

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

Docket No. LC 76

In the Matter of

CASCADE NATURAL GAS COMPANY,

2020 Integrated Resource Plan Update

STAFF COMMENTS

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1. Introduction

These are Staff's initial comments regarding the Cascade Natural Gas Company's (CNG, Cascade, or the Company) 2020 Integrated Resource Plan (IRP) update. Staff has organized these comments to provide an overall background driving its analysis and then explores four items. Those items are:

- General compliance with IRP guidelines and previous orders;
- Analysis of action plan items seeking acknowledgement;
- Oregon Department of Environmental Quality (DEQ) Climate Protection Program (CPP) compliance strategy; and
- Cascade's role in the Bend Community Climate Action Plan initiative.

The Company's update seeks acknowledgement of six distribution system projects with a project value of approximately \$16 million. The Company removed these projects from its most recent IRP, and stated it would include these projects for acknowledgement in the future. Cascade has included these projects in its IRP Update for Commissioner consideration.

Staff highlights for the Commission that, since the acknowledgement of Cascade's 2020 IRP in April 2021, DEQ has adopted rules for the CPP. This major policy development creates a new dynamic in gas resource planning and Staff devotes a large part of its opening comments on this topic. Utilities, stakeholders, and Staff must incorporate new considerations for least-cost, least-risk investments. The Commission's Natural Gas Fact Finding docket (UM 2178) ran concurrent to the DEQ's CPP development process and reported back on the key elements to this new dynamism in gas resource planning. The Fact Finding also launched a broad and ongoing conversation amongst the gas companies, stakeholders, and Commission Staff about optimal compliance pathways and attendant risks. As such, this IRP Update will be the first Oregon gas IRP filed and commented upon since the adoption of the CPP. This document and future memos will reflect Staff's evolving thinking and approach to gas resource planning in an era of deep decarbonization in Oregon.

Finally, in this introduction Staff notes that it experienced difficulties with the Company's responsiveness to Information Requests in this proceeding. Staff initiated Information Requests to the Company the first week of June, and responses were due the third week of June. After a request for an extension followed by minimal information on when the responses would be sent, the Company did not respond to Staff's Information Requests on Thursday, July 21 – a month after the due date, and just one day before these opening comments were due. As a result, Staff does not discuss the Information Responses from the Company in these opening comments. Staff expects the Company to be timely and responsive with their Information

Responses for the remainder of this proceeding and will address the initial round of Information Responses in Staff's Final Report.

2. IRP Update Overview

Cascade's 2020 IRP was acknowledged April 27, 2021, in Order No. 21-127. This IRP Update filing builds on this acknowledged order. It contains the latest information on some of the action items. The Update also includes a request for acknowledgement of six distribution system projects.

Compliance

IRP Update Compliance

The IRP Update is guided by two sets of requirements: OAR 860-27-0400 (8) and (9), and IRP Guidelines 3f and 3g from Order No. 07-002.

The directions from these two requirements are generally similar. Energy utilities must do the following:

- Submit annual updates on its most recently acknowledged IRP.
- Summarize the update at a public meeting.
- Request acknowledgement of changes in proposed action items.
- Describe actions taken to implement the acknowledged action plan.
- Provide an assessment of what has changed since acknowledgement that affect the action plan.

Information on Action Plan Implementation Activities

Cascade's IRP Update provided new information on some of the acknowledged action plan items. In several cases, no new information was provided. While this made sense in a few cases (e.g., the action plan item was intended for the next IRP filing in 2023), Cascade's IRP Update contains omissions where Staff believes more data would be helpful. Additionally, the apparent lack of progress on some of the action plan items has spurred Staff to ask for more information in the Company's upcoming reply comments.

Table 1 captures a synopsis of the acknowledged action plan items that either the Company provided information on in their IRP Update filing, or that the Company needs to provide an update on through its response to Staff Information Requests or in its Reply Comments.

Table 1: Action Item Summary

Action Plan Item # **	Description of Action Plan Item	Information From the Company or Needed From the Company in IRP Update <i>(Required information in Bold Font)</i>
1. Resource Planning		
1.a	Attend other local distribution companies (LDC) meetings	Cascade included an update in its filing. No further information sought by Staff.
1.b	Realign Maximum Daily Delivery Obligation w/ Northwest Pipeline LLC (NWP)	
1.c	Make Jackson Prairie Contract permanent	Cascade needs to explain timing relative to IRP in reply comments.
1.d	Model scenarios for Pipeline Operational Flow Orders	Cascade needs to provide assurance in reply comments this will be included in next IRP.
1.e	Improve alignment between purchased gas adjustment (PGA) and IRP on resources/costs	Cascade included update in filing. No further information sought by Staff.
1.f	Scenarios for changing Canadian markets	
1.g	Add renewable natural gas (RNG) as candidate portfolio	
1.h	Presentation on severity of outcomes	Staff will look for update in TAG meetings.
2. Demand Forecast		
2.a	Adjustments to demand forecast methodologies for next IRP (i.e., Wind and Peak Day)	No information provided on these items. However, an update is optional. If Cascade would like to provide update on progress, Staff invites it to do so in reply comments.
2.b	Incorporate price as demand forecast variable in next IRP	
2.c	Publish demand forecast model variables, as appendix, in next IRP	
3. Environmental Policy		
3.a	Continue to support the City of Bend’s Climate Action Plan	Cascade provided no information on these items. Given the nexus with CPP, providing a brief update, on most items in reply comments would be reasonable. (3.a will be covered in greater detail below.)
3.b	Participate in City of Bellingham Climate Action Plan discussions	
3.c	Monitor service areas for potential GHG reduction goal development relating to energy delivery and supply	
3.d	Monitor carbon pricing and policy developments nationally and statewide	
3.e	Monitor federal and state GHG regulation development for energy industry	
3.f	Continuation of current emission reduction and monitoring endeavors.	
4. Demand-Side Management / Energy Efficiency		
4.a	Implement all action items on IRP pages 11-3 and 11-4 (Meet with ETO; Summary of Meetings with ETO in IRP Update; Collaborate with ETO on expanded government engagement to meet local communities climate goals)	Cascade provided no information provided on these items The Company should provide an update on all items in reply
4.b	Acquire cost-effective EE as detailed on table	

Action Plan Item # **	Description of Action Plan Item	Information From the Company or Needed From the Company in IRP Update <i>(Required information in Bold Font)</i>
4.c	Work with the Energy Trust of Oregon (ETO) to target areas to alleviate load constraints	comments, especially given the nexus with CPP.
4.d	Host workshop on 4.c to detail progress	
5. RNG for IRP Update		
5.a	Continue to develop and update RNG cost-effectiveness tool	Cascade provided no information. The Company should provide an update on this item in reply comments.
5.b	Detail RNG program revenue	Cascade included an update in its filing. No further information sought by Staff.
5.c	Estimate RNG revenues from CA and/or Oregon clean fuels programs	
5.d	RNG case scenario reflecting CPP	
6. Distribution Projects		
6.a	Remove 18 projects from Action Plan	--
6.b	Host workshop to present distribution upgrade project information	Cascade included an update in its filing. No further information sought by Staff.
7. Other Recommendations Prior to Next IRP		
7.a	Present on gas price forecasts and price shocks at 2022 IRP Technical Advisory Group Meeting	Cascade provided no information on either item. The Company should provide an update, if any, on both items in reply comments.
7.b	Refine distribution system avoided cost value for EE	
7.c	Host workshop on improved communications for next IRP cycle	Cascade included an update in its filing. No further information sought by Staff.

** - Sub-bullet lettering was added by Staff in these comments for clarity's sake.

Staff Request

1. In the Company’s Reply Comments should respond to all the requests for more information on the IRP action items as detailed in Table 1 to better understand progress and respond to all Staff Information Requests in a timely manner.

Assessment of Changes Affecting the IRP Action Plan

In the year since Cascade’s 2020 IRP was acknowledged the Oregon energy policy landscape has radically changed. A sweeping and complementary set of decarbonization rules and laws went into effect that will change how Oregon’s investor-owned utilities plan for and conduct their operations.¹ Cascade’s IRP Update does not include an assessment of how the CPP impacts the acknowledged action plan. Given the scope of the change, Staff sees this as a missed

¹ LC 76 was acknowledged April 27, 2021. DEQ’s CPP rules for covered fuel suppliers, including gas utilities, were adopted effective December 16, 2021. The legislature’s decarbonization bill for electric utilities, HB 2021, was passed June 26, 2021.

opportunity for the Company to communicate with Staff, the Commissioners, and stakeholders the impact of CPP on its activities and next IRP process.

Staff Request

2. In the Company's Reply Comments provide a narrative summary of how the adoption of CPP rules impacted acknowledged action plan items and is impacting future planning.

Request for Acknowledgement of Distribution System Projects

The original Action Plan included eighteen distribution system projects for acknowledgement. During IRP review and comment process Staff raised concerns about the Company's level of documentation to justify several of the proposed distribution system projects. As a result of the dialogue between Staff and Cascade, the Company agreed to pull all of the distribution system projects from the 2020 Action Plan. On April 15, 2021, Cascade submitted a revised IRP Action Plan without the projects in question.² The Company did note though the future necessity for these projects and stated it would resubmit them at a later date.³ The projects the Company is seeking acknowledgement for in its Update are:

- Prineville Gate
- Ontario Reinforcement
- Baker City Reinforcement & New Gate
- Bend: Bend Gate
- Bend: Bend Shelvin Park Reinforcement
- Bend: 6" Pipe

Section 3 of Staff's comments will review each project in more detail and include requests.

Decarbonization Policy and Resource Planning

As part of this section providing an overview to the IRP Update, Staff feels it is important to review the decarbonization policy impacting Cascade's planning and to articulate how those policies affect Staff's approach to reviewing the IRP Update.

CPP Review

As noted earlier, Oregon DEQ adoption of CPP rules in December 2021 represents a major policy development for gas utility resource planning. The mechanics of the rules and associated penalties create new variables that must be considered in the development and assessment of least-cost, least-risk investments. The list below summarizes, at a high-level, some of the key characteristics of the CPP rules:

² Docket No. LC 76, *Cascade Natural Gas Corporation's Response to Staff PM Report and Amended IRP Chapters*, April 15, 2021.

³ *Id.* at 11-5.

1. Decreasing Compliance Instruments: CPP allots a decreasing number of compliance instruments every year to each Oregon covered fuel supplier, including gas utilities.⁴ The compliance instruments represent one metric ton of CO2 equivalent (MT CO2e) emissions. The exact number of annual instruments are set by rule and the allotment decreases at a regular rate to reach a 50 percent reduction in GHG emissions by 2035 and a 90 percent reduction by 2050. Unused instruments can be traded or applied in future years to achieve compliance.
2. Alternative Compliance Instruments: The CPP offers the use of a single alternative compliance instruments called a Community Climate Investment (CCI) credit. Gas utilities can obtain CCI credits by contributing funds to a DEQ-approved CCI entity that implements projects reducing GHG emissions in Oregon. A CCI credit value is the equivalent of an MT CO2e emission reduction and the price is set by rule. The amount of CCI credits that can be used annually are limited. CCIs used for compliance can be from the current or previous compliance period and can be held through two compliance deadlines.
3. Compliance Period: DEQ assesses utility CPP performance during compliance periods, which are every three years. Total covered emissions for those three years will be weighed against total allotted compliance instruments and purchased CCI credits. There is no adjustment for weather. The first CPP performance period began January 2022 and ends December 2024.
4. Covered Emissions: Covered emissions for gas utilities are GHG emissions from the combustion of natural gas distributed through their system, including transport customers. The rules exclude natural gas used at large electricity generating facilities.⁵ They do not include emissions from biomass-derived fuels.

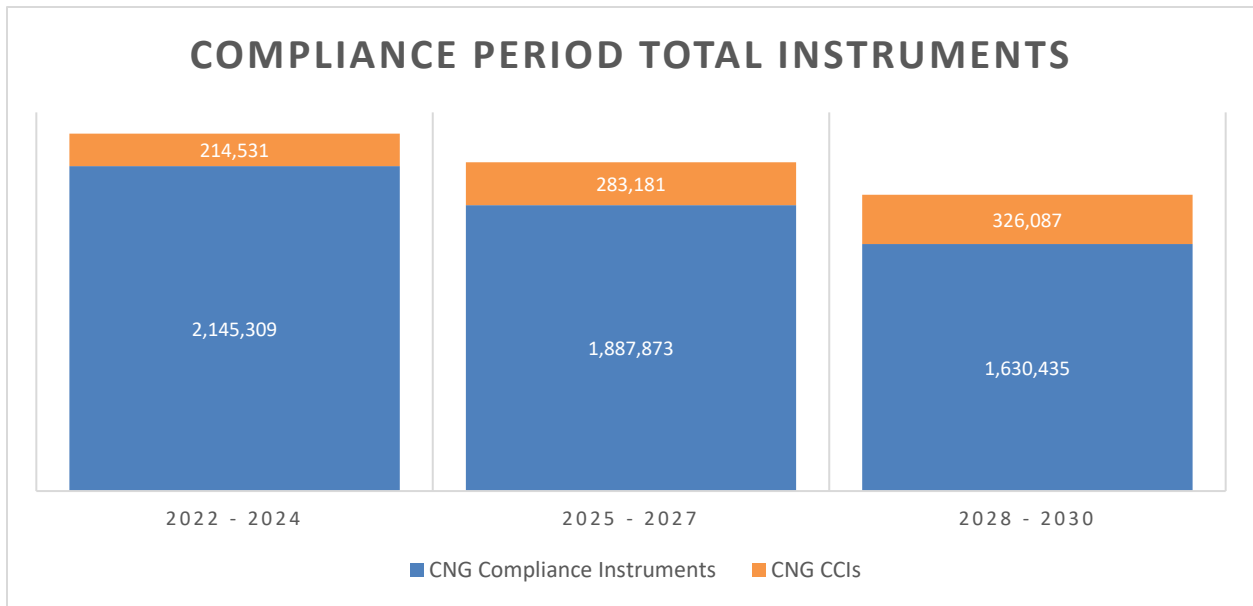
Figure 1 below attempts to capture Cascade's allowable emissions during each three-year enforcement period using DEQ data.⁶ DEQ's approach creates a predictable stairstep of a decreasing pool of compliance instruments. This puts a premium on near-term action, as unused compliance instruments can be utilized later when compliance is more difficult.

⁴ See OAR 340-271-9000, Table 4.

⁵ See OAR 340-271-0110 (4)(b)(B)(iv)

⁶ See DEQ Climate Protection Rules OAR 340-271-9000, Table 4

Figure 1: DEQ CPP Compliance Instruments by Period



Finally, DEQ has stated that the CPP non-compliance penalties would be assessed on a per metric ton basis and that it also has discretion for group violations.⁷ For current planning purposes Staff believes it is conservative to assume that DEQ’s non-compliance penalty floor will be higher than CCI credit cost applied to every metric ton of emissions above compliance period allotment. While Staff expects the Company to comply with the law, assigning a value to non-compliance makes plain the compliance risk in planning. From Staff’s perspective, portfolios of investments that are not forecasted to achieve near-term CPP compliance in the IRP action plan window create a predictable financial impact on the Company.

Bend Community Climate Action Plan

The portion of CNG’s Oregon service area with the largest load growth is around Bend. According to the Company the entire area is growing at approximately 1.83 percent annually.⁸ In addition to high growth, Bend also has ambitious fossil fuel reduction goals.⁹ While not binding, Bend’s 2019 Community Climate Action Plan (CCAP) seeks to reduce fossil fuel use 40 percent by 2030, using 2016 as a baseline.¹⁰

⁷ See Climate Protection Program Covered Fuel Supplier FAQ, last updated February 7, 2022, page 5.

⁸ See Docket No. LC 76, *Cascade Natural Gas 2020 Integrated Resource Plan*, July 31, 2020, page 46.

⁹ See Bend 2019 Community Climate Action Plan, Executive Summary, page 2

¹⁰ *Ibid.* The 2016 baseline of emissions was 809,352 MT CO₂e.

This goal reflects an expression of the public interest by the customers and the municipal government served by Cascade to reduce fossil fuel use. The Company played a constructive role in the development of the CCAP and committed to supporting it, which was included as an action item in the 2020 IRP.¹¹ This support was detailed as partnering on RNG development, a voluntary offset program, and pursuing other low carbon opportunities.¹² Staff will include a more detailed analysis of this topic and associated requests for Cascade in Section 3.

Staff's Approach to IRP Analysis Considering State and Local Decarbonization Initiatives

Overall, Staff finds that the drive to decarbonize Oregon's energy systems results in expanding the analysis conducted in IRPs. Broadly, a gas IRP and its action plan items must identify and quantify how the performance of a proposed portfolio of investments forms an effective near- and long-term CPP compliance strategy. Financial risks from CPP non-compliance should be articulated both within and independent of any portfolio analysis, as the Commission may need to determine in the future who should bear the risks of an underperforming CPP compliance strategy.¹³ Further, the design and enforcement cadence of the CPP favors actions that increase the probability of near-term compliance over longer-term compliance strategies that incur near-term penalties, *regardless of impacts on other energy systems*. In short, Staff believes legitimate concerns about optimized joint planning between electric and gas utilities for CPP compliance do not alleviate the gas companies from a near-term responsibility to present an IRP that is CPP-compliant and avoids penalties.

Within this context, the drivers of any proposed gas distribution system upgrade become exceedingly important. Distribution system upgrades for purely safety purposes most likely need no further justification than is currently required. However, system expansions or reliability upgrades driven by growth forecasts should now require additional analysis due to the CPP.¹⁴ The figure 2 below is meant to capture Staff's current approach to analyzing distribution system upgrades:

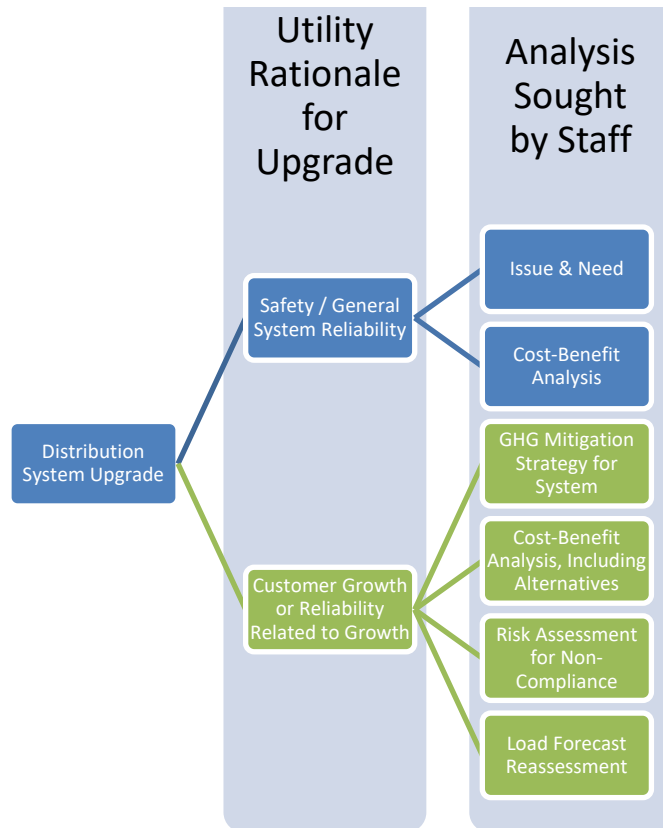
¹¹ See LC 76 Integrated Resource Plan, page 7-7

¹² *Id.*

¹³ For more on this see Staff's NGFF Report, page #, Compliance Tool "Protecting Customers" #6

¹⁴ *Id.*

Figure 2: Staff’s Current Approach for Analyzing Distribution System Upgrades



In sharing the above, Staff would also note that this is an evolving rubric for approaching proposed gas distribution system upgrades. Staff notes that this rubric is subject to change, including future Commission direction and Orders that may direct Staff’s analysis on this analysis.

3. IRP Update Action Item Review

As noted earlier, Cascade is proposing the acknowledgement of six distribution system upgrades in this IRP Update. As mentioned in the introduction, the Company has been very delayed in its Information Responses, and they were not received by Staff in a timely manner that allowed them to be included in Staff’s analysis in these opening comments. Staff will continue to analyze the responses and initiate new Information Requests to inform its Final Staff Report recommendation on these projects.

Overall, the justification for the proposed upgrades contained in the Company’s update filing come from a combination of current pressure issues during peak cold weather events and forecasted growth. The Company has stated regular, non-peak usage could be met by the

existing systems in all four locations through 2027.¹⁵ The table below from the Company shows the forecasted annual growth driving the need for these upgrades.¹⁶

Table 2: Forecasted Annual Growth

2021-2027 Growth in Therms	Baker	Ontario	Prineville	Bend
Annual Load	165,339	288,239	396,426	5,417,383
Peak Day Load	1,906	3,630	5,102	62,683
Peak Marginal Increase	318	605	850	10,447

At this time Staff only has information on one proposed project – the Bend Shelvin Park reinforcement – with a cold weather event that dropped substantially below minimum operational pressure.¹⁷ Further, the marginal peak growth numbers seem manageable via alternatives such as energy efficiency, relative to the upgrade costs. As a result, Staff would appreciate the Company explaining in its reply comments the extent to which alternatives to these distribution system upgrades that reduce estimated peak growth can address the identified issues.

Cascade is on record in LC 76 as stating its lowest acceptable distribution pressure is 10 psig, but that when modeling reveals system pressures slightly above, ranging from 15 to 20 psig, those areas may become potential candidates for reinforcement.¹⁸ Further, the threshold to address low-pressure issues through system upgrades or reinforcements depends on the rate of local growth, but the Company uses 20 psig as a typical threshold in high-growth areas.¹⁹ In reply comments and outstanding IRs, Staff requests that Cascade explain the distribution pressure for each of the four high-growth areas. Notably, Staff would like the Company to address the reasoning for the Company’s goal to increase the design day pressures to 35 psig for the Ontario and Baker projects.²⁰

In short, it is currently difficult for Staff to apply the new rubric for assessing distribution system upgrades explained in Figure 2. With the current information the Company has provided, Staff cannot parse necessary safety and reliability upgrades from those due to forecasted growth for most of the proposed projects. When Staff asked Cascade to detail the specific safety and reliability concerns from not completing each proposed upgrade, Cascade shared a blanket statement that not completing the projects would jeopardize the ability to meet peak day

¹⁵ See IR 82, June 27, 2022

¹⁶ *Ibid.*

¹⁷ See IR 80, July 1, 2022. In 2022 the Westside of Bend dropped to 0.5 psig during a cold weather event.

¹⁸ See LC 76, Staff’s Public Meeting Memo on IRP acknowledgement, March 26, 2021, pg. 22.

¹⁹ *Ibid.*

²⁰ See LC 76, IRP Update, April 27, 2022, pages 11 (Baker) and 18 (Ontario)

demand in each area.²¹ Cascade has argued that much of the need for the six proposed distribution system projects is a result of growth. Between now and final comments, Staff plans to fully engage with Cascade in applying its new rubric for assessing distribution system upgrades.

Staff Requests

3. Explain in reply comments the extent to which non-pipe alternatives to these distribution system upgrades that reduce estimated peak and overall growth can address identified issues.
4. Explain the distribution pressure for each of the four high-growth areas, specifically addressing the goal for the Ontario and Baker projects to increase the design day pressures.
5. Provide detail of specific safety and reliability concerns from not completing each proposed upgrade, broken down by each project.

Overview of Proposed Projects for Acknowledgement

Below are brief overviews of each of Cascade's proposed projects for this IRP Update. As mentioned previously, they total over \$16 million in value and all share a common theme of underlying growth driving the need for the project. Staff is still conducting its analysis of the projects' safety and reliability need and also its relationship to growth. We look forward to working with the Company and stakeholders to resolve these issues over the coming two months.

Prineville Gate (\$1.5 million)

This upgrade is meant to alleviate a constraint on growth at the gate connecting Cascade's system to interstate pipeline. It will allow for higher flows out of the gate station to meet future growth. No alternative investment was considered; Cascade claims the gate must grow to meet future demand.

The area has been growing at approximately 3 percent annually since 2015 and sales are forecasted to increase 8 percent by 2026 over 2022 sales.²²

²¹ See IR #81

²² See IR #85, prepared June 3, 2022

Table 3: Prineville Gate Upgrade Statistics

Customer Counts	Current	2026	2030
Residential	2,614	3,188	3,540
Commercial	528	576	610
Industrial	32	32	32

Therm Usage	Current	2026	2030
Residential	1,710,914	1,919,420	2,127,284
Commercial	1,786,280	1,890,827	1,995,049
Industrial	425,031	427,803	430,516

There has only been one pressure event since 2019 and no discussion of alternatives to reduce emissions associated with this growth. If no RNG is added, commensurate with this forecasted growth, Staff estimates Prineville in total will contribute about approximately 22,000 MT CO₂e in 2026 to Cascade’s total emissions. Staff needs to investigate further the extent to which the 2019 pressure event warrants the investment and if non-pipe alternatives offer a least-cost, least-risk approach to meet growth needs.

Ontario Reinforcement (\$1.23 million)

This project involves installing a new regulator and upgrading 6,000 ft of pipe from 2” to 4”.²³ It will boost design day pressures from 25 to 35 psig and introduce a second feed into the Ontario distribution system from the south to support system growth.²⁴

The area has been growing at approximately 1.4 percent since 2015 and sales are forecasted to increase approximately 5 percent by 2026 over 2022 sales.²⁵

²³ See LC 76 IRP Update, April 27, 2022, page 17.

²⁴ *Ibid.*

²⁵ See IR #106, prepared June 3, 2022

Table 4: Ontario Reinforcement Upgrade Statistics

Customer Counts	Current	2026	2030
Residential	3,891	4,081	4,271
Commercial	958	1,007	1,056
Industrial	24	27	30

Therm Usage	Current	2026	2030
Residential	2,152,106	2,253,715	2,355,026
Commercial	2,612,089	2,748,575	2,884,728
Industrial	478,146	494,036	510,400

Staff is unclear if there has been any safety or pressure events due to the smaller pipe and lack of regulator in the south of Ontario. Staff needs to investigate further the extent to which forecasted growth warrants the investments and if non-pipe alternatives offer a least-cost, least-risk approach to meet growth needs.

Baker City Reinforcement and New Gate (\$1.75 million)

This project involves installing 1,200 ft of 6” pipe and a new gate station. It will boost design day pressure for a large portion of the city from 20 to 35 psig. The only alternative investment considered was a different piping route.

Staff is unclear if there has been any safety or pressure events due to the smaller pipe and single gate in Baker. Staff needs to investigate further the extent to which forecasted growth warrants the investments and if non-pipe alternatives offer a least-cost, least-risk approach to meet growth needs.

Bend Projects (\$11.9 million)

Cascade is proposing three projects in Bend. The projects support and complement one another, but do not appear to be entirely reliant on each other.

- **Bend Gate (\$1.87 million):** The current gate on the east side of Bend is currently constrained and Cascade asserts it needs to be upgraded to meet future growth.²⁶ In 2022 there was one pressure event at the Bend gate but there were several at the South Bend gate, which is hydraulically connected. In addition to meeting growth needs, the upgrade would alleviate overtaxing the South Bend gate and better balance out flows to maintain pressure on the high pressure system. No alternatives were considered.
- **Bend Shelvin Park Reinforcement (\$2.6 million):** This project involves installing a new regulator station and 1.8 miles of 6” pipe to extend high pressure to the west side of

²⁶ See LC 76 IRP Update, April 27, 2022, page 10.

Bend. This reinforcement will take the distribution system pressure on design day from 15-20 psig up to 40-45 psig and will support the significant growth experienced on the west side of Bend as subdivisions expand. No other alternatives with a similar scope were considered. Many data requests regarding this upgrade have yet to be answered.

- Bend 6" (\$7.5 million): This project spans multiple years and phases. This project would have several benefits. It would support higher outflows from both the Bend Gate and South Bend gate, improve the overall line depth, accommodate future growth, and eliminate the need to conduct a bypass during winter months. No alternatives were considered with a similar scope.

Staff Requests

6. Respond to all future Information Requests in a timely manner.
7. In reply comments explain how Cascade could immediately evaluate non-pipe alternatives to alleviate current and future local distribution system peak needs and overall demand at each project area. (e.g., extensive energy efficiency measures in existing and new buildings such as smart thermostats, enhanced insulation, and dual-fuel systems using cold weather heat pumps).

4. Decarbonization Planning Analysis: CPP Compliance and Action Item Acknowledgement

As stated previously, DEQ's December 2021 adoption of the CPP rules created a large-scale change for gas utilities. Operational and resource planning decisions will need to be altered in the very near-term and well into the future. Cascade's IRP Update did not include an assessment of how this major policy landscape shift impacted their resource decisions in the time since their IRP was acknowledged.²⁷ Cascade stated in an Information Request response that their current CPP compliance strategy is consistent with what was shared in UM 2178, the Natural Gas fact finding docket directed by Executive Order No. 20-04, and it was on a path to reduce emissions in excess of their CPP compliance instruments.²⁸

Staff used publicly available data from UM 2178 as a supplement to the Company's IRP Update. From that data Staff attempted to assess how the Company's resource plan and proposed investments positioned it to meet the emissions targets of the CPP.²⁹ Cascade has noted that all of the proposed system upgrades do not factor into the compliance strategy as they are intended to meet current or future peak needs.³⁰ Regardless, Staff's initial analysis points toward the Company's not being on a path to near-term CPP compliance and potentially

²⁷ See IRP Guideline 3.g

²⁸ See IR #113. Notably UM 2178 was designed to serve as a fact finding docket and not intended to replace the resource planning process.

²⁹ See UM 2178, Cascade Natural Gas

³⁰ See IR #113, June 28, 2022

incurring a large financial risk when DEQ assesses performance after the end of the first compliance period in 2024.

Cascade’s UM 2178 base case CPP compliance scenario relies on a combination of energy efficiency, renewable natural gas, and CCIs and is illustrated in Table 7:

Table 5: CPP Compliance Resource Needs

UM 2178 Base Case Scenario, Resource Needed (Therms)³¹	2022	2023	2024
Expected EE	1,633,849	2,146,222	2,690,808
Expected RNG	1,344,500	1,344,500	1,344,500
Tier 1 Incremental EE	25,113	25,113	37,716
CCI Needed	31,481	63,825	98,059

The filed IRP Update does not share any progress to date on securing the resources detailed above from their UM 2178 base case scenario. Additionally, Staff would note:

- For 2022, ETO plans to secure 0.75 million therms of energy efficiency for Cascade.³² This represents less than half of the expected and incremental energy efficiency called for by 2022 in Cascade’s plan. It is unknown at this time what ETO’s 2023 goals are and the extent to which Cascade has any plans to secure energy efficiency from transport customers.
- Staff believes that Cascade currently has zero RNG secured for 2022. Cascade did note in an IR response that it was awarded a contract to develop a landfill RNG system in Deschutes County.³³ However, it is not known at this time when this new RNG project will be completed and the estimated number of pipeline-quality therms it will introduce to CNG’s system annually. Staff would note that Cascade’s UM 2178 base case scenario forecasts 6.8 million therms of landfill RNG and 7.2 million therms of solid waste RNG for a total of approximately 14 million therms of RNG being acquired in 2025. For perspective, in NW Natural’s 2021 SB 98 Compliance Report (RG 99), the Lexington Renewable Energy project is forecasted to produce approximately 846,000 therms of RNG annually.³⁴
- Staff estimates that Cascade will be forced to purchase the maximum allowable number of CCIs credits for the first compliance period. While Cascade forecasts a total purchase

³¹ See UM 2178, Cascade Natural Gas Fact Finding Results Excel File, September 7, 2021.

³² See Energy Trust’s approved 2022 Annual Budget, December 17, 2021, page 84 of <https://energytrust.org/wp-content/uploads/2021/12/2022-Approved-Budget-Binder.pdf>.

³³ See IR #110, July 6, 2022.

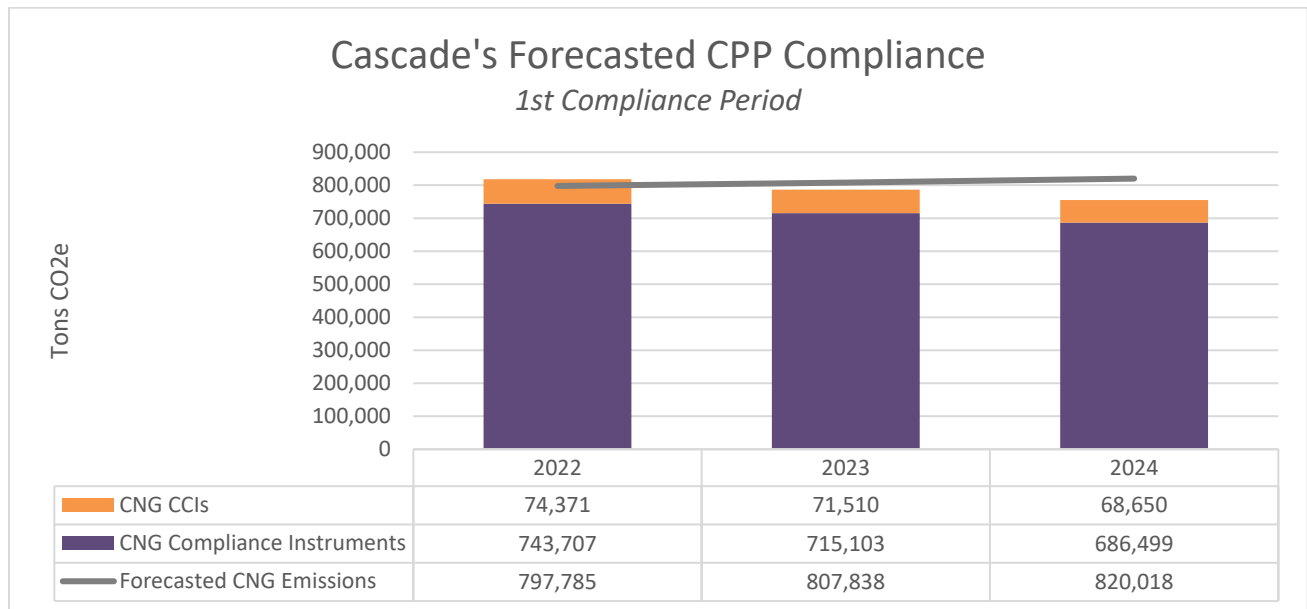
³⁴ See RG 99, NW Natural Annual RNG SB 98 Compliance Report, June 30, 2022, page 5 of <https://edocs.puc.state.or.us/efdocs/HAA/haa181512.pdf>.

of 193,364 CCI credits, Staff forecasts Cascade will have to purchase 214,531 CCI credits. The cost difference is approximately \$2.2 million.

With regards to other compliance resources, Staff asked about the potential use of hydrogen. In response to an Information Request for the proposed distribution system upgrades to utilize 20 percent hydrogen, the Company said it would explore this in the next IRP. It also pointed to a 2021 consultant study submitted in the DEQ CPP rule development process regarding Cascade’s long-term plan to rely on hydrogen for 2035 and 2050 CPP compliance.³⁵

Using publicly-available data and information provided through the IRP Update, Staff estimates that for the first CPP compliance period (2022 to 2024) the Company’s covered emissions will exceed CPP compliance instruments. Specifically, by the end of 2024 and assuming no major changes in activities, Cascade appears on a path to experience a net deficit of approximately 66,000 tons, illustrated in Figure 3.

Figure 3: Cascade's Forecasted CPP Compliance



It appears to Staff that the resource decisions proposed in the current IRP Update compromise the Company’s ability to comply with the CPP in 2022 and do not show alignment with or responsiveness to the strategies the Company proposed in UM 2178 to which the Company points. Further, no additional plans were articulated in the IRP Update for enhanced resource acquisitions in 2023. Staff also understands that Cascade’s 2024 compliance activities are still in development via the IRP process. However, those activities will need to compensate for any net

³⁵ See IR# 120

CPP compliance deficits incurred in 2022 and 2023 to avoid noncompliance penalties. In addition, Staff sees a sizeable financial risk for the Company going into the next three-year compliance period. The screen shot of Cascade’s base case of needed resources in Table 6 from its UM 2178 filings highlights the pressure on the Company in 2025 to 2027 to acquire a sizeable number of therms from its current compliance pathway’s resources. The next IRP should explore multiple pathways to CPP compliance, especially if the needed resources identified in the UM 2178 base case have a low probability of being acquired by the timeframe necessary.

Table 6: Cascade’s Base Case of Needed Resources

	2022	2023	2024	2025	2026	2027
Expected EE	1,633,849	2,146,222	2,690,808	3,247,009	3,817,421	4,401,746
Expected RNG	1,344,500	1,344,500	1,344,500	1,344,500	1,344,500	1,344,500
Tier 1 Incremental EE	25,113	25,113	37,716	42,653	45,757	47,832
Incremental Landfill RNG	-	-	-	6,880,193	9,241,605	12,181,161
Incremental Solid Waste RNG	-	-	-	7,217,600	9,697,530	12,719,404

From a near-term financial perspective, if the Company continues to grow at the current pace without changes to its CPP compliance strategy – prior to or during the review of the next IRP – Cascade should anticipate incurring CPP compliance costs for the first three-year compliance period in 2025. Staff notes again that it expects the Company to both demonstrate plans to comply with the CPP and achieve said compliance. However, to aid in illustrating the risks, by Staff’s estimate, the CPP compliance costs associated with the current forecasted levels of emissions should not be expected to be less than approximately \$30 million over the next three years, illustrated in Table 7.

Table 7: Estimated CPP Compliance Costs Paid to DEQ or CCI entity

	2022	2023	2024	Total
CCI Cost (@10% Max)	\$7.96 M	\$7.72 M	\$7.48 M	\$23.16 M
Estimate Non-Compliance Cost (Penalty)	\$0	\$0.11 M	\$6.59 M	\$6.71 M
Total	\$7.96 M	\$7.83 M	\$14.08 M	\$29.87

Staff believes that the Company could take actions in the near-term to reduce the risk of noncompliance. Staff would appreciate Cascade answering the following in its reply comments:

- Who should bear the financial and performance risks of Cascade’s current CPP compliance strategy?
- While the proposed distribution system projects are intended to meet peak reliability needs, each of them is also inextricably linked to overall growth in demand. If the planning document proposing distribution system upgrades includes no action items or

progress updates regarding compliance and/or the reduction or mitigation of near-term system emissions from demand, for which substantial fines could be levied, how knowledgeable are the proposed distribution system upgrades?

Staff Requests

8. In reply comments, confirm the accuracy of Staff's analysis of Cascade's 2022-2024 CPP compliance net deficit and potential financial risks with supporting data.
9. In reply comments, explore how strategies to reduce both peak and/or overall demand at the Prineville, Ontario, and Baker could forestall these upgrades.
10. In reply comments, discuss how Cascade determined that the proposed CCI credit purchases from its UM 2178 filing were a least-cost, least risk IRP resource and CPP compliance option relative to other emission reduction measures.
11. In reply comments, confirm that Cascade can purchase, under the CCI rules, the approximately 98,000 CCI credits it forecasts requiring in 2024.
12. In reply comments, please describe the Deschutes County landfill project in more detail, noting the estimated date of operation and annual RNG production.
13. In reply comments, detail ETO's energy efficiency goals in Cascade's service territory for 2023 and 2024.
14. In reply comments, describe what constitutes "Tier 1 Incremental Energy Efficiency" for 2023 and 2024. Please note what plans have been made by Cascade to identify and secure this resource in 2023 and 2024 and the estimated cost to do so.
15. In reply comments, please describe the development and procurement activities Cascade has undertaken to secure upwards of 15 million therms of RNG by 2025 to be CPP compliant. Include how much RNG Cascade currently has under contract or potentially pending.
16. In reply comments, please respond to Staff's two questions at the end of this section regarding the financial responsibility for non-compliance and the acknowledgement of investments if the plan does not demonstrate compliance with emission rules from DEQ.

5. Decarbonization Planning Analysis: Bend Community Climate Action Plan (CCAP)

An LC 76 action item was for Cascade to continue to support Bend's CCAP. By Staff's estimates, natural gas use in Bend constituted between 15 percent to 20 percent of the fossil fuel use targeted by the CCAP for a 40percent reduction by 2030. CNG's forecasted sales in Bend will grow over 13 percent by 2027 and 20 percent by 2030, using 2021 as a baseline.³⁶

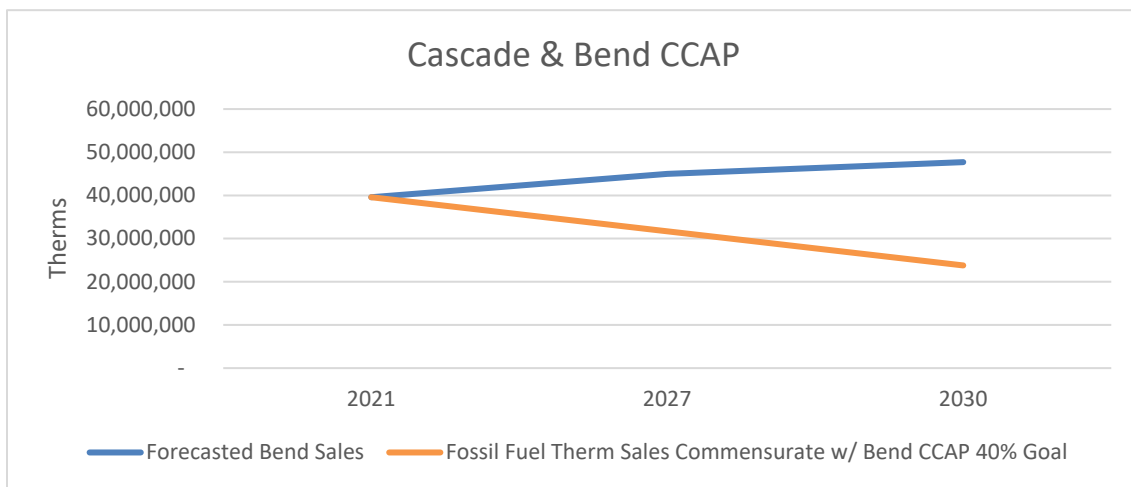
³⁶ IR #109, received July 6, 2022

Table 8: Forecasted Bend Sales & Estimated Emissions without RNG

	2021	2027	2030
Annual Therms	39,582,104	44,999,487	47,708,145
Est. Emissions w/out RNG	209,785	238,497	252,853

The Bend CCAP does not assign a specific amount of fossil fuel reduction to Cascade to meet the community’s 2030 goals. However, Cascade’s 2021 emissions represent approximately 26 percent of the Bend baseline total community GHG emissions. For Cascade to achieve a commensurate 40 percent reduction in fossil fuel use *in Bend*, using 2021 as a baseline, Staff estimates CNG would need to avoid approximately 83,900 MT CO2e emissions by removing or replacing approximately 15.8 million therms of fossil fuels, demonstrated in Figure 4.

Figure 4: Cascade Forecasted Sales Relative to Bend’s 2030 Fossil Fuel Reduction Goal



Staff Requests

- 17. In reply comments, confirm Staff’s analysis of a reduction in fossil fuel, natural gas sales commensurate to meet the 40 percent reduction goal of the Bend CCAP.
- 18. In reply comments, discuss how Cascade will update Bend’s Environment and Climate Committee, who oversees CCAP implementation, on its growth in Bend, associated emissions, and plans to mitigate those emissions.

6. Next Steps

Below is a schedule of upcoming activities in this docket and the next IRP. In addition, Staff will set up regular meetings with Cascade staff between now and our final report in September to

work through the technical issues related to the IRP Update, especially the action items seeking acknowledgement and the impact of decarbonization policy on planning.

Date	Docket	Event
July 28, 2022	Next IRP	Technical Advisory Group (TAG) Meeting #3 (OR)
August 17, 2022	LC 76	Cascade Reply Comments
September 14, 2022	LC 76	PUC Staff Final Report
September 20, 2022	Next IRP	TAG Meeting #4 (OR)
October 14, 2022	LC 76	Cascade & Stakeholder Reply Comments
November 1, 2022	LC 76	Special Public Meeting for Commissioner Decision
November 9, 2022	Next IRP	TAG Meeting #5 (OR)
January 5, 2023	Next IRP	Draft IRP Filed
February 24, 2023	Next IRP	Comments on Draft IRP due
April 14, 2023	Next IRP	IRP Filed

7. Conclusion

Staff finds many outstanding issues need to be more fully vetted before we can recommend acknowledging the proposed distribution system projects. Cascade has argued that much of the need for the six proposed distribution system projects is a result of growth. Putting aside the self-perpetuating logic of such an approach, the IRP Update does not provide any insights into how the emissions associated with this growth will be or could be mitigated through near-term actions. This is especially important given the analysis that points toward a net compliance deficit by the end of the first compliance period for the CCP, which is just two and a half years away. More information and dialogue are needed and we look forward to working with Cascade staff and interested stakeholders on these issues.

This concludes Staff's opening comments for the Cascade Natural Gas 2020 IRP Update. We look forward to the next steps in the IRP Update acknowledgement process. Finally, Staff lists below the 18 requests for additional information or action by the Company in its reply comments.

1. In the Company's Reply Comments should respond to all the requests for more information on the IRP action items as detailed in Table 1 to better understand progress and respond to all Staff Information Requests in a timely manner.
2. In the Company's Reply Comments provide a narrative summary of how the adoption of CPP rules impacted acknowledged action plan items and is impacting future planning.

3. Explain in reply comments the extent to which non-pipe alternatives to these distribution system upgrades that reduce estimated peak and overall growth can address identified issues.
4. Explain the distribution pressure for each of the four high-growth areas, specifically addressing the goal for the Ontario and Baker projects to increase the design day pressures.
5. Provide detail of specific safety and reliability concerns from not completing each proposed upgrade, broken down by each project.
6. Respond to all future Information Requests in a timely manner.
7. In reply comments explain how Cascade could immediately evaluate non-pipe alternatives to alleviate current and future local distribution system peak needs and overall demand at each project area. (e.g., extensive energy efficiency measures in existing and new buildings such as smart thermostats, enhanced insulation, and dual-fuel systems using cold weather heat pumps).
8. In reply comments, confirm the accuracy of Staff's analysis of Cascade's 2022-2024 CPP compliance net deficit and potential financial risks with supporting data.
9. In reply comments, explore how strategies to reduce both peak and/or overall demand at the Prineville, Ontario, and Baker could forestall these upgrades.
10. In reply comments, discuss how Cascade determined that the proposed CCI credit purchases from its UM 2178 filing were a least-cost, least risk IRP resource and CPP compliance option relative to other emission reduction measures.
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12. In reply comments, please describe the Deschutes County landfill project in more detail, noting the estimated date of operation and annual RNG production.
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15. In reply comments, please describe the development and procurement activities Cascade has undertaken to secure upwards of 15 million therms of RNG by 2025 to be CPP compliant. Include how much RNG Cascade currently has under contract or potentially pending.

16. In reply comments, please respond to Staff's two questions at the end of this section regarding the financial responsibility for non-compliance and the acknowledgement of investments if the plan does not demonstrate compliance with emission rules from DEQ.
17. In reply comments, confirm Staff's analysis of a reduction in fossil fuel, natural gas sales commensurate to meet the 40 percent reduction goal of the Bend CCAP.
18. In reply comments, discuss how Cascade will update Bend's Environment and Climate Committee, who oversees CCAP implementation, on its growth in Bend, associated emissions, and plans to mitigate those emissions.

Dated at Salem, Oregon, this 22nd of July 2022.

/s/ Jean-Pierre Batmale

JP Batmale
Division Administrator
Energy Resources and Planning Division