

Appendix K
Comments Matrix
2020 OR IRP

The following comments are informal comments the Company received on the Draft Integrated Resource Plan. Cascade has provided a response for each comment.

Item 1: With regard to IRP Guideline 1, the Company appears to have evaluated resources on a consistent and comparable basis. Staff appreciates the inclusion of renewable natural gas (RNG) project data with the draft IRP filing. Staff believes it could be helpful in the final IRP to utilize this project data in an example cost effectiveness assessment. This could illustrate the Company's thinking about RNG and how the Company's cost effectiveness calculation differs from and is similar to the proposed methodology found in Docket No. UM 2030. If the Company is able to provide this example in the final IRP, Staff would interpret this as a non-binding "snapshot" or case study of how RNG cost effectiveness may be evaluated to further the long-term conversation about this emerging resource.

Response: Cascade has included the cost-effectiveness evaluation model on the RNG project that is included in Appendix J. Cascade agrees that this should be treated as a non-binding "snapshot" or case study and would appreciate any and all feedback on Appendix J.

Item 2: Additionally, it appears that CNGC's analyses include greater consideration of risks and uncertainties in this IRP than in LC 69. Staff wishes to express two substantive concerns regarding IRP Guideline 1. First, it is not clear to Staff how the 2020 IRP captures the potential severity of negative outcomes (1.c.1). Staff hope to see greater clarification of this in the final IRP.

Response: There are several risks that the Company must analyze throughout the 20-year planning horizon. Those risks involve change in price, change in customer forecast, as well as several other scenario's Cascade runs to evaluate the Company's portfolio. These scenarios can be found on page 9-31 in Chapter 9. Cascade also provides the results of these scenarios on pages 73-109 of Appendix E, Current & Alternative Resources. These results include net present value over the 20-year planning horizon, average cost per therm, unserved demand amount, and served demand amount. Furthermore, Cascade includes an analysis of the potential severity of a couple of negative impact scenarios on page 9-32 and 9-33. Cascade has added the following language to the Action Plan: The Company commits to working 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.

Item 3: Staff does not believe the limited discussion of the impact of Governor Brown's recent Greenhouse Gas (GHG) executive order (E.O. 20-04) is sufficient to meet IRP Guideline 1d. The topic should be more thoroughly addressed in the final IRP. While the Governor issued E.O. 20-04 recently, in March 2020, the order contains substantive direction, and in combination with the May 15, 2020 response from the Oregon Department of Environmental Quality (ODEQ) on "Cap-and-Reduce," the Company's final 2020 IRP could include a preliminary discussion of the possible impacts of the order as well as some preliminary data. Such preliminary data would help Staff and stakeholders meaningfully engage with the Company on the scope of Cap-and-Reduce efforts. This data could include, but not be limited to:

- Quantification of CNGC's past annual GHG emissions,
- Quantification of forecasted emissions from the preferred portfolio, and
- Comparison of the Company's forecasted emissions from the preferred portfolio to a Company-level, cap-and-reduce emission level reflective of the percentage based, GHG reduction level goals found in the Executive Order (i.e., 45% below 1990 emission by 2035).

Response:

• Cap and Invest

o The Oregon State Legislature did not reach consensus on a direction this year regarding cap and invest legislation. As a result, Governor Kate Brown issued Executive Order 20-04, directing state commissions and agencies to facilitate achievement of new GHG emissions goals of at least 45% below 1990 levels by 2035, and at least 80% below 1990 levels by 2050. The order specifically directs the Environmental Quality Council and Department of Environmental Quality to take actions necessary to cap and reduce GHG emissions. The implications of the Governor's directive can be found below.

• Executive Order 20-04

o At the end of the 2020 legislative session, Governor Brown issued Executive Order 20-04, which is intended to build on Executive Order 17-20, Accelerating Efficiency in Oregon's Built Environment to Reduce Greenhouse Gas Emissions and Address Climate Change, and to further Oregon's goal of reducing greenhouse gas emissions. The EO provides 13 directives to multiple state agencies, with reporting requirements and deadlines. Specifically, the EO directs the Environmental Quality Council (EQC) and Department of Environmental Quality (DEQ) to take actions necessary to cap and reduce GHG emissions, consistent with the new GHG emissions goals from large stationary sources, transportation fuels, and other liquid and gaseous fuels, including natural gas. The EO directs DEQ to commence cap and reduce program options no later than January 1, 2022.

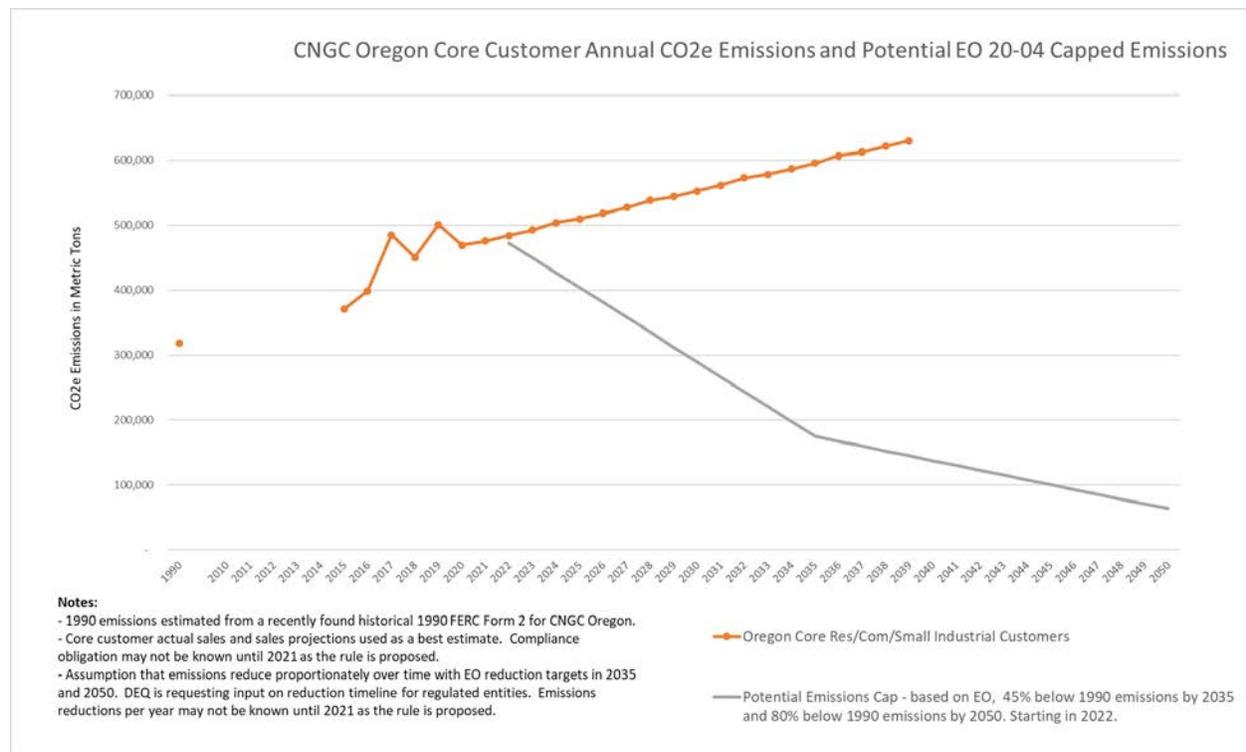
The first reporting deadline associated with EO 20-04 was on May 15, 2020. The Governor designated state agencies to report on proposed actions within their statutory authority to reduce greenhouse gases and mitigate climate change impacts. DEQ offered a preliminary report which describes the EQC's legal authority to cap and reduce GHG emissions, proposes a process to engage the public and stakeholders in gathering input into program design options, provides a preview of policy considerations and initial core program design elements, and describes the public comment process on the preliminary report. DEQ also sought public input on a list of questions designed to inform DEQ's final work plan and a final report was submitted to Governor Brown by June 30, 2020.

On June 15, 2020, Cascade submitted comments in response to the DEQ's report and associated questions. The Company identified areas of potential impact to Cascade's 75,000 customers in Oregon. As part of its planning efforts, Cascade intends to coordinate with other state agencies, specifically the OPUC and the Oregon Department of Energy (ODOE) to further understand existing program and compliance obligations that may interplay with the Department's cap and reduce efforts. Cascade will work closely with all relevant agencies to consider and manage the fiscal impacts of GHG reductions to natural gas consumers and businesses. Additional considerations may be needed if reduction requirements are difficult to achieve and compliance flexibility is limited.

The GHG reductions for natural gas suppliers are likely to have substantive impacts to Cascade's customers. The Company has previously estimated cost increases to the company's natural gas customers under the legislative approaches from 2019 to 2020, which incorporated the same GHG reduction goals as published in EO 20-04. Although we expect DEQ's rulemaking could be different, the same goals are stated. If the same reduction goals are applied to natural gas distribution utilities, Cascade's residential and commercial customers may see rate increases in their bills starting in the first year the reductions are to be implemented and would be projected to spike to a 46 percent increase by 2035 and would be expected to increase further as the cap reduces beyond 2035. This projection was anticipated under a legislative approach which included flexibility in the form of allowances, offset

purchases and trading. If DEQ’s authority is constrained and cannot legally provide compliance flexibility and alternative compliance options, costs will be even higher for natural gas distribution utilities and customers. Emissions reductions required within the strict goal timelines as identified in the EO could result in noticeable increases in energy costs to customers without sufficient compliance flexibility. Cascade will continue to monitor these potential impacts as part of its resource planning.

DEQ plans to commence formal rulemaking work with the appointment of a rules advisory committee (RAC) in late 2020. DEQ plans to host RAC meetings and any additional public or invited stakeholder meetings in early 2021 and to release a notice of rulemaking packet for public comment in Summer/Fall 2021. The rulemaking packet is expected to be provided to the EQC in Fall 2021. DEQ has not determined a final cap and reduce timeline/trajectory or compliance obligation for regulated entities. However, Cascade has developed a preliminary graph showing past and projected core customer emissions, using the preferred portfolio forecast, representing the combustion of natural gas sold to customers that may potentially be regulated by DEQ under Cascade’s compliance requirement. The chart also has a projected emissions reduction trajectory that was estimated by applying a proportionate amount of reduction over time considering the EO’s goal of 45 percent reduction of 1990 emissions by 2035 and 80% reduction of 1990 emissions by 2050. Absent a baseline and final trajectory provided by DEQ, Cascade has used an estimate of 1990 emissions from core customer sales volumes provided on a recently located 1990 FERC Form 2 schedule and applies a baseline in 2022 of a three-year average of core customer actual emissions from 2017-2019. Depending on DEQ’s approach to rulemaking and designation of a specific emissions baseline, Cascade’s compliance obligations may be very different from what is presented here. As DEQ’s rulemaking process commences, Cascade is expected to have a clearer picture of compliance obligations.



Cascade is also monitoring possible increases to the market price of renewable natural gas as competition for renewable natural gas as a compliance option for multiple sectors increases. Cascade understands that DEQ is planning a rulemaking to increase landfill methane capture in Oregon. The Company has encouraged DEQ to ensure regulations allow for natural gas utilities to utilize landfill gas as a compliance option to reduce GHG emissions for utility customers. The determination of whether landfill gas is allowed as part of cap and reduce compliance will have impacts on the total available RNG potential for Cascade as it increases its planning in this area.

In addition to its engagement with DEQ, Cascade submitted comments to ODOE in response to their implementation report submitted to Governor Brown in May 2020. Cascade understands that ODOE will launch a rulemaking process in Summer of 2020 to establish new rules for energy efficient products by September 1, 2020. In addition, ODOE plans to work with the Building Codes Division (BCD) to adopt building efficiency goals for 2030 for new residential and commercial construction. ODOE also plans to work with BCD to report on current progress toward achieving a goal of at least 60 percent reduction in new building annual site energy consumption, and to develop metrics to inform the baseline and reduction associated with code updates. Cascade supports the work of ODOE in establishing and updating energy efficiency standards for appliances.

Through its experience operating energy efficiency programs in Washington, Cascade has observed that as more stringent energy efficiency rules take effect for appliances, opportunities for energy efficiency incentives tend to narrow. This is because typically, under current rules, energy efficiency rebates cannot be offered for equipment at code efficiency. If the equipment standards raise, but the market is not able to rapidly adjust to these standards (older equipment still on trucks, vendors slow on compliance with new standards) there will be a difference between technical requirements and what is available to be physically installed in a home or building. To that end, Cascade intends to work with the OPUC and Energy Trust to determine if some additional market mechanisms and incentives would be reasonable if allowed for a certain transitional period to support uptake of the new standard and ensure accessibility for small businesses and those on fixed or limited incomes. Cascade is also monitoring other potential impacts and increases to program offerings necessitated by EO 20-04 and will work closely with the Energy Trust to understand what changes may result to conservation potential levels and EE program design.

Cascade will continue to monitor agency developments in response to Executive Order 20-04, We will continue to encourage the integration of programs that reduce energy burden and protect low income ratepayers while meeting the objectives of the Governor. Of particular interest to the Company are ways we can work with ODOE and OPUC to expand low income offerings or engage in pilots that reduce low income energy burden and support deeper energy efficiency opportunities. Cascade believes it is fully compliant with Governor Brown's recent Greenhouse Gas (GHG) executive order (E.O. 20-04), sufficient to meet IRP Guideline 1d given the status of the State's process, the timing of Cascade's IRP filing, and its responsive comments and analysis as discussed above. This language has been added to Chapter 6, Demand Side Management.

Item 4: In addition, IRP Guidelines 4, 6, 7, 8, 11 and 13 are the most relevant of the remaining guidelines for Staff's review of this draft IRP. Generally, the draft IRP appears to meet the requirements for IRP planning components in Guideline 4. With regard to conservation requirements (Guideline 6), Staff noted in a meeting with the Company that the draft IRP only contains two years of

energy efficiency forecast data, though it should contain four years pursuant to Commission order. CNGC has already agreed to change the action plan forecast for this item from two-years to four-years. With regard to demand response (Guideline 7), CNGC only mentions this resource once, in Chapter 6. Staff would note that other Oregon natural gas local distribution companies have begun to explore pilots for demand response offerings, and that CNGC should begin looking into this Demand Side Management resource.

Response: Cascade has updated the table in the four-year action plan to include 2022 and 2023 savings. The Company is aware of the other natural gas LDCs efforts and have been monitoring their progress with the demand response offerings. Cascade appreciates Staff's suggestion to look into pilots for demand response offerings, so the Company has reached out to ETO in which they provided a "to-do" list to get started. Cascade will work with ETO to consider possible targeted DSM. The Company will provide an update on those discussions no later than the filing of the 2021 Annual IRP Update.

Item 5: Regarding Environmental Costs (Guideline 8), Staff appreciates the approach of utilizing California Cap-and-Trade program values for carbon emissions. However, Staff would like greater clarity on the range of values used over time. In particular, Staff would like to know why the Company has capped the value at \$61.50 per metric ton of CO₂ equivalent, while the 2030 ceiling in the California program is approximately \$85 per ton. Further, Staff would like the Company to provide a clarification on how the significant change in value in 2021 (Figure 9-8) relates to ODEQ's future proposed Cap-and-Reduce program. In particular, Staff would like clarification of the Company's internal analysis that led to these operating assumptions. Staff would also note, in this regard, CNGC agreed with Staff in the Company's final comments of LC 69 that CNGC would improve its carbon price forecast and include additional justifications for the data to be used in the 2020 IRP. Staff hopes to see additional documentation in the finalized IRP around carbon values and associated risks.

Response:

On the cover page of Cascade's source document for the 2019 CEC Carbon Pricing, it is stated: "When prices reach a given tier price, regulated entities may purchase from a pool of allowances set aside for that tier. The regulation reallocates allowances from the current reserve to each tier and to the price ceiling. If prices reach the ceiling, CARB must make unlimited allowances available at the price ceiling, although CARB has indicated it believes the price ceiling is extremely unlikely to be reached. Meanwhile, a greater supply of allowances at Tier 1 and Tier 2 will slow price increases at those levels. For the 2019 IEPR scenarios, therefore, staff uses the Tier 2 price in 2030 for the low demand (high price) case, the Tier 1 price for the mid case, and continue to use the Auction Reserve Price in the high demand (low price) case.

"Because credits are bankable over time, economic theory predicts that the price in any given year will equal the present discounted value of the final equilibrium price, so in the low consumption case, prices increase at the rate which produces a final nominal price of \$108. In the high consumption (low price) scenario, prices are assumed to stay at the auction reserve price, which escalates at the rate of the auction reserve price (Consumer Price Index +5%). In the mid case, the prices are escalated to reach the Tier 1 price by 2030."

Cascade has interpreted this to mean that prices will cap at the 2030 mid-price, which is on row 25 the "GHG Price Calculations" Tab. The jump in price seen in Figure 9-8 is related to Cascade's philosophy that carbon compliance costs will begin one year after the planning horizon begins. Cascade's carbon

forecast was locked in before Governor Brown's executive order so it would not be correct to say that it explicitly models ODEQ's future proposed Cap-and-Reduce program, but the intent is to capture the potential impact from a program such as the ODEQ proposed program. Cascade does appreciate Staff's feedback that more documentation would be valuable in the IRP and has included additional narrative around this subject on page 5-4 and 5-5.

Item 6: In addition to Staff's concern, expressed above, regarding carbon cost data, Staff notes additional concerns about the Draft IRP related to CNGC's compliance with the Commission order acknowledging the Company's 2018 IRP. In particular, that order encouraged CNGC to use more granular city- and town- level usage data rather than citygate-level data in its 2020 IRP (Recommendation 1c). In the draft IRP, the Company offers no explanation as to why it continues to utilize citygate data. This data might be appropriate to use, but Staff expects the Company to explain in the final IRP why it chose not to work with more granular data. In addition, it is not clear to Staff how CNGC accounted for auto-correlation, an issue raised in the 2018 IRP comments. Staff would like the Company to provide greater detail to explain this issue in the final 2020 IRP.

Response: At the time of the 2018 IRP, Cascade only had city- and town-level data so the Company had to allocate that data to the citygate level. Since the 2018 IRP, Cascade is now able to pull monthly billing data at the citygate level, therefore, no longer needing to allocate the data to the citygate level. It's Cascade's understanding that the purpose of this comment was to remove the allocation process, which Cascade has successfully done so. To say the city- and town-level data is more granular would now be inaccurate. The reason behind forecasting at the citygate level is because upstream transportation contracts have a receipt point at the citygates, not the cities and towns. Optimizing upstream transportation is an important step to minimizing costs as well as determining any shortfalls and needs for more capacity. Cascade has a rigorous model selection process that includes testing for autocorrelation. This methodology begins by first building a model based on historical data. Then, the residuals are tested for autocorrelation using the auto.arima functionality within the "forecast" package of R Studio (Statistical Software). The auto.arima function is used for displaying and analyzing time series data via state space models and automatic ARIMA modeling. The auto.arima function will analyze any necessary auto-regressive or moving average terms as well as the required amount of differencing.

Item 7: Staff appreciated the thoroughness of the draft IRP. Below are some broad comments that only indicate general interest and future points of discussion once the 2020 IRP is finalized:

- **Staff is interested in the IRP further exploring the competing forces of reduced load growth and the rapid increase in customers, and how that plays out in risk and acquisition strategies.**
- **Staff would like to better understand the drop in industrial load growth between the 2018 IRP and the 2020 IRP.**
- **Staff would like to see additional discussion of the driving factors behind the reduction in the range of per-therm avoided costs from \$0.42 - \$1.21 in the 2018 IRP to \$0.26 - \$1.11 in the 2020 IRP, despite the incorporation of higher carbon costs.**
- **Staff looks forward to one additional Technical Advisory Group (TAG) meeting, to be held June 30, 2020, which will focus on RNG-related topics.**
- **Finally, Staff looks forward to a more in-depth discussion in the final 2020 IRP of the proposed change from assessing weather on a "coldest day in 30 years" basis to the Company's new methodological approach for the next IRP."**

Response:

- The competing forces of reduced load growth and rapid increase in customers are quantified in the conservation potential assessment and customer growth forecasts, respectively. While these forecasts are not correlated *per se*, the independent results of these competing processes inform the impact to forecasted load. Cascade performs stochastic analyses of both of these processes in the form of its high and low growth scenarios for customer growth, and its various carbon sensitivities and their impact on conservation potential, all of which are discussed in detail in Chapter 9. These risk-based analyses inform the Company's resource acquisition strategy as discussed in the Supply Resource Optimization Process. Cascade added additional risk-based analysis of the carbon scenarios in Chapter 9. The Company will also add to the action plan that the Company will look into running more scenarios that involve fuel switching and climate action plans that ban natural gas in certain areas.
- The change in industrial growth was caused by several large volume customers moving from a non-core rate schedule over to a core rate schedule. The core and non-core forecasts are treated separately, so when a customer transfers from core to non-core or vice versa, it could impact each forecast differently. This change increased the core forecast by approximately 10-13 million therms and decreased the non-core forecast by approximately 10-13 million therms. Cascade is still serving those customers, so the overall industrial load Cascade is serving hasn't changed.
- In the results section of the Avoided Cost chapter, Cascade indicated that the main driver of the lower avoided cost was due to the falling commodity prices and low volatility, which kept Cascade's price forecast lower throughout the planning horizon. The commodity price from the 2018 OR IRP is approximately 33% higher than the commodity price in the 2020 OR IRP.
- Cascade held a successful TAG 6 meeting and discussed the preliminary cost-effective evaluation tool Cascade has proposed as a potential tool to evaluate Renewable Natural Gas. Cascade appreciates the feedback received during the TAG 6 meeting.
- For the 2020 IRP, Cascade used the coldest day in 30 years. The reason for the potential change is because the current peak day (12/21/1990) will fall outside the 30 years in the next IRP so Cascade is exploring other possibilities. One option is to continue using the 12/21/1990 peak day until there is another day that is colder. A second option would be running 10,000 Monte Carlo simulations, using the past 30-years of weather history, and taking the 99% draw as the peak day.

Item 8: Keeping the above comments in mind, Staff believes the Company's draft 2020 IRP is well conceived and well organized and will lead to a robust dialogue regarding the Company's least-cost, least risk portfolio of resources over the planning period. Staff appreciates the care that CNGC has taken with the planning process thus far and looks forward to working with the Company and stakeholders in the coming months.

Response: Cascade appreciates the feedback that has been received so far. Receiving stakeholder comments have only made the IRP a stronger and better prepared plan.