Cascade Natural Gas Integrated Resource Planning Feedback Report

Item #	Date	TAG Meeting	Name/Company	Comment/Question	Cascade Response
1	2/12/2024	Targeted TAG 2	WUTC	On slide 7, Cascade notes Environmental Compliance Costs as an element of its avoided cost calculation. Is Cascade considering how these costs will change over time? Both tendentially going up as more allowances are required and the price ceiling increases, and how there might be downward pressure on compliance costs due to the possibility of declining customer counts or per customer demand?	Environmental compliance costs are modeled on an increase price curve for all values considered. Marginal Compliance costs will increase over time as identified by Staff, while the Social Cost of Carbon is already presented on an increasing price curve. Declining customer counts/demand would only impact the avoided cost if it entirely eliminates the need for the highest cost resource, creating a potential stepwise impact on the compliance cost element of the avoided cost. Cascade is evaluating the marginal cost to serve the next highest cost unit of one therm of demand with traditional natural gas, to evaluate whether it would be more cost effective to reduce this demand via energy efficiency or not. Unless demand reductions fully eliminated the need for the highest cost tranche of environmental compliance, declining demand will not impact this element. To preempt a potential question about the need to look at this more holistically, as one could potentially argue that there could be enough demand reduction to exogenously move Cascade into a lower tranche of the stepwise function, the volumes we identified in the 2023 as part of the highest tier of the marginal abatement cost curve are significant, to the point that even aggressive conservation acquisition projections and projected demand decreases as outlined in prior IRPs would not move Cascade to a different step of the curve.
2	2/12/2024	Targeted TAG 2	WUTC	• On slide 8: o "Are there avoided costs associated with keeping customers on the system or avoided costs associated with declining customer counts? o "Commodity Costs are taken from Cascade's 27-year price forecast." Has this forecast changed since the previous IRP? Does it include non-conventional fuels? o "Cascade will be requesting feedback regarding its methodology related to environmental compliance costs" Will cascade be reaching out to the Department of Ecology? Or is this a generalized request for the IRP process? o "The Company's 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." Staff would like to hear more. What is meant by "related only to growth"? o "Risk premium is calculated as the delta from deterministic and stochastic pricing" How might this differ if Cascade were to use the brownian motion prices from the previous IRP?	o This is an interesting question and one that Cascade does not have a response to yet. The Company stated during the Targeted TAG 2 meeting that we'll discuss this idea internally to determine if this shoould be included and how it would be quantified. Cascade also asked Staff if they had any thoughts on how this would be quantified, and they responded that they would provide some thoughts a week after the Targeted TAG meeting. o It has been shifted one year from last year's 28-year forecast as Cascade ultimately aims to have projections out to 2050. Slide 11 discusses why this specific element only uses traditional fuels. o This is requested of the all participants of the TAG. o Distribution system projects can be broken down into two classifications: "System Integrity Enhancements" and "Growth Related Projects." System Integrity projects would only be avoidable if the demand associated with the project were eliminated entirely. Reducing demand, as is the objective of the twin processes of avoided cost calculations and conservation efforts, does not prevent embrittled pipes from needing to be replaced, for instance. Thus, these projects are not avoidable. Growth related projects, on the other hand, are projects that are identified as needed to support forecast demand growth on a given distribution system. Since the need is purely related to growth, these are potentially avoidable, or at the very least deferrable, and thus part of the avoided cost calculation. This line can become blurred when projections are identified as system integrity projects but also involve an upsizing of pipe. The system integrity side would not be avoidable or deferrable as there is a significant safety risk identified, but the upsizing element could theoretically be deferred. There are further economic challenges with deferral here, however, as you have already acquired permitting and committed labor toward digging up the pipe. It would rarely make sense to replace it twice, once for integrity and then again for growth, but a qualitative decision would need to be made as to whether that would make sense. o The stochastic element of this calculated does use the Geometric Brownian motion prices from the previous IRP for the "Shock" element of the "Drift & Shock" methodology as discussed in the IRP
3	2/12/2024	Targeted TAG 2	WUTC	• Slide 10, "For Cascade's system, all storage is off-system and provides a net-positive benefit to customers, so it does not qualify as an avoided cost" Staff would appreciate more explanation of this distinction.	Cascade fills its storage assets during the non-heating season, when gas prices are significantly lower than in the winter. When performing a life cycle analysis of a therm that is purchases from a basin, stored in the summer, and then injected in the winter, the cost savings of the summer/winter spread far supersede any costs associated with the storage of that therm, thus the statement that it is a net positive, and not a cost one would be able to avoid.
4	2/12/2024	Targeted TAG 2	WUTC	• Slide 12, "With the passing of the Climate Commitment Act, Cascade believes it may be more accurate to utilize the company's marginal compliance cost associated with this rule." What is the statutory/rule basis for excluding either cost?	Staff's historical position has been that Cascade has need to follow RCW 80.28.395 when evaluating the cost of carbon, which dictates the use of the Social Cost of Carbon with a 2.5% Discount rate, adjusted to real dollars, as the cost of carbon. With the passing of the Climate Commitment Act, Cascade knows what its marginal abatement cost for carbon is with regards to this piece of legislature, and believes this may be a more accurate representation of the Company's cost of carbon. Both of these items attempt to quantify the cost to abate one metric ton of CO2e, and thus using both would be double counting this this element.
5	2/12/2024	Targeted TAG 2	WUTC	• Slide 13, o "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." Staff inquires if there are avoided costs associated with the possibility of declining customer counts – either avoided costs in customers leaving or policies designed to retain customers. Put another way, would an energy efficiency rebate program that might function to keep customers on the system and works to avoid of some CCA compliance obligations be cheaper (to ratepayers) than the loss of customers due to the possibility of declining price competitiveness of gas service relative to electric service? Has Cascade considered this as a basis for avoided costs? o "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." Might the possible retention of customers through EE programs have broader impacts beyond peak day? o Staff would like clarification about the savings in deferring system enhancements might go to if there are savings?	o In response to bullet 1 and 2, this is an interesting question and one that Cascade does not have a response to yet. The Company stated during the Targeted TAG 2 meeting that we'll discuss this idea internally to determine if this shoould be included and how it would be quantified. Cascade also asked Staff if they had any thoughts on how this would be quantified, and they responded that they would provide some thoughts a week after the Targeted TAG meeting. o There isn't really a savings persay, but delaying the system enhancement, or removing it all together, would avoid costs being passed to the ratepayers through a rate case.

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6	2/12/2024	Targeted TAG 2	WUTC	• Slides 14-21, how might the dynamics communicated in these slides work with a declining customer count? How would a decrease or decreasing peak load impact the model?	Addressed in item 5 response.
7	2/12/2024	Targeted TAG 2	WUTC	• Slides 18-20, Staff would appreciate more information regarding the calculation of present value of deferral.	To illustrate this with an example, suppose Cascade had a hypothetical project in Kennewick scheduled for 2026 to spend $1,000,000 towards what was identified as a needed distribution system expansion to satisfy growth. Relating to the figure on slide 15, this would represent the hypothetical point of deficit occurring in 2026. Furthermore, let's assume that peak day growth from 2026 to 2027 is 10,000. Finally, let's assume that the real discount rate is 4%. It's important to use the real discount rate as it's assumed that year over year costs will increase by inflation, so that must be backed out of the discount rate. The Company would now know that by reducing demand through conservation by 10,000 therms, Cascade would delay the point of deficit by one year. To quantify this value, first Cascade would need to adjust the capital outlay to 2024 dollars with a simple PV calculation of 1,000,000*(1/((1+Real Discount Rate)^(2026-2024)) or 1/1.04^2. This gives the Company the value of the cash outlay in today's dollars. From here, Cascade calculates the value of not spending the money in 2026, but rather spending it in 2027, by multiplying the PV of the 1,000,000 by the real discount rate, which represents Cascade's Real Weighted Average Cost of Capital. The value is deferral value, which the next step is to divide by the number of therms needed to avoid, 10,000 in this example, to get your deferral value per therm.
8	2/12/2024	Targeted TAG 2	WUTC	• Slide 25, "Accurately captures the increasing uncertainty around pricing, as nominal risk premium generally increases over time" Does this premium include CCA compliance cost uncertainties such as variations in prices at auction? Additionally, can you speak to Cascade's preference here for Stochastic prices over Brownian price forecasts?	Currently compliance costs are modeled at the Social Cost of Carbon which is a known quantity. If Cascade does shift to the Company's marginal abatement cost, there might be value in the certainty of conservation versus the risk in CCA Allowance price variance. Cascade will need more data to discern the nature of allowance price movements. If they ultimately follow a normal distribution, for instance, the risk of rising and falling prices would be equivalent, and thus no quantifiable value to mitigate. Cascade's position regarding stochastic modeling is that, due to the seasonal nature of natural gas pricing, it is most appropriate to use the "Drift and Shock" model as described in the IRP versus a pure Geometric Brownian price forecast. A Geometric Brownian Motion model is appropriate when there are no discernable seasonalities to what is being modeled, as is the case, typically speaking, with stock prices, a common application of Brownian or Geometric Brownian motion models. If applied to natural gas prices, such a model could commonly result in summer prices higher than winter prices which, while not impossible, is certainly improbable. The "Drift" or deterministic trend element of Cascade's model allows the model to consider this seasonality while still allowing for the desired variance of a stochastic model.
9	2/12/2024	Targeted TAG 2	WUTC	• Slide 28, "% CH4 per unit of natural gas: 93.4%". Are there CO2e emissions associated with the remaining 6.6%?	The remaining 6.6% is made up of N2, CO2, Ethane, Propane, Ibutane, Nbutane, Ipentane, Npentane, and Hexanes. It's Cascade's understanding that, other than CO2 and methane, the other gases don't have as much of a global warming impact and are not defined as Greenhouse gases under HB 1257. In the 2023 IRP, Cascade noted that in several areas where Cascade serves, the methane and CO2 content was approximately 93.5%, which is very similar to what others are reporting at 93.4%. Cascade will re-evaluate this figure for the 2025 IRP.
10	2/12/2024	Targeted TAG 2	WUTC	• Slide 28, How has Cascade considered distribution system emissions?	The distribution system emissions are captured in the Upstream Emission Loss Factor. The Upstream Emmission Loss Factor is supposed to represent the loss of fuel in emissions from production to delivery to the customer before it's combusted.
11	2/22/2024	Post Targeted TAG 2	WUTC	1. What actions are being taken by Cascade to increase the attendance of Energy Justice Communities during the IRP process?	In 2023, Cascade formed an Equity Advisory Group (EAG) consisting of seven members who live in and provide representation for six of the most vulnerable communities in the Company's service territory. To enhance collaboration with various community representatives, Cascade is also considering holding meetings throughout Cascade's service territory during the first circulation of the Company's Draft IRP. Cascade is also considering other means of increasing participation if bill inserts and hosting meetings at various sites within the Company's service territory are unsuccessful.
12	2/22/2024	Post Targeted TAG 2	WUTC	2. What actions are being taken by Cascade to inform their customers and community-based organizations about the IRP process and encourage attendance?	Cascade is fully committed to ensuring the public is invited to participate in its IRP process. The Company notifies five general segments of stakeholders using multiple communication channels. The five segments are: Commission Staff, customer representatives, community-based organizations, the expert public, and the general public. Many of the IRP members that have attended IRPs in the past, such as Commission Staff, customer representatives, and expert public, are notified via Cascade's email distribution list. Cascade did separately reach out to the Company's Washington Community Partners via email regarding the IRP and how to join as well. As mentioned in response one and the response below, the Company is looking into other methods to target community-based organizations, Energy Justice Communities, and the general public. Cascade notifies these segments in several ways, including: • Social media • Bill inserts provided in both English and Spanish • Meetings throughout service territory • Invite to docket distribution lists relevant to the IRP • Web page • Commission web page Cascade has a dedicated Internet webpage, which can be translated into multiple languages, where customers and interested parties can view the IRP timeline, TAG presentations, minutes, video recordings of the meeting, as well as current and past IRPs. Also, the Company provides information on how to join the IRP Stakeholder group. Cascade is exploring targeted outreach to increase attendance of Energy Justice Communities in the IRP process. This includes working with Health Districts, the Washington Department of Social and Health Services, Community Action Agencies, and the WorkSource Unemployment Office which are resources commonly accessed by vulnerable populations. In addition, Cascade participates in two separate coalitions which represent Energy Justice Communities. Both are made up of 80+ members including CBO's, small business owners, nonprofits, school districts, social services etc. Mid-Valley Providers Consortium Sunnyside United Unidos Monthly Coalition
13	2/22/2024	Post Targeted TAG 2	WUTC	3. Has Cascade considered hosting TAG meetings after typical work hours or on weekends to accommodate the needs of their customers whose schedules cannot accommodate a meeting at 9am?	Cascade is considering holding a meeting outside of typical work hours in a low-income or disadvantaged community. The Company is planning to run a series of questions by the Equity Advisory Group to gain a better understanding of topics such as timing, location, childcare services, and best ways to promote the meeting.
14	2/22/2024	Post Targeted TAG 2	WUTC	4. Staff acknowledges the highly technical nature of the IRP, however, in order to make the presentations more accessible, Staff offers that Cascade could provide frequent summary sentences that highlight key processes, trade offs or dynamics, and that these summary sentences could be written in non-Latinate English. (e.g. "I acquired an automobile" becomes "I got a car" or "the derivative rapidly increases" becomes "the slope of the line goes up").	Cascade will provide the presentations to the Company's communication's group when it is finalized in order to have someone review the presentation with an eye on making technical terms more accessible. Cascade cannot guarantee the edits will make it in the presentation that is provided a week in advance but will put in a best effort to ensure these edits are included in the presented version and the version that is posted on the Company's website.
15	2/22/2024	Post Targeted TAG 2	WUTC	5. During TAG 2, Cascade staff requested that WUTC Staff provide possible methods for determining the avoided costs associated with the retention of customers. That is, from a customer's perspective it may be cheaper to pay a higher rate knowing the rate increase goes to EE measures that keep other customers on the system and thereby avoiding the bill increase due to the increasing ratio of fixed costs to customers. This question presents many nuances and potential complications: a. The impacts of raising rates to pay for EE may drive customer losses, but at a slower rate and may require optimization. It may present short-term higher bill impacts with the promise of long-term lower bill impacts b. Converting the marginal bill impact incurred from customer loss into an additional component to the avoided cost seems straightforward, but it is unclear that EE expenditures would translate that directly into customer retention. Rather, the bill impact benefit of customer retention and the efficacy of EE programs at retaining customers may need to be a back-end determination - after Cascade has modelled customer responses to building codes, rising compliance costs, and incentives to electrify. This may be a guess and check process: running the model with various avoided cost values and honing in on a set of values that approximates optimal. c. Another approach might be to optimize the portfolio for lowest customer bill impacts and let the optimization software set/find the avoided cost associated with customer retention. This might be messy and create a moving avoided cost associated with this optimization. This would also have to be done on the back end once the other parts of the model were lined up. d. Alternatively, Cascade might consider conservation as a portfolio resource, with constraints, and have Plexos optimize the portfolio to retain customers.	Cascade is still trying to fully understand this request. From Cascade's understanding, the avoided cost calculation is looking at the avoidable costs from the Company's perspective, or in other words, the utilities cost or utility-centric measure. Cascade does agree that utilities have a responsibility to consider the interests of their customers, so the Company does not want to totally ignore this request. However, Cascade argues that if there is a fundamental change in the Avoided Cost, going from a utility-centric measure to also including customer-centric benefits, the Company would prefer this be discussed through a meeting with all utilities.
16	2/22/2024	Post Targeted TAG 2	WUTC	• Slide 28, Cascade clarified that "Upstream Emission Loss Factor" included losses in the distribution system. Has this loss factor associated with the distribution system been corroborated by Cascade's leak reduction efforts and data collection associated with those efforts?	The process of calculating the upstream emission loss factor is not a perfect science. When Cascade purchases gas, it is generally in blocks of 5,000-10,000 dekatherms which are then added to or cut based on actual usage. This value is not too difficult to track. The difficult part is that gas can either transfer from pipe to pipe or go into storage to be pulled out later. Finally, if Cascade was able to track those volumes, then the Company would have to estimate what is flowed to each customer due to billing cycles. Based on a rough estimate of 2023, Cascade estimates the loss from purchase to citygate is ~1.37% for NWP and GTN combined, giving slightly more weight to NWP as Cascade transports more gas on NWP. Cascade estimates the Company's distribution system loss rate is 0.2479% (which can be found on the Company's 663 tariff). Given the difficulty of calculating the loss from basin to citygate, the roughly estimated loss rate calculated by Cascade appears to be slightly higher than the calculation in the avoided cost model. Cascade does think that the values in the avoided cost model are better vetted and should be used in the avoided cost model. For the record, The current fuel loss rate on NWP is 0.93% and GTN is 0.0043% per mile, which is lower than what is currently used in the avoided cost and what Cascade estimates. Finally, the Company wants to also point out that the difference to the avoided cost when comparing Cascade's estimated loss rate vs the current loss rate is $0.014/therm on average.

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17	2/22/2024	Post Targeted TAG 2	WUTC	• Previously UTC Staff inquired "Slides 14-21, how might the dynamics communicated in these slides work with a declining customer count? How would a decrease or decreasing peak load impact the model?" Cascade staff said that they would follow up on this question as it may relate to stranded assets.	As Cascade mentioned in an earlier response, a decrease or decreasing peak load would essentially eliminate all distribution system projects related to growth. Given that this is in context to stranded assets, the Company would need to determine the impact stranded assets would have on the customers remaining on the system. There are several remedies to stranded assets that Cascade could explore (e.g. sell assets to industrial or large volume customers, fiber optics, etc.), each being determined in a case-by-case situation. Cascade does anticipate customer counts to be relatively flat in the near future but does not anticipate customer counts to decline in any significant matter. With Staff's agreeance, Cascade would like to investigate stranded assets throughout the 2025 IRP in regard to the avoided cost for inclusion in future IRPs.
18	3/4/2024	Pre Targeted TAG 3	WUTC	o Staff recommends that Cascade spell out acronyms in full the first time they are used in the presentation to improve accessibility.	CNGC acknowledges and agrees.
19	3/4/2024	Pre Targeted TAG 3	WUTC	o Has Cascade considered the impacts of IRA and IIJA funding upon EE? If so, what steps have been taken to integrate those impacts into the EE and DSM programs?	CNGC is evaluating the relevance of IRA and IIJA funding for natural gas utilities. At this point it looks to be electric utility focused. This could be relevant for fuel switching programs, but that is yet to be fully investigated.
20	3/4/2024	Pre Targeted TAG 3	WUTC	o How does the low-income program factor into this analysis?	The Low-Income Weatherization program is administered independently from the LoadMAP analysis.
21	3/4/2024	Pre Targeted TAG 3	WUTC	o Has Cascade cultivated relationships with non-English speaking trade allies?	Cascade does not track non-English speaking trade allies, although CNGC is confident a subset of our trade allies does have this capability.
22	3/4/2024	Pre Targeted TAG 3	WUTC	o Has Cascade identified trade deserts in its service territory? Has Cascade cultivated trade allies in conservation deserts?	Yes, Cascade has created heat mapping and metrics for market penetration by county in the service territory. CNGC has found trade allies, in particular point of sale vendors, have penetrated into areas which have historically been thought to be underrepresented. An example of this is Benton and Yakima counties which are now being aggressively sought after for insulation and home sealing.
23	3/4/2024	Pre Targeted TAG 3	WUTC	o Has Cascade conducted an equity analysis of EE program participation?	We have begun to address equity considerations in our energy efficiency program with our low-income weatherization program. This program begins to bridge that gap between regular incentives accessible to all customers and the additional incentives available to income qualified customers who otherwise may not have the resources to access the standard Energy Efficiency program. We work with agencies across Washington who are funded by the Department of Commerce, our local Agencies give priority, but are not limited to provide Weatherization services to: • Elderly (60 years of age or older). • Persons with disabilities. • Children nineteen years of age, or under. • High Residential Energy Users • Households with High Energy Burden and • Native American, with particular emphasis on households residing on reservations. The Weatherization Incentive Program provides energy efficiency measures, health and safety and repairs to income qualified households at no cost to customer.
24	3/4/2024	Pre Targeted TAG 3	WUTC	o Has Cascade identified the demographics of customers who participate?	The only demographic data that is captured by our application is owner/renter status. We do, however, use aggerated population demographic data for modelling and program performance initiatives aimed at increasing participation.
25	3/4/2024	Pre Targeted TAG 3	WUTC	o Has Cascade Identified the steps to take advantage of EE rebates/trade allies and identified barriers within those steps that might limit more equitable participation? If These barriers may include: • Knowledge of the program • Economic/financial barriers to participation • Asking for too much/sensitive information • Time poverty barriers to participation • Renter/property owner barriers • Finding/communicating with Trade allies • Forms/Paperwork – especially as it relates to language accessibility • Submission of rebate forms • Review of rebate forms	Knowledge of the program: Standard Rebate Program & Point of Sale: We use bill inserts, TAs, Energy Services Representatives, and regional events to provide education and create awareness of the Programs. Low-Income Program: We use bill inserts, Cascade Website, leverage Community Action Agencies (CAA) for program awareness, in the of form sandwich boards on active weatherization projects, flyers, word of mouth, radio slots. We leverage the bill discount program (CARES), auto enroll customers receiving Weatherization Assistance to our bill's assistance programs and vice versa. WA EE Outreach Analyst focused on targeted outreach, video/eligibility quiz development. Target audience housing authorities and Section 8 landlords to increase participation in Weatherization Incentive Program. Economic/financial barriers to participation: Standard Rebate Program & Point of Sale: Point of Sale provides an instant discount for EE measure upgrades; we do not offer any zero % financing. Low-Income Program: LI Programs we have worked to reduced economic financial barriers by aligning with department of commerce requirements, we do not add additional requirements to our customers/CAAs, we follow one set of requirements/guidelines based on the Weatherization Assistance Manual issued by the state. This ensures we align with the CAAs, we also increased our project coordination fees. As this was something the CAAs expressed as a continued barrier to project completion. The LI program is at no-cost to customers. Asking for too much/sensitive information: Standard Rebate Program & Point of Sale: Account information, heating source and payee information is required, and we regularly look for ways to reduce the friction in our rebate processes. Low-Income Program: Our CAAs collect and maintain confidential demographic information at agency level; information collected follow commerce guidelines as previously noted and is not collected directly by Company. We do not add any additional program requirements, this ensures we do not add undue burden to customer or agencies, guarantees we do not duplicate efforts, we use department of commerce eligibility and weatherization specifications.
26	3/4/2024	Pre Targeted TAG 3	WUTC	o Has Cascade Identified the steps to take advantage of EE rebates/trade allies and identified barriers within those steps that might limit more equitable participation? If These barriers may include: • Knowledge of the program • Economic/financial barriers to participation • Asking for too much/sensitive information • Time poverty barriers to participation • Renter/property owner barriers • Finding/communicating with Trade allies • Forms/Paperwork – especially as it relates to language accessibility • Submission of rebate forms • Review of rebate forms	Time poverty barriers to participation: Standard Rebate Program & Point of Sale: The program is designed to require minimal time investment. Low-Income Program: CAAs handle eligibility for Company, there are multiple options for customer participation they can email documents, call, apply in person, mail in documents, depending on situations there are home visits available. Most information needed for applications can be completed via phone, prior to appointment to reduce time barriers for customers. CAAs also offer after hour appointments during harvest season for our migrant-seasonal workers. We now have a designated LI staff to address all LI inquiries to refer appropriate to agencies. Renter/property owner barriers: Standard Rebate Program & Point of Sale: EE recognizes the challenges to reach property owners and renters may apply if they are the account holder. Low-Income Program: On going barriers, fear of rent increase for tenants, owners not willing to agree to a 12 month no rent increase. Agencies continue to provide education of tenant rights and owner/landlord rights; however, it is an ongoing barrier. Finding/communicating with Trade allies: Standard Rebate Program & Point of Sale: EE has over 120 TAs and we monitor performance through random inspections and services like the Better Business Bureau Forms/Paperwork: Standard Rebate Program & Point of Sale: especially as it relates to language accessibility - Online portal has been launched and incentives and applications are available in Spanish; translation is also an option. Low-Income Program: Rebate forms are available to our CAAs in English and are available in Spanish by request. Our rebate applications are not customer facing, they are completed by CAA representatives.
27	3/4/2024	Pre Targeted TAG 3	WUTC	o Has Cascade Identified the steps to take advantage of EE rebates/trade allies and identified barriers within those steps that might limit more equitable participation? If These barriers may include: • Knowledge of the program • Economic/financial barriers to participation • Asking for too much/sensitive information • Time poverty barriers to participation • Renter/property owner barriers • Finding/communicating with Trade allies • Forms/Paperwork – especially as it relates to language accessibility • Submission of rebate forms • Review of rebate forms	Submission of rebate forms: Standard Rebate Program & Point of Sale: Rebates are available through the Point of Sale program and can be submitted via email, post, FAX, the online portal, and occasional walk in. Low-Income Program: Rebates can be submitted via secure email (Biscom) CAA representatives can request a secure link from Sr. Conservation Analyst and or use our online portal for submissions. Review of rebate forms: Standard Rebate Program & Point of Sale: Rebate forms are reviewed, revised, and simplified in tandem with tariff updates. Our TAs have communicated their preference to minimize the changes/revisions to program forms. Low-Income Program: Same process followed for LI rebate forms, updated on calendar year and with tariff updates.
28	3/4/2024	Pre Targeted TAG 3	WUTC	o What drove the significant increase in EE savings from 2022 to 2023 and what did Cascade learn from that experience that it is implementing now?	Investment in The Point of Sale and Trade Ally programs are significant contributors to the increase in EE savings in 2023 compared to 2022. Over half of all applications received in the second half of 2023 were attributed to these offerings. CNGC is continuing to invest in and grow these offerings for the upcoming biennium.
29	3/4/2024	Pre Targeted TAG 3	WUTC	o What changes led to the shift in more residential therm savings?	Growth in the Point of Sale and Trade Ally programs were significant factors. The POS program in particular provides instant rebates for the work, from the customer's perspective. We have seen this being particularly effective in covering a large portion of the project cost for insulation and air sealing jobs. CNGC has increased insulation rebates while remaining extremely cost effective in the upcoming biennium to drive further growth and opportunity for all income levels.
30	3/4/2024	Pre Targeted TAG 3	WUTC	o What does CNG foresee as coming challenges for energy efficiency programs?	Consumer sentiment around energy codes, building codes, and the future of natural gas is a significant challenge and increases risk for program participants. Participants are less likely to make significant investments in their home and business when risks of fuel choice use are present. Additionally, supply issues with insulation materials are still being noticed by select contractors.
31	3/4/2024	Pre Targeted TAG 3	WUTC	o How does the likelihood of a decrease in gas customers/increase in customers who are electrifying factor into the CPA calculations?	Customer counts by segment (residential, commercial, industrial) and by climate zone are provided as inputs to the CPA calculation. Gas use and savings potential are generally directly related to customer count.
32	3/4/2024	Pre Targeted TAG 3	WUTC	o What kind of sensitivity analysis did CNG do when calculating the CPA? Staff would like to know more about the methods used to generate the CPA.	CNGC has conducted sensitivity analyses in the past. A recent example is alternative scenario modeling to inform chapter 7 of the 2023 Washington IRP. The alternative scenarios included an update to baseline fuel usage and avoided costs, a scenario of high future Renewable Natural Gas (RNG) usage, and a scenario combining high future RNG usage and increased municipal gas bans with decreasing customer counts. Further details can be found on pages 7-22 through 7-24 of the 2023 Washington IRP.
33	3/4/2024	Pre Targeted TAG 3	WUTC	o Staff would like some clarity to why the baseline forecast for therms goes up for industrial over time, but goes down for residential and commercial. What are the drivers both for decreases and increases?	This is a function of average use per customer per segment and total number of expected customers. On average, industrial customer count expectations increased more than commercial or residential in this CPA. Average use per customer for commercial and residential decreases over time, driven by energy code restrictions impacting gas use for residential and commercial construction.

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34	3/4/2024	Pre Targeted TAG 3	WUTC	o Staff would like greater clarity what is causing the gap in the achievable technical and achievable economic potential in the CPA.	From page 7 of the 2023 CPA: UCT Achievable Economic Potential further refines achievable technical potential by applying an economic cost-effectiveness screen. In this analysis, primary cost-effectiveness is measured by the utility cost test (UCT), which assesses cost-effectiveness from the utility's perspective. This test compares lifetime energy benefits to the costs of delivering the measure through a utility program, excluding monetized non energy impacts. These costs are the assumed incentive, represented as a percent of the incremental cost of the given efficiency measure, relative to the relevant baseline course of action (e.g., federal standard for lost opportunity and no action for retrofits), plus any non-incentive costs that are incurred by the program to deliver and implement the measure. If the benefits outweigh the costs, a given measure is included in the economic potential. Note that we set the measure-level cost-effectiveness threshold at 0.9 for this analysis since Cascade may include non-cost-effective measures as long as the entire portfolio is cost-effective. This is important because a portfolio considers more than just energy savings. Cascade may include popular measures that are on the cusp of cost-effectiveness, accommodate variance between climate zones, maintain a robust portfolio, or include a measure that improves customer outreach and communication. It also supports the inclusion of borderline cost-effective measures, increasing overall savings through energy efficiency offerings.
35	3/4/2024	Pre Targeted TAG 3	WUTC	o How is CNG modeling scenarios with benefits from the Inflation Reduction Act	Repeating the response in item 19; CNGC is evaluating the relevance of IRA and IIJA funding for natural gas utilities. At this point it looks to be electric utility focused. This could be relevant for fuel switching programs, but that is yet to be fully investigated. CNGC welcomes modeling scenarios and inputs from the CAG and commission staff in regard to the IRA during the upcoming CPA cycle.
36	3/4/2024	Pre Targeted TAG 3	WUTC	"Customer Segmentation" Does this analysis include an equity analysis?	Customer segmentation involves allocating portions of the customer count per program segment: Residential, Commercial, Industrial. For each segment, the count is further segmented into income level, home size, type of business, type of production process, etc. Details on residential customer segmentation by income group can be found on page 25 of the 2023 CPA under docket 210838.
37	3/4/2024	Pre Targeted TAG 3	WUTC	o "Market size, Equipment Saturation, Technology Shares, Vintage distribution" Do these analyses include equity analysis? Does it consider demographics of the market? Does it consider demographics of equipment vintages and ownership?	This is separate from an equity analysis. It involves calculating the average of what exists in the market, equipment vintages, etc. per income level, home type, commercial business type, etc. A full description of this market characterization can be found on pages 21-32 of the 2023 CPA docket 210838.
38	3/4/2024	Pre Targeted TAG 3	WUTC	o "Unit energy consumption" Does unit energy consumption include an equity analysis? Are there distributional inequities in how much energy different customer groups might be consuming?	Unit Energy Consumption is a calculation for the average amount of energy a given piece of equipment is expected to use in one year. It is broken down by specific market segment in the CPA. It embodies an average level of service and average equipment efficiency for the specific market segment. This includes a calculation of average therm usage per home by building type and income level in the residential sector. Lower income homes and multifamily homes are assumed to use less energy on average. A summary of Energy consumption by income group can be found on page 26 of the 2023 CPA.
39	3/4/2024	Pre Targeted TAG 3	WUTC	o "New Construction Profile" In the past year how has participation in the new construction energy efficiency program changed? Have similar patterns been seen with new customer uptake?	One way to measure new construction participation is through incentives only available for new construction homes. In 2022 136 projects were submitted for the "Built Green Certified Home" offering. In 2023 only one project was received. This offering was deemed to no longer be viable with the implementation of WSEC 2021. New service points in the service territory dropped approximately 10% from 2022 to 2023.
40	3/4/2024	Pre Targeted TAG 3	WUTC	o "Customer growth" Has Cascade already calculated the customer growth or is this value determined at the end of the IRP process?	The customer growth for the 2023 CPA comes from the previous IRP cycle. The 2025 CPA is anticipated to use customer count figures from the 2025 IRP which is yet to be finalized.
41	3/4/2024	Pre Targeted TAG 3	WUTC	o "Elasticities" What types of elasticities is Cascade considering? Does 'elasticities' include an equity analysis of EE program participation?	Elasticities come from EPRI End-Use Models (REEPS and COMMEND). These models provide the energy-use elasticities applied to equipment prices, household income, home size, heating requirements, etc.
42	3/4/2024	Pre Targeted TAG 3	WUTC	o "Achievable Economic" Does achievable Economic include an equity analysis of who is able to participate?	Yes, savings potential screening methods do involve equity analysis, market segmentation, and participation assumptions. Within AEG's LoadMAP model, we estimate potential using the Council's preferred approach of beginning with technical potential, applying ramp rates to estimate achievable technical potential, and finally screening for cost effectiveness to estimate achievable economic potential. Cost effectiveness varies by commercial/industrial business type, income bracket, average equipment cost etc. More details on the potential screening can be found on pages 7 and 8 of the 2023 CPA.
43	3/4/2024	Pre Targeted TAG 3	WUTC	o "UCT/TRC Achievable Economic Potential" Do these future projections anticipate that EE measures will become more cost effective in the future?	Generally speaking, EE measures become less cost effective over time as the "low hanging fruit" becomes exhausted from the market. This is of course augmented by changes in technology, consumer behavior, avoided costs, and market adoption rates to name a few. Should avoided costs increase in the future, for example, we would anticipate measures becoming more cost effective. For the 2023 CPA, UCT achievable economic potential does increase year over year through a 20-year forecast window.

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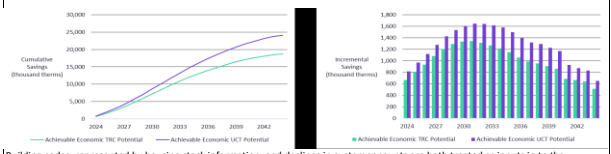
Item #	Date	TAG Meeting	Name/Company	Comment/Question	Cascade Response
44	3/4/2024	Pre Targeted TAG 3	WUTC	o"Technical Potential" Does technical potential assume increasingly efficient options in the future?	Yes, from page 7 of the 2023 CPA: Technical Potential is defined as the theoretical upper limit of energy efficiency potential. It assumes customers adopt all feasible measures regardless of their cost. At the time of existing equipment failure, customers replace their equipment with the most efficient option available. In new construction, customers and developers also choose the most efficient equipment option. Technical potential also assumes the adoption of every other available measure, where technically feasible. For example, it includes the installation of high-efficiency windows in all new construction opportunities and furnace maintenance in all existing buildings with installed furnaces. These retrofit measures are phased in over a number of years to align with the stock turnover of related equipment units, rather than modeled as immediately available all at once. It also involves estimates for technology and equipment advances in the future.
45	3/4/2024	Pre Targeted TAG 3	WUTC	o"Summary of Energy Efficiency Potential as % of Baseline Projection" Does this projection contemplate the possibility of declining customer counts?	Customer counts is an input into the LoadMAP model. LoadMAP could handle a forecast with decreasing customer counts. In general, an input of decreasing customer counts would decrease energy efficiency potential and baseline energy usage.
46	3/4/2024	Pre Targeted TAG 3	WUTC	oCumulative UCT Achievable Potential Forecast, Around the year 2035 there is a change in concavity of the graph. What are the causes of this concavity change?	There are many factors at play in calculating UCT achievable potential. Around the year 2035 opportunity and retrofit ramp rates change concavity or begin to phase out which significantly impacts achievable potential. These graphs can be found in appendix D of the 2023 CPA.
47	3/4/2024	Pre Targeted TAG 3	WUTC	oIf the avoided cost analysis changes substantially (see Staff comments on TAG 2), is this analysis capable of pivoting to match the new data? What is the time lag/interaction between EE program data and IRP analysis data?	Yes, avoided costs will be a changeable input into the 2025 CPA. The CPA informs EE program data with inputs from the IRP including avoided costs, HDDs, customer counts, inflation assumptions, etc. The 2025 CPA is anticipated to include IRP data inputs through approximately Q4 2024.
48	3/4/2024	Pre Targeted TAG 3	WUTC	oIn the last BCP, many of the rebates offered had UCT and TRC ratios well above 1.0. If these ratios were lowered (by increasing the rebate offered) would it increase the achievable potential?	The achievable potential is impacted by a cost effectiveness screening. In the last CPA, this level was .90. Lowering this cutoff could increase the achievable economic potential by allowing more measures through cost screening. Adjusting rebate amounts comes much later in the process in the program planning phase, after the achievable potential has been set.
49	3/4/2024	Pre Targeted TAG 3	WUTC	"Furnace Direct Fuel" Do customers adopt these measures before their old furnace fails? Looking to the demand forecast, how might data associated with this measure inform the model of customer decision making when it comes to furnace replacement and electrification?	The average lifespan for measures assumes that some equipment items are replaced prior to failure and that some pieces of equipment last longer than anticipated. The average lifespan of the measure, or average energy usage per unit could be adjusted in future CPAs to reflect a higher rate of replacement prior to failure. More concrete data on consumer decisions would be useful in informing this.
50	3/13/2024	Post Targeted TAG 4	WUTC	• Staff would appreciate it if the TAG meetings could be simulcast to YouTube. Cascade can use Puget Sound Energy's IRP process as an example. This would upload the meeting immediately and give staff ample time to review TAG meetings and give more informed feedback. In addition, this would give members of the public a way to monitor TAG meetings on a website they are more familiar with. o If Cascade is unwilling or unable to do this, Staff request that Cascade provide Staff with a recording of the meetings prior to the deadline for comment.	
51	3/13/2024	Post Targeted TAG 4	WUTC	• If Cascade's CPA is, in part, aiming to focus on measures with long term benefits, has Cascade considered emphasizing EE measures that focus on envelope efficiency (especially in residential), and other measures that are beneficial for customers in the long run even if they leave gas service (i.e. not appliances)?	Cascade agrees that fuel agnostic Energy Efficiency Measures are optimal. Cascade has sought to increase uptake in these Residential envelope measures by increasing insulation incentives in the 2024-2025 BCP by 60-100% compared to the previous BCP. Additionally, Cascade has invested significant resources into the Point of Sale rebate program which is currently heavily skewed towards fuel agnostic envelope measures including ceiling insulation and air sealing.
52	3/13/2024	Post Targeted TAG 4	WUTC	• Why is achievable potential anticipated to go up for the next 20 years? Does this align with Staff concerns regarding building codes and compliance costs, and the potential for declines in customer counts?	It's important to note the difference between cumulative savings potential (compounding over time) and incremental savings potential (a single year snapshot). While the CPA did consider the impacts of Washington Energy Code on customer fuel adoption and future use of gas, many measures serving existing customers were still found to be cost effective and will continue to be important to help customers reduce their energy burden. Using adoption ramp rates and achievability methodology consistent with those used by the NWPCC 2021 Power Plan, the achievable remaining market for these measures is captured over the study period, which means new installations or captures of turnover equipment in each year. The cumulative savings from these annual measures are what is reported in the CPA. The available savings potential in each year (i.e., the incremental potential) does start to decline starting around 2030, partly due to the shape of Council's ramp rates, but also due to changes in the underlying market baseline loads expected.  Building codes, represented by housing stock information, and declines in customer counts are both treated as inputs in to the LoadMAP forecasting model. Impacts from building codes, compliance cost, and changing customer counts were modeled with information as of Spring 2023 for the 2023 CPA. These inputs will be updated for the 2025 CPA to reflect the most accurate understanding of housing stock information and customer counts at that time.
53	3/13/2024	Post Targeted TAG 4	WUTC	• Staff would like to remind Cascade that the 10% RTF preference adder does not relate to Non-Energy Benefits.	Cascade asked Staff to share their thoughts on what the 10% RTF preference adder does cover, from their perspective. Staff's response: UTC Staff cannot speak for the RTF. However, the RTF refers to the 10% preference adder as a "regional preference adder" (slide 11). In that 2019 presentation, the RTF cites to [Northwest Power Act, §3(4)(D), 94 Stat. 2699.] which states "3(4)(D). For purposes of this paragraph, the "estimated incremental system cost" of any conservation measure or resource shall not be treated as greater than that of any non-conservation measure or resource unless the incremental system cost of such conservation measure or resource is in excess of 110 per centum of the incremental system cost of the nonconservation measure or resource."
54	3/13/2024	Post Targeted TAG 4	WUTC	• Staff will be following up regarding how Cascade can put IRA/IIJA implementation assumptions into their modeling assumptions. There will be continued discussion around this issue.	Cascade appreciates the follow up.
55	3/13/2024	Post Targeted TAG 4	WUTC	• Staff emphasizes the need for an empirical foundation for the customer forecast theory that will guide the development of Cascade's model. Staff notes that understanding the conditions in which customers adopt "furnace - direct fuel – AFUE 97% (CEE Tier 3)" measures may shed like on future customer behaviors.	Cascade appreciates staff emphasizing this need and will look into it.
56	4/17/2024	Post Targeted TAG 5	WUTC	Staff lauds Cascade's initiative in developing a building stock attrition rate. Staff would appreciate greater clarification about what is captured by the building stock attrition rate; especially to avoid double counting between building/customer loss due to anticipated bill impacts/customer flight and non-economic drivers of customer loss.	Cascades intent for building stock attrition rate is that this rate would reflect natural building decay, in which a building is either demolished and rebuilt under current WA State Building Codes, or remodeled/renovated to a point in which the home must follow current WA State Building Codes.
57	4/17/2024	Post Targeted TAG 5	WUTC	Customer Count Forecast and Price Elasticities – Staff lauds Cascade's efforts to engage with this topic. Staff looks forward to further conversations with Cascade staff as it develops its methods. Has Cascade staff considered evaluating its historic customer count and retail price data by controlling for economic growth or some other econometric proxy for 'bullishness'? Further, Staff questions whether historic price data is probative since the prices and bill impacts anticipated from CCA compliance costs and the likely changing ratio of fixed costs to customers likely exceeds historic data in the intermediate to long run. Staff questions if customer choices to electrify might be better understood as a stepwise function? Has Cascade considered that customers, individually, may leave gas service at a service-price tipping point? Has Cascade considered the dynamics of a heterogenous population of such individuals as service prices increase?	Cascade does attempt at controlling for economic growth by including total household and employment growth in the Company's customer forecast model. Cascade agrees that historic price data may not be probative as Staff states. Thus, Cascade will also be inlcuding a separate electrification analysis that looks at service-price tipping points.
58	4/17/2024	Post Targeted TAG 5	WUTC	WA State Building Codes – The presentation noted "The new building codes have made it impractical for new residential and commercial buildings to use natural gas." Cascade staff noted during the TAG that, currently, new residential customers were typified by gas stoves, and barbeques and space heaters for shared spaces. On a use per customer basis how does this align with previous IRPs' assumptions around future use per customer? In addition to changes in customer end-uses, how has growth in customer counts changed in the last year?	If Cascade continues to see growth in residential homes with appliances such as stoves, barbeques, and space heaters in shared areas, the Company would anticipate the use per customer declining. Historically, Cascade's use per customer is flat the slowly declining, which is what we would anticipate with new residential homes being limited to stoves, barbecues and space heaters in shared areas. As of March 2023, Cascade experienced 1.05% growth. Update -- As of June 2023, Cascade's year-over-year growth is at 0.69%.
59	4/17/2024	Post Targeted TAG 5	WUTC	Cascade staff proposed running an alternative scenario modeling the possibility that the CCA and/or Washington State building codes are overturned. Staff supports modeling this alternative scenario.	Cascade appreciates Staff support.
60	4/17/2024	Post Targeted TAG 5	WUTC	Weather Normals and Climate Change Impact – Does Cascade or ICF have an evidentiary basis is for deviating from RCP 8.5 or SSP5-8.5 as used by the NWPCC? Staff stresses the centrality of empiricism in our work and urges that the baseline scenario represent the most likely future for Cascade Planning based on available data, even if that deviates from RCP 8.5. Staff also invites Cascade to consider climate change models that deviate from current expectations in additional scenarios. Staff would further appreciate more information about the "Cold Weather Review Relevant to Peak Forecasts".	Cascade does not plan on running the RCP 8.5 or SSP5-8.5. Cascade explained that the RCP 8.5 and SSP5-8.5 have been deemed as highly unlikely and Often wrongly used as 'business as usual'. See more in this article: comment article
62	5/17/2024	Post Targeted TAG 7	WUTC	Staff appreciates Cascade's receptivity to comments and feedback from Staff and interested parties. Staff highlights that Cascade's efforts in the current IRP process thus far have been quite productive. Staff looks forward to continued work with Cascade throughout the IRP process.	Cascade appreciates the feedback and the collaborative efforts in producing the IRP.
63	5/17/2024	Post Targeted TAG 7	WUTC	Staff appreciates Cascade's clarifications about future hydrogen strategies. Staff looks forward to Cascade investigating both hydrogen fuel blending and a parallel hydrogen-only system as pathways to decarbonization. Staff also looks forward to ongoing discussions with Cascade staff about the collateral costs of hydrogen blended fuels. Staff is supportive of Cascade investigating decarbonization strategies, but Staff also reiterates its concerns about hydrogen contained in its comments responding to the 2023 IRP.	Cascade understands Staffs concerns regarding hydrogen and looks forward to working through any concerns in the future.
64	5/17/2024	Post Targeted TAG 7	WUTC	Staff looks forward to future talks about equity in distribution system planning and analysis. Staff recommends that Cascade work with the EAG and future TAGs to develop an equity framework for distribution system planning for the 2024 IRP.	Cascade looks forward to continuing the collaborate efforts on equity in the IRP.

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Item #	Date	TAG Meeting	Name/Company	Comment/Question	Cascade Response
65	5/17/2024	Post Targeted TAG 7	WUTC	Staff questions whether a 5-year planning horizon is appropriate for distribution system planning. Staff questions if a shorter planning horizon might result in path dependency issues compared to a longer planning horizon. Staff acknowledges the difficulties of accurate planning with longer time horizons, but recommends that Cascade investigate the possibility of longer planning horizons that align with the 2050 planning horizon of the IRP document. Staff questions whether useful, though perhaps generalized, information might be gleaned from a longer planning horizon that might provide insights into strategies and capabilities to mitigate risks to rate payers and the utility.	Cascade appreciates Staff's feedback. With growth uncertainty being at an all time high, it is extremely difficult to plan for a longer planning horizon. With that said, Cascade does agree that there are some benefits that could be explored looking further out into the future when planning distribution system upgrades.
66	6/6/2024	Post Targeted TAG 8	WUTC	• During Targeted Tag 8, Cascade requested other sources for electrification data. Staff offers the following resources, however UTC Staff cannot vouch for the accuracy or reliability of these resources, nor does the following list convey any endorsement of these resources: o Avista offers a Heating Comparison Calculator (apogee.net) on its website. While this does not predict future electric rates, it does compare indoor heating costs. o Avista's work papers associated with its 2023 Gas IRP and Electric Progress Report are publicly available under docket UE-200301. o Puget Sound Energy also has various of its work papers publicly available under docket UE-200304.	Cascade appreciates Staff's feedback.
67	6/6/2024	Post Targeted TAG 8	WUTC	• Staff is concerned about the lack of a preferred portfolio. Staff is open to having an extended conversation about this with the Company and the Oregon PUC.	Cascade appreciates the feedback on the lack of preferred protfolio. Cascade has re-evaluated the preferred portfolio and will be including one in this IRP.
68	6/6/2024	Post Targeted TAG 8	WUTC	• Staff would like to see Cascade's data that supports "Reference Case: Washington State Building Code Council rules w/ flat customer growth".	Cascade was able to put together a report that pulls service line retirements without reconnection. When a line that feeds a customer is retired, Cascade does not collect a reason for why they're being disconnected. This is the best estimate the Company has been able to establish for customers leaving, whether it be through home destruction or electrification. Here are the results from this report for our Washington service territory: Year | Customers | Retirement | % of customers 2011 | 196,015 | 399 | 0.20% 2012 | 197,548 | 369 | 0.19% 2013 | 199,949 | 407 | 0.20% 2014 | 202,195 | 396 | 0.20% 2015 | 204,867 | 432 | 0.21% 2016 | 207,868 | 420 | 0.20% 2017 | 211,164 | 410 | 0.19% 2018 | 214,996 | 400 | 0.19% 2019 | 218,811 | 366 | 0.17% 2020 | 222,778 | 341 | 0.15% 2021 | 226,633 | 342 | 0.15% 2022 | 229,418 | 391 | 0.17% 2023 | 231,539 | 314 | 0.14% This is showing that the number of service line retirements each year is in the ballpark of .15% to .20% per year, which is much flatter than the 1.5% decay rate that has been discussed between the parties in the past. Cascade is still seeing customers who are interested in adding non-space and water heating appliances, which are allowed under the current building codes. This is currently how Cascade is coming to the conclusion for utilizing a flat growth rate, with a declining upc, for the reference case.
69	6/6/2024	Post Targeted TAG 8	WUTC	• During Targeted-Tag 8, Staff asked for a more detailed description of PLEXOS' selection criteria for electrification. Staff would like to schedule a meeting with Cascade staff to walk through this aspect of the model.	Cascade is still working on the electrification analysis. Cascade will present this at TAG 2, or at a Targeted TAG meeting after TAG 2.
70	6/6/2024	Post Targeted TAG 8	WUTC	• Staff continues to stress the benefits of conducting a plausible worst-case scenario where all variables that are demonstrated to increase systemic instability are each simultaneously increased/decreased, within plausible parameters, to increase systemic instability. Staff urges Cascade to consider the non-arithmetic impacts of model inputs.	Cascade understands Staffs concern regarding a plausible worst-case scenario. Cascade will address this under the declining customer growth scenario.
71	6/6/2024	Post Targeted TAG 8	WUTC	• Staff reiterates its previous feedback regarding the possibility of targeted energy efficiency/elevated avoided costs to mitigate customer losses.	Cascade appreciates Staff's feedback.
72	6/6/2024	Post Targeted TAG 8	WUTC	• Staff reiterates its previous feedback regarding the possibility of system pruning as a strategy to lower fixed costs	Cascade appreciates Staff's feedback.