



STATE OF WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION
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February 20, 2018

David Anderson
President and Chief Executive Officer
Northwest Natural Gas Company
220 NW Second Avenue
Portland, Oregon 97202

**Re: Northwest Natural Gas Company
2018 Natural Gas Integrated Resource Plan
Docket UG-170911**

Dear Mr. Anderson:

The Washington Utilities and Transportation Commission (Commission) has reviewed the 2018 Natural Gas Integrated Resource Plan (IRP or Plan) filed by Northwest Natural Gas Company (NW Natural or Company) on August 24, 2018, and finds that it meets the requirements of Washington Administrative Code (WAC) 480-90-238.

By acknowledging compliance with WAC 480-90-238, the Commission does not signal pre-approval for ratemaking purposes of any course of action identified in the IRP. The Commission will review the prudence of the Company's actions at the time of any future request to recover costs of resources in customer rates. The Commission will reach a prudence determination after giving due weight to the information, analyses, and strategies contained in the Company's IRP along with other relevant evidence.

Because an IRP cannot pinpoint precisely the future actions that will minimize a utility's costs and risks, we expect that the Company will regularly update the assumptions that underlie the analysis within the IRP and adjust its operational strategies accordingly.

The Company's Plan reflects the substantial advancements the Company has made over the last several planning cycles. In this Plan, the Company continues taking on new challenges to advance the quality of its work. The Plan is clear in the presentation of its results and the Company's future options and strategies for meeting its service obligations in a least-cost

manner. The Commission provides additional feedback in the attached document. Generally, the Commission makes the following suggestions and requests:

1. The Company should pursue all conservation measures made cost effective by the projected rise in the Company's avoided cost.
2. The Company must continuously monitor the usage pattern of the interstate pipeline to determine whether the assumptions in the Plan continue to hold true.
3. The Company should monitor the conditions that affect the zonal configuration of NW Pipeline's system.

NW Natural should file its next IRP work plan on or before August 23, 2019, and its final 2020 IRP on or before August 23, 2020.

Sincerely,

MARK L. JOHNSON
Executive Director and Secretary

Attachment

Attachment

Northwest Natural Gas Company's 2018 Integrated Resource Plan Docket UG–170911

1. Introduction

WAC 480-90-238 directs investor-owned utilities (IOUs) to describe the mix of natural gas supply resources and conservation that will meet current and future needs at the lowest reasonable cost to the utilities and their ratepayers. The planning requirements specified in WAC 480-90-238 are intended to help each natural gas utility develop a strategic approach to navigate marketplace opportunities and risks based on that utility's unique attributes. The rule requires IOUs to conduct a comprehensive analysis of the costs and benefits, including risk mitigation benefits, of various approaches for meeting future resource needs using the best available information.

The Commission recognizes that the quality of the IRP is a direct result of the Company's continued progress, begun in previous IRP cycles, to enhance its staffing, modelling capabilities, and responsiveness to the questions and concerns the Commission has raised in previous acknowledgment letters. We hope NW Natural continues to sustain this fine progress and to improve its modelling further in the next planning cycle.

2. NW Natural's 2018 Base Case Resource Portfolio

NW Natural projects its Washington/Oregon peak demand will grow 0.9 percent annually after adjusting for energy efficiency acquisition over the 20 year planning horizon. Total annual weather-normalized sales are expected to grow only 0.6 percent after adjusting for energy efficiency acquisition over the planning horizon. In its base case, the Company expects a resource deficiency of 250,000 Dth/day in 2038, net of energy efficiency.

In the short term, the type of resources NW Natural plans to use to fill the gap in load and resource balance are the same as in its 2016 IRP, albeit with the amounts of the acquisition changed slightly. The resource acquisition identified within this Plan's two-year action plan still consists of energy efficiency and Mist recall.¹ However, as shown in Table 1, the amount of cost-effective energy efficiency has increased significantly as a result of improvements the Company

¹Northwest Natural Gas Company, 2016 Integrated Resource Plan, Pages 1.18-1.19, Docket UG-151776.
Northwest Natural Gas Company, 2018 Integrated Resource Plan, Pages 1.21-1.22, Docket UG-170911.

has made to its avoided cost calculations.² The amount of Mist recall chosen as least-cost in 2019 has dropped slightly from 30,000 Dth/Peak Day to 20,000 Dth/Peak Day.

Table 1. Northwest Natural's resource plan for the current (2018) and previous (2016) IRP (without a regional pipeline project)³

2018 IRP			2016 IRP		
<i>2018 IRP Resource Name</i>	<i>Year Acquired</i>	<i>Dth/Peak Day</i>	<i>2016 IRP Resource Name</i>	<i>Year Acquired</i>	<i>Dth/Peak Day</i>
<i>Energy Efficiency</i>	2018-2038	8,490-207,242	<i>Energy Efficiency</i>	2016-2036	5,956-106,274
<i>Mist Recall</i>	2019-2029	20,000-220,300	<i>Mist Recall</i>	2019-2027	30,000-220,300
<i>Central Coast Feeder 1</i>	2030	15,000	<i>Christensen Compressor</i>	2022	40,000
<i>Central Coast Feeder 2</i>	-	13,000			
<i>Central Coast Feeder 3</i>	-	12,000			
<i>North Mist II</i>	-	-	<i>North Mist IIa</i>	2027	50,000
<i>On-system RNG 2</i>	2029	3,000	N/A	-	-
<i>Local Pipeline Expansion</i>	2031	30,000	<i>Sumas Expansion Local</i>	2033	18,355

² In the 2018 IRP, 181,140 Dth/day of energy efficiency is acquired by 2036. In the 2016 IRP 150,220 Dth/day of energy efficiency is acquired by 2036.

³ Comparison of resource plans via email communication with NW Natural. Doyle, Matthew “RE: Resource plan changes.” Message to Jennifer Snyder. October 29, 2018.

3. Discussion

Capacity Planning Standard

NW Natural has made a significant change to its peak planning standard by moving from a standard that plans for the coldest day in the previous thirty years to a peak day planning standard that uses a risk-based methodology. The Company’s methodology is a statistical approach to serving the highest firm sales demand day with 99 percent certainty.

The Commission recognizes that the new capacity planning standard allows for a more consistent planning structure for the Company and potentially prevents a shift to a less reliable planning standard. The Commission observes that continued use of the “coldest day in 30 years” standard would result in exclusion of the record cold day of February 2, 1989, replacing it with a 30-year weather period that is remarkably absent of extreme cold days. While there is little dispute that overall temperatures are rising, the possibility of extreme low temperature events still exists. We are therefore cautious about the Company’s new capacity planning standard. We encourage the Company to pursue refinements and verification of this methodology in future IRP cycles, including further analysis of how many years of historical data is appropriate to use in its modeling.

New Supply-side Resources

The Commission commends NW Natural’s transparent and evidence-driven investigation of a broad range of potential resources in the Plan. The Company examined a suite of supply-side resources that encompasses pipeline capacity required for transportation, gas storage options, major system upgrades necessary for distribution, and the source of gas itself. We observe that Mist recall and the expansion of Mist storage has consistently been the Company’s least-cost choice across multiple IRPs.

Specifically, the 2018 IRP analyzes five different generic resources of renewable natural gas (RNG) as scenarios, assigning (among other values) different carbon intensities, monetization of market credits, and value to the distribution system. We commend the thoroughness of the Company’s work while recognizing carbon regulation and the maturation of the RNG industry are necessary to drive RNG toward cost-effectiveness. NW Natural’s analysis clearly illustrates the variable costs and benefits of different configurations of RNG resources, and that RNG cannot reasonably be evaluated as a single generic resource.

Avoided Costs

NW Natural made several improvements to its avoided cost methodology in the 2018 IRP. These changes include a more robust calculation of avoided distribution infrastructure costs and increased transparency. The new method adds three additional end-use-specific avoided costs for energy efficiency measures, bringing the total to seven. The new method also applies avoided costs to alternative resources, treating alternative resources in a manner consistent with

conventional resources. For example, on-system resources, whether conventional or RNG, receive credit for the additional value provided to the distribution system while off-system RNG resources do not. Additionally, the Company separately presents the six avoided cost components used in its methodology. The Commission appreciates this transparency.

Due in large part to incorporating these needed improvements to its avoided cost methodology, the Company has identified 33,000 Dth/day of additional cost-effective energy efficiency that can be acquired by 2036.⁴ The Commission expects NW Natural to begin realizing these additional savings in 2019.

Forecast of Emissions

In addition to sensitivities around gas transportation infrastructure and economic growth, the Company includes in its IRP four separate environmental policy sensitivities with an emissions forecast for each. These sensitivities provide valuable information to the public about the effect of various policy decisions on the Company's system.

The Commission anticipates that NW Natural will reevaluate these sensitivities as it selects sensitivities to model in its 2020 IRP in response to the changing risk of regulation. In addition, NW Natural should include a sensitivity that does not include a price on carbon for comparison of both emissions and price.

4. Conclusion

The Commission acknowledges that NW Natural's 2018 Natural Gas IRP complies with WAC 480-90-238.

⁴ In the 2018 IRP, 181,140 Dth/day of energy efficiency is acquired by 2036, in the 2016 IRP 150,220 Dth/day of energy efficiency is acquired by 2036.