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July 31, 2023

Via Electronic Filing

OREGON PUBLIC UTILITY COMMISSION ATTENTION: FILING CENTER
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RE: Docket No. UG 462 – In the Matter of NORTHWEST NATURAL GAS COMPANY, dba NW NATURAL, Renewable Gas Adjustment Mechanism

Attached for filing are the following:

UG 462 Staff Exhibit 200-204 TD Public Version
UG 462 Staff Exhibit 200-204 TD CONFIDENTIAL
UG 462 Staff Exhibit 201 TD CONFIDENTIAL (Excel file)
UG 462 Staff Exhibit 200-204 TD HIGHLY CONFIDENTIAL

UG 462 Certificate of Service
UG 462 Service List

/s/ Mark Brown
Oregon Public Utility Commission
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CERTIFICATE OF SERVICE

UG 462

I certify that this day I served the foregoing document upon all the following parties or attorneys of parties of record in this proceeding by delivering a copy in person or by mailing a copy properly addressed with first class postage prepaid or by electronic mail pursuant to OAR 860-001-0180 (which may include a link to a secure shared file service).

Dated this 31st day of July, 2023 at Salem, Oregon

Mark Brown
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CASE: UG 462
WITNESS: TED DRENNAN

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 200

Rebuttal Testimony
Dakota City Renewable Natural Gas Project

July 31, 2023

Q. Please state your name, occupation, and business address.

A. My name is Ted Drennan. I am an Energy Policy Analyst employed in the Utility Strategy and Integration Division of the Public Utility Commission of Oregon (OPUC). My business address is 201 High Street SE, Suite 100, Salem, Oregon 97301.

Q. Have you previously provided testimony in this case?

A. Yes. Please see Exhibit Staff/100 for my opening testimony.

Q. What is the purpose of your testimony?

A. NW Natural is asking to place the Dakota City project in rates in a manner that places undue risk on its customers. In this testimony, I elaborate further on my concerns about the project's prudency and discuss rate design elements and other protections that are available to mitigate these risks. I also address proposals raised by Oregon Citizens' Utility Board (CUB) and Alliance of Western Energy Consumers (AWEC).

Q. Did you prepare an exhibit for this docket?

A. Yes – I prepared four additional exhibits:

- Confidential Staff/Exhibit 201 consisting of workpapers for analysis related to risk.
- Staff Exhibit 202, which contains the Company's response to DR 41, and Attachment 1.
- Highly confidential Staff Exhibit 203 the Company's responses to Staff data request 10.

- Confidential Staff Exhibit 204 which contains the Company's supplemental response to data request 30.

Q. How is your testimony organized?

A. My testimony is organized as follows:

ISSUE 1. BACKGROUND

Q. Please provide a brief history of this docket.

A. On February 28, 2023, Northwest Natural Gas Company (NW Natural or the Company) made an initial filing to bring the costs associated with the Dakota City Project into rates. Their intent is to include these costs as part of Schedule 198, Renewable Natural Gas Adjustment Mechanism. Included in the filing was the cost-of-service model, with the intended rate spread for customers. These rates would go into effect on November 1, 2023.

Staff and intervenors, including the Citizens' Utility Board (CUB) and Alliance of Western Energy Consumers (AWEC), filed opening testimony on May 25, 2023. The Company filed reply testimony on June 26.

Q. Please summarize Staff's position to date.

A. In Opening Testimony, Staff describes the risks that the Company's approach to recovering this investment places on customers. Staff detailed why these concerns are exacerbated by problems with the information that the Company used to select this project, including the Company's difficulty establishing a reliable production estimate and evaluating the risks associated with this investment. Staff believes that these issues, combined with the proposal to ratebase the investment rather than procuring the renewable thermal credits (RTCs) from the affiliate at a fixed offtake price, raises many questions about the reasonableness of the Company's actions, so that Staff does not support a finding of prudence for this investment.

In addition, Staff proposed that to the extent it is acceptable for the Company to recover this investment in Schedule 198 because it is similar to NW Natural's Lexington Project, Staff will likely recommend that any future RNG projects proposed for recovery through Schedule 198 be supported by IRP analysis and an acknowledged IRP action plan. Finally, Staff supports a similar approach to protections in the affiliate structure as adopted for NW Natural's Lexington Project in Order No. 22-211.

Q. Please summarize other parties' positions to date.

A. AWEC, in its opening testimony, views the project as prudent but notes the performance risk may require additional conditions. AWEC questions whether the Company has proposed an appropriate Investment Tax Credit (ITC) normalization approach and recommends that the Dakota Project be structured such that 100 percent of the ITC benefits flow to the ratepayers providing the capital. AWEC also proposes an alternate rate spread approach that it believes will better reflect each rate class's contribution to Oregon's Climate Protection Program (CPP) compliance obligations.

In opening testimony, CUB found the project "reasonable at this time, but reserves the right to respond to issues raised by other parties."[1] CUB also cast doubt on the Company's claim that the use of an automatic adjustment clause would shift risk to the Company.[2] Finally, CUB recommended that the Commission make a legal determination regarding the interplay between the

[1] See CUB/100, Gehrke/2 lines 11-12.
[2] See CUB/100, Gehrke/3 lines 5-6.

CPP and Senate Bill (SB) 98 and "rule that NW Natural should only be permitted to pursue SB 98's voluntary standards to the extent that they fit within a least cost, least risk compliance plan to comply with the CPP."[3]

[3] See CUB/100, Gehrke/3 lines 13-15.

ISSUE 2. RNG ACQUISITION

Q. In opening testimony, Staff requested the Company provide a description of how Dakota City fits in to the Company's CPP strategy. Has NW Natural described how this project will fit into its overall CPP strategy?

A. NW Natural noted that the Company decided to invest in the project prior to the passage of the CPP legislation but that the RNG from the project will be used towards CPP compliance.[4] Once the Commissions LC 79 order is issued, the Company will comment further on how RNG projects fit into its CPP strategy.

Q. How does Staff respond?

A. Staff appreciates the Company's discussion on the topic. Staff agrees with the Company's assertion that the project was entered into prior to CPP rules adoption. Staff further notes that it looks forward to the Company's discussion in surrebuttal testimony should the Commission's LC 79 order come out prior to the filing deadline. However, Staff believes that because the Dakota City project will be utilized for CPP compliance, and that provides a material benefit from the project to ratepayers, the overall CPP strategy is important to consider in analyzing the costs and benefits of this project.

Q. Please describe the current market for acquiring RNG.

[4] See NW Natural/300 Chittum/40 lines 9-15.

A. NW Natural's 2022 IRP describes the current RNG market as nascent and dynamic, noting the "substantial development and acquisition activities from large established players in the oil and natural gas and asset management space, such as Kinder Morgan and BlackRock," which may drive down prices in the future.[5] There is competition for the RNG resource types NW Natural would pursue driven by the D3 renewable identification number (RIN)[6] market and transportation fuel sector.[7] There are also conflicting estimates of the costs and availability of RNG supply.[8]

The potential availability of new technologies creates further uncertainty in assessing near-term RNG acquisitions. For example, hydrogen technology costs are projected to come down in the coming years and may benefit from the development of larger-scale projects.[9]

In addition, the nature of biomethane RNG technologies, such as those used in the Dakota Project, come with added unpredictability given the reliance on outside industrial processes to generate fuel stock.[10] The Tyson projects

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[5] See page 48 of NW Natural's 2022 IRP.
[6] RINs are credits used for compliance and are the "currency" of the Renewable Fuel Standard (RFS) program.[1] Under the program renewable fuel producers generate the RINs which market participants may trade. Those with obligations may retire the RINs, similar to the approach with Renewable Energy Credits (RECs). The D3 RIN market [GS*P1] [DT*P2] is seen as "the type of RNG the majority of resources[2]" NW Natural would purchase for carbon compliance.
[7] See page 194 of NW Natural's 2022 IRP.
[8] See Staff's Final Comments in LC 79, pages 55-60.
[9] See page 20 of the Hydrogen Insights Report 2021, relied upon by NW Natural in its 2022 IRP, which projects a decline of 60 percent in the cost of hydrogen by 2030 at the following link: https://hydrogencouncil.com/wp-content/uploads/2021/02/Hydrogen-Insights-2021.pdf. This implies a cost of $9.2 per mmbtu, based on a starting point of $23 per mmbtu.
[10] See for instance, International Journal for Research in Applied Science & Engineering Technology Volume 10 Issue 11 February 2022, Review: Factors Affecting Biogas Production. link; https://www.ijraset.com/best-journal/review-factors-affecting-biogas-production.

are highly dependent on **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.[11] For Dakota City, the Company has stated production declines are related to COVID-19 impacts, as well as **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**[12] as impacting production levels. It is not clear that the Company has any ability to influence these issues related to RNG production at Dakota City.

Finally, the immaturity of this technology makes project completion uncertain and investment deals less predictable. The Company is familiar with these challenges, having provided the following summary to the Portland Business Journal:

> The company cited a number of factors for the scant RNG on its system in 2022, including delays in projects coming online, lapsing of a large 2021 purchase, and a decision to resell "RNG from our largest contract into the vehicle fuel market in 2022 in order to provide a $7 million rate credit to customers."[13]

Q. Does this mean that the Company should not have looked to acquire RNG?

[11] See NW Natural/301 Chittum/32.
[12] See NW Natural/100 Chittum/Page 22 lines 10-12.
[13] See NW Natural Renewable Natural Gas Adoption Lags Behind State Targets, Portland Business Journal, July 19, 2023.

A. No. It means that the Company is stepping into new territory and should expect for cost recovery to be examined differently until the technology and acquisition decisions are better understood. In advance of articulating a sufficient least cost, least risk acquisition strategy that considers near and long-term risk it also means that the Company should be expected to share the burden of these risks and uncertainties with customers.

Due to the timing of the decision to acquire the Dakota project, Staff accepts that this can be considered an SB 98 project, as opposed to a project to which the Company committed after the CPP rules were finalized.[14] While Staff agrees that the Company should look for creative ways to acquire RNG, given the market complexities, the approach is flawed without protections for ratepayers. A voluntary program like SB 98 was not a blank check for utilities to procure RNG supplies without appropriately examining the costs and risks. The approach is more critical when rate-basing long-lived and unpredictable assets rather than pursuing an off-take agreement.

The passage of the CPP and the decision of the Commission in Docket No. LC 79 only increase the need for a balanced approach to the Company's decarbonization efforts.

[14] See Staff/100, Drennan/14 lines 11-13.

ISSUE 3. PRUDENCE OF DAKOTA CITY

Q. Initial testimony from Staff did not support the prudency of the Dakota City investment, has that opinion changed given the testimony provided by other parties and the Company?

A. Staff still has serious concerns with the risks that the Company's approach to recovering this investment places on customers. These concerns are exacerbated by problems with the information that the Company used to select this project, including the Company's difficulty establishing a reliable production estimate and evaluating the risks associated with this investment.

Staff is particularly concerned about the Company's lack of confidence in project performance when considering the structure proposed. NW Natural has structured the project such that the price customers will pay per RTC is dependent on project production in two ways. First, it chose to seek to recover the affiliate's capital investment in rates rather than execute an offtake agreement with the affiliate. Staff notes that this has higher upside and downside risk for customers, depending on the performance of the project, but the upside risk is diminished by the lack of confidence in project performance. Second, the cost customers bear is dependent on the Company's ability to sell underlying brown gas. The less RNG the project produces, the fewer the RTCs and the lower the revenue customers receive for their fixed level of investment. This would ultimately increase RNG acquisition costs for ratepayers.

Q. Please elaborate on the Company's difficulty establishing a reliable production estimate and evaluating the risks associated with this investment.

A. The Company's production estimates for this project have varied throughout the evaluation and decision-making process and continue to vary within this docket as reiterated in the table below. The Company also appears to use more ambitious production estimates when selecting its investments and then lose confidence in its production estimates when contemplating cost recovery.

Table 1: Estimates through Time

Date	Metric	Estimates
November 2021: Investment Decision	Volumes	**[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**[15]
	Risk adjusted incremental cost	$5.76/mmbtu[16]
	RTC Cost	**[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**[17]
March 2023: UG 462 Opening Testimony	Volumes	**[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**[18]
	Risk adjusted incremental cost	**[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**[19]
	RTC Cost	**[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**[20]
June 2023: UG 462	Current Volumes	**[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**[21]

[15] See NW Natural/100 Chittum/Page 15 line 4.
[16] See response to DR 41, attachment 1 pages 30-31.
[17] See confidential supplemental response to DR 30.
[18] See NW Natural/100 Chittum/Page 22 lines 14-17.
[19] See NW Natural/100 Chittum/Page 19 line 1.
[20] See NW Natural/300 Chittum/Page 15 line 3.
[21] See NW Natural/300 Chittum/Page 4 line 7.

Q. Did the Company have any other issues with the information it used to make its decision?

A. Staff is also concerned with the Company's treatment of production risks associated with the COVID-19 pandemic. When asked about its considerations in deciding to invest in Dakota City, the Company stated that:

> NW Natural relies on its subject matter expertise in evaluating the risks of each project and, as explained below, updated these risks as more became known (e.g., when production did not bounce back from the COVID-19 interruption as anticipated). Specifically, NW Natural quantified the risks of the project to the best of its ability given the information that it had at the time, especially concerning the effect of COVID-19 on production, which, at the time of the investment decision, the Company reasonably believed would abate by the time Dakota City commenced service in 2023.[22]

Staff questions the reasonableness of the Company's assessment. The decision to invest in Dakota City was made at in November of 2021, more than 19 months after the onset of the pandemic. There were multiple reports of issues at meatpacking plants, including a shutdown of Tyson's Dakota City facility.[23] In response to OPUC DR 10, the Company provided an analysis that led to the revised output projections. From the Company's response, it appears the Company did not address the potential impact from COVID-19 issues until **[BEGIN HIGHLY CONFIDENTIAL]** [redacted]

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[22] See NW Natural/300 Chittum Pages 34-35 lines 20-2

[23] After coronavirus outbreak, Tyson temporarily closes Nebraska beef plant for cleaning, NBC News April 30, 2020. Link: https://www.nbcnews.com/news/us-news/after-coronavirus-outbreak-tyson-temporarily-closes-nebraska-beef-plant-cleaning-n1196826

[redacted]

[redacted] **[END HIGHLY CONFIDENTIAL]**. The Company also states in its response to OPUC DR 10:

> **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**.

Production did not recover this quickly, and Staff believes the Company should have addressed potential production issues well before then. To ignore the risk was not reasonable and is one of the reasons Staff believes the investment decision was not prudent.

Q. What else has the Company said about these risks?

A. The Company's response in ADV 1502 in IR 1 discusses the reasoning behind RTCs from a purchase from the Wasatch Resource Recovery Project at $12.00 per RTC,[24] which was selected for a voluntary program while Dakota City and Lexington costs were assigned to all customers.

> Lexington and Dakota City were both development projects, so risks associated with capital costs and operating costs, for instance, would have been more substantial. The contract for

[24] The Company's response to this IR was included in the Company's filed reply comments in that docket. See ADV 1502 NWN Reply Comments Attachment 2, page 2, and provided in response to DR 41 in this docket, See Staff Exhibit 202.

> Wasatch was a fixed-price contract, so there was no cost risk embedded in the contract.[25]

While the response does not specifically address production risk, it is similar to the identified risks. That is, because the contract is for a fixed price per RTC, the seller, not NW Natural, or its customers, is absorbing the production risk, unlike the Company's proposed treatment for the Dakota City project.

Q. Are there other things the Company could have done to lessen the risk of the project to ratepayers?

A. Yes. Staff reviewed the financial capital structure of Dakota City Renewable Energy, LLC (Dakota City), a joint venture between Northwest Natural Gas Company (NW Natural) and BioCross LLC. NW Natural contributed 100 percent of the financial capital structure with an equity contribution through its NW Natural RNG Holding Company subsidiary. When NW Natural provides financing or cash, it is a combination of debt and equity. BioCross's contribution is through sweat equity; it did not contribute any monetary capital to Dakota City. Had the affiliate capital structure included project financing at the subsidiary level, there would have been a reduction to the operational and catastrophic failure risks that NW Natural and potentially its customers solely bear otherwise.

Q. Is the Dakota City RNG project used and useful?

A. Yes, according to the Company the facility began commercial operations on

[25] Ibid.

April 28, 2023. The production, while lower than that expected when the decisions was made, is higher than that anticipated by the Company in its initial filing. The amount anticipated at the time the Company made the decision is over **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** the amount that they projected at the time for rate recovery. Table 2: Comparison of NWN Production Estimates below shows the values.

Table 2: Comparison of NWN Production Estimates

Time of Estimate	Production Estimate (mmbtu/hr)	Percent of Initial Estimate
Decision Made	**[BEGIN CONFIDENTIAL]** [redacted]	[redacted]
Rate Recovery (Year 1 value increases over Years 2-3)	[redacted]	[redacted]
Rate Recovery (Year 4 forward)	[redacted]	[redacted] **[END CONFIDENTIAL]**

The current production rate is actually over **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**[26] not the conservative estimate of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** for the period April 21, 2023 through May 31, 2023.[27]

Q. Has the Company proposed risk management measures to insulate ratepayers from production risk?

A. No. The Company's use of a 'conservative forecast' for cost recovery actually increases the production risk for ratepayers, while insulating the Company and shareholders from that risk. A conservative forecast will lead to a higher per-

[26] See NW Natural/300 Chittum/Page 4 lines 6-7.
[27] See NW Natural/300 Chittum/Page 4 lines 11-12.

unit cost, increasing the potential for ratepayers to overcompensate the Company for the RTC produced. Use of the AAC will continue the issue, with ratepayers required to pay for any potential poor performance going forward. That is, if the facility underperforms one year, NW Natural will likely update its production forecast downward for the following year, increasing the per-unit cost to customers. This approach shifts the risk of project performance from the Company to ratepayers. This risk issue was discussed in LC 79:

> Staff also suggests a discussion of risk sharing for the costs of any SB 98 RNG the Company pursues in lieu of more cost-effective options like CCIs. If the Company continues to pursue near-term SB 98 RNG, then a conversation should take place around risk sharing. Given that these investments create potential benefits for shareholders around capital costs, yet they are not the lowest cost way to meet CPP requirements for customers, there are ways to place more of the risks of these investments on shareholders. This could include measures to place the risk of cost overruns on shareholders, as the Commission has discussed doing for certain renewable electricity investments. For example, the Company could be limited to recovering the amount of the cost estimate used to select a project in its RNG workbook.[28]

Q. NW Natural argues for prudence based on the use of a Commission-approved model. Do you agree?

A. No. The Company states multiple times that they relied on a "Commission-approved" model from UM 2030;[29] however, the Company made changes to the UM 2030 model when selecting Dakota City and the Commission has

[28] See Staff's Final Comments in LC 79, page 63.
[29] For examples, see NW Natural/300, Chittum/page 2, lines 7-8, NW Natural/300, Chittum/page 9-10, lines 16-1, NW Natural/300, Chittum/page 22, lines 12-13, Chittum/page 27, line 1.

made it clear that using the methods vetted in UM 2030 is not enough to justify prudence.

Q. What did the Commission say about the UM 2030 model?

A. Order No. 20-403 stated the methodology was generally reasonable, with conditions:

> 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.[30]

And further:

> Staff expects that in future filings, Staff will take every opportunity to review model inputs and calculations for accuracy and reasonableness.[31]

And:

> Staff notes the use of the methodology in this way should not be confused with project pre-approval or affect assumptions of project prudency.[32]

Given the analysis provided by the Company, it is not clear that the model inputs are accurate, nor is it clear that the risk modeling is reasonable. Staff raised such concerns in earlier testimony in this docket, as well as NW Natural's latest IRP, Docket No. LC 79. Further, the Company cannot abrogate

[30] See Order No. 20-403 Appendix A, page 2.
[31] See Order No. 20-403 Appendix A, page 6.
[32] See Order No. 20-403 Appendix A, page 8.

its responsibility to make appropriate decisions concerning a specific project based on use of an 'approved model'.

Q. How did NW Natural Change the UM 2030 model used in evaluating the Dakota Project?

A. In Reply Testimony, the Company discusses changes made to the model since UM 2030 that are mainly focused on improvements to risk modeling.[33] Staff disagrees that the risk modeling changes were improvements as the model is highly insensitive to changes in production risk. Staff used the model provided by the Company in response to Staff's DR 14 to analyze this issue. The intent was to see if the model would come up with a cost similar to the one presented in the Company's original testimony if the Company had forecasted the correct volume uncertainty for the project.

[BEGIN CONFIDENTIAL] [redacted]

[redacted]

[redacted]

[redacted]

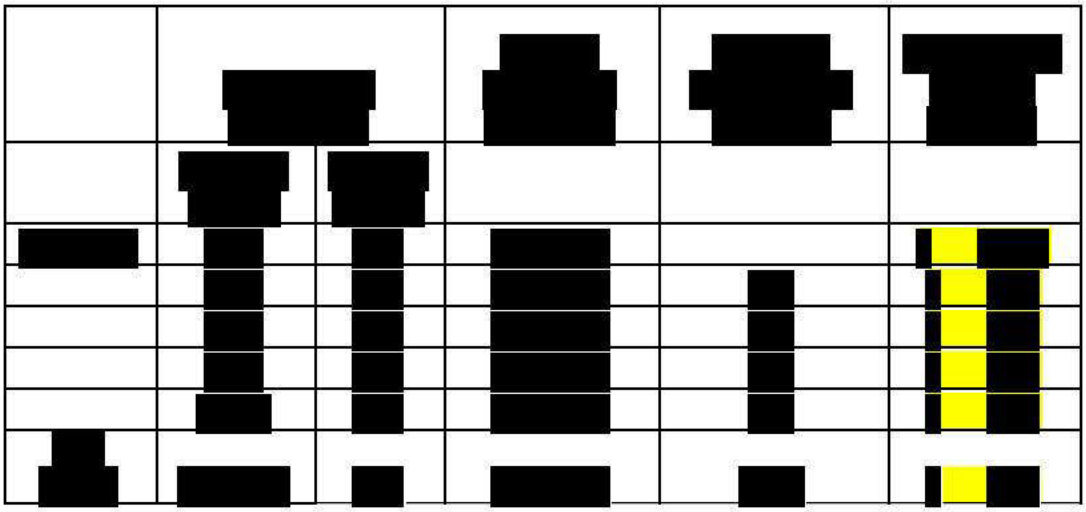
[redacted]

[redacted]

[redacted]

[33] Footnote 19 states: Dakota City was evaluated with risk-adjusters that were an improvement from the original Appendix H methodology.
This "improved approach" is discussed further, see for instance NW Natural/300, Chittum/Page 24 at lines 11-13: The risk adjustment the Company uses reflects an improved approach to evaluating the risk of various RNG projects since the UM 2030 docket, which did not contemplate such risk factors.

[redacted]



[END CONFIDENTIAL]

Q. Was the Company required to use an RFP to select the Dakota City project?

A. No. As the Company correctly points out, current rules do not require an RFP for the investment in Dakota City. OAR 860-150-0500(1) requires competitive bidding only, "before making a qualified investment in biogas production that is upstream of conditioning equipment, pipeline interconnection or gas cleaning." In AR 632, NW Natural also argued for raising the threshold requirement for competitive bidding from $10 million, to $25 million. The Company presented a simple hypothetical of a power-purchase agreement in arguing for the increase:

> a five-year power purchase agreement for an 80 MW wind farm, with a 33% capacity factor priced at $20/MWh could result in costs over $20 million (5 years * 8,760 hours * 80 MW* $20/MWh * 33% = $23.126 million). Therefore, competitive bidding requirements for upstream RNG qualified investments should only apply to projects of a similar scope.

It should be noted that at the cost recovery level requested in the filing, applied to the projected volumes at **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**, respectively yields total project costs of **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** the $25 million cited by the Company in AR 632, or the $12.5 million cited by the Company for Dakota City.[35] If conversely, the same costs were used as when the decision was made, the project would total **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.

[35] See NW Natural/300 Chittum/Page 28 line 15.

Q. Does Staff believe the Dakota City Project is prudent?

A. No, and not without protections for ratepayers. Under the Company's proposal, NW Natural has no incentive to work to ensure that all parties involved in this venture are focused on maximizing project performance. That is, shifting production risk to captive ratepayers eliminates the related cost-recovery risk facing NW Natural. Prudence requires looking at what the Company knew *or should have known* at the time the decision was made. Given NW Natural's challenges characterizing the production of the facility and the decision to not procure the RTCs from the affiliate as an offtake agreement, Staff remains concerned about the prudence of the investment decision.

Q. If the Commission finds the Company's investment in the Dakota City Project is prudent, are there options to protect ratepayers from risks not fully analyzed by the Company?

A. Yes, the Commission could establish a cost cap, or set a cap beyond which the Company and customers share the burden in event of major underperformance. In the event of a prudence decision, Staff recommends that a "soft" cap be established at $12.00/RTC. In the event that RTC production drops such that customers are paying more than $12.00/RTC the Company will be responsible for 50 percent of the excess costs.

Q. What does Staff believe that this cap is an appropriate protection for customers?

A. This figure is in line with the price the Company has included for RTCs to include in it's Smart Energy Program. The cap is also set **[BEGIN**

CONFIDENTIAL] [redacted] **[END CONFIDENTIAL]** when the Company made the decision to invest in the project.

According to the Company, "NW Natural's risk-adjusted incremental cost methodology compares all of these resources on an apples-to-apples basis."[36]

The metric the Company uses in comparing RNG supplies also supports the $12.00 figure as seen in comparing **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.[37]

Q. How does this cap compare to what customers are paying for other RTCs?

A. Staff believes that this is similar to other RNG prices borne by customers. Recovery for the Lexington project is currently capped on a per-unit basis, with ratepayers covering 75 percent of costs above the cap. Staff believes equitable sharing, i.e. 50/50 between the Company and ratepayers is more appropriate, and will incent the Company to maximize production, leading to lower per-unit costs.

Q. Does Staff support symmetrical cost sharing that would allow the Company to receive additional benefit if the Dakota Project performs better than the cap?

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[36] See NW Natural/300 Chittum/Page 22, lines 10-12.
[37] See Staff Exhibit 202, ADV 1502 NWN response to interrogatory 1, pages 30-31.

A. Staff does not believe that it is necessary to provide the Company incentives beyond the ability to use an AAC and to ratebase an affiliate's investment. The proposed structure allows the Company to earn a rate of return on non-utility costs using a single-issue mechanism with annual adjustments to expectations. If the Commission were to establish symmetrical cost sharing, the threshold should incentivize performance that exceeds expectations when the Company decided to acquire Dakota City. Otherwise, symmetrical sharing is likely to penalize customers more than reward great performance.

Q. With this alternative, in the event of a prudence finding, is Staff proposing to implement a sharing mechanism that reflects flat RTC costs?

A. No. Staff believes that project performance at $12.00/RTC or better should be achievable in every year of the project given performance to date. However, Staff understands that the cost structure and revenue stream of the project will not remain constant every year. Given factors such as depreciation and performance ramp up, the $/RTC may be higher than the average in early years and lower than average in out years. As such, Staff proposes to index the cap to the projected $/RTC cost approved at the conclusion of UG 462. To calculate the annual cap the percentage difference between each year's expected revenue requirement in $/RTC terms and the projects average $/RTC would be calculated and then multiplied by the cap Staff is proposing. For instance, if the first year's $/RTC is twice the average, then the sharing mechanism would utilize a cap of $24.00, or twice the average amounts

proposed by Staff. In this way, the average remains the same, but the actual cost sharing reflects the expected project performance.

Q. Would the cap be re-calculated every year as the project expectations change over time?

A. No. In the event the Commission makes a finding of prudence, it is Staff's goal to ensure that ratepayers and the Company are equitably sharing the risks associated with investing in ownership of an RNG project based on contemporaneous information and expectations.

Q. Would this approach require any additional direction from the Commission?

A. Yes. Because the cap would rely on the Company's forecasted $/RTC forecast, the Commission should direct the Company to provide an updated estimate of the projects cost structure which incorporates the most recent cost and production data available to date as part of a compliance filing. This would allow Staff and stakeholders to vet the forecast prior to rate implementation of rate recovery and the sharing mechanism.

Q. Are there other things that can be done to lessen the risk of the project to ratepayers?

A. Yes. One option is to deny the use of an AAC for the recovery of this project, which the Commission noted in Docket No. UG 435, Order No. 22-388, is entirely at its discretion for projects other than Lexington.[38] Another

[38] See for instance, Order 22-388 at 81, "Although A WEC's argument does not persuade us to change our approach to cost recovery for the Lexington project under SB 98, it does give us

option is to impose conditions on the affiliate structure that protect customers.

pause about prospectively and unconditionally adopting an AAC for future RNG projects." And "We are concerned about the potential incentive created by the availability of an AAC to skew the company's analysis of costs and risks of alternative CPP compliance measures towards RNG projects."

ISSUE 4. ITCS

Q. Does Staff agree with the Company's approach to ITC normalization?

A. AWEC raised the issue of ITCs and normalization, wanting to ensure ratepayers received the full benefits of the Company's approach. In reviewing the Company's reply testimony, NW Natural/400 Bourdo-Walker, Staff had no concerns with the approach to normalization as discussed there.

Q. Are there other ITC issues with which Staff has concerns?

A. In testimony, AWEC recommends the "Dakota Project transaction be structured to provide ratepayers with 100% of the ITCs generated from the Dakota Project without being subject to the 1971 normalization requirements."[39] NW Natural has stated: "NW Natural RNG Holding Company also contributes all the capital for the project."[40] NW Natural, and by extension, ratepayers, provided the capital for the project.[41] As such the benefits from the ITC should also accrue to ratepayers.

Q. Does the Company believe the ITC benefits should accrue exclusively to ratepayers?

A. No. The Company states "When the Dakota City project was entered into, the ITC credit for biogas property was not yet law and was not part of the original decision."[42] Unfortunately, the Company believes the production forecast used in the original decision should be updated, increasing costs to ratepayers, but

[39] AWEC/100 Mullins/9 lines 19-21.
[40] See NW Natural/100 Chittum/Page 33 lines 17-18.
[41] See NW Natural/100 Chittum/Page 37 line 14.
[42] See NW Natural/400 Bourdo-Walker/Page 14

different treatment is needed for ITC benefits. Staff sees this approach as problematic at best.

Q. In what circumstances would ITCs potentially be allocated to other entities besides ratepayers?

A. According to the Company, other entities would receive ITCs only if **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.[43] This would only occur under specific conditions **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.[44] While the Company claims this could lead to excess customer benefits,[45] Staff does not agree, as the customers are paying one hundred percent of the capital costs which generate the ITCs. Staff notes that it again appears the Company does not have a high level of confidence in the facility or its risk analysis of the project, given its reticence to guarantee ITC value for ratepayers who are entitled to them. Whatever the likelihood, Staff is concerned that customers face the potential of being deprived of ITC benefits.

[43] See NW Natural/400 Bourdo-Walker/Page 14 3-5.
[44] See NW Natural/400 Bourdo-Walker/Page 14 6-8.
[45] See NW Natural/400 Bourdo-Walker/Page 14 9-11.

ISSUE 5. RATE SPREAD

Q. Do you agree with AWEC's position on cost recovery set by customer class usage?

A. Staff believes the appropriate method for cost allocation is on a per-unit basis. AWEC suggests changes in usage by rate class should be used to allocate costs. Its rationale is that some rate classes are lowering emission rates faster than other rate classes.

Staff believes such an approach is a substantial change from current method and could have ramifications in other areas. Any changes here should be examined for unintended impacts.

Further, the requirement for emissions reductions impacts all customers, and the required reductions are not rate-schedule based in the CPP, particularly when this project was not invested in as part of a clear CPP strategy. It is unfair to implement a CPP specific rate design for a project that has not been evaluated on a least cost/least risk basis for CPP compliance. As such, these costs should be allocated across all customers on a per-therm basis. This is administratively straightforward, and forces users of natural gas to pay the same amount for greening the supply.

There will be winners and losers under AWEC's proposal. For instance, Schedule 2 customers made up roughly 35 percent of natural gas usage in 2022, but under the AWEC proposal they would be responsible for almost 44 percent of the RNG costs. Meanwhile, Schedule 32 and Special Contracts, responsible for 40 percent and six percent of usage respectively, would only be

charged for 34 and three percent of RNG costs respectively. See the full comparison in Table 4: Rate Spread Comparison.

Table 4: Rate Spread Comparison

	Actual 2022 Use	Share of use (2022)	AWEC Allocation
Schedule 2	424,855,615	35.1%	43.5%
Schedule 3	195,083,784	16.1%	19.9%
Schedule 27	871,410	0.1%	0.0%
Schedule 31	26,534,453	2.2%	0.0%
Schedule 32	487,971,830	40.4%	34.0%
Special Contracts	73,625,884	6.1%	2.7%
Total	1,208,942,976	100%	100%

Q. Are there other fairness issues at play with a proposal to base costs on specific rate classes?

A. Yes. Staff has identified at least three fairness concerns with AWEC's proposal.

First, there's the potential for intra-class members that are free-riders, i.e. someone who receives a benefit without cost. That is, individual customers within Schedules 27,31, and 32 could be increasing use of natural gas as compared to the base year, but under the AWEC proposal their cost responsibility would be lower than that of customers under Schedules 2 and 3 who have decreased their usage. Fairness here would require benchmarking individual customers to ensure the proper signals are sent to conserve usage. A flat cents-per-therm approach would send an appropriate price signal to all customers.

Second, there are inherent differences between customer classes and their ability to lower their usage. AWEC's proposal does not take this into

consideration. In order to account for this, additional strategies to mitigate against a customer's inability to alter its demand would need to be addressed before implementing compliance cost allocations on a class specific basis.

Lastly, this proposal would dramatically alter the recovery allocation for a single project without consideration of the way that system costs have shifted. If the Commission believes that AWEC's proposal has merits, Staff recommends implementation of this approach in a general rate case, so that all costs of service can be examined in a fair and equitable manner while accounting for Staff's previous two concerns.

ISSUE 6. AFFILIATE INTEREST PROTECTIONS

Q. Are there consumer protection safeguards Staff would like to see?

A. Yes. In the event the Commission finds the project prudent, Staff supports imposing customer protections that closely mirror those imposed on the Lexington project, as included in UI 451, including addressing the following:

1. A Cost Cap on the amount the Company can recover from ratepayers, which Staff discusses above.
2. Environmental Risks including contamination of the site:
    a. NW Natural to issue reports of environmental liability or cleanup obligation by Dakota City Renewable Energy LLC in excess of $100,000 to be reported to the Commission within ten days of the time it is aware of such an issue.
    b. NW Natural to set and maintain safety standards and policies at the Dakota City Renewable Energy, LLC substantially comparable to or better than NW Natural's current standards and policies.
    c. NW Natural to provide Staff with a summary of the in-force liability insurance coverage(s) for each of NW Natural, NW Natural RNG Holding Company, LLC, and Dakota City Renewable Energy, LLC.
    d. NW Natural to observe and respect corporate formalities between NW Natural RNG Holding Company, LLC and Dakota City Renewable Energy, LLC. These include but are not limited to prohibiting commingling of assets, maintaining separate books and records, and maintaining sufficient capitalization.

3. Other Risks

   a. NW Natural to report to the Commission, any event that materially impacts the operations and cost structure of the project within 10 days of becoming aware of such an event.

   b. All costs attributable to Dakota City Renewable Energy, LLC will be auditable by Staff and the origin of such costs among the companies must be demonstrable, so as to be specifically identified, tracked for the Commission.

   c. NW Natural to account for personnel time for the Dakota City Renewable Energy, LLC project following the same policies and practices of NW Natural's accounting for capital projects.

   d. For the continuing purpose of determining whether NW Natural may recover any costs associated with Dakota City Renewable Energy, LLC, NW Natural must demonstrate that it, NW Natural RNG Holding Company, LLC, and Dakota City Renewable Energy, LLC acted prudently in the construction and management of the Dakota City biogas facility, including NW Natural's oversight of entities involved in the construction and management of the Project. NW Natural will keep documentation sufficient to demonstrate its prudent management, and will have the burden of proof to demonstrate that the project was prudently constructed and managed.

4. Regulatory Controls

   a. NW Natural will ensure Dakota City Renewable Energy, LLC will not,

without the approval of the Commission:

i. Make loans or transfer funds (a) to another member or the manager, or (b) other than dividends and payments pursuant to the operating agreement or project contracts;

ii. Assume any obligation or liability as guarantor, endorser, surety, or otherwise (a) for another member or the manager, or (b) other than a reasonable obligation or liability pursuant to project contracts;

iii. Transfer any of its project assets or property (a) to another member or the manager, or (b) other than (1) sales of products generated by the project or (2) assets or property that is worn out, obsolete, no longer necessary or useful for the operation of the project, or in the reasonable judgment of NW Natural should be disposed of or replaced;

iv. Pledge or seek to pledge project assets or securities backing for any hedging, indebtedness, or securities (a) to another member or the manager, or (b) other than as reasonably undertaken pursuant to project contracts;

v. Enter into cross-default provisions with NW Natural or its subsidiaries (other than NW Natural RNG Holding Company, LLC); and

vi. Participate in a money pool (unless with NW Natural or its subsidiaries).

b. NW Natural will report to the Commission, within 10 days of the time it becomes aware of such an issue, any debt obligation or liability as guarantor, endorser, surety, or otherwise undertaken by BioCross LLC related to the project.

c. Headquarters for Northwest Natural RNG Holding Company, LLC will remain in the state of Oregon.

d. The venue for all disputes related to the endeavors of NW Natural RNG Holding Company, LLC will be Oregon for Dakota City Renewable Energy, LLC, NW Natural RNG Holding Company, LLC will, as reasonably practicable, cause venue for all dispute provisions set forth in project contracts to be Oregon. Where the existing operating agreement requires settlement by arbitration, NW Natural will provide parties access to all submissions and the final order in the arbitration, subject in all respects to confidentiality or similar rules that are not reasonably within the control of NW Natural.

5. Access to information

a. NW Natural will have the ability to access all records and information related to the construction and operation of the Dakota City biogas facility in the possession of NW Natural RNG Holding Company, LLC and Dakota City Renewable Energy, LLC and respond to Commission request at any time for such records and information. In response to a discovery request that is made in accordance with Commission rules, NW Natural will provide the parties with

information to the regulatory review of the project. Upon request from parties during a regulatory review, NW Natural will also undertake reasonable efforts to obtain relevant information related to the construction and operation of the Dakota City biogas facility that is in the possession of entities that are not affiliated with NW Natural. NW Natural shall ensure that Dakota City Renewable Energy, LLC is subject to the same information sharing as NW Natural, including but not limited to access to books and records and meeting minutes.

b. NW Natural will make NWN Natural RNG Holding Company, LLC managing board members available to appear before the Commission.

6. Tax Condition

a. If partnership allocations of income tax losses from Dakota City Renewable Energy, LLC to NW Natural RNG Holding Company, LLC are limited/reduced on an annual basis compared to traditional utility ownership, NW Natural will notify interested parties in the annual affiliated interest report in Docket No. RG 8 and present a plan to address the matter. In future ratemaking proceedings parties will be free to propose adjustments holding ratepayers harmless as if the assets were under traditional utility ownership.

Q. Is Staff proposing to add similar requirements at this point?

A. Yes, in the event the Commission finds the project is prudent.

ISSUE 7. INTERACTION OF SB 98 AND CPP

Q. In their testimony, CUB raised the issue of the interplay between SB 98 and CPP. Does Staff believe this is the appropriate venue for such a discussion?

A. CUB requested:

> The Commission to make a legal determination regarding the interplay between the CPP and SB 98, and rule that NW Natural should only be permitted to pursue SB 98's voluntary standards to the extent that they fit within a least cost, least risk compliance plan to comply with the CPP.

Staff believes this issue may be addressed in the Commission's forthcoming order in NW Natural's IRP, LC 79. In principle, least cost/least risk planning is generally the preferred approach. There may be reasons to pursue resources that do not fit into that paradigm, for instance, reliance on the market for reliability might show up as a least cost approach, however it may be too risky. In principle, CUB's position seems reasonable, although there may be need for more discussion in other forums.

Q. Does Staff have any ideas about improvements that the Company can make to demonstrate it has identified least cost, least risk RNG projects?

A. Yes. Staff does not recommend that the Commission adopt specific modeling requirements for the future but has identified a range of improvements the Company can make to its risk modeling practices. Unlike the highly sensitive

nature of the variable related to the facility shutting down, as discussed in Staff's initial testimony, the Company's model is highly insensitive to changes in production risk. Conversely, as discussed above the Company's model is highly insensitive to changes in production volume risk.

Given that, Staff's concerns with the Company's modeling approach have increased. It is not clear at all that this approach to resource selection is appropriate. To be clear, Staff is not against risk modeling, but believes the Company's approach for Dakota City is inappropriate and should not be relied upon for future resource selections.

Q. Does this conclude your testimony?

A. Yes.

CASE: UG 462
WITNESS: Ted Drennan

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 201
Is
Confidential
Filed In Electronic Format

Protective Order: 23-063

Exhibits in Support
Of Rebuttal Testimony

July 31, 2023

CASE: UG 462
WITNESS: Ted Drennan

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 202

Exhibits in Support
Of Rebuttal Testimony

July 31, 2023

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Rates & Regulatory Affairs

UG 462

Renewable Gas Adjustment Mechanism - Dakota City

Data Request Response

Request No.: UG 462 OPUC DR 41

Please provide the Company's responses to the Informational Requests issued in OPUC Docket ADV 1502, Advice No. 23-04.

Response:

Please refer to UG 462 OPUC DR 41 Attachments 1, 5 and 6 and Confidential UG 462 OPUC DR 41 Attachments 2-4.

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Rates & Regulatory Affairs
ADV 1502
Schedule 400- Smart Energy Program
Renewable Natural Gas Option Advice No. 23-04
Data Request Response

Request No.: ADV 1502 CUB DR 1

According to NWN's filing, (NW Natural OPUC Advice No. 23-04 May 10, 2023; Page 2) the current offering uses carbon offsets as mitigation resources and the new offering will use a mix of RNG and carbon offsets, with a target of 4% renewable natural gas (RNG).

On the NWN website, NWN states that Smart Energy projects include projects like biodigesters on family-owned dairy farms that capture methane from cow manure, keeping this potent greenhouse gas from entering the atmosphere and harnessing it as a renewable energy source.

a. Can NWN provide a narrative that explains the distinction between offsets and RNG and how they would be used in the Smart Energy program?

b. How many projects have NWN funded which use biodigestors to capture cow manure? How much renewable methane (RNG) was produced? What happened to the renewable thermal certificates associated with these projects?

Response:

The current Smart Energy website reflects the current Smart Energy program that uses offsets as a mitigation resource and has not been updated to reflect the current proposal to use renewable natural gas as well as offsets as mitigation resources.

a. A carbon credit is created when one metric ton of a greenhouse gas (GHG) is avoided, reduced, or removed. Carbon credits are also known as carbon offsets or verified emissions reductions (VERs) and are expressed in carbon dioxide equivalent units.

Standards organizations like Climate Action Reserve, Verra and American Carbon Registry, establish science-based standards for quantifying and verifying GHG emissions reduction projects, overseeing independent third-party verification bodies, issuing carbon credits generated from such projects and tracking the credits over time on a transparent, publicly accessible system. These standards ensure the environmental integrity of carbon offsets.

The carbon offsets used by the Smart Energy program are the environmental attributes associated with the biogas produced, and destroyed, from anaerobic digesters at dairy farms; this biogas was used for electricity generation and did not generate renewable thermal credits (RTCs).

In the proposed change to the Smart Energy program, RNG is biogas that is upgraded to meet natural gas pipeline quality standards such that it may blend with, or substitute for, geologic natural gas. Renewable thermal certificates (RTCs) are a unique representation of the environmental attributes associated with the production, transport, and use of one dekatherm of renewable natural gas.

Currently the Smart Energy program procures offsets to mitigate the gas usage of Smart Energy participants. For an average residential customer participating in Smart Energy using 630 therms annually, the Smart Energy program would procure 3.34 metric tons of carbon offsets. Under the Company's proposal, the Smart Energy program would procure 3.21 metric tons of carbon offsets and 2.52 dekatherms of RNG, or 2.52 RTCs for an average residential customer participant.

b. Smart Energy has purchased carbon offsets from eleven projects using anaerobic digesters on dairy farms to capture methane that would have otherwise been released into the atmosphere. As mentioned above, these projects then utilized the recovered methane for electricity generation; no Renewable Thermal Certificates were generated.

The first carbon offsets from a dairy project were 2009 vintage and the most recent 2021 vintage. Over the life of the program 548,400 metric tons have been retired from dairy projects. Initially dairy projects generated electricity from the captured biomethane and distributed on the grid.

Rates & Regulatory Affairs
ADV 1502 Schedule 400 Smart Energy Program
Renewable Natural Gas Option Advice No. 23-04
Data Request Response

Request No.: ADV 1502 CUB DR 2

CUB's understanding of voluntary clean energy programs is that the renewable certificates belong to the customer, not the utility. In its filing NWN says that "NW Natural will also ensure that RNG purchases for the Smart Energy program have the necessary documentation to comply with state reporting and CPP requirements."
Will NWN be using RNG from Smart Energy voluntary customers to comply with the Climate Protection Program?
If so, will the customer who purchases the RNG get credit for it? For example could that customer get a credit to offset some of their share of the system compliance costs?
Please explain how NWN plans to track and allocate the compliance benefits associated with the voluntary RNG purchases made by customers.

Response:

It is important to note that in understanding voluntary clean energy programs that participant attribution and renewable certificate attribution/ownership is defined specific to each voluntary clean energy program. The regulatory context in which a program is offered also has bearing on program design.

In Oregon the carbon regulation structure under which NW Natural's customer deliveries are covered, the Climate Protection Program (CPP), is unique. The utility is the point of regulation for carbon emissions associated with all customer energy delivery. The compliance responsibility for all customers, including participants in the voluntary program, rests with the utility. Ownership is not relevant to molecules contributing to compliance.

NW Natural will purchase, track and allocate RNG purchases within the voluntary program using a Smart Energy program dedicated M-Rets registry account on behalf of participating customers. This is consistent with the legacy Smart Energy program, in which offsets are retired on behalf of customers. Compliance with the CPP will involve a portfolio of decarbonizing measures and instruments. Customers who participate in the program will not receive a direct one for one compliance discount for the portion of renewable natural gas included in the voluntary product. All customers will benefit from the additional RNG purchases that will mitigate a portion of carbon emission reductions.

Commonly accepted GHG Accounting standards[1] support NWN's view that the voluntary program is additional to the carbon cap under the Climate Protection Program (CPP). Customers who use the voluntary program to reduce their onsite (Scope 1) emissions do not preclude NWN from utilizing the same environmental attributes to reduce emissions resulting from the use of its product (Scope 3).

Science Based Targets initiative (SBTi) clearly explains that the same emission reductions will necessarily be claimed by scope 1 and scope 3 emitters for the same reduction activity, i.e. NWN and customers are expected to make overlapping claims Scope 1 and Scope 3 emitters necessarily report on the same carbon emissions according to existing GHG Protocol (GHGP) guidance.

Carbon accounting best practices verify that carbon emissions reduction associated with the same environmental attribute can be used to address emissions from different entities as long as the scopes are distinct. The voluntary program would effectively address our customers' Scope 1 emissions and be part of NWN's strategy to address Scope 3 emissions. This approach has recently been supported by CPUC in its 2020 ruling on SoCal Gas's green tariff.[2]

[1] https://sciencebasedtargets.org/resources/files/SBT_Value_Chain_Report-1.pdf, https://ghgprotocol.org/guidance-0

[2] https://www.socalgas.com/sites/default/files/Joint%20Motion%20for%20Approval%20of%20Settlement%20-%204-13-20%20Final.pdf. Note that in California certain large customers are the point of regulation for the cap-and-trade program. In such a circumstance, double counting concerns can arise (i.e., it is necessary to establish whether the utility or the customer can claim the RNG for compliance with California's cap-and-trade program). The cited order addresses this concern in Attachment A, page 3. This double counting issue does not exist in Oregon, however, because the utility is the point of regulation under the CPP.

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Rates & Regulatory Affairs
ADV 1502
Schedule 400- Smart Energy Program
Renewable Natural Gas Option Advice No. 23-04
Data Request Response

Request No.: ADV 1502 CUB DR 3

NWN's Smart Energy FAQ (https://www.nwnatural.com/about-us/smart-energy-program/smart-energy-faqs) says 30% of the funds collected go toward administration and education. With this new filing will NWN continue to dedicate 30% to administration and education? What constitutes education costs?

Response:

No. The proposed cost per therm reflects a decrease for Marketing and Administration (M&A). The percentages will change to about 22% for M&A, and 78% for the purchase of carbon offsets and renewable thermal certificates. This is the first time the program has changed the price per therm or amount allocated to M&A since the program began in September 2007.

Education within Smart Energy program includes content that communicates information to customers regarding the environmental impacts of their energy use and how they can be addressed through efficiency, conservation, and carbon offsets. The information may include a mechanism to enroll in Smart Energy, e.g., bill insert. The program tagline “Use Less. Offset the Rest.” conveys the priority of reducing natural gas use as a first step in addressing environmental impacts of energy use.

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Rates & Regulatory Affairs
ADV 1502
Schedule 400 Smart Energy Program
Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 CUB DR 4

What was the proceeding or venue where the PUC approved 30% of the funds being used for administration and education?

Response:

The design of the Smart Energy program, including the current volumetric price of $0.10486 per therm, was approved by the Commission in NW Natural's tariff Advice No. 07-4, which can be found at this link State of Oregon: Public Utility Commission of Oregon.

The volumetric price included the cost of offsets and ongoing program costs at a ratio of 70%-30%, as shown below, which is a portion of Table 2 that was included in NW Natural's Advice No. 07-4 filing in Exhibit NWN/103 at page Miller/12. (Total ongoing program costs of $1,333,213 divided by total costs of $4,405,596 = 30%). The volumetric price of the Smart Energy product has not changed since the program was first approved.

NW Natural
SMART ENERGY Program Costs by Cost Category and Program Year

Participant Costs	2007	2008	2009	2010	2011	2012	Total
Costs of CO2 Offsets	25,184	232,819	400,441	581,606	772,940	1,059,394	3,072,383
Ongoing Program Costs	68,716	136,832	142,101	322,574	328,245	334,744	1,333,213
Total	93,901	369,651	542,542	904,180	1,101,185	1,394,138	4,405,596
Start up Costs	1,275,200						1,275,200
Total Program Costs	**1,369,101**	**369,651**	**542,542**	**904,180**	**1,101,185**	**1,394,138**	**5,680,796**

NW Natural notes that shortly after Smart Energy was launched, the Company voluntarily agreed to have the program fall under the oversight and review of the Portfolio Options Committee (POC). NW Natural participated and supported the POC from 2008 until POC meetings were paused starting in 2020. Through participation in the POC, the Smart Energy program's revenue and costs were periodically reviewed by

the POC. The Company notes that the POC never raised any issues with the Smart Energy program's M&A costs.

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Rates & Regulatory Affairs

ADV 1502
Schedule 400 Smart Energy Program
Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 CUB DR 5

How is this 30% allocated between the following:

a. Administration
b. marketing of the program/providing opportunities for customers to enroll
c. general education about RNG, natural gas and carbon emissions
d. other (please explain what is listed as other)

Response:

Our Smart Energy reporting reflects direction from the OPUC Portfolio Options Committee (POC). Marketing includes program marketing and providing enrollment opportunities, which also included general information about how the program worked to mitigate the impacts of natural gas use. Previous information did not include a separate breakout for general education because the program was focused on offsets and not on RNG. Generally speaking, the Company allocates the 30% based upon the annual needs of administration and the annual cost of marketing. Please see the response to ADV 1502 CUB DR 6a for the breakout of administration and marketing costs.

YES! I want to make a difference. Please enroll me in Smart Energy.

I want to offset the carbon emissions from natural gas use for:

❑ **Average Home** - $5.50 per month[1] ❑ **Climate Neutral** *(most popular)* - $0.10486 per therm used each month[2]

Name _____

Signature _____ Date _____

Service address _____ City _____ State _____ Zip _____

Account number (optional) _____ Email (optional) _____

You may opt out or change your program option at any time without penalty. The amount of your selected option will be added to your bill each month The Public Utility Commission of Oregon and the Washington Utilities and Transportation Commission oversee Smart Energy and authorize its rates. The Climate T ust, an unaffi iated non-profit, ve ifies and retires quality offsets on beha f of the program. The Climate Trust may enter into contracts that may produce greenhouse gas emission reductions two or more years into the future.

[1]Based on the average annual natural gas use of NW Natural residential customers of 630 therms (3 7 tons)

[2]NW Natural will add $.10486 per therm to your monthly bill to offset 100 percent of the carbon emissions from your home's natural gas use. Your actual Smart Energy participation cost will vary monthly based on your usage.

❑ I do not wish to receive the free gift.

>> DETACH THIS FORM AND RETURN WITH YOUR BILL PAYMENT <<

04/22 BT22

When you enroll in Smart Energy, the carbon emissions from your natural gas use will be offset through projects that reduce, or prevent the release of, greenhouse gases.

HIGH QUALITY
Verified carbon offsets that benefit the environment

AFFORDABLE
The Average Home cost is just $5.50 a month[1]

SIMPLE
Your enrollment cost is included on your monthly bill

Visit nwnatural.com/smart to learn more about Smart Energy and the projects providing carbon offsets, or to enroll using code **BT22** to claim your free gift!

NW Natural®

PO BOX 6017
PORTLAND OR 97228-6017

Don't have a stamp?
Pay your bill online.
nwnatural.com

FROM:

Make a Difference. Get a Reward!

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PLEASE BE SURE THAT NW NATURAL SHOWS THROUGH THE ENVELOPE WINDOW

EnviroSafe®
22DG
Biodegradable Polystyrene Window Film

PLEASE DETACH PANEL BELOW BEFORE MAILING

MIX
Envelope from responsible sources
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PLEASE BE SURE THAT NW NATURAL SHOWS THROUGH THE ENVELOPE WINDOW

Join over 75,000 NW Natural customers

who are reducing their carbon footprint through NW Natural's Smart Energy program.

Smart Energy participants have funded more than

CO_2 **1.5 MILLION TONS**

of carbon emissions reductions to date.

But with YOUR support, we can do even **MORE.**

ENROLL TODAY!

Enroll by returning this form with your bill or by visiting nwnatural.com/smart using the code **BT22** by September 16, 2022 to claim your **free** Smart Energy water bottle.

Stainless steel water bottle!

SMART ENERGY.
Use less. Offset the rest.

> > PLEASE DETACH THIS PANEL BEFORE MAILING < <

LIFT TO ENROLL

PMS 306 U

YES! I want to make a difference. Please enroll me in Smart Energy.

I want to offset the carbon emissions from natural gas use for:

❑ **Average Home** - $5.50 per month[1] ❑ **Climate Neutral** *(most popular)* - $0.10486 per therm used each month[2]

Name _____

Signature _____ Date _____

Service address _____ City _____ State _____ Zip _____

Account number (optional) _____ Email (optional) _____

You may opt out or change your program option at any time without penalty. The amount of your selected option will be added to your bill each month The Public Utility Commission of Oregon and the Washington Utilities and Transportation Commission oversee Smart Energy and authorize its rates. The Climate T ust, an unaffi iated non-profit, ve ifies and retires quality offsets on beha f of the program. The Climate Trust may enter into contracts that may produce greenhouse gas emission reductions two or more years into the future.

[1]Based on the average annual natural gas use of NW Natural residential customers of 630 therms (3 7 tons)

[2]NW Natural will add $.10486 per therm to your monthly bill to offset 100 percent of the carbon emissions from your home's natural gas use. Your actual Smart Energy participation cost will vary monthly based on your usage.

❑ I do not wish to receive the free gift.

>> DETACH THIS FORM AND RETURN WITH YOUR BILL PAYMENT <<

02/21 BT21

When you enroll in Smart Energy, the carbon emissions from your natural gas use will be offset through projects that reduce, or prevent the release of, greenhouse gases.

HIGH QUALITY
Verified carbon offsets that benefit the environment

AFFORDABLE
The Average Home cost is just $5.50 a month[1]

SIMPLE
Your enrollment cost is included on your monthly bill

Visit nwnatural.com/smart to learn more about Smart Energy and the projects providing carbon offsets, or to enroll using code **BT21** to claim your free gift!

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PMS 368 U PMS 306 U PROCESS BLACK

PLEASE BE SURE THAT NW NATURAL SHOWS THROUGH THE ENVELOPE WINDOW

EnviroSafe®
22DG
Biodegradable Polystyrene Window Film

PLEASE DETACH PANEL BELOW BEFORE MAILING

RECYCLED
Envelope made from recycled material
FSC® C138146

PLEASE BE SURE THAT NW NATURAL SHOWS THROUGH THE ENVELOPE WINDOW

Join over 60,000 NW Natural customers

who are reducing their carbon footprint through NW Natural's Smart Energy program.

Smart Energy participants have funded more than CO_2 1 MILLION TONS of carbon emissions reductions to date.

But with YOUR support, we can do even MORE.

ENROLL TODAY!

Enroll by returning this form with your bill or by visiting nwnatural.com/smart using the code **BT21** by September 10, 2021 to claim your **free** Smart Energy water bottle.

Stainless steel water bottle!

SMART ENERGY. Use less. Offset the rest.

> > PLEASE DETACH THIS PANEL BEFORE MAILING < <

LIFT TO ENROLL

PMS 306 U

YES! I want to make a difference. Please enroll me in Smart Energy.

I want to offset the carbon emissions from natural gas use for:

❑ **Average Home** - $5.50 per month[1] ❑ **Climate Neutral** *(most popular)* $0 10486 per therm used each month[2]

Name _____

Signature _____ Date _____

Service address _____ City _____ State _____ Zip _____

Account number (optional) _____ Email (optional) _____

You may opt out or change your program option at any time without penalty. The amount of your selected option will be added to your bill each month The Public Utility Commission of Oregon and the Washington Utilities and Transportation Commission oversee Smart Energy and authorize its rates. The Climate Trust, an unaffiliated non-profit, verifies and retires quality offsets on behalf of the program. To make participating customers carbon neutral, The Climate Trust may enter into contracts which may produce greenhouse gas emission reductions two or more years into the future.

[1]Based on the annual system average therm use of NW Natural residential customers; 630 therms each (3.7 tons annually).

[2]NW Natural will add $.10486 per therm to your monthly bill to offset 100 percent of the carbon emissions from your home's natural gas use. Your actual Smart Energy participation cost will vary monthly based on your usage.

❑ I do not wish to receive the free gift.

>> DETACH THIS FORM AND RETURN WITH YOUR BILL PAYMENT <<

02/20 BT20

When you enroll in Smart Energy, the carbon emissions from your natural gas use will be offset through projects that reduce, or prevent the release of, greenhouse gases.

You support projects like biodigesters on family-owned dairy farms in the Pacific Northwest and Northern California.

These projects keep methane (a potent greenhouse gas) from entering our atmosphere...

And, offset the carbon emissions from your homes' natural gas use equal to your enrollment level.

Visit nwnatural.com/smart to learn more about Smart Energy and the projects providing carbon offsets, or to enroll using code **BT20** to claim your free gift!

NW Natural®

PO BOX 6017
PORTLAND OR 97228-6017

Don't have a stamp?
Pay your bill online.
nwnatural.com

FROM:

Make a Difference. Get a Reward!

DETAILS BELOW

PMS 368 U PMS 306 U PROCESS BLACK

PLEASE BE SURE THAT NW NATURAL SHOWS THROUGH THE ENVELOPE WINDOW

EnviroSafe®
22DG
Biodegradable Polystyrene Window Film

PLEASE DETACH PANEL BELOW BEFORE MAILING

SUSTAINABLE FORESTRY INITIATIVE Certified Sourcing
www.sfiprogram.org
SFI-00411

PLEASE BE SURE THAT NW NATURAL SHOWS THROUGH THE ENVELOPE WINDOW

Join over 58,000 NW Natural customers

who are reducing their carbon footprint through NW Natural's Smart Energy program.

Program participants have funded more than CO_2 1 MILLION TONS of carbon emissions reductions to date.

But with YOUR support, we can do even MORE.

ENROLL TODAY!

Enroll by returning this form with your bill or by visiting nwnatural.com/smart using the code **BT20** by August 30, 2020 to claim your **free** Smart Energy water bottle.

Stainless steel water bottle!

SMART ENERGY. Use less. Offset the rest.

> > PLEASE DETACH TH S PANEL BEFORE MA L NG < <

LIFT TO ENROLL

PMS 306 U

NW Natural® 250 SW Taylor St, Portland, Oregon 97204 • nwnatural.com

Jane, offset your carbon emissions and support Oregon parks with one simple action.

Jane Doe
101 Fake Street Unit B
Portland, Oregon 97000

Enroll by July 1, 2022, and we'll make a $10 donation to Oregon Parks Forever![1]

OREGON PARKS FOREVER

Dear Jane,

Over my career, I've witnessed the power of individuals helping our environment by taking "small" actions that, when added together, make a larger impact.

This is the case for over 75,000 NW Natural customers enrolled in Smart Energy. Since 2007, participants have collectively funded over 1.5 million tons of emission reductions and supported carbon-offset projects across the American West and Alaska. Last year alone, participant enrollments generated over $23,000 in donations to Oregon Parks Forever.

When you enroll in Smart Energy, the carbon emissions from your natural gas use will be offset through projects that reduce, or prevent the release of, greenhouse gases.

Are you ready to reduce your carbon footprint and join the Smart Energy community?

Mary Moerlins

Mary Moerlins
Director of Environmental Policy
& Corporate Responsibility

PS: Jane, together we can make a powerful difference. Join Smart Energy today!

Choose your program option:

AVERAGE HOME

Offset emissions equal to an average home's natural gas use

Fixed **$5.50** per month[2]

CO_2

You'd offset **3.7 tons of CO_2** per year

That's equivalent to **8,389 miles** not driven by an average passenger vehicle[3]

OR

CLIMATE NEUTRAL

Offset 100% of the emissions from your home's natural gas use

Estimated **$11.00** per month[4]

CO_2

You'd offset an estimated **7.3 tons of CO_2** per year

That's equivalent to **16,543 miles** not driven by an average passenger vehicle[3]

It's easy to enroll online at nwnatural.com/smart using code DM522A

MICRO-PERF

YES! I'm ready to make a difference. Please enroll me in Smart Energy.[5]

I want to offset the carbon emissions from natural gas use for:

☐ **Average Home** - $5.50 per month[2] ☐ **Climate Neutral** - $0.10486 per therm used each month[6]

Signature _____ Date _____

Please sign and return this form in the postage-paid envelope provided.

You may opt out or change your program option at any time without penalty. The amount of your selected option will be added to your bill each month. The Public Utility Commission of Oregon and the Washington Utilities and Transportation Commission oversee Smart Energy and authorize its rates. The Climate Trust, an unaffiliated nonprofit, verifies and retires quality offsets on behalf of the program. The Climate Trust may enter into contracts that may produce greenhouse gas emission reductions two or more years into the future.

[1] NW Natural may make additional donations through its corporate philanthropy program or other charitable campaigns.
[2] Based on the average annual natural gas use of NW Natural residential customers of 630 therms (or 3.7 tons).
[3] Equivalencies calculated using the methodology from the EPA Greenhouse Gas Equivalencies calculator, Jan 2022: https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator.
[4] Based on your average monthly therm use 05/2021-04/2022 - 1260 therms; a monthly average of 105 therms.
[5] For the premise located at 101 Fake Street, Portland, Oregon 97000.
[6] NW Natural will add $0.10486 per therm to your monthly bill to offset 100 percent of the carbon emissions from your home's natural gas use. Your actual Smart Energy participation cost will vary monthly based on your usage.

123456789

DM522A
Jane_Doe

NW Natural®

250 SW Taylor St, Portland, Oregon 97204 • nwnatural.com

Jane, you may be able to enroll in Smart Energy for less than the average residential customer!

Jane Doe
101 Fake Street Unit B
Portland, Oregon 97000

Congratulations, Jane! You're doing an incredible job using less natural gas and keeping your carbon footprint low! At NW Natural, we encourage customers to "use less and offset the rest." You're already using less than the average NW Natural customer. So, today, I'm writing to invite you to offset the rest by going "Climate Neutral" with Smart Energy.

When you enroll in Smart Energy, the carbon emissions from your natural gas use will be offset through projects across the American West and Alaska that reduce, or prevent the release of, greenhouse gases. **When you sign up to be "Climate Neutral," you offset 100% of your home's natural gas use.**

Jane, because your natural gas use is so low, you can enroll for less! Based on 12 months of your natural gas use, your Smart Energy participation would look something like this:

Your natural gas use, on average[1]

26.25 therms per month

The average NW Natural customer uses 52.5 therms/month[2]

Your estimated average cost to participate[3]

$2.75 per month

The Average Home cost to participate is $5.50/month[2]

Your cost to participate could come to $2.75 less than the average NW Natural home!

Will you join me and over 75,000 Smart Energy participants by going "Climate Neutral"?

Mary Moerlins

Mary Moerlins, Director of Environmental Policy & Corporate Responsibility

PS: Jane, you're doing a great job using less natural gas. Take the next step to offset the rest. Enroll in Smart Energy today!

Enroll by July 1, 2022, and we'll make a $10 donation to Oregon Parks Forever![4]

OREGON PARKS FOREVER

It's easy to enroll online at nwnatural.com/smart using code DM522V

MICRO-PERF

YES! I'm ready to be Climate Neutral. Please enroll me in Smart Energy.[5]

I want to offset 100% of my CO_2 emissions from my natural gas use at $0.10486 per therm used each month.

Signature _____ Date _____

Please sign and return this form in the postage-paid envelope provided.

NW Natural will add $0.10486 per therm to your monthly bill to offset 100 percent of the carbon emissions from your home's natural gas use. Your actual Smart Energy participation cost will vary monthly based on your usage. Smart Energy also offers the option to offset the carbon emissions from natural gas use for the "Average Home," based on the annual system average therm use of NW Natural residential customers, for $5.50 a month. You may opt out or change your program option at any time without penalty. The Public Utility Commission of Oregon and the Washington Utilities and Transportation Commission oversee Smart Energy and authorize its rates. The Climate Trust, an unaffiliated nonprofit, verifies and retires quality offsets on behalf of the program. The Climate Trust may enter into contracts that may produce greenhouse gas emission reductions two or more years into the future.

[1] Based on your average monthly therm use 05/2021-04/2022 - 315 therms; a monthly average of 26.25 therms.
[2] Based on the average annual natural gas use of NW Natural residential customers of 630 therms (or 3.7 tons).
[3] Your average monthly therm use x $0.10486 per therm; actual cost will vary based on actual therms used and are not guaranteed to remain below the cost of the "Average Home" option.
[4] NW Natural may make additional donations through its corporate philanthropy program or other charitable campaigns.
[5] For the premise located at 101 Fake Street, Portland, Oregon 97000.

123456789

DM522V
Jane_Doe

NW Natural®

250 SW Taylor St, Portland, Oregon 97204 • nwnatural.com

Jane, you may be able to enroll in Smart Energy for less than the average residential customer!

Jane Doe
101 Fake Street Unit B
Portland, Oregon 97000

Enroll by July 1, 2022, and we'll make a $10 donation to Oregon Parks Forever![1]

OREGON PARKS FOREVER

Congratulations, Jane! You're doing an incredible job using less natural gas and keeping your carbon footprint low! At NW Natural, we encourage customers to "use less and offset the rest." You're already using less than the average NW Natural customer. So, today, I'm writing to invite you to offset the rest by going "Climate Neutral" with Smart Energy.

When you enroll in Smart Energy, the carbon emissions from your natural gas use will be offset through projects across the American West and Alaska that reduce, or prevent the release of, greenhouse gases. **When you sign up to be "Climate Neutral," you offset 100% of your home's natural gas use.**

Jane, because your natural gas use is so low, you can enroll for less!

Will you join me and over 75,000 Smart Energy participants by signing up?

Mary Moerlins

Mary Moerlins
Director of Environmental Policy
& Corporate Responsibility

Based on 12 months of your natural gas use, your Smart Energy participation would look something like this:

Your natural gas use, on average[2]
26.25
therms per month
The average NW Natural customer uses 52.5 therms/month[3]

Your estimated average cost to participate[4]
$2.75
per month
The Average Home cost to participate is $5.50/month[3]

Your cost to participate could come to $2.75 less than the average NW Natural home!

PS: Jane, you're doing a great job using less natural gas. Take the next step to offset the rest. Enroll in Smart Energy today!

It's easy to enroll online at nwnatural.com/smart using code DM522VT

MICRO-PERF

YES! I'm ready to be Climate Neutral. Please enroll me in Smart Energy.[5]

I want to offset 100% of my CO_2 emissions from my natural gas use at $0.10486 per therm used each month.

Signature _____ Date _____

Please sign and return this form in the postage-paid envelope provided.

NW Natural will add $0.10486 per therm to your monthly bill to offset 100 percent of the carbon emissions from your home's natural gas use. Your actual Smart Energy participation cost will vary monthly based on your usage. Smart Energy also offers the option to offset the carbon emissions from natural gas use for the "Average Home," based on the annual system average therm use of NW Natural residential customers, for $5.50 a month. You may opt out or change your program option at any time without penalty. The Public Utility Commission of Oregon and the Washington Utilities and Transportation Commission oversee Smart Energy and authorize its rates. The Climate Trust, an unaffiliated nonprofit, verifies and retires quality offsets on behalf of the program. The Climate Trust may enter into contracts that may produce greenhouse gas emission reductions two or more years into the future.

[1] NW Natural may make additional donations through its corporate philanthropy program or other charitable campaigns.
[2] Based on your average monthly therm use 05/2021-04/2022 - 315 therms; a monthly average of 26.25 therms.
[3] Based on the average annual natural gas use of NW Natural residential customers of 630 therms (or 3.7 tons).
[4] Your average monthly therm use x $0.10486 per therm; actual cost will vary based on actual therms used and are not guaranteed to remain below the cost of the "Average Home" option.
[5] For the premise located at 101 Fake Street, Portland, Oregon 97000.

123456789

DM522VT
Jane_Doe

How Smart Energy Works

Smart Energy helps you reduce your carbon footprint

1. When you enroll in Smart Energy, the carbon emissions from your natural gas use will be offset.

2. Smart Energy purchases offsets from projects that reduce, or prevent the release of, greenhouse gases.

3. Offsets are purchased from projects that sequester, reduce, and prevent the release of, greenhouse gases. Many of these projects are biodigesters on family-owned dairy farms. These projects keep methane, a potent greenhouse gas, from entering the atmosphere by harnessing it as a renewable energy source.

4. The captured methane from biodigesters can be used as an on-demand renewable energy source, while forestry projects also protect wildlife habitat and water quality.

Quality carbon offsets

NW Natural has contracted with The Climate Trust®, an internationally recognized nonprofit located in Portland, Oregon, to ensure that only verified high-quality offsets are purchased and retired for the Smart Energy program.

Smart Energy Offset Projects

To date, Smart Energy has purchased offsets from seventeen projects across the American West and Alaska. Fourteen of the projects capture methane emitted from cow manure or organic waste, preventing this potent greenhouse gas from entering the atmosphere and harnessing it as a renewable energy source. Three of the projects are improved forest management projects that facilitate natural forest growth, sequestering carbon emissions while also protecting critical wildlife habitat. Now that's smart!

Read more about Smart Energy projects at **nwnatural.com/smart**

Not shown: Davis Landfill (Layton, UT), Shaan Seet IFM (Prince of Wales Island, AK)

Your enrollment benefits Oregon Parks Forever!

Oregon parks are an everyday reminder of what makes the Pacific Northwest special. These vast nature areas enhance our physical well-being, as well as planetary health. Oregon Parks Forever is dedicated to enriching the park experience in Oregon; now and for generations to come.

www.orparksforever.org

Thank you so much for joining the Smart Energy community!

Mary

5/22

NW Natural® 250 SW Taylor St, Portland, Oregon 97204 • nwnatural.com

Jane, offset your carbon emissions and support Oregon parks with one simple action.

Jane Doe
101 Fake Street
Portland, Oregon 97000

Enroll by May 28, 2021, and we'll make a $10 donation to Oregon Parks Forever![1]

OREGON PARKS FOREVER

Dear Jane,

Over my career, I've witnessed the power of individuals taking "small" actions to help the environment that, when added together, make a larger impact.

This is the case for over 64,000 NW Natural customers enrolled in Smart Energy. Since 2007, participants have collectively funded over a million tons of emission reductions and supported carbon-offset projects across the Pacific Northwest and California. Last year alone, participant enrollments generated over $25,500 in donations to Oregon Parks Forever.

When you enroll in Smart Energy, the carbon emissions from your natural gas use will be offset through projects that reduce, or prevent the release of, greenhouse gases.

Are you ready to reduce your carbon footprint and join the Smart Energy community?

Mary Moerlins
Director of Environmental Policy
& Corporate Responsibility

PS: Jane, together we can make a powerful difference. Join Smart Energy today!

Choose your program option:

AVERAGE HOME

Offset emissions equal to an average home's natural gas use

Fixed **$5.50** per month[2]

CO_2

You'd offset **3.7 tons of CO_2** per year

That's equivalent to **8,285 miles** not driven by an average passenger vehicle[3]

OR

CLIMATE NEUTRAL

Offset 100% of the emissions from your home's natural gas use

Estimated **$11.00** per month[4]

CO_2

You'd offset an estimated **7.3 tons of CO_2** per year

That's equivalent to **16,543 miles** not driven by an average passenger vehicle[3]

It's easy to enroll online at nwnatural.com/smart using code DM521A

MICRO-PERF

YES! **I'm ready to make a difference. Please enroll me in Smart Energy.[5]**

I want to offset the carbon emissions from natural gas use for:

☐ **Average Home** - $5.50 per month[2] ☐ **Climate Neutral** - $0.10486 per therm used each month[6]

Signature _____ Date _____

Please sign and return this form in the postage-paid envelope provided.

You may opt out or change your program option at any time without penalty. The amount of your selected option will be added to your bill each month. The Public Utility Commission of Oregon and the Washington Utilities and Transportation Commission oversee Smart Energy and authorize its rates. The Climate Trust, an unaffiliated nonprofit, verifies and retires quality offsets on behalf of the program. The Climate Trust may enter into contracts that may produce greenhouse gas emission reductions two or more years into the future.

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[3] Equivalencies calculated using the methodology from the EPA Greenhouse Gas Equivalencies calculator, Mar 2021: https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator.
[4] Based on your average monthly therm use 04/2020-03/2021 - 1260 therms; a monthly average of 105 therms.
[5] For the premise located at 101 Fake Street, Portland, Oregon 97000.
[6] NW Natural will add $0.10486 per therm to your monthly bill to offset 100 percent of the carbon emissions from your home's natural gas use. Your actual Smart Energy participation cost will vary monthly based on your usage.

123456789

DM521A
Jane_Doe

NW Natural® 250 SW Taylor St, Portland, Oregon 97204 • nwnatural.com

Jane Doe
101 Fake Street
Portland, Oregon 97000

Jane, offset your carbon emissions and support Oregon parks with one simple action.

Dear Jane,

Over my career, I've witnessed the power of individuals taking "small" actions to help the environment that, when added together, make a larger impact.

This is the case for over 64,000 NW Natural customers enrolled in Smart Energy. Since 2007, participants have collectively funded over a million tons of emission reductions and supported carbon-offset projects across the Pacific Northwest and California. Last year alone, participant enrollments generated over $25,500 in donations to Oregon Parks Forever.

When you enroll in Smart Energy, the carbon emissions from your natural gas use will be offset through projects that reduce, or prevent the release of, greenhouse gases.

No matter how much natural gas you use each month, there are program options to fit your budget and home.

AVERAGE HOME

Offset the average home's natural gas use

Fixed monthly cost: **$5.50** per month[1]

You'd offset **3.7 tons of CO_2** per year

That's equivalent to **8,285 miles** not driven by an average passenger vehicle[3]

OR

CLIMATE NEUTRAL

Offset 100% of your carbon emissions from natural gas use

Estimated monthly cost: **$11.00** per month[2]

You'd offset an estimated **7.3 tons of CO_2** per year

That's equivalent to **16,543 miles** not driven by an average passenger vehicle[3]

Are you ready to reduce your carbon footprint and join the Smart Energy community?

Enroll by May 28, 2021, and we will make a $10 donation to Oregon Parks Forever, a nonprofit that preserves and enhances the unique experiences in Oregon's Parks.[4]

Mary Moerlins

Mary Moerlins, Director of Environmental Policy & Corporate Responsibility

P.S. Jane, together we can make a powerful difference. Join Smart Energy today!

It's easy to enroll online at nwnatural.com/smart using code DM521B

MICRO-PERF

YES! I'm ready to make a difference. Please enroll me in Smart Energy.[5]

I want to offset the carbon emissions from natural gas use for:

☐ **Average Home** - $5.50 per month[1] ☐ **Climate Neutral** - $0.10486 per therm used each month[6]

Signature _____ Date _____

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123456789

DM521B
Jane_Doe

NW Natural®

250 SW Taylor St, Portland, Oregon 97204 • nwnatural.com

Jane, you may be able to enroll in Smart Energy for less than the average residential customer!

Jane Doe
101 Fake Street
Portland, Oregon 97000

Congratulations, Jane! You're doing an incredible job using less natural gas and keeping your carbon footprint low! At NW Natural, we encourage customers to "use less and offset the rest." You're already using less than the average NW Natural customer. So, today, I'm writing to invite you to offset the rest by going "Climate Neutral" with Smart Energy.

When you enroll in Smart Energy, the carbon emissions from your natural gas use will be offset through projects in the Pacific Northwest, California, and Utah that reduce, or prevent the release of, greenhouse gases. **When you sign up to be "Climate Neutral," you offset 100% of your home's natural gas use.**

Jane, because your natural gas use is so low, you can enroll for less! Based on 12 months of your natural gas use, your Smart Energy participation would look something like this:

Your natural gas use, on average[1]:	← Your Home →	Your estimated average cost to participate would be[2]:
26.25 therms per month		**$2.75 per month**

The average NW Natural customer uses[3]: **52.5 therms/month**
The "Average Home" option cost to participate: **$5.50/month**

Your participation could come to $2.75 less than the average NW Natural Home!

Will you join me and over 64,000 Smart Energy participants by going "Climate Neutral"?

Mary Moerlins

Mary Moerlins, Director of Environmental Policy & Corporate Responsibility

PS: Jane, you're doing a great job using less natural gas. Take the next step to offset the rest. Enroll in Smart Energy today!

Enroll by May 28, 2021, and we'll make a $10 donation to Oregon Parks Forever![4]

OREGON PARKS FOREVER

It's easy to enroll online at nwnatural.com/smart using code DM521V

MICRO-PERF

YES! I'm ready to be Climate Neutral. Please enroll me in Smart Energy.[5]

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250 SW Taylor St, Portland, Oregon 97204 • nwnatural.com

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Portland, Oregon 97000

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26.25 therms per month

The average NW Natural customer uses 52.5 therms/month[2]

Your estimated average cost to participate[3]

$2.75 per month

The Average Home cost to participate is $5.50/month

Your cost to participate could come to $2.75 less than the average NW Natural home!

Will you join me and over 64,000 Smart Energy participants by going "Climate Neutral"?

Mary Moerlins

Mary Moerlins, Director of Environmental Policy & Corporate Responsibility

PS: Jane, you're doing a great job using less natural gas. Take the next step to offset the rest. Enroll in Smart Energy today!

Enroll by May 28, 2021, and we'll make a $10 donation to Oregon Parks Forever![4]

OREGON PARKS FOREVER

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MICRO-PERF

YES! I'm ready to be Climate Neutral. Please enroll me in Smart Energy.[5]

I want to offset 100% of my CO_2 emissions from my natural gas use at $0.10486 per therm used each month.

Signature _____ Date _____

Please sign and return this form in the postage-paid envelope provided.

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[3] Your average monthly therm use x $0.10486 per therm; actual cost will vary based on actual therms used and are not guaranteed to remain below the cost of the "Average Home" option.
[4] NW Natural may make additional donations through its corporate philanthropy program or other charitable campaigns.
[5] For the premise located at 101 Fake Street, Portland, Oregon 97000.

123456789

DM521VT
Jane_Doe

How Smart Energy Works

Smart Energy helps you reduce your carbon footprint

1. When you enroll in Smart Energy, the carbon emissions from your natural gas use will be offset.
2. Smart Energy purchases offsets from projects that reduce, or prevent the release of, greenhouse gases.
3. Offsets are purchased from regional projects like biodigesters on dairy farms that capture methane from cow manure, keeping the greenhouse gas from entering the atmosphere.
4. The captured methane can be used as an on-demand renewable energy source.

SMART ENERGY. *Use less. Offset the rest.* + THE CLIMATE TRUST = **Quality Carbon Offsets**

NW Natural has contracted with The Climate Trust®, an internationally recognized nonprofit located in Portland, Oregon, to ensure that only verified high-quality offsets are purchased and retired for the Smart Energy program.

Local projects mean local benefits

To date, Smart Energy has purchased offsets from 14 projects across the Pacific Northwest, California, and Utah. We prioritize projects that support the development of biogas here in the Pacific Northwest. Thirteen of the projects capture methane emitted from cow manure or organic waste, preventing this potent greenhouse gas from entering the atmosphere and harnessing it as a renewable energy source. Another is an improved forest management project near Astoria, Oregon that facilitates natural forest growth, sequestering carbon emissions while also protecting critical wildlife habitat. Now that's Smart!

Read more about Smart Energy projects at **nwnatural.com/smart**

Not shown: Davis Landfill (Layton, UT)

OREGON PARKS FOREVER

Your enrollment benefits Oregon Parks Forever!

Oregon parks are an everyday reminder of what makes the Pacific Northwest special. These vast nature areas enhance our physical well-being, as well as planetary health. Oregon Parks Forever is dedicated to enriching the park experience in Oregon; now and for generations to come.

Thank you so much for joining the Smart Energy community!

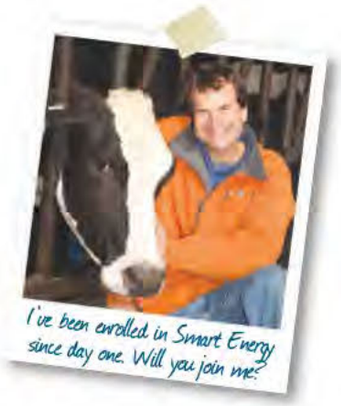
Mary

NW Natural®

250 SW Taylor St, Portland, Oregon 97204 • nwnatural.com

I am personally inviting you to join me in the Smart Energy community because it's up to each of us to take action to lower greenhouse gas emissions.

<Acct First Name> <Acct Last Name>
<Account address>
<City>, <State>, <Zip>



Dear [Acct First Name],

Believe it or not, it's part of my job to convince you to buy less natural gas.

As the Director of Environmental Management & Sustainability at NW Natural, I want you to "use less and offset the rest." You see, we want to help you use natural gas efficiently and lower the impact of your use. That's why, over 12 years ago, we were one of the first gas utilities in the country to create a voluntary carbon offset program for our customers.

We designed Smart Energy to be:

- ☑ Simple — included on your monthly bill
- ☑ Affordable — the Average Home cost is just $5.50 a month
- ☑ High Quality — verified offsets that benefit the environment

And as we were developing the program, over 80% of the customers we asked said they'd be in favor of something like Smart Energy. Clearly a lot of you think it's a great idea — as of today, over 57,000 people have signed up! Thanks to this high customer participation, Smart Energy is not only one of the first programs of its kind but has also made a huge impact in reducing carbon emissions. But you're not enrolled yet.

I'd like you to be part of Smart Energy. Please join me! Enroll by June 26, 2020, and we'll make a $10 donation to Oregon Parks Forever.[1]

Thanks,

Bill Edmonds

Bill Edmonds, Director Environmental Management & Sustainability

PS: We have to do more than hope to achieve lower carbon emissions; we have to take action together. That's why I am personally asking you to join Smart Energy today!

[1] NW Natural may make additional donations through its corporate philanthropy program or other charitable campaigns.

When you enroll in Smart Energy...

The carbon emissions from your natural gas use will be offset

through projects that reduce, or prevent the release of, greenhouse gases

located in the Pacific Northwest, California, and Utah.

Take action to lower your emissions.

Enroll in Smart Energy today!

SMART ENERGY.

It's easy to enroll online at nwnatural.com/smart using code <TrkCd>

MICRO-PERF

YES! I'm ready to make a difference. Please enroll me in Smart Energy.

I want to offset the carbon emissions from natural gas use for:

☐ **Average Home** - $5.50 per month[2] ☐ **Climate Neutral** - $0.10486 per therm used each month[3]

Signature _____ Date _____

Please sign and return this form in the postage-paid envelope provided.

You may opt out or change your program option at any time without penalty. The amount of your selected option will be added to your bill each month. The Public Utility Commission of Oregon and the Washington Utilities and Transportation Commission oversee Smart Energy and authorize its rates. The Climate Trust, an unaffiliated nonprofit, verifies and retires quality offsets on behalf of the program. To make participating customers carbon neutral, The Climate Trust may enter into contracts which may produce greenhouse gas emission reductions two or more years into the future.

[2] Based on the annual system average therm use of NW Natural residential customers; 630 therms each (3.7 tons annually).

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<TrkCd>

<Account First Name_Account Last Name>
<account number>

NW Natural®

250 SW Taylor St, Portland, Oregon 97204 • nwnatural.com

[First Name], you may be able to enroll in Smart Energy for less than the average residential customer!

<Acct First Name> <Acct Last Name>
<Account address>
<City>, <State>, <Zip>

Congratulations, [First Name]! You're doing an incredible job using less natural gas! As the Director of Environmental Management & Sustainability at NW Natural, I encourage customers to "use less and offset the rest." But you're already using less than the average NW Natural customer. So, today, I'm writing to invite you to make your natural gas use "Climate Neutral" with Smart Energy.

When you enroll in Smart Energy, the carbon emissions from your natural gas use will be offset through projects in the Pacific Northwest, California, and Utah that reduce, or prevent the release of, greenhouse gases. When you sign up to be "Climate Neutral," you offset 100% of your home's natural gas use.

Because your natural gas use is so low, [First Name], you can enroll for less! Based on 12 months of your natural gas use, your Smart Energy participation would look something like this:

Your natural gas use comes to, on average[1]:		Your estimated average cost to participate would be[2]:
[MonthTherms] therms per month	← Your Home →	**[MonthCost] per month**

The average NW Natural customer uses[3]: **52.5 therms/month**
The "Average Home" option cost to participate: **$5.50/month**

Your participation could come to [Difference] less than the Average NW Natural Home!

I've been enrolled in Smart Energy since day one. I hope you'll join me!

Thanks,

Bill Edmonds, Director Environmental Management & Sustainability

PS: [First Name], you're doing a great job using less natural gas. Take the next step to offset the rest. Enroll in Smart Energy today!

It's easy to enroll online at nwnatural.com/smart using code <TrkCd>

Enroll by June 26, 2020, and we'll make a $10 donation to Oregon Parks Forever![4]

OREGON PARKS FOREVER 25TH ANNIVERSARY

YES! I'm ready to be Climate Neutral. Please enroll me in Smart Energy.

I want to offset 100% of my CO_2 emissions from my natural gas use at $0.10486 per therm used each month.

Signature _____ Date _____

Please sign and return this form in the postage-paid envelope provided.

NW Natural will add $0.10486 per therm to your monthly bill to offset 100 percent of the carbon emissions from your home's natural gas use. Your actual Smart Energy participation cost will vary monthly based on your usage. Smart Energy also offers the option to offset the carbon emissions from natural gas use for the "Average Home," based on the annual system average therm use of NW Natural residential customers, for $5.50 a month. You may opt out or change your program option at any time without penalty. The Public Utility Commission of Oregon and the Washington Utilities and Transportation Commission oversee Smart Energy and authorize its rates. The Climate Trust, an unaffiliated nonprofit, verifies and retires quality offsets on behalf of the program.

To make participating customers carbon neutral, The Climate Trust may enter into contracts which may produce greenhouse gas emission reductions two or more years into the future.

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[2] Your average monthly therm use x $0.10486 per therm; actual cost will vary based on actual therms used and are not guaranteed to remain below the cost of the "Average Home" option.
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<TrkCd>

<Account First Name_Account Last Name>
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Thanks,

Bill Edmonds, Director Environmental Management & Sustainability

PS: [First Name], you're doing a great job using less natural gas. Take the next step to offset the rest. Enroll in Smart Energy today!

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<TrkCd>

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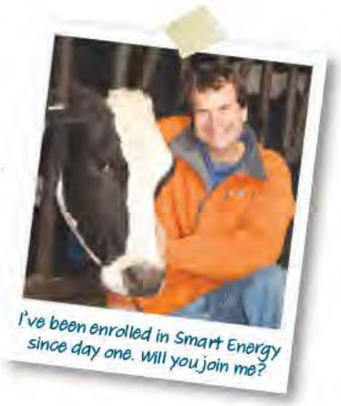
[Acct First Name], I'm personally inviting you to join me and over [City Participants] of your neighbors in [Premise City] in helping fight climate change.



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<TrkCd>

<Account First Name_Account Last Name>
<account number>

How Smart Energy Works

Smart Energy Helps You Reduce Your Carbon Footprint

1. When you enroll in Smart Energy, the carbon emissions from your natural gas use are offset.
2. Smart Energy purchases offsets from projects that reduce, or prevent the release of, greenhouse gases.
3. Offsets are purchased from projects like biodigesters on dairy farms that capture methane from cow manure, keeping the greenhouse gas from entering the atmosphere.
4. The captured methane can be used as an on-demand renewable energy source.

SMART ENERGY. Use less. Offset the rest. + THE CLIMATE TRUST = Quality Offsets

NW Natural has contracted with The Climate Trust®, an internationally recognized nonprofit located in Portland, Oregon, to ensure that only verified high-quality offsets are purchased and retired for the Smart Energy program.

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25TH ANNIVERSARY

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Thank you so much for joining the Smart Energy community!

Bill

NW Natural®

Rates & Regulatory Affairs
ADV 1502
Schedule 400- Smart Energy Program
Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 CUB DR 6

For the most recent three years where data is available please provide:

a. a list of expenditures for the 30% that goes towards administration and education

b. copies of all educational and marketing material produced with these funds.

Response:

a. The table below provides the expenditures for the most recent three years, as reported in the Smart Energy annual reports filed in docket RG-2. Please see Confidential Attachment 5 for a breakdown of the Marketing & Administration costs. Note that the Supply costs listed, which were paid from the 30% administration and marketing costs, are in addition to the 70% of participant contributions that was transferred to The Climate Trust for the purchase of carbon offsets.

	2020	2021	2022
Marketing & Administration	$1,109376.47	$1,364,900.00	$1,487,148.03
Supply	$22,920.00	$1,150.00	$152,153.52
	$1,132,296.47	$1,366,050.00	$1,639,301.55

b. Please see ADV 1502 CUB DR 6 Attachments 1-4. Educational and marketing material is also available on the Smart Energy website at https://www.nwnatural.com/about-us/carbon-offset-program/about-smart-energy.

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Rates & Regulatory Affairs

ADV 1502

Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 OPUC IR 1

01.Please explain how the Company identified the Wasatch Resource Recovery Project as the appropriate project for a voluntary project and other projects as appropriate for serving all customers with RNG (for example the Lexington Project and Dakota City Projects). a. Please explain how the Company determined that this project should be used for a voluntary program as opposed to SB 98 or CPP purposes?
b. Please explain how the costs and risks of this project differ from the RNG projects procured to serve all customers in Oregon, such as the Lexington and Dakota RNG Projects and provide any workpapers supporting this explanation in an excel format.

Response:

1.a. The Wasatch[1] project is being used for SB 98 and CPP purposes, as well as an additional volume for Smart Energy. We expect the RTCs delivered within the Smart Energy Program will be used for compliance under the CPP.

NW Natural was negotiating with BP to purchase RTCs from the Wasatch project for delivery to Oregon customers under SB 98 leading up to the filing of the 2021 – 2022 PGA. In April 2021, the Company determined that Wasatch was the least cost RNG resource available for immediate delivery to customers, and later signed an agreement to purchase the RTCs from Wasatch in Dec. 2021 after some administrative delay by BP.

Throughout 2021 our discussions with BP were to purchase 200 RTCs/day from the project, and thus assumed 200 RTCs/day in our 2021 – 2022 PGA. After the PGA was filed, but before we signed the definitive agreement, BP offered us an additional one-time purchase of 30,000 RTCs from the project. We knew the Smart Energy program was being updated for Washington, and would be updated for Oregon, and that the program was looking for low-cost RTCs to use as supply. We discussed this resource opportunity with the Smart Energy program, and they agreed that this looked like the least-cost RNG resource available for them to use in the Smart Energy program. The

[1] It may be helpful to know that this project was first called “SEV” in some earlier materials, reflecting the name of the broker we were working with, Sustainable Energy Ventures. It has been referred to more recently as both “Wasatch,” reflecting the location, and “BP,” reflecting our contractual counterparty.

resource fit within the parameters of the voluntary program's resource procurement policies.

b. The decision to pursue the Lexington project for Oregon customers was made in November 2020, before the Wasatch project was considered, and the Dakota City project was not ready for decision in April 2021, when we made our decision to pursue Wasatch. So these projects were not compared with one another. Additionally, our evaluation methodology was evolving throughout this period, so we made comparative decisions across our current potential portfolios using different metrics for each of the projects.

At decision-making, the projects looked like this:

	Risk-Adjusted Incremental Cost, Time of Decision	**Average RTC Cost, Time of Decision**
Dakota City	$5.76/mmbtu	
Lexington		$9/RTC
Wasatch	$8.86/mmbtu	$12/RTC

Lexington and Dakota City were both development projects, so risks associated with capital costs and operating costs, for instance, would have been more substantial. The contract for Wasatch was a fixed-price contract, so there was no cost risk embedded in the contract. The Wasatch contract requires the project to deliver us all RNG produced, but there is no minimum contract amount. Our counterparty analysis found that the risk associated with BP was low.

NW Natural®

Rates & Regulatory Affairs

ADV 1502

Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 OPUC IR 2

02. Did the Company use their RNG workbook to evaluate the Wasatch Resource Recovery Project? If yes, please provide the workbook. If no, please explain why.

Response:

At the time of decision-making in April 2021 on Wasatch for delivery to customers under SB 98, the Company did use the RNG Workbook to evaluate the Wasatch Resource Recovery project, provided as Confidential ADV 1502 OPUC IR 2 Attachment 1. The counterparty later offered the additional 30,000 RTCs after the decision was made, which were then offered to Smart Energy.

NW Natural®

Rates & Regulatory Affairs

ADV 1502

Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 OPUC IR 3

03. How will the RNG used to serve Smart Energy customers impact the Company's position with regard to: a. CPP compliance?
b. SB 98 targets?

Response:

The renewable natural gas procured for Smart Energy customers participating in the new program would be complimentary to CPP compliance, but additional to SB98 associated procurement. The utility is the point of regulation for all energy delivered to end use customers, including those voluntarily procuring RNG resources.

NW Natural®

Rates & Regulatory Affairs

ADV 1502

Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 OPUC IR 4

04. Is the Wasatch Resource Recovery Project included in the analysis or otherwise discussed in the Company's IRP or IRP work papers under review in Docket No. LC 79? If yes, please explain where information of this is found in the IRP and work papers.

Response:

The Wasatch Resource Recovery Project is discussed in *Chapter 6, Section 6.4.8* of the 2022 IRP. Details for this project are outlined under "offtake #1" in this section. *Figure 6.16: Current RNG Contracts*, shows the expected volume from the project at the time of IRP modeling. Inputs for the PLEXOS model for this project can be found in the "Workpapers/ 2022 IRP PLEXOS Input Data Files.zip/Supply_Must Take Daily Supplies.csv" and are also summarized in the results file "Workpapers_2022 IRP Scenario Results.xlsx" on the "Fixed Contract tab". The Wasatch Resource Recovery Project is referenced in LC 79 OPUC DR 16.

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Rates & Regulatory Affairs

ADV 1502

Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 OPUC IR 5

05.How will the Company allocate RTCs procured from the Wasatch Resource Recovery Project between participants in Oregon and Washington? Please provide breakdown by customer classes.

Response:

Similar with the way the Smart Energy program handles offsets today, the program does not distinguish either the mitigation supply (i.e., carbon offsets or RTCs) or the demand (i.e., the therms of gas usage to be mitigated) by state or customer class, except for any bilateral commercial/industrial agreements. Mitigation resources are obtained for the Smart Energy program as a whole and are retired for Smart Energy participants based on each participant's funding. Total Smart Energy program charges billed, less an allowance for uncollectibles, is converted to therms of demand, which is then converted into the needed volume of mitigation resource (offsets or RNG). For example, a Smart Energy residential participant using 528 therms per year would fund the mitigation of 506.88 therms with carbon offsets (2.69 metric tons) and 21.12 therms with RNG.

Oregon Public Utility Commission

e-FILING REPORT COVER SHEET

COMPANY NAME:

DOES REPORT CONTAIN CONFIDENTIAL INFORMATION? ■ No ☐ Yes If yes, submit a redacted public version (or a cover letter) by email. Submit the confidential information as directed in OAR 860-001-0070 or the terms of an applicable protective order.

Select report type: ☐ RE (Electric) ■ RG (Gas) ☐ RW (Water) ☐ RT (Telecommunications)
☐ RO (Other, for example, industry safety information)

Did you previously file a similar report? ☐ No ■ Yes, report docket number: RG 2

Report is required by: ☐ OAR
☐ Statute
☐ Order
Note: A one-time submission required by an order is a compliance filing and not a report (file compliance in the applicable docket)
☑ Other Portfolio Options Committee requested report
(For example, federal regulations, or requested by Staff)

Is this report associated with a specific docket/case? ☐ No ■ Yes, docket number: RG 2

List Key Words for this report. We use these to improve search results.

Smart Energy, reconciliation, POC, Portfolio Options Committee

Send the completed Cover Sheet and the Report in an email addressed to PUC.FilingCenter@puc.oregon.gov

Send confidential information, voluminous reports, or energy utility Results of Operations Reports to PUC Filing Center, PO Box 1088, Salem, OR 97308-1088 or by delivery service to 201 High Street SE Suite 100, Salem, OR 97301.

Print

NW Natural®

250 SW Taylor Street
Portland, OR 97204

503-226-4211
nwnatural.com

March 29, 2023

VIA ELECTRONIC FILING

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

Re: RG 2 - NW Natural's 2022 Smart Energy™ Reconciliation Report

Northwest Natural Gas Company, dba NW Natural ("NW Natural" or "Company"), files herewith its 2022 Smart Energy™ Reconciliation Report for the program year January 1, 2022 through December 31, 2022. The Reconciliation Report has been provided in response to a request from the Portfolio Options Committee, which oversaw and advised the Company's offset program when it was active. The Company will continue to provide the Reconciliation Report in the interest of transparency and support of the Smart Energy™ program.

Please address any correspondence on this matter to me with copies to the following:

eFiling
Rates & Regulatory Affairs
NW Natural
250 SW Taylor Street
Portland, Oregon 97204
Telephone: (503) 610-7330
eFiling@nwnatural.com

Sincerely,

NW Natural

/s/ Rebecca Trujillo

Rebecca Trujillo
Regulatory Consultant
(503) 610-7326

Enclosure

Smart Energy Product Reporting

Demand Reconciliation

For the period of January 1, 2022 – December 31, 2022

Table 1: Participating Customer Billings & Resulting Greenhouse Gas Offsets

Calendar Year	Smart Energy Funds Billed	Therms to be offset	Obligation metric tons
2022	$4,851,915.37[1]	46,270,411.69	245,557.56

11.7 pounds per therm based on the recognized standard of U.S. Energy Information Administration
188.43 therms per metric ton

Table 2: Participating Customer Billings & Resulting Greenhouse Gas Offsets and Renewable Natural Gas (RTC[2])

Calendar Year	Smart Energy Funds Billed	Therms to be mitigated	Obligation Offsets mt	Obligation RTCs
2022	$15,313.67[3]	100,443.85	511.74	401.78

Total emissions mitigated: 246,090.62 metric tons CO_2e

[1] Collections, net of uncollectable allowance
[2] Transacted with Renewable Thermal Certificates
[3] Collections, net of uncollectable allowance

Smart Energy Product Reporting

Supply Reconciliation

For the period of January 1, 2022 – December 31, 2022

Table 3: Offset Obligations & Retirements

Calendar	Offset Activity	Metric Tons
Year	Obligations	358,810
2022	Retirements	552,027

Table 4: Renewable Natural Gas Obligations & Retirements

Calendar	RNG Activity	RTC[1]
Year	Obligations	401.78
2022	Retirements	402

[1] Renewable Thermal Certificate

Transaction Confirmation

M-RETS Renewable Thermal

Date: 01-31-2023

M-RETS Organization: NW Natural

Retiring 402 active RTCs

Account	ID	Project	Fuel Type	Vintage	Location	Quantity	CP Name	CP Tool	CP Carbon Intensity	Serial Number
Smart Energy	66D5CE9B-0AC9	Wasatch Resource Recovery, LLC	Renewable Natural Gas	2020-12-01	UT	402				T3831-Utah-12-2020-1329FEF6-3571-3972

Retirement reason:

Voluntary - Beneficial Ownership

Retirement reason details:

Retired for: N/A

Period: 2022

Quarter: Q4

Notes: On behalf of NW Natural Smart Energy Customers

to this retirement account

Smart Energy Retirement

M-RETS hereby declares this transaction confirmation shall serve as proof that the above transaction was completed on the date listed.

Smart Energy Offset Project Obligations

Totals By Project

Project	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
Bettencourt Dairy - B6	131,914	145,408.80	131,914	145,408.80	0	0.00
City of Astoria - Bear Creek	100,000	110,230.00	100,000	110,230.00	0	0.00
Castelanelli Brothers Dairy - Castelanelli	11,295	12,450.48	11,295	12,450.48	0	0.00
Element Markets - Davis LFG	403,920	445,241.02	416,147	458,718.84	12,227	13,477.82
ClimeCo LLC - Everett Composting	42,085	46,390.29	42,763	47,137.65	678	747.36
Great Bear Carbon Credit Corporation - Great Bear Haida Gwaii	137,500	151,566.25	137,500	151,566.25	0	0.00
Great Bear Carbon Credit Corporation - Great Bear North & Central-Mid Coast	137,500	151,566.25	137,500	151,566.25	0	0.00
Revolution Energy Solutions - Lochmead Farms	17,199	18,958.46	17,199	18,958.46	0	0.00
Farm Power - Lynden	20,000	22,046.00	20,000	22,046.00	0	0.00
Farm Power - Misty Meadow	119,134	131,321.41	101,346	111,713.70	(17,788)	(19,607.71)
J.R. Simplot - Moses Lake	126,476	139,414.50	128,320	141,447.14	1,844	2,032.64
J.R. Simplot - Moses Lake 2	155,037	170,897.29	125,037	137,828.29	(30,000)	(33,069.00)
Revolution Energy Solutions - Oak Lea	11,507	12,684.16	11,507	12,684.17	0	0.01
Farm Power - Rexville	71,246	78,534.43	71,246	78,534.47	0	0.04
Farm Power - Rexville 2	9,095	10,025.41	9,095	10,025.42	0	0.01
Roseburg LFG Energy - Roseburg LFG	27,405	30,208.53	27,405	30,208.53	0	0.00
Shaan-Seet, Incorporated - Shaan Seet IFM	80,000	88,184.00	80,000	88,184.00	0	0.00
Farm Power - Tillamook	94,803	104,501.35	75,872	83,633.71	(18,931)	(20,867.64)
TMF Biofuels - TMF Biofuels	15,000	16,534.50	15,000	16,534.50	0	0.00
Mass Energy Works - Van Warmerdam	30,740	33,884.70	30,740	33,884.70	0	0.00
Intrepid Technology Resources - Whitesides Dairy	17,067	18,812.95	17,067	18,812.95	0	0.00
Port Blakely - Winston Creek IFM	150,000	165,345.00	150,000	165,345.00	0	0.00
Total:	**1,908,923**	**2,104,205.78**	**1,856,953**	**2,046,919.29**	**(51,970)**	**(57,286.44)**

Smart Energy Offset Vintage Obligations

Totals By Project and Authorization

Begin Date: 1/1/2022 End Date: 12/31/2022

Element Markets - Davis LFG, Site Location: Layton UT — Project Type: LFG

AU-EM-DLG-1.3 9/15/2022	Vintage	Authorized		Retired		Balance	
		Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
	2021	16,000	17,636.80	18,030	19,874.47	2,030	2,237.67
	Total Auth:	**16,000**	**17,636.80**	**18,030**	**19,874.47**	**2,030**	**2,237.67**

AU-EM-DLG-1.4 12/9/2022	Vintage	Authorized		Retired		Balance	
		Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
	2021	2,595	2,860.47	2,595	2,860.47	0	0.00
	Total Auth:	**2,595**	**2,860.47**	**2,595**	**2,860.47**	**0**	**0.00**

Project Total:	**18,595**	**20,497.27**	**20,625**	**22,734.94**	**2,030**	**2,237.67**

ClimeCo LLC - Everett Composting, Site Location: Everett WA — Project Type: OWC

AU-CG-EC-1.1 9/28/2022	Vintage	Authorized		Retired		Balance	
		Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
	2020	20,145	22,205.83	20,145	22,205.83	0	0.00
	2021	21,940	24,184.46	22,618	24,931.82	678	747.36
	Total Auth:	**42,085**	**46,390.29**	**42,763**	**47,137.65**	**678**	**747.36**

Project Total:	**42,085**	**46,390.29**	**42,763**	**47,137.65**	**678**	**747.36**

Great Bear Carbon Credit Corporation - Great Bear Haida Gwaii, Site Location: B — Project Type: IFM

AU-GB-HG-1.1 7/28/2022	Vintage	Authorized		Retired		Balance	
		Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
	2017	137,500	151,566.25	137,500	151,566.25	0	0.00
	Total Auth:	**137,500**	**151,566.25**	**137,500**	**151,566.25**	**0**	**0.00**

Project Total:	**137,500**	**151,566.25**	**137,500**	**151,566.25**	**0**	**0.00**

Smart Energy Offset Vintage Obligations

Totals By Project and Authorization

Begin Date: 1/1/2022 End Date: 12/31/2022

Great Bear Carbon Credit Corporation - Great Bear North & Central-Mid Coast, S — Project Type: IFM

AU-GB-NCC-1.1 7/28/2022 Vintage	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
2017	137,500	151,566.25	137,500	151,566.25	0	0.00
Total Auth:	**137,500**	**151,566.25**	**137,500**	**151,566.25**	**0**	**0.00**
Project Total:	**137,500**	**151,566.25**	**137,500**	**151,566.25**	**0**	**0.00**

J.R. Simplot - Moses Lake 2, Site Location: Moses Lake WA — Project Type: OWD

AU-JRS-ML-2.4.3 4/29/2022 Vintage	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
2021	13,000	14,329.90	13,000	14,329.90	0	0.00
Total Auth:	**13,000**	**14,329.90**	**13,000**	**14,329.90**	**0**	**0.00**
Project Total:	**13,000**	**14,329.90**	**13,000**	**14,329.90**	**0**	**0.00**

Farm Power - Rexville 2, Site Location: Mt. Vernon WA — Project Type: Dairy

AU-FP-RX-2.1 2/15/2022 Vintage	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
2019	3,041	3,352.09	3,041	3,352.09	0	0.00
2020	6,054	6,673.32	6,054	6,673.32	0	0.00
Total Auth:	**9,095**	**10,025.41**	**9,095**	**10,025.42**	**0**	**0.01**
Project Total:	**9,095**	**10,025.41**	**9,095**	**10,025.42**	**0**	**0.01**

Smart Energy Offset Vintage Obligations

Totals By Project and Authorization

Begin Date: 1/1/2022 End Date: 12/31/2022

Roseburg LFG Energy - Roseburg LFG, Site Location: Roseburg OR — Project Type: LFG

DA-RE-RLG-1.1T 12/9/2022 Vintage	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
2021	(2,595)	(2,860.47)	0	0.00	2,595	2,860.47
Total Auth:	**(2,595)**	**(2,860.47)**	**0**	**0.00**	**2,595**	**2,860.47**
Project Total:	**(2,595)**	**(2,860.47)**	**0**	**0.00**	**2,595**	**2,860.47**

Farm Power - Tillamook, Site Location: Tillamook OR — Project Type: Dairy

AU-FP-TK-1.2.3 10/21/2022 Vintage	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
2019	3,630	4,001.35	3,630	4,001.35	0	0.00
Total Auth:	**3,630**	**4,001.35**	**3,630**	**4,001.35**	**0**	**0.00**
Project Total:	**3,630**	**4,001.35**	**3,630**	**4,001.35**	**0**	**0.00**

Grand Total:	**358,810**	**395,516.25**	**364,113**	**401,361.76**	**5,303**	**5,845.51**

Smart Energy Offset Projects

Retirement Detail (1/1/2022 - 12/31/2022)

Element Markets - Davis LFG | **Site Location: Layton** | **Project Type: LFG**

Estimated Total Project Volume	
Metric Tonnes	Short Tons
400,000	**440,920.00**

Standard: Climate Action Reserve | Registry: Climate Action Reserve | Duration: 10 years

Protocol: 5.0 | Crediting Period: Second | Greenhouse Gas: Methane

Project Authorizations	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
Buyer: Smart Energy	**403,920**	**445,241.02**	**416,147**	**458,718.84**	**12,227**	**13,477.82**

Project Retirements

Vintage	Reporting Start Date	Reporting End Date	Verifier	Verification Start Date	Verification End Date	Metric Tonnes	Short Tons	Retirement Effective Date
2021	1/1/2021	12/31/2021	SCS Global Services	5/31/2022	7/18/2022	116,000	127,866.80	9/23/2022
	Serial Number: CAR-1-US-473-4-963-UT-2021-7125-1 to 116000							
	Registry Listing URL: https://thereserve2.apx.com/mymodule/reg/TabProjectEmissions.asp?r=111&ad=Prpt&act=update&type=PRO&aProj=pub&tablename=cr&id1=473							
2021	1/1/2021	12/31/2021	SCS Global Services	5/31/2022	7/18/2022	2,030	2,237.67	12/16/2022
	Serial Number: CAR-1-US-473-4-963-UT-2021-7125-118596 to 120625							
	Registry Listing URL:							
2021	1/1/2021	12/31/2021	SCS Global Services	5/31/2022	7/18/2022	2,595	2,860.47	12/16/2022
	Serial Number: CAR-1-US-473-4-963-UT-2021-7125-116001 to 118595							
	Registry Listing URL:							

ClimeCo LLC - Everett Composting	Site Location: Everett	Project Type: OWC

Estimated Total Project Volume	
Metric Tonnes	Short Tons
200,000	**220,460.00**

Standard: Climate Action Reserve
Registry: Climate Action Reserve
Duration: 10 years
Protocol: 1.1
Crediting Period: Second
Greenhouse Gas: Methane

Project Authorizations	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
Buyer: Smart Energy	**42,085**	**46,390.29**	**42,763**	**47,137.65**	**678**	**747.36**

Project Retirements

Vintage	Reporting Start Date	Reporting End Date	Verifier	Verification Start Date	Verification End Date	Metric Tonnes	Short Tons	Retirement Effective Date
2020	1/1/2020	12/31/2020	Ruby Canyon Engineering	11/16/2021	7/6/2022	20,145	22,205.83	9/27/2022
	Serial Number: CAR-1-US-825-34-386-WA-2020-7045-1 to 20145							
	Registry Listing URL: https://thereserve2.apx.com/mymodule/reg/TabProjectEmissions.asp?r=111&ad=Prpt&act=update&type=PRO&aProj=pub&tablename=cr&id1=825							
2021	1/1/2021	12/31/2021	Ruby Canyon Engineering	7/27/2022	10/19/2022	22,618	24,931.82	12/13/2022
	Serial Number: CAR-1-US-825-34-386-WA-2021-7314-1 to 22618							
	Registry Listing URL:							

Great Bear Carbon Credit Corporation - Great Bear Haida Gwaii

Site Location: BC | **Project Type: IFM**

Estimated Total Project Volume	
Metric Tonnes	Short Tons
137,500	**151,566.25**

Standard: BC Carbon Offset Program | Registry: BC Carbon Registry | Duration: 10 years

Protocol: Protocol for the Creation of Forest Carbon Offsets in British Columbia (BC | Crediting Period: Initial | Greenhouse Gas: CO2

Project Authorizations	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
Buyer: Smart Energy	**137,500**	**151,566.25**	**137,500**	**151,566.25**	**0**	**0.00**

Project Retirements

Vintage	Reporting Start Date	Reporting End Date	Verifier	Verification Start Date	Verification End Date	Metric Tonnes	Short Tons	Retirement Effective Date
2017	1/1/2016	12/31/2017	KPMG Performance Registrar Inc.	2/20/2019	7/30/2019	137,500	151,566.25	8/9/2022

Serial Number: BCO-BCO-CA-104000000011559-01012017-31122017-8323431-8460930-MER-0-P

Registry Listing URL: https://carbonregistry.gov.bc.ca/br-reg/public/bc/index.jsp?entity=retirement&sort=account_name&dir=ASC&start=0&entity_domain=BC&acronym=&standardId=&categoryId=&unitClass=

Great Bear Carbon Credit Corporation - Great Bear North & Central

Site Location: BC | **Project Type: IFM**

Estimated Total Project Volume	
Metric Tonnes	Short Tons
137,500	**151,566.25**

Standard: BC Carbon Offset Program | Registry: BC Carbon Registry | Duration: 25 years

Protocol: Protocol for the Creation of Forest Carbon Offsets in British Columbia (BC | Crediting Period: Initial | Greenhouse Gas: CO2

Project Authorizations	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
Buyer: Smart Energy	**137,500**	**151,566.25**	**137,500**	**151,566.25**	**0**	**0.00**

Project Retirements

Vintage	Reporting Start Date	Reporting End Date	Verifier	Verification Start Date	Verification End Date	Metric Tonnes	Short Tons	Retirement Effective Date
2017	1/1/2017	12/31/2019	KPMG Performance Registrar Inc.	1/22/2021	12/6/2021	137,500	151,566.25	8/9/2022

Serial Number: BCO-BCO-CA-104000000012798-01012017-31122017-11999070-12136569-MER-0-P

Registry Listing URL: https://carbonregistry.gov.bc.ca/br-reg/public/bc/index.jsp?entity=retirement&standardId=&unitClass=&sort=retirement_date&dir=DESC&name=great%20bear

Farm Power - Misty Meadow	Site Location: Tillamook	Project Type: Dairy

Estimated Total Project Volume	
Metric Tonnes	Short Tons
93,100	**102,624.13**

Standard: Climate Action Reserve
Registry: Climate Action Reserve
Duration: 10 years
Protocol: U.S. Livestock Project Protocol, Version 3.0
Crediting Period: Initial
Greenhouse Gas: Methane

Project Authorizations	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
Buyer: Smart Energy	**119,134**	**131,321.41**	**101,346**	**111,713.70**	**(17,788)**	**(19,607.71)**

Project Retirements

Vintage	Reporting Start Date	Reporting End Date	Verifier	Verification Start Date	Verification End Date	Metric Tonnes	Short Tons	Retirement Effective Date
2020	1/1/2020	12/31/2021	Ruby Canyon Engineering	3/24/2021	9/22/2022	12,212	13,461.29	10/25/2022

Serial Number: CAR-1-US-996-5-212-OR-2020-7248-1 to 12212

Registry Listing URL:

RG 2 - NWN 2022 Smart Energy Reconciliation Report
ADV 1502 OPUC IR 6 Attachment 1
14 of 19

J.R. Simplot - Moses Lake 2	Site Location: Moses Lake	Project Type: OWD

Estimated Total Project Volume	
Metric Tonnes	Short Tons
196,000	**216,050.80**

Standard: Verified Carbon Standard
Protocol:
Registry: Markit
Crediting Period: Second
Duration: 7 years
Greenhouse Gas: Methane

Project Authorizations	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
Buyer: Smart Energy	**155,037**	**170,897.29**	**125,037**	**137,828.29**	**(30,000)**	**(33,069.00)**

Project Retirements

Vintage	Reporting Start Date	Reporting End Date	Verifier	Verification Start Date	Verification End Date	Metric Tonnes	Short Tons	Retirement Effective Date
2021	1/1/2021	12/31/2021	First Environment, Inc.	11/21/2021	3/25/2022	28,000	30,864.40	5/3/2022

Serial Number: 12799-451530646-451558645-VCS-VCU-260-VER-US-13-448-01012021-31122021-0

Registry Listing URL: https://registry.verra.org/app/search/VCS?programType=ISSUANCE&exactResId=448

Farm Power - Rexville 2	Site Location: Mt. Vernon	Project Type: Dairy

Estimated Total Project Volume	
Metric Tonnes	Short Tons
100,000	110,230.00

Standard: Climate Action Reserve
Registry: Climate Action Reserve
Duration: 10 years
Protocol: Climate Action Reserve Livestock Protocol
Crediting Period: Second
Greenhouse Gas: Methane

Project Authorizations	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
Buyer: Smart Energy	9,095	10,025.41	9,095	10,025.42	0	0.01

Project Retirements

Vintage	Reporting Start Date	Reporting End Date	Verifier	Verification Start Date	Verification End Date	Metric Tonnes	Short Tons	Retirement Effective Date
2019	8/12/2019	12/31/2019	Ruby Canyon Engineering	3/24/2021	11/24/2021	3,041	3,352.09	2/15/2022
	Serial Number: CAR-1-US-416-5-874-WA-2019-6742-1 to 3041							
	Registry Listing URL:							
2020	1/1/2020	8/11/2020	Ruby Canyon Engineering	3/24/2021	11/24/2021	6,054	6,673.32	2/15/2022
	Serial Number: CAR-1-US-416-5-874-WA-2020-6741-1 to 6054							
	Registry Listing URL:							

Roseburg LFG Energy - Roseburg LFG	Site Location: Roseburg	Project Type: LFG

Estimated Total Project Volume	
Metric Tonnes	Short Tons
200,000	**220,460.00**

Standard: Climate Action Reserve
Registry: Climate Action Reserve
Duration: 10 years
Protocol: Landfill Project Protocol version 3.0
Crediting Period: Initial
Greenhouse Gas: Methane

Project Authorizations	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
Buyer: Smart Energy	**27,405**	**30,208.53**	**27,405**	**30,208.53**	**0**	**0.00**

Project Retirements

Vintage	Reporting Start Date	Reporting End Date	Verifier	Verification Start Date	Verification End Date	Metric Tonnes	Short Tons	Retirement Effective Date
2021	1/1/2021	12/31/2021	SCS Global Services	8/30/2022	10/19/2022	12,179	13,424.91	12/5/2022

Serial Number: CAR-1-US-886-4-670-OR-2021-7349-1 to 12179

Registry Listing URL:

Shaan-Seet, Incorporated - Shaan Seet IFM	Site Location: Prince of Wales Island	Project Type: IFM

Estimated Total Project Volume	
Metric Tonnes	Short Tons
654,347	**721,286.70**

Standard: American Carbon Registry
Registry: Amercan Carbon Registry
Duration: 20 years
Protocol: ACR Standard Version 6
Crediting Period: Initial
Greenhouse Gas: CO2

Project Authorizations	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
Buyer: Smart Energy	**80,000**	**88,184.00**	**80,000**	**88,184.00**	**0**	**0.00**

Project Retirements

Vintage	Reporting Start Date	Reporting End Date	Verifier	Verification Start Date	Verification End Date	Metric Tonnes	Short Tons	Retirement Effective Date
2020	1/10/2020	1/9/2021	S&A Carbon	11/4/2021	1/27/2022	40,000	44,092.00	2/23/2022

Serial Number: ACR-US-534-2020-1447-1 to 40000

Registry Listing URL: https://acr2.apx.com/mymodule/reg/TabDocuments.asp?r=111&ad=Prpt&act=update&type=PRO&aProj=pub&tablename=doc&id1=534

Farm Power - Tillamook	Site Location: Tillamook	Project Type: Dairy

Estimated Total Project Volume	
Metric Tonnes	Short Tons
88,400	**97,443.32**

Standard: Climate Action Reserve
Registry: Climate Action Reserve
Duration: 10 years
Protocol: U.S. Livestock Project Protocol, Version 3.0
Crediting Period: Initial
Greenhouse Gas: Methane

Project Authorizations	Authorized		Retired		Balance	
	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons	Metric Tonnes	Short Tons
Buyer: Smart Energy	**94,803**	**104,501.35**	**75,872**	**83,633.71**	**(18,931)**	**(20,867.64)**

Project Retirements

Vintage	Reporting Start Date	Reporting End Date	Verifier	Verification Start Date	Verification End Date	Metric Tonnes	Short Tons	Retirement Effective Date
2019	1/1/2019	12/31/2019	First Environment, Inc.	3/24/2020	6/1/2020	3,630	4,001.35	10/26/2022
	Serial Number: CAR-1-US-988-5-212-OR-2019-6085-10084 to 13713							
	Registry Listing URL:							
2020	1/1/2020	12/31/2020	Ruby Canyon Engineering	3/24/2021	9/16/2022	8,523	9,394.90	10/25/2022
	Serial Number: CAR-1-US-988-5-212-OR-2020-7206-1 to 8523							
	Registry Listing URL:							

NW Natural®

Rates & Regulatory Affairs

ADV 1502

Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 OPUC IR 6

06. When will the Company retire RTCs on behalf of participating customers and does the Company plan to provide documentation to the Oregon Public Utility Commission or other regulatory body?

Response:

RTCs will be retired annually for the previous calendar year. RTCs for calendar year 2022 demand were retired in January 2023 from inventory procured in 2022. The timing of retirement may occur throughout the year and will depend on total volume of demand, existing inventory and time needed to procure additional RTCs if inventory is insufficient. The Company plans to provide documentation to the Commission in its annual report filed in docket RG 2, most recently filed on March 29, 2023 (see ADV 1502 OPUC IR 6 Attachment 1).

NW Natural®

Rates & Regulatory Affairs

ADV 1502

Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 OPUC IR 7

07. Did the Company perform customer surveys or other market research to understand customer demand for a voluntary product that provides RNG? If yes, please provide any reports on the results of that research.

Response:

Please see Confidential ADV 1502 OPUC IR 7 Attachment 1.

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Rates & Regulatory Affairs

ADV 1502

Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 OPUC IR 8

08. Please explain why the percentage of renewable natural gas will vary depending on market conditions.

Response:

To provide price certainty for customers the percentage will be adjusted down or up if the cost of RNG increases or decreases, respectively, to avoid annual price changes to the program cost.

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Rates & Regulatory Affairs

ADV 1502

Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 OPUC IR 9

Will the RNG be purchased at a fixed price from Wasatch Resource Recovery?
a. Please explain how the Company plans to ensure at least one percent renewable natural gas if the program change is approved.
b. Please explain the increase in pricing when including RNG as a Smart Energy mitigation resource as compared to the Company only utilizing carbon offsets.

Response:

Yes. In 2022, 20,000 RTCs were purchased at a fixed price and delivered to the Smart Energy M-RETS account. In January 2023, 402 RTCs were retired for Washington customers enrolled in the Smart Energy Program with RNG. This demand was from Washington customers enrolled after June 30, 2022.

a. As noted above, total Smart Energy program billings (less an allowance for uncollectibles) will be used to calculate total therms of demand to be mitigated. If RTC cost at four percent exceeds the demand funds for RNG the percentage will be decreased. Internal controls will be implemented to ensure not less than one percent of RNG will be used to mitigate the therms of demand. For each reporting year the actual percentage of RNG will be included in the Annual PUC Supply and Demand Reconciliation report filed each spring.

b. Currently, the cost of RNG RTCs is higher than the cost of offsets. In order to mitigate the usage of a Smart Energy participant by adding RNG, the price of the Smart Energy product needs to be increased. RNG is a nascent market with significant demand for limited inventory. Markets like the Low Carbon Fuel Standard in California that transact at a higher price, compete for much of the same supply as Smart Energy. RNG is nearly 60% of the total resource mitigation cost for the proposed new Smart Energy blended product and 100% of the price increase.

NW Natural®

Rates & Regulatory Affairs

ADV 1502

Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 OPUC IR 10

10. Please elaborate on why the Company proposes to lower the threshold limit from 100,000 to 50,000 therms for the Commercial Customer Class customers.

Response:

Commercial customers with aggregate therms equal to or greater than 50,000 are estimated to be less than three percent of total commercial accounts. Reducing the threshold allows a few more customers that have expressed interest in RNG and have specific requirements to address their objectives with a bilateral agreement.

NW Natural®

Rates & Regulatory Affairs

ADV 1502

Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 OPUC IR 11

11. Please explain how the Smart Energy Program offering renewable natural gas will be accounted for separately from the RNG that the Company acquires through the Purchase Gas Adjustment and Schedule 198.

Response:

As is the case today, all participant funding and costs of the Smart Energy program are recorded in a separate Smart Energy balancing account. In addition, the Smart Energy program has its own account on M-RETS wherein Smart Energy program RTCs purchased are delivered and retired. For example, please refer to the annual Demand and Supply Reconciliation report filed for calendar year 2022 that included the retirement confirmation – that showed the account, serial numbers, and retirement reason details – on behalf of NW Natural Smart Energy customers. This report is filed in docket RG 2 – found at this link: State of Oregon: Public Utility Commission of Oregon

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Rates & Regulatory Affairs

ADV 1502

Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 OPUC IR 12

12. Please explain the difference in emissions reduction or overall difference in environmental benefits between one to four percent RNG and the carbon offset that would have been purchased prior to the program change.

Response:

The emissions mitigated are the same because it is calculated from the therms of demand as described in the Company's response to ADV 1502 OPUC IR 5. Both carbon offsets and RTCs are mitigation measures that displace or offset GHG. A carbon offset represents one metric ton of CO_2e and there are 188.43 therms per metric ton. RTCs represent one dekatherm, or ten therms, of RNG.

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ADV 1502

Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04

Data Request Response

Request No.: ADV 1502 OPUC IR 13

Please provide all of the following:

a. Number of Oregon and total customers enrolled in the Smart Energy Program by customer class including residential, commercial, and industrial as designated by the program, for the years 2018 through 2023.
b. Penetration rate of Smart Energy Program per customer class (number of participants divided by number of retail customers), for the years 2018 through 2023.
c. Within each customer class, what percent of customers are enrolled in the Smart Energy program.
d. Total volume of customer demand for Oregon customers enrolled in the Smart Energy program in therms annually.
e. Total volume of Oregon customer retail sales in therms annually.
f. Percentage of the Company's total therms of Oregon retail sales offset by the volume of Oregon Smart Energy customer enrollment.
g. Average therms per month of customer for each customer class enrolled in program.
h. Average demand by customer class for customers enrolled in the program.

Response:

a. Number of Oregon and total customers enrolled in the Smart Energy Program by customer class including residential, commercial, and industrial as designated by the program, for the years 2018 through 2023.

- Oregon Smart Energy total customers enrolled carbon offset only.

SMART ENERGY	Carbon Offsets					
OREGON	Number customers enrolled at calendar year end					
Class	2018	2019	2020	2021	2022	2023*
Residential	47,002	55,947	59,905	70,544	79,472	83,705
Commercial	303	298	292	447	600	667
Industrial	4	4	4	4	4	4
Oregon Total	47,309	56,249	60,201	70,995	80,076	84,376
*as of 5/31/2023						

- All Smart Energy customers enrolled carbon offset only.

PROGRAM	Number customers enrolled at calendar year end					
Class	2018	2019	2020	2021	2022	2023*
Residential	48,441	57,592	61,780	73,428	82,869	86,994
Commercial	313	308	301	470	634	695
Industrial	4	4	4	4	4	4
Program Total	48,758	57,904	62,085	73,902	83,507	87,693
*as of 5/31/2023						

- Smart Energy total customer enrolled in both carbon offset only and blend[1].

SMART ENERGY ALL	Number customers enrolled at calendar year end					
Class	2018	2019	2020	2021	2022	2023*
Residential	48,441	57,592	61,780	73,428	83,541	88,061
Commercial	313	308	301	470	636	712
Industrial	4	4	4	4	4	4
Program Total	48,758	57,904	62,085	73,902	84,181	88,777
*as of 5/31/2023						

b. Penetration rate of Smart Energy Program per customer class (number of participants divided by number of retail customers), for the years 2018 through 2023.

- Oregon Smart Energy penetration rate for carbon offset only.

OREGON	Percent sales customers enrolled at calendar year end					
Class	2018	2019	2020	2021	2022	2023*
Residential	7.80%	9.14%	9.64%	11.22%	12.52%	13.14%
Commercial	0.49%	0.48%	0.48%	0.73%	0.97%	1.08%
Industrial	0.65%	0.65%	0.66%	0.67%	0.66%	0.66%
Oregon Total	7.11%	8.33%	8.81%	10.28%	11.48%	12.06%
*as of 5/31/2023						

- All Smart Energy penetration rate for carbon offset only.

TOTAL	Percent sales customers enrolled at calendar year end					
Class	2018	2019	2020	2021	2022	2023*
Residential	7.12%	8.32%	8.77%	10.26%	11.45%	11.98%
Commercial	0.45%	0.44%	0.44%	0.68%	0.92%	1.01%
Industrial	0.59%	0.60%	0.61%	0.62%	0.61%	0.61%
Program Total	6.50%	7.60%	8.02%	9.42%	10.53%	11.02%
*as of 5/31/2023						

- All Smart Energy penetration rate for both carbon offset only and blend products.

[1] Blend is a combination of 4% RNG and 96% carbon offsets. This option is currently only available to Washington premises.

SE ALL	Percent sales customers enrolled at calendar year end					
Class	2018	2019	2020	2021	2022	2023*
Residential	7.12%	8.32%	8.77%	10.26%	11.55%	12.13%
Commercial	0.45%	0.44%	0.44%	0.68%	0.92%	1.03%
Industrial	0.59%	0.60%	0.61%	0.62%	0.61%	0.61%
Program Total	6.50%	7.60%	8.02%	9.42%	10.61%	11.15%
*as of 5/31/2023						

c. Within each customer class, what percent of customers are enrolled in the Smart Energy program.

See response to 13b.

d. Total volume of customer demand for Oregon customers enrolled in the Smart Energy program in therms annually.

OREGON	Carbon Offsets					
Smart Energy Therms	2018	2019	2020	2021	2022	2023*
Res	22,313,967.00	28,202,737.08	30,743,143.43	34,753,391.67	42,973,460.52	26,132,208.37
Com	1,044,249.48	1,025,205.04	1,027,722.68	1,145,718.10	1,379,324.51	640,830.63
Ind	69,578.49	69,578.49	69,578.49	69,578.49	69,578.49	28,991.04
Total	23,427,794.96	29,297,520.60	31,840,444.59	35,968,688.25	44,422,363.52	26,802,030.04
*as of 5/31/2023						

e. Total volume of Oregon customer retail sales in therms annually.

OREGON	2018	2019	2020	2021	2022	2023*
Res	362,936,804	457,237,084	382,726,116	391,010,171	419,239,718	305,557,553
Com	228,125,109	277,110,107	219,875,913	233,247,911	261,724,726	176,611,735
Ind	32,166,990	36,596,883	30,883,057	32,061,464	34,224,495	16,598,136
Total	623,228,903	770,944,075	633,485,086	656,319,546	715,188,939	498,767,424
*as of 5/31/2023						

f. Percentage of the Company's total therms of Oregon retail sales offset by the volume of Oregon Smart Energy customer enrollment.

	2018	2019	2020	2021	2022	2023*
Res	6.15%	6.17%	8.03%	8.89%	10.25%	8.55%
Com	0.46%	0.37%	0.47%	0.49%	0.53%	0.36%
Ind	0.22%	0.19%	0.23%	0.22%	0.20%	0.17%
Total	3.76%	3.80%	5.03%	5.48%	6.21%	5.37%
*as of 5/31/2023						

g. Average therms per month of customer for each customer class enrolled in program.

Values represent average therms per bill for each customer class. PROGRAM includes Oregon and Washington for the carbon offset only product.

PROGRAM	Carbon Offsets					
Therms	2018	2019	2020	2021	2022	2023*
Res	43.62	46.39	44.76	44.11	47.92	63.61
Com	280.52	279.52	293.22	241.98	209.82	195.68
Ind	1,449.55	1,449.55	1,449.55	1,449.55	1,449.55	1,449.55
Total	45.42	47.87	46.11	45.36	49.16	64.71
*as of 5/31/2023						

h. Average demand by customer class for customers enrolled in the program.

See response to 13g.

Rates & Regulatory Affairs
ADV 1502
Schedule 400-Smart Energy Program Renewable Natural Gas Option Advice No. 23-04
Data Request Response

Request No.: ADV 1502 OPUC IR 14

Please explain what accounting mechanisms or other policies or practices are in place to ensure that the purchasing LDC or another entity will not make a claim on the RTCs being retired on behalf of smart energy customer.

Response:

The RTCs procured for and retired on behalf of Smart Energy program participants are tracked in a separate M-RETS account than the RTCs and other renewable natural gas products purchased by NW Natural on behalf of all customers.

In addition, as we provided in our response to ADV 1502 CUB DR 2:

"Commonly accepted GHG Accounting standards[1] support NWN's view that the voluntary program is additional to the carbon cap under the Climate Protection Program (CPP). Customers who use the voluntary program to reduce their onsite (Scope 1) emissions do not preclude NWN from utilizing the same environmental attributes to reduce emissions resulting from the use of its product (Scope 3).

Science Based Targets initiative (SBTi) clearly explains that the same emission reductions will necessarily be claimed by scope 1 and scope 3 emitters for the same reduction activity, i.e. NWN and customers are expected to make overlapping claims Scope 1 and Scope 3 emitters necessarily report on the same carbon emissions according to existing GHG Protocol (GHGP) guidance.

Carbon accounting best practices verify that carbon emissions reduction associated with the same environmental attribute can be used to address emissions from different entities as long as the scopes are distinct. The voluntary program would effectively address our customers' Scope 1 emissions and be part of NWN's strategy to address

[1] https://sciencebasedtargets.org/resources/files/SBT_Value_Chain_Report-1.pdf, https://ghgprotocol.org/guidance-0

Scope 3 emissions. This approach has recently been supported by CPUC in its 2020 ruling on SoCal Gas's green tariff.[2]"

[2] https://www.socalgas.com/sites/default/files/Joint%20Motion%20for%20Approval%20of%20Settlement%20-%204-13-20%20Final.pdf. Note that in California certain large customers are the point of regulation for the cap-and-trade program. In such a circumstance, double counting concerns can arise (i.e., it is necessary to establish whether the utility or the customer can claim the RNG for compliance with California's cap-and-trade program). The cited order addresses this concern in Attachment A, page 3. This double counting issue does not exist in Oregon, however, because the utility is the point of regulation under the CPP.

CASE: UG 462
WITNESS: Ted Drennan

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Exhibits in Support
Of Rebuttal Testimony

July 31, 2023

CASE: UG 462
WITNESS: Ted Drennan

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 204
Is
Confidential

Exhibits in Support
Of Rebuttal Testimony

July 31, 2023