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**VIA E-MAIL TO**

Public Utility Commission of Oregon  
Filing Center  
201 High Street SE, Suite 100  
Salem, Oregon 97301-3398

**Re: Docket UM 2307 - In the Matter of Cascade Natural Gas Corporation, Renewable Natural Gas (RNG) Program Petition as required per Oregon Administrative Rule (OAR) 860-150-0400(1)**

Attached please find the redacted version of Cascade Natural Gas Corporation's Renewable Gas Program Senate Bill 98 Small Utility Petition. Copies of the confidential and highly confidential versions of this document will be distributed to parties bound by both the General Protective Order No. 23-132 and Modified Protective Order No. 24-025.

Please contact this office with any questions.

Sincerely,

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Cole Albee  
Paralegal  
McDowell Rackner Gibson PC

## **Cascade Renewable Gas Program Senate Bill 98 Small Utility Petition**

Pursuant to Oregon Revised Statutes (“ORS”) 757.398 and Oregon Administrative Rule (“OAR”) 860-150-0400, Cascade Natural Gas Corporation (“Cascade” or the “Company”) submits its petition to participate in Oregon’s Renewable Natural Gas (“RNG”) program. For each petition requirement in OAR 860-150-0400, Cascade provides a response with pertinent information. In accordance with ORS 757.392, Cascade is a “small natural gas utility” for purposes of RNG program compliance.

**ORS 757.398(2)(a)** A filing by a small natural gas utility under subsection (1) of this section must include, but need not be limited to:

**(A)** A proposal to procure a total volume of renewable natural gas over a specific period;

**OAR 860-150-0400(1):** Before a small natural gas utility makes a qualified investment for the first time, or purchases RNG from a third-party producer with the intent to seek cost recovery in a new or revised tariff schedule, the utility must file a petition to participate in the RNG program with the Commission. In addition to the information required under ORS 757.398, the small natural gas utility’s petition must include:

**OAR 860-150-0400(1)(a):** The total volume of RNG to be procured per year over a period concluding at the end of the last month of the test year used in the general rate revision filing, expressed as a percentage of all-natural gas expected to be delivered to the utility’s retail customers in Oregon;

**Response:** The total volume of RNG planned to be procured through 2026 (which is the estimated time of the end of the last month of the test year for the next filing) for customer supply will be **[BEGIN CONFIDENTIAL]**

**[END CONFIDENTIAL]** This value represents 45% of the Oregon sales load delivered to those retail customers subject to Climate Protection Program (CPP) rules. This value represents 19% of all retail customers in Oregon including electric generation customers.

*Table 1 Cumulative Amount of RTCs and RNG to be Procured through 2026 (therms)*

Year	RTCs Procured	RNG Procured	Total
2023	<b>[BEGIN CONFIDENTIAL]</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>
2024	<b>[REDACTED]</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>
2026	<b>[REDACTED]</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b> <b>[END CONFIDENTIAL]</b>

**ORS 757.398(2)(a)(B)** Identification of the qualified investments that the small natural gas utility may make in renewable natural gas infrastructure.

**OAR 860-150-0400(1)(b):** Identification of qualified investments the small natural gas utility may make during the period specified in the filing, including the expected average cost and timing of those investments, and the average annual quantity of RNG those investments will produce;

**REDACTED**

Cascade Natural Gas Corporation – Oregon RNG Program Petition

**Response:** The Company’s identification of qualified investments is summarized below in Tables 2 and 3.

*Table 2 Summary of Qualified Investments*

Qualified Investment Name	Expected Average Cost	Production Start	Average annual RNG (therms)	\$/Therm
Knott Landfill RNG	[BEGIN CONFIDENTIAL] [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [END CONFIDENTIAL]
Oregon Project 2	[BEGIN HIGHLY CONFIDENTIAL] [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [END HIGHLY CONFIDENTIAL]
Lamb-Weston Richland	[BEGIN CONFIDENTIAL] [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
City of Pasco PWRP	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [END CONFIDENTIAL]
Washington Project 1	[BEGIN HIGHLY CONFIDENTIAL] [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [END HIGHLY CONFIDENTIAL]
Port of Sunnyside, Washington	[BEGIN CONFIDENTIAL] [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [END CONFIDENTIAL]

*Table 3 List of Qualified RNG Investments*

Qualified Investment Name	Expected Average Cost	Production Start	Average annual RNG (therms)	Stage of Development
Knott Landfill RNG	[BEGIN CONFIDENTIAL] [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [END CONFIDENTIAL]
<p><b>Project Description:</b>                      The Knott Landfill project between Deschutes County and Cascade established an agreement where Cascade will be procuring landfill gas to produce RNG. Cascade will own all the RNG which includes the biomethane and associated environmental attributes. Cascade is assuming responsibility for the operation of the landfill’s gas collection system and will be making modifications to improve the efficiency of the gas collection system. Cascade will build, own, and operate the biogas processing system. Cascade will additionally be responsible for building the interconnection facilities and interconnecting pipeline to enable onboarding onto the local distribution system. The expected capital costs versus average annual RNG were significantly higher on this project primarily due to the capital investment required for building the biogas processing facility. There are also some additional capital investments to improve the gas collection system at the landfill and increase gas collection efficiency. The benefits of this whole system approach are yielded with a significantly lower environmental attribute per therm cost.</p>				

**REDACTED**

Cascade Natural Gas Corporation – Oregon RNG Program Petition

Oregon Project 2	[BEGIN HIGHLY CONFIDENTIAL] [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [END HIGHLY CONFIDENTIAL]
Project Description: This project is under a non-disclosure agreement, and we request to withhold further public description until definitive agreements are fully executed. The project is in Northeast Oregon. Cascade will be purchasing all the RNG which includes the biomethane and associated environmental attributes. Cascade is responsible for building the interconnection facilities, interconnecting pipeline, and gate station to enable procurement of the RNG and onboarding to the interstate pipeline system.				
Horn Rapids/Lamb-Weston Richland	[BEGIN CONFIDENTIAL] [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [END CONFIDENTIAL]
Project Description: Horn Rapids/Lamb-Weston Richland is an agreement between Horn Rapids RNG, LLC and Cascade serving a project with the City of Richland Horn Rapids Landfill and Lamb Weston's Richland, Washington potato processing facility in Richland Washington. They are separate but nearby sites with separate interconnection facilities and a common developer. Cascade will be procuring all the biomethane from both sites, all of the associated environmental attributes from the Lamb Weston site, and not less than 50% of the combined associated environmental attributes from both facilities. For any of the associated Horn Rapids Landfill environmental attributes sold to a third party, Cascade will receive 10% of the gross revenue, which will be utilized to lower the overall environmental attribute cost of the combined sites. Cascade additionally has a one-time option during the term to purchase 100% of the attributes for the remainder of the delivery period. Cascade is responsible for building both interconnection facilities and interconnecting pipelines to enable procurement of the biomethane and onboarding onto the local distribution system.				
City of Pasco PWRP	[BEGIN CONFIDENTIAL] [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [END CONFIDENTIAL]
Project Description: City of Pasco PWRP is an agreement between Burnham SEV Pasco LLC and Cascade which will serve the City of Pasco, Washington's industrial wastewater Process Water Reuse Facility. Cascade will be procuring all the RNG which includes the biomethane and associated environmental attributes. Cascade is responsible for building the interconnection facilities and interconnecting pipeline to enable procurement of the RNG and onboarding onto the local distribution system.				
Washington Project 1	[BEGIN HIGHLY CONFIDENTIAL] [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [END HIGHLY CONFIDENTIAL]
Project Description: This project is under a non-disclosure agreement, and we request to withhold further public description until definitive agreements are fully executed. The project will be an agreement between Cascade and another utility to serve an RNG project in Eastern Washington. Cascade will purchase a percentage of the environmental attributes and all the biomethane. Cascade is responsible for building out the infrastructure to procure the biomethane and onboard it into the local distribution pipeline				
Port of Sunnyside, Washington	[BEGIN CONFIDENTIAL] [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [END CONFIDENTIAL]
Washington Project 2 is an agreement between the Port of Sunnyside, Washington and Cascade which will serve the Port's industrial wastewater processing facility. Cascade intends to procure all				

**REDACTED**

Cascade Natural Gas Corporation – Oregon RNG Program Petition

the RNG which includes biomethane and associated environmental attributes. Cascade will be responsible for building the interconnection facilities and interconnecting pipeline to enable procurement of the RNG and onboarding onto the local distribution system.

Explanation of difference in ratio of “Expected Average Cost” to “Average Annual RNG”: Note that while the Knott landfill has a relatively high ratio of capital expenditure (CAPEX) to annual RNG production in comparison to other projects, this is offset by a correspondingly low purchase price for supply gas and environmental attributes from the landfill. Please note Cascade is calculating expected average cost in terms of revenue requirement of CAPEX and other components.

Explanation of M-RETS Application: Cascade will utilize M-RETS for tracking environmental attribute associated with RNG projects, and the purchase RTCs.

**OAR 860-150-0400(1)(c):** The expected value of any RTCs to be acquired by the utility during the period specified in the filing;

**Response:** The expected value of RTCs that Cascade may acquire during the period specified in the filing is shown in Table 4, below.

*Table 4 Expected value of RTCs to be Acquired*

RTC's Under Contract	RTCs /year(Dth)	Year	\$/Therm
[BEGIN CONFIDENTIAL]			
			[END CONFIDENTIAL]

**OAR 860-150-0400(1)(d):** The expected value of any RNG that the small natural gas utility intends to sell to a party who is not a retail utility customer, including the value of any environmental credits that the utility may acquire from the RNG producer and resell;

**Response:** Cascade does not intend to sell any RNG to non-retail customers.

**OAR 860-150-0400(1)(e):** Any expected savings to be achieved through the avoidance of geologic natural gas costs, to be calculated in the manner described in OAR 860-150-0200(3);

**Response:** Cascade will pay Deschutes County for biomethane produced at the Knott Landfill site at a rate of [BEGIN CONFIDENTIAL] [END CONFIDENTIAL]. Assuming the average cost of natural gas that Cascade procures is [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] per the Oregon Weighted Average Cost of Gas (WACOG), the expected savings are [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] for off system projects. On system projects include an additional savings of [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of [END CONFIDENTIAL] transportation variable cost. Avoided distribution costs will need to be evaluated on a

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Cascade Natural Gas Corporation – Oregon RNG Program Petition

project-by-project basis accounting for location and size of the project. Please see Table 4 for costs of \$/therm of RTC.

**OAR 860-150-0400(1)(f):** The costs of the identified annual RNG procurements and the levelized costs of all qualified investments expressed as a percentage of the utility’s total revenue requirement, where this requirement is that approved by the Commission in the utility’s most recently completed general rate revision;

**Response:** The total costs of the identified annual RNG procurements are included in Table 2. The levelized costs of all qualified investments is 15.51% of Cascade’s most recently completed general rate revision, which is calculated by summing the Total Revenue Requirement Increase in Table 5 and dividing by the overall revenue requirement in Oregon (\$71,079,010). Similarly, the levelized costs of all qualified investments is 3.27% of Cascade’s total system-wide revenue requirement, which is calculated by summing the Total Revenue Requirement Increase in Table 5 and dividing by Cascade’s system-wide revenue requirement (\$336,591,264).

**Table 5. Project Total Revenue Requirement Increase**

Project Name	Lifetime	Discount Rate	Total Revenue Requirement Increase
Knott Landfill	[BEGIN CONFIDENTIAL]	7.03%	[BEGIN CONFIDENTIAL]
Oregon Project 2	[REDACTED]	7.03%	[REDACTED]
Lamb Weston	[REDACTED]	7.03%	[REDACTED]
City of Pasco	[REDACTED]	7.03%	[REDACTED]
WA Project 1	[REDACTED]	7.03%	[REDACTED]
Port of Sunnyside	[END CONFIDENTIAL]	7.03%	[REDACTED] [END CONFIDENTIAL]

**OAR 860-150-0400(1)(g):** An assessment by the small natural gas utility of the relative cost effectiveness of all qualified investments it intends to make during the period concluding at the end of the last month of the test year used in the general rate revision filing. This assessment must utilize the same formula utilized by a large natural gas utility pursuant to OAR 860-150-0200 or another formula specified by the Commission;

**Response:** The relative cost effectiveness of all qualified investments is regularly updated and frequently changes over time due to changes in cost of conventional gas, environmental attributes, etc. The value is calculated on a project-by-project basis using the formula below, which was taken from Cascade’s IRP cost-effective evaluation model. In the IRP, there is a model for RNG resources and a cost-effective evaluation model. All qualified investments have been run through that model. The formula and results of the model are provided below.

**Cost Effectiveness Evaluation Model Notes**

$$C_{RNG} = I_{RNG} - AC_U - AC_D + \sum_{T=1}^{365} (P_{RNG} + VC - CIF) * Q$$

$$C_{Conventional} = \sum_{T=1}^{365} (P_{Conventional} + VC) * Q$$

Where:

$C_{RNG}$  = The all-inclusive annual cost of a proposed RNG project

$I_{RNG}$  = The annual required investment to procure a proposed RNG resource. If Cascade is simply buying the gas and/or environmental attributes, this value is zero.

$AC_U$  = Avoided upstream costs

$AC_D$  = Avoided distribution system costs

$P_{RNG}$  = Daily price of renewable natural gas being evaluated

Q = Daily quantity of gas being evaluated

VC = Variable cost to move one dekatherm of gas to Cascade’s distribution system. This value can be zero if a project connects directly to the Company’s system.

CIF = Carbon Intensity Factor. This is calculated by multiplying the Company’s expected carbon compliance cost by 1 minus the ratio of a proposed project’s carbon intensity to conventional gas’ carbon intensity. For the purpose of compliance with the CCA and CPP, the CIP factor is just Cascade’s expected carbon compliance cost in the various jurisdictions, as these rules do not account for the variable carbon intensities of various sources of RNG.

$C_{Conventional}$  = The all-inclusive annual cost of conventional natural gas.

If  $C_{Conventional} \geq C_{RNG}$ , a project can be considered cost effective, and should be acquired. If not, the project may still be considered if there are no lower cost resources available for compliance.

The first stage of the Company’s decision-making process is to evaluate RNG projects versus conventional natural gas, which is the  $C_{Conventional} \geq C_{RNG}$  element of Cascade’s Cost-Effectiveness model. If projects do not pass this stage, as is the case for the projects in this filing, the next step is to evaluate if the Company has a need to acquire resource, and if so to identify the marginal cost of simply purchasing RTCs on the open market versus investing in a project to develop our own RTCs. This value is represented by Reference RTC Purchase Benchmark. All projects are evaluated on a real dollars per dekatherm per year basis to adjust for differences in volumes and length of deals being considered. All projects listed in this filing passed this threshold, and thus are included in the Company’s filing.

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Cascade Natural Gas Corporation – Oregon RNG Program Petition

**Table 6. Cost-Effectiveness Evaluation Model Results**

Project Name	$C_{\text{conventional}} - C_{\text{RNG}}$	Market Value/Dth/Yr	Reference RTC Purchase Benchmark Value/Dth/Yr
Knott Landfill	[BEGIN CONFIDENTIAL]	[REDACTED]	[REDACTED] [END CONFIDENTIAL]
Oregon Project 2	[BEGIN HIGHLY CONFIDENTIAL]	[REDACTED] [END HIGHLY CONFIDENTIAL]	[REDACTED] [BEGIN CONFIDENTIAL]
Lamb Weston	[REDACTED]	[REDACTED]	[REDACTED]
City of Pasco	[REDACTED]	[REDACTED]	[REDACTED] [END CONFIDENTIAL]
WA Project 1	[BEGIN HIGHLY CONFIDENTIAL]	[REDACTED] [END HIGHLY CONFIDENTIAL]	[REDACTED] [BEGIN CONFIDENTIAL]
Port of Sunnyside	[REDACTED]	[REDACTED]	[REDACTED] [END CONFIDENTIAL]

**OAR 860-150-0400(1)(h):** The utility’s proposed annual rate cap limiting the cost of RNG purchases and qualified investments.

**Response:** Cascade proposes an annual rate cap of 10 percent rate changes as a result of qualified capital investments. Excluded from the 10 percent cap are the biomethane and environmental attributes as these components will be included in the Purchase Gas Adjustment (PGA) mechanism and/or CPP deferral in Docket UM 2257, respectively.



## CERTIFICATE OF SERVICE

I certify that on this February 6, 2024 a true and correct copy of the **Cascade Renewable Gas Program Senate Bill 98 Small Utility Petition** on the parties listed below via electronic mail in compliance with OAR 860-001-0180.

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Dated February 6, 2024.

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