



In the Community to Serve®

August 17, 2022

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

Re: LC 76 – Cascade Natural Gas Corporation Integrated Resource Plan Reply Comments

Cascade Natural Gas Corporation (Cascade or Company) submits the following reply comments to the Oregon Public Utility Commission (OPUC or Commission) on the 2020 Oregon Integrated Resource Plan (IRP) Update.

General comments:

Cascade thanks OPUC Staff, the Citizen’s Utility Board (CUB), and the Alliance of Western Energy Consumers (AWEC) for providing comments to Cascade’s 2020 Oregon IRP Update, as well as for their participation in LC 76 and the useful feedback they provided during the development of the 2020 IRP.

While Cascade has concerns about some of Staff assertions about certain elements of the IRP Update, the Company is committed to working with all stakeholders to find reasonable approaches to address issues identified by stakeholders. For example, as suggested by Staff, Cascade personnel and Staff have and will continue to meet on a regular basis throughout the remainder of the LC 76 update acknowledgement process to work through issues raised in Staff’s initial comments.

Cascade appreciates Staff’s help in clarifying expectations around the incorporation of the Climate Protection Program (CPP) in the Update as well as providing insights as to how Staff will review distribution system planning in future IRPs. Cascade was gratified to see OPUC Staff subject matter experts attending Cascade’s most recent 2023 Washington IRP TAG 4, where the CPP and distribution system planning were among the covered topics. The Company is committed to our IRP Stakeholder Engagement document that was discussed at the joint OPUC-WUTC 2023 IRP TAG 1 meeting and encourages all stakeholders to have subject matter experts available whenever possible to maximize opportunities to provide feedback as well ask questions of the Company on technical and methodological aspects of the many components of the IRP. A best practices IRP is informed by perspectives, analyses, and access to concerns and approaches that the Company may not have considered. Again, Cascade thanks stakeholders for their continued engagement in the IRP process.

Response to OPUC Comments

IRP Update Overview

The following items are action plan items that Staff is seeking more information on.

Make Jackson Prairie Contract permanent

On December 15, 2010, Cascade's Gas Supply Oversight Committee (GSOC) approved the temporary release of 2,000 dths/d of Northwest Pipeline TF-1 capacity (Sumas and Opal to Wenatchee) from Cascade transport agreement 100002 to Puget Sound Energy (PSE). In exchange, PSE temporarily released 178,460 dths of SGS-2 Jackson Prairie storage capacity, with the corresponding TF-2 transportation capacity of 6,077 dths. The temporary releases were set to expire on March 31, 2020. On August 3, 2012, the Federal Energy Regulatory Commission (FERC) issued a No Action letter, clearing the way for Cascade and PSE to proceed with the exchange. In early 2020, PSE requested that these releases be made permanent, or else PSE would let the storage capacity and transport releases expire. Storage is an essential part of any LDC's supply portfolio. As Cascade does not own storage, the loss of this temporary storage capability would have jeopardized the Company's ability to serve peak loads, ensure system reliability and reduce opportunities for price arbitrage. On March 16, 2020, information was provided to GSOC analyzing the impacts/timing of increased energy efficiency and potential supply alternatives available. GSOC, noting that losing this storage capacity, particularly along the I-5 corridor, would put Cascade in a severe disadvantage to addressing cold weather events and significantly reduce the options for managing pipeline balancing and OFO situations, authorized making the PSE JP arrangement permanent. The replacement contracts were executed in NWP's transaction portal on March 30, 2020.

Model scenarios for Pipeline Operation Flow Orders

Cascade has been an active negotiator along with other shippers in reaching a NWP rate settlement. On June 29, 2022, the parties agreed to a settlement in principle. As part of the rate settlement, NWP will eliminate their reliance on Operational Flow Orders (OFOs) between the LaPlata to Green River corridor support displacement dependent primary firm service. The elimination of this displacement has been the cause of frequent OFOs on NWP's system for decades. As such, the previously anticipated OFO modeling plans have to be modified. While the south end displacement issue will be eliminated there remains the minor possibility of OFOs along the Columbia gorge. The elimination of the south end displacement on NWP has no precedent. As such there will be no reliable market or flow data available to help inform any OFO model until after the south end displacement is eliminated in 2024, Cascade will be re-evaluating the need and timing of developing modeling scenarios for OFOs. This change in OFO modeling will be noted in the 2023 OR IRP.

Continue to support the City of Bend's Climate Action Plan

Cascade has continued to support the City of Bend's Climate Action Plan by taking steps like RNG via the Deschutes Landfill Project as well as an offset program.

A member of Cascade was specifically told they could not participate on the new Bend Climate group because they were not a local. Unfortunately, Cascade didn't have anyone else able to be at the table. Cascade does have plans to meet with the Climate Committee in Bend as well as another Staffer who

might be able to help get Cascade at the table on climate/RNG related presentations. Cascade provides more information on the Bend Climate Action Plan in response to staff's request 17 and 18.

Participate in City of Bellingham Climate Action Plan discussions

Bellingham City Council passed an ordinance on Feb 7, 2022, which requires electric space and water heating equipment for new commercial and large (4+ story multifamily buildings). It also requires incremental improvements in EE (building envelope, lighting, insulation) and solar installation or readiness in new buildings. The electric-only mandate for space and water heating does not apply to single family construction, detached houses, duplexes, townhomes or row houses. The ordinance takes effect August 7, 2022.

Cascade is running sensitivity analyses based on the new limitations to the use of natural gas in new buildings. Cascade pulled historical data from 2017-2021 to see which customers would have been affected if this ban took place earlier. The result was approximately 50 customers per year. Cascade decremented customer counts by 50, cumulatively, each year for the forecast. Results of this analysis will be provided in the 2023 IRP narrative.

The City of Bellingham continues to work on the design of a Climate Action Fund. Preliminary drafts indicate that this would be treated as a property tax and would direct funds towards electrification, among other efforts. Following the City Council and Mayor expressing reservations about the design and timing of the plan it was announced they will delay putting the measure on the November 2022 ballot.

Monitor service areas for potential GHG reduction goal development relating to energy delivery and supply

As mentioned in the two previous responses, Cascade is monitoring and participating in the Bend and Bellingham areas. Cascade is also monitoring other regional GHG reduction goals, as well as natural gas bans, such as building code bans on natural gas appliances. Cascade is also signatory to Northwest Pipeline's most recent rate settlement which includes a 5-year multimillion dollar modernization and emission reduction program.

Monitor carbon pricing and policy developments nationally and statewide

On August 16, 2022, President Biden signed a significant spending bill, referred to as the Inflation Recovery Act, which includes climate change-related investments. Cascade is still evaluating the effects of this bill, as it contains incentives to encourage the use of clean energy appliances over the next decade, biogas project development, and funding to encourage higher emitting oil and gas company upstream value chain segments to reduce methane emissions or a methane emissions fee would apply for those higher emitting segments. The fees or incentives are not directly applicable to local distribution companies. At this point, the Company has not identified any significant progress on national carbon pricing legislation.

In Oregon, implementation of the Climate Protection Program has progressed significantly since the publication of the 2020 OR IRP. The Company now has clarification over its emissions reduction requirements related to the program, and the price of Community Climate Investments provides

valuable information related to carbon pricing in Oregon. Cascade will use this information to model its carbon compliance obligations in the 2023 IRP.

Cascade is monitoring US Department of Energy (DOE) proposed rulemaking for energy conservation standards for commercial water heating equipment which may result in impacts to baseline equipment used to determine the Company's Energy Efficiency portfolio. Also, the US DOE launched a notice of intent for funding opportunities for Clean Hydrogen Programs associated with the Bipartisan Infrastructure Law and Cascade is monitoring opportunities for partnerships in this sector across the states Cascade serves.

Monitor federal and state GHG regulation development for energy industry

US Dept of Energy is in the process of holding a proposed rulemaking for energy conservation standards for commercial water heating equipment. This rulemaking may result in impacts to baseline equipment used to determine the Company's Energy Efficiency portfolio.

The US Dept of Energy has also launched a notice of intent for funding opportunities for Clean Hydrogen Programs associated with the Bipartisan Infrastructure Law. Cascade is monitoring opportunities for partnerships in this sector across the states we serve.

EPA recently announced amendments to Subpart W (O&G segment) operational GHG emissions reporting, proposing emission factor updates and additional reporting of "other large release events". These changes are proposed to be effective starting in reporting year 2023. Comments are due this fall with final rule by end of year.

US Supreme Court issued its decision July 1st on *West Virginia v. the EPA*, ruling on the extent of EPA's ability to regulate carbon emissions from power plants. EPA is expected to propose new GHG regulation on existing electric generating units in 2023 considering the court's decision. Future rulemaking could result in additional low carbon fuel requirements for new and existing electric generation.

US Senate Bill - Inflation Reduction Act of 2022 was released in late July, which includes climate change investments to promote decarbonizing the economy. A Methane Emissions Reduction Program is included in the bill and would require fees or investments in reducing methane leaks from production and distribution of natural gas.

Cascade is also committed to Communities and agency programs focused on emissions reductions in Cascade's service territory which currently include: Bellingham, Bend, Whatcom County, Washington Climate Commitment Act and Oregon Climate Protection Program.

Continuation of current emission reduction and monitoring endeavors

As an energy provider proudly serving Oregon and Washington, Cascade Natural Gas has an important role to play in securing a lower carbon future for the Pacific Northwest. Natural gas remains the cleanest option to meeting the region's peak energy demand. This means keeping Cascade's system reliable and affordable for customers while helping communities meet their GHG emission reduction targets.

The Company will operate efficiently to meet the needs of the present without compromising the ability of future generations to meet their own needs. Cascade's environmental goals are:

- To minimize waste and maximize resources;
- To be a good steward of the environment while providing high quality and reasonably priced products and services; and
- To comply with or surpass all applicable environmental laws, regulations, and permit requirements.

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 has a long, collaborative history of active communication with the Energy Trust of Oregon. This ongoing engagement continued uninterrupted during the period listed above (2020-present). During this period, Cascade held multiple meetings to discuss any changes that could affect the Company's energy efficiency therm savings targets, and actions needed to comply with or adapt to changes as applicable.

Examples by year include:

2020

- Closely coordinated with Energy Trust on needs and expectations associated with the 2020 IRP.
- Developed a baseline understanding of how targets would be met to better understand where potential deviations could occur.
- Held ongoing conversations to ensure mutual awareness of emerging opportunities and challenges in the context of Covid 19.
- Continued to participate remotely in Conservation Advisory Council meetings.
- Reviewed Energy Trust budgets and quarterly reports, and actively participated in budget workshops via Zoom
- Monitored ongoing achievement projections, and shared evolving data with our RPT and others in the Company as appropriate.

2021

- Actively reviewed Energy Trust reports and engaged in conversations to better understand the data provided as appropriate.
- Provided Energy Trust with Bend's Climate Action Plan information to help facilitate further engagement, support, and coordination.
- Held ongoing meetings with Energy Trust Staff.
- Continued to participate remotely in Conservation Advisory Council meetings.
- Reviewed Energy Trust budgets and quarterly reports, and actively participated in budget workshops via Zoom
- Monitored ongoing achievement projections, and shared evolving data with our RPT and others in the Company as appropriate.

In late Q2 of 2021, Cascade identified a potential specific area of concern that would have impacted Energy Efficiency services provided to Cascade’s customers, as well as lowered our total therm savings achievements. More information on this in the following response to 4.c.

Energy Trust had proposed a temporary pull-back on certain rebates to Cascade customers due to budget constraints. The rebates in question were still cost-effective. However, the Energy Trust was drawing close to its planned budget for the year. The Company urged the Energy Trust to move forward with the offerings as usual with no interruptions to the program. The Company expressed those rebates should not be frozen, nor progress be otherwise slowed. The Company believes aggressive energy savings is particularly important due to the environmental need for robust energy efficiency, the benefits to Cascade customers, and the future mandates faced from the then-emerging Climate Protection Program. Energy Trust Executive Leadership, with the support of OPUC Staff, agreed to reverse course on the incentive cut-backs for 2021. Cascade appreciated the Energy Trust’s receptivity to our concerns. We will continue to work with the Energy Trust to ensure programs aren’t slowed in future years and no therm savings are left on the table.

2022

Cascade continues to hold regular meetings and engagement in the manner described above with Energy Trust staff. At the last two meetings over the summer of 2022, discussions centered around the potential impact on conservation goals if the avoided cost were substantially increased to reflect a true avoided cost based on carbon compliance and RNG resources. Further discussion took place on how to move forward with potentially developing an energy efficiency program for transportation customers. This conversation included discussion on avoided cost methodologies, information sharing, and potential timelines. Cascade will provide more details on the process and timeline for transport customer DSM in the 2023 Integrated Resource Plan.

Cascade has also seen changes due to HB 3141 Budget Process Coordination and Action Plan with the Energy Trust of Oregon. As a result of this legislative direction the Energy Trust is required to “jointly develop public utility-specific budgets, actions plans and agreements that detail...public utility-specific planned activities, resources and technologies...” This direction required modification of the Trust’s budget development process, increasing utility specific coordination. Cascade is fully engaged in this process, which includes identifying activities that require joint investment and deployment and identification of the utility’s role in these efforts. This includes regular coordination meetings that are on a bimonthly cadence. It also included action planning sessions between the Energy Trust and the utilities in June and July to help identify activities that utilities and the Energy Trust will focus on over the next two calendar years.

(4.c) Work with the Energy Trust of Oregon (ETO) to target areas to alleviate load constraints

Cascade has met with the Energy Trust of Oregon on options for targeted load management. ETO and Cascade laid out a plan to identify and target specific areas where Energy Trust programs can alleviate load constraints in order to defer supply side investments in expanding the Company’s system. Energy Trust and the Company will work together to set load reduction targets in these areas. Energy Trust will coordinate with the Company to design marketing and program implementation solutions to achieve these targets.

In the 2020 IRP update, Cascade did not identify any potential shortfalls on upstream pipeline transportation. Cascade did include distribution system projects in the 2020 IRP update that were identified as needing upgrades due to growth. However, given that these projects either have seen pressure issues, or would see pressure issues under design day Synergi modeling under current customer counts, or near future customer counts, these were identified as immediate upgrade needs so Cascade did not identify these as projects that targeted DSM could alleviate load constraints. Cascade has followed the progress of Northwest Natural's (NWN) Geological Targeted Energy Efficiency (GeoTEE) program which began in April of 2019 and, although NWN has made significant process, the GeoTEE is still in progress. Given Cascade identified these distribution system projects as "currently needed" projects, these were not identified as projects for targeted DSM. However, after further discussions, Cascade believes the Baker City project may be far enough in the future that it could benefit from a targeted load management program and will be reassessed in the 2023 Integrated Resource Plan. Cascade will be transitioning distribution system projects to identify projects further in the future so alternative non-pipe options can be considered to delay or eliminate distribution system projects.

Host workshop on 4.c to detail progress

Cascade is a bit perplexed by this requested update as Cascade does not recall stating this as an action item. However, Cascade believes it is a good idea to host a workshop with Staff and Energy Trust to discuss progress made as well discuss any concerns or questions regarding targeted load management.

Continue to develop and update RNG cost-effectiveness tool

Cascade has made enhancements to its RNG cost-effectiveness model since the 2020 OR IRP. Primarily, the model now utilizes Excel's Solver functionality to allow the analyst to identify the breakeven price point of an RNG project based on projected output volumes, required investment, and the percentage of RNG and associated environmental attributes that Cascade will purchase. Additionally, the model now allows the analyst to value the attributes based on the type of RIN that a project is expected to produce, utilizing current market data from the EPA to project the value of the project's specific type of RIN. The Company will continue updating the model with information learned from its participation in the RNG marketplace.

Present on gas price forecast and price shocks at 2022 IRP Technical Advisory Group Meeting

Cascade presented an in-depth discussion on its gas price forecast during TAG 2 of its 2023 IRP Process. During this discussion, the Company went over how data for the forecast is sourced, how those sources are weighted, and modifications to those weights based on Cascade's Age Dampening Mechanism. Additionally, the Company did present a top-level discussion on its methodology related to price shocks during TAG 1, and solicited feedback related to its philosophy on modeling these events. The only response was from WUTC Staff who agreed that it is a complicated issue that merits further discussion. Cascade will expand on this subject in a future TAG meeting as part of the 2023 IRP Process.

Refine distribution system avoided cost value for EE

Cascade has redefined distribution system avoided cost to move away from margin and more toward a deferred capacity value. The Company’s new distribution system cost calculation looks at forecasted capital expenses related only to growth and uses the company’s load growth forecast to translate these costs to a per therm basis. Additionally, it’s important to recognize that while energy efficiency may not be able to fully eliminate the need for a distribution system enhancement, it can defer the need for these enhancements to a later year. Because of the economic principle of the time value of money, this deferral has value, and that value is the avoided distribution system cost. Since Avoided Cost is based on peak day, this deferral value is then multiplied by the ratio of peak day demand to an average day’s demand to get the impact on peak day. Distribution system analysis is concerned with the pressure during peak hour, so the daily number must then be multiplied by the ratio of peak hour demand to that day’s total demand. The Company presented this methodology to stakeholders during its WA TAG 3 on June 29th and again at OR TAG 3 on July 28th.

Staff’s second request:

“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.¹”

Company’s Response:

	Action Items	How the adoption of CPP rules have impacted Action Items
Resource Planning	attend other regional LDC IRP meetings;	No Impact
	work with NWP on realigning MDDOs;	No Impact
	determine if the temporary Jackson Prairie contract should be made permanent;	No Impact
	develop modeling scenarios that represent Pipeline OFOs;	No Impact
	improve the alignment of resource/costs between the PGA and the IRP;	No Impact
	develop more scenarios that address changing Canadian Markets;	Scenario and Sensitivity analyses now focus heavily on uncertainties around resources needed for CPP compliance
	add RNG as a candidate portfolio; and	No Impact
	work with Staff and Stakeholders to develop a more effective presentation for the severity of negative outcomes. Cascade will report on the status of this action item when filing the 2021 OR IRP Update.	No Impact

¹ <https://edocs.puc.state.or.us/efdocs/HAC/lc76hac153532.pdf> page 7

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Demand	Adding wind in the stochastic weather analysis; and	No Impact
	A new methodology for peak day.	No Impact
Environmental Policy	Continue to support the City of Bend's Climate Action Plan;	The adoption of the CPP rules give Cascade the opportunity to reduce emissions in Bend for both the Bend Climate Action Plan as well as the CPP. The CPP was on Cascade's radar for this Environmental Policy action plan.
	Participate in City of Bellingham Climate Action Plan discussions;	No Impact
	Monitor service areas for potential GHG reduction goal development relating to energy delivery and supply;	No Impact. The CPP was on Cascade's radar for this Environmental Policy action plan.
	Monitor carbon pricing and policy developments nationally and statewide;	No Impact. The CPP was on Cascade's radar for this Environmental Policy action plan.
	Monitor federal and state GHG regulation development for energy industry; and	No Impact. The CPP was on Cascade's radar for this Environmental Policy action plan.
	Continuation of current emission reduction and monitoring endeavors.	No Impact. The CPP was on Cascade's radar for this Environmental Policy action plan.
Demand Side Management	The Company shall hold at least one meeting with the Energy Trust to discuss any changes that might affect the Company's energy efficiency therm savings targets, and, if applicable, what actions may need to be taken to comply with or adapt to the changes.	As part of UM 2178, Cascade reached out to ETO to ask what additional quantities of DSM savings would be available above and beyond what was identified as cost effective through the traditional conservation potential assessment process, and to group these into four tranches based on similar costs to acquire said resource. Cascade has not taken any action to secure this resource, because

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		doing so may be imprudent without full analysis through an IRP, as the Company is performing in the 2023 IRP.
	Cascade will provide a summary of its meeting with the Energy Trust in its 2021 IRP Annual Update. In compliance with OAR 860-021-0400(9), the Company will file an update as soon as is reasonably possible if any changes result in a significant deviation from the 2020 IRP.	No Impact
	The Company will work with the Energy Trust of Oregon to identify potential areas for expanded engagement in support of local communities' climate action planning goals. These discussions could include consideration of biogas engagement where cost-effective and regulatorily permitted. Findings on how to best support local climate plans will be included in the next IRP.	As part of UM 2178, Cascade reached out to ETO to ask what additional quantities of DSM savings would be available above and beyond what was identified as cost effective through the traditional conservation potential assessment process, and to group these into four tranches based on similar costs to acquire said resource. Cascade has not taken any action to secure this resource, because doing so may be imprudent without full analysis through an IRP, as the Company is performing in the 2023 IRP.
	Cascade will strive to acquire 547,244 and 563,251 cost-effective gas therm savings for 2020 and 2021, respectively.	No Impact
	The Company will acquire cost-effective therm savings by partnering with Energy Trust in Oregon and by delivering programs under the oversight of the Company's Conservation Advisory Group in Washington. Short-term annual therm savings targets are refined annually in Oregon by the Energy Trust through the budgeting process and in Cascade's Conservation Plan, which the Company files each December 1st in Washington.	No Impact

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Renewable Natural Gas	Cascade will continue to develop and update the cost-effective evaluation tool.	No Impact
Distribution System Planning	Cascade removed the distribution system projects as an acknowledgeable item.	No Impact
	Host workshop to present distribution upgrade project information.	No Impact
Other Recommendations Prior to Next IRP	Present on gas price forecasts and price shocks at 2022 IRP Technical Advisory Group Meeting.	No Impact
	Refine distribution system avoided cost value for EE.	No Impact
	Host workshop on improved communications for next IRP cycle.	No Impact

This matrix identifies how the adoption of CPP rules will impact acknowledged action plan items. Regarding future planning, the Company is committed to overhauling its resource integration process to identify a Preferred Portfolio of Demand and Supply Side Resources that also comply with all emissions reduction obligations. This is primarily accomplished through Cascade’s new optimization software, PLEXOS, which allows the Company to include emissions limits as a hard constraint in its modeling.

Staff’s third request:

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.

Company’s Response:

Cascade agrees with Staff that there are non-pipe alternatives that could reduce estimated peak and overall usage growth. Cascade also agrees that any distribution system project that is proposed to solve future pressure issues should determine if non-pipe alternatives could address pressure issues at a lower cost. However, most of the distribution system projects provided in the 2020 OR IRP update are identified as projects that have either seen pressure issues or were identified by the Synergi model as areas where Cascade would have pressure issues if design day happened under current customer counts, or in the near future. Cascade believes the Baker City reinforcement could benefit from non-pipe alternatives so Cascade will reassess the Baker City project in the 2023 IRP process. Please see Cascade’s response to Staff’s fourth request for more information on distribution system pressures. Based on conversations with Energy Trust of Oregon (ETO), projects with immediate needs are not ideal projects for targeted load management (TLM) as a TLM process requires long lead times due to area identification, ETO determining feasibility and reduction amount possibilities, determination if that TLM reduction would be enough to delay a project, TLM program uptake, among other tasks. ETO had suggested projects beyond 4-5 years out would be ideal for TLM projects. In future IRPs, Cascade will transition to identifying projects further in the future, rather than identifying projects that have current needs for upgrades to allow for non-pipe alternative options to distribution system projects.

Staff's fourth request:

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.

Company's Response:

The reinforcements proposed are not necessarily correlated to high growth areas. The reinforcements are to address deficits on Cascade's distribution systems. Cascade considers high growth areas as areas that are seeing over two percent growth per year. Bend would be the only town with reinforcements proposed that would be considered a high growth area over the last couple of years.

There is no specific goal to increase the design day pressures for Ontario or Baker City, the goal is just to maintain adequate system pressures on the system to support growth that has occurred and growth that is predicted out in the IRP. The pressure gain after a reinforcement is completed is based on system hydraulics which includes existing pipe sizes, connectivity, preferential flow paths, etc. Each reinforcement size, length and location will have different system impacts on each unique distribution system. Below is more detailed information of each distribution system project.

Bend Shelvin Park Reinforcement

The Bend distribution system is constrained on West side of Bend during peak demand events. The constraint can be seen by the low pressures experienced in the design day model provided in data request response (DR) 99 and in actual pressure chart data provided in DR 79 and 80. A best practice for distribution system modeling is to review low pressure areas identified in the model when the operating pressure of the system is compromised by more than 75%. Engineers perform model reviews on low pressure areas and will confirm deficits and then will propose betterments to address deficits with timelines on when the deficit will need to occur. Due to the actual low pressures experienced, this confirms the design day model projections that the west side of Bend distribution system is in immediate need of a reinforcement; no none pipe alternatives are feasible to address this deficit in time.

Bend 6-inch HP Reinforcement/Replacement

The Bend 6-inch-high pressure system is constrained out of the Bend gate based on the flows needed to meet demand on the system during peak demand events. The constraint can be seen in the Synergi models by high pressure loss in this section of line and in the high velocity experienced in the pipe. This constraint can be seen at the edges of the Bend high pressure system that is downstream of this constraint and in actual pressure data provided in DR 79 and 80. Per DR 79, Cascade provides actual pressure chart data that shows we are losing 10% of the MAOP in the line in the first mile of this line on a non-design day event. (Pressure is dropping from 266# to 238#, which is a 26# drop, or approximately a 10% drop-off). A best practice for pipe sizing is to size pipe with velocity under 100 feet per second and to check that downstream pressures on the system can meet their delivery/downstream pressure requirements. For regulator stations Cascade typically designs for 30# of differential to the downstream cut and will propose reinforcements to maintain the differential pressure needed for systems to operate per regulator manufacturer recommendations. The Bend 6-inch-high pressure has been identified as a deficit to the Bend high pressure system since it is experiencing significant pressure loss that is compromising the downstream high-pressure system and Cascade's ability for regulator stations to cut to distribution pressure. The Bend 6-inch-high pressure reinforcement/replacement is planned in phases and will be reassessed as phases are completed to determine the timing of the next phases.

Bend Gate Upgrade

The Bend gate station is constrained since it cannot get the required flow and outlet pressure out of the gate due to undersized components. The constraint on the Bend gate can be seen in the actual pressures coming out of the gate and the pressure coming out of the South Bend gate gas control logs provided in DR 79. When the Bend gate cannot get the flow out that it is designed for it puts additional flow on the South Bend gate which causes the South Bend gate to get overloaded and see high pressure droop out of the station which compromises the Bend high pressure system. The Bend gate constraints can also be seen in the pipe and component sizing calculations and in the actual pressure data seen out of the gate that was provided in DR 79. Based on actual pressures experienced out of the gate during cold weather events the Bend gate is in immediate need of replacement. Until the replacement can be completed, the district will need to continue to support the cold weather action plan and will need to coordinate with TransCanada to bypass the gate to provide as much pressure as possible while not exceeding the 300# MAOP to maintain the system until the gate replacement can be completed. Having to rely on another company to bypass is not ideal since bypassing is out of Cascade's control and may not be prioritized as highly by the other company.

Ontario Reinforcement

The Ontario distribution system is constrained on east side of Ontario during peak demand events. The constraint can be seen by the low pressures experienced in the design day model provided in DR 99 and in actual pressure chart data provided in DR 79 and 80. A best practice for distribution system modeling is to review low pressure areas identified in the model when the operating pressure of the system is compromised by more than 75%. Engineers perform model reviews on low pressure areas and will confirm deficits and then will propose betterments to address deficits with timelines on when the deficit will need to occur. Due to the actual low pressures experienced, this confirms the design day model projections that east side of the Ontario distribution system is in need of a reinforcement; the timing of this reinforcement will be assessed over time and updated in Cascade's five-year budget. Currently, Cascade is projecting that this reinforcement will need to occur in the next several years.

Baker City Reinforcement and New Gate Station

The Baker City distribution system is constrained on Northwest side of Baker City during peak demand events. The constraint can be seen by the low pressures experienced in the design day model provided in DR 99 and in actual pressure chart data provided in DR 79 and 80. A best practice for distribution system modeling is to review low pressure areas identified in the model when the operating pressure of the system is compromised by more than 75%. Engineers perform model reviews on low pressure areas and will confirm deficits and then will propose betterments to address deficits with timelines on when the deficit will need to occur. The actual pressure chart data seen in Baker City is higher than the design day model prediction but that is expected since Baker City did not get close to a design day temperature event. If a design day event was to happen to Baker City, we would expect the actual pressures on the system to be much closer to the design day model predicted pressures. Even though we have not seen concerning actual pressure chart data on this system it does not mean that the deficit will not occur if temperatures drop to a design day event. Pressure on the edges of a distribution system change exponentially due to increasing demand which increases the velocity and results in pressure drop down the pipe, due to this exponential relationship actual pressures experienced on a recent cold weather event may not be an adequate indicator of a pressure issue problem. It is an inadvisable precedence to only complete reinforcements to systems based on actual pressure chart data if the system has not recently experienced a design day event temperature. Reinforcements need

time to be designed and constructed to avoid future system deficits. The design day model for Baker City is showing future need of a reinforcement; the timing of this reinforcement will be assessed over time and updated in Cascade's five-year budget. Currently, Cascade is predicting that this reinforcement will need to occur in the next five years, which could make none-pipe alternatives an option to address or delay this deficit. Cascade will reassess this project in the 2023 Integrated Resource Plan.

Prineville Gate Upgrade

The Prineville gate station is constrained since it cannot get the required flow and outlet pressure out of the gate due to undersized components. The constraint on the Prineville gate can be seen in the actual pressures coming out of the gate provided in DR 79 (Gate is seeing 34.4# of pressure drop). When the Prineville gate cannot get the flow out that is designed for it compromises the Prineville Transmission and high-pressure system. The Prineville gate constraints can also be seen in the pipe and component sizing calculations. Based on actual pressures experienced out of the gate during cold weather events the Prineville gate is in immediate need of replacement. Until the replacement can be completed the district will need to continue to support the cold weather action plan and will need to coordinate with TransCanada to bypass the gate to provide as much pressure as possible while not exceeding the MAOP to maintain the system until the gate replacement can be completed. Having to rely on another company to bypass is not ideal since bypassing is out of Cascade's control and may not be prioritized as highly by the other company.

Staff's fifth Request:

Provide detail of specific safety and reliability concerns from not completing each proposed upgrade, broken down by each project.

Company's Response:

Bend Gate Upgrade

The Bend gate is currently undersized, during peak demand events it experiences high pressure loss through the station components which compromises the outlet pressure out of the gate. Compromised pressure out of a gate station then compromises the high-pressure system out of the gate since the high-pressure system cannot support the flows and pressures that it is designed to deliver which can then compromise the distribution system since the regulator stations cutting to distribution pressure will not have enough differential pressure to cut the pressure for the demand required. If a gate station cannot deliver the peak flow required and design pressure of the downstream system, it can cause the downstream systems to not be able to deliver the flows required and lose downstream customers. If Cascade loses downstream customers on a cold weather event it becomes a safety risk since lost customers would not be able to heat their homes until relights and equipment checks are completed.

Bend 6-inch HP Reinforcement/Replacement

The Bend 6-inch HP out of the Bend gate is currently undersized and cannot support the required demand out of the Bend gate. The Bend 6-inch HP during peak demand experiences high velocity and pressure loss which compromises the downstream Bend high pressure system and distribution system. If the high pressure out of a gate station cannot deliver the peak flow required and design pressure of the downstream system, it can cause the downstream systems to not be able to deliver the flows required and lose downstream customers. If Cascade loses downstream customers on a cold

weather event it becomes a safety risk since lost customers would not be able to heat their homes until relights and equipment checks are completed.

Bend Shelvin Park Reinforcement

The Bend Shelvin Park Reinforcement is to address constraints and bottlenecks in the Bend distribution system by adding an additional regulator station to meet demand on the Westside of Bend. Without completing this reinforcement, the Bend distribution system will not be able to meet demand on the Westside of Bend and could lose customers. If Cascade loses downstream customers on a cold weather event it becomes a safety risk since lost customers would not be able to heat their homes until relights and equipment checks are completed.

Ontario Reinforcement

The Ontario Reinforcement and new regulator station is to address constraints and bottlenecks in the Ontario distribution system by adding a second regulator station to the Ontario distribution system to meet demand in southern Ontario. Without completing this reinforcement, the Ontario distribution system will not be able to meet demand in southern Ontario and could lose customers. If Cascade loses downstream customers on a cold weather event it becomes a safety risk since lost customers would not be able to heat their homes until relights and equipment checks are completed.

Baker City Reinforcement and New Gate Station

The Baker City Reinforcement and new gate station is to address constraints and bottlenecks in the Baker City distribution system by adding an additional regulator station to meet demand in Northeast Baker City. Without completing this reinforcement, Cascade projects the Baker City distribution system will not be able to meet demand in the future in Northeast Baker. If Cascade loses downstream customers on a cold weather event it becomes a safety risk since lost customers would not be able to heat their homes until relights and equipment checks are completed. As mentioned earlier, Cascade will reassess this project in the 2023 Integrated Resource Plan.

Prineville Gate Upgrade

The Prineville gate is currently undersized, during peak demand events it experiences high pressure loss through the station components which compromises the outlet pressure out of the gate. Compromised pressure out of a gate station then compromises the high-pressure system out of the gate since the high-pressure system cannot support the flows and pressures that it is designed to deliver which can then compromise the distribution system since the regulator stations cutting to distribution pressure will not have enough differential pressure to cut the pressure for the demand required. If a gate station cannot deliver the peak flow required and design pressure of the downstream system, it can cause the downstream systems to not be able to deliver the flows required and lose downstream customers. If Cascade loses downstream customers on a cold weather event it becomes a safety risk since lost customers would not be able to heat their homes until relights and equipment checks are completed.

Staff's sixth request:

Respond to all future Information Requests in a timely manner.

Company's Response:

Cascade has noted Staff's comment. The Company always strives to provide responses in a timely manner. However, sometimes an Information Request requires more time to gather, analyze, or describe a response that fully addresses the request.

Staff's seventh request:

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).

Company's Response:

Please see Company's response to Staff's third request.

Staff's eighth request:

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.

Company's Response:

Cascade does not agree with Staff's analysis of Cascade's 2022-2024 CPP compliance. Below is a summary of Staff's analysis:

Staff Analysis			
	2022	2023	2024
CNG CCIs	74,371	71,510	68,650
CNG Compliance Instruments	743,707	715,103	686,499
Forecasted CNG Emissions	797,785	807,838	820,018
Shortfall	0	-21,225	-64,869

The first inaccuracy in this calculation is a misunderstanding of how CCI limits are calculated. As per OAR 340-271-9000 Table 6, in compliance period 1 the "Allowable percentage of total compliance obligation(s) [emphasis Cascade] for which compliance may be demonstrated with CCI credits" is 10%. 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 CO₂e." The maximum number of CCIs should have been 10% of the values in row 3, not the values in row 2. Cascade has worked with Staff to confirm that the Company's understanding is correct, to which OPUC Staff graciously offered to reach out to DEQ Staff for confirmation that its calculation of CCIs is accurate. OPUC Staff did receive confirmation that the Company's methodology is correct and has relayed that information to Cascade.

Additionally, it is important to recognize that within a CPP compliance period, compliance instruments may be rolled into future years if all are not needed for a given year. In Staff's own analysis, Cascade

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would theoretically have an excess of 20,293 compliance instruments in 2022, but Staff shows no allowance utilization of this resource in 2023 or 2024.

Finally, as Staff noted in table 5 of its comments, Cascade has an expectation of reduced load from Energy Efficiency performed by ETO. Staff does correctly acknowledge that “For 2022, ETO plans to secure 0.75 million therms of energy efficiency for Cascade.” It is important to note that the 2020 Oregon IRP, the most current IRP as of the time of the analysis performed in the Natural Gas Fact Finding (NGFF), used a load forecast from 2020 and DSM projections as of 2020. By the end of 2022, three years of cumulative energy efficiency programs would have been reducing Cascade’s 2020 load forecast, leading to the numbers utilized in the NGFF, numbers that Cascade believes must be included in any CPP compliance calculation.

Cascade presents its own version of Staff’s analysis below:

Cascade Analysis				
	2022	2023	2024	Comp Period Total
CNG CCIs	79,779	80,784	82,002	
CNG Compliance Instruments	743,707	715,103	686,499	
Forecasted CNG Emissions	797,785	807,838	820,018	
DSM Savings (Therms)	1,633,849	2,146,222	2,690,808	
DSM Savings (CO ₂ e)	8,669	11,388	14,277	
(Shortfall)/Excess (CO ₂ e)	34,370	(563)	(37,240)	(3,433)
(Shortfall)/Excess (Therms)				(647,082)

CO ₂ e/therm =	0.005306
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As Staff noted in their comments, Cascade does have a contract with the Deschutes Landfill for the acquisition of RNG. Cascade will note that any on-system RNG acquisition will be considered as a system resource. The Company expects the Bend Landfill to come online in late 2024 which could supply approximately 2.5 million therms of RNG annually, which, alongside purchasing RNG attributes, Cascade would satisfy the projected deficit.

As stated earlier, the Company takes the position that the premise of this analysis is flawed because it utilizes stale data and analysis not fully vetted in an IRP process. When Cascade was contacted by Staff to participate in UM 2178, the NGFF docket, it was with an understanding that the analysis performed within the docket was purely a modeling exercise, with the primary objective being to provide the OPUC and its Staff a general understanding of the magnitude of expected costs and resource needs to comply with the CPP. Resource acquisition analyses always occurs within the context of an IRP because typically, optimization exercises like the one presented in UM 2178 require over a year’s time to fully vet through the IRP process. The utilities were given less than two months to complete this challenge, including Cascade’s need to build an optimizer from scratch to model emissions reduction pathways. The Company was happy to accept the challenge, however, it was Cascade’s understanding that there would not be any expectation of action based on these results. Again, it was always intended to be purely a modeling exercise for informational purposes only. Cascade recognizes that the Company is in Year One of the first compliance period and is taking actions such as the contract with the Deschutes landfill to reduce its emissions, but any financial risk analysis will only be appropriate after such risks

are full vetted through an IRP, as they are currently being done with the 2023 IRP. The Company will present this analysis once it is complete.

Staff's ninth request:

In reply comments, explore how strategies to reduce both peak and/or overall demand at the Prineville, Ontario, and Baker could forestall these upgrades.

Company's Response:

Please see Company's response to Staff's third request.

Staff's 10th request:

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.

Company's Response:

Cascade has not determined that 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 because this analysis has not been completed in an IRP process. As discussed earlier, the Company was assured on multiple occasions that the UM 2178 docket was a fact-finding mission for informational purposes only. The assertion that Cascade is proposing any CCI credit purchases is misleading, as firm conclusions such as that were never intended to be drawn from the analysis performed in the docket, which were completed on an extremely abbreviated timeline. Cascade believes the 2023 IRP is a more appropriate venue for such analysis. The Company is evaluating CCIs along with other demand and supply side resources and will present and support how the acquisition of CCI credits and all resources acquired are a least-cost, least-risk IRP resource and CPP compliance option relative to other emissions reduction measures.

Staff's 11th request:

In reply comments, confirm that Cascade can purchase, under the CCI rules, the approximately 98,000 CCI credits it forecasts requiring in 2024.

Company's Response:

Under the CCI rules, in compliance period 1 the "Allowable percentage of total compliance obligation(s) [emphasis Cascade] for which compliance may be demonstrated with CCI credits" is 10%. Based on the 2020 IRP, Cascade projected emissions of 2,245,641 MT CO₂e from 2022-2024, 10% of which is 224,561. That being said, the Company feels it would be imprudent to confirm any forecast requirements because such analysis has not been fully completed in the 2023 IRP process. Any reference to projected values calculated in UM 2178, a docket which required an expedited time frame for analysis, should be recognized as being informational only until fully vetted through a complete IRP process.

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Staff's 12th request:

In reply comments, please describe the Deschutes County landfill project in more detail, noting the estimated date of operation and annual RNG production.

Company's Response:

A joint Cascade/Jacobs Engineering team was the successful candidate chosen through a Deschutes County RFP process to make beneficial use of landfill gas from Deschutes County's Knott Landfill in Bend, OR. Our proposal involves Cascade owning and operating processing facilities to convert landfill gas to RNG. The RNG would be injected directly onto Cascade's Bend, OR distribution system. Cascade is currently in the process of negotiating a contract with Deschutes County, and assuming that is successful, expects approximately 2.5 million therms/year with an estimated date of operation of late 2024.

Staff's 13th request:

In reply comments, detail ETO's energy efficiency goals in Cascade's service territory for 2023 and 2024.

Company's Response:

In the table below, Cascade has outlined ETO's energy efficiency goals in Cascade's service territory for 2023 and 2024. These are the same goals outlined in the UM-2178 filing. Cascade is actively working with ETO to determine updated energy efficiency goals for 2023 and 2024 in the current IRP Process.

Sector	2023	2024
Residential	692,683	919,539
Commercial	1,145,764	1,367,589
Industrial	205,839	250,775
Unclaimed Market Savings	69,956	104,935
Large Project Adder	31,980	47,970
Total	2,146,222	2,690,808

As mentioned in response to Staff's eighth request, Staff mistakenly claimed Cascade's 1,633,849 therms of expected energy efficiency in 2022 as incremental energy efficiency goals, when those are actually cumulative goals. In the following table, Cascade outlines the actual incremental energy efficiency goals. Based on Staff's comment, ETO actually plans to secure more energy efficiency in Cascade's service territory (0.75 million therms) than was originally planned (0.52 million therms).

Sector	2022	2023	2024
Residential	159,256	172,995	226,857
Commercial	264,588	241,741	221,825
Industrial	48,494	46,669	44,936
Unclaimed Market Savings	34,978	34,978	34,978
Large Project Adder	15,990	15,990	15,990
Total	523,306	512,373	544,585

Staff's 14th request:

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.

Company's Response:

During UM 2178, the OPUC's NGFF Docket, Cascade explained that one resource the Company would explore as a potential solution to meeting emissions reductions targets would be to acquire energy efficiency above and beyond what was identified as cost effective through the traditional conservation potential assessment process. To this end, Cascade reached out to ETO to ask what additional quantities of DSM savings would be available, and to group these into four tranches based on similar costs to acquire said resource. "Tier 1 Incremental Energy Efficiency" was the first tranche of this resource.

Regarding the second part of this request, Cascade has not taken any action to secure this resource, because doing so may be imprudent without full analysis through an IRP, as the Company is performing in the 2023 IRP. Any reference to projected resource needs calculated in UM 2178, a docket which required a burdensome, expedited time frame for analysis, should be recognized as being informational only until fully vetted through a complete IRP process.

Staff's 15th request:

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.

Company's Response:

Cascade has continued to actively seek on system RNG. Cascade is currently in advanced contract discussions with four projects that, if successful, would result in over 7.5 million therms of RNG to be injected into our system and available by 2025 and is pursuing a variety of additional projects that are in various stages of discussion. Cascade is also actively seeking purchases of off-system RNG attributes.

Staff's 16th request:

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.

- *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 acknowledgeable are the proposed distribution system upgrades?*

Company's Response:

Because Cascade projects to be able to meet compliance with CPP guidelines as previously described in these reply comments, Cascade does not anticipate any financial or performance risks. As always, the burden of proof will fall with Cascade to demonstrate the prudence of its decisions and actions.

Cascade has an obligation to serve as well as an obligation to meet CPP targets. The Company's current 2023 IRP planning process will include action items to meet compliance targets, and the Company will be providing regular progress updates on its efforts through the ongoing IRP process. Unfortunately, the IRP update was developed prior to the implementation of the full compliance analysis that the Company will be presenting in the current IRP. However, the Company is including the proposed distribution system upgrades in its ongoing process to meet its obligation to serve its existing and projected customer base. Also, given Cascade's explanation of how the Company plans to meet compliance obligations in response to Staff's eighth request, Cascade believes these distribution system projects are acknowledgeable.

Staff's 17th request:

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.

Company's Response:

Cascade agrees with Staff's statement, "[w]hile 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." Cascade staff actively participated on the Bend Climate Action Steering Committee (CASC) and helped develop plans related to working towards this aspirational target.

Cascade agrees that the goal reflects an expression of public interest by customers and members of the municipal government served by Cascade to reduce greenhouse gas emissions across all sectors of the economy including the energy (natural gas + electric) sectors, and vehicle/transportation sectors.

However, as a member of the CASC, Cascade observed that not all comments provided to the CASC were unanimous, and many members of the community were concerned about the setting of prescriptive mandates. Instead, a significant subsection of commenters were interested in policies in support of continued resource adequacy, energy affordability, and other community priorities. Cascade and the other members of the CASC thus looked towards non-binding solutions to lower the carbon intensity of all sectors (inclusive of the fossil fuel sector) in a manner sensitive to the diverse needs and perspectives of the Bend community. Cascade has been actively exploring pathways to meet its good faith obligations as set by the Company during Cascade's participation on the CASC.

Cascade agrees that "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. This support was detailed as partnering on RNG development, a voluntary offset program, and pursuing other low carbon opportunities."

While the City's targets and goals were not binding, Cascade has continued discussions with the City, as well as with internal staff to actively pursue opportunities to meet the decarbonization needs of the

Bend community. Ramp-up of these items has taken time. However, Cascade intends on offering an offset program to Oregon customers and Cascade plans to have an RNG project in Bend beginning late 2024. Cascade has held regular conversations with the City of Bend since 2020 to encourage greater engagement and support of our customers energy efficiency needs in the Bend Community. These are concrete actions taken in support of our good faith engagement with the City.

Staff's 18th request:

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.

Cascade's Response:

Following the end of the CASC, Cascade staff requested participation on the Bend Environment and Climate Committee in supporting of building from the achievements of the CASC. At that time, City staff indicated that only individuals local to Bend would be considered for a role on the Committee. Since Cascade's Manager of Energy Efficiency Policy is not located in Bend, Cascade was unable to provide technical representation to the committee from an energy efficiency standpoint.

However, Cascade staff has remained in conversation with City staff regarding evolving plans for an offset program in support of the City's aspirational targets. Cascade has met with the ETO on several occasions to discuss future options for increased DSM support to the City as part of our Resource Planning conversations. Cascade is also actively engaged with Deschutes County to finalize a contract in support of the development of RNG at the Deschutes landfill, which will help support the City's decarbonization efforts through a regionally based effort.

Most recently, Cascade has added a Community Affairs Representative who, along with the External Affairs Manager, will soon be meeting with Energy Trust's Central OR staff, as well as members of City staff in order to facilitate conversations with the Environment and Climate Committee around emissions mitigation.

CUB's comments:

The Citizen's Utility Board made similar comments as OPUC in that Cascade should explore non-pipe alternatives to distribution system projects. CUB also suggested that Cascade "work on innovative solutions to meeting capacity need, for example, by designing an energy efficiency/demand response (EE/DR) pilot."

Cascade's Response:

Cascade agrees with the Citizen's Utility Board. Cascade will explore non-pipe alternatives and innovative solutions to meet capacity needs and distribution system projects where applicable.

Also, Cascade suggests seeing the Company's responses regarding Staff's third request.

Conclusion

This concludes Cascade response to stakeholders' initial comments. The Company appreciates stakeholders' comments and concerns and hope our responses demonstrate Cascade's commitment to providing information needed to meet IRP expectations in these new and challenging times. Cascade looks forward to working with all parties as the 2020 Update process continues.

Sincerely,

CASCADE NATURAL 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