

ITEM NO. RA1

**PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: November 3, 2020**

REGULAR X CONSENT _____ EFFECTIVE DATE November 4, 2020

DATE: October 26, 2020

TO: Public Utility Commission

FROM: Nick Sayen

THROUGH: Bryan Conway, JP Batmale, and Sarah Hall **SIGNED**

SUBJECT: NORTHWEST NATURAL:
(Docket No. UM 2030)
Recommendation on the use of Northwest Natural's Renewable Natural Gas evaluation methodology.

STAFF RECOMMENDATION:

The Public Utility Commission of Oregon (Commission) should approve the Revised Appendix H Renewable Gas Supply Resource Evaluation Methodology (Methodology) for use by Northwest Natural (NW Natural or Company).

DISCUSSION:

Issue

Whether the Commission should approve the Revised Appendix H Renewable Gas Supply Resource Evaluation Methodology for use by Northwest Natural.

Applicable Law

In executing its general powers under ORS 756.040, the Commission “is vested with power and jurisdiction to supervise and regulate every public utility and telecommunications utility in this state, and to do all things necessary and convenient in the exercise of such power and jurisdiction.”

After opening an investigation under ORS 756.515, the Commission may make such findings and orders as the commission deems justified or required by the results of such investigation.

Under OAR 860-027-0400(7), the Commission “may provide direction to an energy utility regarding any additional analyses or actions that the energy utility should undertake in its next IRP.”

In the acknowledgement order for NW Natural’s 2018 Integrated Resource Plan (IRP), Docket No. LC 71, Order No. 19-073, the Commission acknowledged a revised action item that included NW Natural’s participation in “an investigation into the use of the Company’s proposed methodology to evaluate renewable natural gas (RNG) cost effectiveness.” This docket was opened pursuant to Commission Order No. 19-276.

Analysis

Summary

This investigation was opened to examine a methodology proposed by NW Natural to evaluate the cost-effectiveness of renewable natural gas (RNG). The examination consisted of two phases. Phase One focused on NW Natural’s presentation of revisions to the methodology, as suggested by Staff in final IRP comments. Phase Two focused on the review of work papers demonstrating the application of the methodology to an actual proposed project. The phases are described in greater detail below.

Staff concludes that the proposed methodology, referred to as *Revised Appendix H*, is generally reasonable and fit for use in evaluating the cost-effectiveness of RNG resources, in or outside of the IRP process. This conclusion is subject to both continuing review of input accuracy, and further evaluation in the next IRP after the Company has procured actual resources. Staff recommends the Commission approve the methodology for this use.

This memo consists of a section on the background and origins of the investigation, a section on each phase of the investigation that document the rationale for Staff’s conclusion, a section on the investigation’s relationships to 2019 Senate Bill (SB) 98 and Docket No. AR 632, and finally a section on consideration given to approval of the proposed methodology.

Background

In NW Natural’s 2018 IRP, the Company initially requested acknowledgement of its proposed methodology for determining the cost-effectiveness of bringing RNG resources to customers. NW Natural explained the rationale for this request as follows:

NW Natural prefers that RNG opportunities be reviewed on a project-by-project basis through the IRP process. However, RNG market characteristics dictate that waiting for IRP acknowledgement for specific projects may lead to lost cost-

effective RNG procurement opportunities for NW Natural's customers. Consequently, NW Natural is seeking acknowledgement of an evaluation methodology and process that would allow us to use the key assumptions detailed and reviewed in the most recent IRP to evaluate and procure cost effective RNG within a timeframe acceptable to RNG suppliers.¹

The methodology was described in Appendix H of the IRP. In simple terms, the methodology would be used to evaluate RNG resources against conventional gas resources based on all-in costs, and assess the ratepayer costs and benefits of NW Natural-owned RNG projects and third-party RNG contracts. NW Natural notes the methodology is “an application of the existing least cost and least risk resource planning framework to evaluate low carbon gas resources on an apples-to-apples basis against conventional gas resources.”² The Company goes on to say, “This methodology applies the current least cost and least risk planning standard to RNG resources; it is not meant to expand the scope of integrated resource planning or serve as a policy statement regarding RNG.”³

Per Appendix H, all-in costs of RNG projects are calculated with the following equation:

$$\text{Annual all-in cost of RNG (R)} = \text{Cost of methane (M)} + \text{Emissions compliance costs (E)} - \text{Avoided infrastructure costs (I)}$$

Additional detail on the calculation of these costs can be found in the Revised Appendix H.⁴

Staff's final comments on the IRP recommended launching an investigation into the use of the methodology, which would provide opportunity for discussion, evaluation, and collaboration that would not have been possible in the IRP's limited timeframe. Staff's final comments also included suggested revisions to Appendix H. In Order No. 19-073, dated March 4, 2019, the Commission endorsed the proposed investigation and the revised action plan that included NW Natural's participation in this investigation.

Governor Brown signed SB 98 on July 15, 2019, with an effective date of September 29, 2019. The legislation directed the Commission to adopt by rule a large renewable natural gas program for large natural gas utilities, amongst other things.

¹ See LC 71, NW Natural 2018 Integrated Resource Plan, page H.6, <https://edocs.puc.state.or.us/efdocs/HAA/lc71haa151218.pdf>.

² Ibid, page H1.

³ Ibid, page H1.

⁴ See Revised Appendix H, pages H.2 – H.5 for a visual, formulaic representation of the calculations and pages H.11 – H.15 for a narrative description of the calculations, <https://edocs.puc.state.or.us/efdocs/HAH/um2030hah144246.pdf>.

In Order No. 19-276,⁵ dated August 28, 2019, the Commission adopted Staff's recommendation to open this docket and launch the investigation. Staff noted the investigation as an opportunity to more carefully vet the modeling process and assumptions used in the proposed methodology, and to begin the conversation about whether/how it should be used to procure additional RNG outside of the IRP process. The investigation would also consider any interactions between the proposed methodology and SB 98.

Phase One – Review of methodology revisions (Revised Appendix H)

Staff's October 16, 2019 memo⁶ informed the Commission of the proposed scope for UM 2030: the investigation would determine whether NW Natural's Appendix H, as revised according to Staff's comments per Order No. 19-073, is appropriate for determining the cost-effectiveness of RNG projects. In Phase One of the investigation, NW Natural would present at a stakeholder workshop its revised Appendix H methodology, which would be followed by a public comment period, and reply comments from the Company. In Phase Two, NW Natural would file for stakeholder review work papers demonstrating the RNG methodology as applied to a RNG project. This would be followed by a public comment period, and reply comments from the Company, before the methodology would come before the Commission.

On December 13, 2019, Staff held a public workshop at which NW Natural presented a summary and updates to Appendix H. The updates were in response to Staff's final IRP comments. NW Natural hosted the workshop which was attended by twenty-six stakeholders, Staff and NW Natural personnel.

On January 10, 2020, NW Natural filed its Revised Appendix H. The revisions were intended to respond to changes suggested by Staff in final IRP comments. NW Natural also made several changes clarifying IRP-specific language, and expanding several graphics and tables. With the Revised Appendix H filed, Staff requested stakeholders review the document and consider whether the methodology is appropriate for determining the cost-effectiveness of RNG projects. Staff and AWEC submitted comment in response.

Staff's Phase One comments⁷ found the Company largely implemented Staff's four requested changes to Appendix H originating in final IRP comments. First, NW Natural updated greenhouse gas (GHG) policy expectations by documenting that future updates of GHG compliance cost assumptions would be done annually, after the legislation

⁵ See <https://apps.puc.state.or.us/orders/2019ords/19-276.pdf>.

⁶ See <https://edocs.puc.state.or.us/efdocs/HAU/um2030hau175645.pdf>.

⁷ See <https://edocs.puc.state.or.us/efdocs/HAC/um2030hac16519.pdf>.

sessions in each state or when legislation is signed into law, and that Washington State had directed the use of the social cost of carbon for resource planning.

Second, the Company added a zero or low-price carbon price path by revising the stochastic modeling of annual GHG emissions compliance costs to include a “no compliance cost” path. Staff requested the zero carbon price path start as late as 2030; NW Natural disagreed with the 2030 deadline, and Staff agreed to using the Company’s proposed 2026 deadline.

Third, the Company updated inputs, assumptions, and forecasts used in the methodology, and clearly documented the timing of future updates to the inputs and forecasts used in the methodology. NW Natural went on to state it will update input assumptions and forecasts at any time if unforeseen changes occur that would have a material impact on the evaluation since the previous update.

Fourth, the Company provided a detailed description of the SENDOUT RNG modeling process including additional text and visuals.⁸ NW Natural also clarified that the RNG cost-effectiveness methodology is independent from SENDOUT software.

Staff’s final point raised in comments was a question about whether the methodology may be applying a distribution system capacity cost benefit too broadly. In Phase One Reply Comments,⁹ NW Natural responded and Staff was satisfied this benefit is applied correctly.

AWEC submitted Phase One comments¹⁰ with several key points. First, AWEC supports the use of “all-in” costs to evaluate RNG resources. Second, AWEC cautions that the acknowledgment of the methodology ought not be confused with project pre-approval or prudence review. Third, AWEC notes all-in costs should be limited to current costs and not forecasted or assumed future costs. Fourth, AWEC supports bringing voluntary incremental RNG into the gas distribution system, while noting pricing and policies developed in this and other dockets should not be designed to compete with other RNG markets.

In Phase One Reply Comments, NW Natural responded to AWEC’s concern about preapproval and noted all projects are subject to prudence review. The Company also acknowledged and responded to AWEC’s comment regarding future costs.

⁸ SENDOUT is the software application the Company uses for its supply resource planning model.

⁹ See <https://edocs.puc.state.or.us/efdocs/HAC/um2030hac9501.pdf>.

¹⁰ See <https://edocs.puc.state.or.us/efdocs/HAC/um2030hac165158.pdf>.

Phase Two – Review of proposed RNG project work papers

NW Natural filed work papers on June 1, 2020, that demonstrated the proposed methodology as applied to a potential RNG project.¹¹ The work papers consisted of a cost of service model, a gas price forecast, Monte Carlo simulations of gas prices and GHG compliance costs, and project evaluations. In addition to these spreadsheets, the work papers included a project information fill-in sheet, a RFP for the project, and a written narrative summarizing the application of the methodology, the potential RNG project, and the methodology inputs. Some information in the written narrative, as well as the spreadsheets in entirety, were redacted as confidential or highly-confidential information.

On June 16, 2020, Staff held a workshop at which NW Natural reviewed Phase Two work papers and addressed stakeholder questions. As the information in question was designated as Confidential and Highly Confidential, the workshop was open only to parties that signed the protective and modified protective orders.

After thoroughly reviewing the model work papers to verify that the methodology as implemented was consistent with NW Natural's description of the methodology elsewhere in this investigation, Staff found in their Phase Two Comments¹² that the methodology is generally reasonable and fit for use in evaluating the cost-effectiveness of RNG resources, subject to continuing review of input accuracy. Staff expects that in future filings, Staff will take every opportunity to review model inputs and calculations for accuracy and reasonableness. Staff asked whether NW Natural used the weighted average cost of capital (WACC) from its most recent general rate case as a discount rate, and requested confirmation if this was the case, or explanation of the use of a different discount rate. Finally, Staff noted that suggested changes from Phase One comments appeared to be executed appropriately in the work papers.

In Phase Two Reply Comments,¹³ in response to Staff's question about the appropriate discount rate, NW Natural explained that the cost of service model submitted for review in Phase Two intended to use a discount rate equal to the real inflation adjusted after-tax marginal WACC rate as approved in the Company's most recent Oregon and Washington general rate cases. However, the spreadsheet calculation had an error, and referenced cells incorrectly. This error has been corrected.

AWEC's Phase Two comments¹⁴ were supportive of the methodology, but noted it has limitations. For example, it does not evaluate different hypothetical deal structures for a

¹¹ See <https://edocs.puc.state.or.us/efdocs/HAH/um2030hah101837.pdf>.

¹² See <https://edocs.puc.state.or.us/efdocs/HAC/um2030hac164139.pdf>.

¹³ See <https://edocs.puc.state.or.us/efdocs/HAC/um2030hac133757.pdf>.

¹⁴ See <https://edocs.puc.state.or.us/efdocs/HAC/um2030hac112027.pdf>.

project, or which structure most benefits ratepayers, NW Natural shareholders, or the developer. AWEC noted the project analysis, negotiations, and project inputs will need to be evaluated in a prudence review. AWEC questioned the need and purpose of acknowledging the methodology to determine if a project is in the best interest of customers, and structured in a fair and balanced way. Finally, AWEC noted that ideally each RNG project should be evaluated on a case-by-case basis in the IRP, though this process may lead to lost cost-effective RNG opportunities.

In Phase Two Reply Comments, NW Natural agreed there are different structures for RNG projects, and that in some circumstances the Company will be unable to dictate process or structure, but will always endeavor to obtain the most optimal terms and conditions for its customers. The Company noted approval of a methodology will demonstrate the Commission believes this is an appropriate way to value RNG, and that the appropriate factors are being considered and evaluated. Finally, NW Natural noted that OAR 860-150-0200(1)(a) requires the Company to perform a cost-effectiveness calculation for RNG it acquires.

In September, NW Natural contacted Staff to expand on the Company's response to Staff's question about the use of the appropriate discount rate. The company provided further details regarding the spreadsheet calculation error, along with corrected work papers.

Relationship to 2019 Senate Bill 98 and Docket No. AR 632

SB 98 directed the Commission to adopt by rule a large renewable natural gas program for large natural gas utilities, amongst other things. This led to Docket No. AR 632 and Order Nos. 20-095 and 20-227, as well as Permanent Administrative Order PUC 5-2020 establishing such a program in Division 150 of Chapter 860 in Oregon Administrative Rules.

SB 98, and the resulting large renewable natural gas program rules, include provisions regarding incremental costs for renewable natural gas, including cost-effectiveness. OAR 860-150-0200(1)(a) provides:

A large natural gas utility must apply a cost-effectiveness calculation to all RNG that the utility acquires for its retail natural gas customers. The cost-effectiveness calculation must be consistent with the methodology used to evaluate RNG resources in the utility's most recently acknowledged integrated resource plan, or integrated resource plan update, or as the utility may otherwise be directed by order of the Commission;

Should the Commission adopt Staff's recommendation to approve the Revised Appendix H methodology for use, the means by which NW Natural shall apply a cost-effectiveness calculation to all RNG will be established.

Acknowledgement

In the 2018 IRP, NW Natural had requested acknowledgement of Appendix H. In Staff's final comments, Staff expressed concerns with the concept of acknowledging a methodology, particularly without specifics on cost or quantity of RNG to be acquired.¹⁵ In this proceeding, AWEC's comments note concerns about acknowledging a methodology for RNG, questioning the need and purpose for doing so.¹⁶ NW Natural, in its Phase 2 Reply Comments, equates the request for acknowledgment with "approval," stating: "approval of a methodology will demonstrate the Commission believes this is an appropriate way to value RNG, given what is known now. Similar to methods associated with qualifying facility avoided costs, evaluating energy efficiency, and other methods as approved by the Commission it will show that the appropriate factors are being considered, and evaluated."¹⁷

Staff does not support acknowledgment per se. In the IRP context, the Commission has described the development and acknowledgment of an action plan as representative of the preferred portfolio, finding, for example, that "Our acknowledgment of an IRP means that the Commission finds that the utility's preferred portfolio is reasonable at the time of acknowledgment."¹⁸ Outside of the context of an IRP, as this investigation is, and on review of a methodology separate from any resource action, Staff finds the application of acknowledgment inappropriate given the subsequent ambiguity as applied in this docket.

However, a directive by the Commission to use a cost-effectiveness methodology is consistent with OAR 860-150-0200(1)(a) and OAR 860-027-0400(7). For this reason, Staff recommends instead that the Commission approve of the use of this methodology in evaluating the cost-effectiveness of RNG resources, in or outside of the IRP process. Staff notes the use of the methodology in this way should not be confused with project pre-approval or affect assumptions of project prudence. Such approval appears consistent with NW Natural's recent comments seeking approval of the methodology for use in the evaluation of RNG under the present circumstances.

¹⁵ LC 71, Staff Final Comments, December 31, 2018, at 17-18.

¹⁶ AWEC's Final Comments, Phase 2, August 3, 2020, at 2.

¹⁷ NW Natural's Reply Comments, Phase 2, August 14, 2020, at 3.

¹⁸ *In the Matter of Idaho Power Company 2017 Integrated Resource Plan*, Docket LC 68, Order No. 18-176 (May 23, 2018).

Conclusion

Staff concludes that the Revised Appendix H methodology is generally reasonable and fit for use in evaluating the cost-effectiveness of RNG resources, subject to both continuing review of input accuracy, and further evaluation in the next IRP after the Company has procured actual resources. Staff recommends the Commission approve the methodology for that use. Should the Commission adopt Staff's recommendation, the means by which NW Natural shall apply a cost-effectiveness calculation to RNG, as required by 860-150-0200(1)(a), will be established. While NW Natural originally requested acknowledgement of the methodology, that is inappropriate because the methodology is under review outside of an IRP and is not representative of a particular resource or portfolio. Staff recommends that the Commission approve the use of this methodology in evaluating the cost-effectiveness of RNG resources, in or outside of the IRP process, subject to both continuing review of input accuracy, and further evaluation in the next IRP after the Company has procured actual resources.

PROPOSED COMMISSION MOTION:

The Public Utility Commission of Oregon should approve the Revised Appendix H Renewable Gas Supply Resource Evaluation Methodology for use by Northwest Natural.