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Nov 2, 2023

Oregon Public Utility Commission  
Attn: Filing Center  
P.O. Box 1088  
Salem, OR 97308-1088

**RE: LC 83 Cascade Natural Gas Corporation's Reply Comments**

Attention: Filing Center

Enclosed for filing is Cascade Natural Gas Corporation's (Cascade or Company) Reply Comments regarding LC 83. Cascade thanks OPUC for the opportunity to file Reply Comments.

If there are any questions regarding this request, please contact me at (509) 734-4589 or via email at [mark.sellers-vaughn@cngc.com](mailto:mark.sellers-vaughn@cngc.com) or Brian Robertson at (509) 221-9808 or via email at [Brian.Robertson@cngc.com](mailto:Brian.Robertson@cngc.com).

Sincerely,  
CASCADENATURAL GAS CORPORATION

A handwritten signature in black ink that reads 'Mark Sellers-Vaughn'. The signature is written in a cursive, flowing style.

Mark Sellers-Vaughn  
Manager, Supply Resource Planning

LC 83 CNGC Enclosed

LC 83 Cascade Reply Comments CONF 11-2-2023.pdf  
LC 83 Cascade Reply Comments Redacted 11-2-2023.pdf  
LC 83 Attachment A - Amended Action Plan.pdf

**BEFORE THE  
PUBLIC UTILITY COMMISSION OF OREGON**

In the Matter of

CASCADE NATURAL GAS COMPANY  
dba CASCADE NATURAL GAS, 2023

2023 Integrated Resource Plan (LC 83)

Cascade Natural Gas Response  
Comments

**CASCADE NATURAL GAS CORPORATION**

**November 2, 2023**

## **Introduction**

Cascade Natural Gas (Cascade, CNG or Company) files these response comments regarding the Cascade 2023 Integrated Resource Plan (IRP or Plan), filed in Docket No. LC 83 as well as in response to opening comments received by the Oregon Public Utility Commission Staff (OPUC, Commission Staff, or Staff), Oregon Citizens' Utility Board (CUB), Alliance of Western Energy Consumers (AWEC), Climate Advocates, and the general public.

## **Opening Remarks**

Cascade appreciates all of the feedback the IRP stakeholders have provided, not only in opening comments, but during the entire IRP process as well. The ultimate goal of the IRP process is to produce a plan with the best combination of expected costs and associated risks and uncertainties for the utility and its customers. This is best accomplished with inputs from all stakeholders.

The 2023 IRP included several new aspects and challenges to the Company's IRP such as climate change impacts, new upstream optimization software, scenario and sensitivity model, and modeling carbon compliance goals to name a few. Cascade held a transparent IRP process that included five Technical Advisory Group (TAG) meetings and was always open to meeting with any Stakeholder outside of the TAG meetings to answer any questions. The Company produced a preferred portfolio after running deterministic and stochastic analysis on the different portfolios. This technique resulted in over 2,800 simulations that tested varying weather and pricing scenarios on different carbon compliance pathways. As is the case with all IRPs, Cascade will seek to improve the IRP during the next IRP process in which the Company will monitor items such as future policy changes and the development of the differing compliance technologies.

With that said, Cascade does agree that the Action Plan lacked detail around specific investments regarding the preferred portfolio. Included in the Company's Reply Comments is an amended Action Plan in Attachment A which includes further detail and specific investments the Company is seeking acknowledgement on.

## **Cascade's Response to Opening Comments**

The following bullets are recommendations made by Commission Staff, CUB, AWEC, Climate Advocates and the general public. Cascade has organized the recommendations by similarity and has provided a response:

## Cascade's Action Plan

- Staff recommends, in Reply Comments, Cascade provide a more detailed Action Plan that includes the specific investments of the Company's Preferred Portfolio and the year the investments are expected to occur.
- AWEC does not support blanket acknowledgment of any and all CPP Costs. AWEC requests that Cascade provide more detail in reply comments.
- AWEC requests that Cascade provide more information to clarify its Action Plan in Reply Comments.
- CUB is concerned that Cascade's 2-4 year Action Plan is not the least cost, least risk pathway available to the Company to meet Oregon's needs from a resource and compliance mandate perspective.
- CUB seeks clarity from Cascade regarding whether the primary resources in the Top-Ranking Candidate Portfolio were renewable natural gas (RNG) in Oregon and allowances from auction in Washington.<sup>1</sup> is intended to justify near-term, on-system RNG procurement in lieu of maximizing Community Climate Investments (CCI) use.
- Staff recommends, in Reply Comments, Cascade explain what drives the Company's PLEXOS model to select other supply-side resources before maximizing CCIs.
- AWEC proposes the addition of an Action Plan item as follows: "Cascade will continue engaging with transportation customers and perform custom energy efficiency projects where doing so is a cost effective means of complying with the CPP."

Cascade appreciates the feedback on Cascade's action items and agrees that a clearer understanding of Cascade's acquisitions for the action plan is needed. First, since Cascade's optimization process showed CCIs to be the cheapest option in compliance period one and two, Cascade fully intends to maximize CCIs at the 10% and 15% of the carbon compliance obligations as long as pricing remains consistent to Cascade's modeling throughout the action plan time period. Cascade will note that the amount of CCIs that Cascade can purchase will vary based on actual emissions. Figure 1 shows the planned purchases by Cascade for the first compliance period.

Figure 1: Cascade's compliance period 1 planned purchases

Emissions Net RNG	2,361,321
CCI Constraint	236,132
CCIs Used	236,132
RNG Projects	9,462
RTCs	53,995
Net Emissions	-

To see how Cascade plans to meet the 9,462 mtCO<sub>2</sub>e of RNG and the 53,995 mtCO<sub>2</sub>e,

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<sup>1</sup> Cascade 2023 IRP at 9-20.

please see the Company's SB 98<sup>2</sup> filing, which is anticipated to be filed the week of November 6.

Figure 2 shows the planned purchases by Cascade for the second compliance period.

Figure 2: Cascade's compliance period 2 planned purchases

Emissions Net RNG	2,166,802
CCI Constraint	325,020
CCIs Used	325,020
RNG Projects	107,142
RTCs	225,637
Net Emissions	-

To see how Cascade plans to meet the 107,142 mtCO<sub>2</sub>e of RNG and the 225,637 mtCO<sub>2</sub>e, please see the Company's SB 98<sup>3</sup> filing.

There are a few reasons for the observed discrepancies between Cascade's Plexos results and the action plan. Staff had noted in their calculation<sup>4</sup>, and stated that "Cascade plans to utilize CCIs to meet 11.5 percent of emissions [in compliance period 2]. This estimation is not accurate. Staff's assertion that "The CPP allows the Company to use up to 15 percent [in compliance period 2]" is correct, however, as per OAR 340-271-9000 Table 6, in compliance period 2 the "Allowable percentage of total compliance obligation(s) [emphasis Cascade] for which compliance may be demonstrated with CCI credits" is 15%. As per OAR 340-271-0020 (11) "Compliance obligation" means the total quantity of covered emissions from a covered fuel supplier rounded to the nearest metric ton of CO<sub>2</sub>e." Therefore, in Staff's calculation, Staff should have subtracted Oregon RNG to the denominator prior to dividing by the CCI amount. Cascade will also mention that the data from the CCI Percentages ES spreadsheet is in fiscal year, where the fiscal year runs from November to October. This is due to Plexos making optimization choices each November for supply and transport optimization reasons. Finally, since the CCI amount varies depending on other compliance instruments, Cascade had to estimate what the 15% would be to insert into Plexos since Plexos doesn't have a dynamic option to limit CCIs at 15% based on the other compliance instruments selected. With that said, as Cascade mentioned in the Action Plan clarification, Cascade intends to purchase the maximum CCIs over the other compliance options, as long as CCIs remain more cost effective. In the long-term, other compliance options such as RNG/Hydrogen physical supply and attributes and pilot activities that directly reduce carbon emissions should be considered over CCIs since they are long-term solutions and minimize future compliance risk.

Cascade agrees that a report discussing and evaluating the Company's pipeline

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<sup>2</sup> In order to keep the LC 83 timeline intact, Cascade has decided to reference a forthcoming filing, rather than delaying the Reply Comments to coincide with the SB 98 filing.

<sup>3</sup> *Ibid.*

<sup>4</sup> CCI Percentages ES.xlsx, sheet titled "Emissions Charts" cell B37.

optimization activities would be of benefit to stakeholders. Cascade looks forward to working with AWEC and other stakeholders in the development of such a report, and its inclusion as an ongoing narrative in future IRPs.

### **Storage Opportunities**

- Staff recommends, in Reply Comments, Cascade explain in detail the need for more storage and why the possibility for this need was not discussed in the 2023 IRP.

The need for resources is continually assessed including the need for added storage. While the company does evaluate multiple storage fields and options, not all meet the requirements of Cascade. Over the last few years Cascade saw an opportunity to add MIST storage on two separate occasions and has added 1,640,000 dth of capacity and 50,000 dth of demand to meet winter loads and peak demand days. Last winter the northwest experienced very high day spot pricing in the range of \$40.00-\$60.00/Dth. Cascade avoided high pricing with storage. In addition, over the last winter the company experienced a new peak day over the previous highs and was able to meet those peak day requirements via the added demand of MIST storage. Cascade storage only accounts for approximately 15% of our winter season demand, this is the lowest amount of all the other Pacific Northwest Utilities. Cascade needs additional resources to meet growing demand in the region, in addition to pricing arbitrage over the winter season. Pricing has continued to be extremely volatile and only highlights the added need for storage.

In addition to the need for storage to meet demand and use as a pricing arbitrage, Cascade needs storage for operational purposes. As resources in the Northwest continue to be strained, the Pipelines, especially Northwest Pipeline continue to add additional requirements and constraints. Cascade often has limited resources to meet those requirements and relies heavily on storage to meet the pipeline's requirements. The number of Entitlement days on Northwest Pipeline has seen a significant increase and Northwest has also added what is called a Customer Specific Entitlement warning which adds additional strain and operational impacts. Storage is a necessary and needed resource that the company will continue to evaluate.

### **Demand Forecast**

- Staff recommends, in Reply Comments, Cascade present a new demand forecast using the latest data available (since June 2022), rerunning the customer count and using per customer models with both retail price and a lag of retail price as regressors, using R code that can be replicated.
- Climate Advocates recommend Cascade update its load forecast by considering Washington building codes, the Inflation Reduction Act, and Oregon's Climate Resilience package (HB 3409) and assume zero new customer growth starting no later than 2027.
- Staff recommends, in Reply Comments, Cascade explain why a separate demand forecast was used in the Company's Synergi model.

- Staff recommends, in Reply Comments, Cascade compare the results of the demand forecast used in PLEXOS with the demand forecast in Synergi for Prineville, Baker City, Ontario, and the aggregate for Company's Oregon service territory.

Cascade's load forecast model forecasts customers and use per customer at the citygate and rate schedule level, resulting in approximately 200 models for each, it takes several weeks to months for Cascade to gather the necessary data and run the models. Cascade has started this process; however, Cascade will not have this completed in time for the Reply Comments. Cascade will provide an updated forecast during the final Comment.

Cascade's load forecast model used for the 2023 IRP is not an end use model. Given the changes seen in building codes, IRA, and HB 3409 as noted by the Climate Advocates, Cascade is looking into including end use information into the model to better reflect the impacts changes to certain end uses may have on the Company's load forecast model. Cascade anticipates this will be included in the 2025 IRP.

Cascade's upstream demand forecast model and the Synergi model are modeling different aspects of the Company's usage. The upstream model focuses on forecasting daily usage as well as peak day usage at the citygate level where the Synergi model focuses on utilizing customer billing data applied spatially to calibrate the model at a peak hour. When forecasting for the Synergi model, Cascade will apply peaking factors to the design day demands file to match the growth predicted by the Company's upstream load forecast model and then will use the growth models to assess deficits and determine timing needs to avoid deficits. Cascade is looking at ways to compare the results, however, there are some conversion difficulties between comparing daily dekatherm values versus hourly mcf values.

### **Synergi Model**

- Staff recommends, in Reply Comments, Cascade provide the rationale behind using a peak day model that is based on an average daily temperature standard of -11F that occurred more than 30 years ago.
- Staff recommends, in Reply Comments, Cascade provide Synergi results for Prineville that use the lowest temperature in the past 30 years and an industry standard heating degree day calibration of 65 degrees Fahrenheit.
- Staff recommends, in Reply Comments, Cascade provide a detailed demonstration of how the load on peak design day is accurately derived, and a risk analysis on the predicted timing of breaching system capacity over a range of probable maximum loads on peak design day.

Cascade's heating degree day used in the design day model is based on when the model rebuild occurs. Currently Cascade rebuilds its Synergi design day models every three years. Cascade's design day model used for the 2023 IRP uses Cascade's 2021 Synergi design day model. Cascade's 2021 design day models are based on the lowest average daily temperature over the 30-year period from 1990-2020. For the 2021 Central Oregon

design day models the peak weather event is based on the Redmond weather station which experienced a low temperature event on 12/21/1990 where the high temperature recorded for the day was 2°F and the low temperature for the day was -23°F, corresponding to an average daily temperature of -11°F relating to a 71HDD (referenced to 65°F).

Cascade provided model validation information requested in LC 83.<sup>5</sup> Following model validation for a recent cold weather day DNV uses Synergi's customer management module (CMM) to increase demands to meet its peak heating degree day, based on a 30-year history, to create the design day model. CMM demand files are based on linear regression equations created for each customer based on usage in CC&B. To assess deficit timing needs, Cascade will add the five-year growth predictions from Plexos to the design day model and will add growth year by year to predict when the deficit will occur to avoid the deficit. Cascade does not perform risk assessment on large volume contract loads since Cascade's design day models do not include interruptible loads and model all firm large volume contracts at their contract demand.

### **Prineville Gate Upgrade**

- Staff recommends, in Reply Comments, Cascade provide the full potential of interruptible and curtailable loads at Prineville, including an assessment of each eligible load for interruption or curtailment on a case-by-case basis to inform the feasibility of inclusion in Cascade's Interruptible Customer Curtailment plan.
- Staff recommends, in Reply Comments, Cascade describe all short-term options for relieving system stress at Prineville, taking into consideration the expected frequency, duration, and advance notice for periods of design day peak load, discussing practicality, costs, and risks of each option, including exploring practical means for the implementation of the existing option of bypassing the regulator at the gate.
- AWEC Recommends the Commission Acknowledge the Prineville Gate Upgrade, but not the Baker City or Ontario Reinforcement Projects.

Cascade provided the interruptible customer list for Prineville in response to Staff's data request.<sup>6</sup> Cascade's design day model does not include interruptible loads, all interruptible loads are set to 0 demand in Cascade's design day models, there is no opportunity for additional curtailment on RS-163 and RS-170 rate schedules. In Staff's opening comments staff discusses the potential for reviewing the 32 firm customers to see if there is opportunity to reduce their firm contract during design day conditions to provide additional capacity for growth. Cascade would like to clarify that these 32 customers are core with the majority on an RS-105 rate schedule. RS-105 rate schedules do not have contracts or dedicated firm capacities in the design day model. Cascade models RS-105 rate schedules based on their historical usage in Customer Care and Billing (CC&B). If these RS-105 customers change their usage and or make conservation efforts, it would be reflected in Cascade's updated design day models based on the CC&B

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<sup>5</sup> LC 83, DR 9.docx

<sup>6</sup> LC 83, DR 13 CONF.docx



data pulled for the model rebuild.

Cascade is currently in discussions with TransCanada on potential short-term solutions and will provide an update in the Company's final comments.

Cascade agrees with AWEC on acknowledging the Prineville Gate upgrade and appreciates AWEC support for continuing to provide reliable service to our service territory.

### **Bakery City and Ontario Upgrade**

- Staff recommends, in Reply Comments, Cascade describe how and when it will assess whether DSM activities are on track to meet load reduction targets at Baker City and Ontario and describe what other non-pipe alternatives it would consider if DSM alone appears unable to achieve the required load reductions.
- Staff recommends, in Reply Comments, Cascade describe how DSM is modeled in Synergi and confirm whether DSM is reflected in the Company's modeling of Baker City and Ontario.
- Include project-specific non pipeline alternatives (NPA) that account for non-energy benefits, explaining which measures were considered and why any NPA is not selected. If the reason is that the NPA could not be implemented in time, the analysis should explain what steps Cascade will take to perform its future NPA analyses for similar projects in time.

Cascade and ETO have completed the DSM assessment to meet the required target load reductions to offset the reinforcements proposed by Cascade. ETO worked on a pilot program that was similar to NW Naturals GEOTee. ETO has informed Cascade that they do not anticipate pursuing targeted load management (TLM) implementation in their budget for 2024-2025 for Baker City or Ontario. Energy Trust indicated they did not perceive TLM as being the right framework for these areas given the stark difference in load reduction vs. EE potential. The timeframe ETO identified for meeting load reduction goals was 16 years based on the ETO's available offerings and resources. After Energy Trust's analysis of potential vs. the peak deferral need in the two potential areas, they did not move to the next phase of fine-tuning total program costs (e.g., delivery and incentives for TLM implementation). Cascade respects the limitations of the Energy Trust, while recognizing the continued importance of non-pipe solutions to load management. As part of Cascade's planning for compliance with the Climate Commitment Act and understanding of the need and urgency for non-traditional solutions, Cascade is considering other pathways for non-pipe alternatives that can be effectively implemented. Cascade will look to Energy Trust to provide complementary solutions to these pathways as they develop. However, as time is of the essence, Cascade will proceed with additional non-pipe alternative planning as appropriate and will discuss other non-pipe alternatives considered in future IRP's.

Cascade modeled DSM for Ontario and Baker City in Synergi by applying the Plexos five-

year growth predictions to its design day model and then determining the load reduction needed to meet Cascade's design requirements. Cascade applied the DSM load reduction throughout each town to all existing and future customer rate schedules.

### **Bill Impacts**

- Staff recommends, in Reply Comments, Cascade provide the net present value of adding a new customer, by rate class, that includes CPP compliance costs.

Cascade provided a bill impact analysis that included net present value results that were from Cascade's Plexos model where Cascade introduced new customers. This information was provided in Appendix K of Cascade's IRP.

### **RNG and Hydrogen Assumptions**

- Staff recommends, in the development of the next IRP, Cascade describe how supporting research informs its green hydrogen price and availability assumptions and how it proposes to model future price and availability uncertainty.
- Staff recommends, in the next IRP, Cascade provide all supporting documentation it relied on regarding green hydrogen market development in the United States; price and availability ranges used in Monte Carlo analysis; and any NPVRR analysis it conducted to measure the severity of bad outcomes associated with missing green hydrogen targets, and how those sources translate into the Preferred Portfolio.
- Staff recommends, in Reply Comments, Cascade provide an explanation of how RNG cost assumptions have changed since the 2019 report was published, and if so, further explain how the AGF/ICF study remains applicable.
- Staff recommends, in Reply Comments, Cascade provide further information on how Figure 29 of the AGF/ICF study was translated into the Company's overall projected RNG costs and if the Company will only be procuring RNG from landfill projects, and if not, why did the Company assume pricing based on landfill cost projections solely.
- Staff recommends, in Reply Comments, Cascade identify the RNG projects the Company has already contracted and those where the Company is in an advanced stage of negotiating procurement of RNG.
- AWEC is Supportive of Cascade Pursuing Cost Effective On-System RNG Projects

Cascade's assumptions around RNG have evolved significantly since the finalization of assumptions used in the 2023 IRP. During the IRP process much of Cascade's market intelligence around the actual cost of RNG and its associated Renewable Thermal Credits (RTCs) were informed by its analysis related to the Deschutes Landfill Project. These costs made the projections utilized in the IRP from AGF/ICF study seem conservative by comparison, and thus valid for utilization in the IRP. Since then, the Company has evaluated a number of deals, both for the development of RNG with associated costs and the purchase of RTCs in deals where the Company receives no physical gas. **[Beginning**

**Confidential]** [REDACTED]

**[END CONFIDENTIAL]**. That being said, it

is important to emphasize that IRPs are a point in time document, where analysis must be done with the best information available at the time. Additionally, with the Company projecting to maximize its utilization of CCIs in the short term, and a lack of available regional data to model alternatives such as electrification and transport customer DSM, Cascade still takes the position that the 2023 IRP Preferred Portfolio represents its least cost, least risk resource mix of known resources to meet demand while hitting emissions reduction requirements. The Company will also revisit assumptions from the 2019 AGF/ICF study around the long availability of RTCs, but empirical evidence in the short-term (two-to-four years) shows that Company should be able to acquire its projected RTC needs based on the volume of reasonably priced deals that have been presently evaluated by Cascade, many of which can be reviewed in the Company's SB 98 filing.

Cascade apologizes for mistakenly miscommunicating to Staff in its response to DR 23 Part a. That the Company utilized Figure 29 of the 2019 AGF/ICF study, this was intended to state Figure 34, as is referenced in Part d of the Company's response to DR 23. As discussed in DR 23, Cascade views the projections in Figure 34 of the AGF/ICF study to presented in two phases, a growth phase where prices rise in a somewhat stepwise linear function until about approximately 750 tBtu/y, and a relatively stagnant phase after that. This change occurs after approximately 1/3rd of the volume is acquired, and thus Cascade splits its RNG pricing forecast into two tranches, reflecting these two distinct phases. Without having access to the underlying data for this figure, Cascade qualitatively assessed that the average price at the first tranche was approximately \$13/dth while the average price at the second tranche was \$19/dth. The Company did not mean to state that it would only be acquiring landfill based RTCs, or that its projections would come from the forecasted price of landfill gas only.

Cascade encourages those who are interested in viewing the Company's RNG and RTC purchase activities to view its recent SB 98 filing<sup>7</sup> as these details are presented in this filing.

### **Electrification**

- Staff recommends, in Reply Comments, Cascade explain why the New Electrification scenario selects no new DSM.
- Staff recommends, in Reply Comments, Cascade explain why no additional DSM was selected in Scenario 4 Increased Electrification.
- In its Scenario 4, Cascade apparently concluded that costs are lower in an electrification scenario. AWEC has concerns with this analysis, however, because

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<sup>7</sup> In order to keep the LC 83 timeline intact, Cascade has decided to reference a forthcoming filing, rather than delaying the reply comments to coincide with the SB 98 filing.

it only considered Cascade's costs and did not correspondingly consider increased cost on the electric system.

- AWEC recommends that the Commission avoid making any widespread policy decisions about electrification in this docket, and instead, focus on the cost effectiveness of the specific measures that Cascade analyzed in its filing.
- Climate Advocates recommend Cascade proactively analyze building electrification as a resource and use consistent methods for incorporating supply-side and electrification incentives in its planning, disaggregated by market segment (e.g., new vs. existing construction, income-qualified vs. market rate customers).

Cascade used an all-encompassing load decrement to usage, which was approximately 2% decline per year beginning after 2050. The decrement to usage was intended to include a decline in customer count as well as baked in DSM. Cascade agrees that this is not clear in the IRP and plans to clarify all scenarios in future IRPs. In the next IRP, Cascade intends to look at electrification with region wide implications.

AWEC is correct that the electrification scenario only showed costs from Cascade's perspective. In Cascade's IRP,<sup>8</sup> Cascade stated "This alarming increase [to bill impacts] reaffirms the Company's position that any efforts to undertake a dramatic move toward electrification must not be done without a detailed understanding of the regional impact of such a shift of load. While Cascade's cost may be lower, this comes at the consequence of a significant load increase to regional electric utilities, with all of the risks associated with the ability to serve such a dramatic influx of customers. Additionally, those utilities are presumably already utilizing their lowest cost, lowest risk resources to serve their existing customers. The costs to add these new customers may force those utilities to explore higher cost resource for electricity generation and their own emission mitigation. This does not even account for the significant cost to customers to replace existing gas units with their electric counterparts, a cost that will need to be accounted for in a regional electrification analysis before any action should be undertaken."

Cascade agrees with AWECs recommendation against making widespread policy decisions surrounding electrification in this docket.

### **EITE Customers**

- AWEC recommends Cascade engage in a stakeholder process to investigate and evaluate the impacts of the CPP on ratepayers and Energy Intensive Trade Exposed ("EITE") businesses.
- AWEC recommends that Cascade engage in a collaborative discussion with stakeholders, including the Oregon DEQ, to evaluate the impact of the CPP on EITE businesses in Oregon, with the goal of mitigating these impacts and keeping business in the state.

Oregon does not have a criterion established for EITE customers. Cascade's largest

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<sup>8</sup> LC 83 CNGC 2023 IRP, Page 9-32

Oregon customers are transportation customers on Rate Schedule 163. Cascade plans to correspond with each of these customers individually and provide information regarding the anticipated impact of CPP compliance and then meet with groups of customers to get their feedback on the impact of CPP compliance and their perspective on how best to mitigate the impact. Cascade has already begun a process to engage transportation customers on energy efficiency audits, see response to Transportation Energy Efficiency Programs.

### **Transportation Energy Efficiency Programs**

- AWEC also requests that Cascade update stakeholders on the status of the transportation energy efficiency program.

The Company is working to reduce greenhouse gas emissions from sources in Oregon, one being its Transport Customers. The Transport Customer Carbon Compliance Assessment Pilot has produced seven Energy Analysis reports as of March 2023. The Energy Analysis reports are customized to each customer's need and are based on a visual analysis of conditions observed at the time of the on-site assessment, information provided by the customer and usage history.

Frontier and the Company continue to engage Transport Customers for potential Energy Audits throughout Oregon service territory. Transport Customers who have participated in the pilot program received one on one meetings to review their Energy Analysis report. Each report holds detailed energy cost savings and greenhouse gas reductions which will result from implementation of measures noted within the report. Each customer expressed interest in low/no cost improvements and capital improvements to reduce the facility's natural gas energy consumption and as such a summary of opportunities by payback was customized based on the need of each Transport Customer. They also received a summary with the description of each technology and future recommendations.

Currently Cascade's Transport Customers are a small subset of total Cascade customers, and the Company is exploring the best approach to serving them. Energy Efficiency will remain important for all customers. However, since transport customers do not purchase gas directly from Cascade, they have not traditionally had access to the Company's energy efficiency offerings. New opportunities to serve these customers will be considered as part of Cascade's decarbonation plan. The Company believes partnering individually with Transport Customers, and building custom projects to help meet carbon reduction goals, would help expedite this process. As Cascade reviews the first Energy Analysis reports and learn more about the recommended technologies the Company will continue to consider the development of custom projects for its Transport Customers in Oregon.

## **Upstream Pipelines**

- AWEC recommends the commission approve the following: "Within 180 days following the final order on Cascade's IRP, Cascade will file a report discussing and evaluating its pipeline optimization activities, including how those pipeline optimization revenues are being returned to ratepayers."

Cascade agrees that a report discussing and evaluating the Company's pipeline optimization activities would be of benefit to stakeholders. Cascade looks forward to working with AWEC and other stakeholders in the development of such a report, and its inclusion as an ongoing narrative in future IRPs.

## **Voluntary RNG Program**

- AWEC recommends cascade's Voluntary RNG program Should Be Reevaluated in The Context of the CPP

Cascade is still working on creating a Voluntary RNG program. The Company can confirm that the CPP is being considered while developing the RNG program.

## **Long-term Action Plan**

- CUB states: Like the Commission found for NWN, Cascade must provide a long-term plan that adequately assesses cost and risk and includes reasonable and accurate inputs for its Top-Ranking Portfolio, including a realistic understanding of the uncertainty around those inputs.

Cascade believes the 2023 Oregon IRP included reasonable inputs in the development of its Top Ranking Portfolio. However, Cascade notes that the regulatory landscape has rapidly evolved throughout this IRP cycle, particularly in the areas of decarbonization rules and impacts. Many of these challenges left utilities with unclear guidance from the Commission regarding the desired level of analyses expected in the development of IRP portfolio optimization models. Cascade is encouraged that the Commission has signaled that a proceeding to improve IRP development guidance may be opened in the coming year where the Company and stakeholders will work with Staff to better quantify and clarify IRP analytical expectations in light of the changing landscape. Cascade is committed to being an engaged participant in those efforts.

## **Climate Change**

- Climate Advocates recommend Cascade incorporate climate data to reflect realistic climate-related demand projections in resource planning, informed by climate experts.

Cascade is researching multiple avenues to improving Cascade's understanding regarding climate change impacts, including hiring a climate expert, and will provide an update in the 2023 OR IRP Update filing.

## PLEXOS Modeling

- Climate Advocates recommend Cascade model non-renewal or retirement of pipeline capacity contracts, and the costs and benefits of doing so.
- Staff recommends, in Reply Comments, Cascade explain what the probability of unserved energy is implied by the Company's PLEXOS assumptions, the difference in NPVRR of Cascade's preferred portfolio with one that allowed a single event to occur, and the expected cost of one unserved demand event.
- Staff recommends, in Reply Comments, Cascade provide any study that assessed the cost-effectiveness of Cascade's resource adequacy standard.

Cascade is working with Energy Exemplar to better improve the Company's current model in order to allow for modeling non-renewal or retirement of pipeline capacity contracts, and the costs and benefits of doing so under deterministic and stochastic modeling. Cascade will include the improved modeling in future IRPs.

The implied probabilistic statement of Cascade's PLEXOS assumptions is as follows: "Cascade's PLEXOS modeling concludes that, with 99% certainty relative to potential weather variance and its impact on demand, the Company will be able to reliably meet all peak, swing, and base-load system requirements." It is important to note that Cascade's analysis does not include a quantification of the risk and associated cost with allowing an unserved demand event, as even a singular event is not considered an acceptable outcome for Cascade as a natural gas utility. This distinction between types of utilities is significant, so much so that it is discussed in OPUC's IRP Guidelines, specifically Guideline 11 as listed in Order No. 07-002, which states:

*"Guideline 11: Reliability. Electric utilities should analyze reliability within the risk modeling of the actual portfolios being considered. Loss of load probability, expected planning reserve margin, and expected and worst-case unserved energy should be determined by year for top-performing portfolios. Natural gas utilities should analyze, on an integrated basis, gas supply, transportation, and storage, along with demand-side resources, to reliably meet peak, swing, and base-load system requirements. Electric and natural gas utility plans should demonstrate that the utility's chosen portfolio achieves its stated reliability, cost and risk objectives."*

Cascade's analysis complies explicitly with this Guideline of identifying a mix of demand and supply-side resources to reliably meet peak, swing, and base-load system requirements. To the Company's knowledge there is no rule identifying a natural gas reliability standard. To this end, in attachment A of OPUC Order 23-340, as discussed in UM 2143 and AR 660, resource adequacy is explicitly defined as "the expected ability of a Load Serving Entity to supply aggregate electric power and energy to meet the requirements of their consumers with a sufficient degree of reliability and plan to meet future demand with sufficient supply-side and demand side resource." While a Load Serving Entity is defined as "An Electric Company or Electric Service Supplier." Since Cascade does not meet this definition, and does not supply electric power, these resource adequacy standards do not apply to Cascade or any natural gas LDC. Any discussion about changing the natural gas resource adequacy standard should not be adjudicated

in Cascade's IRP, but rather in a separate rulemaking if parties so desire.

### **GTN Xpress**

- Cascade noted several comments regarding GTN Xpress and wanted to provide an update.

As the Commission noted in their NWN acknowledgment decision, the IRP is an analytical exercise and is intended to be an exploratory process.<sup>9</sup> The IRP is not the forum for prudency concerns. From an IRP modeling and timing perspective, it is important to recognize that upstream pipeline capacity projects are “lumpy” and become available on a project-by-project basis. Cascade identified that based on the information available to the Company at the time, the GTN Xpress project was indeed, justified. The decision to acquire the capacity was made based on the best information about market conditions and Cascade's forecasted load at the time. While the IRP does not determine prudency, the process Cascade followed to acquire the capacity is consistent with long-standing practice by regulators to assess resource acquisitions from the standpoint of what did the utility know at the time it made the decision. The GTN Xpress contract was executed prior to receiving or becoming aware of recent decarbonization requirements or expectations. Utilities such as Cascade are guided by their IRPs but have adaptive management regarding ultimate operational decisions. Such is the case with the GTN Xpress project. As Cascade continuously points out, IRPs inform, IRPs do not decide. Cascade believes the IRP is not the proper forum for a prudency determination.

### **Conclusion**

Cascade has sought to, from start to finish, embody all characteristics of a “best practices” IRP process and result. The Company believes it has exceeded all industry norms and standards in this regard. The advisory meetings have been transparent and responsive to all issues raised, with documentation provided in advance and prompt follow-up to all questions. Cascade's Draft IRP and voluminous appendices have covered all planning issues. In the past four years Cascade has fully developed an IRP team of four full-time analysts, reporting to a management chain committed to the IRP process, and retained an IRP consultant.

The Company is fully aware that overall acknowledgement by the Commission does not constitute approval for ratemaking purposes. However, awareness of what the Commission and its Staff sees as beneficial planning for its body of customers is appropriate. Cascade recognizes this IRP cycle presented several unexpected challenges. Cascade encourages the OPUC to open a docket to discuss the ever-changing regulatory environment.

This concludes Cascade's comments.

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<sup>9</sup> OPUC Order No. 23-281 at 8



Dated at Kennewick, Washington, this 2<sup>nd</sup> day of November, 2023.

A handwritten signature in black ink, reading "Mark Sellers-Vaughn". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Mark Sellers-Vaughn  
Manager, Supply Resource Planning

## **Attachment A**

### **Amended Two- to Four-Year Action Plan**

## 2023 Action Plan

The IRP Action Plan demonstrates Cascade's commitment to implementing the Company's Integrated Resource Plan and creating a portfolio of resources with the reasonable least cost mix of energy supply resources and conservation.

### Key Points

Cascade's 2023 Action Plan focuses on:

- Resource Planning
- Environmental Policy
- Avoided Cost
- Demand Side Management
- Renewable Natural Gas
- Distribution System Planning
- IRP Process

## Resource Planning and Environmental Policy

Cascade recognizes the importance of gathering best practices from other jurisdictional LDCs. To that end, the Company will continue to participate in the IRP process of at least three regional utilities over the course of the next two to four years with the objective of incorporating aspects that may enhance Cascade's IRP. Cascade will also attempt to get additional stakeholder involvement through convening the IRP TAG meetings in various locations within Cascade's territory, updates to Company website, and/or other means.

Cascade will also:

- Continue to develop the Company's new PLEXOS® model.
- Cascade will purchase approximately 561,152 mtCO<sub>2</sub>e of CCIs and acquire 396,236 mtCO<sub>2</sub>e of RNG or environmental attributes to meet the carbon reduction goals laid out by the Climate Protection Program (CPP).<sup>1</sup> Cascade's forthcoming SB 98 filing will provide detailed information regarding Renewable RNG and RTC attributes the Company plans to invest in to meet the CPP goals.
- Cascade will purchase the necessary amount of RNG for the Company's voluntary RNG program once the RNG program is active and customers have joined the program.
- Cascade will continue to investigate the cost and feasibility of a potential hydrogen plant as well as other hydrogen options as an alternative resource.
- Continue to participate in the local climate community action plans around Cascade's service territory.

## Avoided Cost

Cascade will investigate incorporating a separate avoided cost for non-core customers. Cascade will also explore how environmental compliance costs from the CCA/PPP will impact the avoided cost calculation.

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<sup>1</sup> See LC 83 Cascade Reply Comments, Page 3 for a further breakdown.

## **Demand**

Cascade will look into incorporating end use forecasting into the load forecast model. With the increase in building code changes, Cascade will need to gain a better understanding on usage by end use and how the building code changes will impact future demand. Cascade will also look into incorporating income as an explanatory variable.

## **Demand Side Management (Energy Efficiency)**

Cascade will continue to work with Energy Trust of Oregon (ETO) in an effort to create a DSM program for non-core customers. In coordination with ETO, Cascade will strive to acquire the projected gross savings targets of 772,570 therms in 2024, 816,866 therms in 2025, 831,951 therms in 2026, and 848,951 therms in 2027. Cascade will coordinate with ETO in 2023 to include targeted load management for Baker City and Ontario distribution system projects.

## **Distribution System Planning**

The Company will address the following Action Items for Distribution System Planning.

- Prineville Gate Upgrade.
- Baker City Gate Upgrade.
- Ontario Gate Upgrade.

Cascade has identified an immediate need for the Prineville Gate upgrade.<sup>2</sup> Cascade has also identified a need to upgrade the citygates for Baker City and Ontario.<sup>3</sup> For Baker City and Ontario, Cascade is working with ETO in order to reduce 3,709 peak day therms from Baker City and 3,501 peak day therms from Ontario. ETO provided an assessment that would reduce the needed load, but under a 16-year timeline. Currently, ETO does not anticipate including TLM for Baker City and Ontario in the most recent budget. Cascade will continue discussions with ETO as well as consider other non-pipe alternatives that can be effectively implemented.

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<sup>2</sup> See Cascade 2023 IRP Appendix I

<sup>3</sup> *Ibid.*