown at this time.