

[Service Date April 1, 2009]

April 1, 2009

Katherine J. Barnard
Senior Director, Regulatory Affairs
Cascade Natural Gas
222 Fairview Avenue North
Seattle, WA 98109-5312

Re: Cascade Natural Gas 2008 Integrated Resource Plan
Docket UG-080791

Dear Ms. Barnard:

The Washington Utilities and Transportation Commission (Commission) has carefully reviewed the 2008 Integrated Resource Plan (IRP) filed by Cascade Natural Gas (Cascade or Company) and finds that it meets the requirements of Washington Administrative Code 480-90-238. The Company's work plan for the 2010 IRP is due December 15, 2009. The Company's 2010 IRP is due December 15, 2010.

We remind the Company that this finding does not signal pre-approval of any course of action identified in the IRP for ratemaking purposes. No IRP can determinatively pinpoint the future actions that will minimize a utility's cost. The Company should regularly update the assumptions that underlie the IRP and adjust its operational strategies accordingly. At the time of Cascade's next general rate case or purchased gas adjustment filing, the Commission will give due weight to the information, analyses, and strategies contained in the most recent IRP along with other relevant evidence when determining the prudence of the Company's actions. As part of that evidence, Cascade should thoroughly explain its natural gas procurement strategies as well as its efforts to validate its price and supply projections.

The Commission recognizes the improvement in Cascade's ability to use the Sendout® and Vector gas™ computer models. Cascade now must meet the task of integrating the newly developed capability to perform risk analysis into its business

decisions. Upcoming decisions about new resource supplies and changing interstate pipeline opportunities and costs should be informed by the 2008 IRP and guided by the analysis Cascade is now able to perform.

The Commission also has a continuing interest in the relationship between Cascade's IRP and its gas purchasing and hedging strategies. Risk management principles and gas purchasing strategies and practices are developed by the Company's gas purchasing group. They are not formally part of an IRP planning process. However, the two functions can reasonably be expected to inform one another.

In its next IRP, the Commission expects that Cascade will expand its discussion of the analytical results. This will help lead the way for the IRP to inform Cascade's management in decisions on resource acquisition. Finally, in the next IRP, Cascade should improve documentation and expand discussion of the rationale it applies to reach its final determination of achievable conservation.

More specific comments regarding the IRP are attached.

Sincerely

DAVID W. DANNER
Executive Director and Secretary

Attachment

Washington Utilities and Transportation Commission Review of Cascade Natural Gas 2008 Integrated Resource Plan

Summary

Cascade Natural Gas (Cascade or Company) has expanded the number of resource portfolios it models while incorporating “Monte Carlo-type” simulations of both natural gas price and weather. In addition to this expansion, the quality of the modeling work has greatly improved. However, the plan’s discussion and demonstration of what the modeling results mean for Cascade’s future resources could be improved.

The increased complexity of the modeling also demands increased scrutiny of the data and assumptions being used in the model. One such improvement in the modeling data was the new zonal load forecasting, which replaced the system-wide forecasting of the previous integrated resource plan (IRP).

Cascade’s development of conservation in its IRP should go beyond an “assessment of currently employed” programs available in the utility industry.¹ Cascade should use the IRP as an opportunity to assess “new policies and programs needed to obtain the conservation improvements.”²

Cascade’s Plan

Cascade’s IRP contains all the necessary components of a natural gas utility IRP, *i.e.*, demand forecasts, supply forecasts (both conventional and nonconventional), commodity price forecasts, cost projections for resources, assessments of conservation and DSM, investigation of storage options, projections of pipeline transmission capability and future availability with reliability and price estimates, integration of demand and supply to compare portfolio costs using probabilistic outcomes, and a two-year implementation action plan. Commission comments on each of the IRP chapters follow below.

Demand Forecasts

Resource plans are built on the assessment of future demand. Typically, projecting demand over 20 years has been more difficult than projecting demand for the required two-year outlook. However, the current weakness in the economy and its varied effect on Cascade’s diverse service territory have made short-term demand prediction more difficult.

¹ WAC 480-90-238 (3)(b).

² WAC 480-90-238 (3)(b).

Cascade used the following procedure to produce low, medium and high long-term demand forecasts:

1. Estimate the increase in customers. Cascade used econometric models to estimate increase in core residential, commercial and industrial customers. Model inputs included population, employment opportunities, the housing market (residential measured by 30 year mortgage rates) and the prime interest rate for commercial and industrial customer growth.
2. Estimate use per customer. Cascade estimated usage per customer based on heating degree-days, relative fuel prices and real personal income.
3. Estimate growth in peak day use. Cascade projected peak demand using a lower 61-degree design day that represents the coldest day in the last 30 years.
4. Zonal demand. Cascade matched each of the three inputs above to city gate demands from pipeline “zones.” The zones represented groups of city gates between which there are no significant pipeline constraints.
5. Forecast total gas use. Cascade combined baseload and peak day gas growth estimates and applied a “variant” to develop low, medium, and high gas demand forecasts.

The Commission commends the development of the zonal demand model. However, as the resolution of the location of demand increases the resolution of the data for modeling demand must also increase.

- The source and quality of the temperature data used for each zone should be scrutinized as well as calculations of city gate gas use for each zone.

Cascade uses 30-year mortgage rates as an input to its econometric regression analysis for modeling residential demand. The current economic conditions – characterized by an unusually high housing supply, very low demand, very low interest rates and a rapidly rising unemployment rate – may reduce the predictive quality of 30-year mortgage rates in the regression analysis.

The Commission is still concerned with the Company’s conclusion that price elasticity should not be included in the demand forecast.

- Without judgment on the conclusion made in the 2008 IRP, we are encouraged that Cascade has committed in the two-year action plan to revisit the calculation of price elasticity in its next IRP.

The 2008 IRP lacks a sufficient description and rationale for how the “variants” were applied to the Woods and Poole data to obtain the high, medium and low demand forecasts.

- Cascade must document the methodology and reasoning used to determine the “variants” in the demand forecast in its next IRP.

Cascade lowered its heating degree-day base temperature to 61 from 65 (with the effect of lower peak day demand). It is the Company’s obligation to meet peak demand. The Commission notes, by way of comment only, that 30 years is a narrow historical window for weather patterns.

On page 17 of the IRP, Cascade states its assumption that: “the core market load shape does not significantly change throughout the planning horizon.”

- If Cascade continues to rely on this assumption in its next IRP, it should demonstrate that conservation efforts do not affect core load shape.

Demand-Side Management

Cascade continues to improve its assessment of demand-side management (DSM) and conservation programs. Cascade’s utilization of the Energy Trust of Oregon’s (ETO’s) update of the Oregon 2006 Stellar conservation study to update the conservation potential of its Washington service territory was a well managed opportunity. However, the Commission notes the study does not provide program design and implementation strategies. These are two key elements of a conservation program. Increasing the percentage of the technical potential that is achievable is dependent on the development of these two elements.

- Further development of program design and implementation strategies will be necessary in the next IRP.
- A new conservation potential study will be needed for the 2010 IRP.

The Commission notes the increased effort Cascade has made to participate in, and gather knowledge and perspective on, conservation programs based on planning conducted by other regulated companies. The Commission also notes Cascade’s effort to work with Puget Sound Energy and Pacific Power & Light Company on conservation measures in their overlapping service territories.

- The Commission encourages Cascade to pursue coordination of conservation efforts with electric utilities that share common service territory.

Supply-Side Resources and Uncertainties

Cascade has continued to improve its modeling capacity. The Company’s modeling included three liquefied natural gas (LNG) terminals, three pipeline expansion projects, additional transportation capacity on both the Williams Gas Pipeline

Company³ and TransCanada GTN⁴ pipelines (including backhaul capability), MIST and AECO off-system storage, and on-system satellite LNG facilities. Cascade's ability to model a larger number of resource options is commended. However, additional complexity in the modeling and the dynamic nature of new resource development in the western hemisphere require additional sophistication and adaptability in Cascade's use of the modeling. In developing the 2008 IRP Cascade experienced the difficulty of modeling dynamic markets when the proposed Kitimat LNG facility changed its plans, deciding to export rather than import LNG. In response, Cascade's IRP team considered other LNG supplies in their model.

- Continued care and consideration should be exercised in choosing the input resources for the modeling.

Resource Integration

Resource integration is the development of multiple resource portfolios under multiple scenarios and the evaluation and selection of a preferred resource portfolio for the IRP two-year action plan. The principal objective of the integration process is to find the mix of demand- and supply-side resources that best balance the twin goals of minimizing costs and minimizing risk.

Cascade's enhanced ability to use the computer program Sendout® with VectorGas™ to evaluate and understand how various physical and financial risks affect potential resource choices is a notable improvement.

As noted above in the comments on supply-side resources, the market conditions in which Cascade operates remain dynamic. Just as the Kitimat development changed course, pipeline expansion projects and pipeline rates can change.

- Cascade could improve its plan by using IRP modeling results that have sufficient flexibility to inform the Company's reconsideration of its preferred portfolio if resource development in the marketplace does not include Cascade's preferred resource choice.

The IRP is valuable for identifying the preferred portfolio, but the IRP's greatest value is in identifying the alternative portfolios available to respond to multiple possible future conditions.

The discussion under "Integration Results and Key findings" is a good beginning, but the last paragraph of page 72 provides a barely-adequate description of the preferred resources. For instance, it is not clear why the "capacity recall" of Cascade's rights

³ Formerly Northwest Pipeline.

⁴ Also called Gas Transmission Northwest.

on Williams pipeline in 2016 is not recalled earlier to serve peak load.⁵ Perhaps it is not available to recall or is not the lowest cost resource, but these and other details are left unexplained in the IRP narrative.

In the next IRP, Cascade should:

- Greatly expand the narrative discussion of the resources it plans to use to meet its load and detail why it did not choose other resources.
- Provide a description of existing resources, how Cascade intends to use them to meet demand in the future, and why resources were chosen in the order they were chosen.

Two-year Action Plan

Cascade's two-year action plan contains a comprehensive and detailed list of items. All of these items appear to be supported by the plan's analyses save one. Action item 9 expresses the Company's particular concern regarding changing conditions on Williams pipeline. At the same time, incremental capacity on that pipeline is listed as part of the preferred portfolio. The Commission encourages an improved narrative in the next IRP as a means of clarifying any appearance of contradictions between the action plan and the IRP as a whole.

⁵ See Cascade IRP Figure 7-C, page 73.