

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

LC 60

In the Matter of

NORTHWEST NATURAL GAS  
UTILITIES COMPANY, dba  
NW NATURAL

2014 Integrated Resource Plan  
North Mist Expansion Update

STAFF'S COMMENTS

Northwest Natural Gas (NWN or Company) filed an update in Docket No. LC 60, its 2014 Integrated Resource Plan (IRP), on May 29, 2015. This filing included the results of the Company's analysis of a North Mist expansion project as described in Action Item 2.3a<sup>1</sup> of the IRP.

As explained more fully in Staff's analysis, Staff is concerned about the magnitude of the increase in cost for the North Mist Expansion since it was modeled in NWN's 2014 IRP. The magnitude of this cost increase calls into question the reliability of NWN's cost estimates, and accordingly, the conclusions drawn from them.

NWN discusses a potential Mist expansion project in Chapter 3, on page 3.24 in its initial filing, described in the update as Alternative 1. Alternatives 2 and 3 were not part of that filing, but were the result of additional analysis performed by the Company and submitted in the update.

NWN Update

In its update, NWN describes the three alternatives as follows:

- Alternative 1 includes shared use of a new northbound pipeline, the Kelso-Beaver, and interconnecting with Northwest Pipeline (NWP) in the vicinity of Kelso, Washington, for transmission back to NWN's system.
- Alternative 2 uses the existing South Mist Pipeline (SMP) and South Mist Pipeline Extension (SMPE and, together, SMP/SMPE), interconnecting with

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<sup>1</sup> 2.3a Analyses to be performed for future pipelines and alternative resources: Complete analysis regarding North Mist: refine cost estimates; quantify the value of the project's optionality created by upsizing the associated takeaway pipeline near-term versus at some future date(s); and research applicability of the Company's Hinshaw Exemption. NW Natural will submit this analysis for the Commission's review by May 2015.

NWP's Grants Pass lateral in the vicinity of Molalla, Oregon, and transmission by NWP to NWN's system.

- Alternative 3 is a hybrid configuration of takeaway pipelines , with gas flowing north using the existing North Mist Pipeline (NMP), the existing North Coast Feeder, and onto NWP at the Deer Island gate station for transmission by NWP to NWN's system and flowing south using SMP/SMPE and NWP as described in Alternative 2.

Alternative 1 requires the least amount of money, but would require near-term investment because there is a near-term need for the pipeline to serve the non-core customer. NWN's IRP reflects that based on 2014 load forecasts, the soonest the North Mist supply resource is needed is 2022.<sup>2</sup> Investments in Alternatives 2 and 3 could be deferred until closer to the time the pipeline capacity is needed. However, these alternatives require a greater investment than Alternative 1, in part because of the economies of scale that can be realized with upsizing the new pipeline for future shared use.<sup>3</sup>

NWN asserts that the estimated cost of the North Mist Expansion discussed in its 2014 IRP, which assumed the shared pipeline of Alternative 1, has increased from \$75.3 million (\$2013) to \$114 million (\$2015). NWN analyzed whether North Mist Expansion retained its place in NWN's least cost resource portfolio even with the increased cost estimates. NWN concluded that it did when using the PVRR of North Mist Expansion with Alternative 3.

NWN concluded in its analysis of a North Mist expansion that using the Alternative 3 Hybrid Takeaway configuration is least cost in terms of present value revenue requirement (PVRR) for Core customers when compared with Alternative 1 Shared Northbound Takeaway configuration and with other future resource alternatives analyzed in its 2014 IRP. Each alternative has the capacity to deliver 100 thousand Dekatherms per day of natural gas from underground storage at a new North Mist reservoir to NWN's distribution system on a peak day.

### Staff Analysis

Staff's review of NWN's North Mist expansion analysis resulted in several key observations regarding the Company's conclusion about the least cost alternative to deliver 100 thousand Dekatherms per day of natural gas from underground storage at a new North Mist reservoir to the Company's distribution system on a peak day.

NWN's cost estimate for Alternative 1 has increased by 55 percent from \$75.3 million to \$114 million since the 2014 IRP estimate. This is a large increase that raises concern with regard to the accuracy of the Company's cost estimates. However, NWN's "logic

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<sup>2</sup> Id. at 6.

<sup>3</sup> Id. at 6.

analysis,” on page 14 of the its update, appears to show that even with a higher cost, the North Mist resource is still “least-cost.”

The spread in PVRR between the three alternatives analyzed, shown on page 9 in Figure 1 of the update, is 21.6 percent. This seems large enough that the 55 percent “error” in estimating the costs for Alternative 1, even if repeated in Alternatives 2 and 3, should not invalidate the end result of NWN’s update.

NWN states that there is no need to complete a “real options analysis” because Alternative 3 has a lower PVRR than the other alternatives in every IRP case. The PVRR for each alternative for each IRP case are compared on pages 12 and 13 of the update in Figures 3 and 4. While North Mist Alternative 3 has the least PVRR, the delta between Alternative 3 and Alternative 1, on a PVRR basis, is very small. Despite the fact that NWN doesn’t provide the numbers in its update, it appears that the delta is less than 1 percent. A delta this small would make the alternatives not statistically different. On this basis, and considering the Company’s estimating “errors” discussed above, Staff is concerned with the Company’s conclusion that an Alternative 1 “real options analysis” is unnecessary.

This concludes Staff's Comments.

Dated at Salem, Oregon, this 18th day of August, 2015



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