BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of Avista Corporation 2022-2023 Biennial Conservation Plan	**DOCKETS UE-210826 and UG-210827**
In the Matter of Cascade Natural Gas Corporation 2022-2023 Biennial Conservation Plan	**DOCKET UG-210838**
In the Matter of Northwest Natural Gas Company 2022-2023 Biennial Conservation Plan	**DOCKET UG-210831**
In the Matter of Pacific Power and Light Company 2022-2023 Biennial Conservation Plan	**DOCKET UE-210830**
In the Matter of Puget Sound Energy 2022-2023 Biennial Conservation Plan	**DOCKETS UE-210822 and UG-210823**

COMMISSION STAFF COMMENTS REGARDING GAS AND ELECTRIC UTILITY CONSERVATION PLANS UNDER RCW 19.285 and 80.28 and WAC 480-109 (2022-2023 BIENNIAL CONSERVATION PLANS)

December 17, 2021

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Introduction

The Utilities & Transportation Commission (Commission) must approve biennial conservation targets for both gas and electric utilities. 2022-2023 is the first biennium requiring approval of gas conservation targets, while electric conservation targets have required approval since 2010. [1,2]

On November 1, 2021, Avista Corporation d/b/a Avista Utilities (Avista), Cascade Natural Gas Corporation (Cascade), Northwest Natural Gas Company (NW Natural), PacifiCorp d/b/a Pacific Power & Light Company (PacifiCorp), and Puget Sound Energy (PSE), filed their respective Biennial Conservation Plans (BCPs or Plans), regarding their 2022-2023 conservation targets with the Commission.[3] The Commission requested comments on the Plans by December 17, 2021.[4] This is the first time that Commission Staff (Staff) have analyzed, reviewed, and responded to all five (5) utilities' conservation targets at the same time.

Staff provided technical assistance to the utilities and assisted with the review of the Plans through participation in the various advisory groups for all five companies. Staff also conducted a thorough review of the draft and final Plans. Staff's review focused on verifying that the companies used methodologies consistent with the Northwest Power and Conservation Council's (Council) Power Plan, where appropriate. Staff provided feedback to each company to ensure that each Plan complied with the statutory requirements to acquire all available and cost-effective conservation.[5] Staff believes each company met the reporting requirements outlined in RCWs 19.285.040(1)(b), RCW 80.28.380, and WAC 480-109-120(1), as applicable to electric and gas utilities.

In these comments, Staff summarizes the target setting process and discusses the effect of recent legislation on the BCPs. Staff also discusses additional recommendations regarding Plan implementation in the 2022-2023 biennium.

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[1] RCW 19.285.030(19) (definition of "qualifying utility"); RCW 19.285.040(1)(b) (biennial conservation targets). In 2006, Washington voters approved Initiative 937, also known as the Energy Independence Act (EIA). Codified in RCW 19.285 and Chapter 480-109 WAC, "qualifying" electric utilities — those with at least 25,000 customers in Washington — must set and meet energy conservation targets.
[2] The Laws of 2019, Chapter 285, created new sections, including RCW 80.28.380 (requiring each gas utility to identify and acquire all conservation measures that are available and cost effective) and RCW 80.28.395 (establishing the cost of greenhouse gas emissions for the purposes of RCW 80.28.380). Under the new section, gas utilities must establish biennial acquisition targets based on a conservation potential assessment (CPA). Per RCW.80.28.380, the CPA must be prepared by an independent third party and approved by the Commission. The first gas biennial target must take effect by 2022.
[3] Dockets UE-210826 and UG-210827 (Avista); UG-210838 (Cascade); UG-210831 (NW Natural); UE-210830 (PacifiCorp); and UE-210822 and UG-210823 (PSE).
[4] *Ibid*., Notice of Opportunity to Comment, Nov. 10, 2021.
[5] RCW 19.285.040(1) and RCW 80.28.380.

After reviewing the comments filed by other parties, Staff intends to present its final recommendations and potential conditions for approval at the Commission's January 18, 2022, Recessed Open Meeting.

Table 1 shows each utility's 2022-2023 electric target (in megawatt hours, MWh), while Table 2 shows each utility's 2022-2023 gas target (in therms).

Table 1: Summary of 2022-2023 Electric Targets (MWh)

Company	EIA Target	EIA Penalty Threshold	Decoupling Threshold	Total Utility Conservation Goal
Avista	101,566	91,054	5,078	106,644
Pacific Power	94,210	87,436	4,711	98,921
PSE	497,564	469,182	24,878	536,717

Table 2: Summary of 2022-2023 Gas Targets (Therms)

Company	Biennial Acquisition Target	Decoupling Threshold (If applicable)	Total Utility Conservation Goal
Avista	2,192,434	109,622	2,302,056
Cascade	1,931,751	N/A	1,931,751
NW Natural	619,200	N/A	619,200
PSE	9,262,931	463,147	9,791,327

Target Setting and Implementation Plans

The target setting process begins with the development of Conservation Potential Assessments (CPAs), which establish the achievable savings potential in a utility's service territory over twenty-, ten-, and two-year periods. Once a CPA is completed, electric utilities use savings potential as an input to the integrated resource plan (IRP) model, which acts as an economic screen to determine the cost-effective potential. The process is different for gas, where most of the state's gas utilities include an economic screen within the CPA. They may then treat the economic potential as a must-take resource in the IRP process.[6] Per RCW 80.28.380, 2021 was

[6] PSE is the only gas utility that uses the IRP process as an economic modeling screen in the same way that it does for its electric IRP.

the first-year gas companies were required to submit a CPA for Commission approval.[7] As discussed further in the below sections, each gas utility CPA was approved with a condition at the October 14, 2021, open meeting.

Once the amount of cost-effective conservation is identified, the electric utilities may make necessary adjustments to derive their biennial EIA conservation target, penalty threshold, and total utility conservation goal. Examples of the modifications that a utility could make include updating savings estimates based on new information, adding savings associated with measures not captured in the CPA (such as distribution savings), and removing savings from the penalty threshold that will be achieved through programs without direct utility administration, such as the market transformation work done by the Northwest Energy Efficiency Alliance (NEEA). Similarly, the gas utilities identify the amount of available cost-effective conservation, adjusting to account for any decoupling commitments and any additional savings identified outside the CPA, to determine their total utility conservation goal.

Tables 3 and 4 below define the various elements used to determine electric and gas savings targets. Staff proposes to use this terminology going forward and does so throughout this document.[8]

Table 3: Definition of Savings Terms Used in 2022-2023 Electric BCPs

EIA Target	All cost-effective conservation potential as required by RCW 19.285. Includes the CPA Pro-Rata Share plus other programs/measures with confident savings omitted from the CPA subject to the EIA.
EIA Penalty Threshold	As approved by the Commission, which may rely on standard practice to set IOU conservation targets. Generally, the EIA target minus NEEA savings from "program measures" and "codes and standards" not included in the CPA.
Decoupling Penalty Threshold	Five percent of the EIA target.
Total Utility Conservation Goal	EIA target plus decoupling threshold and any additional savings identified outside of the EIA target.

[7] There is no statutory requirement for electric utilities to submit CPAs to the Commission in a stand-alone docket for approval.
[8] These definitions are not necessarily found in rule or statute. Some of the terms in Table 3 (including "Two-Year EIA Target" and "Two-Year EIA Penalty Threshold") were developed in 2018 through the Statewide Advisory Group (SWAG) process. *See* Dockets UE-171087, UE-171091, and UE-171092, "Report on 2018 Washington State Investor-Owned Utility Energy Efficiency Joint Advisory Group Activities and Outcomes". Staff proposes the use of the terms in Table 4.

Table 4: Definition of Savings Terms used in 2022-2023 Gas BCPs

Biennial Acquisition Target	All available cost-effective conservation potential as required by RCW 80.28.380. May include other adjustments.
Decoupling Commitment	Avista and PSE have gas decoupling commitments equal to five percent of the Biennial Acquisition Target.
Total Utility Conservation Goal	Biennial acquisition target plus decoupling commitment and any additional savings identified outside of the Biennial Acquisition Target.

Impact of New Legislation
For the 2022-2023 biennium, new laws impacted the biennial conservation planning process significantly. The Laws of 2019, Chapter 285, codified as RCW 80.28.380, introduced several new gas conservation requirements. Prior to these requirements, there was little guidance regarding gas conservation in statute. The Laws of 2021, Chapter 11, codified as RCW 80.28.260, opened the door to both gas and electric utilities to offer conservation measures aimed at mitigating the urban heat island effect. Finally, the Laws of 2021, Chapter 188, codified as RCW 80.28.425, added requirements for low-income assistance programs that implicate both gas and electric conservation programs.[9]

The new gas conservation law in RCW 80.28.380 requires each gas utility to identify and acquire all available and cost-effective conservation measures, and to establish a conservation acquisition target every two years, beginning in 2022. These new targets must be based on a CPA approved by the Commission. The first round of gas CPAs were approved at the October 14, 2021, open meeting, subject to a condition regarding data transparency of subsequent CPA filings.[10]

While the EIA has required BCPs from the electric utilities for over a decade, RCW 80.28.380 prompted the first round of gas BCPs. Since the law's passage in 2019, Staff has held discussions with gas and electric utilities on implementing it. In the following sections, Staff addresses several topics that require further discussion as utilities implement the new conservation laws.

Clarification of the Public Interest and Equity
New language established in RCW 80.28.425(1) says that "in determining the public interest, the commission may consider such factors including, but not limited to, environmental health and

[9] One final piece of legislation, the Laws of 2021, Chapter 79, added a section to RCW 19.285.040 allowing electric utilities to remain in compliance with their EIA targets if events beyond their reasonable control prevent them from achieving those targets. Staff does not address this new law in these comments but may address it, as necessary, when utilities submit their 2020-2021 biennial conservation reports in 2022.
[10] Per Order 01, Dockets UG-210773, UG-210450, UG-210461, and UG-210462, p. 8, ¶ 37 (Oct. 14, 2021).

greenhouse gas emissions reductions, health and safety concerns, economic development, and *equity*, to the extent such factors affect the rates, services, and practices of a gas or electrical company regulated by the commission." While this language is explicitly tied to the approval of multiyear rate plans, Staff believes it is relevant to the acquisition of conservation because of the language in subsection 2 regarding the approval of tariffs that reduce the energy burden of low-income residential customers. Further, the public interest as described in RCW 19.405.010(6) "includes but is not limited to: the *equitable distribution of energy benefits* and reduction of burdens to vulnerable populations and highly impacted communities; long-term and short-term public health, economic, and environmental benefits and the reduction of costs and risks; and energy security and resiliency." Staff identifies four (4) recommendations for utilities going into the upcoming biennium:

- Work with advisory groups and customers to identify specific geographic locations and customer segments that have been underserved by both gas and electric conservation programs.
- Develop or update a gas underserved customer needs assessment for review with its advisory groups that explores demographic factors beyond income, incorporates diverse data sources, and identifies plans for better data collection. As part of such an assessment, utilities should include a comprehensive list of the data sources and data collection methodology used when identifying underserved customers and plans for better data collection to address any lack of information about its service territory and customer base.
- Consider how and whether existing conservation programs serve the customers identified above.
- Adjust existing conservation programs, and, if needed, design new programs and offerings that ensure an improvement in the equitable distribution of energy and nonenergy impacts.

Gas Transportation Customers

Staff sought guidance from the Commission on whether conservation savings from gas transportation customers should be included in the conditions for approval of the gas CPA during the October 14, 2021, open meeting. After discussion with representatives from each gas utility, Commission Staff, and various stakeholder groups – including Public Counsel, the Alliance of Western Energy Consumers (AWEC), and the NW Energy Coalition (NWEC) – the Commission found that the statute is ambiguous and more information is required to determine whether RCW 80.28.380 should be interpreted to include gas transportation customers.[11] In the next two years, Staff requests that the gas companies work toward providing Commission Staff with more information by quantifying the need for gas conservation among transportation customers during the upcoming biennium. Gas utilities should consult their conservation advisory groups on how to accomplish this task.

[11] Dockets UG-210773, UG-210450, UG-210461, and UG-210462, Order 01, p. 8, ¶ 35 (Oct. 14, 2021).

Gas Cost Effectiveness Tests

In addition to identifying and acquiring all available and cost-effective conservation and establishing two-year conservation targets, RCW 80.28.380 requires gas utilities to include the costs of greenhouse gas emissions in their cost-effectiveness analysis. A key question going forward is which cost-effectiveness test is appropriate for use by gas utilities. In the currently approved CPAs, utilities used a modified Utility Cost Test (UCT), which included the social costs of greenhouse gases. Staff believes that gas utilities will ultimately need to move away from the UCT because it does not allow for the accounting of societal costs, such as those caused by greenhouse gas emissions.

Staff supports allowing each gas utility to continue using its existing cost-effectiveness test in 2022-2023, as well as continued ongoing discussions with gas utilities about this matter. The gas cost-effectiveness test question may be addressed in docket UE-210804;[12] it may also be handled as part of a separate, future process. Regardless of where the topic is addressed, Staff expects the gas utilities to participate in ongoing discussions to determine the appropriate gas cost-effectiveness test during the 2022-23 biennium.

Penalties for Missing Gas Conservation Target

As shown in Table 5, each of the four gas utilities has agreed in previous general rate case (GRC) settlements to reach their respective biennial gas savings targets. Regardless of whether those agreements contain a specified penalty amount, the gas utilities can be penalized for failing to meet the biennial savings targets established by Commission order. The Commission retains discretion to issue penalties for failure to comply with a Commission order, and the orders listed in Table 5 below in no way limit this discretion.[13] The following table illustrates the targets and penalties for each gas utility, as well as the related orders.

[12] Docket UE-210804 is an ongoing staff investigation into the development of a UTC jurisdictional specific cost-effectiveness test for distributed energy resources incorporating Clean Energy Transformation Act policies.
[13] *See* RCW 80.04.380 and 80.04.405.

Table 5: Gas Conservation Penalty Targets

Company	Requirement	Penalty	Docket	Order
Avista	100% of annual target, plus 5% for decoupling	Yes, applicable to 5% decoupling commitment. $20,000 for incremental conservation between 4.5 and 5 percent, $50,000 between 3.75 and 4.5 percent, $75,000 below 3.75 percent	UE-190334, UG-190335, UE-190222	Multiparty Settlement Agreement; Order 09
Cascade	100% of annual target	Yes, not specified	UG-152286	Joint Settlement Agreement; Order 04
NW Natural	100% of annual target	Yes, not specified	UG-181053	Joint Settlement Agreement; Order 06
PSE	100% of target, plus 5% for decoupling	90-99% of target: $200,000 75-89% of target: $500,000 Less than 75% of target: $750,000	UG-011571; UE-170033	12th Supp, Exhibit F to Stipulation; Order 08

Urban Heat Island Mitigation

In the Laws of 2021, Chapter 11, the Legislature tackled the problem of urban heat islands, which "make cities hotter than surrounding rural areas."[14] The law is codified in RCW 80.28.260, which allows the Commission to approve incentive rates of return on gas and electric utility programs that improve the efficiency of energy end-uses, and provides specific guidance to electric utilities seeking an incentive rate of return on tree planting programs; and RCW 80.28.300, which highly encourages gas and electric utilities to provide information to their customers regarding landscaping that includes tree planting for energy conservation. RCW 80.28.300 also allows for voluntary donations to be used to support urban forestry initiatives and tree planting energy conservation programs that meet the requirements of RCW 80.28.260(2).

Staff highly encourages each utility to work with its advisory group to determine how to implement RCWs 80.28.260(2) and 80.28.300. Staff believes the adoption of heat island mitigation programs by the utilities is in the public interest as it provides innovative demand-side energy conservation opportunities in an increasingly saturated conservation market, while also supporting the state's goals of promoting equity and public and environmental health.

[14] Laws of 2021, Ch. 11 § 1 (1). See note after RCW 35.92.355, *available at*: https://app.leg.wa.gov/RCW/default.aspx?cite=35.92.355#:~:text=RCW%2035.92.355%20Energy%20conservation%20%E2%80%94%20Legislative%20findings%20%E2%80%94,to%20be%20a%20public%20purpose%20of%20highest%20priority.

Additional Areas of Interest

Staff provides a discussion of some of the areas of interest that were discussed with each of the utilities through participation in advisory groups prior to the draft and final BCP filings, including:

- Non-energy impacts
- NEEA gas savings
- Energy efficiency's role in a decarbonized electric grid

Non-Energy Impacts

The EIA requires the inclusion of quantifiable environmental costs and benefits when calculating cost-effective conservation.[15] The Clean Energy Transformation Act (CETA) further requires utilities to ensure an equitable distribution of benefits, emphasizing the need to value non-energy impacts.[16]

Following the submission of the 2020-2021 electric BCPs, the Commission provided guidance to all three electric IOUs via orders, requiring the utilities to "demonstrate progress towards identifying, researching, and developing a plan to properly value non-energy impacts that have not previously been quantified" and to include these impacts in their 2022-2023 BCPs.[17] The utilities coordinated their efforts and engaged with a third party, the consulting firm DNV, to assign values to non-energy impacts (NEIs). DNV used existing values from their database of published NEI studies – adjusting for differences in geographic, economic, climatic, and programmatic conditions – and mapped those values to each utility's Washington service territory. The results yielded concerns regarding the methodology for valuing NEIs and the lack of advisory group participation early in the process.

While Staff believes that the DNV analyses are starting points to begin properly valuing NEIs, Staff is concerned about the conservative nature of DNV's methodology. DNV assigns both confidence and plausibility factors (CFs and PFs) to each of the studies in its database to measure how well each study follows best practices in NEI research. The CFs and PFs are designed to be conservative and are used to discount the values in those studies by up to 75 percent.[18] Those discounted values are then applied across each utility's Washington service territory. The resulting values are inherently conservative estimates and *may significantly undervalue NEIs*.

Additionally, Staff is concerned that the utilities did not engage their respective advisory groups early in the NEI study review process. It is possible that some of the concerns expressed here

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[15] *See* RCW 19.285.040(1). Cost-effectiveness is defined in RCW 80.52.030(7) and includes system costs and quantifiable environmental costs and benefits.
[16] RCW 19.405.060(1)(c)(iii); similar language found in RCW 19.405.010(6) and elsewhere.
[17] Dockets UG-190905, UG-190912, and UG-190908, Order 01, Attachment A, Condition 10a (Dec. 18, 2019).
[18] *See Puget Sound Energy Biennial Conservation Plan 2022-2023*, Docket UE-210822, Exh. 2, Supplement 3 ("Final Report: Non-energy Impacts, Puget Sound Energy"), p. 2 (Filed Oct 29, 2021).

could have been addressed had the advisory groups been brought into the process, rather than simply given a final report when the analysis was complete.

Staff encourages Avista, PacifiCorp, and PSE to work with their advisory groups to appropriately address items identified in DNV's gap analysis, and refine the valuation provided through the DNV studies to fit their Washington service territories. The companies should update the NEIs where local data is available, incorporating updated values into their program planning no later than the submission of their Annual Conservation Plans, due to the Commission by November 15, 2022.[19] When special analyses like the DNV study are planned in the future, Staff expects both gas and electric utilities to inform their advisory groups early in the project, so that stakeholders can provide useful input that will facilitate utilities' compliance with new laws.

NEEA Gas Savings

In 2021, all gas utilities participated in NEEA's gas market transformation program efforts. Staff is supportive of that effort. However, it appears the program is not measuring quantifiable savings in Washington beyond codes and standards. At a PSE conservation advisory group meeting (attended by Staff) in September 2021, NEEA staff conveyed that it expects to achieve some small amount of conservation from equipment measures in the upcoming biennium, though NEEA could not firmly quantify those savings. None of the gas utilities are projecting any firm gas savings in this biennium.[20]

Staff continues to support participation in the NEEA gas market transformation program through the end of NEEA's 2020-2024 funding cycle. Staff has not yet determined how participation in the NEEA gas market transformation program should be handled beyond this funding cycle and expects the utilities to work with their advisory groups to consider the cost-effectiveness of the gas market transformation programs.

Continued Importance of Energy Efficiency in a Decarbonized Electric Grid

As the regional generation mix changes to rely heavily on renewables, the avoided cost of energy is likely to decline significantly. On the surface this implies that avoided costs for energy efficiency will decline and it will become more difficult to find cost-effective conservation. In the past the driving value of energy efficiency has been avoiding energy costs. In a decarbonized grid much of the value of energy efficiency is the potential to avoid buildouts of additional large-scale resources, reliably provide reduction to peak, lower customer bills and energy burden, and equitably spread benefits to all customers. As demonstrated by this biennium's continued robust targets, energy efficiency, in conjunction with other properly valued demand side resources, plays a critical role in obtaining CETA goals now and in the future. As demonstrated by

[19] WAC 480-109-120(2).
[20] The tables in the company sections below reflect this fact, with a projected NEEA savings this biennium of zero.

numerous studies, energy efficiency is a pivotal component of a decarbonized grid.[21] Staff continues to support energy efficiency as a lowest reasonable cost resource.

Company Targets and Plans

Avista (Dockets UE-210826 and UG-210827)

Electric Conservation

As illustrated in Table 6 below, Avista set its electric conservation target for this biennium starting with the two-year pro rata share of its 10-year conservation potential. The Company has an EIA Penalty Threshold of 91 thousand MWh; a decoupling threshold of five thousand MWh; and total planned savings of 107 thousand MWh.

Table 6: Avista Electric Conservation Targets and Goals

Category	MWh
Pro Rata Share of 10-Year Conservation Potential	101,566
EIA Target	**101,566**
Excluded Programs (NEEA)	(10,512)
EIA Penalty Threshold	**91,054**
Decoupling Penalty Threshold	5,078
Total Utility Conservation Goal	**106,644**

Table 7 below compares the Company's 2022-2023 electric savings targets to those from its 2020-2021 BCP. Avista's EIA Penalty Threshold in the 2022-2023 biennium is 52 percent higher than its Penalty Threshold for the 2020-2021 biennium, while its total planned savings for the upcoming biennium is 39 percent higher than the 2020-2021 biennium. This increase likely owes in part to significant changes in avoided costs due to CETA implementation.

Avista plans to spend $43.4 million on its electric conservation programs in the upcoming biennium. This figure is 38 percent larger than the Company's electric conservation budget in the current biennium. The Company expects its total electric portfolio to achieve a TRC ratio of 2.6 and a UCT ratio of 3.4, indicating that the portfolio remains cost-effective.

[21] US building energy efficiency and flexibility as an electric grid resource; Langevin et al; Joule; Volume 5; Issue 8; P2102-2128; August 18, 2021. *Available at*: https://doi.org/10.1016/j.joule.2021.06.002

Table 7: Avista Electric Conservation Savings and Budget

	2020-2021 EIA Penalty Threshold	2020-2021 Total Utility Conservation Goal	2022-2031 10-year potential	2022-2023 EIA Penalty Threshold	2022-2023 Total Utility Conservation Goal
Savings (MWh)	59,948	76,486	507,829	91,054	106,644
Budget		$31,482,000[22]			$43,364,106

Gas Conservation

As illustrated in Table 8 below, Avista set its gas conservation target of 2.2 million therms for this biennium using the two-year pro rata share of its 10-year conservation potential. In addition, the Company has a decoupling commitment of 110 thousand therms, for a total conservation goal of 2.3 million therms for the biennium.

Table 8: Avista Gas Conservation Targets and Goals

Category	Savings (Therms)
Biennial Acquisition Target	2,192,434
Five percent decoupling commitment	109,622
Forecasted NEEA savings	(0)
Total Utility Conservation Goal	2,302,056

Table 9 below compares expected savings and budgets in the 2020-2021 and 2022-2023 biennia. The Company expects a 57.3 percent increase in spending for gas conservation and a savings increase of 22.8 percent. The total budget for the gas conservation program in the upcoming biennium is $18.8 million. The Company expects the gas program to remain cost-effective, with a UCT ratio of 2.9 and a TRC ratio of 2.4.

[22] *See 2020-2029 Ten-Year Achievable Electric Conservation Potential and 2020-2021 Biennial Conservation Target Under RCW 19.285.040 and WAC 480-109-010*, Docket UE-190912, Order 01, Table 2 (Dec. 17, 2019).

Table 9: Avista Gas Conservation Savings and Budget

	2020-2021 Total Utility Conservation Goal	2022-2031 10-year potential	2022-2023 Total Utility Conservation Goal
Savings (Therms)	1,874,392	16,550,540	2,302,056
Budget	$11,976,703		$18,837,759

Pilot Programs

Avista included several pilot projects within its plan. Staff commends the Company for designing innovative approaches to comply with new laws and serve customers equitably. Staff has encouraged the Company to work closely with its advisory groups to ensure robust implementation and evaluation of these pilots.

One of these pilots deserves mention, as it is projected to provide *more than half the conservation* planned within the residential sector. Avista's new "Always-On" behavioral pilot program will target the homes with the highest 33 percent of base load profiles, based on advanced metering data, with messaging intended to encourage households to reduce residential energy use that is always on, such as plugged-in appliances currently not in use. While this pilot is promising, at the same time Staff has communicated potential concern about residential savings relying so heavily on it. Avista agreed to work with Staff and its advisory group to ensure robust implementation and evaluation of this program and its other pilots.

Cascade (Docket UG-210838)

Table 10 below illustrates the calculation of Cascade's total biennial target. Cascade plans to obtain 1.9 million therms of conservation, representing an 8 percent increase from its annual plans covering the previous two years.[23] The Company's conservation target is based on the expected savings for the first two years of the 10-year potential. Unlike Avista and PSE, Cascade does not have a commitment to achieve additional conservation savings as part of its decoupling agreement.[24]

[23] The 2022-2023 biennium represents Cascade's first biennial plan; in prior years, the Company submitted annual conservation plans. The 2020-2021 numbers referenced here combine annual plan figures from 2020 and 2021.
[24] *See Wash. Utils. & Transp. Comm'n v. Cascade Natural Gas Corp*., Docket UG-152286, Order 04, p. 3 ¶ 8-9 and p. 8 ¶ 25 (July 7, 2016) (Order does not require an additional conservation commitment as part of the decoupling mechanism).

Table 10: Cascade Conservation Savings

Category	Savings (Therms)
Biennial Acquisition Target	1,931,751
Forecasted NEEA savings	(0)
Total Utility Conservation Goal	1,931,751

Table 11 below compares Cascade's 2022-2023 biennial target and budget with those from the previous two years. Cascade plans to spend $24.5 million to acquire the two years' savings, a 51.8 percent increase from the previous biennium's budget. The Company used the UCT to calculate total technical achievable conservation as the basis of its target, in consultation with its contractor Applied Energy Group (AEG), and in line with the Commission's policies on gas cost effectiveness.[25] For this biennium's portfolio, the UCT is 2.2 and the TRC is 1.7.

Table 11: Cascade Conservation Savings and Budget

	2020-2021 Total Utility Conservation Goal[26]	2022-2031 10-Year potential	2022-2023 Total Utility Conservation Goal
Savings (Therms)	1,788,452	17,569,079	1,931,751
Budget	$16,133,961		$24,500,122

Low-Income Conservation

As part of its most recent CPA, Cascade asked AEG to assess residential potential by income group, so it could determine how much conservation potential existed within each income group. The study determined that almost 60 percent of Cascade's customers are low- or moderate-income, with 41 percent of those customers ineligible for free weatherization services. It also characterized typical heating and housing types by income level. In the end, the study identified 51 thousand therms of low-income savings potential, which helped inform the Company's low-income savings target for this biennium.

Staff commends Cascade for initiating a low-income and housing stock study through AEG in summer 2020, as part of their updated CPA, to better understand the needs of their unique, dispersed, rural service territory in Washington. Staff believes this forward-looking analysis is

[25] *See Policy Statement on the Evaluation of the Cost-Effectiveness of Natural Gas Conservation Programs,* Docket U-121207, p.14, ¶ 36 (Oct. 9, 2013).
[26] Includes combined totals from the Company's 2020 and 2021 annual plans.

fundamental to equitable weatherization program implementation and looks forward to further conversations about demographics in program participation.

NW Natural (Docket UG-210831)

As shown in Table 12 below, NW Natural plans to achieve approximately 619 thousand therms of natural gas conservation during the 2022-23 biennium. NW Natural contracted with AEG to conduct their CPA. To determine its biennial conservation goal, the Company used the first two years of the 30-year achievable economic potential projection developed by their CPA.

Table 12: NW Natural Conservation Targets and Goals

Category	Savings (Therms)
Biennial Acquisition Target	619,200
Forecasted NEEA savings	(0)
Total Utility Conservation Goal	619,200

Table 13 below compares NW Natural's 2020-21 and 2022-23 savings and spending projections.[27] To achieve its conservation target, the Company expects to spend $6.4 million. Compared to the previous two years, the 2022-2023 BCP represents a decrease in expected savings of over 16 percent, and an expected budget decrease of about 4 percent. This expected decrease in savings is attributed to increasingly high market penetration for energy efficiency products, combined with new Washington codes that have eliminated some residential and commercial offerings.

The Company expects its total portfolio to achieve a TRC ratio of 1.7 and a UCT ratio of 2.0, indicating that the portfolio remains cost-effective.

Table 13: NW Natural Conservation Savings and Budgets

	2020-2021 Total Utility Conservation Goal[28]	2022-2031 10-year potential	2022-2023 Total Utility Conservation Goal
Savings (Therms)	745,768	4,390,000	619,200
Total Budget	$6,670,194		$6,391,873

[27] Like Cascade, NW Natural submitted annual plans through 2021. The 2020-2021 figures presented here are the totals from those two annual plans.
[28] Includes combined totals from the Company's 2020 and 2021 annual plans.

New Conservation Programs

During the upcoming biennium NW Natural plans to offer an energy efficiency pilot program to serve industrial customers. Historically, NW Natural energy efficiency programs have not served industrial customers. The Company will work with its advisory group to identify program activities, assessments, and energy efficiency opportunities that may be included in this pilot offering. The CPA identified strategic energy management (SEM) systems and gas boiler upgrades as the top opportunities for industrial savings. Staff supports this expansion into the industrial sector and will participate in the advisory group efforts to ensure savings opportunities are realized.

The CPA also identified a home energy report (HER)-style behavioral program that NW Natural does not currently offer. Behavioral program savings are not expected during this biennium as NW Natural plans to begin evaluating and establishing systems for the residential program through 2023, claiming associated savings in the 2024-25 biennium. The behavioral program was identified to have the second highest savings potential for residential measures. Staff is supportive of the HER-style program and will monitor whether a full biennium is needed for development.

PacifiCorp (Docket UE-210830)

In addition to Avista, Cascade, and NW Natural, Applied Energy Group also developed PacifiCorp's CPA for all six states in its service territory, except Oregon, where conservation resources are obtained through the Energy Trust of Oregon. PacifiCorp estimates that its 10-year conservation potential is 471 thousand MWh. The Company used the 2-year pro-rata share of this 10-year conservation potential as the basis for its 2022-2023 biennial conservation target.

Table 14: PacifiCorp Conservation Targets and Goals

Category	MWh
Pro Rata Share of 10-year conservation potential	94,210
EIA Target	**94,210**
Excluded Programs (NEEA)	(6,774)
EIA Penalty Threshold	**87,436**
Decoupling threshold	4,711
Total Utility Conservation Goal	**98,921**

PacifiCorp plans to spend $45.8 million over the 2022-2023 biennium to achieve an estimated 99 thousand MWh, including NEEA forecasted savings. This represents an increase in the Company's conservation budget for a similar amount of energy savings compared to the

previous biennial period. Among other factors, this reflects a reduction in low-cost conservation potential, and a resulting increase in incentives required to obtain the same savings. A comparison between the two biennia is shown in Table 15.

Table 15: PacifiCorp Conservation Savings and Budgets

	2020-2021 EIA Penalty Threshold	2020-2021 Total Utility Conservation Goal	2022-2031 10-year potential	2022-2023 EIA Penalty Threshold	2022-2023 Total Utility Conservation Goal
Savings (MWh)	86,979	97,849	471,050	87,436	98,921
Total Budget		$27,979,077			$45,837,776

The bulk of PacifiCorp's conservation budget increase is due to more generous incentives for residential and business programs, including increased and extended incentives for projects in highly impacted communities (HICs) and removed barriers to access incentives (e.g., no automatic exclusion based on credit score threshold, and increased reimbursements for necessary repairs).

The Company expects its total portfolio to achieve a TRC ratio of 1.7 and a UCT ratio of 1.9, indicating that the portfolio remains cost-effective.

Non-Energy Impacts

Staff commends PacifiCorp for including a proxy NEI value (based on the U.S. Environmental Protection Agency's assessment of public health benefits of energy efficiency in the Pacific Northwest) in its cost-effectiveness calculation for energy efficiency measures. While this proxy is not perfect (it is not energy efficiency measure- or PacifiCorp territory-specific), its use represents a positive first step towards accounting for the value of NEIs in the Company's demand-side management procurement process.

Pilot Programs

PacifiCorp's BCP describes six pilot programs that it plans to implement during the 2022-2023 biennium. Five of these pilots are a continuation of, or build upon, pilots from the previous biennium, and the sixth is a direct response to the Laws of 2019, Chapter 285. Staff understands that the timeline of pilots cannot always line up with the biennial cycle and some may well take longer than two years to produce meaningful findings. However, to ensure these pilots are serving their intended purpose, Staff encourages the Company to clearly communicate the status of its pilot programs with Staff and its advisory groups, including how it determines when those programs are ready to "graduate" out of the pilot phase.

Participation Tracking

In its plan, PacifiCorp outlines a new approach to tracking participation in conservation programs with respect to certain targeted groups, including HICs, participants living in manufactured homes, participants who rent/lease homes, participants living in multifamily units, very small businesses, and participants whose primary language is not English. Staff believes this is a positive step towards understanding how the Company's conservation programs and benefits are being distributed among its customers. Staff encourages PacifiCorp to continue this effort while remaining responsive to feedback from its advisory groups and interested stakeholders.

Puget Sound Energy (Dockets UE-210822 and UG-210823)

Electric Conservation

As illustrated in Table 16 below, Puget Sound Energy (PSE) set its electric conservation target for this biennium using the two-year pro rata share of its 10-year conservation potential. The Company has an EIA Penalty Threshold of 469 thousand MWh; a decoupling threshold of 25 thousand MWh; and total planned savings of 537 thousand MWh.

Table 16: PSE Electric Conservation Targets and Goals

Category	MWh
Pro Rata Share of 10-year conservation potential	497,564
EIA Target	**497,564**
Excluded Programs (NEEA)	(28,382)
EIA Penalty Threshold	**469,182**
Decoupling Threshold	24,878
Firm Savings Excluded from CPA[29] and Pilots with Uncertain Savings	14,275
Total Utility Conservation Goal	**536,717**

Table 17 below compares the Company's 2022-2023 savings targets to those from its 2020-2021 revised biennial conservation plan. PSE's EIA Penalty Threshold in the 2022-2023 biennium is 14.3 percent higher than its Penalty Threshold for the 2020-2021 biennium, while its total planned savings for the upcoming biennium is only 2.0 percent higher than the 2020-2021 biennium.[30]

[29] Savings excluded from the CPA include special contracts and retail wheeling customers under Schedule 449.
[30] In its April 2020 "Petition to Modify the Biennial Conservation Target, Penalty Threshold, Decoupling Commitment and Ten-Year Potential" (filed with the Commission on April 15, 2020; see Docket UE-190905 Order

PSE plans to spend $240.1 million on its conservation program in the upcoming biennium. This figure is 23.8 percent larger than the Company's electric conservation budget in the current biennium. The lion's share of the $46.2 million increase in budget ($38.0 million) comes from the increased cost to achieve savings, continuing a trend of increasing costs to achieve a similar amount of conservation savings. For residential programs, some of this additional cost can be attributed to increased incentive levels (partly to serve hard-to-reach customers), while on the commercial and industrial side, the Company has added programs at the same time as code changes have required the Company to incentivize more efficient equipment models.

The Company expects its total portfolio to achieve a TRC ratio of 1.7 and a UCT ratio of 2.3, indicating that the portfolio remains cost-effective. These figures include some of the NEIs calculated through the Company's DNV study; PSE will continue incorporating those NEI values into its program planning as it plans its 2023 conservation activities.

Table 17: PSE Electric Conservation Savings and Budgets

	2020-2021 EIA Penalty Threshold[31]	**2020-2021 Total Utility Conservation Goal[32]**	**2022-2031 10-year potential**	**2022-2023 EIA Penalty Threshold**	**2022-2023 Total Utility Conservation Goal[33]**
Savings (MWh)	410,633	526,044	2,487,820	469,182	536,717
Total Budget		$193,876,789[34]			$240,105,807[35]

Gas Conservation

As illustrated in Table 18 below, PSE has set its gas Biennial Acquisition Target at 9.3 million therms. This figure corresponds to the first two years of the CPA's conservation potential.[36] In

02), the Company proposed adding nearly 50 thousand MWh of conservation savings to its total portfolio savings goal, but to exclude such savings from the EIA Target due to modeling uncertainties and the COVID-19 pandemic. This explains why the Penalty Threshold grew significantly while overall savings growth remains modest.

[31] *In re Puget Sound Energy 2020-2029 Ten-Year Achievable Electric Conservation Potential and 2020-2021 Biennial Conservation Target Under RCW 19.285.040 and WAC 480 109 010,* Docket UE-190905, Order 02, p. 6, ¶ 24 (May 21, 2020).

[32] *See Petition to Modify the Biennial Conservation Target, Penalty Threshold, Decoupling Commitment and Ten-Year Potential*, Docket UE-190905, p. 2, Table 1 (April 15, 2020) (Petition).

[33] Includes NEEA, decoupling commitment, additional firm savings, and pilots with uncertain savings.

[34] *See* Petition at 2 Table 1.

[35] Includes $4.6 million for the net metering program, and $640 thousand for the energy efficiency program's portion of the Company's demand response pilot program.

[36] *See generally, in re Petition Seeking an Order Approving Natural Gas Potential Conservation Assessment*, Docket UG-210461, Order 01 (Oct. 14, 2021). In past biennia, PSE has set its gas conservation target using the two-year pro rata share of its 10-year potential. However, the Company approached its Conservation Resource Advisory

addition, the Company has a decoupling commitment of 463 thousand therms, and expected pilot program savings of 65 thousand therms, for a total conservation goal of 9.8 million therms for the biennium.

Table 18: PSE Gas Conservation Targets and Goals

Category	Savings (Therms)
Biennial Acquisition Target	9,262,931
Five percent decoupling commitment	463,147
Forecasted NEEA savings	(0)
Pilots with Uncertain Savings	65,250
Total Utility Conservation Goal	9,791,327

Table 19 compares expected savings and budgets in the 2020-2021 and 2022-2023 biennia. As with electric conservation, the Company expects a 25.9 percent increase in spending for gas conservation, though that spending increase comes with a 22.3 percent increase in therm savings. Adding 85,000 gas customers to the Home Energy Report program accounts for most of the savings' increase, with space heating and non-residential retrofits also seeing significant increases. The total budget for the gas conservation program in the upcoming biennium is $48.5 million. The Company expects the gas program to remain cost-effective, with a UCT ratio of 1.6 and a TRC ratio of 1.3.

Table 19: PSE Gas Conservation Savings and Budget

	2020-2021 Total Utility Conservation Goal	2022-2031 10-year potential	2022-2023 Total Utility Conservation Goal[37]
Savings (Therms)	7,774,516	59,615,581	9,791,327
Total Budget	$37,221,653		$48,523,531

Low-Income and Hard-to-Reach Respondents

For the 2022-2023 biennium, PSE anticipates achieving low-income electric conservation savings roughly on par with its 2020-2021 BCP. For gas, however, the Company anticipates a decline in low-income conservation achievement by about one-sixth compared to the 2020-2021

Group (CRAG) in early 2021 with concerns around using the pro rata share of the 10-year potential for its 2022-2023 target. The CRAG gave its consent to PSE's proposal to use the first two years of potential as its target instead.

[37] Includes NEEA, decoupling commitment, pilots with uncertain savings, and additional portfolio build-out.

BCP. The Company cites the ongoing pandemic and supply chain issues as impediments in accomplishing low-income conservation. In 2021, PSE completed a conservation low-income needs assessment that it intends to use to inform its low-income program implementation in the next biennium. Additionally, as required by WAC 480-109-060(22), PSE has adjusted its low-income threshold to the higher of 80 percent of area median income or 200 percent of the federal poverty level.

Outside of the low-income conservation program, PSE intends to focus on moderate-income households through increased incentives, particularly for space and water heating measures. The same programs will target hard-to-reach markets such as manufactured homes for heat pump conversions. The Company also intends to focus its multi-family retrofit program on buildings with low-income residents and target hard-to-reach small industrial customers through its commercial retrofit program.

Staff expects PSE to regularly update its conservation resource advisory group (CRAG) throughout the biennium on how these efforts – particularly the low-income program enhancements – are progressing. Staff expects the Company to periodically update the CRAG on how it is working to reduce or remove systemic participation barriers among communities with high energy burden.

Distribution Efficiency

In comments on previous conservation dockets, Staff expressed disappointment with the rate at which PSE has planned to complete conservation voltage reduction (CVR) projects.[38] For the 2022-2023 biennium, PSE plans a significant expansion of its CVR activities: from eight in 2020-2021 to 24 in 2022-2023. The Company intends to conduct a study that would provide updated energy savings methodology for an improved type of distribution efficiency called volt-var optimization. Staff appreciates the accelerated CVR implementation and encourages the Company to keep the CRAG updated on its volt-var optimization study progress throughout the biennium.

Summary

After reviewing the comments filed by other parties in this matter, Staff intends to present its final recommendations, including potential conditions discussed with electric and gas companies and stakeholders, at the Commission's January 18, 2022, Recessed Open Meeting.

[38] *See In re Puget Sound Energy's 2016-2017 Biennial Conservation Target Under RCW 19.285.040*, Docket UE-152058, Staff Comments, p. 7 (filed July 19, 2018); and *in re Puget Sound Energy's 2020-2029 Ten-Year Achievable Electric Conservation Potential and 2020-2021 Biennial Conservation Target Under RCW 19.285.040 and WAC 480 109 010*, Docket UE-190905, Staff Comments, p. 7 (filed Dec. 12, 2019).