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November 7, 2019

VIA ELECTRONIC FILING

Public Utility Commission of Oregon
Attn: Filing Center
201 High Street SE, Suite 100
Post Office Box 1088
Salem, Oregon 97308-1088

Re: LC 71—NW Natural’s 2018 Integrated Resource Plan (IRP) Update 2

In compliance with Oregon Administrative Rule 860-027-0400(8) and (9), Northwest Natural Gas Company, dba NW Natural, hereby files an update to its 2018 Integrated Resource Plan that was previously filed on August 24, 2018, in docket LC 71.

This update is an informational filing and no Commission action is requested at this time.

Please contact me at (503)721-2452 if you have any questions.

Sincerely,

NW NATURAL

/s/ Natasha Siores

Natasha Siores
Manager, Regulatory Compliance

Enclosure

NW Natural's 2018 IRP Update 2
Docket No. LC 71
November 7, 2019

Introduction

NW Natural filed its 2018 Integrated Resource Plan (2018 IRP) on August 24, 2018 and the Public Utility Commission of Oregon (Commission) acknowledged the associated Action Items in Order No. 19-073, entered on March 4, 2019. NW Natural submits this update in compliance with Oregon Administrative Rule (OAR) 860-027-0400(8) and (9) and does not seek Commission acknowledgement of any Action Items with this update. This filing is for informational purposes only.

Mist Storage Capacity Recall

NW Natural's acknowledged¹ 2018 IRP Action Plan included the following item under Action Item #1:

Recall 10,000 Dth/day of Mist storage capacity for the 2020-2021 gas year.

Following the filing of the 2018 IRP, NW Natural filed an update to the 2018 IRP in April of 2019. The update filed in April of 2019 contains forecasts for the customer count, annual load and peak day, which were updated in the summer of 2018, using the same methodology as the 2018 IRP. These forecasts were updated again in the summer of 2019 in order to inform the Mist Recall decision for the 2020-2021 gas year.

The new peak day forecast for the 2020-2021 heating season is estimated to be about 983,000 Dth per day during a peak weather event. NW Natural's daily deliverability including segmented capacity (and assuming no supply outages for the 2019-2020 winter) is 992,127 Dth per day. Therefore, capacity recall from Mist storage is not needed to serve peak day demand this upcoming winter. In addition to peak day requirements, the Company evaluated the need for incremental storage options (e.g., Mist Recall) to meet annual energy requirements. Using the supply resource planning model (SENDOUT) and a cold weather design, the evaluation demonstrated that recalled storage from Mist was not needed for energy requirements for the upcoming 2020-2021 winter. The updated forecasts do suggest that Mist Recall will be need for the 2021-2022 heating season.

With this updated load forecast, the 2018 IRP Action Plan item to recall 10,000 Dth/day of Mist deliverability effective May 2019 to serve the 2020-2021 winter is not needed. NW Natural will not recall any Mist storage capacity in the spring of 2020 in order to serve the 2020-2021 winter season.

Mist Miller Station Large Dehydrator

NW Natural's acknowledged² 2016 IRP Action Plan included a project to "[r]eplace or repair, depending on relative cost-effectiveness, the large dehydrator at Mist's Miller Station." The Company stated therein that "[r]eplacement is currently estimated to cost between \$6 million and \$7 million based on

¹ Commission Order 19-073 entered on March 4, 2019.

² Commission Order 17-059 entered on February 21, 2017.

estimates obtained from a third-party engineering consulting firm engaged by [NW Natural].” The Commission acknowledged the project in its Order No. 17-059 entered in LC 64 on February 21, 2017.

In February 2018, the Company filed an update of its 2016 IRP Action Plan. NW Natural informed the Commission that it had recently received the final report from the engineering consultant (“Engineering Report”) and that it was assessing the recommendations and proposed solutions provided in the Engineering Report.³ The Engineering Report was conducted during the 2017 injection season and included examinations of service and maintenance records, operability, external structural integrity, age, and cost estimations. The report recommended both interim repairs to the dehydration system and replacement of the large dehydrator because it had reached the end of its useful life and was not functioning as designed.

After it received the Engineering Report, the Company attempted interim repairs to the large dehydration system (i.e., a shorter-term solution recommended in the Engineering Report in advance of the system replacement), but those repairs were not successful. The Company identified several additional critical issues during its repair efforts, most notably the increasing malfunction of the large dehydrator’s regeneration and scrubber systems that would continue if they were not replaced.

The Company conducted a Request for Proposals (“RFP”) as part of its assessment of the recommendations and proposed solutions provided in the Engineering Report. The Company issued that RFP to prospective contractors for the design and construction of the project. The RFP responses contained pricing substantially higher than the initial estimated cost range that the Company provided in its 2016 IRP Action Plan. The initial estimate received did not include adequate engineering, project management, or construction labor costs. In addition, material costs have increased in the subsequent four years. The Company evaluated the RFP responses and awarded the contract to the winning RFP bidder in August 2018, at a contract cost of \$16.8 million (without NW Natural’s engineering costs and cost overhead (COH) and based upon 2018 prices and construction in 2019).

The project currently is in the execution phase. Design and long-lead equipment procurement processes are ongoing. Construction is planned to start in April 2020. The Company expects the project to be in service by October 2020. The total cost to complete the project is currently estimated to be between \$23 million and \$25 million inclusive of contract cost, COH and NW Natural’s engineering costs.

³ The Company stated in the 2018 IRP that an in-depth economic and alternatives analysis was underway. The Company has completed that in-depth economic and alternatives analysis. The Company conducted a Six-Sigma Failure Mode and Effects Analysis (“FMEA”) in the third quarter of 2018. The FMEA concluded that replacement of the Mist large dehydration system was necessary as soon as possible for both safety and compliance. It found that the large dehydrator system has performance and operational issues and has a high probability of experiencing a failure impacting safety and/or compliance by 2024. Consequently, the Company concluded that the replacement of the large dehydrator at Mist’s Miller Station was appropriate as soon as possible.