Exh. SWM-1T
Docket UG-240008
Witness: Scott W. Madison

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant, v. CASCADE NATURAL GAS CORPORATION, Respondent.	DOCKET UG-240008

CASCADE NATURAL GAS CORPORATION

DIRECT TESTIMONY OF SCOTT W. MADISON

March 29, 2024

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Scott W. Madison and my business address is 8113 West Grandridge Blvd., Kennewick, WA 99336.

Q. By whom are you employed, for how long, and in what capacity?

A. I am employed by Cascade Natural Gas Corporation ("Cascade" or "Company"), a wholly-owned subsidiary of MDU Resources Group, Inc. ("MDU Resources"), as Executive Vice President of Business Development and Gas Supply. In this capacity, I am responsible for the gas control and gas supply functions at Cascade and the business development function, which works with new and potential residential, commercial, and industrial gas customers.

Q. Please briefly describe your educational background and professional experience.

A. I am a graduate of the University of Idaho with a Bachelor of Science degree in accounting. I have participated in several executive education programs, including attending executive education at the Harvard Business School. I am a director and past Chairman of the Northwest Gas Association. I am a director of the Association of Washington Business, Western Energy Institute, University of Idaho Foundation and the Idaho Governors Cup. I am a director and past Chairman of the Idaho Association of Commerce and Industry, and the past Chairman of the Boise Metro

Chamber of Commerce. I am the past President of the Idaho Petroleum Council. I have served as Chairman of the Board for the Better Business Bureau of Idaho.

I served as Vice President, Controller and Chief Accounting Officer for Intermountain Industries and each of its subsidiaries from 1997 to 2008. From 1987 to 1997 I was a Senior Manager with Arthur Andersen LLP. I am a Certified Public Accountant and a member of the American Institute of Certified Public Accountants and the Idaho Society of Certified Public Accountants.

II. SCOPE AND SUMMARY OF TESTIMONY

Q. What is the purpose of your testimony in this docket?

A. My testimony will address high-level considerations related to the regulatory and policy landscape into which Cascade is filing this rate case. Particularly, this marks Cascade's first rate case filing since the passing of the Climate Commitment Act ("CCA"), which directed the Washington Department of Ecology ("Ecology") to implement a statewide cap-and-invest program to support the state in meeting the greenhouse gas ("GHG") emissions reduction commitments set forth in state law (RCW 70A.45.020). It also marks the first rate case filed by Cascade under RCW 80.28.425, which requires every general rate case to include a proposal for a multiyear rate plan. Cascade is proposing a two-year multiyear rate plan in this case. I discuss the steps Cascade will take to comply with the CCA during the proposed

multiyear rate plan and the impacts CCA compliance will have on Cascade's customers.

My testimony will highlight the Company's ongoing efforts to support Washington's GHG emission reduction goals and comply with the CCA while also meeting its duty to serve customers in Cascade's Washington service territory. In filing this testimony, I will demonstrate that Cascade understands its role as a contributor to the achievement of the state's GHG emissions reduction commitments and that the Company is dedicated to utilizing its existing assets and deploying new assets to support statewide decarbonization efforts. Cascade commits to continue to explore opportunities to decarbonize the Company's operations and support customers in decarbonizing their energy usage in the most cost-effective and equitable manner possible.

Q. Please outline the content of your testimony.

A. First, I provide a high-level overview of Cascade's historical decarbonization efforts and the steps Cascade is taking to further decarbonize. Second, I discuss the current policy and regulatory landscape for gas utilities in Washington, explain the Climate Commitment Act, and describe how the CCA will impact Cascade. Third, I discuss new decarbonization measures that complement cap-and-invest allowance purchases. In this section I describe the strategy that Cascade will pursue to meet CCA compliance obligations, including direct investments in durable decarbonization measures. The importance of reviewing business planning through an equity lens is also discussed. Finally, I provide testimony supporting the recovery of

decarbonization measures that are requested for cost recovery in this case. I provide testimony supporting Cascade's request for recovery of $350,000 for decarbonization testing and demonstration activities that will assist Cascade in complying with state law. And I discuss the Company's proposal to embed incremental labor costs related to CCA compliance in base rates.

Q. Are you sponsoring any exhibits in this proceeding?

A. Yes, I sponsor the following exhibits:

- Meta Analysis of U.S. Economy Wide Decarbonization Studies Feb 2024, Exh. SWM-2
- WA Energy Consumption 2021 Lawrence Livermore National Laboratories, Exh. SWM-3
- Cascade Natural Gas 2023 Integrated Resource Plan Excerpt (p.4-5 to 4-17), Exh. SWM-4
- Minnesota CenterPoint Energy NGIA Filing, Exh. SWM-5
- SoCalGas – Clean Fuels Application – August 2022 (including Transportation Fueling), Exh. SWM-6

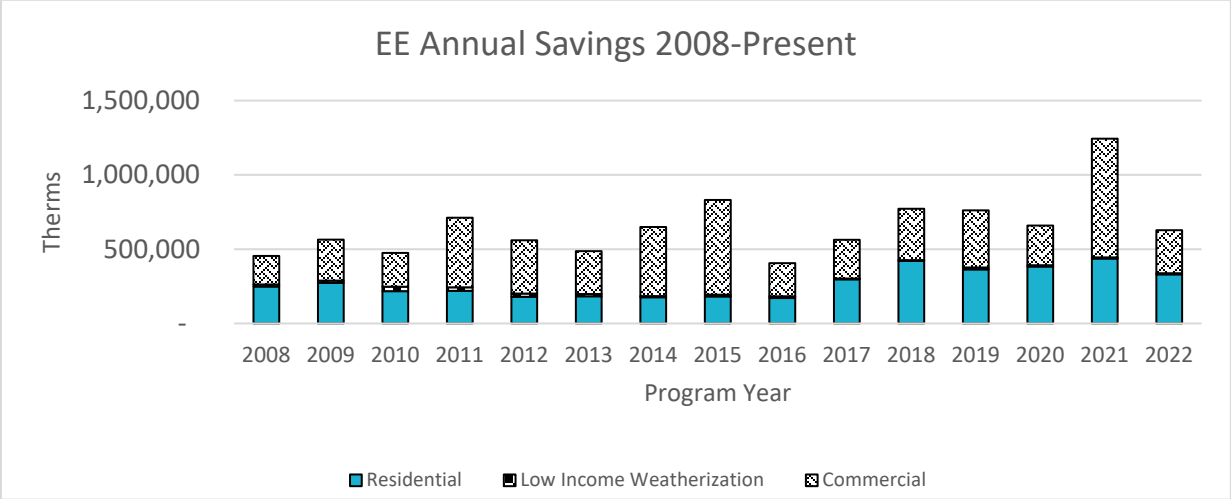
III. OVERVIEW OF CASCADE'S HISTORY OF DECARBONIZATION EFFORTS AND STEPS BEING TAKEN TO FURTHER DECARBONIZE

Q. Please describe Cascade's history with respect to decarbonization efforts.

A. Cascade is not new to decarbonizing our operations and providing decarbonization solutions for our customers. The Company has been actively involved in deploying energy efficiency initiatives for over a decade. Between 2008 and 2022 Cascade supported savings of 9,763,488 therms for our customers through energy efficiency programs: 42 percent of the therm savings were realized by residential customers, 56

percent were realized by commercial and industrial customers, and 2 percent by low-income weatherization customers.

Figure 1. Energy Efficiency Annual Savings



Q. Are there other decarbonization efforts being undertaken?

A. Yes. In 2023, Cascade's parent company MDU Resources set a methane emissions reduction target of 30 percent by 2035, compared to 2022 levels, across the entirety of its natural gas utility segment. This 2035 target by definition is focused on reducing emissions associated with fugitive methane leakage in the natural gas system, which accounts for approximately 10 percent of MDU Resources' scope 1 GHG emissions.

Q. In what ways is the CCA changing the way Cascade serves its customers?

A. By quantifying the value of GHG emissions associated with the use of energy across the state, something that was previously an externality in the system, the passing of the CCA is changing the way Cascade serves customers. While not every investment will reduce GHG emissions, Cascade endeavors to make investment decisions that

serve customer interests, comply with policy and regulatory imperatives, further equity, and enhance the affordability, safety, and resilience of the energy system. As Cascade endeavors to meet the CCA requirements while serving its customers equitably, the Company is currently developing a diversified portfolio of decarbonization measures to achieve compliance. Purchasing allowances through the Washington cap-and-invest allowance auction is an important component of Cascade's strategy for achieving near-term CCA reduction targets. In addition, Cascade believes it should simultaneously consider making durable, direct capital investments in targeted decarbonization measures that will benefit Cascade ratepayers and all Washington residents and businesses by contributing to Washington's GHG emissions reduction goals.

As described in Exhibit SWM-2 "Designs for Net-Zero Energy Systems: Meta-Analysis of U.S. Economy-Wide Decarbonization Studies" ("Meta Analysis"), local distribution companies like Cascade, and its pipeline infrastructures, will need to be leveraged to enable a sustainable and equitable decarbonization of Washington's energy system.[1]

As part of this transition to a decarbonized energy system, Cascade firmly believes that targeted investments to: a) utilize existing assets more efficiently; b) decarbonize the Company's fuel supply; and c) deploy new low-carbon assets, will be in the best interests of customers and all Washington residents. Executing an equitable transition to a decarbonized system will result in changes to the ways all

[1] *See* Exh. SWM-2, beginning on p. 23.

customers interact with their energy service providers. As such, we expect that customers' service needs will change, and Cascade will need to respond dynamically and flexibly to provide new solutions that serve all customers' changing needs and expectations.

Q. What steps is Cascade taking to support Washington's GHG reduction goals?

A. As discussed in more detail below, Cascade is currently undertaking a comprehensive planning exercise to determine how best to utilize its knowledge and assets to support Washington in achieving the statewide GHG emissions reduction targets. Cascade's intent is to proactively formulate a plan for making durable, direct capital investments in decarbonization measures that could prove more impactful than allowance purchases over the long term. Early results from this analysis are already informing projects that the Company could invest in to support statewide decarbonization efforts as we move through 2025. Examples of potential capital investment initiatives Cascade is analyzing to support system decarbonization, in no order of preference of pursuit, include:

1) Developing low-carbon fuel production,
2) Developing thermal energy networks,
3) Encouraging the deployment of hybrid heating systems,
4) Delivering hydrogen to large customers, and
5) Developing low-carbon fueling for transportation end uses.

These decarbonization measures are described in more detail later in my testimony. And as noted earlier, while purchasing allowances represents the least-cost

compliance option at the present time, going forward Cascade intends to seek an optimal balance between allowance purchases and durable, direct capital investments in decarbonization measures that deliver environmental, social, and customer benefits while managing the cost impact to Cascade customers over the long term.

IV. CASCADE IS FOCUSED ON COMPLYING WITH THE CCA WHILE ALSO MEETING ITS DUTY TO SERVE CUSTOMERS

Q. Describe the value that the gas delivery system provides to the Washington decarbonization efforts, including resilience and reliability.

A. In 2021, natural gas supplied approximately 19 percent of the total economy-wide energy demand in Washington covering end uses inclusive of building heating, electric power generation, and industrial process loads. In comparison, hydro, nuclear, wind and solar together supplied approximately 39 percent, while petroleum supplied roughly 34 percent of the total economy-wide energy demand across the state as illustrated in Exhibit SWM-3.[2] While decarbonization of the statewide energy system may require full or partial electrification of many end uses, it is also important to recognize that the natural gas energy system provides significant benefits to this transformation, including inherent storage capabilities and significant investment in the transportation and delivery system.

. As some energy use in the state is electrified to meet decarbonization goals, there will still be a need for gas and other fuels, as part of a comprehensive energy

[2] Washington Energy Consumption in 2021. Lawrence Livermore National Laboratory https://flowcharts.llnl.gov/commodities/energy

portfolio, to provide overall reliability and resilience benefits to the energy system to meet the highest peak loads. As the Meta Analysis describes, "Although pipeline gas consumption decreases for net-zero scenarios, peak gas demands can remain relatively high."[3] For these reasons, it will be in the interest of the state to maintain the viability of the gas utility business in Washington, and the Commission should approve and grant cost recovery of projects that will support reduction of carbon emissions to meet CCA compliance targets.

Q. Please describe the Climate Commitment Act and the cap-and-invest allowance market administered by the Washington State Department of Ecology.

A. The CCA was signed into law May 17, 2021 and codified in chapter 70a.65 RCW. The law was designed to address climate change by establishing significant GHG emission reduction targets for the state, establishing programs to reduce emissions, and providing assistance to communities that have been disproportionately impacted by emissions and/or climate change. The CCA is Washington's solution to reducing statewide GHG emissions by defining a steeply declining GHG emissions reduction trajectory over the coming years.

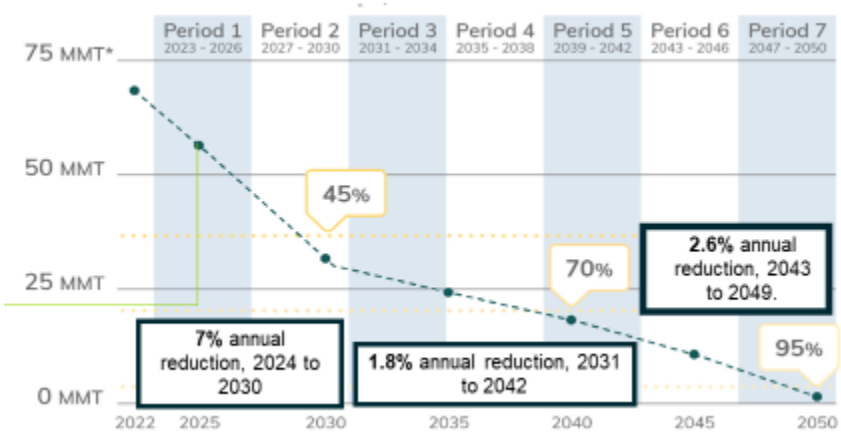
The CCA directed Ecology to develop and implement a cap-and-invest program to cut emissions and commence the program by January 1, 2023. The CCA's goal is to reduce overall GHG emissions 95 percent below 1990 levels by 2050 with interim goals to reduce GHGs by 45 percent by 2030 and 70 percent by 2040 with 1990 as the base year. The program is designed to limit emissions from larger

[3] Exh. SWM-2, p. 24-25.

emission sources, or covered entities, including natural gas utilities, liquid fuel suppliers, fossil fuel fired electric generating units, and other industrial facilities, emitting more than 25,000 metric tonnes CO2 equivalent ("CO2e") per year. Covered entities may receive no-cost emissions allowances, purchase allowances at auction or on a secondary market, implement decarbonization measures with direct emissions reductions, and utilize a limited amount of other compliance instruments to meet emissions reduction obligations. The State of Washington will invest revenue generated from allowance auctions to fund projects and programs to achieve additional emissions reductions and address climate change and environmental justice.

Ecology assigns each covered entity a limit, or baseline, on overall carbon emissions equivalent to the covered entity's 2015-2019 average emissions and requires reductions from the emissions baseline over time. For 2023 through 2030, Ecology requires emissions reductions of seven percent per year through 2030 with subsequent periods requiring less aggressive reductions. Figure 2 below depicts the projected emissions reductions through 2050 in million metric tons of CO_2 equivalent.

Figure 2. Projected Emissions Cap Over Time[4]



The CCA is designed with the intent to allow covered entities to find the most cost-effective path to lower carbon emissions, including purchasing allowances at auction. Emission allowances can be obtained through quarterly auctions administered by Ecology and hosted by the Western Climate Initiative ("WCI") or bought and sold on the secondary market. Some covered entities, including natural gas suppliers such as Cascade, receive a limited number of no-cost allowances directly from Ecology, and the no-cost allowance allocations decline proportionately with the CCA emissions cap as depicted in Figure 2 above.

Q. Please elaborate on the no-cost allowances Cascade receives.

A. Beginning in 2023, Cascade, as a natural gas supplier, received no-cost allowances equal to 93 percent of its baseline emissions. A portion of the no-cost allowances are required to be consigned at auction to generate revenues that must be used for the benefit of customers and through oversight from the Commission. In 2023, 65 percent

[4] Source: Washington Department of Ecology. Cap-and-Invest - Washington State Department of Ecology

of Cascade's no-cost allowance allocation was required to be consigned at auction. The proportion of no-cost allowances for consignment increases five percent annually with 100 percent of the no-cost allowances to be consigned by 2030 and thereafter. Most emitters, including natural gas utilities, will need to purchase allowances to meet compliance obligations. As no-cost allowance allocations will decrease over time and allowance prices will likely increase, finding ways to achieve cost-effective direct emissions reduction is of upmost importance for covered entities.

Q. Is Cascade also considered a regulated "facility" under the CCA?

A. Yes. In addition to being regulated as a natural gas supplier, Cascade is also regulated as a "facility" under the CCA for the Company's distribution system operational combustion and methane emissions, as Cascade's facility emissions are slightly higher than the CCA's emission threshold of 25,000 CO2e per year.

Q. What decarbonization strategies will Cascade deploy to meet the requirements of the CCA as a regulated "facility"?

A. Cascade does not receive no-cost allowance allocations for its facility emissions. Therefore, to meet the CCA targets, Cascade must reduce GHG emissions associated with its facilities, purchase allowances to cover the emissions at its facilities, and/or purchase offsets to meet the requirements of the CCA.

Cascade will primarily achieve near-term compliance through cap-and-invest allowance auction purchases. In the long-term, Cascade plans to make capital investments to reduce emissions across its facilities, which will also help to reduce reliance on allowance purchases. Achievement of the MDU Resources-wide 2035

methane reduction goal will also support Cascade's compliance with the CCA as a regulated "facility." Achievement of this goal will primarily focus on reduction of leakage across the MDU Resources system, which will include implementation of Picarro, an advanced mobile leak detection ("AMLD") and monitoring system. Implementing Picarro will further support Cascade's efforts to mitigate leaks and quantify and report company-specific methane emissions to Ecology for demonstrating emissions reductions and ultimately lower Cascade's reliance on allowance purchases. This project is discussed in the direct testimony of Patrick C. Darras, Exh. PCD-1T.

Q. Describe Cascade's CCA compliance cost recovery application submitted March 1, 2024.

A. On March 1, 2024, Cascade filed Schedule 700, Temporary Climate Commitment Act Adjustment Schedule in Docket UG-240141. The proposed tariff would include recovery of actual compliance costs for 2023, including allowance purchases and administration costs, and forecasted 2024 compliance costs. The tariff would also credit customers the revenues obtained from no-cost allowance sales in both periods. The costs and credits will be recovered through the Schedule 700 tariff and are not included in base rates in this case.

Q. When will CCA compliance costs, as reflected in Schedule 700, impact customer bills during the multi-year rate case time horizon?

A. The costs of purchasing CCA allowances will begin to impact customers in 2024 and will impact customers over the implementation time period (2024-2026) of the multi-

year rate case. As noted above, these costs are detailed in Docket UG-240141 and will be collected through Schedule 700. The filing proposes to collect $31.25 million in net CCA compliance costs beginning May 1, 2024.

Q. What will be the customer impact to financial affordability resulting from the current policy and regulatory landscape?

A. Overall, Cascade customers will experience bill increases resulting from the implementation of CCA, although the CCA provides protections for low-income residential customers. As outlined in RCW 70A.65.130(2)(a), revenues from the sale of no cost allowances must "at a minimum eliminate[] any additional cost burden to low-income customers."

V. CASCADE IS PLANNING NEW DECARBONIZATION MEASURES THAT COMPLEMENT CAP-AND-INVEST ALLOWANCE PURCHASES

Q. Describe the decarbonization planning process Cascade is undertaking to fulfill CCA compliance and address the business and financial impacts to Cascade.

A. Driven by the current state energy policy described above, Cascade is undertaking a planning exercise to manage for the financial impact of meeting the state climate goals on our customers and our business. Through this exercise, Cascade is strategizing how to best meet the emissions reduction targets of the CCA by utilizing a combination of allowance purchases and durable, direct capital investments. As outlined above, the near-term investments that Cascade will make to meet CCA

compliance requirements—primarily purchasing allowances in the cap-and-invest market—will result in cost increases for our customers.

Meanwhile, the Company is strategizing ways to make direct investments in a diversified portfolio of durable decarbonization measures that will limit impacts to customers in the future and support a cost-effective transition to a low-carbon energy system for Washington's residents and businesses.

Q. Describe the advantages of Cascade investing in capital projects and programs in addition to allowance purchases.

A. Investing directly in durable, targeted decarbonization measures alongside allowance purchases will transform the role of the natural gas utility. While carbon allowance purchases allow CCA-covered entities to comply, they do not directly mitigate the natural gas utility's GHG emissions. By meeting the CCA requirements through durable, direct investments in targeted decarbonization measures, Cascade will continue to provide vital energy services to customers while being an important part of Washington's decarbonized energy solution.

Q. Describe how Cascade's decarbonization planning effort will support the financial resiliency of Cascade's utility operations while complying in full with the State of Washington's policy and regulatory mandates.

A. Cascade believes that a rigorous planning effort is needed to achieve best-cost decarbonization while also maintaining the Company's financial strength. The outcome of the planning effort will provide Cascade with a trajectory that enables the continued financial strength and stability of the business while also complying with

existing policy mandates. The stability of the business is of high importance for both Cascade and its customers. Cascade has a duty to serve customers in its service territory, and customers depend on Cascade to meet their energy needs. Cascade must be financially stable to meet customers' energy needs while also investing in the decarbonization of its system. Future business planning will align with solutions that support Washington's decarbonization policy efforts while taking into account customer impacts.

Q. How will Cascade's decarbonization planning efforts take into account customer equity concerns?

A. The direct testimony of Noemi Ortiz, Exh. NO-1T, contains details on how Cascade is proposing to integrate an equity lens into all aspects of its business. Cascade understands that it must prioritize equity in decision-making processes moving forward. When applying an equity lens, Cascade is focused on the following customer groups: 1) Tribal Lands, 2) Overburdened Communities, 3) Highly Impacted Communities, and 4) Vulnerable Populations. These customer groups are defined in Noemi Ortiz's direct testimony.

Cascade has formed an Equity Advisory Group ("EAG"), which is a collaborative forum comprised of representatives from equity communities within Cascade's service territory. The EAG will provide valuable feedback in the decision-making process relating to Cascade's decarbonization efforts.

Q. What are the decarbonization strategies that Cascade will deploy to meet the requirements of the CCA as a natural gas supplier?

A. In the early years, Cascade will achieve CCA compliance primarily by purchasing allowances through the Washington cap-and-invest auctions and by introducing renewable natural gas ("RNG")[5] as a low-carbon fuel option for customers. As noted earlier, the Company is currently undertaking a planning process to evaluate a comprehensive portfolio of decarbonization measures—including capital projects and programs—that it can deploy to meet CCA emission reduction targets over time. Cascade has formed internal teams and engaged an external consultant to assess and prioritize the decarbonization impacts, cost drivers, policy and regulatory compliance commitments, emerging markets, technologies and customer needs, and potential business models for ramping up Cascade's direct investments in optimizing our decarbonization efforts. This work is ongoing and will chart a path forward for Cascade to support achieving the State of Washington's decarbonization goals.

Q. What categories of decarbonization measures is Cascade exploring?

A. The primary solutions Cascade is exploring as part of this process include the following five decarbonization measure categories:

1. **Developing Low-Carbon Fuel Production:** Low-carbon fuels ("LCF"), such as RNG and hydrogen, offer decarbonization benefits while leveraging existing natural gas distribution infrastructure and limiting the burden on customers to

[5] RNG refers to biomethane and the environmental attributes.

make significant investments in replacing end-use equipment. As described in greater detail below, Cascade is currently participating in five RNG related projects, including one production facility. Cascade continues to explore opportunities to make additional direct investments in LCF production facilities. By owning the facilities, Cascade can secure long-term access to LCF supply and limit exposure to long-term risk of LCF price volatility, providing more security in costs for our customers.

2. **Developing Thermal Energy Networks:** Community geothermal and thermal energy networks offer an efficient way for customers to meet heating and cooling needs while curtailing GHG emissions at the point of use. Although geothermal heating systems can offer very low operating costs, the underground pipe infrastructure can be overly costly to serve a single customer. Cascade is exploring opportunities to leverage its capabilities as a regulated utility with knowledge of underground pipe infrastructure to develop thermal energy networks, to achieve economies of scale that make geothermal a more economical solution for low-carbon heating and cooling. This exploration will be further enabled by House Bill 2131, which passed in the 2024 legislative session and is currently on the Governor's desk for signature. The law gives gas utilities priority for developing thermal energy network pilot projects in the gas utility's service territory and provides the opportunity for local distribution companies to apply for grant funding for such pilots through the Washington State Department of Commerce. An interested gas utility must announce in writing to the Commission its intention to deploy a pilot project in a specific location within 12 months of the

effective date of the statute and then must deploy a pilot project within 30 months to maintain this priority.

3. **Encouraging the Deployment of Hybrid Heating Systems:** Hybrid heating systems, such as dual fuel heat pumps, offer decarbonization benefits over traditional fossil fuel systems, while providing benefits around system resilience. Cascade is exploring opportunities to pilot hybrid heating systems to provide viable avenues to support system decarbonization and reduce impacts to customers. As the Meta Analysis describes, efficiency improvements across all sectors will be critical to meet decarbonization goals while still allowing for economic growth. [6]

4. **Delivering Hydrogen to Large Customers:** Many large commercial and industrial customers have processes that are difficult to electrify and will require access to low-carbon fuels to decarbonize. Cascade is exploring the opportunity and interest of large customers in the region to move to a hydrogen supply. In addition, the Company is exploring the business case to develop projects to supply hydrogen fuels by deploying new pipeline or modifying existing pipeline to develop dedicated hydrogen delivery to large customers.

5. **Developing Low-Carbon Fueling for Transportation End Uses:** The transportation sector is the largest source of GHG emissions across the state. Therefore, reducing emissions across this sector will be critical to achieving the state's decarbonization goals. Not all transportation end uses are suited to

[6] *See* Exh. SWM-2, p. 5.

electrification, particularly heavy-duty vehicles. As such, low-carbon fuels can provide an alternative to help decarbonize these difficult-to-electrify transportation segments, and Cascade is exploring options to serve the needs in this market.

Cascade is currently exploring each of the decarbonization solutions described above to evaluate the market opportunity, understand the interest of customers, and to build the financial case, particularly in comparison to the ongoing purchase of allowances through the Washington cap-and-invest market. Cascade is committed to pursuing capital projects and programs that result in a reduction of CCA covered GHG emissions to reduce the need for allowance purchases over time. To meet the objectives of the CCA, Cascade believes incremental capital project investments and programs that reduce CCA covered emissions are necessary to leverage the Company's infrastructure, which has been heavily invested in by Washington ratepayers. A diverse portfolio of decarbonization solutions will ensure that Cascade will be a part of reducing energy-related GHG emissions across the state, help meet the CCA requirements, and manage the impacts of the transition to a low-carbon energy system equitably and cost-effectively for Cascade's customers and energy users across the state.

Q. With respect to low-carbon fuel production discussed above, describe Cascade's ongoing and planned RNG development efforts as part of the Company's CCA compliance.

A. Cascade believes that RNG is a critical resource in the portfolio to be deployed to meet CCA GHG emissions reduction targets. Renewable natural gas is an emerging supply option that brings many benefits; chief among them being emissions reductions. RNG is a gas consisting largely of methane and other hydrocarbons derived from the decomposition of organic material in landfills, wastewater treatment facilities, and anerobic digesters. Cascade provides a deeper discussion of RNG in its 2023 Integrated Resource Plan ("IRP").[7] An excerpt is provided as Exh. SWM-4.

Cascade is currently progressing on RNG projects at varying stages of development. There are three types of RNG projects with which Cascade is involved: "Purchase Projects," "Transport Projects," and "Production Projects."

Purchase Projects are defined as projects where the Company would invest in the Cascade infrastructure required to on-board or flow the RNG produced by a third party into the Company's distribution system and purchase the environmental attributes or Renewable Thermal Credits ("RTC") to be utilized for compliance obligations or voluntary RNG tariffs. The Company's investment in the infrastructure influences the negotiated price to purchase the RNG.

[7] Docket UG-220131, Cascade Natural Gas Corporation 2023 Integrated Resource Plan. Filed February 24, 2023.

In Transport Projects, RNG produced by a third party is injected into the Company's distribution system, and Cascade transports the customer's RNG so that the customer may market the environmental attributes to other parties. Cascade is not the purchaser of the environmental attributes of "Transport Projects", either because they are priced higher than would be prudent for cost recovery from utility customers or they are already committed to another customer. For a Transport Project, the third-party producer will normally be placed on Cascade's transportation rate schedule 663, and Cascade will make an investment in the infrastructure required to flow the gas in the distribution system in accordance with Cascade's line extension tariff. Although Cascade plays an essential role in enabling Washington's emissions reductions through its facilitation of RNG Transport Projects, under current rules, Cascade receives no credit for the emissions reductions accorded to the RNG production entity.

The third type of RNG projects, called Production Projects, are defined as projects where Cascade invests in the RNG production facility as well as the infrastructure required to flow the RNG into the distribution system. Cascade will ultimately produce and own the RNG, including the associated environmental attributes. Cascade plans to grow its portfolio of RNG Production Projects over time to support Washington's GHG emissions reduction goals.

Q. Please describe the five contracts that Cascade has executed for RNG projects.

A. Cascade has signed contracts for five RNG projects. Four are contracts with third-party producers where the gas will be injected into Cascade's distribution system.

Three of the four projects are Purchase Projects where Cascade will be purchasing some or all of the environmental attributes. The fourth is a Transport Project where Cascade is only facilitating the transportation of RNG on its distribution system. The fifth project is a Production Project where Cascade will own and operate the production facility and retain both the biomethane and RTCs for use by its customers. Additional contracts are likely in the near future. These projects are listed below and discussed in more detail in the direct testimony of Patrick C. Darras, Exh. PCD-1T.

VI. CASCADE'S APPROACH FOR RECOVERY OF DECARBONIZATION MEASURES

Q. What types of cost recovery mechanisms are appropriate for costs associated with CCA compliance?

A. Cascade believes that regulatory cost recovery mechanisms should be flexible and principled, based on cost causation, for CCA compliance investments and programs. The Commission should be open-minded to multiple cost recovery mechanisms and customer cost allocations that align with the way Cascade deploys capital while achieving policy objectives and managing customer equity.

In this case, Cascade proposes to bifurcate CCA compliance costs into two distinct groupings: (i) annual recovery costs, which include allowance purchases and credits, RTC purchases, and administration costs, and (ii) base rate investments including capital projects, incremental labor, and technology testing and demonstration. CCA annual recovery costs should have a discrete cost recovery venue/mechanism, while cost recovery for base rate investment proposals to meet

CCA compliance should be carried out in either a rate case or a single-issue regulatory proceeding.

Cascade anticipates using future regulatory proceedings—both rate cases, and annual recovery mechanisms, such as the proposed Schedule 700—to request cost recovery for decarbonization investments and customer solutions. Cascade is sensitive to the impacts that decarbonization compliance will have on customers' energy costs and is mindful of the need to balance decarbonization mandates and customer energy affordability.

Q. Is Cascade seeking approval of direct investments in decarbonization measures in this case?

A. Yes, Cascade is seeking cost recovery of three distinct items in this case: RNG capital additions, testing and demonstration funding, and embedding incremental labor costs associated with decarbonization efforts into base rates.

Q. What RNG capital plant additions is Cascade seeking to recover in this case?

A. The direct testimony of Patrick C. Darras, Exh. PCD-1T, contains detailed information on RNG plant additions that are being requested for cost recovery. Only the capital costs associated with RNG projects are being requested for inclusion in this multiyear rate plan. Cascade is requesting cost recovery for the following RNG projects:

- Knott Landfill RNG Project (Bend) – FP-322677 – Production Project
- Divert Inc., RNG Project (Longview) – FP-323431, 323432, 323434, 323435 – Transport Project

- Horn Rapids Landfill RNG Project (Richland) – FP-323443, 323446, 323452 – Purchase Project
- Lamb Weston RNG Project (Richland) – FP-323467, 323469, 323472 – Purchase Project
- Process Water Reuse Facility RNG Project (Pasco) – FP-323775, 323824, 23840, 323841 – Purchase Project

Q. Will technology testing and demonstration be warranted to implement the solutions required to meet Washington's decarbonization goals?

A. Yes. Providing the deep decarbonization envisioned in the CCA while still maintaining safe and reliable energy for Washington customers will only be possible through the expanded use and accelerated availability of new or emerging technologies. In the Meta Analysis of five different U.S. economy-wide net-zero studies, all studies relied on large-scale deployment of new technologies. The study goes on to state, "Innovation in a variety of forms – technologies, operating models, market frameworks, and beyond – will be central to enabling the transition to net-zero economies."[8]

Q. Please explain the technology testing and demonstration proposed in this case.

A. Cascade is proposing to collect $350,000 annually from customers through base rates to fund technology testing and demonstrations related to the potential measures outlined earlier in my testimony. A potential option for providing this type of testing and demonstration is Operations Technology Development, NFP ("OTD") and Utilization Technology Development, NFP ("UTD"). These collaborative not-for-

[8] *See* Exh. SWM-2, p. 6.

profit organizations are managed by GTI Energy and would allow the Company to direct funding to projects that directly support Cascade's decarbonization efforts, providing meaningful benefits to customers.

Participation in these not-for-profit organizations will allow Cascade to benefit from leveraging the collective intelligence and experience of other participating companies from across North America as well as outside funders to bring innovative solutions to Washington. The requested technology testing and demonstration funding can also be used to fund specific pilot projects related to Cascade's decarbonization strategies. This targeted funding will allow Cascade to develop and apply innovative near-term and long-term solutions to address Washington's energy transition goals. Cascade would develop a technology testing and demonstration plan after the decarbonization solutions are selected. Based on approval in this proceeding, the plan would be implemented in 2025. The technology testing and demonstration plan would be updated each year with spending capped at $350,000 annually.

Q. Please describe OTD's work and how Cascade and its customers could benefit from working with OTD.

A. OTD directs a research, development, and deployment program of near-term applied research to develop, test, and implement new technologies that enhance system safety, improve operating efficiencies, reduce operating costs, and maintain system reliability and integrity. Examples of OTD research projects that will assist Cascade in implementing decarbonization solutions include research on improved leak

detection technology to improve customer safety and meet decarbonization goals, research to better understand and safely incorporate lower carbon gases like hydrogen and renewable natural gas, and research into new thermal energy delivery systems such as community geo-thermal.

Q. Please describe UTD's work and how Cascade and its customers could benefit from working with UTD.

A. UTD directs a research, development, and deployment program of near-term applied research to expand innovative customer solutions that maximize the environmental performance, affordability, efficiency and safety of equipment and processes that use natural gas and renewable energy resources, including the integration of hydrogen or electricity derived from renewable energy. Washington's technology interests and needs, like other states, are based on building types, venting safety, specific codes and standards, weather, and other localized factors. One major benefit of participating in UTD is that projects can be tailored to specific issues within a state or service territory. Working with UTD, the utility can engage UTD's staff and technology developers to ensure that the technologies being developed can address any specific state or local issues and best perform for Washington consumers. Additionally, any add-ons or optimization of a specific technology can potentially be tested through demonstration projects in Cascade's service territory to verify performance, measure environmental benefits and to learn any specific barriers to future deployment. Local contractors involved in the demonstration project learn about installing new pre-

commercial emerging technologies, which can help to identify and overcome any potential local barriers.

Q. How has the Commission previously treated decarbonization studies that focus on testing and evaluating methodologies for complying with state decarbonization laws?

A. The Commission approved a settlement in Puget Sound Energy's ("PSE") 2022 multiyear rate plan that required PSE to spend $15 million in funding for a decarbonization study, targeted electrification pilot, and a targeted electrification strategy. The decarbonization study was required, among other things, to evaluate: various decarbonization measures and scenarios and consider the cost to rate payers and emissions reductions resulting from the measures, including decarbonized fuels; and reducing and decarbonizing gas throughput.[9]

Q. How does the PSE decarbonization study relate to Cascade's proposal in this case to recover $350,000 annually for testing and demonstration activities to support Cascade's decarbonization strategies?

A. Because PSE is both a gas and electric company its decarbonization plan would look different from Cascade's plan. But in both cases, the utility would be taking steps to study, test, and evaluate options and solutions for decarbonization and compliance with state law. Given the enormity of the energy transition that must take place, and the uncharted territory that lies ahead, it is appropriate for the Commission to grant

[9] *See WUTC v. Puget Sound Energy*, Dockets UE-220066 et al. Order 24/10 p. 18 (December 22, 2022) (citing Revenue Requirement Settlement ¶ 66)).

recovery of costs to evaluate decarbonization methodologies and strategies. Ultimately customers will benefit through a planned transition to a decarbonized future.

Q. Is there regulatory precedent in other jurisdictions that support testing and demonstration of decarbonization solutions?

A. Yes, state regulatory commissions in other states are considering or have approved utility spending to test and demonstrate decarbonization solutions within the regulated gas industry. In Minnesota, the Natural Gas Innovation Act creates a regulatory framework for natural gas utilities to invest in renewable energy resources and innovative technologies that aim to reduce the state's greenhouse gas emissions. In June 2023, CenterPoint Energy proposed the first five-year innovation plan Docket No. G-008/M-23-215[10] under Minnesota's Natural Gas Innovation Act that is subject to review and approval by the Minnesota Public Utilities Commission. Within the proposal CenterPoint proposed several research and development projects aimed at better understanding various pathways to achieving net-zero carbon emissions. A copy of the Minnesota CenterPoint Energy filing is provided as Exh. SWM-4.

In California, Southern California Gas ("SoCalGas") has applied for spend and received cost recovery from the California Public Utilities Commission ("CPUC") across four main research areas[11] including Clean and Renewable Energy

[10] Petition by CenterPoint Energy for Approval of its First Natural Gas Innovation Plan Docket No. G-008/M-23-215. *See* Exh. SWM-5.
[11] *See* Exh. SWM-6 (Southern California Gas Company (U 904 G). 2024 General Rate Case. A.22-05-015. Exhibit SCG-12-R).

Resources, Gas Operations, Clean Transportation, and Clean Energy Applications. The Research, Development and Deployment Program tracks and evaluates projects based on a set of six potential ratepayer benefits: safety, reduced GHG emissions, improved air quality, improved affordability, operational efficiency, and reliability. A copy of the SoCalGas filing is provided as Exh. SWM-6.

Q. Please explain the request to add incremental labor and benefits related to CCA compliance to base rates.

A. In Docket UG-220759, the Commission authorized the deferral of costs related to compliance with the CCA including incremental labor. Cascade added personnel to assist with the efforts to develop and interconnect RNG projects, to develop voluntary RNG customer programs, manage overall decarbonization compliance, and to effectively participate in allowance auctions. Incremental labor and benefit costs related to these positions or partial positions are currently being deferred. In this multiyear rate plan, Cascade is requesting these incremental labor and benefits costs be embedded in base rates. The direct testimony of Jacob A. Darrington, Exh. JAD-1T, discusses the proposed adjustments related to this item.

VII. CONCLUSION

Q. Does this conclude your direct testimony?

A. Yes.