Decision No. C24-0397

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

PROCEEDING NO. 23A-0392EG

IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF COLORADO FOR APPROVAL OF ITS 2024-2028 CLEAN HEAT PLAN.

COMMISSION DECISION GRANTING APPLICATION WITH MODIFICATIONS, REQUIRING FILINGS, AND ISSUING CERTAIN DIRECTIVES TO GUIDE NEXT CLEAN HEAT PLAN FILING

Mailed Date: June 10, 2024
Adopted Date: May 1, 3, 8, 10, 15, 2024

TABLE OF CONTENTS

I. BY THE COMMISSION

A. Statement

1. Through this Decision, the Commission addresses the Application of Public Service Company of Colorado (Public Service or the Company) filed on August 1, 2023, as amended on November 6, 2023, which requests the Commission approve the Company's proposed 2024-2028 Clean Heat Plan (Clean Heat Plan or CHP).

2. Based on the record established in this Proceeding, we grant the Application with modifications and establish emission target goals and budgets for 2024 through 2027.

B. Procedural History

3. On August 1, 2023, Public Service filed its Clean Heat Plan Application (Application), which requests that the Commission approve the Company's proposed 2024-2028 Clean Heat Plan.

4. The Commission issued a Notice of Application Filed on August 2, 2023. The Notice set a 30-day intervention period that ran through September 1, 2023. The Application automatically deemed complete on September 16, 2023, for purposes of the statutory deadline for a final Commission decision pursuant to § 40-6-109.5, C.R.S.

5. By Decision No. C23-0626, issued September 19, 2023, the Commission granted requests for permissive intervention filed by the City and County of Denver (Denver), City of Boulder (Boulder), the City of Pueblo, the County of Pueblo, Project Canary, PBC (Project Canary), Colorado Energy Consumers, Holy Cross Electric Association, Inc., Black Hills Colorado Gas, Inc., the Natural Resources Defense Council (NRDC) and Sierra Club (collectively, the Conservation Coalition), the Colorado Renewable Energy Society (CRES) and Physicians for Social Responsibility Colorado (PSR-CO) (jointly), Western Resource Advocates (WRA), the

Southwest Energy Efficiency Project (SWEEP), Energy Outreach Colorado (EOC), the Colorado Solar and Storage Association (COSSA) and the Solar Energy Industries Association (SEIA) (jointly), the Chevron Rockies Business Unit, Occidental Petroleum Corporation, and Williams (collectively, the Colorado Decarbonization Coalition), Denver Pipefitters, Local 208 (Pipefitters), and Laborers' International Union of North America, Local 720 (Local 720). The Commission acknowledged the notices of intervention of right filed by Trial Staff of the Commission (Staff), the Colorado Office of the Utility Consumer Advocate (UCA), and the Colorado Energy Office (CEO).[1] Also through that decision, the Commission determined that it would hear this Proceeding *en banc* and ordered the filing of supplemental direct testimony.

6. On September 6, 2023, Boulder, CRES and PSR-CO, COSSA/SEIA, the Conservation Coalition, SWEEP, UCA, and WRA (collectively, the Joint Movants) filed a Joint Motion for Partial Summary Judgment (Summary Judgment Motion).

7. On or around October 17, 2023, the Company filed supplemental direct testimony pursuant to Commission Decisions No. C23-0626 and C23-0678-I.

8. On September 27, 2023, responses to the Summary Judgment Motion were filed by: (1) Public Service; (2) the City of Pueblo, the Colorado Decarbonization Coalition, the County of Pueblo, Pipefitters, Local 208, and Project Canary (Pueblo *et al.*); (3) Denver; and (4) CEO and the Air Pollution Control Division (APCD or Division).

9. On October 3, 2023, the Joint Movants filed their Motion for Leave to Reply to the Partial Summary Judgment Motion (Motion for Leave to Reply) which the Commission denied pursuant to Decision No. C23-0746-I, issued on November 6, 2023.

[1] Through Decision No. C23-0685-I, issued October 12, 2023, the Commission granted APCD's motion to participate in this Proceeding as a non-party *amicus curiae*, filed on September 20, 2023. APCD is housed within the Colorado Department of Public Health and Environment and serves as staff to the Colorado Air Quality Control Commission (AQCC).

10. At the October 18, 2023 Commissioners' Weekly Meeting (CWM), the Commission addressed the Motion for Leave to Reply and the Summary Judgment Motion. The findings and conclusions from the October 18, 2023 CWM were memorialized by two written orders. By Decision No. C23-0717, issued October 20, 2023, the Commission established an accelerated procedural schedule to address the inclusion of certified natural gas (CNG) and emission offsets as proposed in Public Service's "Clean Heat Plus" portfolio for its Clean Heat Plan. That decision scheduled a pre-hearing conference for October 26, 2023, as well as an evidentiary hearing on December 5 and 6, 2023. Also by Decision No. C23-0717, the Commission established numerous testimony deadlines in November related to the December evidentiary hearing. Through Decision No. C23-0729, issued on October 27, 2023, the Commission denied the Summary Judgment Motion and provided certain threshold legal guidance regarding the inclusion of CNG and emission offsets within a clean heat plan.

11. The Commission held a prehearing conference on October 26, 2023. At the pre-hearing conference, Public Service made an oral motion for leave to amend its application to which the Commission provided an opportunity for response from other parties. The Commission also heard proposals from other parties on other matters in this Proceeding. At the pre-hearing conference, the Commission vacated the October 27, 2023 deadline for direct testimony established by Decision No. C23-0717. The Commission also set a deadline of October 27, 2023, at 12:00 p.m. for Public Service to provide its request for leave to amend in written form and a deadline of close of business on October 30, 2023, for responses to the Company's request.

12. On October 27, 2023, the Company filed its Motion for Leave to Amend (Motion for Leave to Amend), seeking leave to file a restrictive amendment to its Application, consistent with Rule 1309(a) of the Commission's Rules of Practice and Procedure, 4 *Colorado Code of*

Regulations (CCR) 723-1. The Company also requested the Commission vacate the expedited procedural schedule adopted in Decision No. C23-0717 to accommodate a December 2023 hearing.

13. Through Decision No. C23-0746-I, issued November 3, 2023, the Commission granted the Motion for Leave to Amend and vacated the procedural deadlines set forth in Decision No. C23-0717.

14. On December 1, 2023, the Company filed amended testimony of Mr. Weinberg (Hr. Ex. 107, Rev. 1); Dr. Lieb (Hr. Ex. 106, Rev. 1); and Ms. Quillian (Hr. Ex. 104, Rev. 1) in addition to its Amended Application filed on November 6, 2023 (Amended Application).

15. Through Decision No. C23-0801-I, the Commission established a procedural schedule for the remainder of the Proceeding, including an evidentiary hearing on March 11-15, 2024, and March 18-19, 2024. Through Decision No. C24-0024-I, the Commission determined that the evidentiary hearing would be held virtually.

16. On January 8, 2024, the Commission held a public comment hearing at which over 70 members of the public shared oral comments with the Commission.

17. On March 11-15, 2024, and March 18, 2024, the Commission convened an evidentiary hearing, during which parties had opportunity for cross examination and the Commissioners questioned certain witnesses. In addition, the Commission admitted Hearing Exhibit 2300 and all of the documents listed thereon into evidence. These documents consist of all of the pre-filed testimony and attachments in the Proceeding. In addition, during the course of the hearing, the following hearing exhibits were offered and admitted into the record: hearing exhibits 102, Attachment DRA-1, Rev. 1; 103, Rev. 1; 111, Rev. 1; 116, Rev.1; 117; 119, Attachment LWQ-7 through 12; 128; 129; 130; 140; 145, Attachments DRA-15 through 18; 143; 144; 147;

148; 149; 150; 151; 203, Rev. 2; 303; 306; 307; 505; 604; 605; 806; 1007; 1201; 1305; 1406; 1408; 1410; 2100; 2101; 2102; 2103; 2104; 2105; 2106. Administrative notice was taken of hearing exhibits: 504; and 1203.

18. Also at hearing, the Commission ordered additional testimony from the Company through a bench order on March 11, 2024.[2] This bench order required the Company to update its modeling to include a portfolio scenario that excludes the scalar multiplier related to beneficial electrification (discussed further in Section D(1)) and allows the model to contemplate end-of-life air conditioner (AC) replacement with air-source heat pump units (also discussed further in Section D(1)). The bench request also required Public Service to evaluate the cost-benefit of its portfolios using the Utility Cost Test (UCT) in addition to the mTRC. In response to the bench order, the Company filed Hearing Exhibits 140, 145, Attachments DRA-15 through DRA-18 on March 15, 2024, which were admitted into the evidentiary record on March 18, 2024.

19. On April 9, 2024, Public Service, Pueblo County, Project Canary, Pipefitters, EOC, CRES/PSR-CO, the Colorado Decarbonization Coalition, City of Pueblo, Boulder, CEC, Denver, UCA, Staff, COSSA/SEIA, CEO, and WRA-SWEEP-Conservation Coalition (jointly) each filed a statement of position (SOP).

20. The Commission conducted live deliberations in this Proceeding at the Commissioners' Weekly Meetings on May 1, 2024, May 8, 2024, and May 15, 2024, and at a Commissioners' Deliberations Meetings on May 3, 2024, and May 10, 2024, resulting in this Decision.

[2] Hr. Tr. March 11, 2024, pp. 19:21-25:04.

C. Background and Statutory Requirements

1. SB21-264

21. Senate Bill (SB) 21-264, codified as § 40-3.2-108, C.R.S., requires Colorado gas utilities with more than 90,000 retail customers to develop, file, and receive approval of comprehensive clean heat plans designed to achieve greenhouse gas emission (GHG) reductions, specifically the reduction of carbon dioxide and methane emissions from gas distribution systems and the associated end-use consumption. In passing this legislation, the General Assembly stated its intent in enactment is to "implement a performance standard that will allow Colorado gas utilities to use available tools, including energy efficiency, biomethane, hydrogen, recovered methane, beneficial electrification of customer end uses, cost-effective leak reductions on the utility's distribution system as determined by the Commission that exceeds state and federal requirements, and other measures to achieve greenhouse gas emission reductions, cost-effectiveness, and equity."[3] Further, it declared that the Commission must "maximize greenhouse gas emission reductions and benefits to customers, with particular attention to residential customers who participate in income-qualified programs, while managing costs and risks to customers, including stranded-asset cost risks, and in a manner that supports family-sustaining jobs."[4]

22. A clean heat plan is a "comprehensive plan submitted by a gas distribution utility or municipal gas distribution utility that demonstrates projected reductions in methane and carbon dioxide emissions that, together, meet the reductions required in this section at the lowest reasonable cost."[5] The "lowest reasonable cost" means a reasonable-cost mix of clean heat

[3] § 40-3.2-108(1)(c)(I), C.R.S.
[4] § 40-3.2-108(1)(c)(II), C.R.S.
[5] § 40-3.2-108(2)(b), C.R.S.

resources that meet clean heat targets established pursuant to this section as determined through a detailed analysis of available technologies and includes resource costs, market volatility risks, risks to ratepayers, systems operations costs, infrastructure costs, environmental justice goals, the social cost of carbon, and the social cost of methane in comparing the costs and benefits of alternatives, and other costs and benefits as determined by the Commission.

23. SB21-264 sets ambitious greenhouse gas reduction targets. Section 40-3.2-108(3), C.R.S., requires gas utilities to file a clean heat plan to demonstrate the utility will achieve greenhouse gas emissions reduction targets of four percent by 2025 and 22 percent by 2030, based on 2015 emission levels. Emission reductions must be from the "distribution and end-use combustion of gas"[6] and must include: (a) methane leaked from the transportation and delivery of gas from the gas distribution and service pipelines from the city gate to customer end use; (b) carbon dioxide emissions resulting from the combustion of gas by residential, commercial, and industrial customers not otherwise subject to federal greenhouse gas emission reporting and excluding all transport customers; and (c) emissions of methane resulting from leakage from delivery of gas to other local distribution companies.[7] Pursuant to Commission Rule 4527(a), 4 CCR 723-4, the utility must use the most recent version of the workbook published by the Air Pollution Control Division to calculate its baseline and projected emissions.[8]

24. The statute also enumerates certain resources as "clean heat resources" including: (1) demand side management (DSM) (as defined in § 40-1-102(6), C.R.S.); (2) recovered methane (defined as biomethane or methane derived from municipal solid waste, the pyrolysis of municipal solid waste, biomass pyrolysis or wastewater treatment that meets a recovered methane protocol

[6] § 40-3.2-108(4)(b)(I), C.R.S.
[7] § 40-3.2-108(4)(c)(I), C.R.S.
[8] 4 CCR 723-4-4527(a).

approved by AQCC and is located in Colorado); (3) green hydrogen (defined as hydrogen derived from a "clean energy resource," which is defined in § 40-2-125.5 (2)(b), C.R.S., that uses water as the source of the hydrogen and may, for purposes of a clean heat plan green hydrogen project, include associated clean energy generation, transmission, and other infrastructure, subject to Commission approval); (4) beneficial electrification (BE) (as defined in § 40-1-102(1.2), C.R.S.); (5) pyrolysis of tires; (6) thermal energy (as defined in § 40-3.2-108(1)(r), C.R.S.); and (7) wastewater thermal energy (as defined in § 40-3.2-108(1)(u), C.R.S.) The Commission shall consider whether a plan "achieves the clean heat targets through maximizing the use of clean heat resources" before considering approving non-enumerated emission reduction pathways.[9]

25. When approving a clean heat plan, the Commission must consider several factors when determining if a plan is in the public interest, including whether:

(a) the clean heat plan achieves the clean heat targets through maximizing the use of clean heat resources;
(b) the additional air quality, environmental, and health benefits of the plan in addition to the greenhouse gas emission reductions;
(c) investments in a clean heat plan prioritize serving customers participating in income-qualified programs and communities historically impacted by air pollution and other energy-related pollution;
(d) the clean heat plan results in a reasonable cost to customers, including savings to customer bills resulting from investments made pursuant to the plan; and
(e) the clean heat plan ensures system reliability.

26. SB21-264 requires the Commission to establish a cost cap of 2.5 percent of annual gas bills for all full-service customers as a whole.[10] This cost cap, which is the maximum cost impact established for compliance with a clean heat target, may only be exceeded if the Commission finds that: (1) the plan is in the public interest; (2) costs to customers are reasonable; (3) the plan includes mitigation of rate increases for income-qualified customers; and (4) the

[9] *See* § 40-3.2-108(6)(d)(I)(A), C.R.S.
[10] § 40-3.2-108(6)(a)(I), C.R.S.

benefits of the plan, including the social costs of methane and carbon dioxide, exceed the costs. The Commission may alter or amend the Company's proposed plan as necessary to ensure that the resulting clean heat plan is in the public interest.[11]

2. Application Overview

27. Pursuant to § 40-3.2-108(4)(a), C.R.S., Public Service filed its clean heat plan on August 1, 2023. As its inaugural application, the Company's Application is technically its 2025 clean heat plan, but the Company indicates that, while the plan makes the maximum practical progress towards the 2025 clean heat target, its focus is on putting the Company on track to meet the 2030 clean heat target.[12] The Company proposes pursuant to Rule 4527(b), 4 CCR 723-4, a plan with an action period of 2025 through 2028, but also sets forth a "vision for a clean energy future" with an eye towards 2050.[13] The Company states that "[w]hile the 2025 Clean Heat targets are an important interim goal, given the timing of the Company's filing of this inaugural Clean Heat Plan, the likely timing of a final Commission decision, and the necessary time to ramp up programmatic DSM and BE beyond current levels, achievement of the 2025 target will be extremely uncertain. As a result, achieving the 2030 goals is the appropriate focus of the modeled Clean Heat Portfolios."[14]

28. The Company calculates that its 2015 baseline is approximately 7.1 million metric tons in carbon dioxide equivalent (MT of CO_2e), calculated by multiplying its actual 2015 sales data by the emission rate of natural gas combustion and adding an estimate of its methane system leakage in carbon dioxide equivalents.[15] Based on this baseline, the Company calculates that the

[11] *See* § 40-3.2-108(6)(d)(III), C.R.S.
[12] Hr. Ex. 101 (Ihle Direct), p. 45.
[13] *Id*. at 2.
[14] Hr. Ex. 101 (Ihle Direct), Attachment JWI-1, pp. 18-19.
[15] Hr. Ex. 101 (Ihle Direct), Attachment JWI-7, p. 15.

statute requires an approximate reduction of 1.1 million MT of CO_2e in 2025, and 2.2 million MT of CO_2e in 2030.[16] Of this total baseline, in 2015 approximately three percent is system methane emissions, 29 percent is non-residential use, and 68 percent is residential end-use.

29. In its initial Application, the Company presented four portfolios for Commission consideration. These portfolios include the "Cost Target;" the "Emission Target;" the "Electrification Only;" and the "Clean Heat Plus" portfolios. On rebuttal, the Company began referring to the selection of a clean heat resource portfolio and accompanying budget as "Vertical 1."[17] These portfolios consist of a mix of clean heat resources that together will reduce the emissions of the Company from the distribution and end use combustion of natural gas.

30. The "Cost Target" portfolio comprises of DSM, BE, recovered methane, and hydrogen resources. The Company contends this portfolio meets the statutory directive in § 40-3.2-108(4)(c)(II)(A), C.R.S., to comply with the cost cap while using clean heat resources to the maximum extent practicable. The "Cost Target" portfolio has largely remained unchanged through this Proceeding. This proposed portfolio would not meet the 2025 or 2030 emission target but complies with the Company's calculation of the statutory cost cap (approximately $34 million annually).[18] The Company estimates that this portfolio would accomplish a reduction of 0.37 million metric tons of carbon dioxide emissions by 2028.[19]

31. The Company's second presented portfolio is the "Emissions Target" portfolio which the Company contends responds to the statutory directive in § 40-3.2-108(4)(c)(II)(B), C.R.S., for the utility to present "[a] portfolio that meets the clean heat targets in the applicable

[16] *Id*. at 14.
[17] Hr. Ex. 116 (Ihle Rebuttal), p. 15.
[18] Hr. Ex. 101 (Ihle Direct), p. 32.
[19] Hr. Ex. 101 (Ihle Direct), Attachment JWI-7, p. 7.

plan period using only clean heat resources but that need not meet the cost cap."[20] The proposal is also comprised of DSM, BE, recovered methane. and hydrogen resources, but presents a path to achieving the 2030 emissions target at an approximate average cost of $227 million annually.[21] The Company's "Emissions Target" portfolio has remained largely unchanged throughout the Proceeding.

32. The Company also presented an "Electrification Focus" portfolio which is comprises only DSM and BE resources. This portfolio, as proposed by the Company, would reduce approximately 1.5 million metric tons of carbon dioxide emissions by 2028 at an average cost of $472 million annually.[22] The proposal only allows for all-electric retrofit replacement and models a significant increase in the electrification pace proposed in the Colorado Greenhouse Gas Pollution Reduction Roadmap (GHG Roadmap). The Company did not continue to support the "Electrification Focus" portfolio on rebuttal.

33. In its initial Application, the Company presented the "Clean Heat Plus" portfolio as its preferred portfolio. This portfolio initially presented a path to meeting the 2030 clean heat target through the use of both clean heat resources (DSM, BE, recovered methane, and hydrogen) as well as "differentiated gas" (*i.e.*, certified natural gas or CNG) and carbon offsets.[23]

34. After the Commission issued Decision No. C23-0729, on October 27, 2023, the Company requested to amend its preferred portfolio to exclude CNG and carbon offsets. Through amended testimony filed on December 8, 2023, by Mr. Weinberg, Dr. Lieb,[24] and Ms. Quillian, the Company amended its preferred "Clean Heat Plus" portfolio to include only enumerated clean heat

[20] Hr. Ex. 101 (Ihle Direct), p. 34.
[21] Hr. Ex. 101 (Ihle Direct), Attachment JWI-7, p. 7.
[22] *Id*.
[23] Hr. Ex. 101 (Ihle Direct), p. 32.
[24] Later adopted by Ms. Quillian.

resources. This amendment to its Application removed CNG and offsets from the emission accounting towards the clean heat targets and replaces the "Clean Heat Plus" portfolio with the "Amended Clean Heat Plus" portfolio. It also retains the Company's request to purchase CNG at the same volume and cost levels as proposed in the original Clean Heat Plus portfolio, but restricts that request to approving those purchases under the Commission's general authority, outside the clean heat emissions accounting framework. The amended portfolio also removed the request to purchase offsets entirely from the proceeding and retained the Company's request for approval of the Renewable * Connect Natural Gas voluntary retail program (RCNG).[25] As amended, the Clean Heat Plus portfolio would reduce approximately 915,589 million metric tons of carbon dioxide emissions through 2028 at an approximate annual cost of $190 million per year.[26]

35. On rebuttal, the Company also presented the "Flex Portfolio" for Commission consideration which is a refinement of the Amended Clean Heat Plan Plus Portfolio. Developed after intervenor input, the Flex Portfolio potentially increases the levels of electrification available by creating a mid-point check in process that allows for potentially shifting the budget allocation in 2026. The Company proposes a flex "baseline" of $576.4 million through 2028 with an additional $119 million budget that could flex between additional DSM, BE, hydrogen, or recovered methane spending based on successful implementation prior to the 2026 check-in process. In conjunction with the "Flex Portfolio," the Company proposes a 2026 check-in process in which it would provide data regarding the implementation of clean heat strategies and propose an allocation of the $119 million.[27] The Company proposes that parties would have an opportunity for comments and the Company would have an opportunity for responsive comments, creating a

[25] Verified Amendment to Application of Public Service Company of Colorado for Approval of Its 2024-2028 Clean Heat Plan, filed on November 6, 2023.
[26] Hr. Ex. 115 (Ihle Additional Supplemental Direct), p. 18.
[27] Hr. Ex. 116 (Ihle Rebuttal), p. 99.

record on which the Commission could make a determination of whether any or all of the flex dollars should be deployed, and if so, where.[28]

D. Portfolio Modeling and Development ("Vertical 1")

36. The Commission's consideration of the proper portfolio of clean heat resources to ensure progress towards the applicable clean heat targets requires consideration of Public Service's modeling efforts to design and determine the cost efficiency of the portfolios (discussed in Section D(1)) as well as consideration of whether exceeding the statutory cost cap is in the public interest (discussed in Section D(2)) and a consideration of which resources and what spending level are appropriate for inclusion in this clean heat plan (discussed in section D(3)-D(5)). This section discusses each in turn to support the Commission's final determination of the proper portfolio of clean heat resources to support the Company reaching the 2030 statutory emission reduction target.

37. A clean heat plan is a "a comprehensive plan submitted by a gas distribution utility or municipal gas distribution utility that demonstrates projected reductions in methane and carbon dioxide emissions that, together, meet the reductions required in this section at the lowest reasonable cost." As part of a utility's clean heat plan filing, it is required to set forth portfolios that present alternative compliance approaches for reducing carbon dioxide and methane emissions to meet the clean heat target.[29] A utility must present: (1) its preferred option; (2) a portfolio of resources that uses clean heat resources to the maximum practicable extent, while complying with the cost cap; and (3) a portfolio that meets the clean heat target using only clean heat resources, but need not meet the cost cap.[30] For each portfolio presentation, a utility must: (1) quantify the

[28] *Id*. at 99.
[29] § 40-3.2-108(4)(c)(II), C.R.S.
[30] § 40-3.2-108(4)(c)(II), C.R.S.

annual projected greenhouse gas emission reductions during the applicable plan period and (2) propose program budgets to meet the emission reduction targets.[31]

1. The E3 Model and Portfolio Cost-effectiveness Analysis

a. Company Proposal

38. Public Service retained Energy and Environmental Economics, Inc. (E3) to perform modeling to explore the interrelationship between costs and emission reductions in order to "strike the appropriate balance between the two" and also to determine the appropriate mix of emission reduction measures.[32] The E3 model "seeks to obtain the most cost-effective mix of emissions reduction options available to meet a given GHG reduction target" through the modeling of marginal emissions abatement curves.[33] The model seeks "the most cost-effective mix of resources based on these supply curves and considering the various constraints and resource combinations."

39. The model calculates a total resource cost for each available resource and sorts them all in order of abatement cost on a dollar-per-ton basis, creating a supply curve dispatch order. It then selects the least-cost set of resources in each year subject to statutory constraints and availability assumptions, building the portfolio of resources for each scenario (*e.g.*, a portfolio that meets the cost target or a portfolio that meets the emissions target but does not meet the cost target, as required by statute).[34]

40. The model considers two types of costs—total resource costs and program administrator costs. The total resource metric is the basis of the model's cost minimization function. The program administrator cost is used to assess the cost of clean heat compliance for

[31] § 40-3.2-108(4)(c)(III)-(IV), C.R.S.
[32] Hr. Ex. 101 (Ihle Direct), p. 29.
[33] *Id*. at 32.
[34] Public Service SOP, p. 4.

the Company's gas customers. For supply side resources, program costs are equal to the cost premium of those resources relative to natural gas. Demand-side program costs are evaluated based on the incentives that the Company would pay its customers to support energy efficiency or electrification.

41. The E3 model uses the CEO GHG Roadmap for modeling the amended preferred portfolio, and later the flex portfolio, by assuming that the maximum pace of electrification market transformation is equal to the sales share for appliances assumed in the 2021 Roadmap, with two modifications. First, E3 modified the roadmap assumptions to account for the fact that the Company cannot begin expanding sale share until 2024, so the pace of electrification is slightly higher to account for the three years of lag. Second, for the Emissions Target and Electrification portfolios, E3 treated the pace of adoption as a variable because it found that the GHG Roadmap trajectory would be insufficient to meet 2030 emissions target.[35] Public Service expects that between 200,000 and 400,000 heat pumps must be installed through 2030, depending on the portfolio at issue. This means that an annual average of between 28,000 and 57,000 heat pumps must be installed in every year beginning in 2024 – roughly fourteen to twenty-eight times the number installed in 2022.[36]

42. The modeling was performed by a four-step process. First, the model calculated the costs and benefits for each resource. This step calculates the total resource costs and program costs for DSM resources utilizing multiple cost tests.[37] The modeling effort then sorted demand- and supply-side measures in a cost per ton of abatement—essentially creating a dispatch order for clean heat resources. Utilizing this dispatch order, the model then created least-cost portfolios within the

[35] Hr. Ex. 102 (Aas Direct), Attachment DRA-1, p. 10.
[36] Hr. Ex. 105 (Mark Direct), p. 23.
[37] Hr. Ex. 101 (Ihle Direct), p. 43.

constraints needed for each portfolio (meeting the emission reduction target, the annual program cost cap, selection of only electrification, etc.). Finally, the output of the model for each portfolio presented "key metrics" which include sales of efficient and electric appliances, blend of natural gas, recovered methane and hydrogen, emissions reductions achieved, and program costs are reported out for a portfolio constructed for a specific model year.[38] Based on the E3 model results, the Company presented several portfolios discussed in greater detail below in Section D(3).

43. In the cost benefit analysis step of the modeling, the Company utilized a "scalar" mechanism to project the budget necessary for each portfolio over time[39]. The scalar essentially assumes that incentives for BE adoption will need to increase over time to reach greater market penetration. The Company argues that this is appropriate for several reasons, including that consumers may have varying preferences relating to electrification, electrification technologies come with up-front premium costs, low-income customers may require higher incentive levels than other customers, there is a split-incentive problem in multi-unit residential buildings, some buildings may be more expensive to electrify, and other jurisdictions already provide incentives at higher levels than the Company's current incentives.[40]

44. Public Service contends that the modified total resource test (mTRC) is the most appropriate tool for evaluating clean heat plans because it captures the entirety of costs to customers to achieve the emissions reductions in a given portfolio, and because those emissions reductions will depend on tens of thousands of individual customer choices. Public Service argues that the Utility Cost Test (UCT) should only be used in addition to using an mTRC analysis because it only looks at the costs and benefits that will be passed through customer bills and it also ignores

[38] Hr. Ex. 102 (Aas Direct), Attachment DRA-1, p. 25.
[39] Public Service SOP, pp. 4-5.
[40] Public Service SOP, p. 5.

the significant up-front costs to customers and that the UCT is unable to consider societal costs because those costs do not flow through to utility bills. Public Service also argues that a full assessment of costs and benefits should consider avoided gas system and incremental electric system investments.[41]

b. Party Responses

45. Boulder argues that the Company's modeling should be rejected because the modeling methodology failed to comply with the Commission's direction that cost effective enumerated clean heat resources must be selected first prior to consideration of blue hydrogen.[42] Boulder also criticizes the modeling of supply side resources by the Company because the cost input assumptions used by the Company are based on an "nth plant analysis" and therefore look artificially lower in cost since the model utilized costs that may only be realized once the technologies are at full maturity and broad deployment.[43] Boulder argues that blue and green hydrogen, and to a lesser extent recovered methane, are too new of technologies to use mature technology cost data.

46. UCA argues that the primary flaw in the Company's model is that it assumes an unreasonable level of customer adoption of DSM and BE technologies.[44] UCA believes the conversion rates modeled by the Company are unreasonable for several reasons, including that: (1) the heat pump installation rate must increase somewhere between 14x and 28x the 2022 adoption rate; (2) customers are unlikely to replace appliances until the end of their life; (3) building retrofits are difficult and carry a premium capital cost over conventional gas

[41] *Id*. at 12-13.
[42] Boulder SOP, p. 6.
[43] *Id*. at 6-7.
[44] UCA SOP, p. 7.

technologies; and (4) there may not be enough contractors to service or install the modeled level of adoption.[45]

47. Staff does not point to a specific "flaw" in the Company's modeling efforts, but notes that the extensive use of modeling within this Proceeding could give the sense of false precision on the options before the Commission.[46] Staff recommends the Commission focus less on the modeled level of emissions (because the real-world implementation of any portfolio will surely deviate from the modeled version) and instead focus on the approved budget.[47]

48. The Conservation Coalition, SWEEP, and WRA argue that the Company's E3 model overstates the costs and barriers to BE adoption. First, they argue that the scalar utilized in the E3 model inflates the costs of BE adoption artificially without considering changing customer or contractor willingness to participate in BE programs over time.[48] They also argue that the model understates the availability of BE potential by excluding gas-only customers from its analysis and failing to take into consideration existing state and local incentives for BE adoption.[49] CEO similarly argues that the E3 model overestimates the cost of BE generally.[50]

49. CEO also suggests that future modeling efforts of the Company should include several additional considerations: (1) include mid-sized commercial buildings, large commercial buildings, and industrial customers in the resource portfolio selection model; (2) include impacts of the statewide and local building benchmarking and performance programs, and state tax incentives for heat pump systems in the Company's gas load forecast; (3) account for the impacts of tariffed on-bill financing, if approved, on gas DSM and BE adoption in the resource portfolio

[45] *Id*. at 8.
[46] Staff SOP, p. 14.
[47] *Id*. at 14-15.
[48] WRA-SWEEP-CC SOP, pp. 2-3.
[49] WRA-SWEEP-CC SOP, pp. 2-3.
[50] *Id*. at 4.

selection model; and (4) model gas demand response measures, commercial ground source heat pumps (GSHPs), thermal energy systems, and the replacement of air conditioners with heat pumps.[51]

50. Public Service asserts that the model is the "most sophisticated model available for any gas distribution company (LDC) system in the country."[52] It asserts that the three main intervenor criticisms of the E3 model are misplaced. Regarding the scalar model criticism, the Company states that the scalar (which assumes that the costs of electrifying will increase in future years) does not affect the mix of resources selected for each portfolio but instead is a function of the cost optimization function.[53] The other main intervenor criticism of the model—that it artificially limits the use of DSM resources such as heat pumps—is misplaced according to the Company because the model uses the CEO GHG Roadmap as its baseline assumption for the maximum pace of electrification.[54] Finally, the Company claims that the assertation by intervenors that the model discounted opportunities for replacing air conditioners with heat pumps is wrong because the model accounts for the total reasonable number of heat pumps that would be installed in the Company's service territory based on the roadmap and those heat pump installations could be achieved by replacing furnaces or air conditioners. [55]

51. WRA-SWEEP-Conservation Coalition argue against use of the mTRC or the UTC and instead provide an analysis of their proposal for a cost-benefit analysis through Mr. Brant's testimony that they purport is consistent with SB21-264.[56] They contend that the SB21-264 directs gas utilities to make investments that reduce emissions, and expressly requires consideration of

[51] CEO SOP, p. 4.
[52] Public Service SOP, p. 3.
[53] *Id*. at 5.
[54] Public Service SOP, p. 6.
[55] *Id*.
[56] WRA-SWEEP-CC SOP, p. 16, citing Hr. Ex. 600 (Brant Answer), p. 64.

the social cost of those avoided emissions. and that the statute and the Commission's implementing rules repeatedly call for evaluation of portfolios' costs to the utility—explicitly requiring cost-benefit analyses to consider "non-fuel direct investment associated with the clean heat plan"—and neither even mentions incremental equipment costs paid by individual BE and DSM program participants.[57]

c. Findings and Conclusions

52. In light of party arguments both in support of and against the Company's modeling approach, we address several decision points related to the modeling methodology. Further, we find that several modifications to the modeling methodology should be made prior to the next clean heat plan filing by the Company. We also provide additional guidance on how the Company should refine its clean heat plan-related cost effectiveness analyses moving forward.

53. While we generally agree that the modeling presented by the Company, and the scalar mechanism in particular, artificially inflates the cost projection of beneficial electrification through several different controversial inputs, the underlying results of the modeling are broadly agreed with by most parties[58]—any portfolio approved by the Commission should prioritize BE and DSM as the vast majority of this clean heat plan. For now, we focus on approving a reasonable level of financial resources and program design guidance to put the Company on the appropriate path to meet the 2030 target using the most cost-effective technologies (discussed further below in Section D(5)). While we find the E3 model to include some debatable assumptions about BE technology adoption rates, that does not change the fact that, at present, BE and DSM represent the best path forward for emission reductions aligned with SB21-264. We therefore find the

[57] WRA-SWEEP-CC SOP, pp. 16-17.

[58] "Public Service and EOs agree that electrification and efficiency will be the workhorses for meeting the Clean Heat target." Public Service SOP, p. 2.

Company's modeling to provide a reasonable starting point for the development of an appropriate clean heat resource portfolio in this Proceeding.

54. However, with respect to the Company's specific inclusion of a scalar multiplier that affects the cost estimation of the proposed portfolios, we have serious concerns with the Company's approach. We agree with WRA-SWEEP-Conservation Coalition and others who contend that anticipating the incentive levels will need to expand six times[59] over current levels is counter to economic principles that technologies generally decline in cost as adoption is increased, as evidenced by numerous examples including wind, solar and batteries. Further, we find the scalar concept, as proposed by Public Service and incorporated in the E3 model, is at odds with the likely economic attractiveness of electrification over time. We agree with those who argue the technology will likely increase in availability and improve as suppliers and trained installation and maintenance contractors enter this burgeoning market. We also believe that if rates on the gas system increase at a pace close to those shown throughout this Proceeding, this will only further improve the economic benefits of end-use electrification. Thus, we find the scalar mechanism embeds a vision of cost escalation that is not supported by the record or economic principles. We find that the inclusion of the scalar artificially lowers the BE that can be accomplished by a given budget. This finding is supported by the results of the bench request modeling run. When the scalar was removed from the model run, the total abatement of carbon dioxide increased significantly, BE budget increased modestly, and the cost benefits of the plan improved materially.[60] The Company should not include such an assumption in future modeling efforts.

55. We agree with both the Company and the parties supporting the Pollution-Free Buildings (PFB) Portfolio, developed by WRA, SWEEP, and the Conservation Coalition, that the

[59] Hr. Ex. 102 (Aas Direct), Attachment DRA-1, Rev. 1, p. 44.
[60] Hr. Ex. 145, Attachment DRA-16 (Flex Base (No Incent. Scalar) Tab).

GHG Roadmap is a reasonable starting point for the modeling efforts, as it relates to electrification adoption rates. As modified by the Company, it represents an aggressive growth rate that the Company should strive to match with its adoption rates of BE technologies. However, we expect that the Company's modeling will become more accurate as program development experience is gained and the availability of relevant data increases dramatically during initial years of implementation. We note the Company will likely need to repeatedly refine its model and potentially the incentives it offers to induce participation in its BE and DSM programs as customer preferences, contractor engagement, technology efficiencies, manufacturing capacities, and the array of government and utility incentives and other market signals evolve and interact with one another. We also note that, per Decision No. C23-0413 in Proceeding No. 22A-0309EG, the Company is required to provide a revised potential study representing the overall annual market opportunity for BE and DSM technologies including such factors as the approximate number of appliance replacements, residential and commercial buildings newly constructed, and buildings subject to substantial retrofit per year.[61] That study is to be submitted with the Company's next Strategic Issues application (no later than July 1, 2025 as discussed below in Section H(2)).

56. We also agree with WRA and other intervenors that the Company inappropriately limited the model to evaluate heat pumps to replace both furnace and AC units. As WRA suggests, heat pump replacement of AC units alone (thereby creating a hybrid heat pump and furnace system) represents a critical pathway to BE. The Commission also notes that, based on the results of the bench request analysis, the cost-effectiveness of the Flex Portfolio increased dramatically (by approximately $300 million) when the constraint on AC-only replacement was removed.[62] This result is generally consistent with arguments made by WRA-SWEEP-Conservation Coalition

[61] *See* Decision No. C23-0413, ¶ ¶ 69-72, in Proceeding No. 22A-0309EG.
[62] Hr. Ex. 145, Table DRA-ABO-2.

who suggested replacing the AC unit with a standard heat pump is a very cost-effective option that reduces a majority of the gas consumed at a modest incremental cost. WRA-SWEEP-Conservation Coalition also argued that replacing an AC unit with a heat pump represents a far easier customer decision than a furnace replacement with a cold climate heat pump as a broken AC generally occurs in the summer and while inconvenient, may not be critically urgent; in contrast, if a furnace requires replacement in mid-winter, it must be done so immediately.[63] WRA-SWEEP-Conservation Coalition also suggested the replacement of an AC unit with a standard heat pump requires no expansion of a home's electrical capacity or ductwork. We agree with those arguments fully and believe replacing AC units with a heat pump represents a critical stepping stone as customers become more acquainted and trusting of heat pump technology. Accordingly, the Commission agrees with WRA and SWEEP that hybrid heating systems will exist for some time and that the time of AC replacement represents a compelling option for a customer to gain confidence in heat pump technology at a modest incremental cost or risk. We therefore order the Company to both prioritize this pathway in BE program implementation and to revise its modeling accordingly for submittal in its next application in which this modeling is presented.

57. We also emphasize that a critical need for quality input data on incremental upgrade costs for heat pumps and other technologies in the Company's future clean heat modeling efforts. As evidenced by the disparity in incremental cost values used by SWEEP in the PFB and the Company in its E3 model, improving the accuracy of cost values of both traditional and BE equipment will improve the modeling moving forward. We expect Staff and the Company to analyze this data in the upcoming Strategic Issues Proceeding or another proceeding the Commission deems appropriate. We also expect the Company to present testimony in the next

[63] Hr. Ex. 1400, Attachment MF-6 (PFB Report), p. 16.

proceeding that utilizes modeling specifically on the technology cost data inputs it chose. We further encourage the Company to work with stakeholders in order to develop agreed-to values through a consensual approach with the goal of reducing uncertainty for the Commission in future proceedings.

58. With respect to the effect on upstream infrastructure, we note that BE technologies in particular will impact the need for and size of electric and gas investment. WRA's assessment on the issue of electric transmission and distribution investment highlights the growing interdependence of the two systems and the potentially very significant costs that could result from broad electrification of end use, especially if considerations are not made for the optimization and responsiveness of demand to grid needs. On the other hand, business as usual investment in additional gas infrastructure could cause dramatic cost increases on the gas system, under scenarios of declining sales. We recognize that modeling and optimizing investment in both gas and electric systems during this period of transition spurred on by the clean heat plan is an extensive exercise. Nonetheless, we find that Public Service's application did not adequately support key transmission and distribution investment outcomes it suggests will be required in high-electrification scenarios. Accordingly, we expect the Company to develop tools that are appropriately capable of forecasting the complex relationship between BE adoption, electric infrastructure investment and gas infrastructure investment, and to provide a thorough presentation of such modeling capabilities in the Company's next clean heat plan application, if not sooner. The Company should endeavor to provide consistent information on the assumptions across Commission proceedings to avoid significantly different values from being provided for the same input across separate proceedings.

59. We recognize the effort and novelty of the modeling efforts presented by the Company in this Proceeding. However, we also recognize the need for continued iteration and

progress on developing reliable, objective models. To that end, we anticipate the need for earlier review of the model through a workshop, technical conference, or similar in the next clean heat proceeding. The Commission recognizes the benefits that early analysis of the model, along with its functions and inputs, will provide to the evidentiary record and will adjust the procedural schedule of the future clean heat plan proceeding accordingly.

60. Regarding the cost-benefit analysis utilized by the Company to analyze its presented portfolios, we find that the Company's analysis is consistent with the guidance in the Commission's Rules and in SB21-264. While we find value in the presentation by the Company of both the UCT and mTRC within this Proceeding there are some changes we would like to see in the next clean heat filing. First, in addition to other cost effectiveness measurements, we would like to see a presentation of the Ratepayer Impact Measure (RIM). Secondly, we would like to see a measure of cost effectiveness that weighs the programmatic costs to ratepayers against the full range of benefits to determine cost effectiveness. While the mTRC may be an effective way to measure market potential and demand, it doesn't provide an adequate mechanism for comparing cost effectiveness of various measures and incentives. The UCT offers an effective way to measure cost effectiveness, but only when compared against the full benefits including those required in statute (as the TRC was modified to include societal costs, perhaps this could be considered a similarly modified UCT). No one existing cost-benefit analysis test is perfect or neatly designed for the clean heat plan context, but the Company presented enough reliable information to ensure an approved portfolio has benefits that exceed the costs. Section 40-3.2-108(6)(c)(I), C.R.S., requires the Commission to consider a cost test that includes the social costs of carbon and methane, which the mTRC does. The statute also requires the Commission to consider the costs and benefits it deems relevant when analyzing the portfolios, including rate impacts on income-

qualified customers, affording the Commission broad latitude. While we support the cost benefit analyses put forth by the Company, we do find merit in the PFB's approach of considering additional health benefits from reduced air pollution, consistent with § 40-3.2-108(4)(c)(VII), C.R.S. As suggested by Dr. Bilsback's testimony, any attempt to quantify the health benefits from reduced air pollution will in fact make a cost-effective portfolio even more cost-effective.[64] The Company should attempt to quantify health benefits of respective portfolios in future clean heat plans, as the underlying legislation suggests should be done.[65] We also acknowledge the difficulty of addressing the cost interactions between the electric and gas system, and anticipate that this consideration will become of increasing importance in future analyses.

2. Compliance with the Cost Cap

61. SB21-264 requires the Commission to establish a cost cap of 2.5 percent of annual gas bills for all full-service customers as a whole.[66] This cost cap, which is the maximum cost impact established for compliance with a clean heat target, may only be exceeded if the Commission finds that: (1) the plan is in the public interest; (2) costs to customers are reasonable; (3) the plan includes mitigation of rate increases for income-qualified customers; and (4) the benefits of the plan, including the social costs of methane and carbon dioxide, exceed the costs. The Commission may alter or amend the Company's proposed plan as necessary to ensure that the resulting clean heat plan is in the public interest.[67]

62. Public Service calculates the cost cap at approximately $34 million per year.[68] For modeling purposes, the Company modeled the cost target inclusive of $10.5 million of

[64] Hr. Ex. 1402 (Bilsback Answer), Attachment KB-1, Rev. 1, p. 26 (Table 2).
[65] *See* § 40-3.2-108(4)(c)(VII), C.R.S.
[66] § 40-3.2-108(6)(a)(I), C.R.S.
[67] *See* § 40-3.2-108(6)(d)(III), C.R.S.
[68] Hr. Ex. 101 (Ihle Direct), p. 107.

estimated Inflation Reduction Act (IRA) funding that is available.[69] Public Service argues that the Commission may approve a portfolio above the cost cap if the costs are reasonable and the plan is in the public interest and that the Company's modeling shows that investments beyond the 2.5 percent cost target are necessary for the Company's emissions reductions to remain on pace to meet the clean heat targets.[70] The Company notes that its gas customers would not pay for any electrification under the Company's proposal, as those costs will be implemented through a rider paid by the Company's electric customers.[71] The Company therefore calculated the cost cap, which statutorily applies to gas customer bill impacts, exclusive of the electrification budget, which would apply to only electric customers under its proposal.

a. Party Positions

63. Several parties urge the Commission to only approve a clean heat plan that falls under the cost cap established by § 40-3.2-108(6)(d)(III), C.R.S. UCA recommends the Commission should adopt a small budget which selects only those resources that are cost effective and result in calculable emissions reductions. UCA urges the Commission to prioritize customer affordability and prioritizes reasonableness of costs to consumers in the transition away from fossil fuel energy sources.[72] While UCA supports BE and DSM, it urges the Commission to approve a budget for these measures that incorporates realistic customer adoption assumptions and provides reasonable programmatic costs to the Company's ratepayers. Similarly, CEC supports the Commission approving a plan within the cost cap initially and utilizing the proposed flex check- in process later to authorize further spending if it is demonstrated to be in the public interest.[73]

[69] Hr. Ex. 102 (Aas Direct), Attachment DRA-1, p. 12.
[70] Hr. Ex. 101 (Ihle Direct), p. 85.
[71] Hr. Ex. 116 (Ihle Rebuttal), pp. 54-55.
[72] UCA SOP, pp. 4-5.
[73] CEC SOP, pp. 1-3.

64. The City of Pueblo notes there is a high rate of poverty in the greater Pueblo area and contends gas utility costs that exceed the statutory rate impact cap are not in the best interests of the City and its residents.[74] Pueblo argues carbon emission reduction cannot be "at any cost." Pueblo says its "ask" is that the Commission acknowledge that Public Service does not need to get to full resolution of its carbon emissions efforts in this Proceeding and that the cost of those efforts can best be managed by being spread out in order to moderate the rate impacts.

65. The County of Pueblo argues that the record evidence in this Proceeding is flawed regarding the true cost of electrification and as a result the cost estimates, particularly those of WRA-SWEEP-Conservation Coalition, are not credible or reliable.[75]

66. Staff argues that the Commission cannot approve a plan in this Proceeding that exceeds the cost cap because the Company has not demonstrated that the portfolios presented (aside from the cost target portfolio) provide rate increase mitigation efforts for income-qualified customers sufficient to satisfy the statutory requirement.[76]

67. Several parties suggest the Commission should ensure the Company is on track to meet the 2030 target by exceeding the cost cap in this Proceeding. WRA-SWEEP-Conservation Coalition note that the Company's Cost Target portfolio is projected to result in an increase of two percent in 2030 relative to the 2015 baseline, and such a result would be contrary to the purpose and intent of the clean heat statute.[77] They argue the Company "must exceed the cost cap to have any reasonable chance of meeting its 2030 clean heat target, and it thus is in the public interest to exceed the cost cap and approve a portfolio such as the PFB."[78] Boulder also argues that exceeding

[74] City of Pueblo SOP, p. 2.
[75] County of Pueblo SOP, pp. 3-5.
[76] Staff SOP, p. 16.
[77] WRA-SWEEP-CC SOP, p. 12.
[78] *Id*.

the cost cap is in the public interest because there is no portfolio presented that stays within the constraint of the cost cap and also puts the Company on a trajectory to achieve its statutory targets.[79]

68. CEO argues that the Commission can approve a budget that exceeds the cost cap because the plan would include support for near- and long-term measures to mitigate customer impacts.[80] CEO believes that "rate mitigation" does not require that the clean heat plan reduces rates during the pendency of the plan and that authorizing spending now to achieve longer term benefits to the gas utility system and customers. CEO points out that one way to mitigate the long-term potential rate impact to customers is through careful evaluation of necessary capital investment on the gas system and that longer gas planning framework established by the Commission's Gas Infrastructure Planning Rules is a form of rate mitigation.[81]

b. Findings and Conclusions

69. Based on the record in this Proceeding, we find that it will be necessary and permissible to approve a portfolio of clean heat resources that exceeds the maximum cost impact contemplated by SB21-264. Simply put, it is evident that it will be necessary to exceed the cost cap in order for the Company to be on a realistic path to meeting the statutory 2030 emission reduction target. While the exact amount by which the approved portfolio will exceed the cost cap is discussed below in greater detail in the Cost Recovery section in Section G, the Commission finds here that approving a portfolio of resources that exceeds the cost cap is in the public interest.

70. Although the legislature set a cost cap in SB21-264, it also expressly authorized the Commission to approve a clean heat plan that exceeds that cost cap, based on certain requisite

[79] Boulder SOP, p. 1.
[80] CEO SOP p. 26.
[81] *Id*. at 27.

findings. Section 40-3.2-108(6)(d)(III), C.R.S., provides that the cost cap, which is the maximum cost impact established for compliance with a clean heat target, may be exceeded if the Commission finds that: (1) the plan is in the public interest; (2) costs to customers are reasonable; (3) the plan includes mitigation of rate increases for income-qualified customers; and (4) the benefits of the plan, including the social costs of methane and carbon dioxide, exceed the costs. By statute, the Commission may alter or amend the Company's proposed plan as necessary to ensure that the resulting clean heat plan is in the public interest.[82]

71. Here, we find that a plan exceeding the cost cap is in the public interest because such a plan is necessary to put the Company on track to meet the 2030 statutory target as evidenced by the fact that the Company's "Cost Target" portfolio, which remains under the cost cap, would fall far short of meeting both the 2025 and 2030 emission targets set by the legislature.[83] The Company estimates that it would accomplish a reduction of only 0.37 million metric tons of carbon dioxide emissions by 2028—which is less than 20 percent of the needed reductions by 2030.[84] In order to effectuate the purpose of SB21-264, which is to achieve the clean heat targets by reducing carbon dioxide and methane emissions from gas distribution utilities, the Commission must approve for Public Service a plan that adequately puts the Company on a trajectory to reducing its commensurate emission burden. We find it meaningful that the legislature gave the Commission the discretion to find that additional spending is necessary to meet the prescribed clean heat targets, but did not give the Commission similar discretion to act to lower the Company's required 2030 emission reduction. Given these considerations, we conclude that a plan

[82] *See* § 40-3.2-108(6)(d)(III), C.R.S.
[83] Hr. Ex. 101 (Ihle Direct), p. 32.
[84] Hr. Ex. 101 (Ihle Direct), Attachment JWI-7, p. 7.

that prioritizes the use of cost-effective resources and puts the Company on the trajectory to meet the clean heat target is in the public interest, even if the costs of that plan exceed the cost cap.

72. We are also assured that the plan approved here achieves the prescribed critical emission reductions at a reasonable cost to utility customers. We find that the plan approved here results in costs to customers that are reasonable, which we further discuss below under "Rate Impact Analysis" in Section G (4). Importantly, the portfolio approved here strikes an appropriate balance of emission reductions, costs, and long-term rate impacts. There is no doubt, as throughput on the Company's system declines due to load electrification and other drivers, and without proactive measures by the company to diversify their gas heating business to include clean heat resources, the road ahead could be costly to gas consumers and that long-term rate impacts could be significant. However, we find that the plan approved here represents a reasonable balance of spending over the near term and meaningful emission reduction in furtherance of the clear state mandates.

73. We find the plan approved here is lawful as it adequately includes mitigation of both short and long-term rate increases for income-qualified customers, particularly when paired with the EOC proposal that is discussed further in Section I (4), and by our decision to decline to approve the 2028 budget and allow us to reconsider longer term rate impact issues in the 2026 clean heat plan filing. To this point, Public Service has maintained that its plans can lawfully exceed the cost cap because they include means of rate mitigation for income-qualified customers, including the component that any plan devotes 20 percent of all electrification and DSM spending on programming that directly serves income-qualified customers and customers in disproportionately-impacted communities. Public Service states that its current affordability programs for income-qualified customers already mitigate rate increases for income-qualified

customers and that, under these existing practices, currently enrolled Percentage of Income Payment (PIPP) customers would see limited, if any, bill increases from this Proceeding.[85] We tend to agree with Public Service's advocacy on this point and find that these protections will help mitigate rate increases for income-qualified customers, particularly when combined the Commission's decision to reexamine the ramp-up in clean heat plan investment in the 2026 clean heat plan filing. We also find merit in EOC's proposal to expand PIPP enrollment automatically to income-qualified customers who participate in clean heat plan BE programs (discussed in Section I (4)) and find that this too will help to mitigate rate impacts for income-qualified customers.

74. Finally, we find that the benefits of the approved plan, including the social costs of methane and carbon dioxide, exceed the costs. The Company's own cost-effectiveness analysis indicates that the flex base portfolio presents more benefits than costs under either the mTRC or UTC cost tests.[86] We also find that this analysis by the Company more than likely undercounts the benefits of the plan approved here for several reasons. First, according to the Company's bench request analysis and the scalar and technology adoption modifications to that analysis discussed above, the Commission's approved plan is projected to induce more gas savings and emission reductions than initially associated with the flex base plan (by a margin of 15.4 percent) while requiring a budget that is only slightly higher than the initial flex base plan (by a margin of 6.5 percent) through 2028. Second, the cost-effectiveness of the approved portfolio will be higher because we are removing the least cost-effective resources (*i.e.*, the majority of the supply-side resources). Third, the Company's cost analysis did not include any quantification of the health benefits of the proposed portfolios. As discussed above, WRA's testimony indicates that the reduction of particulate matter (PM2.5) emissions alone results in tens to hundreds of millions of

[85] Public Service SOP. pp. 18-19; Hr. Ex. 116 (Ihle Rebuttal), p. 84.
[86] Hr. Ex, 145, Table DRA-ABO-2.

dollars in health benefits across six years.[87] Further, we are not aware of any attempt in this record to quantify the related health benefits from the reduced emissions of ammonia (NH3), nitrogen oxides (NOx), sulfur oxides (Sox), and volatile organic compounds (VOCs), which are all also related to indoor gas stove use.[88] While WRA's data presents a wide range of benefits and considerations, and only represents the health benefits related to one pollutant, we are confident that qualitatively, any consideration of health benefits in the cost-benefit analysis will show that the approved plan has a greater degree of benefits exceeding the costs.

3. Vertical I Clean Heat Resource Portfolio Proposals

a. Proposals

(1) Cost Cap Portfolio

75. The "Cost Target" portfolio is comprised of DSM, BE, recovered methane, and hydrogen and the Company contends meets the statutory directive in § 40-3.2-108(4)(c)(II)(A), C.R.S. The "Cost Target" portfolio presents a budget for 2024-2028. This proposed portfolio would not meet the 2025 or 2030 emission target but complies with the Company's calculation of the cost statutory cost cap (approximately $34 million annually).[89] The Company estimates that it would accomplish a reduction of 0.37 million metric tons of carbon dioxide emissions by 2028.[90]

(2) Emission Target Portfolio

76. The Company's second presented portfolio is the "Emissions Target" portfolio which the Company contends responds to the statutory directive to present "[a] portfolio that meets the clean heat targets in the applicable plan period using only clean heat resources but that need

[87] Hr. Ex. 1402 (Bilsback Answer), Attachment KB-1, p. 25.
[88] *Id*.
[89] Hr. Ex. 101 (Ihle Direct), p. 32.
[90] Hr. Ex. 101 (Ihle Direct), Attachment JWI-7, p. 7.

not meet the cost cap."[91] The proposal is also comprised of DSM, BE, recovered methane. and hydrogen, but presents a path to achieving the 2030 emissions target at an approximate average cost of $227 million annually through 2028.[92] The Company's "Emissions Target" portfolio has remained largely unchanged throughout the Proceeding.

(3) Flex Portfolio

77. The Company's preferred portfolio evolved through testimony over the course of the Proceeding. On rebuttal, the Company introduced the Flex Portfolio "high" and Flex Portfolio "base" for Commission consideration. The Company defines this rebuttal proposal as an "appropriate balance of costs and emission reductions"[93] which is anticipated to cost $576.4 million (with an additional $119 million in "flex") and reduce by 2030 1.4 to 1.6 million metric tons of carbon dioxide emissions.[94] In this portfolio, the Company proposes a flat $20 million annual spending on recovered methane; no hydrogen spending until 2027 and then $5.7 million on blue hydrogen and $20.1 million on blue and green hydrogen in 2028; an annual additional gas DSM budget ranging from $15.3 million in 2024 to $18.1 million in 2028; and an increasing electrification budget, beginning at $26.7 million in 2024 and increasing to $126.6 million in 2028.[95] The flex base portfolio is anticipated to have a negative net cost—the Company states that with or without the flex process, the proposal "pencils from a CBA perspective."[96]

78. The Company also proposes a "flex check-in" process which would allow for the Commission to augment budgets during this plan period if conditions warrant such. The Company's proposed 2026 check-in would potentially unlock an additional $119 million in

[91] Hr. Ex. 101 (Ihle Direct), p. 34.
[92] Hr. Ex. 101 (Ihle Direct), Attachment JWI-7, p. 7.
[93] Hr. Ex. 116 (Ihle Rebuttal), p. 85.
[94] Hr. Ex. 116 (Ihle Rebuttal), p. 96, Table JWI-R-4; Hr. Ex. 117 (Aas Rebuttal), p. 34, Table DRA-R-4.
[95] Hr. Ex. 116 (Ihle Rebuttal), p. 96, Table JWI-R-4.
[96] Hr. Ex. 116 (Ihle Rebuttal), pp. 104-105.

spending on clean heat resources for 2027 and 2028 through an interim process within this Proceeding in summer 2026.[97] The Company proposes a limited discovery process and a technical conference or similar presentation of information by the Company which would cumulate in a Commission decision regarding how to best allocate the "flex" funds amongst clean heat resource categories.

79. In response to the bench order on March 12, 2024, the Company also submitted a modeling exercise we will refer to as the "Flex Base-No Scalar and AC Replacement" model run. This model run eliminates the scalar mechanism in calculating anticipated programmatic costs and also prioritizes AC replacement with heat pumps. Under this model run, the flex base portfolio would achieve a cumulative abatement through 2030 of approximately 1.9 million metric tons of carbon dioxide emissions.

(4) Pollution Free Buildings Portfolio (PFB)

80. WRA-SWEEP-Conservation Coalition developed an alternative plan which they refer to as the Pollution-Free Buildings (PFB) Portfolio.[98] The PFB proposed portfolio utilizes only BE and gas DSM measures because they argue that these two clean heat resources have the lowest abatement costs per-ton of avoided emissions.[99] They contend that the PFB utilizes a more defensible modeling approach because it prioritizes replacing furnaces with cold-climate heat pumps and also prioritizes replacing air conditioners with heat pumps at end of life, as a decision point separate from furnace replacement and removes the Company's "pessimistic assumptions

[97] The $119 million was previously allocated to recovered methane in the APP. *See* Hr. Ex. 116 (Ihle Rebuttal), p. 94.
[98] Hr. Ex. 1400, Attachment MF-6 (PFB Report), p. 16.
[99] WRA-SWEEP-CC SOP, p. 2.

about electrification."[100] The PFB is projected to cost up to $225 million per year, peaking in 2028.[101]

81. WRA-SWEEP-Conservation Coalition argue that their anticipated BE adoption levels are appropriate and likely achievable and point to Maine as an example of successful program design approaches (including upstream incentives, on-bill financing, and aggressive marketing) that lead to unprecedented levels of heat pump adoption.[102]

b. Party Responses

82. CEO argues against the Commission approving the flex portfolio in whole as presented by the Company because the level of investment and emission reduction is much lower than the Emissions Target Portfolio and is therefore insufficient to ensure the Company meets the 2030 target. CEO recommends the Commission substantially increase the amount of BE spending in the "base budget" and allow for additional BE spending that can be allocated through the 60/90 Day Notice process (instead of the August 2026 flex check-in proposed by the Company). CEO recommends its own revised flex base portfolio which starts with the Company's Flex Portfolio, removes hydrogen resources, and adds an additional $360 million in incremental BE for a total expenditure of $1.01 billion by 2030.[103]

83. Denver supports the adoption of a portfolio that focuses exclusively on demand-side resources and "sides" with WRA-SWEEP-Conservation Coalition who anticipate continued policy support to rapidly transform the market and ensure greater levels of BE adoption.[104] Denver notes that its own new building codes (adopted in 2022) will drive

[100] *Id*. at 3.
[101] Hr. Ex. 1400, Attachment MF-6 (PFB Report), p. 37.
[102] Hr. Ex. 1400, Attachment MF-6 (PFB Report), p. 23.
[103] Hr. Ex. 505, CEO Exhibit presenting modifications to Hr. Ex. 117, Attachment DRA-13.
[104] Denver SOP, p. 3.

electrification for the more than 20 percent of Public Service's service territory within Denver. Denver argues that much of the groundwork has already been laid across the Company's service territory to support electrification levels beyond what the Company modeled. Denver characterizes a portfolio limited to demand-side resources as a "no-regrets" approach to reducing emissions and supports the PFB. Alternatively, Denver suggests that the Commission approve a flex portfolio with certain modifications on the flex process. In the alternative, Denver supports a flex with a higher electrification budget over the first three years, and a flex check-in process that limits any flex spending to additional electrification and allows for ample intervenor participation.[105]

84. COSSA/SEIA suggests the Commission should approve a clean heat plan portfolio that maximizes the use of electrification and DSM before investment in unproven supply-side resources.[106] They argue that prioritizing BE adoption now "rips off the bandage" towards a clean energy future and helps support customers in gaining comfort with the transition to electric heating. They argue that SB21-264 does not require approval of supply-side resources and that the record here does not support the inclusion of any supply-side resources in the approved portfolio.[107]

85. Boulder supports the PFB portfolio and recommends the Commission reject all of the portfolios presented by Public Service due to "multiple material flaws in the modeling" that was used to develop them.[108] Boulder argues that the modeling approach for the supply side resources was inappropriate and applied a bias against demand side resources through the introduction of the scaling factors. Boulder argues that the PFB relies on much more realistic assumptions and proven principles of transforming markets.

[105] Denver SOP, pp. 7-9.
[106] COSSA/SEIA SOP, p. 2.
[107] *Id*.
[108] Boulder SOP, p. 6.

86. UCA continues to advocate for budget restraint in this inaugural clean heat plan and contend that SB21-264 requires the Commission to prioritize customer affordability. UCA argues for an approach that includes BE and DSM measures, but in "realistic" amounts that contribute to accountable emission reductions. UCA urges that no recovered methane, hydrogen, or CNG be included in the final portfolio and that the Commission prioritize investments that lead to capacity reduction approaches.[109]

87. CEC suggests the Commission approve the Company's Cost Target portfolio as an initial baseline and, if warranted in the future, allow for an expanded clean heat plan budget through the flex process. CEC says the Commission should reject Public Service's proposal in favor of a more measured portfolio that recognizes the major cost impacts for customers and learning curve involved for the Company and program participants, while still striving for momentous emission reduction through the clean heat plan process.[110]

88. The County of Pueblo argues that the Commission should only approve a portfolio within the confines of the cost cap (which it states is approximately $12 million in total).[111] It also urges the Commission to find that attaining the "emission goal reduction of 22% by 2030" is not in the public interest at this time.[112] The County of Pueblo also argues against the PFB proposal and further claims the Commission should find that the opinions of Mr. Brant, Ms. Mejia-Cunningham, and Ms. Fickling are "speculative, deficient, based on incorrect facts, have not been tasted [sic] and their potential error rate is unknown" and therefore should be struck from the record.[113]

[109] UCA SOP, pp. 5-9; 24.
[110] CEC SOP, p. 1.
[111] Pueblo County SOP, p. 11.
[112] *Id*.
[113] *Id*.

89. Staff cautions the Commission from relying on the modeling presented by the Company because it could leave a sense of false precision in the process and instead suggests that the Commission adopt an approach of: first, determining an appropriate budget and timeframe for this proceeding; then, determining what the appropriate resources and allocation are appropriate for this plan.[114] Staff advocates for a budget that falls under the cost cap.

c. Findings and Conclusions

90. The Commission may alter or amend the Company's proposed plan as necessary to ensure that the resulting clean heat plan is in the public interest.[115] While we find that the Company's portfolios and the PFB were thoughtfully designed and each have individual merit, we agree with Staff that, at this juncture, the best approach is for the Commission to design a portfolio based on both the Company's modeling efforts and the Commission's determination of an appropriate budget.[116] To that end, we will design a portfolio using the process Staff proposes—by first determining an appropriate spending level and then which clean heat resources should be included in the plan. Based on these considerations, we ultimately do not adopt, in full, any of the parties' proposed portfolios.

4. Supply Side Clean Heat Resources

a. Recovered Methane

91. In its Direct Case, the Company proposed a total recovered methane budget of $219 million over the 2024-2028 period.[117] In its rebuttal case, the Company reduces the amount of proposed spending on recovered methane.[118] Specifically, the Flex Portfolio has a total

[114] Staff SOP, p. 14.
[115] § 40-3.2-108(6)(d)(I), C.R.S.
[116] *See* Staff SOP, pp. 14-15.
[117] Hr. Ex. 116 (Ihle Rebuttal), p. 93.
[118] Hr. Ex. 116 (Ihle Rebuttal), p. 13; Hr. Ex. 121 (Weinberg Rebuttal), p. 13.

recovered methane budget of $100 million over the 2024-2028 period.[119] Each option presented by the Company (except the electrification only portfolio) in Vertical 1 includes some level of recovered methane as a strategy to meeting the clean heat target. It argues that recovered methane is a cost-effective abatement strategy, particularly in light of the evidence that continued gas sales and throughput are expected through the end of the clean heat action period under any scenario.[120] Public Service's position on recovered methane is informed in part by the responses it received to a joint utility recovered methane request for information (Joint RFI). A summary table of the responses the Joint RFI was provided to certain intervenors during discovery and was later admitted as a hearing exhibit.[121] Public Service states that, based on the responses to the RFI, there are "significant volumes" of recovered methane available in Colorado, but the price of the recovered methane varies widely.[122]

(1) Party Positions

92. Staff does not offer a specific recommendation on how the Commission should allocate its chosen budget among the clean heat resources but opines that recovered methane is a less cost-effective way of reducing near-term emissions than the more attractive options of gas DSM and beneficial electrification. Staff states that the main consideration on this point is how much—if at all—the Company should rely on recovered methane.[123]

93. At a high level, CEO supports the use of recovered methane as a clean heat resource and the development of a Colorado recovered methane market, arguing that recovered methane allows for the reduction of emissions in other sectors and encourages the beneficial use of gas, the

[119] Hr. Ex. 116 (Ihle Rebuttal), pp. 93-94.
[120] *Id*. at 16.
[121] *See* Hr. Ex. 121 (Weinberg Rebuttal), Attachment EPW-7.
[122] Hr. Ex. 121 (Weinberg Rebuttal), p. 12.
[123] Hr. Ex. 1300 (Haglund Answer), p. 30.

capture of which is not otherwise required by law.[124] However, CEO argues that additional information and an opportunity for parties and the Commission to review projects is needed before approving specific recovered methane projects. CEO asserts that the record in this Proceeding "does not adequately address the price, emission reductions, and location for recovered methane projects" and that the Company has not complied with Rule 4731(f)(III), 4 CCR 723-4 to identify any portions of the project located in disproportionately impacted communities.[125] CEO opines that the 60/90 Day Notice process is appropriate for swift approval of methane projects, but the Commission could also seek additional process such as a litigated hearing.[126]

94. Similar to CEO, COSSA/SEIA argues that the Company has failed to develop the record in this Proceeding justifying expenditures for recovered methane. COSSA/SEIA argues that the Commission should only approve a recovered methane budget if the Company returns with additional information demonstrating the following: (1) cost certainty based on real-world pricing, not modeling; (2) emissions reductions based on real-world projects, not modeling; (3) procurement of recovered methane molecules, not environmental attributes only; and (4) thoughtful consideration of potential environmental justice impacts and outcomes associated with ratepayer investment in recovered methane projects in Colorado.[127] Unlike CEO, COSSA/SEIA does not propose a specific process for how the Company would demonstrate these factors.

95. Boulder likewise argues that the Commission should reject the recovered methane projects in this Proceeding and require the Company to submit an application for a certificate of public convenience and necessity for any recovered methane projects after sufficient detail is

[124] CEO SOP, pp. 20-21.
[125] CEO SOP, pp. 3, 12.
[126] *Id*. at 12, 20.
[127] COSSA/SEIA SOP, pp. 10, 16.

known. Boulder reasons that this additional process would allow intervenors to evaluate the benefits, costs, and appropriate risk sharing between ratepayers and shareholders.[128]

96. SWEEP-WRA-Conservation Coalition oppose the use of recovered methane. These parties argue that Public Service failed to show how recovered methane—with unknown availability, cost, and emissions intensity—will meet applicable requirements to reduce emissions pursuant to recovered methane protocols at the lowest reasonable cost. [129] They further argue that E3's modeling uses cost and availability estimates that were based on the Company's discussions with recovered methane developers, but these discussions failed to produce an opportunity to actually procure recovered methane. Although Public Service later received responses to the Joint RFI, SWEEP-WRA-Conservation Coalition argue that the Company did not update its modeling to reflect these responses. Moreover, SWEEP-WRA-Conservation Coalition assert that the Joint RFI responses fail to calculate emission reductions using recovered methane protocols, which is necessary to calculate the abatement costs of the recovered methane projects.[130] For similar reasons, CRES/PSR-CO also oppose the use of supply side resources such as recovered methane.[131] CRES/PSR-CO also points to the health benefits associated with stopping the burning of natural gas.[132]

97. Denver also argues that the approved clean heat portfolio should be focused exclusively on demand-side resources as a "no-regrets" approach. Even if it means that the remaining gas molecules in the Company's system retain the same carbon intensity, Denver asserts that purchasing recovered methane is a wasteful distraction. Denver reasons that ratepayer dollars

[128] Boulder SOP, pp. 1, 14.
[129] WRA SOP, p. 10.
[130] *Id*. at 8-9.
[131] CRES/PSR-CO SOP, p. 8.
[132] *Id*. at 3-4.

would be better spent in service to longer-term solutions, such as investments in the electric distribution system to support widespread electrification.[133]

98. UCA argues that the Commission should not include the Company's recovered methane proposals in any approved clean heat plan.[134] UCA asserts that recovered methane is not a cost-effective resource and that the Company will not be able to move forward with recovered methane until the AQCC approves protocols for the specific type of project and Public Service enters into a contract to purchase the recovered methane.[135]

99. In contrast to many of the other intervenors, Pipefitters encourages the Commission to adopt the alternative fuel programs that Public Service proposes. Pipefitters reason that alternative fuel sources would provide family supporting jobs whereas destroying the gas industry will also destroy such jobs.[136] The Colorado Decarbonization Coalition also appears to support clean fuels and points to the benefits of diversification of resource types and the cost-effectiveness of recovered methane.[137] The Decarbonization Coalition advocates for resource diversity and notes that beneficial electrification and DSM rely on the decisions of tens thousands of utility ratepayers.[138]

(2) Public Service's Rebuttal

100. While Public Service reduces its proposed budget for recovered methane in its rebuttal, the Company continues to advocate for a portfolio that uses all available clean heat resources (including recovered methane) to preserve optionality and hedge risk.[139] The Company disputes suggestions from WRA that the E3 model only selects recovered methane because of the

[133] Denver SOP, p. 9.
[134] UCA SOP, p. 13.
[135] *Id*. at 12.
[136] Pipefitters' SOP, p. 3.
[137] Colorado Decarbonization Coalition, pp. 2-5.
[138] Colorado Decarbonization Coalition SOP, pp. 5-6.
[139] Public Service SOP, p. 14.

model's assumptions regarding the pace of electrification or that recovered methane is not cost-competitive with electrification.[140] Public Service also opposes CEO's proposal to require additional processes for the deployment of recovered methane, arguing that this would require "too many Company, stakeholder, and Commission resources, and the numerous notices required before entering into contracts for recovered methane … would stymie the ability to move quickly in clean fuels deployment and potentially chill commercial opportunities."[141] On this last point, during the hearing, Public Service argued that requiring Commission approval for the specific recovered methane procurement contracts could result in the recovered methane providers selling their supplies to other purchasers, such as the California market.[142]

(3) Findings and Conclusions

101. The record in this Proceeding does not establish that recovered methane is a cost-effective emissions reduction tool relative to incremental BE or DSM, especially considering how BE and DSM have persistent emissions benefits.[143] In addition, while BE and DSM have the potential to reduce investments in gas infrastructure, recovered methane does not. Likewise, recovered methane does not produce the added health benefits that BE and DSM do, including lower levels of indoor air pollution and lower emissions of other air pollutants. The record also indicates, however, that there is wide variation in projected pricing for recovered methane, and certain recovered methane sources might have the potential to be cost effective.[144]

[140] *Id*. at 6.
[141] *Id*. at 13.
[142] Hr. Tr. March 13, 2024, pp. 68-69.
[143] Public Service SOP, p. 17, fn. 70 (citing Hr. Ex. 119 (Quillian Rebuttal), p. 20 ("E3 modelling showed that CNG-related environmental attributes had a dollar cost per [MTCO2e] at $19. For comparative purposes in the Amended Preferred Portfolio [and by extension, the Flex portfolio], DSM programs' average abatement cost was $20/MTCO2e, beneficial electrification was $123/MTCO2e, and recovered methane was $219/MTCO2e.").
[144] Hr. Ex. 117 (Aas Rebuttal), p. 24 (noting that E3 "found a wide variation in the emissions savings and abatement costs across projects and feedstock types"); Hr. Ex. 121 (Weinberg Rebuttal), p. 12 (noting that the indicative prices in the Joint RFI show a large spread).

Moreover, the legislature has specifically identified recovered methane as a potential source of a small percentage of the emissions reductions that can be achieved under the clean heat plan, and recovered methane holds some promise in reducing emissions from other sectors, including landfills and wastewater treatment.[145] In short, it is unclear how much specific sources of recovered methane will cost, but even though recovered methane appears to be more expensive on average than other emissions reduction tools, specific sources of recovered methane might be cost effective.

102. Weighing the many uncertainties regarding recovered methane, together with guidance from the legislature that recovered methane may be used as a limited clean heat resource,[146] we find it appropriate to approve a reduced budget for recovered methane with additional process before any of that limited budget can be spent. Specifically, we authorize a $5 million budget for recovered methane in 2025 and 2026, for a total of $10 million, on a net present value basis.[147] This $10 million can be allocated within one or more contracts for specific recovered methane projects, and the term of these contracts may extend beyond 2027 when the current clean heat plan will end. As discussed elsewhere, the coalbed methane market transformation project—if it moves forward—falls within this $10 million budget.

103. While we approve a $10 million dollar budget for recovered methane, we find persuasive the arguments from CEO and other parties for the need for additional process to refine this allocation. Several critical factors regarding recovered methane are relatively unknown on this record, including the abatement costs of available recovered methane projects, the available

[145] § 40-3.2-108(3)(b)(II), C.R.S.

[146] While the statute lists recovered methane as a defined clean heat resource, only five percent of the total emissions reductions required in a clean heat plan for the period from 2026 through 2030 may come from recovered methane projects, subject to certain exceptions. § 40-3.2-108(4)(d), C.R.S. We find that the level of spending approved here for recovered methane will fall well within this statutory confine.

[147] The discount rate for determining the net present value shall be the Company's most recently approved weighted average cost of capital.

quantities of recovered methane, the locations of recovered methane projects, how close such projects are to existing gas infrastructure, which may inform additional infrastructure costs, and how recovered methane plays into a long-term vision of the gas system. Accordingly, we reject the Company's position that CEO's suggestion for additional processes would require too many Company, stakeholder, and Commission resources and "potentially chill commercial opportunities."[148] Critical information regarding the specific recovered methane projects is missing from the record that Public Service presented in this Proceeding. We are confident that ensuring this type of information is examined prior to the Company's use of the budgeted up to $10 million dollars in ratepayer funds is well worth the additional Company, stakeholder, and Commission resources.

104. Thus, Public Service is not authorized expend any part of the $10 million budget unless and until the specific recovered methane projects have gone through a modified 60/90 Day Notice process. In particular, Public Service must provide notice of its plan to acquire recovered methane from a specific project through the 60/90 Day Notice process discussed further below in Section H(1)(c). At a minimum, any such notice must contain the following: (1) the term of the contract (*i.e.*, how many years Public Service would commit to purchase recovered methane); (2) the estimated emissions reductions of the recovered methane pursuant to the approved recovered methane protocols; (3) the anticipated environmental justice impacts of the project, including—pursuant to Rule 4731(f)(III), 4 CCR 723-4—the location of the project and whether any portions are located in disproportionately impacted communities; (4) whether the Company would acquire bundled or unbundled recovered methane and, if unbundled, how such a structure complies with the recovered methane protocols; (5) the total price of the recovered methane,

[148] Public Service SOP, p. 13.

including any infrastructure costs necessary to deliver the recovered methane to Public Service's system, and resulting abatement costs of the recovered methane (*i.e.*, the dollars per MT of CO_2e); and (6) any other material contract terms that are necessary to evaluate whether the acquisition of the recovered methane is in the public interest.

105. Further, we encourage Staff to use its authority under the 60/90 Day Notice process to file a notice of deficiency regarding the proposed acquisition of recovered methane if (1) Public Service's notice fails to establish the above components for each particular recovered methane source, or (2) the abatement cost of the particular recovered methane source does not appear to be cost effective compared to the abatement cost of BE and DSM. If Staff files such a notice of deficiency, the Commission would ultimately decide whether Public Service can proceed with the proposed recovered methane acquisition.

106. Although we empathize with COSSA/SEIA's and Boulder's concerns about the lack of support for specific recovered methane projects on this record, we stop short of requiring additional processes (*e.g.*, an application for a certificate of public convenience and necessity) beyond the additional requirements in the 60/90 Day Notice process set forth above. Public Service has raised concerns that a prolonged administrative review of a specific project might jeopardize the feasibility of the project. We find that CEO's suggested use of the 60/90 Day Notice process, as modified above, appropriately balances the need for additional transparency and review of the specific recovered methane sources with the Company's desire to be able to move forward quickly with the projects.

b. Hydrogen

107. Public Service plans to spend $26 million as part of its Flex Base Portfolio on a combination of blue and green hydrogen in this first clean heat plan period, with spending on

hydrogen beginning in 2027. Public Service argues that hydrogen is an important supply-side clean heat resource that the legislature repeatedly emphasizes the importance of developing hydrogen as a path towards decarbonization.[149]

108. The Company argues intervenors' concerns regarding blending safety and feasibility are addressed by its evidence on rebuttal regarding the safety of blended hydrogen projects in other jurisdictions that had no negative impacts on utility infrastructure or customer appliances.[150] The Company stresses that the Commission should not prejudge and foreclose the potential role of hydrogen and should approve a budget here for use of hydrogen that can get reassessed as needed through the 2026 check-in process.

(1) Party Proposals

109. Most parties are against a budget for hydrogen as part of this clean heat plan, including UCA, Staff, Boulder, COSSA/SEIA, WRA-SWEEP-Conservation Coalition, and Denver.[151]

110. CEO generally supports using hydrogen to lower emissions. but recommends the Commission not approve an initial budget for blue and green hydrogen as part of the resource portfolio at this time.[152] CEO explains the Company's budget request was vague and the Company did not identify the parts of the system that are incompatible with conveying volumes of mixed

[149] Public Service SOP, p. 21.
[150] *Id*. at 22.
[151] *See e.g.*, Boulder SOP, p. 4; Denver SOP, p. 11 (Noting that hydrogen is supply constrained and there are considerable limitations associated with blending hydrogen into gas pipelines); UCA SOP, p. 16 (Calling hydrogen a risky and expensive distraction from the goals of the clean heat plan); Staff SOP, p. 21 (Arguing it is not in the public interest to make significant investment in the natural gas system for the purpose of hydrogen blending because of the Colorado Legislature's recent statutory enactments focusing on electrification); WRA-SWEEP-CC SOP, p. 6 (Arguing Company has not shown that it will be able to acquire hydrogen in this clean heat plan period, and that it did not show it will be cost effective or deployed safely and produce actual emission reductions); and COSSA/SEIA SOP, pp. 16-17 (Questioning the long-term viability of using hydrogen in the gas utility context).
[152] CEO SOP, p. 19.

gas with up to 20 percent hydrogen pursuant to Commission Rule 4553(d)(2), 4 CCR 723-4.[153] However, in general support of hydrogen, CEO explains: The legislature explicitly determined that green and blue hydrogen have the potential to be zero or very low carbon sources of energy for use in a variety of sectors, including the gas distribution system. The legislature also permitted gas utilities to use available tools, including hydrogen, to achieve GHG emission reductions, cost-effectiveness, and equity. While only green hydrogen is an enumerated clean heat resource, the Commission provided legal guidance on the use of non-enumerated resources in clean heat plans.[154]

(2) Findings and Conclusions

111. We decline to adopt any level or budget or emission reductions for hydrogen as part of the portfolio of resources to meet the clean heat target approved in this Proceeding. At this time, there are too many open questions regarding system compatibility for hydrogen blending, additional infrastructure or infrastructure costs, potential contract terms, and actual emission reduction potential to approve any spending now. Despite Commission Rules 4553(d)(II) and 4731(e) prompting the Company to evaluate system compatibility with hydrogen, the Company has thus far declined to provide any analysis of the compatibility of their system, or portions thereof, or cost projections for any necessary upgrades to ensure the safe conveyance of hydrogen blended with methane. The lack of proactive, transparent analysis on compatibility issues and their potential costs hinders our ability to see the future the Company is envisioning as it relates to hydrogen blending.

112. To better inform future proceedings, we instruct that Public Service, if it chooses to present hydrogen as part of a future clean heat plan application, clearly differentiate between blue

[153] *Id*.
[154] *Id*. at 17-18.

and green hydrogen sources in its presentation of portfolios. In this Proceeding, the Commission determined that,[155] given a plain reading of the statute, the Commission must consider whether the proposed plan maximizes the use of clean heat resources prescribed by statute before consideration of other resources. Green hydrogen is an enumerated clean heat resource, while blue hydrogen is not.[156] Therefore, the conflation of the two resources into one category is not a reasonable presentation of information in compliance with Commission Rule 4731. Detailed information, as required by Rule 4731(d)(II), should be presented for each resource, with green hydrogen and blue hydrogen being separate resources.

5. Overall Resource Portfolio, Emissions, Timeline, and Budget Findings and Conclusions

113. Several parties make similar points regarding the nascency of the gas transition and the uncertainties ahead for the later plan years. The Company attempts to address this uncertainty as to how to best allocate spending in 2027 and 2028 with its flex check-in proposal. Staff attempts to address this uncertainty by suggesting the Commission shorten the plan time frame approved here. We agree with the concerns raised by Public Service, Staff, CEC, and others that substantial questions remain related to the later proposed plan years. We also see merit in approving a shorter-term plan as it will allow for any necessary course correction earlier with an eye towards meeting the 2030 target. Pursuant to § 40-3.2-108(6)(d)(I), C.R.S., the Commission has the discretion to order an earlier filing as necessary. Given these considerations, we find it appropriate to approve a clean heat plan budget that extends only through 2027. As discussed below, the Company is

[155] *See* Decision No. C23-0729, ¶ ¶ 58-59, issued October 27, 2023, in Proceeding No. 23A-0392EG.

[156] Section 40-3.2-108(2)(c), C.R.S., enumerates certain resources as "clean heat resources" including green hydrogen (defined as hydrogen derived from a "clean energy resource," which is defined in § 40-2-125.5 (2)(b), C.R.S., that uses water as the source of the hydrogen and may, for purposes of a clean heat plan green hydrogen project, include associated clean energy generation, transmission, and other infrastructure, subject to Commission approval).

directed to file its next clean heat plan no later than July 1, 2026. In that proceeding, the Commission will address the 2028 budget and associated emission reduction goals and therefore we decline to adopt a 2028 budget in this Proceeding.

114. In light of our decision to limit the term of this plan to 2027, there is no need for the Company's proposed flex check in process since the next plan filing is now due in mid-2026. We therefore decline to approve any budget apportioned as future "flex" dollars here. However, we approve some measure of budget flexibility to account for this change to the Company's proposal. Specifically, we allow budget flexibility up to 15 percent per resource and per year if the market demand for the programs indicate that additional funding is needed to expand the maximum abilities of the programs. We also allow budget flexibility across resources in a given year, with the dollar shift limited to 15 percent of the smaller resource budget and also so long as associated technology adoption levels are met for a program the Company wishes to shift funds to. Any use of these flexibility provisions should go through a 60/90 day process as described below in Section H(1)(c).

115. We find that it is reasonable to base the approved budget off the Company's modeling efforts in the Bench Request analysis.[157] We find this a reasonable path forward because that model, derived from the Company's flex base proposal, aligns the Company's proposal with the Commission's determinations regarding modeling, including the inclusion of AC replacement and removal of the BE scalar mechanism. We find that the Company's flex base portfolio, when modified as described, presents a reasonable balance between emission reductions and costs to ratepayers. We therefore approve the following budgets (in $ millions):

[157] Derived from Hr. Ex. 145, Attachment DRA-16, "Flex Base- AC Repl. (No Incen)" tab -- referring to no constraint on AC Replacement and removal of the scalar mechanism.

Measure Bin	2024	2025	2026	2027	Total
Additional Gas DSM – Flex Plan	7.7	16.2	16.9	17.6	58.4
Additional Electrification – Flex Plan	16.7	54.8	75.2	105.4	252.1
Recovered Methane – Approved	0	5	5	0	10
Sub-Total: Vertical 1	*24.4*	*76*	*97.1*	*123*	*320.5*
Mkt. Trans. Portfolio (w/o New Constr.)	4.1	13	9.2	4.2	30.5
New Construction @ 6x	3	13	13	3	32
Sub-Total: Vertical 2	*7.1*	*26.0*	*22.2*	*7.2*	*62.5*
Vertical 1 & 2	31.5	102.0	119.3	130.2	383.0
Flex: 15% per year and 15% across resources, as a % of the smaller program (w/ 60/90 day notice and only after associated adoption levels are met)	4.7	15.3	17.9	19.5	57.5
Grand Total (with 60/90 day check on Flex)	**36.2**	**117.3**	**137.2**	**149.7**	**440.5**

116. We find that this portfolio of resources and commensurate budgets is in the public interest for several reasons.[158] When approving a clean heat plan, the Commission must consider several factors when determining if a plan is in the public interest, including whether:

(a) the clean heat plan achieves the clean heat targets through maximizing the use of clean heat resources;
(b) the additional air quality, environmental, and health benefits of the plan in addition to the greenhouse gas emission reductions;
(c) investments in a clean heat plan prioritize serving customers participating in income-qualified programs and communities historically impacted by air pollution and other energy-related pollution;
(d) the clean heat plan results in a reasonable cost to customers, including savings to customer bills resulting from investments made pursuant to the plan; and
(e) the clean heat plan ensures system reliability.

117. The following table indicates initial projected annual and total abatement levels, including the investment approved through this decision and via the Strategic Issues proceeding (No. 22A-0309EG).

[158] *See* § 40-3.2-108(6)(d)(I), C.R.S.

Measure Bin	2024	2025	2026	2027	Total
Current Gas DSM & BE (funded thru 22A-0309EG)	18,575	35,292	57,847	57,847	169,561
Additional Gas DSM – Flex Plan	17,879	34,284	31,668	29,516	113,347
Additional Electrification – Flex Plan	29,297	92,698	121,223	159,211	402,429
Recovered Methane – Approved	0	2,773	5,546	5,546	13,865
Sub-Total: Vertical 1	*65,750*	*165,047*	*216,284*	*252,120*	*699,201*
Mkt. Trans. Portfolio (w/o New Constr.)	TBD	TBD	TBD	TBD	TBD
New Construction @ 6x	TBD	TBD	TBD	TBD	TBD
Sub-Total: Vertical 2	TBD	TBD	TBD	TBD	TBD
Vertical 1 & 2	65,750	165,047	216,284	252,120	699,201
Flex: 15% on Additional Investment	7,076	19,463	23,766	29,141	79,446
Grand Total (with 60/90 day check on Flex)	**72,826**	**184,510**	**240,050**	**281,261**	**778,647**

Table reflects anticipated GHG emission reduction performance expectations on an annual basis in mCO_2eq

118. The Commission notes that while the plan approved here does not meet a specific clean heat target, when combined with the investment approved in the Strategic Issues proceeding docket, it sets the Company on a reasonable track to meet the 2030 emission target. The Commission also notes that projecting forward emission reduction benefits is not an exact science and that the Commission's decisions in this Order may require the projections provided in the current record to be adjusted. However, given the level of funds approved above and in the Strategic Issues proceeding, the Company's calculations provided through the bench request evaluation, and reasonable modifications to account for ongoing recovered methane purchases, the Commission projects emission reduction benefits of approximately 699,000 tons of CO_2 equivalent through 2027. This figure excludes the flexibility budget of 15 percent, which could add as much as another 79,000 tons of CO_2 equivalent emission reduction, approximately. The abatement values described also exclude the emission reduction benefits of the MTP investments and the Commission's decision to significantly expand the Whole Neighborhood New

Construction program. The Commission believes those additional adjustments could increase the total emission reduction capability significantly. Overall, the funding approved through this decision and 22A-0309EG offer a real and significant opportunity to meet the statutory 2030 emission reduction targets. As part of our order here, we require the Company to submit via a compliance filing an estimate of the emission reduction benefits of the overall approved plan including the components and considerations described in this paragraph.

119. We further find the plan as modified here to be in the public interest because it maximizes the use of cost-effective clean heat resources while ensuring that additional air quality and health benefits[159] are achieved while reducing greenhouse gas emissions. By approving a plan that prioritizes BE, additional air quality and health benefits will be achieved by installation of heat pumps and reduction of methane leakage on the Company's system. Additional benefits are ensured by reducing emission of other air pollutants associated with fossil fuel use, including ammonia, nitrogen oxides, sulfur oxides, and volatile organic compounds.

120. We also find that the plan approved here provides some significant dedicated funding to help serve customers participating in income-qualified programs and communities historically impacted by air pollution and other energy-related pollution. Below in Section I(4), the Commission finds that the Company must spend at least 20 percent of incremental BE an DSM budget on programs that directly benefit income-qualified or disproportionately impacted customers, in addition to other measures that will ensure prioritization of income-qualified customers.

[159] *See* Hr. Ex. 101 (Ihle Direct), p. 84 (explaining additional air quality, environmental, and health benefits of the BE in any portfolio due to the reduction in gas furnace appliances and methane leakage on the Company's system). *See also* Hr. Ex. 1402 (Bilsback Answer), Attachment KB-1, Rev. 1, p. 26 (Table 2).

121. The flex base portfolio, as modified here, prioritizes and maximizes the use of BE and DSM, which the record reflects are the most cost-effective clean heat resources. Further, it ensures the Company have a meaningful opportunity to meet the Company's 2030 emission reduction target of 2.1 million metric tons at a reasonable cost to customers. The Commission (the methodology is discussed in para. 249 below) finds that the plan approved here will increase rates by approximately 7.0 percent for gas rates (6.0 percent without any change in throughput) and electric rates by 1.1 percent (1.2 percent with any change in sales volumes) during the revised plan period (*i.e.*, through 2027), but that considerable uncertainty and potential concerns may arise surrounding the longer-term rate impacts, particularly for income-qualified customers. For now, given our decision to reconsider these longer-term rate issues in the next 2026 clean heat plan filing, we find that this is a reasonable cost to customers in light of the emission reductions associated with this budget and because all modeling in this record suggests such a spending level is necessary to ensure the Company is on pace to meet the 2030 statutory target. Further, the plan approved here has benefits that exceed the costs as discussed above under the "Cost Cap" section.

122. Finally, the Commission finds that the plan will ensure system reliability. While this consideration garnered very little discussion in the instant Proceeding, we agree with the Company that this plan is consistent with the gas infrastructure plan filed in Proceeding No. 23M-0234G, and also does not make any radical or substantial changes to the system that could create risks to system safety and reliability.[160]

[160] *See* Hr. Ex. 101 (Ihle Direct), p. 86.

E. Market Transformation Initiative and Fund Proposals ("Vertical 2")

a. Overall

(1) Proposal

123. The Company states that the goals of the Market Transformation Portfolio (MTP) are to stimulate markets for emissions reductions tools, complement approaches in the clean heat portfolios, and advance understanding of proposed emissions reduction options. The MTP projects are intended to be scalable demonstration projects that provide early insights into how to transform the market to gain emissions reductions at the scale needed to achieve the clean heat targets. The MTP comprises a set of eight stand-alone projects and an Innovation Fund (the subject of Section E (9)) to develop and execute a suite of project concepts. The Company states that it worked with a diverse group of organizations with interest and expertise in the initiatives in the MTP.[161] It proposes a five-year budget of $52.4 million for market transformation projects and $2.5 million annually for the Market Transformation Fund, for a total MTP budget of $64.9 million.

124. The Company articulates the following principles for the MTP:

- Reduce annual and cumulative GHG emissions;
- Reduce natural gas demand, and potentially natural gas infrastructure investment;
- Overcome barriers to market adoptions of technologies or business models;
- Minimize costs and keep customer bills low;
- Enhance the customer experience and customer choice; and
- Ensure equitable distribution of clean heat programs to communities across Colorado.

125. The Company asks the Commission not to "piecemeal" the MTP, but to approve it in full given its reasonable budget. It argues that each component is "critical to providing early-stage support across the range of available emissions reduction options to help develop as

[161] *Id*. at 90-93.

many cost-effective tools as possible."[162] The Company argues that the MTP could drive all-electric construction, neighborhood electrification, improved leak detection, develop a transparent and verifiable certified natural gas (CNG) market, and facilitate future non-pipeline alternatives (NPAs), but that these things will not happen if the Company and project partners don't "have a space to try." The Company emphasizes that the partnership and collaboration the MTP provides will be required to drive market adoption regardless of which clean heat portfolio the Commission selects, and it therefore asks the Commission to approve the entire MTP to help pave the way for this and future clean heat plans.[163]

126. The eight proposed Market Transformation Initiatives are:

1. The Neighborhood Residential Electrification Retrofit;
2. All-Electric New Residential Construction;
3. The Boulder Pearl Street Project Non-Pipeline Alternative;
4. The F3 Reinforcement NPA;
5. The Coalbed Methane project;
6. The Certified Natural Gas pilot;
7. The Advanced Mobile Leak Detection project; and
8. The Hydrogen Blending Demonstration project.

b. Party Positions

127. UCA contends that, except for the two NPA projects, the Commission should reject the MTP and Innovation Fund as part of this clean heat plan, since this proposal is outside the scope of SB21-264, does not provide any direct emission reductions and only would create an unnecessary burden for ratepayers. UCA suggests that the Company focus on proven and approved

[162] Public Service SOP, p. 14.
[163] *Id*. at 15-16.

methods of emission reductions that are cost-effective, in the public interest, and consistent with SB21-264.[164]

128. CEO recommends that in considering approval of the MTP initiatives and concepts, the Commission focus on whether each: (1) has the potential to reduce emissions; (2) has the potential to be a clean heat resource; (3) is a prudent use of ratepayer funds; and (4) is truly exploring a novel technology or program approach. CEO also recommends that if the proposed initiative or concept fails to meet any of criteria 1-3, Public Service may seek cost recovery, but that cost recovery cannot occur through the same riders used to recover clean heat plan or Market Transformation Costs.[165] CEO recommends that the Company be allowed to include verifiable emissions reductions resulting from its MTP projects once they are verified through a third-party evaluation firm and filed in advance of the Company's next clean heat plan.[166]

129. In cross-answer testimony, SWEEP expresses support for the criteria CEO proposes for determining the appropriateness of initiatives or concepts in the MTP, and generally agrees with CEO regarding which particular initiatives and pilots should be rolled into the clean heat plan, and which should remain in the Market Transformation Portfolio.[167]

130. In its SOP, Staff notes that the MTP is not required by statute and that the Company does not intend to count any MTP-related emission reduction toward its clean heat plan goals. Staff states it is therefore wary of using ratepayer funds to support the MTP and recommends that the Commission approve only projects with clean heat resources that are "closer to realization" and reject all Innovation Fund concepts. Staff contends that if the Commission approves any MTP initiatives, it should not allow rider recovery of the costs, as the riders should be reserved solely

[164] Hr. Ex. 310 (Henry Sermos Answer), pp. 7, 34; UCA SOP, pp. 19-21.
[165] Hr. Ex. 501 (Ottesen Answer), pp. 25-26.
[166] *Id*. at 36.
[167] Hr. Ex. 702 (Brant Cross-Answer), pp. 15-19.

for the core purposes of the clean heat plan. MTP costs should instead be deferred without carrying costs and presented in a future rate case following publication and Staff review of project final reports.[168]

131. WRA-SWEEP-Conservation Coalition jointly contend that the Commission should approve only those MTP initiatives that focus on eligible clean heat resources. They therefore support the following: Neighborhood Residential Retrofit, All-Electric New Construction, Pearl St. Mall and Aurora F-3 Reinforcement NPAs, and the Coalbed Methane Recovery project. Finally, they argue that the Commission should allow the Company to proceed with its Advanced Mobile Leak Detection (AMLD) project, but its costs should be recovered via a future rate case rather than the clean heat plan.[169]

132. COSSA/SEIA argues that given the magnitude of customer expenses at issue in the case, it would be unwise to invest in speculative measures so the Commission should use every opportunity it has to trim the unnecessary fat and focus ratepayer investment on proven customer-sited emission reduction measures. It therefore urges the Commission to reject the $65 million in spending on "unproven" MTP measures and the $13 million proposed for CNG acquisition under Vertical 3.[170]

133. Denver opposes the Coalbed Methane, CNG, AMLD, and Hydrogen Blending projects in favor of alternatives that would reduce long-term reliance on the fossil gas system. It recommends that the Commission direct the Company to solicit proposals to partner with local governments to identify market transformation projects and to propose these via the 60/90 Day Notice process. As an example, Denver points to the technical feasibility study being conducted to

[168] Staff SOP, p. 19.
[169] WRA-SWEEP-CC SOP, pp. 21-22.
[170] COSSA/SEIA SOP, pp. 5-6.

convert the Company's steam network into a district thermal energy network and Denver's related follow-on work. Denver contends that these projects represent a scalable alternative to the continued expansion of gas infrastructure. It notes that this initiative could be leveraged to strategically pursue zonal electrification or other initiatives focused on disproportionately impacted communities to ensure they are not left behind in the clean energy transition. Denver contends it would be prudent to direct the Company to propose a portfolio of such projects in its next clean heat plan that account for at least one percent of gas retail sales.[171]

134. The Colorado Decarbonization Coalition strongly supports the MTP and the CNG project in Vertical 3, referring to it as "a cost-effective nation-leading measure."[172] The Colorado Decarbonization Coalition emphasizes that the research and market development proposed by the MTP can serve as a hedge against the significant uncertainties (most notably individual consumer decisions and statutory and code changes) that are inherent in any approved clean heat plan, potentially diversifying clean heat resources and demonstrating new and emerging technologies.[173]

c. Findings and Conclusions

135. Rather than reject the MTP in its entirety as some parties prefer or approve the entire MTP as the Company recommends, we find that the evaluation framework proposed by CEO is a useful way to review and approve or reject the initiatives individually. However we add the following criteria to those CEO proposes that must be satisfied before emission reductions from any initiative may count toward the Company's goals or its costs may be recovered through the clean heat plan riders: (1) the documentation for each initiative must articulate a clear set of objectives for the project; (2) the documentation for each initiative must include a clear timeline

[171] Denver SOP, pp. 14-16.
[172] Colorado Decarbonization Coalition SOP, p. 2.
[173] *Id*. at 6-7.

for project completion; and (3) a final report for each project must be submitted which clearly communicates project outcomes and the potential for scaling the project to a full program. Third-party verified emission reductions complying with the criteria immediately above as well as the first three CEO criteria discussed in paragraph 127 shall be eligible to count toward the Company's emission reduction goals and the costs of the initiatives producing such verified savings shall be recoverable via the applicable rider authorized below.

1. All-electric New Build Initiative

136. This project seeks to better define the market, customer, and supply chain barriers to the widespread deployment of all-electric new construction, and the solutions to address those barriers. It would target a group of 50-100 homes focusing primarily on market-rate homes but will look for opportunities to partner with income qualified new construction. The Company proposes a budget of $5 million.[174]

137. This initiative garnered the support of CEO, Denver, Staff, Conservation Coalition, SWEEP, WRA, among others. CEO recommends that any verified savings be counted toward the emission reduction targets and that costs be recoverable via the clean heat plan riders. CRES/PSR-CO advocate that the Commission require the use of ground-source heat pumps for large buildings, new housing developments and new districts.

138. We find that the promotion of all-electric new construction offers the most cost-effective opportunities to simultaneously reduce both LDC emissions and capital expenditures, and so we are disappointed that that the Company is proposing such a limited pilot program in this area. As Staff states, electrification of new construction is the "low hanging fruit" of avoiding emissions on the gas system.[175] Rather than the Company's proposed limited approach, we find it

[174] Hr. Ex. 101 (Ihle Direct), Attachment JWI-2, p. 10.
[175] Hr. Ex.1300 (Haglund Answer), p. 35.

appropriate to support aggressive electrification of new residential construction, and to do so in a manner that engages multiple builders and mechanical contractors across diverse geographies to best identify the market barriers and potential program approaches to overcome them. Accordingly, we will approve a budget for this initiative of $32 million, an increase of roughly sixfold as compared to the Company's proposal. We expect that this significantly increased funding will allow the Company to influence the construction of several hundred new all-electric homes, working with numerous builders and involving numerous mechanical contractors throughout the state. In designing this initiative, we encourage the Company and parties to consider additional or larger incentives for all-electric neighborhoods (as compared to individual all-electric homes).

139. In implementing this project, we will not require, but strongly encourage the Company to look for opportunities to utilize ground-source heat pumps as suggested by CRES/PSR-CO,[176] where doing so may avoid an upgrade to the electrical capacity that would otherwise be needed to serve electric resistance heating loads on the coldest days. Although ground source heat pumps currently have considerably higher initial costs than air-source units, there may be ways to reduce unit costs when the wells for multiple homes located in close proximity are drilled as part of a single project. Any such cost reductions, coupled with reductions in capital expenditures on new feeder and transformer capacity and service extension capacity enabled by the use of ground-source rather than air-source heat pumps could result in cost-effective ground-source heat pump installations, particularly since the cost of the ground-source heat pumps would be included in the purchase price and therefore the mortgage of the newly-built homes. In addition to the peak capacity advantages, utilization of ground-source heat pumps also has the potential to provide additional job opportunities for the workforce which has historically served

[176] CRES/PSR-CO SOP, p. 5.

projects to expand gas infrastructure, providing for a more strategic and thoughtful workforce transition.

140. We note that per the provisions of Section 5 of HB 23-1252 (codified as § 40-4-121(3)(a), C.R.S.), the Company is required to develop and submit to the Commission a proposal for a pilot thermal energy network program by September 1, 2024. We find that the All-Electric New Residential Construction MTP initiative we are approving here will likely present natural opportunities for the thermal network pilot required by HB 23-1252, and encourage the Company to consider ways to maximize the cross-purpose between these two initiatives. In addition to potential emissions and capital cost reductions, networked geothermal projects offer a potential path to buttress the Company's rate base and mitigate, to some degree, the impact that declining gas throughput may have on its future rates, while also planning for a more strategic workforce transition through a "piped" alternative.

141. Finally with regard to the All-Electric New Residential Construction Initiative, we note that the high densities of newly deployed controllable electric loads resulting from this initiative will present excellent opportunities for integration with the Company's ongoing demand response and virtual power plant efforts. We strongly encourage the Company to enlist the controllable electric loads supported by this initiative into the set of resources that will be managed by the Phase II DERMS it will be procuring pursuant to Commission Decision No. C24-0211 in Proceeding No. 23M-0466EG. We also strongly encourage the Company to take advantage of every such opportunity to integrate its efforts, thereby reducing the capacity and cost of both the electric distribution assets and line extensions that will be needed to serve the all-electric homes participating in this initiative. A failure to meaningfully pursue demand response and virtual power plant options for these new loads could likely result in the Company's system missing out on

significant benefits in optimizing the cost and operations of the distribution, transmission and generation assets that will be required in the future, resulting in higher than necessary costs for ratepayers, which would not serve the public interest.

2. Neighborhood Residential Retrofit Initiative

142. The Neighborhood Residential Retrofit Initiative will seek to better understand how to achieve economies of scale in neighborhood recruitment and implementation of energy efficiency and beneficial electrification measures. The project would cover 100-200 participating single-family homes and would be compared against a control group of 100 single-family homes. The Company proposes a $10 million budget for this project through 2027.[177]

143. This initiative has the support of CEO, Denver, Staff, Conservation Coalition, SWEEP, and WRA. CRES/PSR-CO also express support for the initiative but recommend that the Commission expand it to include a minimum of one hundred income-qualified multifamily units.

144. We approve the budget requested for this initiative and find that it has natural synergies with NPAs in residential areas such as the Aurora F-3 NPA. Accordingly, we strongly encourage the Company to focus this initiative largely or entirely in areas where it is implementing NPAs and expect that in doing so there may be some reduction in the overall budget as compared to implementing this initiative outside of an NPA area. Not only will this initiative supplement and support demand reduction in NPA areas by promoting electrification, but it will likely also reduce the need to provide incentives for new gas appliances in those areas, which has been a controversial aspect of the Aurora F-3 NPA. Any reasonable consolidation will also likely increase the chance of successful execution, as it will strategically limit the amount of individual initiatives to ensure the Company can stay focused on success across initiatives.

[177] Hr. Ex. 101 (Ihle Direct), Attachment JWI-2, p. 7.

145. As with the All-electric New Residential Construction initiative, we find that this initiative is intended to result in high densities of controllable electric loads, which will likely create opportunities for integration with the Company's demand response and virtual powerplant efforts. Accordingly, we strongly encourage the Company to enlist the controllable electric loads subsidized by this initiative into the set of resources that will be managed by the Phase II DERMS it will be procuring pursuant to Commission Decision No. C24-0211 in Proceeding No. 23M-0466EG.

146. We find that there is insufficient information in the record regarding the impact that a requirement to include any minimum number of income-qualified units in the initiative would have on its success. Accordingly, we decline to make such a directive here. However, should this initiative evolve into a full program, we encourage the Company and the parties to investigate the potential for a program element focusing on income-qualified households in disproportionately impacted communities.

147. We find that there is insufficient information in the record regarding the impact that a requirement to include any minimum number of income-qualified units in the initiative would have on its success. Accordingly, we decline to make such a directive here. However, should this initiative evolve into a full program in the future, we encourage the Company and the parties to investigate the potential for a program element focusing on income-qualified households in disproportionately impacted communities.

3. Pearl Street Mall NPA

148. The Pearl Street Mall Initiative would explore the feasibility of pursuing a NPA portfolio, composed of electrification programs, to avoid the need for the planned Pearl Street Mall

expansion project, which would avoid future gas investment for a specific segment of the Company's system. The Company proposed a budget of $4.5 million for this initiative.[178]

149. This initiative is supported by CEO, Denver, Staff, Conservation Coalition, SWEEP, WRA, CRES/PSR-CO. CEO and SWEEP propose that the Mead to East Longmont NPA and Fort Lupton NPA be approved here as well.[179] UCA supports the project but with costs recovered in a rate case rather than via riders.[180]

150. We approve the proposed budget for this initiative. Because we do not have the record in this Proceeding to approve the additional NPAs as proposed by CEO and SWEEP, we decline to do so here. However, we will take this opportunity to reinforce the urgency of continuing to evaluate the cost-effectiveness of additional NPAs between Gas Infrastructure Plan proceedings given the need to begin NPA implementation well in advance of the identified avoidable capital project. Therefore, the Company should not interpret this as a sign to slow down or stop work evaluating and initiating NPAs where alternatives should be evaluated, as the Commission expects upcoming gas infrastructure projects known or reasonably expected to be needed to receive thorough evaluations early enough in advance to pursue appropriate alternatives, if deemed to be cost effective.

4. Aurora F-3 NPA

151. The Aurora F-3 NPA project would explore the feasibility of pursuing a NPA portfolio to avoid the need for the planned F-3 reinforcement capacity expansion project located in the City of Aurora, which would avoid future gas investment for a specific segment of the

[178] Hr. Ex. 101 (Ihle Direct), Attachment JWI-2, p. 17.
[179] Hr. Ex. 702 (Brant Cross-Answer), pp. 15-19.
[180] UCA SOP, pp. 20-21.

Company's system by reducing demand. The Company proposes a budget of $7.5 million for this NPA.[181]

152. This initiative garnered support from numerous parties and opposition from none. SWEEP and CRES/PSR-CO support the project but contend that it should focus exclusively on BE, shell measures and all-electric new construction, excluding efficient gas-fired appliances.[182] UCA also supports the project, but recommends that its costs be recovered through a rate case rather than any approved clean heat plan riders.[183]

153. We approve the proposed budget for this initiative. While we are certainly receptive to the arguments to exclude incentives for high-efficiency gas appliances and are loath to subsidize adoption of new gas equipment, we acknowledge that the record contains no information about the impact that excluding such equipment might have on the success of this NPA. We find that it is more important for this initial NPA effort to succeed in avoiding new distribution capacity than it is to eliminate all incentives for gas-fired equipment. Accordingly, we will not require the elimination of those incentives as SWEEP and CRES/PSR-CO recommend. However, many incentives for gas-fired appliances have already been phased out pursuant to the Commission's decision in Proceeding No. 22A-0309EG,[184] and the Company indicated at hearing that such phase-outs would apply to clean heat-funded programs as well.[185] We again emphasize the overlap between this initiative and the Neighborhood Residential Retrofit initiative, and encourage the Company to combine these two initiatives to the maximum extent possible, which, in part, could serve to limit this concern by focusing more heavily on electrification, as that initiative proposed.

[181] Hr. Ex. 101 (Ihle Direct), Attachment JWI-2, p. 21.
[182] Hr. Ex. 700 (Brant Answer), p. 71.
[183] UCA SOP, pp. 20-21.
[184] *See* Decision No. C23-0413, ¶ ¶ 226-233, in Proceeding No. 22A-0309EG.
[185] Hr. Tr. March 14, 2024, pp. 178-181.

5. Southern Ute Coal Bed Methane Initiative

154. This project would use horizontal drilling for a shallow coal outcropping on the Southern Ute Reservation. Methane which would otherwise be emitted to the atmosphere would be collected, cleaned and injected into a gas transmission pipeline. The Company proposes a budget of $2.7 million annually for this initiative, or $13.5 million through 2028.[186]

155. The Company responds to opposition to the Coal Bed Methane Initiative by noting that it is not proposing to count the related emissions reductions toward its clean heat plan targets at this time but would do so if the recovered methane statutory definition is revised in the future so as to encompass this project. The Company asks that the Commission indicate its support for such a statutory change. The Company contends that this project will produce real environmental and economic development benefits and is worthwhile to pursue regardless of whether the statute is modified.

156. CEO supports project and proposes that the costs and emission reductions due to the Coalbed Methane Initiative be conditionally considered part of the approved portfolio pending a statutory change that would allow coalbed methane to be considered a clean heat resource and the AQCC's adoption of a recovered methane protocol for it. CEO contends that there is no difference between coalbed methane and coal mine methane.[187]

157. Staff opposes project because it doesn't fit within the statutory definition of "recovered methane" for purpose of clean heat plan target compliance.[188]

158. CRES/PSR-CO points out that this source would amount to only about 0.1 percent of Public Service gas sales and could cost as much as three times the cost of conventional gas.

[186] Hr. Ex. 101 (Ihle Direct), Attachment JWI-2, p. 23.
[187] CEO SOP, p. 32.
[188] Hr. Ex. 1300 (Haglund Answer), p.37.

CRES/PSR-CO also notes that the coalbed methane boom in Wyoming was shut down in part due to groundwater contamination. CRES/PSR-CO opposes funding for this project.[189]

159. UCA opposes this project because the captured methane will not count towards clean heat targets, so its cost should not be socialized to ratepayers as part of this proceeding.[190]

160. Denver opposes this project in favor of projects that would lessen dependence on gas.[191]

161. We are generally supportive of the concept of recovering coal bed methane but find that there is insufficient information in the record about the duration of contracts for the recovered methane, whether additional infrastructure and associated capital costs would be needed to integrate this resource into the LDC, or whether the costs presented in this Proceeding represent all costs associated with this potential resource. Accordingly, we find that it is premature to approve the budget for this initiative at this time. If the legislature modifies the definition of recovered methane to include coal bed methane at some point in the future, then methane recovered from the proposed Southern Ute Coal Bed Methane initiative could be procured under same the terms as any other recovered methane, as discussed in Section D (4).

6. Advanced Mobile Leak Detection

162. This project would use highly sensitive detection equipment mounted on vehicles to detect methane passing through its path, allowing crews to cover more area and detect and repair leaks more quickly. The Company proposes a budget of $3.2 million for Advanced Mobile Leak Detection (AMLD) implementation and $0.95 million for leak survey and repair costs.[192]

[189] CRES/PSR-CO SOP, pp. 8-9.
[190] UCA SOP, pp. 10-11.
[191] Hr. Ex. 1800 (Rogers Answer), p. 13.
[192] Hr. Ex. 101 (Ihle Direct), Attachment JWI-2, p. 10.

163. WRA-SWEEP-Conservation Coalition jointly recommend that the Commission allow the Company to proceed with its AMLD project but contend that its costs should be recovered via a future rate case rather than a clean heat plan rider.[193]

164. CEO opposes this initiative because the Company has not provided sufficient information to show that the AMLD leak detection proposal fits the definition of recovered methane or could count toward the clean heat targets. CEO states that it supports AMLD conceptually but contends that it should be implemented in the ordinary course of business with conventional recovery.[194]

165. Staff opposes this project because it considers it premature to approve such an expenditure when the Commission is considering this technology as part of an ongoing rulemaking.[195] Staff contends that the Commission should wait to approve the AMLD initiative until the Commission and the Pipeline and Hazardous Materials Safety Administration develop the rules on advanced leak detection to ensure compliance and efficiency. Staff argues that the Company should not receive rider recovery for the AMLD initiative because the rulemakings could require the Company to undertake advanced leak detection. It argues that cost recovery for this activity should occur through conventional rate recovery.[196]

166. Boulder concurs with Staff that the AMLD initiative should be rejected pending completion of any related rulemaking.[197]

167. CRES/PSR-CO support advanced leak detection but contend it should be required as part of routine service, with its costs recovered in a rate case rather than this Proceeding.[198]

[193] WRA-SWEEP-CC SOP, pp. 21-22.
[194] CEO SOP, pp. 31-32.
[195] Hr. Ex. 1302 (LaMere Answer), pp. 30-31.
[196] Staff SOP, pp. 20-21.
[197] Boulder SOP, p. 6.
[198] CRES/PSR-CO SOP, p. 11.

168. Noting that the Company provided no estimates of emission reduction from this program and in fact stated that it has no such estimates, UCA states that the clean heat plan is not the appropriate platform for this program. UCA encourages the Company to continue improving its leak detection systems through proposals in the gas infrastructure plan, and to provide more concrete information regarding estimated costs and emission reductions in that proceeding.[199]

169. In response to intervenor comments regarding the AMLD Initiative, the Company states that AMLD will eventually allow it to complete in one year the entire-system survey that currently takes three years to complete, and that the roughly $1 million increase in annual operating and maintenance expense associated with AMLD is due in part to incremental expense associated with finding and repairing leaks more quickly. The Company argues that waiting to achieve these benefits as UCA suggests, or only after another rulemaking specific to AMLD, as Staff suggests, does not make sense. The Company argues that the Commission should not delay using this technology to quickly address leaks.[200] With regard to intervenor contentions that the AMLD costs should be recovered in a rate case, the Company suggests that if it incurs the costs to bring forward the benefits of AMLD in this Proceeding, then cost recovery in this Proceeding should also be appropriate.[201]

170. We agree with Staff that it is premature to approve funding for AMLD in this Proceeding when there are rulemakings at both the state and federal levels considering this technology. We will take up consideration of appropriate costs and cost recovery once we have improved clarity on how those proceedings develop. Accordingly, we deny the Company's AMLD proposal at this juncture, however nothing here would preclude the Company from otherwise

[199] Hr. Ex. 301 (Henry-Sermos Answer), pp. 44-46.
[200] Hr. Ex. 122 (Gardner Rebuttal), pp. 8-9.
[201] *Id*. at 10.

making investments in AMLD they identify as prudent for the purpose of improving safety and reducing emissions through leak detection.

7. CNG Pilot

a. Proposal

171. The Company proposes procuring CNG from Williams Energy for one year through its Market Transformation Initiative and if successful, would proceed to purchase additional CNG environmental attributes as part of Vertical 3. The Company argues that the MTP project would provide an opportunity to show the emission benefits that can be achieved and verified through procurement of CNG.[202] The Company anticipates that CNG will come with a modest premium compared to conventional natural gas, mainly due to the environmental attributes associated with CNG. The Company expects that future purchases might incur higher premiums due to its commitment to more robust measurement processes. Company consultant E3 modeled a CNG cost premium range of $0.05-0.10/MMBtu compared to conventional gas purchases. The Company contends that CNG is considered a relatively cost-effective emission reduction tool.[203]

172. The Company proposes budgets of $1 million for the initial MTP pilot and $2.4 million, $4.6 million, and $6.2 million for larger purchases of CNG under Vertical 3 in 2026-2028, respectively. The cost of the CNG environmental attribute would be recovered along with the physical gas through the Company's existing gas cost adjustment rider mechanism.[204]

173. In rebuttal, the Company notes that all clean heat plan portfolios entail ongoing gas sales, and that CNG is an attempt to reduce the emissions associated with that gas further and faster than required by federal and state regulations. The Company argues that all gas produced may

[202] Hr. Ex. 106, Rev. 1 (Lieb Direct), pp. 20-24.
[203] *Id*. at 14.
[204] Hr. Tr. March 11, 2023, pp. 288-289.

eventually comply with very strict leakage requirements, but that this will not be the case within the timeframe of this clean heat plan, and that its proposal would harness the market to accelerate emissions reduction. The Company notes that the abatement cost of CNG is lower than that of DSM, BE and recovered methane, at $19/MT. The Company states it will monitor and update its purchasing program as regulation evolves, either lowering the allowable methane intensity for the pilot or ceasing to purchase CNG if regulations significantly reduce or eliminate the benefits of CNG. The Company contends that its proposed pilot will help ensure transparent verification and avoidance of double counting unless and until a more holistic regime is in place on the regulatory side and recommends that the Commission approve the CNG pilot, stating that it can complement any approved clean heat portfolio, achieve broader and swifter statewide emissions reductions, and push the country forward on meeting its national and international commitments.[205]

b. Intervenor Positions

174. Staff, CEO, Denver, COSSA/SEIA, and SWEEP note that CNG is not a clean heat resource, and so argue that it should neither be approved here nor recovered through the clean heat plan riders or through the gas cost adjustment mechanism. In their opposition to the CNG, Staff, NRDC, Sierra Club, SWEEP, WRA, CRES/PSR-CO, UCA, and Boulder variously argue that: (1) there is no existing baseline at the state or federal level against which to measure emission reductions due to CNG; (2) new state and federal regulations will require significant reduction in fugitive methane leaks, thereby significantly reducing the difference between CNG and minimally compliant gas production in the near future; (3) there is no industry-accepted standard defining certification requirements, allowing operators to select their own certifiers with hand-picked certification requirements; (4) there are serious shortcomings with some monitoring equipment as

[205] Hr. Ex. 119 (Quillian Rebuttal), pp. 7-23.

identified by direct field experience indicating discrepancies between leakage events and operator reporting; (5) that because of the foregoing, the credibility of the entire concept of CNG is severely undermined; (6) that any emission reductions related to CNG are properly accounted for as reductions in the oil and gas sector rather than credited to Xcel ratepayers or toward the achievement of clean heat plan targets; and (7) that CNG is therefore a distraction from Company efforts to use approved clean heat resources to reduce emissions in the distribution or consumption of gas by its customers and achieve its clean heat targets.[206] Furthermore, Boulder points out that Xcel is an investor in a venture capital firm that has invested in a CNG certification company, creating a potential conflict of interest.[207] Boulder also asks the Commission to confirm that CNG will not be eligible for clean heat plan compliance in this or future plans to obviate need for future litigation of the issue.[208]

175. In support of the Company's proposal, Williams Energy, the proposed provider of CNG for the pilot, differentiates the monitoring and quantification regimes that many stakeholders criticize from what Williams' plans are for the CNG pilot.[209] Williams Energy notes that Public Service recognized many of the same concerns raised by opponents of the CNG pilot about the CNG programs offered by early market participants, and was cautious and conscientious in selecting Context Labs as the technology platform partner and certificate generator for the CNG pilot. Williams Energy states that Context Labs provides a robust and granular measurement-based quantification, assessment and verification of emissions intensity across each sector of the natural gas supply.

[206] Hr. Ex. 501 (Ottesen Answer), p. 35; Hr. Ex. 500 (Hay Answer), pp. 84; CEO SOP, p. 30-31; Denver SOP, pp. 10-12; Hr. Ex. 1302 (LaMere Answer), pp. 38-41; Hr. Ex. 1800 (Rogers Answer), pp. 14-15; COSSA/SEIA SOP, pp. 18-19; Hr. Ex. 700 (Brant Answer), pp. 19-20; Hr. Ex. 1400HC (Fickling Answer), pp. 90-98; Hr. Ex. 802 (Copeland Answer), pp. 8-20; Hr. Ex. 801HC (Lehrman Answer), pp. 32-33; Hr. Ex. 1904 (Raynes Answer), pp. 5-6.

[207] Hr. Ex. 801HC (Lehrman Answer), pp. 32-33.

[208] Hr. Ex. 802 (Copeland Answer), pp. 8-20.

[209] Hr. Ex. 203 (Lush Cross-Answer), pp. 6-7.

176. Williams Energy argues that "it would be counter to the goal of reducing greenhouse gas emissions for the Commission to determine that the enumerated clean heat resources are the only permissible pathway to reducing emissions associated with the distribution of natural gas in the State of Colorado. Instead, all concerned members of the public should embrace an all-of-the-above or by-any-means approach to reducing greenhouse emissions as a complement to the enumerated clean heat resources."[210] Williams Energy contends that the CNG pilot, and potential scaling of CNG to 100 percent of Public Service's gas supply in the future, is both an effective and affordable solution to reduce emissions associated with the distribution of natural gas in the State of Colorado, and recommends that the Commission approve it.[211]

c. Findings and Conclusions

177. We find that while the Company's CNG proposal is well-intentioned and could potentially reduce the methane emissions of upstream and midstream producers, the proposal leaves too many questions unanswered for us to approve it here. The most pressing of these questions regards the baseline against which emission reductions due to CNG would be measured. There is no universally-accepted definition of CNG, there are no data in the record indicating average or typical methane intensities for producers in Colorado, nor is there an established state or federal standard setting a ceiling for methane intensity. These issues are more than technicalities, as they make it difficult, if not impossible, to determine the size of any claimed greenhouse gas reductions, making it difficult to understand the value from an emissions standpoint, especially at a time when state regulations governing upstream suppliers are already tightening. Moreover, despite its potential to harness market forces to reduce methane emissions in the supply chain, it is clear that any such emission reductions would not constitute a clean heat resource, and that such

[210] *Id*. at 11.
[211] *Id*. at 14-18.

reductions would accrue to the Scope 1 emissions of Public Service's midstream and upstream suppliers, not to the Company's efforts toward achieving its clean heat plan emission reduction targets. Accordingly, we deny funding for both the CNG pilot proposed as part of the MTP and the ongoing purchases of CNG proposed as part of Vertical 3.

178. Although we are rejecting the Company's CNG proposals, we do find merit in the concept of a market mechanism that establishes incentives for emission reductions from the gas supply chain that credibly exceed the evolving regulatory requirements on that sector. The Company and Williams Energy are of course correct in noting that, no matter how effective the Company's DSM and BE efforts are, gas consumption through the LDC will continue for decades. As the largest purchaser of gas in the state, the Company occupies a uniquely powerful role in its ability to create incentives for a premium, low-leakage natural gas product. Moreover, despite the numerous, apparently well-founded critiques many parties leveled in this Proceeding at the existing CNG certification industry, we do not discount the possibility that efforts to reduce methane leakage well beyond regulatory requirements can be implemented and credibly monitored and quantified. Accordingly, although we reject the CNG proposals here, we acknowledge that there may be a market in ratepayers looking to pay a premium for a gas product that could be verified to have a lower greenhouse gas footprint in the future once some of the unanswered questions about the setting and validity of measurements and baselines are resolved.

8. Hydrogen Blending Proposal

179. SB21-264 enumerates green hydrogen as a clean heat resource to achieve greenhouse gas emissions reductions, cost-effectiveness, and equity.[212] The statute also states that a gas distribution utility may include proposals to make investments in green or blue hydrogen

[212] § 40-3.2-108(2)(c)(III), C.R.S.

projects that will reduce greenhouse gas emissions, and if a utility proposes such a project, the utility must also include a proposal for competitive solicitation.[213]

a. **Proposal**

180. In its initial Application, the Company proposed a Hydrogen Blending Demonstration Project which was intended to demonstrate that the Company can safely and reliably blend hydrogen into its existing gas infrastructure and deliver it to customers. The Company shared four major categories of technical considerations it was evaluating throughout the project: (1) hydrogen supply and storage; (2) hydrogen blending and control; (3) pipeline operations; and (4) customer end-use. Further, the Company stated that it would be further evaluating, and updating for scalability considerations, all safety, technical, engineering, operational, and reliability considerations respective to its proposed technical evaluation categories based on the demonstration project.[214]

181. Specifically, the Company states that The Hydrogen Blending Demonstration Project would be a small-scale initiative utilizing a blending facility in unincorporated Adams County that would blend hydrogen into the existing natural gas supply for approximately 230 residential gas customers in that area. The project would blend hydrogen into the existing natural gas system at incremental percentages (beginning at two percent and anticipating to increase over time up to ten percent hydrogen as the Company continuously monitors and verify operations, safety, and reliability) over a two-year period. The Company believes that increasing to a maximum ten percent hydrogen blend is appropriate, given that this is the Company's first effort, on a small-scale basis, to engage in and study hydrogen blending.[215]

[213] § 40-3.2-108(4)(f), C.R.S.
[214] Hr. Ex. 109 (Gardner Answer), p. 11.
[215] *Id*. at 12.

182. The Company states that this demonstration would present a number of operational considerations for the Company. The Company stated that the overarching metric for the project's success was to safely complete the project, and thereby demonstrate that the Company will be able to consider introducing hydrogen blending more broadly in its system, applying lessons learned from the demonstration project.[216] The Company stated that it would use either blue or green hydrogen as the hydrogen source, and that the demonstration was budgeted at approximately $6.3 million.[217]

183. The Company noted favorable gas system technical, material, and operations conditions as the reason for selecting the project location, and stated that the Company had completed preliminary analyses related to technical, material, and environmental considerations and commenced initial community outreach in the proposed project location.[218]

184. Additionally, the Company states that it does not explicitly know the role of hydrogen in its energy system, but seeks to investigate its potential role and use cases.[219]

b. **Intervenor Positions**

185. Commission Trial Staff,[220] UCA,[221] WRA,[222] Conservation Coalition,[223] Boulder,[224] CRES,[225] PSR,[226] Denver,[227] and SWEEP[228] were uniformly against the Company's original Hydrogen Blending Demonstration Project.

[216] *Id*.
[217] *Id*. at 12-19.
[218] *Id*. at 12-18.
[219] Hr. Ex. 108 (Jensen Answer), p. 15.
[220] Hr. Ex. 1301 (Soufiani Answer), pp. 25-31.
[221] Hr. Ex. 301 (Sermos Answer), p. 6.
[222] Hr. Ex. 1400 (Fickling Answer), p. 101.
[223] Hr. Ex. 600 (Hopkins Answer), pp. 46-55.
[224] Hr. Ex. 800 (Elam Answer), pp. 30-32.
[225] Hr. Ex. 1902 (Howarth Answer), pp. 8-12.
[226] Hr. Ex. 1908 (Swain Answer), p. 8.
[227] Denver SOP, p. 13.
[228] Hr. Ex. 700 (Brant Answer), p 20.

c. Public Service Rebuttal

186. In response to the fairly comprehensive opposition to the Company's initial Hydrogen Blending Demonstration Project, the Company augmented its approach to its hydrogen demonstration in its rebuttal testimony. It states that it will wait until 2026 to pursue its original proposal.[229] The Company's new proposal contains two different, smaller scale hydrogen demonstrations. The Company anticipates that these demonstrations would cost in the range of what it budgeted for its original demonstration – $6.3 million.[230]

187. The Company's first revised proposal is for a demonstration facility with no "live" customers for the purpose of introducing and evaluating the operation of blended hydrogen. The Company states that the project would evaluate some of the same technical, material, and operational considerations that the Company proposed in its original proposal.[231] The Company states that they have not determined where this proposed project would take place, but that it would be located at an existing Company facility, or a new physical facility on Company owned or controlled property developed for this purpose. The Company states that whether the demonstration is an overlay on an existing facility, or a new physical facility developed on Company owned or controlled property, the use of blended hydrogen would be conducted utilizing distribution facilities from the blending equipment that are dedicated to blending, and not interconnected with the Company's general distribution system.[232]

188. The Company's second revised proposal is for a request for information or similar process to identify one or more commercial customer partners interested in receiving blended

[229] Hr. Ex. 123 (Gardner Rebuttal), p. 12.
[230] Hr. Ex. 123 (Gardner Rebuttal), p. 17.
[231] *Id*. at 12-13.
[232] *Id*. at 13.

hydrogen fuel stock. The Company states that it believes there would be customer interest in this solution, presumably as a way for those customers to reduce end-use emissions.[233]

189. The Company does not commit to the type (*i.e.,* color) of the hydrogen it will use in these demonstration projects; rather, it asserts that the small amount of hydrogen used in these projects make the color immaterial, and that the real learning edge is to improve the Company's ability to safely blend hydrogen and gauge customer interest in blended hydrogen.

d. **Findings and Conclusions**

190. The Commission rejects blending hydrogen in a customer demonstration project during this clean heat period, thus we decline to approve the Company's initial Hydrogen Blending Demonstration Project, even with the Company's revised 2026 start date. The Commission also rejects the Company's first revised proposal to blend hydrogen in a Company facility with no "live" customers. At this juncture, the Commission does not see a clear path as outlined by the Company for the blending of green hydrogen on the gas system to be a least-cost, emissions-reducing clean heat resource. Thus, it is unclear without a realistic vision of the role that green hydrogen would or could play as a safe and cost-effective solution on the system at large, in what way the demonstration project would be helpful or a prudent use of ratepayer dollars, in pursuit of a deeply decarbonized future system.

191. The Commission approves the Company's plan to issue a request for information or use a similar process to identify those commercial and industrial customer partners interested in receiving blended hydrogen fuel stock, as identifying hard-to-electrify industrial uses appears at this time to be one of the most compelling paths forward for the Company's interest in hydrogen and the decarbonization that could result. At the end of the request for information period, the

[233] *Id*. at 13-14.

Company should provide a report to the Commission stating which commercial and industrial customers were interested in receiving blended hydrogen fuel stock. This report should also include, for each interested customer, whether that customer is subject to or excluded from paying toward for clean heat-related costs in its energy bills. This will allow the Company and the Commission to better understand the intersection of customers with hard to abate end uses or those interested in a hydrogen blend and customers that are paying toward the Company's clean heat efforts.

192. The Commission denies approval for the Company to move forward with a hydrogen project in partnership with any customer until the Commission has reviewed the request for information results and determined that potential customers benefitting from a potential hydrogen program are paying for that program.

9. Market Innovation Fund Proposals ("Vertical 2")

a. Proposals

193. The Company proposes a Market Innovation Fund (MIF) as a component of the Market Transformation Portfolio, with a proposed annual budget of $2.5 million per year and an initial set of eight concept projects. The Company indicates that it intends to propose and vet additional MIF projects through the 60/90 Day Notice Process in the future. The initial MIF projects proposed are:

a) The Community Ground Source Thermal Energy concept, which seeks to conduct site assessments for community or networked ground source thermal loop as a first step towards meeting the requirements of HB 23-1252, which requires the Company to propose a Thermal Energy pilot project on or before September 1, 2024.

b) The Strategic Partnership Projects concept, which would continue work with customers and communities on innovative projects that reduce emissions with a focus on new infrastructure developments. This could include a variety of innovative programs above and beyond current DSM or BE rebate offerings,

including electrification programs, efficiency, alternative fuel programs or resiliency projects that could enable all-electric builds.

c) The Commercial Flue Gas Capture concept, under which the Company would work with primarily larger commercial customers (such as Ball Arena) to investigate Carbon Capture Utilization and Storage technology that would allow for carbon capture on commercial-sized gas appliances, presenting an opportunity reduce emissions without a major disruption to operations or expensive retrofits.

d) The Universal Weatherization Expansion concept, which explores ways to expand traditional DSM measures to a new level of scale to encourage increased investments in weatherization, both as a standalone energy efficiency measure and as a complement to electrification of space and water heating.

e) The Recovered Methane Coal Mine study concept, which would identify suitable active or inactive mines based on criteria such as the available coal mine gas with sufficient methane content that is eligible for RM credits under the State's Protocol. The study would further identify ballpark cost parameters for coalmine methane refining, compression, and transportation between coal mines and customers, as well as potential large natural gas customers who may be interested in direct injection of coal mine methane in their thermal heating systems.

f) The Biomass Gasification with Biochar concept, which would help identify a pyrolysis technology that could generate carbon neutral hydrogen and create biochar from forestry waste wood, in an economically feasible manner.

g) The Direct Air Capture for Synthetic Natural Gas Production concept, which would test the ability and costs to produce synthetic natural gas from green hydrogen and CO2 collected from the atmosphere, and then deliver it into the Public Service gas grid without any major infrastructure change.

h) The High-Quality Carbon Offsets Study concept, which seeks to significantly build up a Colorado pipeline of carbon offset projects in order to meet the demand for carbon offsets. This study would explore the potential for a pipeline of high-quality carbon offsets, focusing on land- based project types such as improved forest management and avoided grassland conversions, as well as carbon sequestration projects.

b. Party Positions

194. Staff expresses concern about spending ratepayer dollars on pursuits without a clear and viable path to contribute to emissions reductions in a clean heat plan in the near future. Staff's position is that ratepayer funds are best focused on helping the Company develop options that are closer to fruition and avoid more speculative efforts. Staff recommends that the

Commission reject the creation of a Market Transformation "Fund" and its associated budget of $2.5 million per year, arguing that the concepts are too vaguely defined and too far from making a direct contribution to emissions reductions to justify the use of ratepayer funds.[234]

195. SWEEP opposes the Biomass Gasification with Biochar Study, the Direct Air Capture for Synthetic Natural Gas Production, and the High-Quality Carbon Offsets Study, stating that these concepts are unrelated to clean heat resources, are not part of the Pollution-Free Buildings Portfolio, or both.[235]

196. Denver recommends that the Commission approve the inclusion of the Community Ground Source Thermal Energy proposal as part of the market innovation fund. Additionally, Denver encourages the Company to allocate additional resources to explore multi-source district thermal solutions, associated infrastructure challenges and opportunities, and the necessary regulatory pathways that would need to be pursued for the Company to update its thermal energy service offerings.[236]

197. CEO expresses explicit support for the Community Ground Source Thermal Energy Concept, the Commercial Flue Gas Capture Concept and the Recovered Methane Coal Mine Study Concept.[237] CEO also opposes the Carbon Offsets Study.[238]

c. Findings and Conclusions

198. While we agree with Staff that some of the concepts the Company nominates for funding from the Market Innovation Fund lack some specific details at this time, we disagree that the mere fact that a concept appears to be a long way from making a direct contribution toward

[234] Hr. Ex. 1300 (Haglund Answer), pp. 33-34.
[235] Hr. Ex. 700 (Brant Answer), pp. 76-79.
[236] Hr. Ex. 1800 (Rogers Answer), pp. 20-29.
[237] CEO SOP, p. 7.
[238] *Id*.

achievement of the Company's clean heat targets is sufficient justification to reject the establishment of the proposed Fund. Without some level of research and development, concepts that currently appear speculative may never become "closer to fruition." Some of the concepts the Company proposes appear to be worthy of support, as they may identify or accelerate technologies that help to reduce emissions associated with gas consumption. Accordingly, we reject the Staff recommendation to reject the Market Innovation Fund as a whole.

199. In approving the budget for the Fund, we reiterate the criteria listed in paragraph 127 (inclusive of those recommended by CEO), along with the Commissions added requirements from paragraph 134, as the minimum requirements for any project supported by the Fund. Furthermore, we note that some of these concepts would appear to be primarily applicable to the large commercial customers that are frequently transport-only rather than retail gas customers. As the cost of the Fund is to be recovered from the Company's retail customers and because any emission reductions associated with these projects can only assist the Company in achieving its emission reduction targets to the degree that emission reductions come from its retail customers, we caution the Company to ensure that all projects supported by the Fund directly benefit retail customers and have significant potential to reduce the emissions of retail customers.

200. With the above caveats, we find that six of the proposed concepts are worthy of support from the Market Innovation Fund. Specifically, these are: (1) the Community Ground Source Thermal Energy concept; (2) the Strategic Partnership Projects; (3) the Commercial Flue Gas Capture concept; (4) the Universal Weatherization Expansion concept; (5) the Recovered Methane Coal Mine Study; and (6) the Biomass Gasification with Biochar Study.

201. With regard specifically to the Community Ground Source Thermal Energy concept, we encourage the Company to work with communities that have already expressed

interest in this concept, as this should accelerate the Company's progress in this area and leverage existing efforts and funds.

202. Regarding the Direct Air Capture for Synthetic Natural Gas Production concept, we note that this project is opposed by UCA, Staff, and SWEEP because any fuel produced by this method would not qualify as a clean heat resources. We note further that there is extremely little information about this project in the record, but are concerned that this concept would have extremely high carbon abatement costs because both the green hydrogen and direct air capture of CO2 are very energy intensive and expensive. Moreover, the Company has not indicated why an electric or gas utility should conduct this research or what it could learn that could not be gathered from others' research, as there are companies in the private sector attempting to develop this technology. Accordingly, because we find that this project does not have the potential to be a clean heat resource and that it would not be a prudent use of ratepayer funds, we direct the Company not to provide support for it from the Market Innovation Fund.

203. For the same reasons, we reject funding for the proposed High Quality Carbon Offsets Study.

F. Ongoing Gas Throughput Proposals ("Vertical 3")

1. CNG

204. While the Company removed CNG from its preferred clean heat plan portfolio as a result of the Commission's Decision on the Summary Judgment Motion, it continues to advocate for a CNG proposal within the Market Transformation Initiative portfolio as discussed earlier. Notably, because this CNG proposal is outside the Company's clean heat plan portfolios, any emission reductions from the use of CNG would not count towards the Company's efforts to meet the clean heat target.

205. The Company proposes procuring CNG from Williams Energy for 1-year through its Market Transformation Initiative and if successful, would proceed to purchase additional CNG environmental attributes. The Company argues that the project will provide an opportunity to show the emission benefits that can be achieved and verified through procurement of CNG.[239] The Company anticipates that CNG will come at a modest premium compared to conventional natural gas, mainly due to the environmental attributes associated with CNG. In its testimony, the Company references tracking public regulatory filings in other states, like Michigan, Pennsylvania, Washington D.C., and Virginia, where observed cost premiums for CNG have been in line with the Company's projections for the clean heat plan. The Company states that it expects that future purchases might incur higher premiums due to its commitment to more robust measurement processes. Company consultant E3 modeled a CNG cost premium range of $0.05-0.10/MMBtu compared to conventional gas purchases. Despite this, on a cost-per-ton of carbon basis, the Company contends that CNG is considered a relatively cost-effective emission reduction tool.[240]

206. The Company proposes budgets of $2.4 million in 2026, $4.6 million in 2027, and $6.2 million in 2028 to cover the costs of CNG environmental attributes. The Company contends that these figures reflect the Company's commitment to gradually increase its investment in CNG, aligning with the development and maturation of the CNG market. The cost of the CNG environmental attribute would be recovered through the Company's existing gas cost adjustment rider mechanism.[241]

207. Party positions on CNG are described in paragraphs 173-175.

[239] Hr. Ex. 106, Rev. 1 (Lieb Direct), pp. 20-24.
[240] *Id*. at 14.
[241] Hr. Tr. March 11, 2024, pp. 288-289.

208. We reject funding for both the CNG pilot under the MTP and ongoing CNG purchases proposed as part of Vertical 3 as explained in paragraphs 176 and 177.

2. Renewable Connect Natural Gas Proposal

209. Public Service proposes a Renewable Connect Natural Gas program as a voluntary opportunity for ratepayers to purchase bundled carbon offsets and renewable natural gas for a flat rate.[242] The emission reductions and product costs would be separate from the clean heat emission targets and resource portfolio spending. The Company explains that the cost of the RCNG product will vary greatly based on (1) the ratio of renewable natural gas to carbon offsets and (2) customer participation. However, the Company intends for the program to be self-sufficient in that non-participants rates will not be used to support the RCNG program.[243]

a. Party Positions

210. Staff recommends that the Commission reject the RCNG program, citing two main concerns: the use of renewable natural gas and the reliance on carbon offsets, an unregulated product that does not represent a reduction of emissions from the Company's system.[244] Regarding the use of renewable natural gas, Staff argues that Public Service has failed to demonstrate that the RCNG program will comply with statutory mandates for direct reductions in GHG emissions from the distribution and end-use of gas. Staff also asserts that the Company's RCNG proposal is deficient in that it lacks transparency in renewable natural gas procurement and its lifecycle GHG emission reductions.[245] As for the use of carbon offsets, Staff argues that allowing Public Service to sell an unregulated product (carbon offsets) could negatively impact the competitive integrity of the carbon offsets market and that carbon offsets do not produce tangible emissions reductions

[242] Hr. Ex. 107 (Weinberg Direct), pp. 44-45.
[243] *Id.* at 52-53.
[244] Staff SOP, p. 24.
[245] *Id*.

on the Company's system.[246] While Staff ultimately recommends that the Commission reject the RCNG program, if the Commission approves a version of the RCNG program, Staff argues that the program should be modified to only offer RNG with no carbon offsets. Staff requests that the Commission "set precedent" in this Proceeding by removing all aspects of carbon offsets.[247]

211. In its SOP, CEO summarily requests that Public Service's marketing materials explain that participants cannot use the RCNG product for compliance with Greenhouse Gas Emissions and Energy Management for Manufacturers in Colorado ("GEMM") I, GEMM II, or the statewide Building Performance Standards.[248] CEO otherwise does not appear to endorse or oppose the RCNG program.

212. WRA-SWEEP-Conservation Coalition argue that the Commission should reject the RCNG program because "it provides a false sense of climate action, relies on likely overestimated reductions attributable to carbon offsets, and promotes an unfavorable use of [renewable natural gas]."[249] SWEEP in particular asserts that the RCNG program would compete with Public Service's efforts to scale energy efficiency and promote BE.[250] For similar reasons, and consistent with their opposition to any clean fuel, Denver and CRES/PSR-CO oppose the RCNG program.[251] UCA likewise opposes the RCNG program.[252]

213. A significant portion of Boulder's SOP argues against the RCNG program. Among other things, Boulder argues that the RCNG program distracts from effective emissions reductions measures like BE, inappropriately places a heavy reliance on carbon offsets, and does

[246] *Id*. at 25.
[247] Hr. Ex. 1302 (LaMere Answer), pp. 24-25. Staff notes that despite its concerns with the RCNG program, it does not oppose the Company's proposed financial structure in which the program is funded entirely by participating customers who pay a premium on their bill. Hr. Ex. 1302 (LaMere Answer), pp. 16-17.
[248] CEO SOP, p. 6.
[249] WRA SOP, p. 23.
[250] Hr. Ex. 700 (Brant Answer), p. 83.
[251] Denver SOP, pp. 12-13; CRES/PSR-CO SOP, pp. 4-5.
[252] UCA SOP, pp. 11-13.

not decrease the utilization of the gas distribution system.[253] In the alternative, if the Commission authorizes the RCNG, Boulder argues that several modifications to the program must be made. For example, Boulder urges the Commission to require an early termination fee, require Public Service to rename the program given the small amount of renewable natural gas that will be included, and prohibit customers from subscribing to the RCNG program until they have demonstrated participation in approved DSM and BE products or certify that they are unable to participate.[254] In its answer testimony, Boulder argues that if Public Service cannot clarify the mix and source of carbon offsets and renewable natural gas in this Proceeding, the Company should bring back the RCNG in a future proceeding.[255] COSSA/SEIA reiterates in its SOP its agreement with Boulder regarding the RCNG program and recommends that the Commission reject the program.[256]

214. Similar to its recommendation on recovered methane, Pipefitters seems to endorse the RCNG program.[257]

b. **Public Service's Rebuttal**

215. In rebuttal and at hearing, the Company continued to defend the RCNG program. Regarding the unregulated nature of offsets, Public Service compares them to Renewable Energy Certificates (RECs). Public Service notes that it already offers a voluntary program to its electric customers that allows them to purchase RECs from the Company, even though customers could also procure the RECs from third-party vendors.[258] Similar to RECs, the Company argues that purchasing carbon offsets from a regulated utility simplifies the process for customers and ensures

[253] Boulder SOP, pp. 8-12.
[254] *Id*. at 12-13.
[255] Hg. Ex. 801C (Lehrman Answer), pp. 30-31.
[256] COSSA/SEIA SOP, p. 20.
[257] Pipefitters SOP, p. 3.
[258] Hr. Ex. 121 (Weinberg Rebuttal), p. 21.

Commission oversight.[259] Moreover, Public Service reiterates the Company's self-imposed requirements for selecting high quality carbon offset projects. For instance, Public Service states that any carbon offsets would need to be procured from projects within Colorado, and a scientifically robust protocol would ensure that the carbon offsets are additional, real, permanent, only counted once, and verified by an independent third party.[260]

216. Public Service goes on to argue that the RCNG program will not distract from other investments such as electrification. The Company reasons that there is a segment of customers who are interested in participating in the RCNG program and that individual customers "will electrify their appliances if that makes economic sense for a customer…, regardless of whether they will enroll in a program such as [RCNG]."[261] Public Service again refers to its voluntary renewable electricity programs where customers can choose to enroll in such a program but could also decide to install solar panels on their homes.[262]

217. In its SOP, Public Service asserts that voluntary programs like RCNG are imperative. The Company argues that programs like RCNG "get the customer involved in this process, creating a foundation for further engagement as emissions reduction strategies."[263] The Company adds that RCNG can engage income-qualified customers and renters in a manner that electrification may not and that reducing emissions from the gas system will require tens of thousands of customer decisions.[264]

[259] *Id*.
[260] *Id*. at 24-25.
[261] *Id*. at 26.
[262] *Id*.
[263] Public Service SOP, pp. 18-19.
[264] *Id*.

d. Findings and Conclusions

218. The Commission rejects the RCNG program as presented in this Proceeding. Despite the program's name, the RCNG program would be comprised almost entirely of carbon offsets.[265] Several intervenors have raised legitimate concerns about the effectiveness of carbon offsets at reducing emissions. At the very least, Public Service has failed to establish in this Proceeding that the use of carbon offsets reduces carbon dioxide and methane emissions from the distribution and end-use combustion of gas. For this reason, we find unpersuasive the Company's argument that the RCNG program will help "get the customer involved in this process." [266] The process before the Commission in this Proceeding is centered on reducing emissions from the distribution and end-use combustion of gas. Public Service does not argue that the RCNG program's use of carbon offsets will help in this regard.

219. In addition, as currently designed, the RCNG program is likely to create customer confusion and frustrate efforts related to SB21-264 clean heat compliance. Being comprised almost entirely of carbon offsets, the price to participate in the RCNG program could significantly undercut the price of clean heat resources that actually do reduce emissions from the distribution and end-use combustion of gas, which is the Commission's main priority and statutory directive.

220. Nevertheless, we appreciate the concept of a voluntary program that allows those customers who are able and willing to further support greenhouse gas reductions to do so by paying more, particularly if such a program is comprised of verifiable reductions from Colorado CNG and recovered methane with no carbon offsets. There would also need to be transparency so that customers are clear on what they are electing to purchase. With these caveats, we are open to Public

[265] Public Service proposes using 95 percent carbon offsets and five percent renewable natural gas. (Hr. Tr. March 12, 2024, p. 256).

[266] Public Service SOP, pp. 18-19.

Service working with stakeholders and bringing back in a separate application a revised proposal for a voluntary program for natural gas customers. The specifics could be examined by the stakeholders, but any such program should include relatively small amounts of recovered methane—perhaps five or ten percent to keep the program more affordable—with the remainder being comprised of Colorado CNG with verifiable baseline and emissions data so the environmental attributes being offered to customers can be confirmed.

221. While we are open to Public Service proposing such a program, we remain mindful of the potential confusion it could cause. In addition, achieving the core objectives of the approved clean heat plan is a significant undertaking, and we are wary of diverting time and attention away from our primary objectives, as well as the Company doing the same. For these reasons, we stop short of approving the development of a revised voluntary program. If Public Service brings forward a revised program in a separate application or other future proceeding, we are open to evaluating it through the normal adjudicatory process.

G. Cost Recovery

1. Rider Mechanism

222. The Company proposes to implement two new riders outside of base rates to recover the allocable costs from gas and electric customers, which it refers to as the Clean Heat Support Gas Adjustment (CHSGA) and the Clean Heat Support Electric Adjustment (CHSEA), for gas and electric respectively. Public Service contends rider recovery is appropriate for these costs because such treatment will manage and smooth the bill impacts of the programming and investments to advance the measures needed to decarbonize the LDC system.[267]

[267] Hr. Ex. 101 (Ihle Direct), p. 125.

223. The Company proposes that additional gas DSM and the incremental cost of recovered methane would be recovered from the Company's gas customers through the CHSGA rider as well as future hydrogen projects if approved in the future. Costs for BE would be recovered from the Company's electric customers through the CHSEA rider. Allocation issues would be handled separately. The Company explains that both riders would have a similar structure and mechanism to the Company's existing Transportation Electrification Programs Adjustment rider, which captures the costs of Commission-approved TEP spending.[268]

224. The Company argues that transparency around the costs of meeting the statutory emission goals, which is a significant new undertaking by the Company, is an important reason to make clean heat plan cost recovery a clear and separate line item on customers' gas and electric bills. Public Service also claims there is also substantial complexity in potentially combining clean heat plan cost recovery into the existing Demand Side Management Cost Adjustment (DSCMA) mechanisms, at least at this juncture. Public Service explains that among other things, DSMCA costs are not amortized, and the DSMCA includes spending on programs that have little direct relation to clean heat, such as electric energy efficiency. The Company contends that in its inaugural TEP proceeding, No. 20A-0204E, the Company proposed including the TEP revenue requirement in the DSMCA, for reasons similar to those raised by Staff in this Proceeding. The Commission rejected that proposal, requiring the Company to separately collect TEP costs, primarily for transparency reasons.[269]

225. Public Service suggests it would be more appropriate to open a miscellaneous proceeding than attempting a full integration of the riders now, which may have the unintended

[268] *Id*. at 117-118.
[269] Hr. Ex. 116 (Ihle Rebuttal), p. 78-80.

effect of impeding implementation of the clean heat plan approved in this Proceeding.[270] The Company also suggests that it can combine the clean heat and DSM riders at a later time once the technical issues are overcome.

a. **Party Positions**

226. Staff suggests if the Commission approves rider recovery for any clean heat plan costs, it should utilize the existing gas and electric DSMCA riders instead. Staff contends there is sufficient overlap between the activities the Company proposes through its clean heat plan to justify this approach.[271] Staff also contends rider recovery should be limited to the recovery of costs that serve the core purpose of clean heat plans, and not Market Transformation projects that the Company acknowledges the "statute does not explicitly require," or additional measures like CNG that are not enumerated in statute.[272] Staff further suggests that the Commission should apply an asymmetric carrying charge whereby ratepayers earn a carrying cost at the Company's WACC on over-recovery but the Company does not earn a return on under-recovery. Staff contends such a structure would incentivize the Company to avoid over- or under-recovery and is consistent with the existing Transportation Electrification (TEPA) and Transmission (TCA) riders.

227. CEO similarly suggests the Company collect clean heat costs using the existing DSMCA riders, but that recovery through a rider should only be limited to clean heat resources or potential clean heat resources.[273]

b. **Findings and Conclusions**

228. The Commission agrees with Staff and CEO that there is significant overlap between the activities conducted and recovered through the existing DSMCA and the activities

[270] Hr. Ex. 116 (Ihle Rebuttal), p. 79.
[271] Staff SOP, p. 8.
[272] *Id*.
[273] CEO SOP, p. 5.

contemplated here. We note that the Vertical 1 emission reduction activities approved above strongly overlap with activities in the DSMCA. In fact, approved BE and DSM budgets comprise nearly 97 percent of Vertical 1 investment. Accordingly, we find the clean heat riders proposed by the Company are unnecessary for cost recovery of Vertical 1 activities and that costs should be recovered in the DSMCA riders for gas and electric customers, respectively.

229. With respect to cost recovery of Vertical 2 (Market Transformation Portfolio) investments, Staff suggested these activities should not be recovered through any rider as SB21-264 does not explicitly require such projects or investment. We disagree that rider recovery should be limited in this way. First, we note that most of the approved Vertical 2 investment is designed to support enumerated clean heat resources. Second, we note that the approved Market Transformation Portfolio activities represents valuable research in support of overall emissions reduction. Accordingly, we find recovery of approved Vertical 2 spending through the relevant DSMCA riders, consistent with Vertical 1 recovery, to be just and reasonable, and approve that aspect of the Company's proposal.

230. With respect to Staff's proposal to apply an asymmetric carrying charge on over- and under-recovered funds, we find the proposal has merit and appropriately incentivizes the Company to set the riders accurately so that they recover clean heat expenditures as they are incurred. Accordingly, we order the Company to calculate the carrying charge, as proposed by Staff, in its rider recovery application filings.

231. The Commission recognizes, as the Company explains, the mechanics of cost recovery (for example, amortization of rebates) may differ between funds authorized through the Strategic Issues proceeding and those authorized here in this Decision. We only require that the Company clearly explain all calculations in its DSMCA filings including so that the review of such

can be conducted as efficiently as possible. To the extent funds from different authorizing decisions require unique mathematical treatment, the Company should represent each separately in its DSMCA filing before calculating the total dollar value to be recovered.

2. Amortization and Return

232. The Company requests 15-year amortization and weighted average cost of capital (WACC) return on unamortized balances for all rebates and other investment covered in its riders such as NPAs presented in Vertical 2. The Company argues the WACC represents the Company's cost to finance the rebates and other investments. The Company also contends that WACC sends a policy signal to the Company to grow its electrification programming and drive adoption.[274]

233. With respect to calls for a shorter amortization period by SWEEP and CEO, the Company argues the 15-year suggested period aligns with the useful life of the measures and that it manages rate and bill impacts imposed on customers. The Company states that it recognizes that "longer amortization periods can be more costly over the long-term, but rate and bill stability should take priority here."[275]

a. Party Positions

234. WRA-SWEEP-Conservation Coalition suggest that rebates receive a 10-year amortization period and return at the customer deposit rate.[276]

235. Staff calculates a 15-year amortization would turn $1 of investment in $1.71 of recovered costs from ratepayers. Staff opposes the amortization of BE rebates, arguing the Company has a "natural incentive" to promote BE whereas they do not have such an incentive to promote efficiency.[277]

[274] Public Service SOP, p. 29.
[275] *Id*. at 30.
[276] WRA-SWEEP-CC SOP, p. 26-28.
[277] Staff SOP, p. 7.

236. CEO suggests a 4-year amortization period and argues the modification would lower the Company's Return on Investment from 44 percent to nine percent, but only increase customer bills slightly due to shorter amortization period. CEO also notes that Public Service used a WACC of 6.3 percent in its rate calculations even though its electric WACC is 6.95 percent and its gas WACC is 6.7 percent.[278] In response, Public Service takes issue with CEO's "return on investment" calculation, arguing CEO sums the total of all amounts recovered by customers and compares it to the upfront costs and that such a calculation does not accurately report earnings because it excludes the portion of financing costs using debt.[279]

b. **Findings and Conclusions**

237. Determining an appropriate amortization period and return requires consideration of numerous interests. First, amortization represents an opportunity to mitigate immediate rate impacts on current customers, but too long of an amortization period can lead to a significant accumulated burden on future ratepayers. Second, the amortization period and return represent a financial inducement to the Company to engage in the relevant activity and invest consistent with the priorities of the program. We also note that, in approving amortization and rider recovery in the Company's recent Transportation Electrification Plan,[280] the Commission determined that rider recovery in and of itself is a distinct and utility-supportive cost recovery mechanism. We continue to believe that in evaluating the overall inducement to the Company, it is appropriate to consider rider recovery, amortization duration, and allowed return on unauthorized balances as well as other incentive mechanisms that may be available.

[278] CEO SOP, pp. 4-5.
[279] Hr. Ex. 116 (Ihle Rebuttal), pp. 80-81.
[280] *See* Decision No. C24-0223 at ¶ ¶ 181-183, in Proceeding No. 23A-0242E. As of the mail date of this Decision, RRR is pending before the Commission on this issue.

238. We find that CEO's proposed four-year amortization, when combined with DSMCA recovery as approved above, represents a meaningful inducement to the Company and reasonably balances the interests of current and future ratepayers.

239. The Commission also notes that current DSM and BE activities funded through Public Service's Strategic Issues application (*See* Proceeding No. 22A-0309EG) does not receive amortization and return treatment, but the Company is authorized to receive a Performance Incentive Mechanism (PIM) upon reaching certain goals established by our order in that Proceeding.[281] We also note that the Company intends to implement the clean heat related-BE and DSM through the existing set of programs funded through the Strategic Issues proceeding.[282] At this juncture, we recognize that two different inducement structures applicable to two separate pools of funds is not ideal structure, and it is our intention to establish a single efficient mechanism, in due time, that facilitates the goals established above in a clear, consistent and appropriate manner. However, until that inducement mechanism can be harmonized across funding sources, the Company shall keep clear and consistent records so that funds approved through either the Strategic Issues or this clean heat Proceeding are not incentivized with both the DSM bonus and amortization with WACC recovery.

240. The Commission also recognizes that the oversight of these funds and further refinement of the programs to fulfill the goals of the clean heat plan, as modified by this Decision, are the subject of a third proceeding, the Company's 2024-2026 DSM/BE Plan application, Proceeding No. 23A-0589EG. As discussed below, the Commission established in its clean heat

[281] *See* Decision No. C24-0223, ¶ ¶ 252-268.
[282] Hr. Tr. March 14, 2024, pp. 183-184.

plan deliberations a set of guidelines on programmatic implementation that are also relevant to Proceeding No. 23A-0589EG.[283] Those guidelines are discussed further in Section H (b) (1).

3. Beneficial Electrification Cost Allocation

241. Public Service proposes recovering BE costs solely from its electric customers, and says it has multiple reasons for doing so, including: it is the only method that requires gas customers who fully electrify to pay their share of beneficial electrification program costs and it is the only method that does not force gas customers remaining on the system to pay subsidies to electrify customers who leave the gas system.[284] Public Service witness Mr. Ihle further states that recovering BE costs from the electric system is "the only method designed to work over the long term in a high electrification world, in which a majority of customers leave the gas system entirely."[285]

a. Party Positions

242. Staff notes that in the Company's most recent Strategic Issues Proceeding (Proceeding No. 22A-0309EG), the Commission adopted an allocation whereby, among other criteria, costs for measures and programs that seek to electrify existing gas end-uses are allocated 50/50 to electric and natural gas customers. Staff recommends the Commission mirror this "thoughtful and reasonable approach" here in the clean heat plan and recognize that BE provides benefits and imposes costs on both gas and electric ratepayers. Further, because the Company has approximately the same number of gas-only and electric-only customers, the 50/50 allocation serves to not disproportionately burden either group.[286]

[283] On May 16, 2024, the administrative law judge in Proceeding No. 23A-0589EG issued Recommended Decision R24-0347-I, which indicated a settlement agreement is expected by the parties no later than May 30, 2024.

[284] Hr. Ex. 116 (Ihle Rebuttal), pp. 75-76.

[285] *Id*.

[286] Staff SOP, p. 11.

243. CEO recommends that beneficial electrification costs be recovered from electric customers.[287]

244. WRA-SWEEP-Conservation Coalition suggest the Company recover 75 percent of BE costs from gas customers and 25 percent from electric customers. WRA-SWEEP-Conservation Coalition states that "the gas rate base should shoulder the bulk of compliance costs" because it is the gas utility that must reduce emissions.[288] SWEEP suggests gas customers should not be allowed to avoid paying for emissions reduction requirements, which would keep gas bills "artificially low."[289]

245. The Company counters arguments made by WRA-SWEEP-Conservation Coalition stating: requiring gas customers to pay for former gas customers' heat pumps does nothing to reduce the remaining gas customers' emissions; rather, it just pushes their costs upward. Mr. Ihle further contends SWEEP's purpose of its arguments appears to be to *raise* gas bills, and questions whether this will actually spur more electrification as SWEEP appears to hope. Regardless, Mr. Ihle contends, it is inappropriate because it disconnects the group of customers receiving the benefits of BE (that is, those receiving heat pump subsidies and the broader electric customer base that sees relatively lower rates due to increased electric energy consumption) from the group of customers who pay (that is, those remaining on the gas system).[290]

b. **Findings and Conclusions**

246. The Commission finds merit in Staff's proposal. First, we find value in maintaining consistency between our decision here and the findings in Proceeding No. 22A-0309EG. Roughly one year ago, we determined it appropriate that for measures and programs that seek to electrify

[287] Hr. Ex. 500 (Hay Answer), p. 88.
[288] Hr. Ex. 600 (Hopkins Direct), p 51.
[289] Hr. Ex. 700 (Brant Answer), p. 49.
[290] Hr. Ex. 116 (Ihle Rebuttal), p. 75-77.

existing gas end-uses are allocated 50/50 to electric and natural gas customers.[291] The benefits to the electric customers presented by the Company may be largely speculative at this point, assuming that new electric loads provide a benefit, rather than a detriment to the electric grid, which will require more advanced demand response and load management programs consistent with this Commission's expectations, as already explained in other sections. However, at this time, those programs are not in place to the degree needed to maximize benefits. Also, it is not logical for the gas system and its customers to bear no cost of compliance, as suggested by the Company, since that is the system statutorily obligated to reduce emissions. Therefore, we agree with Staff that both gas and electric customers will see benefits and costs of such a fuel switch and believe that a 50/50 allocation is still appropriate at this juncture.

4. Findings and Conclusions Regarding Rate Impacts

247. The Commission notes that the rate impacts incurred by the Company's gas and electric customers depend on a variety of factors including the annual and total budgets approved, the allocation of costs amongst gas and electric customers, sales and throughput volumes, the amortization and return allowed, and whether the costs can be recovered immediately via a rider. In this Decision, the Commission has approved several factors that affect the cost cap calculation: a total budget of $440.5 million which ramps over the clean heat plan period through 2027, a 50/50 allocation of cost amongst gas and electric customers for BE; four-year amortization of non-operating investment and WACC return on unamortized balances; and immediate recovery through existing DSMCA riders. We also note that a significant driver of future rate increases appears to be the assumed reduction in throughput, or sales, across the gas system, as customers employ electrification or DSM. The Commission calculated the rate impacts below in two ways:

[291] *See* Decision No. C22-0413, Proceeding No. 22A-0309EG, ¶ 215.

(i) by holding throughput steady at 2024 levels and only evaluating the direct cost of the clean heat plan investment, and (ii) by also including an estimated impact on throughput due to the clean heat plan investments determined through adjustments to the Company's response to the Bench Request. Those adjustments include: incorporating only one half-year of implementation in 2024 and removal of 2028 from consideration. We estimate, based on these modifications, the Company's annual sales volumes will decline from approximately 141.5 million Dth in 2024 to 120.7 million Dth in 2027.

248. Further, we find it necessary to note that the ultimate rate impacts felt by customers will be a function of the Company's ongoing investment in infrastructure expansion and replacement, or its ability to taper such investment. We note that the Company projects the large majority of costs to maintain the system to persist at similar or increased rates, even if throughput falls considerably. This forecast presents a concerning economic situation moving forward, especially since some significant degree of electrification of gas loads may take place even absent the actions in this plan due to the factors already identified, as well as significant incentives and policy actions also pointing in this direction. This larger, systemic problem likely points to a need to reexamine the strategic planning for how the business will adapt to a future with the potential for significantly lower sales volumes.

249. That being said, the Commission calculates that based on the array of factors mentioned, the approved clean heat plan, inclusive of both programmatic expenses and the resulting decrease in throughput, is projected to increase gas rates by approximately 7.0 percent and electric rates by 1.1 percent over the revised plan period (*i.e.*, through 2027), with significantly larger increases likely on gas rates over the longer-term if clean heat plan investment levels or general electrification adoption rates ramp up or even persist. When excluding the change in sales

forecasted to be caused by this decision (as DSM and other rate impact calculations are conducted), the Commission projects gas and electric customers will experience a 6.0 and 1.2 percent increase, respectively, through 2027.

H. Regulatory Pathway Forward

1. Implementation of 2024-2027 Clean Heat Plan and Programmatic Guidance

a. Alignment Process with 2024-2026 DSM Plan Proceeding

250. In Proceeding No. 23A-0589EG (2024-2026 DSM Plan Proceeding), the Company proposes the following process to address coordination issues:

> After receiving a Commission decision in the clean heat plan, the Company may begin augmenting its existing rebates using Clean Heat funding. Any other changes (such as to equipment eligibility or rebate structure, which are topics of discussion in this proceeding) would not be implemented until this 2024-2026 DSM & BE Plan proceeding is concluded. Historically, the Company has not been required a 60/90 Day Notice to implement bonus rebates, but for transparency the Company would submit an informational filing detailing the new rebate amounts. This process will assist in limiting delay in the Company's ability to inject its new funding into the market to encourage the ability to meet Clean Heat targets. Within 45 days of final Commission decisions in both this proceeding and the Clean Heat proceeding, the Company will make a filing in this 2024-2026 DSM & BE Plan proceeding that summarizes the Company's overarching approach for how it plans to further coordinate any Clean Heat portfolio budgets (referred to as Vertical 1 in Proceeding No. 23A-0392EG) for electrification and energy efficiency with the 2024-2026 DSM & BE Plan.[292]

251. WRA-SWEEP-Conservation Coalition suggest that, regardless of the portfolio selected, the Commission should initiate a process to incorporate this Decision into the 2024-2026 DSM Plan Proceeding eventual final decision. Their recommendation is similar to that put forth by the Company in the 2024-2026 DSM Plan Proceeding excerpted above. They recommend that the Commission specify the Company must do the following after the final decision:

[292] While this proposal by the Company is not before us here, we reference its substance only to indicate that it is similar in nature to the WRA-SWEEP-Conservation Coalition proposal that is before us.

> Within 45 days, convene at least two stakeholder meetings to discuss how to incorporate this CHP decision into the 2024 DSM-BE Plan; circulate an initial proposal to stakeholders at least seven business days before the first stakeholder meeting; in the event BE program eligibility guidance differs between the BE and CHP proceedings, include in their proposal how they will administer programs with different eligibility criteria without creating barriers to program participation; allow for stakeholders to submit written comments based on the initial filing and stakeholder meetings; and, within 90 days, submit a revised, informational filing that is filed as a notice into the DSM-BE proceeding and describes the Company's plans for rebate amortization, expected new program or measure additions, Clean Heat budget allocation by program, and estimated impacts on DSM and BE achievements. The Commission should issue a decision on the filing, taking into account any stakeholder comments and recommendations.[293]

252. Numerous other parties highlighted through testimony and at hearing the importance of maximum possible alignment between existing and future DSM and BE offerings under the clean heat and DSM processes.[294]

253. Neither SB21-264 nor the Commission's rules outline a process by which implementation of the clean heat plan budgets and goals occurs. This Proceeding was designed to set high-level policy guidance and budgets and emission goals to ensure future compliance with the 2030 emission target. However, it is clear that the Commission, the Company, and stakeholders must develop a plan for how the budget approved here will be spent to ensure maximum emission reduction potential under the clean heat plan process, and in a manner in which customer confusion is minimized. We see value in as much alignment as possible between programmatic offerings made under the clean heat plan budget and those made under the Company's current DSM and BE efforts. To that end, we support the general proposals outlined by WRA-SWEEP-Conservation Coalition to utilize a stakeholder process to create an integration plan in the near future.

254. We order that the Company:

[293] WRA-SWEEP-CC SOP, p. 23.
[294] *See e.g.*, Hr. Tr. March 14, 2024, pp. 183-184.

- Allow for immediate "augmentation" of existing rebates using clean heat funding as to not delay the 2024 efforts.
- Within 45 days of final decision in this Proceeding, initiate a stakeholder process that includes at least two stakeholder meetings to discuss how to incorporate this Decision into the 2024-2026 DSM Plan. The stakeholder process should include circulation of an initial proposal to stakeholders at least seven business days before the first stakeholder meeting and allow for stakeholders to submit written comments based on the initial filing and stakeholder meetings; and
- Within 90 days of the kick-off of the stakeholder process, the Company shall submit a revised, informational filing that is filed as a notice into Proceeding No. 23A-0589EG as well as in this Proceeding and describes the Company's plans for integration, including those for rebate amortization, expected new program or measure additions, clean heat budget allocation by program, and estimated impacts on DSM and BE achievements.

255. The Commission anticipates that the guidance provided within this Decision, as well as the results of the 2024-2026 DSM Plan Proceeding will serve as a strong foundation for a stakeholder process that can reach a consensus approach to integration moving forward. In the event that a consensus approach is not reached, the Commission will consider at that time whether additional process is needed.

b. Programmatic-Level Proposals and Guidance

256. We make several findings regarding appropriate programmatic-level implementation for this clean heat plan. As a general matter, we agree with several parties-including UCA, CEO, Staff, and the Company—that highlighted the need for as much alignment as possible between DSM offerings and clean heat plan offerings. We find this alignment necessary to reduce customer and contractor confusion which will help to ensure maximum adoption levels of new technologies. To that end, we require the Company to:

- Align DSM and BE offerings on incentives, eligible measures, customer eligibility, required forms, marketing, customer finance and other program design elements so there is minimal potential for confusion among customers, contractors, and other program participants. In essence, DSM/BE program participants' experience should not differ based on the source of the funds or type of application funds were approved in;

- Leverage third-party implementation entities where reasonably possible to expand customer and contractor awareness of, and participation in, DSM/BE programs. Third-party implementers may be paid for signing up eligible contractors and customers;
- Make progress towards alignment of incentives across funds initiated from both strategic issues and clean heat plan applications over the next 12-18 months. In essence, the Company should be provided a consistent and clear financial signal to run the programs effectively and efficiently with an appropriate level of collaboration and oversight from stakeholder parties; a Because the Company is likely to receive, for the time being, different inducement from implementation of the BE and DSM programs via the strategic issues and clean heat plan proceedings, it should clearly track the expenditure of funds and which budget they fall under. Expenditures should not receive both inducements (i.e., PIM *and* amortization) available from the strategic issues and clean heat plan proceedings, respectively;
- Strategic issues and clean heat plan funds should be spent in the following order: 1) strategic issues funds as specifically approved under the Commission's decision in the strategic issues proceeding (C23-0413) before inclusion of the flexibility budgets; 2) clean heat plan funds as specifically approved under this clean heat plan decision before inclusion of the flexibility budgets; 3) the flexibility budgets approved here in this clean heat plan (per the Commission's oversight of such funds); 4) the flexibility budgets approved in the strategic issues proceeding; and
- Flexibility funding should produce proportional energy savings and/or emission reductions on a unitized basis as primary funding for all resources unless the Company can explain the necessity to change the unit values embedded in the approved primary funding levels.

257. In light of the assumptions made in the E3 modeling, we find certain programmatic guidance important to provide so that we can align program adoption as closely as possible to that modeled by the Company, these requirements include that the Company should:

- Prioritize AC replacements with heat pump as a cost-effective and efficient first step toward broader electrification;
- Make available appliance incentives at the time and place of purchase if procured at a retail seller (e.g., Home Depot or Lowes);
- Directly incent contractors to install BE and DSM measures. Ideally, a significant majority of contractors that work in the Company’s service territory should be eligible to receive incentives; and
- Set or modify in the future incentive levels for customers and contractors so that annual BE adoption levels, at a minimum, reach the yearly CEO Roadmap values.

258. We further find that additional DSM reporting on certain data will aid in refinement of the Company's modeling efforts over time. To that end, we require the Company to collect and report the following data:

- Forecast and report results based on the number of measures installed and the appliance being replaced (if applicable) the utility cost of each measure adopted, the projected energy and emissions savings of each measure adopted, the unitized cost of energy and emissions savings, and the total measures adopted as a percent of the applicable total market activity in the PSCo service territory (as reasonably determined);
- Assess the split incentives issue to determine the number of income-qualified and disproportionately impacted customers (separately) that own their home vs. rent; and whether landlords are properly incented to invest in BE/ DSM in these communities; and
- Acquire cost information of measures installed from participating contractors as well as square footage and age of home, measure capacity (e.g., in cooling tons), installation location, and other data as to support refinement of incentives without being a burden to contractor participation.

c. 60/90 Day Notice Process

259. The Company proposes to implement a similar 60/90 Day Notice process to the mechanism currently in place for the Company's DSM and Transportation Electrification Plan (TEP) program adjustment processes.[295] Public Service states that the 60-Day Notice Process allows for the Company to undertake efficient changes to introduce new programs or adjust existing programs and that the 90-Day Notice Process allows the Company to do the same for programs it seeks to discontinue.[296]

260. Through the 60-Day Notice Process, the Company issues a notice to stakeholders who then have 30 days to provide comments to the Company. After the initial 30 days, the Company then has 30 days to consider the comments and respond to them accordingly. The Company then files a summary report in the appropriate proceeding that summarizes the

[295] Hg. Ex. 101 (Ihle Direct), p. 71.
[296] *Id*. at pp. 71-72.

comments received and why they were incorporated into the final notice or justification of why comments were not incorporated. For a 90-Day Notice, the process is relatively similar. Stakeholders have 30 days to provide comments, and then the Company has 60 days to consider the comments before the Company makes a final decision on the proposed discontinuance.

261. Importantly, the Company is also seeking to remove Staff's Notice of Deficiency authority for the clean heat plan-related 60/90 Day Notice Process. Public Service suggests the Notice of Deficiency has not been used, so therefore it is no longer needed and that Staff or other parties could file an appropriate pleading before ethe Commission in its place.[297]

262. The Company explains that it will file the Clean Heat Plan Annual Reports required by Rule 4733, 4 CCR 723-4. In addition to the required reporting, the Company proposes that the Commission schedule a Commissioners' Information Meeting (CIM) 45 to 60 days after the submission of each Annual Report to allow for dialogue around the contents of the report.[298]

(1) Party Proposals

263. Staff does not necessarily oppose the Company's proposal to adopt the 60/90 Day Notice Process but only if Staff retains full discretion to file a Notice of Deficiency, as was recently approved in the Company's TEP proceeding.[299] Despite the Company's assertion that the Notice of Deficiency mechanism has not been used, Staff views the lack of use as an indicator that the mechanism ensures the Company has incentive to meaningfully engage with stakeholders and implements stakeholder feedback. CEC similarly opposes removal of deficiency ability of Staff and suggests the Company retain the 60/90 Day Notice Process as currently utilized for DSM program offerings.[300]

[297] *Id*. at 72.
[298] *Id*. at 69.
[299] Staff SOP, p. 12.
[300] CEC SOP, p. 10.

(2) Findings and Conclusions

264. We continue the Company's proposal to utilize the same 60/90 Day Notice Process as proposed. However, we agree with Staff and CEC that Staff's ability to file a Notice of Deficiency should continue. We disagree that the process is unnecessary because it has not yet been utilized and see the value in retaining Staff's function to ensure fruitful stakeholder engagement and to ensure the Commission is made aware of programmatic changes as needed.

265. We appreciate the Company's flex plan check-in process proposal and see value in such a process for future proceedings. However, as we discussed above in Section D (5), because of our decision to shorten this plan period to 2027 and require a filing no later than July 2026, we do not see the need for an additional check in during this Proceeding. However, the Company can always request modification of a Commission decision through § 40-6-112, C.R.S. We also note that the Commission's Clean Heat Plan Rules specifically anticipate that situations may arise in which the clean heat plan need to be amended earlier as well.[301]

266. The Company explains that it will file the Clean Heat Plan Annual Reports required by Rule 4733, 4 CCR 723-4. In addition to the required reporting, the Company proposes that the Commission schedule a CIM 45 to 60 days after the submission of each Annual Report to allow for dialogue around the contents of the report.[302] We agree that continued dialogue between the Commission and Public Service on the contents of the reports would be meaningful and anticipate exploring scheduling CIMs in the future as proposed by the Company.

[301] 4 CCR 723-4-4733(b): The utility may request a revision to an existing, approved clean heat plan, as necessary, in order to improve its opportunity of achieving future clean heat targets or otherwise fulfill the purpose of these clean heat plan rules.

[302] Hr. Ex. 101 (Ihle Direct), p. 69.

2. Alignment of Next Clean Heat Plan with Strategic Issues Filing

a. Proposals for Alignment of Clean Heat Plan and DSM Strategic Issues Proceeding

(1) Party Proposals

267. Staff suggests the Commission should direct the Company to combine its next clean heat plan and Strategic Issues applications into one "omnibus" proceeding in an effort to improve regulatory and administrative efficiencies. Specifically, Staff recommends the Commission approve the clean heat plan in this Proceeding for 2024-2026 only, and direct the Company to combine its next clean heat plan application with its next DSM/BE Strategic Issues application, currently expected no later than July 1, 2025.[303] Staff contends there is significant uncertainty associated with this clean heat plan and that the Commission should therefore "avoid locking itself into a 5-year course of action and instead retain the flexibility to revisit Clean Heat after the first couple years of implementation."[304]

268. Staff suggests combining the strategic issues and clean heat plan proceedings for three reasons. First, several of the Company's proposals in this clean heat plan filing augment or expand upon the Company's existing DSM and BE programs, but propose different cost recovery mechanisms and incentives. Staff is concerned that this situation "will lead to confusion over whether an individual DSM or BE measure will be treated as DSM or clean heat plan for purposes of cost recovery and calculation of incentives."[305] Second, the proposal would eliminate any duplicative review of such spending caused by keeping the applications separate. Third, Staff maintains that combining the proceedings provides a significantly improved knowledge base for stakeholders, the Commission, and the public, to better understand and consider the Company's

[303] *See* Decision No. C23-0413, ¶ 281, issued in Proceeding No. 22A-0309EG.
[304] Hr. Ex. 1300 (Haglund Answer), p. 13.
[305] Staff SOP, p. 5.

DSM/BE Plan applications with a more comprehensive and holistic foundation set. Finally, Staff notes that these proceedings are large and generate significant evidentiary records with many intervenors. Combining like proceedings would allow the Commission to better keep track of overlapping issues, testimony, and proposals. Staff suggests combining applications will "eliminate confusion in filings and avoid the veritable spider's web of facts, decisions, and programs that have become all too commonplace before the Commission."[306]

269. Public Service argues it would be premature and overly complex to combine the next clean heat plan filing with the next Strategic Issues filing. The Company says that approach could create significant complication and impede the implementation of the clean heat plan if the stakeholders must litigate an entirely new plan in 2025. The Company recommends further study of the potential overlap between the two proceedings in a miscellaneous proceeding. It also contends there would be too little time between a final order in this proceeding and a new filing next year for the Company, stakeholders, and the Commission to learn from implementation or for market conditions to materially change in a way that could be measured and incorporated into a new plan.[307] The Company would need to begin "locking down" that modeling by the end of the first quarter of 2025. At that point, the Company would have been implementing this inaugural clean heat plan for only 6-9 months, after at most one winter heating season. The Company also notes that planning and filing a clean heat plan is a major undertaking that requires significant staff time and resources for outside support, and requires significant resources of the parties.

270. Public Service also objects to aligning the clean heat plan and strategic issues generally, arguing the two proceedings arise from different statutes, have different histories, and seek to address different goals. Public Service also notes that the topics addressed in clean heat

[306] *Id*. at 7.
[307] Hr. Ex. 116 (Ihle Rebuttal), p. 88.

and Strategic Issues overlap only partially and that DSM/BE proceedings exclude clean fuels, mitigation of leakage, and other supply-side issues. Further, the Company argues, the primary metric of success in clean heat is greenhouse gas emissions reductions, as compared to the "net annual savings" metric used in DSM.[308] Similarly, cost-effectiveness is considered differently in clean heat and the mTRC does not apply. In Mr. Mark's view, this would complicate a combined proceeding that sought to evaluate all DSM/BE activity in one place.

(2) Findings and Conclusions

271. The Commission finds that several arguments made by Staff ring true. First, as described above, there is significant overlap between the Strategic Issues and clean heat proceedings, particularly given the modifications made by the Commission in this Decision. Second, there is unique treatment of both cost recovery and cost-effectiveness evaluation based on the source of the funds, and as the Commission described above, it is our intention to find a single, consistent approach to these issues as soon as reasonably practicable. Finally, we wholeheartedly agree with Staff that combining like proceedings would allow the Commission to better keep track of the issues, testimony, proposals, and eliminate confusion across filings. Additionally, as brought up earlier, an alignment of incentives between these very similar, concurrent efforts would benefit the process and best serve the public interest. We note that the growing number of adjudications (many of which are completely new to the Commission and were established through recent legislation) represent a constraint of time and attention on the Commission, the Company, and the parties, which requires us to be strategic in their execution. Therefore, we find that it is necessary to combine proceedings in order to carry out the overall mandate of the Commission: to carry out

[308] Hr. Ex. 120 (Mark Rebuttal), p. 54.

regulatory oversight in an efficient and timely manner for the mutual benefit of ratepayers and the companies that serve them essential energy services at rates deemed just and reasonable.

272. We also find merit in the Company's argument that its programs are just now gaining valuable experience and data, and that requiring a 2025 re-submission of a clean heat plan filing will only further burden the Company, stakeholders and the Commission before such experience can be garnered and evaluated. Pursuant to § 40-3.2-103, C.R.S., the Company's next Strategic Issues proceeding must be submitted no later than July 2026. While this statutory timing constraint forces the combined filing slightly earlier than preferred, the Commission believes a combined strategic issues/clean heat plan filing no later than July 2026, on balance, represents the best path forward. Accordingly, we require the Company to file a combined clean heat plan and strategic issues application at that time, and to incorporate in its application a proposal and thorough evaluation of a single, consistent mechanism to incentivize the Company effectively and efficiently. The incentive mechanism should look to establish a symmetrical incentive and penalty structure around greenhouse gas emissions across the system and their cost-effective achievement. Overall, at some point in the future, it may be useful to find ways to better explore the linkages between the clean heat plan and DSM / BE SI filings and the gas infrastructure plan so that the interactions among load forecasting approaches, broader capital spending, DSM and BE investments, emission reductions, and rate impacts can all be considered on a more integrated basis.

3. Filing Guidance for Combined SI/Clean Heat Plan Filing

(1) Gas Consumption Forecasts

273. Commission Rule 4731(a), 4 CCR 723-4 requires the Company to conduct initial forecasts of sales, customer counts, system wide capacity, throughput by fuel type, and emissions

and include, among other things, the effect of current and enacted state and local building codes and changes in line extension policies. The Commission's Rules Regulating Gas Utilities also align the forecasting requirements between the clean heat plan and gas infrastructure planning processes; in response to the Company's most recent gas infrastructure planning informational filing in Proceeding No. 23M-0234G, the Commission discussed shortcomings of the forecast filed in that proceeding and required extensive improvement to the Company's forecasting processes to include all the relevant components under Rule 4731(a), 4 CCR 723-4.[309] Those improvements are expected in the Company's upcoming gas infrastructure planning application to be submitted in 2025 pursuant to Rule 4552(a), 4 CCR 723-4.

274. The Company explains in its Application that customer counts have been growing 1.1 percent per year, mostly in the residential class and weather-adjusted sales growth has been slightly lower at 1.0 percent per year. Going forward, the Company projects a slight decrease in gas throughput due to current DSM/BE programs. However, that throughput results in emissions that remain well above the 2015 baseline emissions, and results in emission levels that do not meet the statutory 22 percent emission reduction target in 2030.[310]

275. CEO argues the Commission should require the Company to include in its forecasting the impacts of State Building Performance Standards and local building benchmarking and performance programs, as well as Colorado's State tax incentives for heat pump systems in the Company's gas load forecast. CEO also contends the Company's gas consumption forecast, which informs the resource selection model developed by consulting firm E3 failed to include mid-sized commercial buildings, large commercial buildings, and industrial customers.[311]

[309] *See* Decision No. C24-0092, in Proceeding No. 23M-0234G, at ¶ 24.
[310] *See e.g.*, Hr. Ex. 101 (Ihle Direct), pp. 158-159.
[311] CEO SOP, p. 4.

276. The Commission notes that the clean heat plan process, by design or until modification, only represents gas emissions among *retail sales* customers (that is, not those receiving transport service). It is generally understood that large commercial and industrial customers procure primarily transport service from Public Service and report their own emissions to the U.S. Environmental Protection Agency. The Commission generally agrees with CEO that if commercial and industrial customers are taking sales service from Public Service or are not reporting their emissions to the U.S. Environmental Protection Agency, the Commission should be aware of such discrepancies. Accordingly, we order Public Service, to the extent it maintains or can obtain such information, to report it as part of the Commission's intended proceeding to be initiated shortly after this Proceeding concludes into the relationship between clean heat initiatives and transport service customers as described in Section I (2).

277. With respect to CEO's contention that the Company failed to comply with Rule 4731(a), 4 CCR 723-4, the Commission notes that we made lengthy findings regarding the inadequacies of Public Service's gas forecasting process as part of our decision in the Company's gas infrastructure plan proceeding (Proceeding No. 23M-0234G). Unfortunately, no more advanced forecasting methodology was put forth in this proceeding, either. Based on that order, the Commission is expecting a forecast that fully complies with Rule 4731(a), 4 CCR 723-4 to be submitted with the Company's 2025 gas infrastructure plan. Compliant forecasting, inclusive of the many factors that could change the upcoming trajectory of gas sales, could lead to significantly improved and even different outcomes related to adoption and cost projections, so we wish to once again emphasize the importance of moving forward with improvements to this work. While we generally agree with CEO that the Company's gas forecast does not meet the letter or intent of Rule 4731(a), 4 CCR 723-4 we recognize such requirements will take a concerted effort by the

Company. We believe our decision in Proceeding No. 23M-0234G (Decision No. C24-0092, mailed February 15, 2024) appropriately addressed the Company's gas forecasting process inadequacies and established expectations for the next gas infrastructure plan submission (which will also be a fully adjudicated application). Accordingly, we decline to provide additional requirements or guidance at this time as it relates to the gas forecast.

I. Other Issues

1. On Bill Financing Proceeding

278. Several parties argued that the availability of capital is a barrier to BE and DSM adoption. The PFB report, developed by WRA, SWEEP and Conservation Coalition, discusses the need for attractive financing to support the initial cost homes and businesses first encounter when considering BE and DSM technologies and services.[312] They explain that "financing which allows building owners to avoid a large upfront cost, while saving money over time on their utility bills, would be ideal."[313] The Commission strongly agrees with this and notes that we have indicated to the Company, over several decades of proceedings and decisions, the need to implement an on-bill financing mechanism so that finance-related barriers can be overcome efficiently and effectively.

279. The Commission also notes that, during the Company's ongoing DSM/BE Plan proceeding, No. 23A-0589EG, the issue of on-bill financing was raised via supplemental direct testimony required by the Commission and responded to by the parties there. In supplemental direct in the 23A-0589EG proceeding, the Company has offered to file a specific application to implement a tariffed on-bill finance (TOBF) program within 60 days of a decision there.[314]

[312] Hr. Ex. 1400 (Fickling Answer), Att. MF-6, p. 23.
[313] *Id*. at 26.
[314] *See* Hr. Ex. 106 (Mark Supplemental Direct), p. 5, filed in Proceeding No. 23A-0589EG, on February 12, 2024.

Several parties have requested the Commission require a TOBF application as early as September 30, 2025, several days after the Commission's 250-day deadline in that proceeding.

280. The Commission recognizes these are inter-related but distinct dockets with overlapping but still-unique lists of parties, and that the 23A-0589EG proceeding is currently before an administrative law judge.[315] Accordingly, we don't want to try that case here. Nonetheless, we feel obliged to indicate that we generally support the concept brought forward by the Company to initiate a separate application no later than 60 days following the completion of that proceeding, or by November 15, 2024, whichever is earlier.

281. Any such proposal from the company for a TOBF program should make the program available to all customers, provide subsidized financing rates, with streamlined enrollment and approval procedures. The program should include the incorporation of any incentives in financed customer costs.

2. "Seams Issues"

282. The Company describes two major issues as "seams issues" in its filings: the eligibility and cost sharing of BE programs to customers who take either gas or electric service from a provider *other* than Public Service, and similar questions of program eligibility and cost allocation as applied to transportation customers. The issue of cost sharing, also referred to as *allocation*, amongst sales customers, is discussed separately under the broader heading of cost recovery (Section G (3)). With respect to program eligibility, the Company proposes to limit BE programming available through this clean heat plan application to "combination customers" that take both gas and electric service from Public Service. The Company explains it is proposing this

[315] On May 17, 2024, the parties to that proceeding reported to the administrative law judge that they have come to terms on a full settlement, and proposed to submit that settlement for the administrative law judge's approval by May 31, 2024.

limitation only for incentives provided during this nascent stage of clean heat programs, and that it is not opposed to expanding electrification programs to its gas-only customers in the future.[316]

283. The Company suggests it is inappropriate to decide seams issues here as not all potential electric providers for our gas-only customers are likely to be parties to this Proceeding. Public Service also notes that such seams issues will not be an issue unique to Public Service. The Company suggests the Commission open a miscellaneous proceeding within 60 days of a final order in this Proceeding to explore these seams issues and other questions that arise that require Commission and stakeholder input prior to the filing of the Company's next clean heat plan application.[317]

284. Public Service argues that if beneficial electrification spending is paid for using an electric-side rider, as the Company proposes, gas-only customers that electrify would receive a subsidy from the Company's electric customers, but would not themselves contribute to paying for their own electrification nor would they contribute to the electric system as a whole via their new electric heating demands (which would benefit another utility's electric system).

285. With respect to transportation customers, Public Service explains gas transport represents approximately 50 percent of the volume of gas distributed through the Company's system. These customers, also referred to as "shippers," are required to deliver the amounts of gas they consume to the Company's system, and often rely on third parties known as "marketers" to coordinate the actual purchasing and scheduling of gas. The Company explains that it views transport customers as falling into three general categories that warrant different policy considerations with respect to clean heat. These categories are: (1) Other Gas Local Distribution

[316] Hr. Ex. 101 (Ihle Direct), p. 13.
[317] *Id*.

Companie; (2) Electric generating units; and (3) "Retail" transport customers – similarly situated as retail sales customers.[318]

286. The Company has proposed to exclude retail transport customers from clean heat programming or cost recovery and suggests exploring these issues in a miscellaneous proceeding is an appropriate next step. The Company notes that if the Commission exempts "retail" transport customers, including C&I customers, from paying for the costs of implementing a clean heat plan, those costs will have to be paid entirely by the gas sales classes. In that scenario, sales customers would be incentivized to switch to transport service, removing them from the obligation to pay for clean heat programs and reducing the size of the remaining customer base whose share of the program costs would increase. With respect to a potential transfer fee proposed by CEO, the Company notes that it does not oppose such a mechanism. However, Public Service explains, if the Commission believes it may ultimately decide to include transport customers in clean heat programming and cost recovery, this issue may be best left for a future proceeding after the proposed miscellaneous proceeding.

a. Party Positions

287. Boulder suggests the Commission require that Public Service offer DSM and BE programming to gas-only customers. It is inequitable to provide Public Service's combination gas and electric customers support and incentive to take advantage of DSM and BE programming, while leaving their gas-only customers with nothing.[319] Boulder notes that Public Service provides gas-only service to at least 33 communities. Boulder supports proceeding with a miscellaneous proceeding to address cost allocation but does not agree that a miscellaneous proceeding is

[318] Hr. Ex. 101 (Ihle Direct), pp. 122-123.
[319] Boulder SOP, p. 21.

necessary to provide DSM and BE programming to its gas-only customers as part of its clean heat plan compliance.

288. Staff suggests the Commission direct the Company to make BE offerings available to all customers who are eligible for the Company's other DSM offerings. The Company's proposal to limit BE spending to areas where it provides both gas and electric service is an unnecessary course change from what this Commission approved in the Company's Strategic Issues proceeding, may make the statutory emissions targets more difficult to achieve and more costly, and simply "frustrates the purpose of the CHP."[320]

289. CEO supports the Company's proposal to limit BE programming to areas where the Company provides both gas and electric service, and the Company's proposal to open a miscellaneous proceeding to determine how best to handle seams issues related to the Company's gas-only customers and dual-service customers.

290. With respect to transportation customers, CEO proposes a "transfer fee" similar to the exit fee enacted in the Winter Storm Uri proceeding in order to discourage switching to transport service to avoid the clean heat rider.[321] Denver recommends that the Commission establish all transport customers to be eligible for clean heat program offerings, but also that issues relating to transport customers should be addressed in a separate miscellaneous proceeding.[322] Boulder agrees with the Company that the Commission should open a miscellaneous proceeding to address cost allocation and available programming for transport service customers.[323]

[320] Staff SOP, p. 11.
[321] Hr. Ex. 500 (Hay Answer), p. 9.
[322] Hr. Ex. 1800 (Rogers Answer), p. 31.
[323] Hr. Ex. 800 (Elam Answer), p. 7.

b. Findings and Conclusions

291. With respect to which sales customers are eligible for incentives and other expenditures supported by this clean heat plan, the Commission notes that through the Company's recent Strategic Issues proceeding, BE and DSM programs were made available to all customers regardless of whether Public Service provided electricity, gas, or both. We agree with Staff's evaluation that limiting the availability of programming to only combination customers, as Public Service proposes, simply frustrates the purpose of the clean heat plan. We also note that elsewhere in this Decision, we found that the Company should make its programs consistent and uniform regardless of the source of funding (*i.e.*, a Strategic Issues or clean heat application). The same should be true regardless of whether a customer receives gas-only, electric-only or combination service from the Company. Accordingly, we order the Company to make its DSM and BE programs available, and consistently administered, to all its gas customers regardless of whether Public Service provides both fuels.

292. We also express interest in working with AQCC to develop a beneficial electrification protocol and the APCD apply this protocol to the evaluation of gas compliance with the emissions reductions required under SB21-264. We are conceptually interested in ideas that could bridge the gap between who serves different sources of energy to certain customers and the difference in options that may provide including the establishment of a market for credits that all electric and gas utilities can use to buy and sell credits that would be used for gas companies to establish compliance with the statutory reduction targets. We intend to schedule a Commissioners' Information Meeting with AQCC in the coming months to explore this idea further.

293. With respect to transportation customers, the Commission recognizes this is a complex issue. As Public Service explained, roughly one-half the volume of gas passing through

the Company's system is destined for transportation customers. The Commission notes that the record in this case is not entirely clear how each category of transportation service, as defined by Public Service and referenced above, is responsible for the total transportation throughput, and within those categories of transportation service, the percentage of throughput and related emissions is reported to the Environmental Protection Agency. We believe these are important topics that require further research. Accordingly, we agree with the Company that this issue is best left for a separate area of investigation and find that it is in the public interest to open a miscellaneous proceeding docket shortly after the completion of this clean heat plan proceeding to further examine this issue.

3. Labor Issues

294. Pursuant to SB21-264, for any utility-owned project that is part of a clean heat plan, the gas LDC "shall, where practicable, use its own employees to complete the work."[324] For a utility project that is part of a competitive solicitation and with a cost of more than one million dollars, the gas LDC shall require all bidders to provide detailed information about the use of Colorado-based labor and out-of-state labor, and that the utility shall provide this information to the Commission.[325] Further, DSM and beneficial electrification programs within a clean heat plan must follow the labor standards applicable to those programs, as set forth in §§ 40-3.2-105.5 and 105.6, C.R.S.[326] When approving a clean heat plan and the clean heat resources acquired as part of a plan, the Commission must consider "whether the plan provides long-term impacts on Colorado's

[324] § 40-3.2-108(8)(a), C.R.S.
[325] § 40-3.2-108(8)(b), C.R.S.
[326] § 40-3.2-108(8)(c), C.R.S.; *see id*. § 40-3.2-105.5, C.R.S. (labor standards for gas DSM projects); *id*. § 40-3.2- 105.6, C.R.S. (labor standards for beneficial electrification projects).

utility workforce as part of a just transition including consideration of [] labor metrics and benefits."[327]

295. In its direct case, the Company states it has been a leader in the just transition in Colorado, and that the need for such a transition is just as salient for its gas LDC business as it is for its electric business.[328] The Company states that it does not anticipate that its gas LDC workforce will decrease during this proposed plan's action period but that it recognizes that as the gas system changes through 2050, there will be a smaller workforce needed to maintain it.[329] The Company asserts that its clean heat plan will ultimately create jobs as the Company shifts its gas LDC business model and services toward a decarbonized future, which will support a transition for the gas workforce.[330]

296. The Company argues that it has deep experience with developing low-impact workforce transition plans, and that it intends to bring its knowledge from retiring its coal fleet to the gas workforce transition. It proposes utilizing the same five-step process that it used on its electric workforce transition, including:

a) Modeling the impacted workforce, inventorying skills, identifying future opportunities, and crafting a workforce transition plan.
b) Identifying transition opportunities from future assets, potential contractor insourcing, and natural attrition across all operations biz areas.
c) Conducting transition conversations with impacted works, mapping employee aspirations to opportunities, and performing skill gap analyses.
d) Creating and deploying workforce transition resources and rolling out transition pathways for affected workers, who then execute plans.
e) Updating the workforce transition plan, and updating the Commission and key stakeholders.[331]

[327] Rule 4732(b)(VI), 4 CCR 723-4; *see* § 40-3.2-108(8)(d), C.R.S.
[328] Hr. Ex. 101 (Ihle Direct), p. 147.
[329] *Id.*
[330] *Id*. at 147-148.
[331] *Id*.

297. The Company also states that it will use its workforce to the extent practicable, require the submission of labor information from bidders in competitive solicitations, and comply with the labor standards as required by SB21-264. The Company states that it will report on labor impacts in its annual clean heat plan reports as required by Commission Rules.[332]

298. Finally, the Company states that due to the ambition of the statutory clean heat targets, "it [is] difficult to estimate the total labor impact of the plan with certainty. [The Company] anticipate[s] being able to provide more detailed labor metrics and more detailed projections for labor impacts in our next CHP, when [they] will be better able to evaluate how each Clean Heat Plus measure has performed over the course of the action period."[333] Further, in its Clean Heat Portfolio Analysis report prepared for the Company, E3 states that the Company cannot "alone ensure there is a sufficient number of skilled contractors to deliver electrification measures at the scales envisioned here." also states that it cannot "…ensure there is a sufficient number of skilled contractors to deliver electrification measures at the scales envisioned here."[334] Despite this, the Company believes that Clean Heat Plus Portfolio will create jobs during the next five years across the measures in the portfolio and that it will support existing utility workers in Colorado and create new jobs for electricians, construction workers, and home energy technicians.[335]

a. Party Positions

299. Local 720 has concerns about the lack of information about workforce impacts for the portfolios the Company has modeled, and proposes two options for the Commission to consider to ensure a measured approached to ensure workers have the opportunity to plan for the future and

[332] *Id*. at 149.
[333] *Id*. at 149-150.
[334] Hr. Ex. 102 (Clean Heat Portfolio Analysis) DRA-1, p.17.
[335] Hr. Ex. 101 (Ihle Direct) pp. 147-148.

are not inadvertently left behind.[336] First, Labor 720 proposes that the Commission host a separate public hearing for the Company to present to the public both; (1) the labor impacts and benefits of its Amended Preferred Portfolio as required by the Commission's rules, and (2) the mechanics of the five-step process it has proposed to deploy for ensuring a just transition for its gas workforce. Alternately, in the absence of a hearing, Labor 720 proposes the Company establish a working group comprised of labor unions, contractors, other interested parties, and the appropriate Company representatives to (1) establish a baseline of the number of construction workers employed on the Company's gas system and the labor metrics for that workforce as defined by Commission Rule 4001(h), 4 CCR 723-4; (2) support the implementation of the Company's five-step process; (3) develop a model to quantify job losses and benefits; and (4) share best practices for ensuring future competitive solicitations for clean heat resources that satisfy statutory labor standards and the Commission's rules. Local 720 states that they believe this is "especially needed considering the Company's forecasted capital expenditures which anticipate a significant drop in capital investment in new business and capacity expansion between 2024 and 2028, with zero investment starting in 2030."[337]

300. In its rebuttal testimony, the Company states that it supports Local 720's proposal to form a working group to address the issues raised by Local 720, and proposes that the working group report back to the Commission in a future Commissioners' Information Meeting.[338]

b. Findings and Conclusions

301. The record in this Proceeding, and legislature's emphasis on ensuring a just workforce transition, supports the formation of a Company-established working group comprised

[336] Hr. Ex. 2200 (Trujillo Answer), p. 6.
[337] Hr. Ex. 2200 (Trujillo Answer), pp. 6-7.
[338] Hr. Ex. 116 (Ihle Answer), p. 124.

of labor unions, contractors, other interested parties, and the appropriate Company representatives to:

a) Establish a baseline of the number of construction workers employed on the Company's gas system and the labor metrics for that workforce as defined by Commission Rule 4001(h), 4 CCR 723-4,
b) Support the implementation of the Company's five-step process,
c) Collaborate with the Company to develop a model to quantify job losses and benefits,
d) Share best practices for ensuring future competitive solicitations for clean heat resources that satisfy statutory labor standards and the Commission's rules, and
e) Determine workforce training needs by technology type and location within the Company's service territory to ensure that the workforce is ready to undertake clean heat plan initiatives, identify how needs can be met, and create a timeline and geographically sensitive plan for workforce training.

302. The Company is directed to partner with Local 720, the Pipefitters Unions, and other interested stakeholders to establish, scope, and determine membership of this working group. The Company shall also amend its five-step process to identify the workforce needs to effectively expand the BE and DSM industries to reach the emissions targets identified in SB21-264. These amendments should include:

a) Quantification of which gas jobs have traditionally been embedded in the state versus transient;
b) Identification of which job creations may need to be catalyzed by workforce training, and a plan to procure that training for the workforce; and
c) Quantification of job losses and gains by job category so that the Commission can adequately understand the job type changes.

303. The Company shall also work with the working group to create and maintain a list of BE and DSM contractors. The Company will identify a venue to easily connect contractors to interested customers to ensure that the workforce is readily matched to opportunities to participate in BE, DSM, and other program activities.

304. Finally, the Commission directs the Company to consider how ground source heat pumps and networked geothermal systems could displace the need to transition workers traditionally working on the pipes within the gas LDC system, as ground source heating installation and maintenance largely relies on the same expertise as that needed for gas pipelines. The Company should also work with the CEO to ensure that its workforce transition plan works in collaboration with evolving state policy goals.

4. Issues Relating to Income Qualified Customers and Disproportionately Impacted Communities

305. SB21-264 creates a number of statutory obligations for utilities and the Commission to advance equity through utility clean heat plans. First, the statute states that the Company's clean heat plan must prioritize investments that ensure that disproportionately impacted communities or customers who meet requirements for income-qualified programs benefit from the investments made to implement the clean heat plan.[339] Second, the statute states that in evaluating whether the clean heat plan submitted to the Commission is in the public interest, the Commission shall take into account, amongst other factors, whether investments in a clean heat plan prioritize serving customers participating in income-qualified programs and communities historically impacted by air pollution and other energy-related pollution.[340] Third, the statute states that the Commission may approve, or amend and approve, a clean heat plan with costs greater than the cost cap only if it finds that the plan includes mitigation of rate increases for income-qualified customers.[341] Finally, the statute requires that the utility submit to the Commission an annual report that shows the amount of money that it has spent under each program in the clean heat plan,

[339] § 40-3.2-108(4)(c)(IV), C.R.S.
[340] § 40-3.2-108(6)(c)(I)(C), C.R.S.
[341] § 40-3.2-108(6)(d)(III), C.R.S.

including the amount spent on income-qualified programs or programs that serve communities historically impacted by air pollution and other energy-related pollution.[342]

306. The Commission's Gas Rules state that in evaluating whether the clean heat plan is in the public interest, the Commission shall consider whether the utility has demonstrated the investments in the clean heat plan prioritize serving customers participating in income-qualified programs and communities historically impacted by air pollution and other energy-related pollution.[343]

a. Proposals

Investment in Income-Qualified Customers and Disproportionately Impacted Communities

307. The Company plans to direct 20 percent of its spending on additional demand-side management and beneficial electrification to programs that directly benefit income-qualified customers and disproportionately impacted communities.[344] The Company states these clean heat technologies will be the most impactful and cost-effective ways to direct funds to income-qualified customers and disproportionately impacted communities.[345] The Company further asserts that all offerings and programs for income-qualified customers and disproportionately impacted communities will help the customer with affordability, and that if programs risk short-term or long-term affordability concerns, then the program will be adjusted to help the customer or other existing programs will either be adjusted or created to protect affordability.

308. The Company also states that its website about the programs and how to sign up for a program will be easily understandable and available in Spanish language if necessary. The Company also plans to host outreach events, which will be designed for the customer and

[342] § 40-3.2-108(6)(d)(I)(C), C.R.S
[343] 4 CCR 723-4 4732(b)(IV).
[344] Hr. Ex. 101 (Ihle Direct), p. 138.
[345] *Id*. at 139.

organized with the intent of ease to attend. Finally, the Company states that it will consider compensation for anyone who provides support of program development and education as well as the planned outreach work. It claims that this is appropriate because the Company believes there is an opportunity for partnerships with entities to offer workforce training and upskilling for beneficial electrification. The Company asserts that it will attempt to design these programs so that it is easier for customers to obtain retrofits, heat pumps, and other services through increased incentives and vouchers while not increasing the cost burden. The Company also plans to increase its outreach to income-qualified customers and disproportionately impacted communities in order to maximize the pace and equitable distribution of its clean heat programs.[346] However, the Company also states that its uncertainty regarding the ability to deploy clean heat plan dollars is equally if not more applicable to the IQ/DI budgets the Company is proposing.[347]

309. The Company's Market Transformation Initiatives also contain aspects that will accelerate the rate of retrofits for income-qualified customers and disproportionately impacted communities.

Mitigation of Rate Increases for Income-Qualified Customers

310. In its rebuttal testimony, the Company states that its clean heat plan, and its rates as a whole, contain a host of mitigation measures for income-qualified customers that satisfy the statutory requirement. The Company points to four venues through which it believes it is mitigating rate increases for income-qualified customers. The Company states that:

a. It has specific income-qualified bill mitigation programs, including the Percentage of Income Payment Program, also referred to, respectively, as the Electric Affordability Program ("EAP") and the Gas Affordability Program ("GAP"). It states that for income-qualified customers in those programs, because the Company provides credits

[346] *Id*. at 138-139.
[347] *Id*. at 139.

to customers to help make their bills more affordable, participants in these programs would not see large increases in their bills due to Clean Heat costs.[348]

b. It selected the Amended Preferred Portfolio as an appropriate balance of costs and emissions reductions, stating that it reduces costs substantially from other more expensive portfolios such as the Emissions Target and Electrification Only portfolios.[349]

c. It substantially mitigates bill impacts by using a cost recovery structure that appropriately allocates costs to the electric and gas utilities. The Company asserts that recovering beneficial electrification costs from the electric side will dramatically reduces the bill impacts to its gas customers.[350]

d. It uses a longer amortization period (15 years) than that proposed by other parties.[351]

Investment in Income-Qualified Customers and Disproportionately Impacted Communities

311. In their SOPs, the parties have various recommendations about how the Company can prioritize investments in income-qualified communities.

312. CEO proposes to place guardrails on DSM and BE funding to benefit income-qualified customers and disproportionately impacted communities. CEO recommends that the Commission allow Public Service to spend over 20 percent of its incremental gas DSM and BE budget on programs that directly benefit income-qualified customers and disproportionately impacted communities. Finally, CEO believes that the Commission should allow the Company to roll over unused funds earmarked for income-qualified customers and disproportionately impacted communities to subsequent plan years.[352]

313. CRES/PSR-CO state that the Company should use the 20 percent of clean heat funds allocated to income-qualified or disproportionately impacted customers to provide

[348] Hr. Ex. 116 (Ihle Rebuttal), pp. 84-85.
[349] *Id*. at 85.
[350] Hr. Ex. 116 (Ihle Rebuttal), p. 85.
[351] *Id*.
[352] CEO SOP, p. 16.

electrification grants to income-qualified customers and to owners of multi-family rentals where over 50 percent of renters are income qualified.[353]

314. The Environmental Organizations and Denver recommend the Commission increase the Company's dedicated equity spending to 40 percent of the overall budgets for gas DSM and BE.[354] The Environmental Organizations state that it is crucial that income-qualified customers and disproportionately impacted communities have fair and equitable access to energy efficiency measures and heat pumps, and this clean heat plan should help these customers overcome barriers to electrification. Compared to the Company's proposal, increasing the dedicated equity spending to 40 percent would better advance equity and align with the federal government's Justice40 initiative.[355]

315. EOC is less concerned with the exact percentage of funds allocated to income-qualified customers and disproportionately impacted communities and instead stresses the importance of ensuring that clean heat programs do not lead to increased energy burdens for income-qualified customers and that energy affordability is prioritized in program design.[356]

Mitigation of Rate Increases for Income-Qualified Customers

316. In their SOPs the parties have various recommendations about how the Company can prioritize investments in income-qualified communities.

317. Staff does not believe that the Company has provided adequate rate mitigation efforts and specifies that the longer amortization period that the Company claims as a rate

[353] CRES/PSR-CO SOP, p. 13.
[354] WRA-SWEEP-CC, p. 29; Denver SOP, pp. 25-26.
[355] WRA-SWEEP-CC SOP, p. 29.
[356] EOC SOP, pp. 12-13.

mitigation measure would actually cost ratepayers an estimated $1.71 per dollar of rebates issued by the Company, so should not be treated as a rate mitigation measure.[357]

318. UCA contends the Company does not have sufficient rate mitigation measures for income qualified customers as required by statute. It states that enrollment in PIPP is a symptom of an unaffordable system, not a rate mitigation measure. It states that a lengthier amortization period might reduce upfront rate increases; however, it results in greater total overall costs and increased rates for future ratepayers. Further, it states that the Company's selection of a "less costly" portfolio, compared to its other portfolio, is not a rate mitigation measure as the assertion is based on hypothetical portfolios and circular logic.[358]

319. The Environmental Organizations state that electrification will reduce costs and believe that targeted funding toward electrification measures is a form of rate mitigation. They also see the Company's gas infrastructure plan as a venue for rate mitigation.[359]

320. CEO believes that "rate mitigation" does not require that the clean heat plan reduces rates during the pendency of the plan. CEO suggests the Commission look at rate mitigation as steps to ensure the rate and bill impacts of the clean heat plan are reasonable compared to clean heat plan goals, find that the clean heat plan provides substantial resources to income-qualified and disproportionately impacted customers, and find that the clean heat plan will lead to long-term cost reductions by contributing to comprehensive gas system planning. They believe that the Company's proposed longer amortization is sufficient and state that the gas infrastructure plan presents an opportunity to mitigate rates by limiting gas system expansion.[360]

[357] Denver SOP, pp. 17-18.
[358] UCA SOP, pp. 20-22.
[359] WRA-SWEEP-CC SOP, pp. 14-15.
[360] CEO SOP, pp. 26-28.

321. EOC recommends that income-qualified customers who participate in the clean heat plan income-qualified BE program be auto-enrolled in PIPP, with an opt out option, at the time of their clean heat plan program enrollment or another administratively efficient point in entering the income-qualified BE program. Part of the clean heat plan budget for incremental income-qualified BE should be allocated to the PIPP to fund the incremental cost of auto-enrolling income-qualified households who participate in these early clean heat plan income-qualified BE efforts. Further, income-qualified customers should only participate in an income-qualified clean heat plan program that offers a whole home weatherization service that provides building envelope upgrades as well as electrifying appliances. They state that the combination of traditional energy efficiency measures which reduce fugitive heat and inefficient energy usage alongside appliance electrification gives income-qualified customers the best chance at reducing their energy bills.[361]

b. Findings and Conclusions

Investment in Income-Qualified Customers and Disproportionately Impacted Communities

322. In evaluating whether the clean heat plan submitted to the Commission is in the public interest, the Commission shall take into account, amongst other factors, whether investments in a clean heat plan prioritize serving customers participating in income-qualified programs and communities historically impacted by air pollution and other energy-related pollution.[362] Based on the record of this case, the Commission finds that the Company must spend at least 20 percent of incremental BE an DSM budget on programs that directly benefit income-qualified or disproportionately impacted customers. As needed, the Company and can exceed this threshold within the overall budget—meaning that they can increase spending to benefit income qualified and disproportionately impacted customers above 20 percent within the

[361] EOC SOP, p. 15.
[362] § 40-3.2-108(6)(c)(I)(C), C.R.S.

Commission-approved budget, not increase the overall Commission-approved budget to direct more funding toward these programs.

323. The Company should use this appointed budget—20 percent of the total approved incremental BE an DSM budget—to be spent on actual program benefits. This budget should not be used to enhance program marketing, program accessibility, customer outreach, or compensation for program design; rather, these expenses should draw from the Company's overall approved clean heat plan budget. To be clear, these marketing and outreach efforts are expected to be crucial for the success of these programs, particular in income-qualified and disproportionately impacted customer groups, but their budgets should draw from the overall associated budgets, rather than the 20 percent budget set aside for serving those communities.

324. While the Company proposed relative budgets for certain technologies, it did not elaborate on program design in this clean heat plan. Thus, the Commission finds that the Company shall prioritize interventions to spur adoption in beneficial electrification technologies like point-of-sale rebates and inclusive financing options and encourage income-qualified and disproportionately impacted customers to enroll in programs like PIPP, any demand response or efficiency programs the Company offers, and relevant utility, local, state, and federal programs to improve building envelope weatherization and efficiency.

Mitigation of Rate Increases for Income-Qualified Customers

325. The Commission finds that the Company's plan to rely on existing, system-wide rate mitigation interventions to absorb the rate impacts of the clean heat plan should be complemented by the proposals offered by EOC to ensure the statutory directive of ensuring rate mitigation for income-qualified customers actually occurs. The Company should auto-enroll income qualified customers who participate in the clean heat plan income-qualified BE program,

with an opt out option, at the time of their clean heat plan program enrollment or another administratively efficient point in entering the income-qualified BE program. If this means the Company needs to change how it enrolls customers in PIPP or qualifies income-qualified customers for PIPP, the Company should do that to ensure the result is that all income-qualified customers who participate in the clean heat plan income-qualified BE program are eligible and enrolled in PIPP.

326. The Company should also allocate a portion of its overall clean heat plan BE and DSM program budget toward the PIPP to ensure that there are sufficient funds for all income-qualified customers who participate in the clean heat plan income-qualified BE program to enrolled in and benefit from PIPP, but this should not draw from the 20 percent allocation to disproportionately impacted and income-qualified customer programs and should be additional to that allocation. The Commission recognizes that the cost of participating in clean heat plan programs can also be mitigated by home weatherization and complementary demand response measures, and therefore requires that the Company ensure income-qualified customer are aware of utility-, state-, and federally- available opportunities whole home retrofit options for weatherization, energy efficiency, and demand response as applicable. At this time, the Commission is not mandating that income-qualified participation in income-qualified BE programs be coupled with a whole home weatherization service that provides building envelope upgrades as well as electrifying appliances. While the Commission understands the benefit to this approach, it is important to not mandate a level of participation at this juncture. If customers only have a certain budget or appetite to spend, borrow, or upgrade their homes, we want to ensure that they can use it how they want to use it and not set the bar for participation unrealistically high, which could limit participation in all programs.

327. The Commission also recognizes that electrified, interoperable end uses have multiple additional value streams—like demand flexibility, demand response, and the ability to defer capital investments. We recommend the Company explore the extent to which they can couple their BE programs with these interventions to provide additional grid and customer benefits.

328. Further, the Commission recognizes that the actions taken in this clean heat plan to enroll customers in BE and DSM programs and mitigate rate impacts are measures within a much larger, much needed, set of interventions needed to insulate income-qualified and disproportionately impacted customers against the broader equity and affordability challenges within the gas system. The gas system, which is subject to gas commodity price spikes, negatively affects air quality, and increases emissions, is costly to maintain, costly to keep safe, and costly to keep reliable. In alignment with statute, the Commission acknowledges the need to avoid long term rate increases for income-qualified customers who are unable to leave the gas system at the same rate as non-income-qualified customers. Thus, the Commission reinforces the need for additional efforts—like an on-bill financing program, opt-out program design, renewed focus on energy efficiency and demand response, clean heat plan investments that reduce capital investments like the all-electric neighborhood new construction program, commitment to exploring geothermal energy and a phased and thoughtful implementation of clean heat plan spending that limits longer-term rate impacts —to continue to mitigate customer rate impacts of gas system costs.

5. Clean Heat Plan Expenses

329. Public Service requests Commission approval to defer the consultant, transcript, hearing, and legal counsel costs for this matter in a non-interest-bearing regulatory asset for

presentation in a future cost recovery proceeding.[363] Public Service commits to presenting the actual expenses at the time of the future cost recovery filing.

330. The Commission approves the deferral of the consultant, transcript, hearing, and legal counsel costs for this matter in an interest free regulatory asset for presentation in a future cost recovery proceeding and expressly defers ruling on the appropriateness of recovering these costs until they are properly raised in Public Service's next rate case.

6. Other Issues Not Addressed

331. The Commission denies all requests made in this Proceeding that have not been addressed in this Decision.

7. Compliance Filings

332. The Commission requires Public Service to file, on not less than two days' notice, all tariff sheets authorized as part of this Proceeding and an updated version of its 2024-2028 clean heat plan to reflect all terms and conditions that are approved as a result of this Proceeding. The updated version of the Company's clean heat plan must include a summary of specific issues that have arisen in this Proceeding that will be addressed through quarterly stakeholder meetings, semi-annual reports, and additional working group meetings as needed. The Company shall also file a model run or other analysis that shows the anticipated emission reductions over the 2024-2027 time frame.

333. This filing is due within 60 days after the effective date of this Decision, or, if any party files an application for rehearing, reargument, or reconsideration (RRR) pursuant to § 40-6-114, C.R.S., the compliance filing will be due within 60 days after the effective date of the Commission's decision granting or denying the application for RRR.

[363] Hr. Ex. 101 (Ihle Direct), p. 151.

II. ORDER

A. The Commission Orders That:

1. The Application of Public Service Company of Colorado (Public Service or the Company) filed on August 1, 2023, as amended on November 6, 3024, which requests the Commission approve the Company's proposed 2024-2028 clean heat plan, is granted with modifications, consistent with the discussion above.

2. Public Service shall make an informational filing in this Proceeding describing in detail how the Company will estimate emission reductions, consistent with the discussion above. This filing is due within 60 days after the effective date of this Decision, or, if any party files an application for rehearing, reargument, or reconsideration (RRR) pursuant to § 40-6-114, C.R.S., within 30 days after the effective date of the Commission's decision granting or denying the RRR.

3. Public Service shall file in a new proceeding, an advice letter and tariff on not less than two business days' notice. The advice letter and tariff shall be filed as a new advice letter proceeding and shall comply with all applicable rules. In calculating the proposed effective date, the date the filing is received at the Commission is not included in the notice period and the entire notice period must expire prior to the effective date. The advice letter and tariff must comply in all substantive respects to this Decision in order to be filed as a compliance filing on shortened notice.

4. Public Service shall file an updated version of its 2024-2028 clean heat plan to reflect all terms and conditions that are approved as a result of this Proceeding. This filing is due within 60 days after the effective date of this Decision, or, if any party files an application for RRR pursuant to § 40-6-114, C.R.S., within 60 days after the effective date of the Commission's decision granting or denying the RRR.

5. The 20-day time period provided by § 40-6-114, C.R.S., to file an application for RRR shall begin on the first day after the effective date of this Decision.

6. This Decision is effective upon its Mailed Date.

B. ADOPTED IN COMMISSIONERS' DELIBERATION MEETINGS May 3 and 10, 2024 and COMMISSIONERS' WEEKLY MEETINGS May 1, 8, and 15, 2024.

(S E A L)

ATTEST: A TRUE COPY

Rebecca E. White,
Director

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

ERIC BLANK

MEGAN M. GILMAN

TOM PLANT

Commissioners