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March 15, 2024

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Mr. Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2116

Re: In the Matter of the Company's First Natural Gas Innovation Act ("NGIA") Innovation Plan ("Plan")

Docket No. G-008/M-23-215

REPLY COMMENTS

Dear Mr. Seuffert:

CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas ("CenterPoint Energy" or "the Company") submits these Reply Comments to the Minnesota Public Utilities Commission ("the Commission") in response to the Commission's July 17, 2023, Notice of Comment Period and parties' initial comments on the Company's first Natural Gas Innovation Act ("NGIA") innovation plan ("Plan").

The Company appreciates the involvement of stakeholders and the Commission in the development and review of CenterPoint Energy's first NGIA Plan filed under the landmark bipartisan NGIA. As the largest gas utility in Minnesota, an extremely cold weather state with aggressive climate goals, the Company is well-positioned to take on the challenges of evaluating technologies and fuels for Minnesota's future. The filing of this NGIA Plan continues the Company's ongoing efforts to advance the development of innovative technologies. These efforts include nation-leading gas energy efficiency programming, the Company's Commission-approved renewable natural gas ("RNG") Interconnection Tariff, and the region's first hydrogen blending facility. The Company's NGIA Plan will complement and further this leadership.

The NGIA is a vital tool for innovation. Through the proposed portfolio of pilots, the Company seeks to maximize opportunities to test a variety of innovative resources, designs, and delivery approaches that could help provide a roadmap for wider-reaching programming. For example, energy efficiency and strategic electrification strategies and technologies tested through the NGIA can lay the groundwork for future Conservation Improvement Program/Energy Conservation and Optimization projects. Low-carbon fuels demonstrated through NGIA could become part of CenterPoint Energy's general gas procurement strategy and future Integrated Resource Plans. And new energy delivery mechanisms, like networked geothermal, could become part of the Company's business-as-usual approach to serving customers. In developing this first NGIA Plan, the Company has endeavored to remain open to novel technologies and concepts at various stages of market viability, recognizing that the energy transition likely will require a variety of technologies and novel approaches, including technologies and approaches

that are not known or fully developed today. The Company urges the Commission to evaluate proposed pilots in the same spirit of exploration.

In their eagerness to reduce GHG emissions, some parties have suggested that instead of using NGIA as a tool for exploration, the Commission should interpret the NGIA into a kind of carbon plan structure – reading into the statute-specific GHG reduction goals for CenterPoint Energy's total system. CenterPoint Energy supports the state's GHG reduction goals; however, the NGIA serves an important step in the process to achieving those goals in a cost-effective and equitable manner. Before we can select the technologies and programs that will allow us to achieve a net-zero economy, we must test and develop the available options. NGIA is well suited to be this testing ground.

CenterPoint Energy looks forward to playing a key role in the state's transition to a net zero economy. The Company is uniquely positioned to support the growth of innovative resources in the state. Our role as a trusted provider of energy solutions for our customers creates an opportunity to connect customers to new lower-carbon approaches that can serve their energy needs. In addition, as the operator of the largest natural gas distribution system in the state, the Company is ideally placed to transport and deploy innovative resources such as RNG and hydrogen over that existing system, supporting economic development fueled by Minnesota's own workforce and abundant renewable energy resources. The Company's proposed NGIA plan will lay the groundwork for the energy transition and will demonstrate the value that CenterPoint Energy will continue to bring to Minnesota for decades to come.

The NGIA statutory text and the Commission-established frameworks provide guidelines for ensuring a diversity of resources are integrated into innovation planning. As noted by the International Union of Operating Engineers Local 49 in their comments "[t]he provisions of the NGIA [are] fairly prescriptive as to which type of innovative resources must be part of the initial plan and in what proportions." In addition, the NGIA articulates the criteria for the Commission's evaluation of NGIA plans and the Commission's adopted frameworks provide additional guidance on cost-effectiveness evaluation and GHG accounting. In conjunction with CenterPoint Energy's proposed measurement and verification protocols for proposed pilots, these statutory and regulatory provisions lay the groundwork for robust evaluation of a wide variety of innovative resources. There remain many unknowns about the Company's and Minnesota's path to a net zero future. As required by the NGIA, the Company's Plan is designed to increase our collective knowledge through deployment and testing of a wide variety of innovative resources to help us chart a wiser path to the energy future of the state.

CenterPoint Energy requests that the Commission approve the Company's Petition with the modifications outlined in the enclosed Reply Comments and included in the exhibits provided.

CenterPoint Energy has designated certain information in the body of these Reply Comments and in Exhibit E as trade secret. The identified information meets the definition of trade secret information in Minn. Stat. § 13.37, subd. 1(b), as follows:

1) The information was supplied by CenterPoint Energy, the affected organization;

2) CenterPoint Energy has taken all reasonable efforts to maintain the secrecy of the information, including protecting it from disclosure in this proceeding; and

3) the protected information includes a data analysis tool developed by ICF that has not been previously released to the public and which derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainably by proper means by other persons who could obtain economic value from its disclosure or use.

If you have questions, please contact us at Emily.Suppes@centerpointenergy.com, 612-321-5363, or Betsy.Lang@centerpointenergy.com, 612-321-4318.

Sincerely,

/s/ Emily Suppes

Director of Regulatory Affairs

/s/ Betsy Lang

Lead Regulatory Analyst

Enclosures

C: Service List

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	**Chair**
Joseph K. Sullivan	**Vice Chair**
Valerie Means	**Commissioner**
Hwikwon Ham	**Commissioner**
John A. Tuma	**Commissioner**

In the Matter of Petition by CenterPoint Energy for Approval of Its First Natural Gas Innovation Plan	Docket No. G-008/M-23-215 **Reply Comments**

I. INTRODUCTION

CenterPoint Energy Resources Corp d/b/a CenterPoint Energy Minnesota Gas ("CenterPoint Energy" or "the Company") submits these Reply Comments in response to the Minnesota Public Utilities Commission's ("the Commission's") July 17, 2023, Notice of Comment Period[1] and parties' initial comments discussing the Company's first Natural Gas Innovation Act ("NGIA") innovation plan ("Plan").

The Company's Petition in this docket introduced the first NGIA Plan under the landmark bipartisan NGIA, proposing eighteen innovative pilots which together are projected to reduce or avoid nearly 1.2 million metric tons of carbon dioxide equivalent ("CO_2e") emissions—a 14 percent reduction relative to emissions from natural gas supplied to the Company's sales service customers in 2020. The diversity of pilots included in the Plan are reflective of the recognition in the NGIA "that reducing greenhouse gas emissions from the natural gas utility system is going to take an array of innovative resources and approaches."[2]

As noted by the International Union of Operating Engineers Local 49 ("IUOE") in their Comments, "the provisions of the NGIA [are] fairly prescriptive as to which types of innovative resources must be part of the initial plan and in what proportions,"[3] including a requirement that at least half of the costs approved by the Commission for recovery under the plan are for the

[1] *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, Notice of Comment Period (Jul. 17, 2023). On October 31, 2023, the Commission extended the deadlines for comments in response to a request made by the Department of Commerce and supported by the Company, the Citizens Utility Board of Minnesota, and the Office of the Attorney General – Residential Utilities Division, to provide additional time to develop a complete record for Commission consideration.
[2] *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, Comments from International Union of Operating Engineers Local 49 at 1 (Jan. 15, 2024) ("IUOE Comments").
[3] IUOE Comments at 1.

procurement and distribution of renewable natural gas ("RNG"), biogas, hydrogen produced via power-to-hydrogen, and ammonia produced via power-to-ammonia.[4] Importantly, the NGIA also establishes a cost cap on the size of NGIA plans designed to balance the objectives of the NGIA in developing and advancing utility investment in innovative resources while also ensuring the cost impacts of those investments do not place an unreasonable burden on customers.

To guide gas utilities in developing innovation plans, the NGIA directed the Commission to establish (1) a general framework to compare the lifecycle greenhouse gas emissions intensities of innovative resources and (2) a cost-benefit analytic framework for comparing the cost effectiveness of innovative resources and innovation plans under the NGIA.[5] The Commission initiated a proceeding in 2021 and through a collaborative process, the Department of Commerce, Division of Energy Resources ("Department"), natural gas utilities, and other stakeholders were able to reach substantial consensus on the frameworks that were ultimately approved by the Commission on June 1, 2022.[6] The frameworks established by Commission were designed to provide clear guidance to utilities seeking to develop NGIA innovation plans, avoiding unnecessary expense and complexity that could discourage utilities from pursuing innovation plans.[7] The Commission ordered that "to approve an innovation plan it must find that the expected qualitative and quantitative benefits of a proposed innovation plan are greater in total than the expected quantitative and qualitative costs of the plan in total."[8] In making this determination, the Commission directed that it would consider plan costs and benefits to the utility system, to participating customers, to non-participating customers, and to other energy systems serving Minnesota customers, as well as environmental and socioeconomic costs and benefits and the benefits of the plan for energy resource innovation.[9]

Between January 12 and January 17, 2024, the Department; the Minnesota Office of the Attorney General – Residential Utilities Division ("OAG"); the Center for Energy and Environment ("CEE"); the Citizens Utility Board of Minnesota ("CUB"); the City of Minneapolis ("Minneapolis"); the Coalition for Renewable Natural Gas ("RNG Coalition"); the Clean Energy Organizations, consisting of the Minnesota Center for Environmental Advocacy, Fresh Energy, and the Sierra Club ("CEOs"), the Geothermal Exchange Organization ("GeoExchange"), and the IUOE filed comments on the Company's Petition. In comments, parties offered recommendations, additions to proposed requirements, specific changes, and important perspectives. CenterPoint Energy thanks parties for their comments and appreciates the opportunity to submit these Reply Comments to provide responses and clarifications, update

[4] Minn. Stat. § 216B.2427, subd. 2(d)(1).
[5] Minn. Stat. § 216B.2428.
[6] *In the Matter of Establishing Frameworks to Compare Lifecycle Greenhouse Gas Emission Intensities of Various Resources, and to Measure Cost Effectiveness of Individual Resources and of Overall Innovation Plans,* Docket No. G-999/CI-21-566, Order Establishing Frameworks for Implementing Minnesota's Natural Gas Innovation Act (June 1, 2022) ("Frameworks Order").
[7] Frameworks Order at 9, 15.
[8] Frameworks Order at 21.
[9] Frameworks Order at 21.

information relevant to proposed pilots in the Company's NGIA Plan, and propose modifications to the Plan.

In light of the fact that this proceeding is the first application of the NGIA and involves consideration of a Plan with a broad array of innovative resources and pilot designs, CenterPoint Energy recognized parties would have a range of perspectives that would require continued effort and deliberations to build consensus and understanding. The Company has a strong history of working collaboratively with interested parties in complex regulatory proceedings, including the development of the NGIA frameworks. Throughout the development of the Plan, CenterPoint Energy undertook efforts to engage with and understand stakeholder perspectives, including through stakeholder meetings facilitated by the Great Plains Institute. As CEE observed in their Comments, "The Company conducted an extensive and in-depth stakeholder process across several months to engage stakeholders on possible pilot projects for inclusion in its Innovation Plan, as well as the regulatory assumptions included in the plan."[10]The comments on the Company's Petition continue that engagement and these Reply Comments are offered in the same spirit of productive dialogue.

The remainder of these Reply Comments are structured as follows:

II. Summary of Comments of Parties and Initial Reply Comments

III. NGIA Statutory and Policy Issues

IV. Proposed Modifications and Reallocations of Funding

V. NGIA Proposed Pilots - Reply Comments to Parties, Proposed Modifications

VI. Additional Issues Raised Comments

VII. Conclusion and Recommendations

The Company also provides the following exhibits in support of these Reply Comments:

Exhibit A: Revised Quantitative Metrics, Cost Recovery and Pilot Details
Exhibit B: Updated Cost-Effectiveness Objectives
Exhibit C: Updated Pilot Utility Cost Estimate Details
Exhibit D: Updated Commission Cost-Benefit Framework
Exhibit E: Revised Pilot Portfolio and Quantitative Calculations
Exhibit F: Comparison of Federal Tax Incentives for Pilot D
Exhibit G: Department of Commerce Questions about M-RETS Tracking System

[10] *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, Comments of the Center for Energy and Environment at 1 (Jan. 16, 2024) ("CEE Comments").

II. Summary of Comments of Parties and Initial Reply Comments

The Company summarizes major themes and points made by each commenter below. CenterPoint Energy provides detailed responses to recommendations on individual pilots in the remaining sections of these Reply Comments.

a. Department Comments Summary

The Department recommended approving the Company's Plan with various modifications.[11] The Department recommended approval, with modifications, of the RNG Pilots (B and C), Industrial or Large Commercial Hydrogen and Carbon Capture Incentives (Pilot E), Industrial Methane and Refrigerant Leak Reduction (Pilot F), Residential Deep Energy Retrofits and Electric Air Source Heat Pumps (Pilot N), Small/Medium Business GHG Audit (Pilot O), Gas Heat Pumps for Commercial Buildings (Pilot Q), and a portion of CenterPoint Energy's proposal regarding research and development ("R&D"). The Department also largely supported CenterPoint Energy's cost recovery proposal, with some modifications, and proposed some modifications to the methods by which CenterPoint Energy quantified certain Plan benefits.

The Company appreciates the Department's thorough review and analysis of the Plan, and their efforts to develop a fuller understanding of the Plan through conversations and information requests. The Company looks forward to continuing to assist the Department in its work by responding to information requests and in other conversations, as appropriate, so that their review and recommendations can be as helpful as possible for the Commission.

The Company appreciates the Department's support for a number of aspects of the Company's Plan and agrees to some of the Department's recommended modifications of individual pilots, as discussed below. The Company also disagrees with many of the Department's specific recommendations in these Reply Comments. Perhaps most significantly, the Company disagrees with the Department's overall approach to determining whether energy efficiency and strategic electrification measures are appropriate for inclusion in the Plan. As discussed below, the Department's approach would leave very little opportunity to pursue energy efficiency or strategic electrification through the NGIA, undermining the legislature's intention to advance those resources through the NGIA.

b. OAG Comments Summary

The OAG recommended approving, in part, and denying, in part, CenterPoint Energy's Plan.[12] The OAG did not discuss every pilot proposed in CenterPoint Energy's Plan but expressed concerns or suggested modifications to Renewable Natural Gas RFP Purchase (Pilot C), Green Hydrogen Blending into Natural Gas Distribution System (Pilot D), Industrial Methane and

[11] *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, Comments of the Minnesota Department of Commerce, Division of Energy Resources (Jan. 17, 2024) ("Department Comments").
[12] *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, Initial Comments of the Office of the Attorney General (Jan. 12, 2024) ("OAG Comments").

Refrigerant Leak Reduction (Pilot F), Carbon Capture Rebates for Commercial Buildings (Pilot H), and New Networked Geothermal Systems (Pilot I).

The Company appreciates the OAG providing Comments on the Plan and their commendation of the Company for "working with stakeholders and taking the time to develop novel methods to achieve greenhouse gas savings."[13] The Company values the OAG's perspective and shares their objective of cost-effectively achieving GHG reductions and other benefits for our customers. However, in some cases the OAG's concerns are generalized and not paired with concrete recommendations that the Company could address, making it difficult for CenterPoint Energy to incorporate the OAG's feedback into the Plan. The Company nevertheless endeavors to respond to the OAG's concerns and looks forward to continuing to work with the OAG to improve our NGIA Plan for the benefit of our customers.

c. Minneapolis Comments Summary

Minneapolis recommended approval of the Company's Plan with modifications.[14] Minneapolis expressed support, in some cases with proposed modifications, for RNG Produced from Ramsey & Washington Counties Organic Waste (Pilot B), Industrial or Large Commercial Carbon Capture Incentives (Pilot E), Industrial Methane and Refrigerant Leak Reduction (Pilot F), Urban Tree Carbon Offsets (Pilot G), Carbon Capture Rebates for Commercial Buildings (Pilot H), New Networked Geothermal Systems (Pilot I), Decarbonizing Existing District Energy Systems (Pilot J), New District Energy Systems (Pilot K), Industrial Electrification Incentives (Pilot L), Commercial Hybrid Heating (Pilot M), Residential Deep Energy Retrofits and Electric Air Source Heat Pumps (Pilot N), Small/Medium Business GHG Audit (Pilot O), and Industrial and Large Commercial GHG Audit (Pilot R).

As the largest city in CenterPoint Energy's Minnesota service territory, the Company is particularly interested in finding ways to work with Minneapolis to achieve shared goals. The Company appreciates Minneapolis providing comments on the Company's Plan, their engagement in the Company's stakeholder process, and their support for the majority of the Pilots included in the Company's Plan. However, as discussed further below, Minneapolis focused their review on four objectives: GHG reductions, cost-effectiveness, improving affordability, and health and equity. While these are important considerations, the Commission should focus on the statutorily-specified criteria and the frameworks approved in the Commission's June 1, 2022 Order in Docket No. G-999/CI-21-566[15] in evaluating the Company's Plan.

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[13] OAG Comments at 1.
[14] *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, Comments of the City of Minneapolis (Jan. 17, 2024) ("Minneapolis Comments").
[15] *In the Matter of Establishing Frameworks to Compare Lifecycle Greenhouse Gas Emission Intensities of Various Resources, and to Measure Cost Effectiveness of Individual Resources and of Overall Innovation Plans,* Docket No. G-999/CI-21-566, Order Establishing Frameworks for Implementing Minnesota's Natural Gas Innovation Act (June 1, 2022) ("Frameworks Order").

d. CEE Comments Summary

CEE expressed support for the Company's Plan stating their belief that "the Company's proposal is well-balanced and will advance our understanding of key technologies and strategies to address natural gas emissions across the different customer classes."[16] The Company appreciates CEE for their engagement on NGIA, spanning from the legislative process leading to enactment of the statute to these comments and every point in between. CenterPoint Energy looks forward to continuing to work with CEE in implementing NGIA for the benefit of our customers.

e. CUB Comments Summary

CUB expressed support for New Networked Geothermal Systems (Pilot I), Industrial Electrification Incentives (Pilot L), Commercial Hybrid Heating (Pilot M), Residential Deep Energy Retrofits and Electric Air Source Heat Pumps (Pilot N), Small/Medium Business GHG Audit (Pilot O), and for Industrial or Large Commercial Hydrogen and Carbon Capture Incentives (Pilot E), with a modification.[17] CUB also expressed general support for CenterPoint Energy's cost recovery plan, while suggesting some modifications. CUB stated that they "hope our comments help improve CenterPoint's Plan so that several of the ideas and pilots proposed therein can move forward cost-effectively."[18]

CenterPoint Energy appreciates CUB's comments and acknowledgement that "[d]eveloping such an extensive proposal is a significant undertaking, particularly given CenterPoint's NGIA Plan is the first such plan filed under the new NGIA statute," and of the Company's efforts in having "proactively met with and received feedback from stakeholders prior to finalizing its proposal and petitioning the Commission for approval."[19] The Company responds to CUB's concerns and specific suggestions for modifications throughout this filing.

f. RNG Coalition Comments Summary

The RNG Coalition expressed support for CenterPoint Energy's RNG and power-to-hydrogen blending Pilots (Pilots B-D) and provided general information on both renewable gas technologies and the RNG Coalition's role in the development and implementation of these technologies.[20] The Company appreciates the RNG Coalition's comments, their engagement during the Company's stakeholder process during plan development, and their earlier engagement in the legislative and Frameworks Order regulatory processes. The Company looks forward to continuing to work with the RNG Coalition in implementing the Plan for the benefit of our customers.

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[16] CEE Comments at 2.
[17] *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, Initial Comments of the Citizens Utility Board of Minnesota (Jan. 16, 2024) ("CUB Comments").
[18] CUB Comments at 2.
[19] CUB Comments at 1.
[20] *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, Comments of the Coalition for Renewable Natural Gas (Jan. 16, 2024) ("RNG Coalition Comments").

g. CEOs Comments Summary

The CEOs provided detailed comments on CenterPoint Energy's Plan, opposing some pilots, supporting others, and expressing no opinion on the remainder.[21] The CEOs also provided many recommendations and potential modifications. The CEOs expressed support, in some cases with modifications, for New Networked Geothermal Systems (Pilot I), Decarbonizing Existing District Energy Systems (Pilot J), New District Energy Systems (Pilot K), Residential Deep Energy Retrofits and Electric Air Source Heat Pumps (Pilot N), and certain R&D proposals.

The Company appreciates the CEOs' comments, and their consistent engagement with the Company on NGIA from the legislative process through these comments. The Company addresses the CEOs' specific recommendations and concerns below. One significant source of disagreement is the CEOs' position that "NGIA plans should have a clear overall strategy with well-defined metrics for reaching state GHG reduction goals."[22] CenterPoint Energy does not dispute that achieving GHG reductions is an important goal of NGIA, however as discussed further below, the NGIA is not singularly focused on GHG reduction and does not provide, on its own, all of the necessary tools needed to achieve aggressive GHG reduction goals.

h. Geothermal Exchange Organization Comments Summary

GeoExchange filed comments in support of CenterPoint Energy's Plan and in particular supporting New Networked Geothermal Systems (Pilot I).[23] CenterPoint Energy thanks GeoExchange for their comments and support.

i. IUOE Comments Summary

The IUOE filed comments supporting CenterPoint Energy's Plan.[24] The Company thanks the IOUE for their comments and support as well as their engagement in the Company's stakeholder group and the NGIA legislative process.

III. NGIA Statutory and Policy Issues

a. Overview of Statutory and Policy Issues to be Addressed in this Section

CenterPoint Energy is pleased to engage with interested parties while working to develop the Company's first innovation plan under the historic NGIA. CenterPoint Energy and the state of Minnesota have long been national leaders in deploying gas efficiency for the benefit of

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[21] *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, Initial Comments of the Clean Energy Organizations (Jan. 16, 2024) ("CEOs Comments").
[22] CEOs Comments at 8.
[23] *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, Comments of the Geothermal Exchange Organization (Jan. 15, 2024) ("GeoExchange Comments").
[24] *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, Comments from International Union of Operating Engineers Local 49 (Jan. 15, 2024) ("IUOE Comments").

customers and citizens. The Company looks forward to beginning to expand our efforts through the NGIA to include other innovative resources and to continue furthering our energy efficiency leadership. Because this is the first NGIA innovation plan filed in the state, the Commission's choices in applying this new law are particularly important. In this section, the Company addresses concerns and suggestions that have broader implications than any single pilot proposal and implicate important issues of policy or statutory interpretation.

This section begins with a discussion of the goals articulated in the NGIA statute and addresses some parties' attempts to impose different goals or focus the Commission on only some statutory goals to the exclusion of others. Second, the Company reiterates the statutory criteria for approving an NGIA innovation plan and addresses parties' proposals for alternative approval criteria. Third, the Company provides an overview of its understanding of the meaning of approval of an innovation plan and addresses related concerns raised by various parties, including a discussion of the Company's request for 25 percent budget flexibility for pilots. Fourth, the Company addresses the Department's approach to establishing pilot budgets. Fifth, CenterPoint Energy discusses its recommended approach to the co-application of the Conservation Improvement Program/Energy Conservation and Optimization ("CIP/ECO") with NGIA for energy efficiency and strategic electrification pilots, responding, in particular, to the Department's interpretation of the interaction of those two statutory frameworks. Finally, the Company discusses cost-effectiveness objectives – both the timing for Commission adoption of objectives and parties' specific feedback on the objectives proposed in the Plan filing.

b. Goals of the NGIA

The NGIA requires that the Commission consider many different costs and benefits in evaluating utility innovation plans. The goals of the NGIA are as diverse as waste reduction and reuse, job creation, and energy security.[25] As articulated in the Commission's Frameworks Order,

> The Commission finds that to approve an innovation plan it must find that the expected qualitative and quantitative benefits of a proposed innovation plan are greater in total than the expected quantitative and qualitative costs of the plan in total. In making this determination, the Commission shall consider plan costs and benefits to the utility system, to participating customers, to non-participating customers, and to other energy systems serving Minnesota customers. The Commission shall also consider environmental and socioeconomic costs and benefits that would result directly from the plan and the benefits of the plan for energy resource innovation in the state.[26]

[25] The Company cataloged these various costs and benefits and provided statutory references in our January 28, 2022 compliance filing proposing a cost-benefit framework in Docket No. G-999/M-21-566.
[26] Frameworks Order at Order Point 36.

As explained in the Petition, the Company used the following strategies when designing its portfolio:

- Target a balanced portfolio covering different innovative resource types.
- Maximize innovation and learning by including a wide variety of different pilots.
- Prioritize funding for more innovative options that could help CenterPoint Energy evolve its business to support customers in reducing emissions and help the utility gain experience in these areas.
- Produce a reasonable cost portfolio when considering investment per ton of GHG reduction, while not compromising on innovation for the sake of cost.
- Choosing larger sizes for pilots that are commercial technologies, highly scalable, and have high potential for long-term emissions reductions.

This resulted in a portfolio that includes a broad array of innovative resources and pilot designs. The Company did not use any kind of simple cost-effectiveness test such as maximizing GHG reduction while minimizing costs, but instead considered a wide array of costs and benefits as required by the NGIA statute and the Frameworks Order.

The Company urges the Commission to reject attempts to narrow the goals of NGIA as contrary to the statutory intent. In particular, the CEOs advocate that the Commission "review utilities' NGIA plans with an eye to ensuring that NGIA resources are deployed to their best and highest uses…"[27] The CEOs further recommend that "the main criterion for approving continued or expanded funding should be whether the plan achieves GHG reductions that align with state goals…"[28] Minneapolis similarly recommends focusing the Company's Plan on "cost effectively reducing emissions and creating opportunities for participating customers to save money."[29]

In contrast to the CEOs' and Minneapolis's recommendations, the NGIA statute does not request or enable gas utilities to file carbon plans, as they are called in some states,[30] selecting resources to achieve a specific schedule of total system GHG reductions while minimizing customer costs. Instead, the NGIA is exploratory in nature, prompting gas utilities to test out innovative resources and approaches to their deployment. The very name of the statute includes the word "innovation." While potential GHG reductions are an important part of this exploration, they are not the singular focus of the statute. Nor does the statutory cost cap

[27] CEOs Comments at 6.
[28] CEOs Comments at 56.
[29] Minneapolis Comments at 2.
[30] *See, e.g.*, Duke Energy, Duke Energy files updated Carbon Plan to serve the growing energy needs of a thriving North Carolina (Aug. 17, 2023), available at https://news.duke-energy.com/releases/duke-energy-files-updated-carbon-plan-to-serve-the-growing-energy-needs-of-a-thriving-north-carolina.

provide anything near the funding level that would be needed to successfully implement a carbon plan.[31]

The Commission specifically rejected the narrow "best and highest use" approach in the Frameworks Order, stating that "As utilities begin implementing innovation plans and testing innovative resources, and as new data emerges from NGIA pilot programs, stakeholders and the Commission may be in a better position to explore nuances such as the best and highest uses of certain types of resources. However, at this time, the Commission is not persuaded to order a specific investigation or a set schedule for predetermining these issues on a categorical basis."[32]

As the Commission recognized, learnings from implementation of the NGIA may position the Commission and stakeholders to make future decisions about the appropriate role of resources in the Company's total system as CenterPoint Energy works to decarbonize. However, it would be contrary to both the statutory intent and the public interest to attempt bypassing the learning opportunities that the NGIA affords by contorting the statutory framework into a rigid focus on achieving specific system-wide levels of GHG reductions on a defined schedule.

In addition, while the NGIA asks utilities to develop plans that "contribute to meeting the state's greenhouse gas and renewable energy goals…"[33] it does not require or imply a schedule for overall natural gas decarbonization. The Company supports Minnesota's goal to reduce economy-wide emissions to net zero by 2050[34] and recognizes that CenterPoint Energy has an important part to play in helping the state achieve that goal, but it is important to recognize that the goal is economy-wide. Additional discussion, research, and thought is needed before developing a decarbonization schedule for gas utilities in general or for CenterPoint Energy in particular. In contrast to the CEOs' assertions about end uses that are hard to decarbonize,[35] a growing number of reports recognize that backup heat for buildings in very cold climates is itself a difficult-to-electrify end use, and that the gas distribution system has a continued role to play to support widespread deployment of electric air source heat pumps for building heat.[36]

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[31] CenterPoint Energy has spent an average of $554 million annually on geologic natural gas from July 2018 to June 2023. In contrast the NGIA statutory cost cap, including additional funding available for certain kinds of RNG, is only approximately $106 million for the five-year Plan.
[32] Frameworks Order at 16.
[33] Minn. Stat. § 216B.2427, subd. 2(a)(1).
[34] Minn. Stat. § 216H.02, subd 1.
[35] CEOs Comments at 53 (arguing that the only hard to decarbonize gas uses are industries requiring high process heat).
[36] *See e.g.*, Steven Nadel, "United States Can Electrify Most Fossil Fuel Use: Here is What Needs to Happen to Make This Possible," American Council for an Energy Efficient Economy (August 2023) at 14-15 available at https://www.aceee.org/sites/default/files/pdfs/the_united_states_can_electrify_most_fossil_fuel_use_encrypt.pdf (including supplemental heat for homes, apartments, and large commercial buildings north of Detroit in list of hard to electrify uses of fossil fuels and suggesting that alternative fuels may be a lower-cost path to decarbonization than electrification for some of these applications); Center for Energy and the Environment, *Minneapolis 1-4 Unit Residential Weatherization and Electrification Roadmap* (February

CenterPoint Energy aims to further this conversation in its proposed NGIA Plan through the R&D pilot titled CenterPoint Energy Minnesota Net Zero Study, however, the Company believes that other regulatory or statutory mechanisms, beyond NGIA, are needed to achieve complete system decarbonization.

c. Criteria for Plan Approval

The NGIA sets forth considerations for the Commission when determining whether to approve an NGIA plan. In particular, the NGIA specifies the following criteria upon which the Commission is to evaluate an NGIA plan proposal:

1. The size, scope, and scale of the plan produces net benefits under the cost-benefit framework established by the Commission in its Frameworks Order;

2. The plan promotes the use of renewable energy resources and reduces or avoids GHG emissions at a cost level consistent with the legislative cost cap;

3. The plan promotes local economic development;

4. The innovative resources included in the plan have a lower lifecycle GHG intensity than natural gas produced from conventional geologic sources;

5. The systems used to track and verify environmental attributes of innovative resources are reasonable;

6. The costs and revenues projected under the plan are reasonable in comparison to other innovative resources the utility could deploy, considering other benefits of the innovative resources included in the plan;

7. The total amount of estimated GHG emissions reductions achieved is reasonable considering the state's GHG and renewable energy goals and customer cost; and

8. Any RNG under the plan that is produced from anaerobic digestion of manure is certified as being produced at a facility that has not and does not increase the number of animal units solely or primarily to produce RNG.[37]

Building on these statutory criteria, the Commission developed GHG accounting and cost-effectiveness frameworks in Docket No. G-999/CI-21-566. The Company urges the Commission to reject recommendations to utilize an alternative set of evaluation criteria inconsistent with those set forth in the NGIA.

2023) at 19, available at https://www.mncee.org/minneapolis-1-4-unit-residential-weatherization-and-electrification-roadmap-pdf (describing the grid impact of building electrification and concluding that a practical strategy to mitigate the issue is to use dual fuel systems in some homes).

[37] Minn. Stat. § 216B.2427, subd.2(b).

For instance, the CEOs recommend that the Commission evaluate each proposed pilot based on the criteria of (1) scalability (i.e., whether the technology or program is able to scale to achieve substantial emissions reductions), (2) cost reasonableness (i.e., is the cost of the program reasonable), (3) customer impact (i.e., whether the pilot will deliver health and economic benefits to customers), and (4) clarity of objectives (i.e., what are the learning objectives of the pilot and how will the pilot advance the objective of reducing emissions).[38] Notably, each of the CEOs' four criteria were considered and included in the cost/benefit framework developed in the G-999/CI-21-566 proceeding[39] but the cost/benefit framework adopted by the Commission is broader than these four handpicked criteria. The CEOs provide no justification for discarding the already established framework and adopting a narrower one.

Similarly, the Department developed its own criteria for evaluation of the Company's NGIA Plan, without reference to the NGIA statute or the Commission's Frameworks Order, which include (1) specificity of the cost estimates, (2) project developers' ability to secure financing, (3) construction risk, and (4) program participation estimates.[40] The Department also reviewed the Company's Plan based on the Department-developed criteria of (1) how the proposed pilots could be modified to lower the financial risks and burden on ratepayers, and (2) how the pilots could be modified to maximize participation.[41] Rather than evaluate the Company's Plan pursuant to the NGIA statutory criteria, the Department evaluates whether the Plan could be reduced, disregarding the fact that the statute provides direction on the size of a plan in terms of costs.

Both the CEOs and the Department have recommended additional requirements which are not set forth in the NGIA or are inconsistent with the NGIA. It is imperative that the Commission evaluate the NGIA Plan based on the criteria set forth in the statute.

d. Meaning of Plan Approval

Several parties express uncertainty about the meaning of plan approval or express an interpretation of plan approval that differs from the Company's understanding.[42]

[38] CEOs Comments at 7.
[39] On the "Exhibit B" cost/benefit chart approved by the Commission in the Frameworks Order, scalability is included in "Resource Scalability and Role in a Decarbonized System," cost reasonableness is addressed in "NGIA Utility Perspective," "NGIA Participants Perspective," and "NGIA Nonparticipating Customers Perspective," customer impact, which the CEOs define to include health and economic benefits, is addressed in "Participant Perspective," "Other Pollution," "Net Job Creation," "Economic Development," "Public Co-Benefits," and "Market Development," and clarity of objectives is addressed in "Direct Innovation Support."
[40] Department Comments at 29.
[41] Department Comments at 17.
[42] *See, e.g.*, CUB Comments at 8 ("[U]nderlying many of the above uncertainties and concerns regarding Pilots A-C is the question of what Commission 'approval' of CenterPoint's NGIA plan means at this stage…").

The Commission must approve, modify, or reject the Plan based on evaluation of the criteria set forth in the NGIA statute.[43] Plan approval provides authority for the Company to move forward with the pilots as described in the filing, subject to any modifications adopted by the Commission, and not be denied cost recovery solely because of the decision to move forward with implementing the Plan, including cost recovery with respect to pilot costs that are recovered or incurred beyond the five year term of the Plan.[44]

The NGIA statute provides that "prudently incurred costs under an approved plan . . . *are recoverable*" via one of the three identified recovery mechanisms.[45] Consistent with the NGIA, all spending will be subject to review for prudence in subsequent cost recovery proceedings.[46] Actual NGIA Plan costs proposed for recovery will be reviewed for prudence either (1) in the Company's annual NGIA status reports, where the annual rider mechanism (the "Innovation Act Adjustment" or "IAA") true-up will be presented; (2) in CenterPoint Energy's Annual Automatic Adjustment ("AAA") report, where all hedging, storage, and gas costs recovered through the purchased gas adjustment ("PGA") mechanism are reviewed annually; or (3) in general rate case proceedings. In these reviews, the Commission may find the Company acted imprudently in how it implemented approved pilots but should not find the Company imprudent solely for taking actions described in the approved NGIA plan. For example, CenterPoint Energy could be found imprudent for choosing unqualified vendors for pilot operation or if funds are otherwise mismanaged or wasted.

e. Request for Budget Flexibility

CenterPoint Energy has requested that the Commission approve budget flexibility to allow the Company to reallocate funding from pilots with lower-than-expected expenditures, due to low participation or other factors, to pilots with higher-than-expected expenditures. Specifically, CenterPoint Energy is requesting approval to spend up to 25 percent more than budgeted for pilots with higher-than-expected expenditures without seeking additional approval from the Commission, provided the increase does not cause the Plan, as a whole, to exceed its statutory

[43] Minn. Stat. § 216B.2427, subd. 2(b).
[44] While "[a]n innovation plan has a term of five years," a number of pilots have project lifespans which extend beyond that period. As a result, the Company will incur costs and continue recovery beyond the five-year plan period. While spending decisions are subject to review for prudence, the Company's decision to proceed with an approved pilot does not provide a basis for the disallowance of cost recovery. CenterPoint Energy will also be allowed to continue to recover costs even if those costs are incurred or recovered outside of the five-year term of the approved Plan. For example, if the Company enters into a 10-year contract under Pilot C for purchases of RNG, CenterPoint Energy will continue to recover those costs through the PGA for the ten year term of the agreement, subject to the contract being reviewed for prudence through the annual automatic adjustment.
[45] Minn. Stat. § 216B.2327, subd. 2(c).
[46] Minn. Stat. § 216B.2427, subd. 2(c) ("In seeking to recover costs under a plan approved by the commission under this section, the utility must demonstrate to the satisfaction of the commission that the actual total incremental costs incurred to implement the approved innovation plan are reasonable. Prudently incurred costs under an approved plan, including prudently incurred costs to obtain the third-party analysis required in paragraph (a), clauses (6) and (7), are recoverable").

cost cap or fail to satisfy any other statutory requirements.[47] The proposed budget flexibility is modeled on the flexibility provided in CIP/ECO, where utilities are permitted to spend up to 25 percent more in any segment (i.e. residential, low-income, or commercial/industrial) without notifying or seeking approval from the Department. This policy "is intended to give utilities … the flexibility to continue program and segment activities that are performing better than anticipated without requiring the administrative burden and potential delay associated with filing a plan modification."[48]

Given the parallels between CIP/ECO and the NGIA, such as the NGIA's inclusion of energy efficiency and strategic electrification as innovative resources, there is support for adoption of budget flexibility within the NGIA.[49] Importantly, granting the requested budget flexibility will not impede the Commission's authority to review actual NGIA implementation spending for prudence and reasonableness. Nothing in the NGIA statute purports to treat forecasted NGIA pilot budgets as caps on authorized utility spending for the individual pilots that are approved as part of an NGIA plan. Instead, the only caps established by the legislature are the cap on the average annual total incremental cost of the overall NGIA plan and the 20 percent cap on costs approved for recovery for district energy system pilots.[50] The proposed budget flexibility would be consistent with the legislative cost cap, as the Company would only be permitted to exercise flexibility to the extent an increase does not cause the Plan, as a whole, to exceed its statutory cost cap or fail to satisfy any other statutory requirements.

In their Comments, the CEOs indicate support for the Company's proposal, recommending that "[t]he Commission shouldn't prohibit the Company from going over budget but should ensure that it acts prudently in its spending on approved NGIA pilots."[51] Minneapolis similarly supports allowing the Company flexibility but recommends capping that flexibility at 5 percent of pilot budgets "given that the program is new and has many pilot programs..."[52] CUB, the OAG, and the Department each recommend denial of CenterPoint Energy's proposed budget flexibility,

[47] Petition at 10.
[48] *See In the Matter of CenterPoint Energy's 2024-2026 Energy Conservation and Optimization Triennial Plan*, Docket No. G-008/CIP-23-95, Decision at 268 (Dec. 1, 2023).
[49] Notably, the budget flexibility provided under CIP/ECO is even greater than what the Company has proposed under its NGIA Plan, as CIP/ECO budget flexibility is at the segment level, rather than at the project/pilot level.
[50] Minn. Stat. § 216B.2427, subd. 3 establishes limitations on the annual total incremental costs of an NGIA Plan. Part e of Subdivision 3 provides that "the limits on annual total incremental costs must be calculated at the time the innovation plan is filed as the average of the utility's forecasted total incremental costs over the five-year term of the plan." Minn. Stat. § 216B.2427, subd. 2(d)(2) ("The commission may not approve a utility's initial plan … unless… the utility's costs approved by the commission for recovery for any pilot program to facilitate the development, expansion, or modification of district energy systems, as required under subdivision 9, represent no more than 20 percent of the total costs approved by the commission for recovery under the plan.").
[51] CEOs Comments at 51.
[52] Minneapolis Comments at 9.

arguing it would undermine the Commission's authority to review costs for reasonableness and prudence.[53]

CenterPoint Energy appreciates the CEOs' and Minneapolis's support in allowing for budget flexibility. The Company continues to advocate that the proposed 25 percent flexibility, rather than 5 percent as recommended by Minneapolis, is reasonable, appropriately balancing the need for flexibility in implementing plan modifications without unreasonable administrative burden and delay, with the need to ensure the Company's implementation of the Plan (including modifications to individual pilot spending) is reasonable. Such flexibility is especially important in ensuring successful implementation of the first NGIA plan, as the Company and stakeholders are just beginning the process of gaining critical knowledge and experience with innovative resources. Given the multitude of proposed pilots, it is likely there will be some pilots that perform better than anticipated while other pilots fall short of achieving anticipated participation or are able to achieve participation goals at lower costs than initially forecasted.

CUB, the OAG, and the Department's opposition to the proposed budget flexibility appears to be based largely on a misunderstanding of the Company's intent in requesting to establish such budget flexibility. For example, in recommending that the Commission reject the proposed budget flexibility, the Department contends "[t]he Company is attempting to inoculate itself from some portion of the prudency risk associated with funding pilots at cost levels that the Commission has not explicitly approved."[54] The OAG similarly asserts "it is impossible to know whether additional costs were reasonably incurred before they occur."[55] But the Company is not suggesting such costs be subject to an advanced determination of prudence. Instead, CenterPoint Energy is requesting that the Commission recognize the need for flexibility in pilot implementation and the reality that actual project costs, participation levels, and other criteria may differ from what the Company has forecasted.[56]

CenterPoint Energy's proposed budget flexibility would recognize that shifts in spending between approved pilots within the Plan are still made pursuant to and consistent with the approved Plan. The intent of the proposed budget flexibility is to recognize that costs that are

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[53] Department Comments at 6; OAG Comments at 9-11; CUB Comments at 10-11.

[55] OAG Comments at 9-10.

[55] OAG Comments at 9-10.

[56] The Department also asserts that "[i]nnovation is defined as: 'the act of introducing something new or the act of innovating, the introduction of new things or methods.' This definition suggests the legislature … crafted the legislation such that it allocates the risks associated with the innovative new technologies appropriately between CenterPoint's shareholders and ratepayers." Department Comments at 6. However, the definition cited by the Department is not contained in the NGIA; the NGIA defines innovative resource to mean "biogas, renewable natural gas, power-to-hydrogen, power-to-ammonia, carbon capture, strategic electrification, district energy, and energy efficiency." Minn. Stat. § 216B.2427, subd 1(h). Further, the NGIA statute provides that "prudently incurred costs under an approved plan…*are recoverable*" via one of the three identified recovery mechanisms. Minn. Stat. § 216B.2327, subd. 2(c). The legislature thus did not intend for some portion of prudently incurred costs to implement NGIA plans to be a shareholder expense, as the Department implies.

reallocated from pilots with lower-than-expected expenditures, due to low participation or other factors, to pilots with higher-than-expected expenditures, are nevertheless costs incurred under the approved Plan. Consistent with the NGIA statute, CenterPoint Energy is permitted to pursue recovery of all prudently incurred costs of the approved NGIA Plan, recognizing that CenterPoint Energy must act prudently in implementation of the approved Plan, and that costs incurred in the implementation of the approved NGIA Plan are subject to review for reasonableness.

Requiring the Company to request a formal modification through the annual NGIA report filing for any deviation from individual pilot budget forecasts, as advocated by CUB,[57] would create significant challenges in plan implementation. As noted above, the purpose of budget flexibility is to provide the utility with flexibility to continue program activities that are performing better than anticipated without the burden and potential delay associated with filing a plan modification.[58] Denying the proposed budget flexibility and requiring the Company to seek approval of any budget variances would risk disrupting successful pilot delivery.[59]

Further, the Company plans to monitor actual plan performance on an ongoing basis to track achievement of established cost-effectiveness objectives.[60] There would be an overall cap on exercising the authorized budget flexibility, as the Company would continue to ensure the Plan, as a whole, does not exceed the statutory cost cap. The cost effectiveness of the approved NGIA Plan will be evaluated based on the Commission-approved cost-effectiveness objectives, ensuring the Plan as implemented (including any exercise of budget flexibility) is cost-effective, consistent with the cost-effectiveness framework established by the Commission's Frameworks Order.

The purpose of the NGIA statute is to spur utility investments in new and innovative technologies by providing an avenue for utilities to recover the costs of such investments. However, the filing of an NGIA plan is optional[61] and if utilities are not provided with an opportunity to recover their prudently-incurred costs under an approved plan, Minnesota utilities

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[57] CUB Comments at 11.
[58] *See In the Matter of CenterPoint Energy's 2024-2026 Energy Conservation and Optimization Triennial Plan*, Docket No. G-008/CIP-23-95, Decision at 268 (Dec. 1, 2023).
[59] For example, the forecasted participation in the Pilot R: Industrial and Large Commercial GHG Audit is just five projects. This Pilot is also one of the most cost-effective pilots when assessing quantitative costs and benefits from the utility perspective. The level of participation is based on historic participation in the CIP/ECO Process Efficiency and Commercial Efficiency programs, and CenterPoint Energy believes it to be a realistic estimate of actual participation. However, due to the low number of forecasted participants, a small variation in the number of interested customers could lead to higher-than-expected expenditures. These expenditures would also come with additional GHG emissions reductions. Accordingly, in this example, CenterPoint Energy believes that the additional expenditures would be reasonable and prudent, and that the administrative burden of requesting a formal modification could hinder worthwhile projects from moving forward.
[60] Petition at 10 ("CenterPoint Energy requests that it be allowed to spend up to 25 percent more than budgeted for pilots with higher-than-expected expenditures without seeking any additional approval from the Commission, *provided that the increase does not cause the Plan, as a whole, to exceed its statutory cost cap or fail to satisfy any other statutory requirements*.").
[61] Minn. Stat. § 216B.2327, subd. 2(a) ("A natural gas utility *may* file an innovation plan with the commission.") (emphasis added).

will not elect to proceed with filing such plans. The proposed budget flexibility is important to allow a reasonable degree of flexibility in implementation of an approved NGIA plan, recognizing that while the pilot budgets have been developed based on reasonable forecasts and expectations, circumstances over the period of plan implementation may differ or change for a variety of reasons. This uncertainty is inherent in any plan, but especially true for a plan that involves deployment of novel and innovative projects focusing on emerging technologies.

f. Support for Pilot Budgets

With respect to several pilots, the Department recommended reducing or eliminating budgets because the Company has not yet identified any or enough specific participants to allocate the full spending amount proposed.[62] The Company respectfully disagrees that this is a reasonable approach to determining pilot budgets. As described above, Plan approval and approval of estimated total incremental costs does not insulate CenterPoint Energy from being disallowed cost recovery if the Company is imprudent in implementing the Plan. If CenterPoint Energy cannot find sufficient interest in a given pilot, it will not spend money it does not need to in order to serve the lower number of interested participants.[63] CenterPoint Energy anticipates that the Commission and interested stakeholders will evaluate actual spending when the Company seeks cost recovery regardless of whether the Company has spent more or less than the estimated pilot budgets. However, as described above, for a pilot that performs as anticipated, the Company should not be found imprudent simply for spending the expected amount.

The Department's approach of limiting budgets to only participants identified prior to pilot approval is unreasonable because it requires the Company to identify all interested participants prior to filing an NGIA plan, which would have several disadvantages including:

- Pilot designs may be modified in the regulatory process, causing some participants to lose interest and/or causing new participants to become interested in participating in the modified pilot;

- Significant costs for participant marketing and outreach would be incurred before the Commission and interested parties would have an opportunity to evaluate pilot proposals and estimated costs;[64]

- Additional participants may become interested during the five-year plan period and be required to wait until the next NGIA plan or until a plan modification is approved to move forward with their projects.

Instead, a more reasonable approach to setting budgets for specific pilots is the process used in CIP/ECO. In that context, the Company develops budgets based on expected interest and

[62] Department Comments at 3-5, 33-38, 45-46, 56, 58, 60.
[63] The NGIA annual rider mechanism ensures costs and recoveries will be trued up based on actual costs incurred. *See* Petition at 20.
[64] The Company has included marketing and outreach costs in its NGIA Plan.

market conditions, and is provided flexibility to adjust during implementation of the plan. The Company seeks to use the same approach in NGIA and filed its Plan accordingly.

g. Co-Application of NGIA and CIP/ECO

One overarching issue affecting many pilots is the appropriate co-application of the NGIA and CIP/ECO frameworks as they relate to energy efficiency and strategic electrification pilots.[65] One complicating factor is the newness of both the NGIA and ECO statutes, which were both passed in 2021. CenterPoint Energy developed much of its NGIA and ECO Plans before the Department issued guidance on how it would adjust CIP/ECO cost-effectiveness in light of the ECO statute. The Company's CIP/ECO Plan was adjusted to align with new guidance, but how cost-effectiveness intersects with program design is continuing to develop and evolve.

Given that both ECO and NGIA were passed in the same legislative session, with NGIA passing after ECO, it is clear that the legislature did not intend any provision of NGIA to be meaningless in light of ECO.[66] Because both statutes encourage utilities to deploy energy efficiency and strategic electrification, it is important to find a way to co-apply the two statutes so that utilities can meaningfully deploy those resources under both the NGIA and CIP/ECO frameworks. To assist in understanding the roles of the two statutes, NGIA specifies that energy efficiency and strategic electrification do "not include energy conservation investments that the commissioner [of Commerce] determines could reasonably be included in a utility's conservation improvement program…"[67] Importantly, the NGIA statute uses the term "investments" rather than "measures" or "technologies."

The Department's position on CIP/ECO/NGIA coordination, as articulated in their Comments, does not align with the legislative intent to significantly advance energy efficiency and strategic electrification through the NGIA framework. The Department's specific conclusions regarding pilots intended to deploy energy efficiency and strategic electrification are discussed on a pilot-by-pilot basis in subsequent sections, but in brief, the Department recommended that the Commission deny all of the Company's proposed pilots deploying energy efficiency or strategic electrification except for those explicitly required by the NGIA statute, Gas Heat Pumps for Commercial Buildings (Pilot Q), and the R&D Pilot Weatherization Blitzes.[68] While the Department's specific reasons for recommending denial vary by pilot, one reoccurring theme is whether similar *measures* are included in any utility's CIP/ECO plan.[69]

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[65] As described in the Commission's Frameworks Order, the NGIA "excludes from innovation plans any strategic electrification or energy conservation investments that the Commissioner of Commerce determines could reasonably be included in a utility's conservation improvement program (CIP) under Minn. Stat. § 216B.241." Frameworks Order at 13.
[66] *See also* Minn. Stat. § 645.16 ("Every law shall be construed, if possible, to give effect to all its provisions.").
[67] Minn. Stat. § 216B.2427, subd 1(f), (q).
[68] Department Comments at 91-93.
[69] *See* Department Comments at 58 ("because similar measures are being bundled and provided by other utilities…the Department concludes that CPE has not clearly demonstrated why these measures could

This is not a reasonable approach to giving meaning to NGIA. First, while the Company's rationales for including the strategic electrification/energy efficiency pilots in its Plan vary, in general, the Company has proposed energy efficiency and strategic electrification pilots designed to reach specialized or difficult-to-serve customer segments or to encourage the adoption of technologies that are not widely deployed through CIP/ECO by offering a significant amount of customer support. The Department's approach of denying pilots that share measures with any CIP/ECO plan made by any utility would undermine the opportunity to use NGIA to support and improve CIP/ECO by exploring new methods to deploy under-utilized, but not completely unknown, technologies and further refine methods to most effectively serve specific customer segments. The Department's approach fails to give adequate meaning to the legislature's use of the term "investments." As detailed by CEOs in their comments,

> [T]he Commission adopted recommendations proposed in joint comments led by the Department of Commerce related to the interplay between CIP/ECO and NGIA and, in particular, the phrase "investments" in NGIA. In the joint comments, which included Fresh Energy as a signatory, the joint commenters noted the importance of "facilitating development of a broad array of energy efficiency and strategic electrification investments under NGIA and preserving the integrity of both the CIP and NGIA frameworks." The joint comments went on to "conclude that relying on the term 'investments' used in the statutory definition of energy efficiency and strategic electrification creates flexibility regarding what type of efficiency and electrification programs, measures, or approaches might qualify in the future."[70]

Second, the Department's apparent exception for the pilots required by the statute illustrates that their approach is narrower than intended by the legislature. For example, the NGIA requires that CenterPoint Energy propose a pilot promoting electric cold climate air-source heat pumps and deep energy retrofits in existing homes.[71] The statute does not indicate that this required pilot is an exception to the general delineation between CIP/ECO and the NGIA, instead it is best viewed as an example of the kind of strategic electrification and energy efficiency pilots that fit within the NGIA. However, if the Department were consistent in their interpretation of the delineation of CIP/ECO and the NGIA, the pilot would not be allowed. Deep energy retrofits necessarily include air sealing and insulation, two standard CIP/ECO measures that have been offered by CenterPoint Energy and other utilities for years, and cold climate air source heat

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not be reasonably included in its 2024-2026 ECO portfolio"), Department Comments at 49 ("CPE has previously supported CarbinX research through its ECO portfolio…").

[70] CEOs Comments at 14-15 (citing *In the Matter of Establishing Frameworks to Compare Lifecycle Greenhouse Gas Emission Intensities of Various Resources, and to Measure Cost Effectiveness of Individual Resources and of Overall Innovation Plans*, Docket. No. G999/CI-21-566, Order (Sept. 12, 2022)).

[71] Minn. Stat. § 216B.2427, subd. 8.

pumps are an ECO measure, now eligible for a rebate under many utilities' CIP/ECO plans, including CenterPoint Energy's.

What makes the Residential Deep Energy Retrofit Plus Air Source Heat Pump Pilot difficult to include with CIP/ECO is not the measures themselves, but the overall programmatic approach. The pilot described by the NGIA contemplates an overhaul of both the envelope and heating systems in existing homes at the same time – combining two upgrades, either one of which may be prohibitively expensive or just complicated for homeowners to follow through with. While the Company's CIP/ECO plan includes many, if not all, of the measures that will be offered through the proposed Pilot N, the Company does not offer a holistic home retrofit program that achieves all of the NGIA statutory requirements at once in a single home through CIP/ECO. Many of the Company's proposed strategic electrification/energy efficiency NGIA pilots are distinguished similarly by program design, rather than measure combinations, but these program design distinctions, detailed in Exhibit I to the Petition, are largely ignored by the Department in their evaluation of the Company's proposed energy efficiency and strategic electrification pilot proposals. The Company urges the Commission to reject the Department's limited approach to co-application of CIP/ECO and the NGIA so that both statutory frameworks can be used to advance energy efficiency and strategic electrification for the benefit of the state and CenterPoint Energy's customers.

h. Cost Effectiveness Criteria

i. Statutory Requirement for Cost Effectiveness Criteria and Timing

As described in the Company's Petition, "[t]he NGIA requires the Commission to establish cost-effectiveness objectives for the Plan based on the cost-benefit framework established in the Commission's Frameworks Order."[72] Consistent with the NGIA statute, CenterPoint Energy has proposed cost-effectiveness objectives based on the categories of costs and benefits identified in the Commission's Frameworks Order: Perspectives, Environment, Socioeconomic, and Innovation.[73]

The NGIA further provides that a utility operating under an approved plan must file annual reports to the Commission on work completed under the plan including the utility's progress toward achieving the cost-effectiveness objectives established by the Commission.[74] If the Commission determines that the Company has "successfully achieved the cost-effectiveness objectives" established in the approved innovation plan, the statutory cap on incremental costs will be adjusted upward in subsequent plan filings.[75] Thus, the NGIA establishes a framework under which the cap on incremental costs can be increased with subsequent NGIA plans if the

[72] Minn. Stat. § 216B.2427, subd. 2(e) ("Upon approval of a utility's plan, the commission shall establish cost-effectiveness objectives for the plan based on the cost-benefit test for innovative resources developed under section 216B.2428.").
[73] Petition at 29-32.
[74] Minn. Stat. § 216B.2427, subd. 2(f)(6).
[75] Minn. Stat. § 216B.2427, subd. 3(c).

Commission concludes that the utility has successfully achieved the approved cost-effectiveness objectives established for its previous plan.

CUB recommends that the Commission delay approval of the cost-effectiveness objectives until after it takes action on CenterPoint Energy's NGIA Plan, noting that "[u]ntil approval is granted, the exact scope of CenterPoint's NGIA Plan is uncertain; the Commission may reject certain pilot projects or require modifications. Each of these changes impacts estimations for emission reductions, geologic gas savings, and cost-effectiveness."[76]

While CenterPoint Energy agrees with CUB that a subset of the objectives proposed by the Company would need to be recalibrated or modified to account for any changes to the Plan as approved by the Commission,[77] the Company does not agree it is necessary or reasonable to postpone a decision on those objectives or to require supplemental record development or a subsequent hearing to approve those cost-effectiveness objectives. For example, the Company's proposed objective that the Plan achieve overall lifetime GHG emissions reductions equivalent to 14 percent of emissions from CenterPoint Energy's 2020 sales would need to be recalibrated to account for any pilots that are not approved, that are modified in size, etc. As noted in the Company's Plan, "[a]chievement of this objective would represent a total lifetime GHG reduction of approximately 1,185,000 tons CO_2e and is the expected total lifetime GHG emissions reductions from all pilots."[78] This objective could easily be recalibrated to the final approved plan without the need for delay as suggested by CUB.

The NGIA provides that "[u]pon approval of a utility's plan, the commission shall establish cost-effectiveness objectives for the plan based on the cost-benefit test for innovative resources developed under section 216B.2428."[79] Consistent with this directive, the Commission should establish the cost-effectiveness objectives contemporaneously with the approval of the Company's NGIA Plan, recognizing that the objectives must correspond to the final plan, as approved. Such timing is also appropriate and necessary to provide clear guidance on the objectives upon which the approved Plan will be evaluated and to allow CenterPoint Energy to meet its obligation to address its progress toward achieving the cost-effectiveness objectives established by the Commission in its annual reports.[80] It is important that the Company has clear direction on the cost-effectiveness objectives as it begins the work of implementing the approved Plan.

The Company also proposed in its Petition that the Commission establish clear direction for determining when the threshold for having "successfully achieved the cost-effectiveness objectives" has been met for purposes of increasing the statutory cost cap. In particular "CenterPoint Energy proposes that the test for an increase in funding be achievement of the

[76] CUB Comments at 14.
[77] Exhibit B shows suggested changes to the cost-effectiveness objectives originally proposed to account for proposed Plan modifications described in these Reply Comments.
[78] Petition at 30.
[79] Minn. Stat. § 216B.2427, subd. 2(e).
[80] Minn. Stat. § 216B.2427, subd. 3(f)(6).

majority of [the] proposed objectives."[81] The Company explained its rationale for recommending that the Commission set the determination of "successful achievement" based on achieving a majority of cost-effectiveness objectives, noting that the Company had proposed numerous objectives, reflecting the many different goals of the NGIA statute and the broad cost-effectiveness framework established in the Commission's Frameworks Order. However, some of these objectives are in tension with one another. For example, objectives to increase the use of renewable resources or deploy many different innovative resources may be in tension with objectives to maximize GHG reductions or the cost per ton reduced. If CenterPoint Energy achieves a majority of the proposed objectives, it will have demonstrated substantial value to its customers and the state and it would be appropriate to begin increasing the scale of future NGIA plans.[82]

The NGIA statute leaves to the Commission the determination of whether the established cost-effectiveness objectives have been "successfully achieved" for purposes of increasing the statutory cost cap.[83] Despite finding CenterPoint Energy's rationale for measuring "successful achievement" as achieving a majority of the proposed objectives reasonable, CUB nevertheless concludes it would be untimely for the Commission to establish the threshold for "successful achievement," as the Commission has not yet established cost-effectiveness objectives for the Company's first plan.[84] The Company advocates that the Commission establish both the cost-effectiveness objectives and the test for determining successful achievement of those objectives at the time of plan approval, in order to provide clear direction to the Company as it begins the work of implementing the approved Plan. Providing clear direction with the approval of the Plan is important in the Company's implementation efforts to ensure Plan implementation matches the Commission's established cost-effectiveness objectives.

In response to the Department and Minneapolis, CenterPoint Energy agrees that the Commission cannot determine at this time whether the Company "has successfully achieved the cost-effectiveness objectives established in the utility's most recently approved innovation plan."[85] The Company clarifies that it is not proposing the Commission find, at this time, that the Company has already demonstrated successful achievement of the cost-effectiveness objectives and is entitled to increase the statutory budget cap for the Company's next NGIA plan. Rather, the Company is only proposing that the Commission establish both the cost-

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[81] Petition at 32.
[82] Petition at 32.
[83] *See* CUB Comments at 13 ("If the Commission determines such objectives are "successfully achieved" at the end of an NGIA term, the statutory cap on incremental costs will be adjusted upward in subsequent plan filings.").
[84] CUB Comments at 16 ("We find this argument (regarding the achievement of all objectives) reasonable, but CenterPoint's request for the Commission to make a determination on this issue now is untimely.").
[85] Minneapolis Comments at 9 ("The Commission should not grant this request for the Company's next NGIA at this early stage. We recommend considering this at a later stage after the Company demonstrates whether its first NGIA plan is successful at decarbonizing its system cost effectively."); Department Comments at 8 ("The Department believes CenterPoint must demonstrate that it has fulfilled most of the approved cost-effectiveness objectives before the Commission the Department can address this question.").

effectiveness objectives and the standard by which the Commission will evaluate "successful achievement" at the same time the Commission approves the NGIA Plan. Under the Company's proposal, CenterPoint Energy then must demonstrate that a majority of the established cost-effectiveness objectives are actually achieved through Plan implementation before the Company may propose to increase the statutory budget cap in accordance Minn. Stat. § 216B.2427, subd. 3 (c) and (d).

ii. Pilot Specific Criteria

The CEOs fault CenterPoint Energy's Plan for failing to specify learning objectives or metrics of success for each pilot.[86] The Company notes that neither the NGIA nor the Frameworks Order requires the Company to articulate pilot-by-pilot learning objectives or metrics, nor was the idea brought to CenterPoint Energy's attention during its extensive engagement process with interested parties prior to Plan filing. While not necessarily opposed to articulating pilot-specific learning objectives, the Company believes it may be unproductive to do so in this docket at this time. There would be limited opportunity for stakeholders to debate the merits of any proposed pilot-specific learning objectives or metrics or to discuss what implications those learning objectives or metrics should have.

Instead of requiring pilot-specific learning objectives, the NGIA requires the Commission to establish cost-effectiveness objectives for the Plan as a whole[87] and the Frameworks Order requires the Company to articulate estimated costs and benefits for each proposed Pilot.[88] The Company is also required to file annual reports on a variety of plan-level metrics,[89] and, as discussed below, the Company is open to providing pilot-specific information including GHG savings and Inflation Reduction Act ("IRA") information in annual status reports. The Company has also proposed a measurement and verification ("M&V") process for most of the pilots and will include information on the outcomes of those processes in annual status report filings. CenterPoint Energy believes that these will provide sufficient information for the Commission and stakeholders to evaluate the performance of the Plan as a whole and individual pilots. However, the Company is open to collecting and including in annual status reports any other pilot-specific information of interest provided the information requested is not unduly administratively burdensome to assemble.

[86] CEOs Comments at 18.
[87] Minn. Stat. § 216B.2427, subd. 2(e).
[88] Frameworks Order at Order Point 36.
[89] Minn. Stat. § 216B.2427, subd 2(f).

iii. Other Feedback on Criteria

In this section, the Company addresses other feedback received on its proposed cost-effectiveness objectives, noting that no party filed specific comments opposing the following proposed objectives:[90]

Perspectives

- Overall GHG savings achieved by all approved pilots is achieved at a cost of no more than \$200/MTCO_2e.[91] For this objective, costs are measured on a lifetime basis using the utility cost test and GHG savings are also measured on a lifetime basis.
- 40 percent[92] of residential units served by the Residential Deep Energy Retrofit and Electric Air Source Heat Pump pilots and the Weatherization Blitzes R&D pilot qualify as low-income, as that term is defined in CIP/ECO, or are located in a disadvantaged community, as that term is defined for the Inflation Reduction Act programs.

Environment

- In year five of the Plan, CenterPoint Energy has reduced annual emissions from sales of natural gas by 53,000 metric tons as a result of low-carbon fuels included in the NGIA plan.[93] This goal includes reductions from RNG, power-to-hydrogen, biogas, and power-to-ammonia provided to non-exempt sales customers.
- To support the state's renewable energy goal,[94] CenterPoint Energy procures 602,000 Dth of sales gas from renewable resources.[95] This goal includes RNG, biogas, power-to-hydrogen, and power-to-ammonia provided to non-exempt sales customers.
- To support the state's economy-wide net zero GHG emissions goal,[96] CenterPoint Energy completes an analysis of pathways that would allow it to achieve net zero

[90] The Company has included proposed modifications to these cost-effectiveness objectives to align with modifications proposed in these Reply Comments as Exhibit B. However, because parties responded to the objectives as originally proposed we have included the original language in this section.
[91] This was based on the weighted average cost per ton, using the utility cost test, of the RNG Produced from Hennepin County Organic Waste and RNG Produced from Ramsey & Washington Counties Organic Waste pilots.
[92] Selected to align with the federal government Justice40 initiative which aims to direct at least 40 percent of the benefits of certain federal investments towards disadvantaged communities.
[93] This was approximately the expected GHG emissions reductions from the RNG Pilots (Pilots A-C). Achievement of this objective would represent approximately a 0.5 percent reduction in GHG intensity of supplied fuels, assuming total throughput (on a Dth basis) equal to 2020 sales gas to non-exempt customers.
[94] Minn. Stat. § 216C.05, subd. 2 (3).
[95] This objective is measured as renewable volumes procured or produced in program year 5 from RNG or hydrogen. Achievement of this objective would represent procuring renewable resources equivalent to approximately 0.5 percent of 2020 sales gas to non-exempt customers (on a Dth basis) and the figure proposed was based on the expected amount to be procured or produced from RNG (Pilots A, B, and C).
[96] Minn. Stat. § 216H.02, subd 1.

emissions by 2050. CenterPoint Energy anticipates satisfying this goal through the proposed R&D pilot, CenterPoint Energy Minnesota Net Zero Study.

Socioeconomic

- The Plan supports 4 projects that satisfy Inflation Reduction Act requirements around prevailing wages and support for apprenticeships.
- The Plan supports workforce development through trainings, tours, educational conferences, or similar supportive activities reaching 200 participants per year, or 1,000 participants over the five-year Plan period.

The CEOs, CUB, and Minneapolis expressed support for the Company's proposed objective that 40 percent of residential units served by certain pilots be low-income or located in a disadvantaged community.[97] The CEOs recommended modifying this objective to read "*At least* 40 percent…"[98] a modification which the Company does not oppose. CUB also expressed support for the Company's proposed objectives around workforce development.[99]

Turning to objectives which were opposed by one or more parties, one of the Company's proposed objectives under the "Perspectives" category was as follows:

- Over the course of the five-year Plan, CenterPoint Energy supports the development of four new sources of low-carbon fuels produced in Minnesota. This may include one or more anaerobic digesters that produces RNG, projects that produce hydrogen via power-to-hydrogen, biogas projects, or projects that create ammonia via power-to-ammonia.

CUB expressed concern that "CenterPoint's proposed objective is easily met so long as its Pilot C RFP produces a minimal number of successful bids."[100] CUB's statement is inaccurate. To achieve this objective, CenterPoint Energy would have to support four new sources of low-carbon fuels produced *in Minnesota*. It is not a forgone conclusion that the Company will receive bids for four or more Minnesota sources of RNG through Pilot C and unlikely that all bids received will be for facilities located within the state. In addition, while CenterPoint Energy has proposed to favor local RNG, geographical location is not the only criterion the Company will consider in selecting RNG supply. Instead, achievement of this objective may hinge on the success of initiatives such as the RNG Potential Study R&D Pilot, which is intended to identify RNG potential near the Company's distribution system, the hydrogen component of Industrial or Large Commercial Hydrogen and Carbon Capture Incentives (Pilot E), or the further development of power-to-ammonia in the state through future R&D pilots. The Company notes that several parties expressed a preference for supporting in-state RNG development as

[97] CEOs Comments at 52; CUB Comments at 18; Minneapolis Comments at 8.
[98] CEOs Comments at 52.
[99] CUB Comments at 15.
[100] CUB Comments at 14.

opposed to RNG development in other states,[101] and this cost-effectiveness objective would align the evaluation of the Company's Plan with that preference.

The Company's first two proposed environmental objectives both relate to GHG reductions:

- The Plan achieves overall lifetime GHG emissions reductions equivalent to 14 percent of emissions from CenterPoint Energy's 2020 sales. For purposes of this objective, CenterPoint Energy's 2020 sales include only sales to non-exempt customers and no transport volumes.
- Over the five-year term of the Plan, the Plan achieves annual, first-year GHG emissions reductions equal to one percent of emissions from CenterPoint Energy's 2020 sales. For purposes of this objective, CenterPoint Energy's 2020 sales include only sales to non-exempt customers and no transport volumes. Annual, first-year GHG emissions reductions are the sum of GHG reductions expected to be achieved by all projects implemented under the Plan in the first full year of their operation.[102]

The CEOs state that the Company "derived the 14% reduction in overall lifetime emissions figure from…the RNG produced from Hennepin County Organic Waste and the RNG Produced from Ramsey & Washington Counties Organic Waste Pilots…" and argue that the percentage of GHG reductions should consider the entire portfolio.[103] The Company clarifies that, as described in the Petition, these two objectives are based on the entire portfolio, not the RNG pilots alone.[104] The first environmental objective is approximately the expected total lifetime GHG reductions from all proposed pilots.[105] The second is the expected annual, first year reduction from all pilots.[106]

CUB stated that it found the proposed environmental objectives to be generally reasonable,[107] but also stated that they believed the Commission should "evaluate pilot-specific outcomes in addition to aggregate-level emissions reductions…The Commission can thereafter use that data to inform its decisions on whether the Plan is performing in a cost-effective manner, or whether

[101] Minneapolis Comments at 3; CEO Comments at 21-22.
[102] Petition at 30-31.
[103] CEOs Comments at 53.
[104] It appears that the CEOs interpreted footnote 56 in the Petition as applying to the environmental objectives. That footnote relates only to the first objective under the heading "Perspectives."
[105] Petition at footnote 59.
[106] Petition at 31 and footnote 61. As explained in the Plan, annual, first-year GHG emissions reductions are the sum of GHG reductions expected to be achieved by all projects implemented under the Plan in the first full year of their operation. Achievement of this objective would represent annual, first-year, GHG emissions reductions of approximately 86,000 metric tons and is the expected annual, first year reduction from all pilots. The Company also notes that the CEOs provide some inaccurate statistics in the section addressing the Company's environmental goals. They state that "the NGIA portfolio as proposed will reduce emissions by an estimated 0.30 metric tons CO_2e over five years, which corresponds to a 4% reduction relative to its 2020 emissions." CEOs Comments at 53. The correct figure is 312,000 metric tons CO_2e over five years, which is equivalent to 4 percent of emissions from 2020 sales (including only sales to non-exempt customers and no transport volumes).
[107] CUB Comments at 15.

certain pilots should be modified, put to higher and better uses, or discontinued altogether."[108] The Company agrees with CUB that individual pilot-level data will be informative for the Commission, the Company, and other interested parties working to maximize the benefits of CenterPoint Energy's Plan, and should be used in conjunction with other information to determine which pilots should be continued, discontinued, or modified. The Company supports filing pilot-specific GHG information in annual status reports. However, the Company does not agree, if this was CUB's suggestion, that increased budget caps, described in Minn. Stat. § 216B.2427, subd. 3(c) and (d), should require achievement of GHG objectives by every pilot individually.

Under the "Innovations" category, the Company proposed two objectives:

- The Plan supports projects using at least six of the eight innovative resources.
- 100 percent of completed R&D projects result in a report summarizing learnings and suggesting next steps that will be filed with the Commission.

CUB opined that these two objectives were too easy to meet, noting that NGIA requires that CenterPoint Energy include strategic electrification, district energy, and energy efficiency in its Plan as well as at least one RNG, biogas, power-to-hydrogen, or power-to-ammonia pilot.[109] With respect to learnings summaries, CUB opined that lessons learned through ratepayer-funded R&D and should be shared with the Commission regardless, so it is inappropriate to base a cost-effectiveness objective around sharing such learnings.[110]

The Company agrees that it is required to include at least four innovative resources in its Plan, and in fact the Company has included six, with the potential for implementation of a seventh. However, planning for the deployment of innovative resources and successful deployment of those resources are not the same. The Company's intention with this objective was that it would be achieved only if six resources were actually deployed, or in the case of R&D projects, tested. This objective was intended to ensure that a wide variety of innovative resources were actually deployed under the Plan so that the Commission, Company, and interested stakeholders could benefit from learnings related to their deployment.

Regarding the objective to report learnings from completed R&D projects, the Company was seeking to include an objective related to R&D as it forms a significant part of CenterPoint Energy's proposed Plan and may be particularly useful in considering the future of the natural gas and energy systems in the state. However, to address CUB's concern that achievement of the objective would be too easy, the Company would agree to add a requirement that the Company take action on learnings identified in R&D pilots to the extent that those next steps are within the Company's control and can be initiated prior to the Company's next NGIA Plan filing. Accordingly, the revised objective would read:

[108] CUB Comments at 15.
[109] CUB Comments at 15.
[110] CUB Comments at 15-16.

- 100 percent of completed R&D projects result in a report summarizing learnings and suggesting next steps that will be filed with the Commission and the Company take action on learnings that are within CenterPoint Energy's control and reasonable to pursue, such as incorporating insights into a subsequent NGIA plan or other Company initiative.

IV. Proposed Modifications and Reallocations of Funding

This section of the Company's Reply Comments discusses proposed modifications from the Company's initial Plan proposal and addresses the proposed reallocation of funding from Pilot A. The Company also provides revised versions of certain portions of its Petition in Exhibits A-E showing these changes.

As described in CenterPoint Energy's January 3, 2024 letter, in October 2023, the Company notified parties of a correction to projected commodity cost values and resulting impacts to the RNG pilots' commodity cost savings.[111] The correction involved a mismatch between the calendar years used for the Plan start year (2024) and the commodity cost values (which start in 2023). This led to an overestimate of commodity cost savings, causing the original proposed portfolio to exceed the cost cap by approximately $550,000. Accordingly, the Company stated that it would need to reduce costs across the portfolio to ensure that the overall Plan complies with the statutory cost cap. In Exhibits A, C, D, and E, the Company has corrected the commodity cost savings for RNG projects and made adjustments to Pilot C to ensure the overall Plan does not exceed the statutory cost cap.

CenterPoint Energy's January 3, 2024 letter also notified parties that the Company had received information from Hennepin County that would be likely to impact the feasibility of Pilot A: RNG Produced from Hennepin County Organic Waste. The Company indicated that it expected to remove Pilot A and allocate additional funding to Pilot C: RNG Request for Proposal Purchase. On January 18, 2024, CenterPoint Energy filed an update notifying parties that Pilot A would not be moving forward because Hennepin County has decided not to continue to pursue their anaerobic digester project.[112] Accordingly, the Company would need to remove this pilot from its portfolio and reallocate the corresponding budget. Pilot A's total five-year incremental cost after correcting for avoided commodity costs as discussed above was $2,888,358.

The revised portfolio also incorporates a small correction to operations and maintenance ("O&M") costs projections compared to the original petition. The revised Portfolio maintains the base year O&M cost of $0.05 per Dth and annual escalation rate of -5.25% that were used in the Petition. However, the Petition incorrectly used 2024 as the base year for the O&M costs of

[111] *In the Matter of the Petition by CenterPoint Energy for Approval of its First Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, CenterPoint Energy Letter – Pilot Allocation Adjustments Planned for Reply Comments (Jan. 3, 2024).
[112] *In the Matter of the Petition by CenterPoint Energy for Approval of its First Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, CenterPoint Energy Letter (Jan. 18, 2024).

$0.05 per Dth; however, the correct base year for the O&M cost is 2023.[113] Therefore, the O&M costs for each year the revised portfolio now include one additional year of escalation to reflect the cost changes from 2023 to 2024. The impact of this correction to escalation rate timing for the variable O&M costs is minimal, since the overall impact of O&M cost savings is low. More specifically, the O&M savings for the revised portfolio are $7,178 lower based on this change, and the overall impact on total incremental costs is less than 0.01 percent. Estimated O&M savings per Dth used in the Petition versus the revised portfolio are shown in the table below.

Table 1: O&M Savings Per Dth

Plan Year	Year 1	Year 2	Year 3	Year 4	Year 5
Model Year	2024	2025	2026	2027	2028
O&M Cost Projections, Original Petition	$0.0500	$0.0474	$0.0449	$0.0425	$0.0403
O&M Cost Projections, Revised Portfolio	$0.0474	$0.0449	$0.0425	$0.0403	$0.0382

Additionally, CenterPoint Energy is proposing modifications to four other pilots based on additional insight the Company has gained since filing its Plan.

- The developer of the RNG project underlying Pilot B informed the Company that a smaller volume of RNG than originally assumed would be available for long-term (greater than 5-year) contracts, due to the developer's agreement with Ramsey/Washington Recycling and Energy to reserve half of the produced RNG for sale in short-term (less than 5 year) contracts, which would provide them flexibility to sell into other markets such as those associated with California's Low Carbon Fuel Standard ("LCFS"). The Company anticipates longer-term contracts will be more favorable and assumed a long-term contract in its Plan.[114] Accordingly, the Company revised the proposed portfolio to reduce Pilot B's assumed size from purchasing 80 percent of the RNG produced by the facility to purchasing 50 percent, to reflect this update. This change, combined with other adjustments discussed above, collectively reduce the

[113] The 2023 base year is specified by the Department's 2020 CIP BenCost Input Decision in Docket No. G-999/CIP-18-782. The Frameworks Order at Order Point 28 states that "utilities shall use structural cost-benefit values following the methods described in Appendix H of the Minnesota Department of Commerce's February 11, 2020, CIP BenCost Input Decision in Docket No. G-999/CIP-18-782, Inputs 1–13, with the modifications reflected in the Structural Values Modifications to CIP Approach table filed by the Joint Commenters."

[114] California's LCFS market offers relatively high prices for negative carbon intensity RNG which can be attractive to developers. However, market prices fluctuate, and relying on the LCFS does not offer long-term price certainty. CenterPoint Energy expects to be able to secure more favorable terms, such as lower cost per Dth or other more favorable conditions, by offering long term contracts that help RNG developers de-risk and finance their projects. Additional assessment on RNG pricing was provided in the Petition, Exhibit T, Attachment 1.

estimated incremental costs of Pilot B over the five-year term of the Plan by $3,639,573, relative to the costs included in the Petition.

- On December 26, 2023, the U.S. Department of Treasury released proposed regulations for the Section 45V credit for the production of clean hydrogen.[115] As it relates to Pilot D: Green Hydrogen Blending into Natural Gas Distribution System, CenterPoint Energy assessed the proposed rules and determined that taking the production tax credit ("PTC") for the electrolyzer related portion of investments in this pilot is likely to be advantageous as compared to the 30 percent investment tax credit ("ITC") that was assumed in the Petition. The ITC is still considered a better option for the solar photovoltaic related portion of investments in this pilot. While substantial uncertainty on final Treasury rules and the temporal matching capabilities of renewable electricity providers and tracking systems remains, CenterPoint Energy developed estimates of the value of the PTC, shown in Exhibit F, along with resulting revised pilot budgets. The revised pilot budget also accounts for costs for annual GHG verifications, as required by the PTC regulations, and a slight increase in the utility's annual revenue requirement, given the higher upfront capital investment without the upfront ITC credit for the electrolyzer. Using the conservative PTC estimate, CenterPoint Energy has projected these changes will reduce Pilot D's estimated incremental costs over the five-year term of the Plan by $426,124. The Company's evaluation of the proposed rules and their consequences for Pilot D are further discussed in the Pilot D section below.
- Based on additional market barriers identified while implementing the current CIP/ECO CarbinX pilot (which involves the same technology included in Pilot H), the Company believes that a longer ramp-up period is needed to scale up implementation to the original NGIA Plan's assumed maximum annual participation of 75 units per year. This change reduces Pilot H's incremental costs over the five-year term of the plan by $690,645 and is described further in the Pilot H section below. Additionally, a small number of CarbinX units and commercial hybrid heating systems were assumed to be implemented under Pilot O: Small/Medium Business GHG Audit, and these participation levels have been reduced slightly based on the expectation for slower CarbinX adoption. This change reduces Pilot O's incremental costs over the five-year term of the plan by $294,199.

The Company has reallocated the incremental cost reductions from Pilots A, B, D, H, and O to Pilot C. In the revised NGIA portfolio modelling this increase in Pilot C funding was implemented by including larger purchases of the landfill gas and dairy manure RNG archetype projects, but as noted previously, CenterPoint Energy intends the mix of RNG feedstock sources contracted through Pilot C to depend on the results of the RFP process. The updated levels of annual RNG purchases included in Pilot C were selected so that the overall NGIA portfolio spending aligns closely with the statutory cost cap (in this case about $3,000 under the cost cap) and to ensure greater than 50 percent of Plan costs are for low-carbon fuels, as required under the NGIA

[115] 88 Fed. Reg. 89220, Notice of Proposed Rulemaking and Notice of Public Hearing, Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election to Treat Clean Hydrogen Production Facilities as Energy Property (Dec. 26, 2023), available at https://www.federalregister.gov/documents/2023/12/26/2023-28359/section-45v-credit-for-production-of-clean-hydrogen-section-48a15-election-to-treat-clean-hydrogen.

statute. These changes collectively increased Pilot C's incremental costs over the five-year term of the plan by $7,902,615, relative to the costs included in the Petition.

Table 2 shows a pilot-level comparison of the original and revised portfolio in terms of costs counting against the NGIA cost cap and the estimated lifecycle GHG emissions reductions.

Table 2: Revised Portfolio Summary

Pilot	Cost Counting Against NGIA Budget ($)[116]				Estimated Lifecycle GHG Reductions (Metric Tons CO_2e)[117]			
	Original Portfolio	Revised Portfolio	Variance ($)	Variance (%)	Original Portfolio	Revised Portfolio	Variance (Metric Tons CO_2e)	Variance (%)
RNG Produced from Hennepin County Organic Waste	$2,856,759	$0	($2,856,759)	-100%	28,221	0	-28,221	-100%
RNG Produced from Ramsey & Washington County Organic Waste	$10,160,058	$6,520,485	($3,639,573)	-36%	147,863	92,414	-55,449	-38%
Renewable Natural Gas RFP Purchase	$32,368,811	$40,271,426	$7,902,615	24%	359,884	423,134	63,250	18%
Green Hydrogen Blending into Natural Gas Distribution System	$5,073,067	$4,646,943	($426,124)	-8%	27,993	27,993	0	0%
Industrial or Large Commercial Hydrogen and Carbon Capture Incentives	$3,793,770	$3,793,912	$142	0%	107,196	107,196	0	0%
Industrial Methane and Refrigerant Leak Reduction	$1,247,651	$1,247,828	$176	0%	33,763	33,763	0	0%
Urban Tree Carbon Credits	$329,301	$329,301	$0	0%	4,500	4,500	0	0%
Carbon Capture Rebates for Commercial Buildings	$1,303,022	$612,377	($690,645)	-53%	55,150	23,757	-31,393	-57%
New Networked Geothermal Systems	$11,625,764	$11,625,947	$183	0%	107,355	107,355	0	0%
Decarbonizing Existing District Energy Systems	$597,909	$598,794	$885	0%	124,030	124,030	0	0%
New District Energy System	$215,644	$215,644	$0	0%	40,882	40,882	0	0%
Industrial Electrification Incentive	$503,821	$504,436	$614	0%	11,896	11,896	0	0%
Commercial Hybrid Heating	$7,067,270	$7,068,602	$1,332	0%	25,609	25,609	0	0%
Residential Deep Energy Retrofit and Electric Air Source Heat Pump	$13,616,532	$13,617,633	$1,101	0%	66,760	66,760	0	0%
Small/Medium Business GHG Audit	$2,291,206	$1,997,007	($294,199)	-13%	6,570	4,380	-2,190	-33%
Residential Gas Heat Pumps	$380,759	$380,761	$2	0%	235	235	0	0%
Gas Heat Pumps for Commercial Buildings	$749,442	$749,464	$22	0%	2,154	2,154	0	0%
Industrial and Large Commercial GHG Audit Pilot	$950,286	$950,494	$208	0%	35,560	35,560	0	0%
Total for full Pilots	**$95,131,071**	**$95,131,053**	**($19)**	**0%**	**1,185,620**	**1,131,617**	**-54,003**	**-5%**
R&D Pilots	**$10,570,462**	**$10,570,462**	**$0**	**0%**	**0**	**0**	**0**	**0%**
Total	**$105,701,533**	**$105,701,515**	**($19)**	**0%**	**1,185,620**	**1,131,617**	**-54,003**	**-5%**

[116] This represents project costs that count against the budget cap described in the NGIA. These costs only include utility costs expected to be incurred during the five-year plan and are net of certain savings, including savings due to reduced need to purchase gas, during the term of the five-year plan. Participant costs are not included. The original portfolio shown here are the values included in the Petition.
[117] The variance in GHG emissions highlights where changes have been made to individual pilots, while there is a minor adjustment to the incremental costs for all pilots due to the adjustment in O&M savings discussed above.

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The Company's revised portfolio is presented in detail in Exhibits A, B, C, D, and E.

Table 3: Description of Exhibits Describing CenterPoint Energy's Proposed Plan Modifications

Reply Comment Exhibit	Section/Exhibit from Original Plan Filing	Updated Content
Exhibit A: Revised Quantitative Metrics, Cost Recovery and Pilot Details	Section VIII. Cost Recovery Proposal Exhibit B: Non-Technical Summary Exhibit D: Full Pilots Detailed Descriptions	Table A.1: Summary Quantitative Metrics for Proposed Pilots Table A.2 : NGIA Cost Recovery by Mechanism (Millions) Table A.3 : NGIA Recovery by Class (Thousands) Table A.4 : Estimated Annual Bill Impact for a Typical Residential Customer Tables A.5-A.16: Updated pilot details tables.
Exhibit B: Updated Cost-Effectiveness Objectives	Section X. Proposed Cost-Effectiveness Objectives for the Plan based on the Cost-Effectiveness Framework	Redlined changes to proposed Cost-Effectiveness Objectives
Exhibit C: Updated Pilot Utility Cost Estimate Details	Exhibit E: Pilot Utility Cost Estimate Details and Gas Cost Sensitivities	5-year Utility Cost Breakdown Utility Cost Test Perspective All Quantifiable Costs and Savings Other Perspectives
Exhibit D: Updated Commission Cost-Benefit Framework	Exhibit M: Commission Cost-Benefit Framework Chart	Updated tables.
Exhibit E: Revised Pilot Portfolio and Pilot Quantitative Calculations	Exhibit N: Pilot Assumptions Spreadsheet Exhibit P: Pilot Quantitative Calculations	Combined workbook of Exhibits N and P from Original Petition, updated to reflect revised Plan

While CUB and the Department have suggested a reduction in overall budget,[118] the Company notes that if the budget changes described above were not reallocated to Pilot C, but rather eliminated, the revised portfolio would not comply with the statutory requirement that at least 50 percent of a proposed budget be for the procurement and distribution of RNG, biogas, hydrogen produced via power-to-hydrogen, and ammonia produced via power-to-ammonia, unless there was a corresponding reduction to budgets for non-gaseous fuel pilots. Furthermore, the Company seeks to maximize the opportunity for innovation, learning, and impact of its

[118] CUB Comments at 5-6; Department Comments at 4-6, 17.

innovation Plan, consistent with the limitations in the NGIA statute. The NGIA statute defines how large NGIA plans may be in terms of their annual total incremental costs.[119] One of the criteria upon which the Commission is directed to evaluate an NGIA plan is whether the plan promotes the use of renewable resources and reduces or avoids GHG emissions *at a cost level consistent with the legislative cost cap* contained in subdivision 3 of the NGIA.[120] Accordingly, while the Company has ensured the revised Plan does not exceed the NGIA statutory cost cap, CenterPoint Energy does not intend to reduce its overall proposed budget.

V. NGIA Proposed Pilots - Reply Comments to Parties, Proposed Modifications

This section of the Company's Reply Comments responds to parties' comments, recommendations, and proposed modifications for individual pilots.

Pilot A. **RNG Produced from Hennepin County Organic Waste:** CenterPoint Energy proposes to purchase RNG from Hennepin County's anaerobic digestion facility, which is currently under development. This new anaerobic digester facility will process source-separated food waste from Hennepin County's organics recycling program and a smaller quantity of yard waste.

On January 3, 2024, CenterPoint Energy filed a letter notifying parties that the Company had received information from Hennepin County that would be likely to impact the feasibility of Pilot A. The Company indicated that it expected to remove Pilot A from the proposed Plan. On January 18, 2024, CenterPoint Energy filed an update notifying parties that Pilot A would not be moving forward, attaching a letter from the Assistant Director at Hennepin County's Department of Environment and Energy.[121] Hennepin County notified the Company that the County is no longer pursuing an anaerobic digestion facility based on several factors including capital and operating costs (including inflation, supply chain disruptions, and labor cost changes since the County began the purchase process in 2018), and changes to the local landscape for organics processing (other private and public actors are "developing anaerobic digestion with greater capacity than the county's site could manage").

In light of Hennepin County's changed circumstances, the Company will no longer pursue Pilot A. The Company proposes to reallocate the funds intended for Pilot A to Pilot C, consistent with the approach outlined in Section IV: Proposed Modifications and Reallocations of Funding.

CenterPoint Energy thanks the various parties for their comments with respect to Pilot A. If circumstances surrounding Pilot A change in a manner in which the Company would pursue the opportunity, the Company will take these comments into consideration.

Pilot B. **RNG Produced from Ramsey & Washington Counties Organic Waste:** CenterPoint Energy proposes to purchase RNG from Dem-Con HZI Bioenergy

[119] Minn. Stat. §216B.2427, subd. 3.
[120] Minn. Stat. §216B.2427, subd.2(b) (2).
[121] *In the Matter of the Petition by CenterPoint Energy for Approval of its First Natural Gas Innovation Plan*, Docket No. G-008/M-23-215, CenterPoint Energy Letter (Jan. 18, 2024).

> LLC's anaerobic digestion facility, which is currently under development. This new anaerobic digester facility will process source-separated food waste from Twin Cities metro area counties, including Washington and Ramsey Counties' organics recycling program and a smaller quantity of yard waste.[122]

Four parties – the Department, the CEOs, Minneapolis, and the RNG Coalition – provided specific comments on Pilot B, as summarized below. Several parties also made more general comments about the role of RNG in CenterPoint Energy's Plan, which are addressed in the Reply Comments in relation to Pilot C but are also relevant to the Commission's consideration of Pilot B.

The Department noted that Pilot B satisfied their expectations for cost estimates, financing, relative construction risk, and estimated number of participants.[123] However, the Department recommended that:

- Pilot B be required to participate in the competitive bidding process contemplated for Pilot C;[124] and
- Pilot B be modified so that the Company would buy a smaller amount of bundled RNG commodity gas with the associated environmental attributes from the planned anaerobic digestion facility but a larger portion of unbundled commodity gas.[125]

The CEOs suggested that the Company should consider providing the RNG to near-by industrial offtakers rather than blending the RNG into the Company's distribution system and recommended that the Company incorporate funding and tax credit availability from the IRA for alternative fuels.[126] The CEOs also expressed concerns with RNG blending into the distribution system in relation to all of the Company's proposed RNG pilots, including Pilot B. These concerns are addressed below in relation to Pilot C.

Minneapolis expressed support for Pilot B provided that local air quality impacts are acceptable for nearby residents. Minneapolis also expressed a preference for finding a local offtaker rather than blending into the Company's distribution system.[127]

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[122] The Petition at 6 incorrectly stated that "CenterPoint Energy proposes to purchase RNG from Ramsey and Washington Counties' anaerobic digestion facility." The anaerobic digestion facility is being developed by Dem-Con HZI Bioenergy LLC. Additionally, organic waste is anticipated to be sourced from additional metro locations outside of Ramsey/Washington Counties, and the pilot's description was updated here to reflect this.
[123] Department Comments at 30.
[124] Department Comments at 20.
[125] Department Comments at 38.
[126] CEOs Comments at 20. The CEOs also questioned whether both Pilots A and B should be approved given their similar design. CEOs Comments at 19. Because the Company has withdrawn Pilot A, it does not respond to this concern.
[127] Minneapolis Comments at 3.

The RNG Coalition expressed support for Pilot B as "a strong example of how [anaerobic digestion] can serve as a dual climate strategy in both the energy and organic waste sectors."[128]

As described in Section IV (Proposed Modifications and Reallocations of Funding), CenterPoint Energy has included a revised budget for Pilot B in the revised portfolio presented in these Reply Comments. The revised budget is based on the project developer's intent to diversify contract duration, and thereby retain 50 percent of the RNG produced for short-term (i.e., less than 5 year) contracts, resulting in a reduction to the volume of RNG planned to be purchased by the Company under a longer-term contract for Pilot B. As previously noted, based on market intelligence, including discussions with developers, CenterPoint Energy anticipates that utilizing longer-term contracts will be favorable, providing stability to both parties. Accordingly, CenterPoint Energy reduced this Pilot's total five-year incremental cost in its revised portfolio by $3,639,573 to $6,520,485.[129] CenterPoint Energy reallocated the amount by which Pilot B has been reduced to Pilot C.

The Department recommends that CenterPoint Energy be required to include Pilot B in the competitive bidding process for RNG.[130] Despite recognizing the "qualitative benefits associated with [Pilot B], the Department believes that requiring CenterPoint to competitively bid all its RNG purchase contracts is preferable from a ratepayer and societal perspectives."[131]

The NGIA does not require the use of competitive bidding, but does reflect a legislative intent to advance RNG projects involving food waste diverted from landfills like Pilot B.[132] In other contexts, the Commission has recognized that competitive bidding is not necessary in all circumstances to ensure customer protection in the selection of projects.[133] In the case of Pilot B, CenterPoint Energy supported the selection of this pilot outside of a competitive bidding process in light of the unique characteristics of the project:

> Pilots A and B were two specific RNG projects proposed in response to the Request for Ideas ("RFI"). Each of these pilots is connected to a local government entity within CenterPoint's Minnesota service area and accordingly are expected to result in widespread public benefits for communities served by CenterPoint Energy including assisting the state in achievement of waste

[128] RNG Coalition Comments at 5.
[129] These budget values refer to the incremental utility costs within the first five year NGIA plan window that would count against the cost cap, and the values are inclusive of this pilot's share of the overall portfolio administration costs. The cost reduction here is relative to the costs included in the Petition.
[130] Department Comments at 18-20.
[131] Department Comments at 18.
[132] *See* Minn. Stat. § 216B.2427, subd. 3 (b); Minn. Stat. § 216B.2427, subd. 2(a)(9).
[133] *In the Matter of Minnesota Power's Petition for the Approval of the Acquisition of Solar Power to Support Economic Relief and Recovery*, Docket No. E-015/M-20-828, Order Granting Petition and Requiring Compliance Filings at 8 (June 29. 2021) ("Although a competitive bidding process is ordinarily an effective way to protect ratepayers from unreasonably priced projects, the Commission concurs with the Company that its cost analysis is reasonable and demonstrates that the projects are competitively priced in this case given the unique circumstances.").

> management goals, promotion of a circular economy, and the development of low intensity RNG. In addition, as food waste diversion projects, both qualify for additional funding under Minn. Stat. § 216B.2427, subd 3. These factors make each project highly attractive in ways that are unlikely to be replicated by any other potential RNG projects.[134]

As noted by Minneapolis, Pilot B has a number of potential additional benefits including a marketable biochar product to sequester carbon, reduced methane emissions from landfills, and a new local fuel source that supports local economic development.[135] "[T]his pilot enables the counties to go beyond composting organics to create a soil amendment that supports the state recycling goal of 75% by 2030."[136]

The Department states that its recommendation to require Pilot B to participate in the competitive bidding process is based on the fact that the project is still in the planning stage, creating operational and financial uncertainties with respect to (1) the carbon intensity of the RNG and the associated fair value of the RNG, (2) the costs of various aspects of the project which are yet to be finalized, (3) the potential impact of increased interest rates on project financing costs, and (4) potential construction delays.[137]

First, with respect to the carbon intensity of the project and the associated fair value of the bundled RNG, as explained in the Company's Petition, CenterPoint Energy developed budget estimates for this pilot based on ICF's current estimates of the market value of the RNG. "CenterPoint Energy and Dem-Con HZI plan to identify a fair market price closer to the date of contracting based on verified carbon intensity and available market benchmarks."[138] [139]. While CenterPoint Energy believes that this benchmarking information will be reasonable to determine a fair market price, as discussed in greater detail below, CenterPoint Energy is planning to issue

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[134] *See* Attachment A.1 to the Department's Comments (CenterPoint Energy's response to Department Information Request No. 4).
[135] Minneapolis Comments at 3.
[136] Minneapolis Comments at 3.
[137] Department Comments at 19.
[138] Petition, Exhibit D at 7.
[139] Market benchmarks include the value of environmental attributes that an RNG project developer could monetize if they are able to sell RNG into the California LCFS and also claim Renewable Identification Number ("RIN") credits through the EPA's Renewable Fuel Standard ("RFS") program. However, a developer typically has to give up 20-30 percent of the value of the environmental attributes to other actors in the supply chain (e.g. marketers, fueling stations, fleets) in order to participate in the LCFS. In addition, and as discussed elsewhere, the revenue a project developer can receive from the LCFS and RFS fluctuates over time based on the respective market pricing levels in each program. Accordingly, CenterPoint Energy believes that it can secure better pricing by offering long-term fixed price contracts that eliminate the merchant risk for RNG developers, but the LCFS and RFS still provide useful benchmarks. Another source of market benchmarks are known prices for fixed price offtake contracts. ICF compiled such benchmarks for their market pricing analysis included in Exhibit T to the Petition using data from the public domain, certain third-party data secured via license, and in-house knowledge of the relevant regulations, market actors, and their historical actions. Finally, the expected price of production from various feedstocks, while not a market price, can be informative regarding potential market pricing.

an RFP for Pilot C in the coming months, which will provide additional information to support the reasonableness of the final pricing negotiated for Pilot B.

Second, with respect to the overall cost of the project being subject to change, as acknowledged by the Department, "the Ramsey/Washington County Organic Waste (RWCOW, Pilot B) is currently under development. . . . [and] appears to have very well-developed cost estimates as well."[140] The Department further concludes, based on conversations with RWCOW staff, that the details of the project "fulfil the Department's requirements for the cost estimates, financing, the projects relative construction risk and the estimated number of participants."[141] The Company's cost estimates for Pilot B to purchase RNG are reasonable based on market pricing information and estimated GHG emissions reductions associated with the RNG to be purchased under Pilot B.

Third, with respect to the risk of increased interest rates on project financing, as the Department acknowledges,

> The project is a public private partnership between the Counties and Dem-Con Hzi Bioenergy, LLC. The two entities have a feedstock supply agreement between each other. As per this agreement, the county will supply organic waste to the developer while the developer will build the facility and commercialize it. The Department concludes that the project has less uncertainty … due to the clear terms laid out in the agreement between the counties and the project developer. That approach resolves the financing issue. Dem-Com Hzi Bioenergy, LLC will apparently secure the financing required to complete the project. [142]

Further, as described in the Company's Petition, Dem-Con HZI expects to achieve an investment tax credit under the IRA of 30 to 40 percent of qualified project costs, helping Dem-Con HZI to finance the project.[143]

Finally, with respect to the risk of construction delays, Pilot B is for the purchase of RNG rather than the development of the project.[144] As a result, both the Company and customers will be protected from the risk of such delays as the agreement is for the purchase of produced RNG. CenterPoint Energy is not obligated to purchase volumes of RNG which are not produced, and customers will not be billed through the PGA until the project is operational and delivering RNG.

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[140] Department Comments at 30.
[141] Department Comments at 30.
[142] Department Comments at 30.
[143] Petition, Exhibit D at 6-7.
[144] As explained in the Company's Petition, CenterPoint Energy proposes to contract for the purchase of RNG, including both the commodity and environmental attributes, from Dem-Con HZI Bioenergy LLC's anaerobic digestion facility in Pilot B. Petition, Exhibit D at 5.

Regarding the CEOs' and Minneapolis's suggestion to consider providing the RNG to nearby industrial offtakers rather than blending the RNG into the Company's distribution system, CenterPoint Energy addresses this argument for RNG generally in relation to Pilot C below. However, specific to this Pilot, CenterPoint Energy confirmed with the developer that they had considered this option and determined that it was not feasible or desirable.

In response to the CEOs' recommendation to incorporate IRA funding and tax credit availability for alternative fuels, CenterPoint Energy understands this recommendation to relate to an alternative pilot design in which the Company would work with the project developer and a specific industrial RNG offtaker, as recommended by the CEOs. The Company did consider availability of federal tax credits or other support in relation to the proposed pilot design and described its conclusions in the Petition.[145]

Finally, in response to Minneapolis's concerns about local air quality impacts being acceptable to nearby residents, the developer states that the proposed organics to energy facility will meet stringent federal and state air quality standards for the limited emissions generated through the application of state-of-the-art emissions controls. As described in the Petition, this project will be subject to air permitting and environmental review, which will involve a 30-day public notice period where the neighbors and members of the local community are invited to comment on the project.[146]

Pilot C. **Renewable Natural Gas Request for Proposal ("RFP") Purchase:** CenterPoint Energy proposes to issue an RFP to purchase an additional amount of RNG to complete its RNG portfolio.

The Department, CUB, Minneapolis, the CEOs, the OAG, and the RNG Coalition provided comments on Pilot C specifically. This feedback is summarized below. The Company is also including feedback on the use and role of RNG in its Plan in this section although in many cases it relates to both Pilots B and C.

The Department recommended approval of Pilot C with modifications. Specifically, the Department recommended:

- Modifications to the Pilot budget to remove estimated costs for wastewater and landfill gas RNG as the Company did not identify any specific wastewater or landfill gas RNG projects that have expressed interest in selling their RNG to the Company.[147]
- Reducing the Pilot budget because the Company identified only one food waste facility in development in Minnesota, other than the facility included in Pilot B, and their

[145] Petition, Exhibit D at 6-7.
[146] Petition, Exhibit D at 7. The Petition also mentioned solid waste permitting, but this is no longer anticipated to be required as regulators have since determined that it will be considered a recycling facility.
[147] Department Comments at 91.

estimated production is less than the amount of food waste-derived RNG the Company estimated purchasing under Pilot C.[148]

- That CenterPoint Energy purchase a portion of unbundled commodity gas of some RNG without the environmental attributes and recommended adjusting the budget accordingly.[149]
- That the Company identify three standard contract terms (5, 10, and 15 years) in its RFP and request bidders to provide offers in response to those terms.

In addition, the Department requested that the Company discuss the potential advantages and disadvantages of developing standard RNG contract language that could be included in the RFP,[150] and noted that actual prices for RNG may be significantly different than the Company's estimates.[151]

CUB expressed several concerns about Pilot C and the incorporation of RNG into the Company's Plan more generally. Specifically, CUB:

- Expressed concern that there would be a less robust response to the RFP than the Company anticipates, because many of the entities that have reached out to the Company are interested in selling RNG from projects in development rather than active projects,[152] and that a less robust response than anticipated could cause problems for CenterPoint Energy's portfolio in relation to the statutory requirement that at least 50 percent of plan costs be for RNG, power-to-hydrogen, biogas, or power-to-ammonia.[153]
- Questioned whether the purchase of unbundled RNG environmental attributes without the commodity gas component of RNG would provide many learning opportunities.[154]
- Expressed concern about the risks of entering into longer-term contracts for RNG.[155]
- Questioned whether Pilot C could be considered a "pilot" given its longer-term duration and lifetime utility cost, which is greater than most of the other pilots proposed.[156]
- Questioned whether using Pilot C funding for the purchase of environmental attributes unbundled from the commodity gas component of RNG satisfies the statutory requirement that at least 50 percent of costs under an approved plan be for the procurement and distribution of renewable natural gas, biogas, hydrogen produced via power-to-hydrogen, and ammonia produced via power-to-ammonia.[157]

[148] Department Comments at 36.
[149] Department Comments at 36.
[150] Department Comments at 20-22.
[151] Department Comments at 29.
[152] CUB Comments at 7.
[153] CUB Comments at 6.
[154] CUB Comments at 7.
[155] CUB Comments at 6-7.
[156] CUB Comments at 6-7.
[157] CUB Comments at 7.

Minneapolis stated that the proposed funding for Pilot C is too high, although they could support a smaller similar pilot.[158] Minneapolis also stated their preference for sourcing RNG from within Minnesota rather than from neighboring states.[159]

The CEOs expressed concerns with RNG generally and with blending of RNG into the gas distribution system including:

- RNG has limited availability and competing uses and should be used in hard-to-decarbonize sectors rather than in the natural gas distribution system.[160]
- The Greenhouse gases, Regulated Emissions, and Energy use in Technologies ("GREET") model, which is commonly used to model the GHG intensity of RNG, and was used in CenterPoint Energy's Plan in compliance with the Frameworks Order, has been recently criticized for underestimating the carbon intensity of RNG.[161]
- Large dairy operations, which are one source of RNG, are environmentally damaging and small operations with sustainable management practices should be encouraged over large-scale operations.[162]

The CEOs also expressed concerns about Pilot C in particular including that:

- Pilot C may not result in significant additional learning opportunities if operated along with Pilots A and B, which also propose RNG blending into the natural gas distribution system.[163]
- The purchase of environmental attributes unbundled from the commodity gas component of RNG has no obvious learning opportunities because environmental attribute trading markets are well developed and straightforward.[164]
- The Company has not proposed geographic restrictions for the purchase of RNG.[165]
- There are insufficient long-term benefits to Pilot C to justify committing to longer-term purchase agreements.[166]

The OAG asserted that CenterPoint Energy has not provided sufficient details about Pilot C and expressed concern that the Company was aiming to spend a certain amount on RNG rather than purchase a certain amount of RNG.[167]

The RNG Coalition expressed support for Pilot C.

[158] Minneapolis Comments at 3.
[159] Minneapolis Comments at 3.
[160] CEOs Comments at 10.
[161] CEOs Comments at 10-11.
[162] CEOs Comments at 24.
[163] CEOs Comments at 21.
[164] CEOs Comments at 21.
[165] CEOs Comments 21-22.
[166] CEOs Comments at 22.
[167] OAG Comments at 8.

The Company addresses the parties' concerns and modification recommendations below, but first provides an update to its plan for the Pilot C RFP.

1. *Company's Update to Plan for Pilot C RFP Process*

    a. *Additional information on the availability of RNG*

In preparation for future implementation of Pilot C, if approved, CenterPoint Energy has been proactively reaching out to RNG producers and marketers to inform them of a potential future RFP, and to gather information on existing or planned projects that would have RNG available for purchase within the five-year innovation plan period. To date, CenterPoint Energy has been in contact with **[TRADE SECRET DATA BEGINS……TRADE SECRET DATA ENDS]** producers who have existing or planned projects in Minnesota or neighboring states. Each of these producers has indicated interest in participating in a future RFP. The planned projects have estimated production start dates between 2024 and 2026. Collectively, there are **[TRADE SECRET DATA BEGINS……TRADE SECRET DATA ENDS]** identified projects that are expected to produce over **[TRADE SECRET DATA BEGINS……TRADE SECRET DATA ENDS]** per year by 2026. The feedstocks include landfill, food waste, and animal manure. Estimated carbon intensity scores from some projects are as low as **[TRADE SECRET DATA BEGINS……TRADE SECRET DATA ENDS]** (which is approximately equivalent to **[TRADE SECRET DATA BEGINS……TRADE SECRET DATA ENDS]**). A majority of this RNG would be produced in Minnesota.

CenterPoint Energy believes that this does not represent a comprehensive picture of all RNG in Minnesota or neighboring states, and that there are additional volumes that would be available for purchase. For example, CenterPoint Energy has had conversations with three RNG marketers (third parties that sell RNG on behalf of producers) who indicated interest in responding to a future RFP. Additionally, the Company has communicated with several additional producers to inform them of the RFP but has not gathered specific project information (e.g., location, carbon intensity, production volume) from these developers at this time.

In the revised portfolio included in this filing, CenterPoint Energy estimates purchasing approximately 614,000 Dth per year by year 3 of the Plan, with estimated carbon intensities between 49.65 and 13.03 kg CO_2e/Dth of RNG. Through conversations with producers and information gathered on the projects, CenterPoint Energy is optimistic that our RFP will result in selected projects that achieve the target GHG reductions within the Pilot's budget, and that these projects would be located in Minnesota or have strong economic ties to the state.

    b. *Timing of RFP(s)*

Additionally, through these discussions with developers, CenterPoint Energy has determined that multiple Minnesota projects are seeking to secure offtake agreements in advance of final investment decisions, which are anticipated to occur this summer. Accordingly, CenterPoint Energy believes it is advantageous to issue the Pilot C RFP in the coming months and intends to issue the RFP and potentially work through contract negotiations in that timeframe, prior to a

final Commission decision. CenterPoint Energy will make it clear that any final agreement is contingent on Commission approval of Pilot C within the NGIA Plan.

Based on the identified resource availability and project specifications received in RFP replies, CenterPoint Energy may issue additional RFPs within the five-year Plan period if desired portfolio criteria are not fulfilled in the first round. Additionally, the Company may choose to issue a subsequent RFPs if selected projects experience unforeseen delays, performance issues, or other circumstances laid out in contract contingencies that result in lower than expected volumes of RNG or lower than expected GHG reductions, opening opportunities for producers whose projects will have further developed since the initial RFP.

2. *Meaning of Approval of Pilot C RFP Plan*

In its Comments, CUB requested that CenterPoint Energy clarify how the Company views approval of Pilot C and whether approval means that the Company may move forward with the RFP or approval to spend approximately $27.8 million within the five-year innovation plan period to procure RNG selected through the RFP and to enter into long-term contracts to effectuate those purchases.[168]

As described in Section III.d. above, approval of the Plan provides authorization from the Commission for the Company to move forward with pilots as proposed, subject to any modifications ordered by the Commission. With respect to Pilot C, approval of that Pilot would authorize the Company to move forward with procuring RNG in accordance with the proposed RFP(s), to spend approximately $110 million over the term of the contracts selected through the RFP(s).[169] However, as noted above, that spending would remain subject to review for prudence through the existing annual automatic adjustment review process, consistent with all other gas procurement costs recovered through the Company's PGA mechanism. The structure of Pilot C based on a total dollar amount is appropriate to ensure the selection of reasonable bids through the competitive RFP while also meeting the NGIA's statutory requirement that the Commission may not approve a plan unless 50 percent or more of the utility's costs approved for recovery under the plan are for the procurement and distribution of renewable natural gas, biogas, hydrogen produced via power-to-hydrogen, and ammonia produced via power-to-ammonia. As detailed in the Company's revised portfolio, CenterPoint Energy has projected purchasing approximately 519,000 Dth of RNG per year through Pilot C, beginning in the second year of the Plan and achieving approximately 169,000 metric tons CO_2e emissions reductions over the five year Plan. The Company has provided substantial detail supporting how it will select RNG through Pilot C, including a draft of the RFP the Company plans to issue.

3. *RNG Pricing*

[168] CUB Comments at 8-9.
[169] The $110 million represents the total estimated RNG purchase costs across the entire 10-year assumed contract lifetimes, not just the costs that fall within five-year innovation plan period. This value also represents the full RNG purchase price for the gas commodity and environmental attributes and does not account for the commodity cost savings through reduced purchases of geologic natural gas.

Several commenters expressed concerns that the Company might not be adequately incentivized to ensure it secures RNG at reasonable prices for its customers and/or noted that prices per Dth of RNG may be significantly different than the Company's estimates. Some commenters centered this concern on the NGIA statutory requirement that 50 percent or more of Plan costs must be for RNG, biogas, hydrogen produced via power-to-hydrogen, or ammonia produced via power-to-ammonia, suggesting that the Company would be incentivized to spend its proposed budget for Pilot C whether or not it achieves benefits for customers or the state.

For example, the OAG asserts that the Company's proposal to utilize a request for proposals ("RFP") process to select RNG contracts for Pilot C based on "a total dollar amount of gas, rather than a particular quantity of gas… is unlikely to yield the lowest cost option for ratepayers."[170] This position is inconsistent with the position previously taken by the OAG that competitive bidding, like the RFP planned for Pilot C, is "a 'fair predictable, and transparent' way to select projects,[171] and ignores the fact that costs incurred for Pilot C will be subject to review for prudence and reasonableness.

As discussed above and described in the Company's Petition, CenterPoint Energy has proposed specific cost-effectiveness objectives which create an incentive for the Company to meet both Dth and GHG reduction goals.[172] In particular, CenterPoint Energy proposed the following cost-effectiveness objectives relevant to Pilot C[173]:

- In year five of the Plan, CenterPoint Energy has reduced annual emissions from sales of natural gas by 53,000 metric tons as a result of low-carbon fuels included in the NGIA plan. This goal includes reductions from RNG, power-to-hydrogen, biogas, and power-to-ammonia provided to non-exempt sales customers.

- To support the state's renewable energy goal, CenterPoint Energy procures 602,000 Dth of sales gas from renewable resources. This goal includes RNG, biogas, power-to-hydrogen, and power-to-ammonia provided to non-exempt sales customers.

Further, as articulated in the RFP, proposals will be evaluated on cost in $/MMBTU delivered, cost in $/MT CO_2e reduced, the volume of RNG available for purchase, and lifecycle GHG intensity, among other criteria.[174]

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[170] OAG Comments at 8.
[171] *In the Matter of Petition for Approval of Northern States Power Company, d/b/a Xcel Energy, for Approval for its Long Duration Energy Storage System Pilot Project at Sherco*, Docket No. E-002/M-23-119, OAG Comments at 3 (May 5, 2023) (citing *In the Matter of Northern States Power Company d/b/a Xcel Energy's Application for Approval of its 2004 Resource Plan*, Docket No. E-002/RP-04-1752, Order Establishing Resource Acquisition Process, Establishing Bidding Process Under Minn. Stat. § 216B.2422, subd. 5, and Requiring Compliance Filing at 6 (May 31, 2006).
[172] *See* Section III.h; Petition at 29-32.
[173] As discussed above, the Company has included proposed modifications to these cost-effectiveness objectives to align with modifications proposed in these Reply Comments as Exhibit B.
[174] Petition, Exhibit Q at 10.

Commenters do not support the suggestion that an RFP seeking to procure a specified volume of RNG would result in materially different bids or bid selection as compared to planning to procure RNG up to a specified spending level. The structure of Pilot C based on a total dollar amount rather than a particular quantity of gas is appropriate to ensure the selection of the most reasonable bids through the RFP while also meeting the NGIA's statutory requirement that the Commission not approve a plan unless 50 percent or more of the utility's costs approved for recovery under the plan are for the procurement and distribution of renewable natural gas, biogas, hydrogen produced via power-to-hydrogen, and ammonia produced via power-to-ammonia.[175]

These comments also overlook the fact that, as noted by the Department, "RNG is the NGIA's centerpiece from a financial perspective."[176] Pilot C is critically important to CenterPoint Energy's Plan meeting the 50 percent low-carbon fuels requirement as well as to achieve the Company's proposed cost-effectiveness objectives. Finally, as discussed above, actual costs will be reviewed for prudence through CenterPoint Energy's Annual Automatic Adjustment report, where costs recovered through the PGA mechanism are reviewed annually. Under the PGA mechanism, gas utilities file a monthly PGA report with the Department reflecting a summary of adjustments implemented from the previous month and the computation of each adjustment.[177] The costs and revenues recovered via the PGA are then reviewed for prudence and reasonableness and trued-up to actuals each year through the annual automatic adjustment and true-up report.[178] Consistent with the structure of the PGA recovery mechanism, actual costs for Pilot C will be reviewed through the annual automatic adjustment. Additionally, CenterPoint Energy will provide information regarding Pilot C's costs and performance in its annual NGIA status reports, in accordance with the NGIA.[179]

A number of commenters take the position that Pilot C is "too big" and recommend reducing the overall size of the pilot.[180] CUB asserts that the cost and duration of Pilot C "strains the definition … of what could, or should, be characterized as a 'pilot'" and recommends that it may be more appropriate to wait and increase RNG purchases or conduct additional RFPs in future plans "once the feasibility and costs of utilizing RNG are better understood."[181]

The suggestion that Pilot C as proposed is too big is inconsistent with the clear legislative direction contained in the NGIA. In enacting the NGIA, the legislature specified exactly how

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[175] Minn. Stat. § 216B.2427, subd. 2(d)(1) ("The commission may not approve a utility's initial plan filed under this section unless. . . 50 percent or more of the utility's costs approved by the commission for recovery under the plan are for the procurement and distribution of renewable natural gas, biogas, hydrogen produced via power-to-hydrogen, and ammonia produced via power-to-ammonia.").
[176] Department Comments at 25.
[177] Minn. R. 7825.2700, subp.3, 7825.2910, subp. 1.
[178] Minn. R. 7825.2910, subp. 4.
[179] Minn. Stat. § 216B.2427, subd. 2(f).
[180] *See, e.g.*, Minneapolis Comments at 3 ("Minneapolis could support Pilot C at a significantly reduced size, but at fully a third of the NGIA proposed budget, the cost of Pilot C is too high."); CUB Comments at 7; OAG Comments at 8; CEOs Comments at 22-23; Department Comments at 25-38.
[181] CUB Comments at 7.

large NGIA plans should be in terms of their annual total incremental costs.[182] One of the criteria upon which the Commission is directed to evaluate an NGIA Plan is whether the plan promotes the use of renewable resources and reduces or avoids GHG gas emissions *at a cost level consistent with the legislative cost cap* contained in subdivision 3 of the NGIA.[183] The NGIA is also clear that "the limits on annual total incremental costs must be calculated at the time the innovation plan is filed as the average of the utility's forecasted total incremental costs over the five-year term of the plan."[184]

The NGIA also requires that at least half of the costs of the Plan be for the procurement and distribution of RNG, biogas, hydrogen produced via power-to-hydrogen, and ammonia produced via power-to-ammonia are both nascent technologies. As noted by the Department, "RNG will be the primary technology that will be funded under this provision, at least the initial [Plan]."[185] Minn. Stat. § 216B.2427 Subd 3(b) reinforces this perspective by allowing the Commission to approve additional costs for specific kinds of RNG if certain criteria are met.

The term "pilot" is not defined in the NGIA and there is no limit contained in the statute with respect to the size, duration, or scope of pilots proposed under an NGIA plan, beyond the cap on the annual total incremental costs of the overall plan and the cap on the proportion of plan costs attributed to district energy pilots.[186] CUB's suggestion that Pilot C is too large to qualify as a pilot is unsupported. Commenters do not point to anything in the statute or the Commission's Frameworks Order that would support reducing the size of Pilot C.

4. *The Department's Proposed Modifications to Pilot C's Budget and Proposed Changes to the Company's Draft RFP*

The Department recommended that Pilot C's budget be reduced due to limited pre-identification of producers of wastewater, landfill, and food waste RNG. As described in Section III.f, the Company disagrees with this approach to budget development wherein the Company must pre-identify participants prior to filing an NGIA plan. Additionally, as noted above, subsequent conversations with developers have identified additional planned RNG projects in Minnesota and support the Company's approach of pre-identification of all participants being unnecessary for budget planning purposes.

The Department also recommends that the Company modify the RFP for Pilot C to increase the number of contracting options available to bidders. In addition to accepting proposals for (1) the sale of a bundled RNG (i.e. sale of both environmental attributes and commodity gas) and (2) unbundled RNG (i.e. environmental attributes without the commodity gas) as proposed by the

[182] Minn. Stat. § 216B.2427, subd. 3.
[183] Minn. Stat. § 216B.2427, subd.2(b) (2).
[184] Minn. Stat. § 216B.2427, subd. 3 (e).
[185] Department Comments at 25.
[186] Minn. Stat. § 216B.2427, subd. 3(a)-(e); Minn. Stat. § 216B.2427, subd. 2(d)(2).

Company, the Department recommends the Company include within the RFP purchases of unbundled commodity gas (without the associated environmental attributes).[187]

CenterPoint Energy responds that purchases of unbundled commodity natural gas without the associated environmental attributes were not included in the proposed scope of the RFP under Pilot C because such purchases would not be consistent with the goal of the NGIA to contribute to meeting the state's GHG goals. The NGIA statute requires that environmental benefits produced by an NGIA plan not be claimed for another program[188] and the NGIA is intended to allow Minnesota's natural gas utilities to invest in innovative resources that contribute to meeting the state's GHG and renewable energy goals.[189] While purchases of unbundled commodity gas might make sense outside of the NGIA, they would not be consistent with the NGIA statute and therefore have not been included within the scope of the Company's proposed RFP for Pilot C or other pilots within the Company's NGIA Plan.

With respect to the Department's concern that the Company is inconsistent in its position regarding the ownership of environmental attributes for RNG versus power-to-hydrogen and carbon capture pilots,[190] what is required by the NGIA is to ensure the environmental benefits produced by each pilot are not claimed for any other program. CenterPoint Energy's proposed Plan meets this requirement by acquiring and retiring all environmental attributes for proposed RNG projects and Company-owned power-to-hydrogen and prohibiting customer-owned projects from reselling environmental attributes. As described in Exhibit W to the Petition, the only time CenterPoint Energy may grant an exception to the prohibition on customers' reselling or transferring environmental attributes is situations where "there are sufficient controls and tracking to ensure that the environmental attributes and their benefits are retired on behalf of an entity within the state of Minnesota."[191] These conditions ensure the environmental benefits of the pilots will not be claimed for any other program, consistent with the NGIA statute. The fact that the NGIA does not require a utility "to purchase all the output of an innovative resource that produces environmental benefits like RNG,"[192] does not mean that purchases of unbundled commodity gas without environmental attributes would meet the NGIA's purpose. Further, the Company has not proposed a requirement to purchase the full output of RNG resources in either Pilot B or Pilot C.[193]

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[187] Department Comments at 20-21, 93 ("The Department recommends… Pilot C be modified as follows: Participants in the Pilot C RFP be allowed to sell bundled RNG (brown gas and environmental attributes), unbundled RNG (just environmental attributes) and unbundled RNG (just brown gas).").
[188] Minn. Stat. § 216B.2427, subd. 2(a)(10)(i).
[189] Minn. Stat. § 216B.2427, subd. 2(a)(1).
[190] Department Comments at 21 ("[T]he Company's position on the ownership of any environmental credits appears to be inconsistent. CenterPoint identified some value in a contract structure that allows the developer to retain some or all of the EAs produced by power-to-hydrogen and carbon capture pilots.").
[191] Petition, Exhibit W at 1-2.
[192] Department Comments at 21.
[193] In addition, the Department notes that "[f]rom talking to developers, the Department realized the bottle neck for a potential RNG developer is to find an off taker for its brown gas, not the environmental

Since the Department's recommendation to include a portion of purchases of unbundled commodity gas without associated environmental attributes is inconsistent with the NGIA, the Department's recommendation to reduce the RNG pilots based on alternative scenarios involving the purchase of unbundled commodity natural gas[194] are not reasonable and have not been incorporated into the Company's modified Plan.

With regard to the Department's proposal to specify three standard contract lengths for bidders to respond to, specifically 5, 10, and 15 years, the Company agrees with this suggestion. However, the Company proposes not requiring all bidders to make proposals for all three term lengths but allowing bidders to make proposals for only one or two of the term lengths if that is their preference. CenterPoint Energy also proposes providing bidders with flexibility to submit alternative contract term proposals. In particular, the Company will include in the RFP a preference that bids be submitted for contract terms of 5, 10, and 15 year terms. If bidders are not willing or able to provide any of those options, the Company will request that they note "n/a" in their response for the contract length and provide details on their alternative contract length proposal.

With regard to the Department's request that the Company discuss the merits of using a standard RNG purchase agreement, the Company agrees in principle that use of a standardized contract could simplify the bid review and contracting process. Other utilities have used the North American Energy Standards Board ("NAESB") standard contracting forms for bundled RNG purchase transactions, documenting the legal terms of the transaction through a Base Contract and transaction-specific details such as volume, price, delivery location, quality specifications, and regulatory requirements related to the environmental attributes in a Transaction Confirmation.[195] Additionally, NAESB recently adopted a Renewable Natural Gas

attributes." Department Comments at 38. The Company has not heard that difficulty in our conversations with RNG developers. Instead, the Company understands that interconnection to a pipeline, rather than the actual sale of the commodity gas can be a bottleneck for developers.

[194] Department Comments at 36 ("To estimate alternative incremental costs for the RNG pilots, the Department created two alternative scenarios. Under alternative 1 (Alt 1), the Department assumes CPE purchases up to 30 percent of its projected RNG volume as a bundled product (brown gas and the associated environmental credit) and the remaining percentage of its projected RNG volume as an unbundled brown gas (the developer retains ownership of the environmental attributes). Under alternative 2 (Alt 2), the Department assumes CPE purchases up to half of its projected RNG volume as a bundled product (brown gas and the associated environmental credit) and the remaining half of its projected RNG volume as an unbundled brown gas (the developer retains ownership of the environmental attributes).").

[195] *See, e.g.,* Northwest Natural Gas Request for Proposal # 2023-01, Renewable Natural Gas Resources at 12, available at https://www.nwnatural.com/-/media/nwnatural/rfp/nw-natural-rfp-2023-01.pdf?rev=f317d015431441089719c35f93e502c4&hash=E4583A1CF4C3428F54E1841C522E926F. The NAESB Base Contract governs the overall general terms and conditions of the gas supply contract and is typically signed as a master umbrella agreement that applies to several specific detailed transactions over time. Each specific detailed transaction is recorded in a Transaction Confirmation.

Addendum for purchases and sales of RNG.[196] CenterPoint Energy will incorporate a standard contract with the RFP that uses or draws from the NAESB agreements and RNG addendum.

5. *Expected Response to RFP*

With respect to concerns, described above, that the response to the Company's RFP for Pilot C may be less robust than the Company anticipates, CenterPoint Energy has been proactively reaching out to RNG producers and marketers since filing the Petition to inform them of the potential RFP and to gather information on existing or planned projects that would have RNG available for purchase within the five-year innovation plan period. Based on information gathered, the Company expects a sufficiently robust response to its RFP. Additionally, as described above, the Company plans to issue the RFP later this spring and will likely have received responses prior to a Commission hearing on the Company's Petition.

6. *Limited RNG Supply and Environmental Problems with RNG Production*

In response to the CEOs' concerns about limited RNG supply and competing uses, the Company notes first that this concern is related to the CEOs' proposed "best and highest" use framework for NGIA, which the Company addressed above. However, the Company also wishes to reiterate that every scenario modeled in the G21 report, including the high electrification scenario, included the use of more RNG than the Company has proposed to purchase through the Plan.[197] In other words, while the exact amount of RNG that should be used for end uses currently served by geologic gas in Minnesota in an ideal decarbonized economy is still a matter debate, it is almost certainly more than the Company has proposed to incorporate into its system through its Plan.

The CEOs go on to argue that rather than blending RNG into the Company's existing gas distribution system, it should be directly connected to particularly hard-to-decarbonize end uses such as difficult-to-electrify industry through a separate system. CenterPoint Energy notes that high heat industrial customers are already connected to the gas distribution system, so they are already directly connected to any RNG that is blended into the system. The CEOs seem to be arguing that instead of using the existing direct connection, new connections should be built directly between RNG sources and potential users of that RNG. This is analogous to arguing that rather than using I-35 to drive between Minneapolis and Duluth, we should build a new road that doesn't also happen to connect to Des Moines. While there may be situations when constructing a new direct connection of an RNG source to an RNG user makes sense, it is not economically efficient or in the interest of customers to bypass the existing gas distribution system as a matter of course.

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[196] *See* North American Energy Standards Board, Renewable Natural Gas Addendum (Adopted March 8, 2023), https://www.naesb.org/wgq/cont.asp; *see also* RNG Addendum Overview, available at https://naesb.org/pdf4/wgq_contracts032322w3.pdf.

[197] *See* Petition at 19. Decarbonizing Minnesota's Natural Gas End Uses, Great Plains Institute and Center for Energy and Environment (July 2021), available at https://e21initiative.org/natural-gas/

The Company further notes that the decision to interconnect to a common carrier pipeline, such as CenterPoint Energy's distribution system, provides a project developer with significant additional flexibility for securing offtake agreements, which results in reduced risk for the project over its lifetime. Building a connection that can only serve a single industrial offtaker has many physical limitations and relies on nearly 24/7 continuous operation of that industrial process for the lifetime of the RNG project. Connecting to the local distribution system allows projects to sell the RNG to other markets, such as California's LCFS. Further, to find an industrial customer willing to purchase 100 percent of the produced RNG at market price and who can accept that much physical gas is extremely limiting.

With respect to concerns about the GREET model and GHG intensity of RNG, the Company recognizes that the GHG intensity of low-carbon fuels is constantly being re-evaluated and refined. One of the strengths of the Commission's adopted GHG framework established in the Frameworks Order is that it looks to the GREET model established by the Department of Energy's Argonne National Laboratory ("Argonne"). Argonne revisits the GREET model every year and as part of that annual update process, takes into account concerns or feedback, regulatory developments and federal guidance, and new science. The GHG framework established by the Commission will incorporate those updates as they are made by Argonne. The Company urges the Commission to take action based on the GHG-intensity of RNG using the latest GREET model consistent with the Commission's Frameworks Order, recognizing that the GHG accounting experts at Argonne will continue to evaluate new data and incorporate updates in the future as appropriate.[198]

CEOs also express the concern that energy used and emissions released during the *generation* of some waste RNG feedstocks should be part of the characterization of RNG in GREET.[199] For example, CEOs suggested that the emissions from enteric fermentation during animal digestion and the emissions from housing, feeding, and transporting cattle should be reflected in the GHG intensity characterization of RNG from dairy manure. There is not strong lifecycle accounting precedent (in the GREET model or otherwise) in the GHG intensity evaluation of RNG from waste feedstocks to include the upstream emissions from waste production in the RNG fuel cycle system boundary.[200] Waste like dairy manure is not being specifically produced for RNG production and would already be produced in a business-as-usual scenario without the RNG project (e.g., because of demand for dairy). Following the dairy manure example, emissions from cattle housing, feeding/digestion, and transport are already incorporated into lifecycle carbon assessments of the agricultural sector (dairy farming GHGs are conventionally allocated

[198] Frameworks Order, Order Point 3 ("When applicable, utilities shall use the most recent version of the Argonne National Laboratory's Greenhouse Gases, Regulated Emissions, and Energy Use in Technologies (GREET) model in any NGIA plan filings or status reports. Utilities may use the prior year's model if filing an NGIA plan or status report within 30 days of the publication of a new version of the Argonne GREET model.").
[199] CEOs Comments at 11-12.
[200] In their comments suggesting that manure should be modeled in LCAs of dairy farms as a co-product of dairy and meat, CEOs cite to Stephen G. Mackenzie et al. The Mackenzie et al. study notes that meat and milk are generally considered to be the outputs from dairy systems, and while "manure from dairy systems may also be an output… this is generally excluded from allocation frameworks for dairy farming systems."

between milk and meat production), so to also attribute these emissions to RNG production could obfuscate emissions accounting across the economy and may incorrectly lead to double counting of GHG emissions.

A related concern expressed by the CEOs is with the environmental sustainability of large dairy operations. As proposed by the Company, Pilot C may or may not include the purchase of RNG produced by large dairies. The CEOs argue that "concentrated manure sources should be required to reduce their methane emissions and minimize environmental damages resulting from their operations…and small operations with sustainable grazing practices and other sustainable manure management practices that prevent methane creation should be encouraged over large-scale operations."[201] The Company takes no position on what regulations should apply to agricultural operations, but notes that authority over agricultural operations falls outside of the Commission's jurisdiction and with other state and federal agencies. The Commission should not base its decisions in this proceeding on the CEOs' opinions about regulations that should be, but are not currently, applied to the agricultural sector.[202] If the agriculture sector is required to reduce its methane emissions such that this becomes the business-as-usual scenario for handling RNG feedstocks like animal manure, it is understood that Argonne's experts would incorporate these policy decisions in the GREET model's reflection of RNG lifecycle GHG emissions accordingly in their annual model updates.[203]

7. *Geographical Restrictions on RNG Purchases*

The CEOs expressed concern that "the Company does not specify any geographic restrictions for the purchase of RTCs [Renewable Thermal Certificates] or RNG in its RFP…" and argued that failure to impose a geographic restriction would hamper learning opportunities about interconnection and RNG adoption in Minnesota.[204] Minneapolis stated a preference for securing in-state RNG to promote in-state economic development and limiting the distance fuels must travel, thereby diminishing losses.[205]

The Company agrees in part with these concerns, which is why the Company's draft RFP stated that the Company would give preference to RNG supply in or near Minnesota and supply

[201] CEOs Comments at 24.
[202] The NGIA does require that the Commission find that any RNG purchased by the utility under an NGIA plan that is produced from the anaerobic digestion of manure is certified as being produced at an agricultural livestock production facility that has not and does not increase the number of animal units at the facility solely or primarily to produce RNG for the plan. Minn. Stat. § 216B.2427, subd. 2(b)(8). This indicates that the legislature did consider this issue and chose not to prohibit the purchase of manure RNG, but instead to respond to the concern in this more limited way.
[203] The Company would also like to correct the CEOs' statement that GREET assumes that manure is stored in lagoons. CEOs Comments 11-12. In fact, GREET uses EPA data on the average manure management practices across the United States to characterize the business-as-usual manure handling and assumes that only approximately 32% of manure is managed via anaerobic lagoon. See Petition, Exhibit F, Attachment 6 (GREET 2022), waste tab.
[204] CEOs Comments at 21-22.
[205] Minneapolis Comments at 3.

interconnected to CenterPoint Energy's distribution system.[206] However, the Company believes there is a balance between prioritizing in-state resources and GHG reductions, monetary cost, and other factors. Accordingly, CenterPoint Energy disagrees that it should bar consideration of out-of-state purchase options.

The Company appreciates Minneapolis's statement of their preference for in-state RNG as opposed to RNG from neighboring states. To address this, the Company will modify its RFP to include a four-tier system of preference as it relates to the geographic location of RNG:

1) RNG interconnected with CenterPoint Energy's Minnesota distribution system;
2) RNG within Minnesota;
3) RNG in neighboring regions; and
4) Other RNG.

8. *Purchasing Unbundled Environmental Attributes without Commodity Gas*

In contrast to the Department's recommendation to expand the scope of contracting options for RNG to include unbundled natural gas commodity, the CEOs recommend that CenterPoint modify its NGIA Plan to "eliminate the option to purchase RNG RTCs without procuring the fuel."[207]

CUB also questions whether purchases of unbundled environmental attributes would count toward the statutory requirement that 50 percent or more of the plan costs be used for "the procurement and distribution of renewable natural gas, biogas, hydrogen produced via power-to-hydrogen, and ammonia produced via power-to-ammonia."[208]

As explained in the Company's Petition, "CenterPoint Energy … proposes to give a preference to bundled RNG (i.e. sale of both environmental attributes and commodity gas) but would consider purchasing unbundled RNG (i.e. without the commodity gas)."[209] Including purchases of unbundled RNG environmental attributes may enable broader participation in the pilot. Purchasing unbundled environmental attributes as part of Pilot C is consistent with the NGIA and inclusion of the commodity natural gas component of the RNG is not necessary for these purchases to count toward the requirement that 50 percent or more of the plan costs be used for "the procurement and distribution of renewable natural gas, biogas, hydrogen produced via power-to-hydrogen, and ammonia produced via power-to-ammonia."

[206] Petition, Exhibit Q at 10.
[207] CEOs Comments at 24.
[208] CUB Comments at 7.
[209] Petition, Exhibit D at 7.

Renewable Thermal Certificates or RTCs are a unique representation of the environmental attributes associated with the production, transport, and use of one dekatherm of RNG.[210] The proposed purchase of unbundled RTC's involves the procurement of specified volumes of RNG.

As explained by the RNG Coalition in their Comments, "book-and-claim accounting–as envisioned by the Company in Pilot C—is the most proven method to allow fair ownership claims of the environmental benefits associated with renewable gas."[211] Energy procurement via book-and-claim systems, based on the transfer of certificates verifying environmental attributes, is the foundation of clean and renewable energy markets. For example, in the electric industry, purchases of unbundled renewable energy certificates ("RECs") is common. RECs legally convey the attributes of renewable electricity generation, including the emissions profile of that generation, to their owner and serve as the basis for a renewable electricity procurement claim.

9. *Learning Value of Pilot C*

The CEOs faulted the Company for not delineating specific learning objectives for Pilot C.[212] The Company addressed the CEOs' arguments related to pilot-by-pilot learning objectives above.

CUB and the CEOs argue that purchasing environmental attributes of RNG, without the commodity gas, would have limited learning value for the Company, interested parties, or the Commission.[213] The CEOs argue "[e]nvironmental trading markets are well developed and straightforward."[214]

The Company notes that this perspective contrasts with the CEOs' 2019 Comments on the Company's proposed RNG green tariff, wherein they stated "The net greenhouse gas emission impact of CenterPoint Energy's proposed pilot program will be difficult to parse and will not directly affect Minnesota's greenhouse gas emissions budget because carbon intensity metrics and/or environmental attributes associated with renewable natural gas for end-use in buildings do not yet exist."[215] The CEOs go on in their 2019 Comments to note that while the Company at that time had been in conversation with M-RETS regarding the possibility of collaborating to create a tracking system for RNG in Minnesota, it would likely take several years to get a robust program in place.

As the CEOs noted in their 2019 Comments, environmental attribute trading associated with RNG is new for gas utilities including for CenterPoint Energy. Contrary to the CEOs and CUB's assertions in comments in this docket, there are significant learning opportunities associated

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[210] Midwest Renewable Thermal Tracking System, Renewable Thermal Operating Procedures https://www.mrets.org/wp-content/uploads/2021/06/M-RETS-Thermal-Tracking-System-6-2021.pdf
[211] RNG Coalition Comments at 7.
[212] CEOs Comments at 21.
[213] CEOs Comments at 21; CUB Comments at 7.
[214] CEOs Comments at 7.
[215] *In the Matter of CenterPoint Energy's Petition to Introduce a Renewable Natural Gas Pilot Program,* Docket No. 18-547, Initial Comments of Fresh Energy, Minnesota Center for Environmental Advocacy, and the Sierra Club at 5 (Jan. 8, 2019).

with using newly developed systems in conjunction with the purchase of environmental attributes.

The CEOs also state a concern that there are limited learning opportunities associated with operating both Pilots B and C as both pilots include RNG blending into the gas distribution system.[216] However, Pilots B and C will give the Company, interested parties, and the Commission more diverse experience with RNG as they will involve different RNG producers, different supply locations, different feedstocks, and different GHG-emissions profiles. Pilot C will also give the Company experience with issuing an RFP for RNG and evaluating different RNG options. Accordingly, each Pilot brings distinct learning opportunities.

Pilot D. **Green Hydrogen Blending into Natural Gas Distribution System:** CenterPoint Energy proposes to own and operate a 1 MW green hydrogen plant at an existing Company facility in Mankato, Minnesota. CenterPoint Energy would install dedicated solar panels, an electrolyzer, a hydrogen storage system, and other necessary systems and equipment to generate, store, and blend hydrogen into the gas distribution system.

The Department, CUB, Minneapolis, the CEOs, the OAG, and the RNG Coalition provided comments on Pilot D specifically. This feedback is summarized below.

The RNG Coalition expressed support for Pilot D "as an important step in both scaling the hydrogen resource and evaluating its feasibility in gas system applications."[217]

The Department acknowledged "there is inherent value in continuing to study implementation of hydrogen blending…" but expressed concerns about the operation of the Company's existing hydrogen blending pilot in Minneapolis and recommended a review of the causes of poor performance at that facility before moving forward with a second demonstration pilot.[218] CUB and the OAG expressed similar concerns.[219] The Department also requested that CenterPoint Energy provide an analysis of how recent U.S. Department of Treasury guidance on the clean hydrogen PTC may reduce pilot costs.[220]

CUB and the CEOs expressed concern that Pilot D is duplicative of CenterPoint Energy's existing hydrogen blending pilot in Minneapolis[221] and argued that the potential for hydrogen blending is limited.[222] The CEOs also suggested that the Pilot may be duplicative of insights to come from the federal Hydrogen Hub effort.[223] CUB, the CEOs, Minneapolis, and the OAG also expressed concerns about the safety of hydrogen blending and its effects on the integrity of the

[216] CEOs Comments at 21.
[217] RNG Coalition Comments at 7.
[218] Department Comments at 40, 93-94.
[219] CUB Comments at 4; OAG Comments at 7-8.
[220] Department Comments at 41.
[221] CUB Comments at 4; CEOs Comments at 27-28.
[222] CUB Comments at 4-5; CEOs Comments at 9-10, 25.
[223] CEOs Comments at 26.

gas distribution system.[224] Both the CEOs and the OAG expressed concerns about using carbon-free electricity for the generation of hydrogen when there are other demands for carbon-free electricity and suggested that it would be more beneficial to use dedicated hydrogen production for difficult-to-electrify end uses.[225]

The Company addresses these concerns below.

1. Minneapolis Hydrogen Blending Facility and Hydrogen Hub

While cognizant of the challenges associated with implementing and operating a custom installation, the Company disagrees with the assessment of "poor performance" at the existing Minneapolis hydrogen production and blending facility. The production has significantly increased over time and while it has not yet reached its maximum potential, the Minneapolis facility has already contributed to invaluable learning and improvements to hydrogen production system design and operations including such items as water processing, drying systems, and oxygen handling. The testing, equipment procurement, repairs, software changes, and personnel training at the existing facility have helped validate the design and integration into the distribution system, which will inform the planning and design for Pilot D and streamline the process for getting the new installation online.

With respect to concerns that the learning opportunities of Pilot D would be duplicative of the existing pilot, encouraging the state's hydrogen economy will require a variety of production techniques and locations to evaluate renewable power, federal incentives, and system impacts at different injection points. In particular, Pilot D will investigate the use of on-site solar and hydrogen storage, as well as the interaction of the solar, storage, and electrolyzer systems.[226]

In response to the CEOs concern that Pilot D might duplicate learnings from the federal Hydrogen Hub effort, the Company expects that the Heartland Hydrogen Hub will provide valuable insight into the role of hydrogen within Minnesota but the Hub is not the only investment in hydrogen that should be made within the state. Indeed, the passage of substantial hydrogen tax credits in the IRA, following the passage of Hydrogen Hub grants in the

[224] CUB Comments at 4-5; CEOs Comments at 10, 25, 48; Minneapolis Comments at 4; OAG Comments at 6-7. Minneapolis also states in their Comments "Leaking H2 would negate the climate benefit of offsetting methane and waste customer money on H2 fuel that escapes into the atmosphere." Minneapolis Comments at 4. The Company acknowledges that limiting leakage of any fuel can result in cost savings for customers. However, CenterPoint Energy wishes to clarify that hydrogen is not itself a GHG pollutant and therefore some level of hydrogen leakage does not negate the climate benefits of substituting hydrogen for methane.

[225] CEOs Comments at 29; OAG Comments at 7. The OAG also expressed a concern that there is no guarantee that the electricity purchased for the pilot would be carbon free as CenterPoint Energy has not yet determined exactly what source of carbon- free electricity it will use. OAG Comments at 5. The Company notes that the NGIA statute requires electricity used for production of power-to-hydrogen to be carbon free, Minn. Stat. § 216B.2427, subd. 1(m), and the Frameworks Order provides additional clarity on the meaning of carbon free. Frameworks Order at Order Point 10. CenterPoint Energy intends to comply with the NGIA and the Frameworks Order and will provide evidence of its compliance if necessary.

[226] The Minneapolis location does not have sufficient space to install on-site solar generation.

Infrastructure Investment and Jobs Act ("IIJA"),[227] indicates that the federal government does not believe the Hydrogen Hubs to be sufficient. The Company's proposed Pilot D will take advantage of federal tax credits and provide firsthand learning opportunities for the Company in operating hydrogen production, blending, renewable electricity, and hydrogen storage, which the Company could not gain by simply following along with the Heartland Hub.

2. Federal Hydrogen PTC

At the time of CenterPoint Energy's initial NGIA Plan filing, it was still unclear how the IRA would allow grid electricity purchases covered by RECs or green tariff programs to count towards reaching the $3/kg incentive level designated in the PTC. Thus, costs for this Pilot were estimated using what was considered the conservative approach to IRA funding – the ITC. Recently, the U.S. Department of Treasury issued guidance on the Clean Hydrogen PTC under 26 U.S.C. § 45V.[228] In their Comments, the Department suggests that with updated PTC rule guidance, this Pilot may be eligible for PTC credit access, such that the Pilot cost could be lower.[229]

The Company agrees that the PTC could be leveraged to lower Pilot costs and has included revised cost scenarios based on available information in Exhibit F. The Company notes that at this time, only draft proposed rules have been issued and there are some remaining uncertainties regarding how projects like this Pilot may be evaluated. The Company anticipates that these uncertainties will be clarified with the final rules. The analysis in Exhibit F includes a "conservative approach" and an "optimistic approach" to the assumptions used for PTC tax credits that would reduce the cost of this Pilot in the NGIA Plan. The conservative and optimistic approaches are tied to how grid electricity may qualify for the PTC at present and in the future.[230]

The conservative hydrogen PTC approach is estimated to increase the IRA funding received from $1.5 million (based on the ITC) to approximately $2.1 million, although this PTC funding would be spread out over a 10-year period. The optimistic PTC approach is estimated to result

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[227] The Hydrogen Hub effort was established in IIJA § 40314. IIJA was enacted in 2021 and IRA was enacted in 2022.

[228] 88 Fed. Reg. 89220, Notice of Proposed Rulemaking and Notice of Public Hearing, Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election to Treat Clean Hydrogen Production Facilities as Energy Property (Dec. 26, 2023), available at https://www.federalregister.gov/documents/2023/12/26/2023-28359/section-45v-credit-for-production-of-clean-hydrogen-section-48a15-election-to-treat-clean-hydrogen.

[229] Department Comments at 41 ("We believe that this production tax credit could be leveraged to substantially lower the cost of hydrogen production and improve the potential performance of this proposed pilot, if the pilot is designed to capture some or all of the available PTC.").

[230] One of the issues of significant interest for the Company is requirements for time-matching. The draft PTC rules would require electrolyzer use of electricity to match generation of zero emissions electricity on an annual (through 2027) and then hourly basis to qualify as zero emissions hydrogen. Some sources of renewable electricity may only be able to guarantee annual matching or other time intervals greater than an hour. Currently, the draft rules will require hourly matching starting in 2028 and the Company is conservatively assuming that it will not secure a supply of hourly-matched zero emissions electricity for its electrolyzer other than the on-site solar panels.

in approximately $5.1 million in federal PTC funding for the pilot over the same 10-year period. CenterPoint Energy has assumed the conservative approach for purposes of the revised NGIA Plan presented in these Reply Comments.[231] The revised plan also accounts for additional costs for annual GHG verifications, as required by the PTC regulations, and a slight increase in the utility's annual revenue requirement, given the higher upfront capital investment without the upfront ITC credit for the electrolyzer. The Company concludes this updated cost projection is reasonable based on current information and because the details of the regulations are still being finalized. Final guidance may allow for greater generation of PTC value and the Company will look to find the best approach to leverage federal tax incentives based on the final regulations. Proposed modifications for this pilot can be found in Exhibit A and Exhibit E.

3. Limitations of Hydrogen Blending, Safety, and Effects on Distribution System

With respect to parties' concerns about the safety of hydrogen blending and its effects on the distribution system, as noted in the Petition, the Company consulted with the Minnesota Office of Pipeline Safety ("MNOPS"), the agency responsible for pipeline safety, in advance of filing the Petition. The Company discussed applicable safety regulations, which CenterPoint Energy will follow, as well as MNOPS's plan to visit the facility once it is operational.[232]

Parties are correct to note that as the distribution system and customer appliances are currently designed and operated, there is an upper threshold on how much hydrogen can be safely blended into the distribution system. However, the contribution of hydrogen blending to decarbonization can still be substantial. A five percent hydrogen blend onto CenterPoint Energy's entire distribution system could replace approximately 2.5 million Dth of geologic natural gas consumption annually and reduce annual GHG emissions by approximately 165,000 metric tons CO_2e .[233] Every innovative resource included in the NGIA is in some way limited. For example, no matter how much we invest in energy efficiency, there will still be systems that require energy input, but that does not mean that energy efficiency is not a valuable piece of our

[231] Specifically, the Company's revised NGIA Plan presented in these Reply Comments has changed modeling for the pilot funding sources to the PTC for the electrolyzer (retaining the use of the ITC for solar photovoltaic investment), because a reasonable interpretation of the draft regulations suggests that the Company could get more funding from the IRA this way, lowering the budget for the Pilot in the five-year window of this first NGIA plan. The Company believes it is possible to get some level of ongoing PTC from grid electricity for the electrolyzer after the hourly matching requirement is put into place but assumes zero PTC for the grid electricity after 2028 to produce a conservative estimate in light of the uncertainty around the final rule. There are elements of uncertainty regarding which components of the Pilot's electricity supplies will qualify for the PTC incentives over time and how projects with two different sources of electricity are to be evaluated. Final rules could inform whether dual sources of electricity supply are acceptable for PTC funding and change the Company's understanding of how GHG intensity is to be evaluated and credited under the IRA.

[232] Petition, Exhibit D at 14.

[233] This is similar in scale to annual savings the Company achieves through ECO/CIP. The average annual savings in the Company's 2024-2026 Energy Conservation and Optimization Triennial Plan is approximately 1.9 million Dth or 125,000 $MTCO_2e$.

energy system. Similarly, hydrogen blending is not a “silver bullet” but it can provide substantial GHG reductions and is worth exploration.

In response to arguments about the best uses for carbon-free electricity, which will be needed for applications such as electrification of transportation, buildings, and industry, the Company notes that this is a variation of the “best and highest” use argument addressed above. Again, CenterPoint Energy urges the Commission not to substitute the best and highest use framework for the frameworks already established for the evaluation of NGIA plans.

Pilot E. **Industrial or Large Commercial Hydrogen and Carbon Capture Incentives:** CenterPoint Energy will identify a small number of large commercial or industrial customers interested in installing either power-to-hydrogen or carbon capture demonstration projects and support their projects by providing financial assistance towards feasibility studies and project costs.

The Department, CUB, Minneapolis, and the CEOs provided comments on Pilot E specifically. This feedback is summarized below.

The Department supported approval of Pilot E but recommended certain modifications. Specifically, the Department suggested limiting the Pilot to one power-to-hydrogen customer[234] and waiting until the second year of the Plan to consider funding for carbon capture but approving a carbon capture scoping study as an R&D expense.[235]

CUB recommended modifying Pilot E’s green hydrogen component to limit it to industrial facilities that are not amendable to electrification rather than large commercial operations.[236]

The CEOs expressed support for a hydrogen pilot targeting large industrial customers,[237] but faulted the Company’s proposal for failing to identify customers, not providing cost containment guardrails, and not providing criteria for assessing opportunities.[238] The CEOs expressed concern that the Company’s proposed budget might not represent total costs[239] and suggested that the Company include a minimum Dth of natural gas savings criterion for participation.[240]

Minneapolis expressed support for Pilot E under the condition that CenterPoint Energy’s estimates of GHG reductions are realistic and that there is an off-taker prior to investment of funds.[241] Minneapolis also recommended requiring participating customers to contribute 50 percent of project costs.[242]

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[234] Department Comments at 42, 91.
[235] Department Comments at 45, 91.
[236] CUB Comments at 3.
[237] CEOs Comments at 28.
[238] CEOs Comments at 30.
[239] CEOs Comments at 30.
[240] CEOs Comments at 30-31.
[241] Minneapolis Comments at 4.
[242] Minneapolis Comments at 5.

The Company addresses concerns and suggestions below.

1. *Department's Proposed Budget Modifications*

With respect to the Department's proposed budget modifications, the Company has addressed above why the Department's general approach of limiting budget to only customers pre-identified for participation is not reasonable. With respect to Pilot E in particular, the Company first clarifies that the proposed budget is based on the inclusion of one hydrogen participant and one carbon capture participant; however, the Company proposes to be flexible to allow multiple hydrogen or multiple carbon capture participants depending on interest and as the budget and any available flexibility allow.

CenterPoint Energy has proposed to begin this Pilot with a scoping study to in aid customer identification. CenterPoint Energy is aware of several large customers with aggressive GHG reduction goals and high-temperature processes that may be good fits for this technology and the Company intends to conduct proactive outreach with specific customers this summer to make them aware of the potential for this Pilot, catalog their interest, and collect information on potential projects. This initial outreach will lay the groundwork for the scoping study.

In response to the Department's suggestion to classify the carbon capture scoping study as an R&D expense, the Company notes that with the fourth largest estimated GHG reductions of all proposed pilots, Pilot E results in significant quantifiable GHG benefits, and does not satisfy the R&D criteria described in the Company's Petition.[243] The Company considers the scoping study an integrated component of Pilot E; it is a step in the process of implementing the full pilot that will lead to significant GHG savings. CenterPoint Energy has continued to include Pilot E in the revised pilot portfolio and does not propose to classify a portion of this Pilot's expenses associated with the scoping study as R&D.

2. *Cost Containment and Limitations on Participants*

Regarding the CEOs' concerns about cost containment, the CEOs appear to be concerned that the Company would incur additional costs beyond $1.5 million for a single customer. CenterPoint Energy clarifies that any costs beyond $1.5 million for a specific project would be the customer's responsibility. The Company also clarifies that spending in excess of the proposed 25 percent flexibility requested would require additional Commission approval.

With respect to CUB's proposal to limit Pilot E to hard-to-electrify industrial customers, the Company does not agree. First, the Company does not know as a matter of course which of its customers are industrial as opposed to commercial, nor does CenterPoint Energy know how to determine which customers are hard-to-electrify. More importantly, however, the Company would give individual customers the freedom to choose the decarbonization options that work best in their circumstances. Customers participating in this project will likely be incurring

[243] Petition at 15.

substantial costs beyond what is covered by the Company's proposed incentive[244] and making major changes to their facility in order to accommodate the hydrogen or carbon capture systems. The Company finds it unlikely that any participant in this Pilot would take on this work or expense if they could easily achieve their goals through strategic electrification and the customer would be in the best position to make that determination.

With respect to the CEOs' suggestion that the Company require a minimum amount of Dth savings for project participation, the Company generally does not oppose this recommendation, but would suggest re-framing as a minimum GHG reduction savings because the carbon capture aspect of this Pilot will generally result in GHG but not Dth savings. The Company proposes that participation be limited to projects expected to reduce GHG emissions by 9,000 MT CO_2e or more over the lifetime of the project. This is equivalent to the lifecycle emissions associated with the use of approximately 136,000 Dth of natural gas.

CenterPoint Energy appreciates Minneapolis's suggestion to require customers to pay 50 percent of the costs. The decision to offer an incentive that covers 100 percent of the upfront project cost, up to $1.5 million, was based on the expectation that participating customers are likely to incur an increase in ongoing operating costs associated with the project, as noted above. The Company believes that a large upfront incentive will better motivate customers to move forward with projects that will still require a significant investment of time and effort and a commitment to ongoing increased operating costs. Accordingly, the Company continues to support the incentive structure as proposed.

Pilot F. **Industrial Methane and Refrigerant Leak Reduction:** CenterPoint Energy will hire a vendor to conduct surveys of participating industrial and large commercial facilities for methane and refrigerant leaks behind the customer gas meter. CenterPoint Energy will also offer incentives to partially offset the cost of leak repair.

The Department, CEE, Minneapolis, and the OAG provided comments on Pilot F specifically. This feedback is summarized below.

The Department supported approval of the Pilot but expressed concern that the Company's estimates for participation were too high and recommended reducing the budget.[245]

CEE expressed support for the Pilot, stating that findings from the Pilot "will be relevant for commercial and industrial end-uses currently fueled by natural gas, as well as future end-uses fueled by alternative gaseous fuels and electric technologies that use refrigerants, like heat pumps."[246]

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[244] The Company estimated through the Participant Cost Test calculations that from the customer's perspective the present value of the total lifetime cost increases for the participant implementing this project would be roughly an additional $14.3 million for a carbon capture project and $44.5 million for a hydrogen project, with those values already factoring in the Company's proposed incentive.
[245] Department Comments at 46, 91.
[246] CEE Comments at 5.

Minneapolis supported Pilot F and recommended that contractors for the Pilot be solicited from in-state to maximize local economic development benefits.[247]

The OAG questioned the Company's estimated methane savings for Pilot F.[248]

The Company addresses concerns and suggestions below.

The Company addressed the Department's approach to limiting budget based on pre-identified participants above. Specific to Pilot F, the Pilot includes plans to engage in targeted marketing and outreach. Based on its experience implementing customer programs, the Company believes the planned marketing approach will be sufficient to attract the target level of participation of 25 customers per year.

Regarding Minneapolis's recommendation that contractors be solicited from in-state to maximize local economic development benefits, CenterPoint Energy appreciates the suggestion, however, the Company expects that due to the specialized nature of this Pilot, there may be a limited pool of qualified vendors, and does not feel it would be prudent to limit contractors to only in-state. CenterPoint Energy can take the location of the vendor or hired staff into consideration during a request for proposals process.

Regarding the OAG's concerns with the assumed methane leak rates used to quantify GHG emission reductions in the Pilot, CenterPoint Energy again acknowledges uncertainty in these estimates but also reemphasizes that the approach to quantification of these emissions was intended to be conservative and that the GHG savings achieved could also end up being higher. The respondent to the Request for Ideas ("RFI") who proposed this Pilot has previously administered a similar methane leak pilot and proposed that a higher level of leak reduction might be possible. One Environmental Protection Agency ("EPA") estimate of methane leaks from industrial facilities calculated the rate at up to 5 percent; however, CenterPoint Energy does not expect this level of leaks to be common at most of its industrial customers. Given the lack of other reference data on the level of methane leaks at industrial facilities, and a desire to more conservatively estimate the current level of leaks (which sets the bar on how much leak reduction can be achieved), CenterPoint Energy instead referenced data for the commercial sector (where leaks are generally expected to be lower than industrial facilities) from California. This commercial sector data found leak rates ranging between 0.14 to 0.28 percent of total customer consumption. While CenterPoint Energy's use of a leak rate of 0.25 percent was towards the upper range of that commercial sector estimate, this Pilot is targeting CenterPoint Energy's largest industrial and commercial customers, who could reasonably be expected to have higher leak rates and more complicated gas piping and equipment within their facilities than an average commercial facility. The 0.25 percent leak rate is also significantly below the EPA estimate of 5 percent for some facilities.

As the OAG noted, these leak rates were average values, with some facilities having no leaks and others having higher levels of leaks. However, this does not mean that these rates will

[247] Minneapolis Comments at 5.
[248] OAG Comments at 3.

overestimate GHG savings. CenterPoint Energy would also expect some participants in this Pilot to be surveyed and found to have less than 0.25 percent in methane leaks, while other facilities will be expected to have higher levels of leaks. The idea is that by including 50 large facilities in the program, the overall GHG savings targets for the pilot could be achieved even with some facilities having no leaks to reduce.

It should be noted that even with the conservative assumptions included for this Pilot, it was found to be very cost-effective. Even if the average methane emission reductions achieved were four times lower (e.g., well below the lower-end commercial estimate of 0.14 percent) this Pilot would still be cost-effective considering only quantified costs and benefits. Considering these facts, CenterPoint Energy does not think that this Pilot should be removed from the Plan. Given the attempt at using conservative estimates in the face of significant uncertainty, CenterPoint Energy also does not agree with the request to revise down the expected savings for this Pilot.

Pilot G. **Urban Tree Carbon Offsets:** CenterPoint Energy proposes to purchase carbon offsets from local non-profit, Green Minneapolis. Green Minneapolis works with local tree planting partners across the 7-county Twin Cities Metro area to plant trees in urban areas and funds their work by selling carbon offsets.

The Department, the CEOs, and Minneapolis provided comments on Pilot G specifically. This feedback is summarized below.

The Department stated that they agreed with the concept of Pilot G in principle. However, they were concerned that the credits CenterPoint Energy would purchase would come from trees planted in prior years rather than new trees.[249]

The CEOs expressed the opinion that NGIA should be used only for pilots that directly reduce GHG emissions from the distribution and combustion of gas in the retail gas system and therefore Pilot G should not be approved.[250] The CEOs also argued that Pilot G does not satisfy the statutory definition of “carbon capture”[251] and that there are other sources of funding to support similar efforts.[252]

Minneapolis expressed support for Pilot G.[253]

The Company addresses these comments and concerns below.

Minn. Stat. § 216B.2427, subd. 1 (c) defines “carbon capture” to mean “the capture of greenhouse gas emissions that would otherwise be released into the atmosphere.” Subd. 1(g) defines "Greenhouse gas emissions" as “emissions of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride emitted by anthropogenic sources within Minnesota and from the generation of electricity imported from outside the state

[249] Department Comments at 47, 93.
[250] CEOs Comments at 16, 32.
[251] CEOs Comments at 32.
[252] CEOs Comments at 32.
[253] Minneapolis Comments at 5.

and consumed in Minnesota, excluding carbon dioxide that is injected into geological formations to prevent its release to the atmosphere in compliance with applicable laws."

Under Pilot G, trees will capture carbon that would otherwise remain released in the atmosphere. As such, these credits are consistent with the NGIA's definition of carbon capture. Other commenting parties, including the Department and Minneapolis, express support for the inclusion of such carbon offsets under the NGIA.[254] For example, the Department states that it "considers the carbon offset technology as a possibility for decarbonization efforts within the NGIA," but suggests modifications to Pilot G, as discussed below. The CEOs conclusion that this Pilot does not meet the statutory definition of carbon capture or qualify as an innovative resource under the NGIA is unsupported.

The CEOs also argue Pilot G is inconsistent with Minn. Stat. § 216B.2427, Subd. 10, because the Pilot does not directly reduce natural gas throughput.[255] Minn. Stat. § 216B.2427, subd. 10 provides "It is the goal of the state of Minnesota that through the Natural Gas Innovation Act and Conservation Improvement Program, utilities reduce the overall amount of natural gas produced from conventional geologic sources delivered to customers." This provision of the NGIA establishes an overall goal of reducing geologic natural gas throughput; it does not purport to establish a requirement that pilots proposed within an NGIA plan reduce natural gas throughput. The CEO's suggestion that each pilot should be required to directly reduce natural gas throughput is also inconsistent with the overall NGIA.[256]

Additionally, research investigating the effects of trees on residential building energy use has shown that "trees in urban areas of the conterminous United States annually reduce electricity use by 38.8 million megawatt hours for a savings of $4.7 billion, heating use by 246 million British thermal units, saving $3.1 billion, and avoid thousands of tons of emissions of several pollutants valued at $3.9 billion per year. Average reduction in national residential energy use due to trees is 7.2 percent."[257] Similarly, as described in the Company's Petition, "[t]he Urban Tree Carbon Offsets pilot has unique benefits associated with shading nearby homes and other buildings. Shade can reduce cooling and heating costs over time for any buildings in the vicinity."[258]

The Department also recommends that Pilot G not be approved as proposed because carbon credits to be purchased and retired under the Pilot are "for trees that were planted in Minneapolis between 2019 and 2021. Thus, the funding would go towards existing trees that are

[254] Minneapolis Comments at 5; Department Comments at 46.
[255] CEOs Comments at 32-33.
[256] For example, no carbon capture pilot would reduce geologic natural gas throughput but carbon capture may help achieve other NGIA goals.
[257] U.S. Forest Service, U.S. Department of Agriculture, Residential building energy conservation and avoided power plant emissions by urban and community trees in the United States (2017), available at https://www.fs.usda.gov/research/news/highlights/urban-trees-save-billions-dollars-through-reduced-energy-costs#summary.
[258] Petition, Exhibit O at 1 (citing Energy conservation through trees – tree care, Minnesota Department of Natural Resources, https://www.dnr.state.mn.us/treecare/energy/index.html#:~:text=In%20Minnesota%2C%20strategically).

already growing in Minneapolis. . . The proposal does not lead to any additional trees being planted anywhere in CPE's service territory."[259]

As explained in the Petition, local non-profit Green Cities Accord (formerly Green Minneapolis) is working in partnership with local tree planting partners across the 7-county Twin Cities Metro area and is selling carbon offsets registered as City Forest Carbon+ Credits for trees planted in the community.[260] Green Cities Accord registers tree planting projects with City Forest Credits, the national carbon registry for GHG emission reduction and removal for tree projects in cities and towns. A carbon registry is a non-profit organization that develops and administers protocols, which includes carbon quantification methods, validation, and third-party verification. After verification, City Forest Credits issues and tracks credits for the project duration in a transparent registry system.[261] Under the City Forest Credits Protocol, credits are issued over the lifetime of the trees, not all up front.[262] The City Forest Credits Standard establishes requirements ensuring additionality is protected by:

- A legal requirements test (trees required by a law or ordinance cannot be credited);
- A performance standard baseline developed with data from peer-reviewed urban forest scientists and per the methodology set out in the foundational carbon protocol document the World Resources Institute/World Business Council for Sustainable Development Greenhouse Gas Protocol for Project Accounting (2008), which describes GHG project accounting principles; and
- A 25-year project duration commitment. This imposes an additional maintenance obligation for crediting that is far beyond business-as-usual urban forest maintenance, which is often not at all or for the first several years of a tree's life.[263]

As described by Minneapolis, "CFC releases the carbon credits over time to reflect that sequestering carbon in trees happens over many years."[264] The program also requires a health audit and field monitoring of trees.

Additionality requires that GHG reductions only be recognized for project activities that would not have "happened anyway."[265] In the case of Pilot G, if not for the City Forest Credits urban

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[259] Department Comments at 46.
[260] Petition at 20-21. After CenterPoint Energy's Initial Filing, Green Minneapolis changed its name to Green Cities Accord, in recognition of the organization's expansion across the Twin Cities, Minnesota, and beyond.
[261] Green Cities Accord, Urban Tree Carbon Offset Program, https://www.greenminneapolis.org/projects/climate-resiliency-initiative/carbon-offset-program/.
[262] City Forest Credits, City Forest Credits Standard at 13-14 (Oct. 4, 2021), available at https://www.cityforestcredits.org/wp-content/uploads/2021/10/City-Forest-Credits-Standard.pdf.
[263] City Forest Credits, City Forest Credits Standard at 12, 19 (Oct. 4, 2021).
[264] Minneapolis Comments at 5.
[265] *See* Department Comments at 46 ("If the reductions would have happened anyway – i.e., without any prospect for project owners to sell carbon offset credits – then they are not additional.").

tree carbon offset program, Green Cities Accord and partners would not participate in project activities to maintain and monitor the trees over the 26-year project duration in accordance with the City Forest Credit Standards.

Finally, the Department recommends that the Company modify Pilot G to ensure trees are planted in areas with conditions of project-defined high inequity to trees, such as at schools, affordable or subsidized housing, formerly redlined neighborhoods, areas with high property vacancy rates, or areas with high proportion of renters."[266] Green Cities Accord is responsible for coordinating urban tree carbon offset projects in partnership with local tree planting partners, focusing on expanding the urban tree canopy across Minneapolis and the 7 county Twin Cities metropolitan area to address the most harmful impacts of climate change on residents. As described in CenterPoint Energy's Petition, "Green Minneapolis targets tree planting particularly in areas of limited tree coverage which have a high correlation with areas of concentrated poverty."[267]

As noted by Minneapolis, Pilot G "is cost effective and advances other climate adaptation goals like mitigating urban heat island through urban forestry projects where people live."[268] In addition, trees reduce stormwater runoff, act as a screen to prevent particulate air pollution from streets from reaching nearby homes, and afford other physical and mental health benefits for people in cities.[269] As noted by Green Cities Accord, "[i]n addition to sequestering carbon, urban trees provide other quantifiable benefits to the urban core including the reduction of stormwater runoff, air pollution, urban heat effects, and heating and cooling costs. More than that, trees contribute to our mental health, provide us with oxygen, help reduce the effects of climate change, benefit wildlife, help reduce crime, create local jobs and are a good investment of public dollars."[270]

Finally, in response to the CEOs' argument that "there are other sources of funding to support the benefits of urban tree planting, including the $1.5 billion allotted for urban forests in IRA,"[271] this argument could apply to all innovative resources included in the NGIA. The existence of other sources of funding does not mean that existing funding is adequate or that additional funding cannot secure additional benefits. As described above, Pilot G will yield additional benefits for CenterPoint Energy's customers and the state and therefore, the Company continues to propose inclusion of Pilot G in its NGIA Plan.

Pilot H. **Carbon Capture Rebates for Commercial Buildings:** CenterPoint Energy proposes to provide rebates to commercial customers that install CarbinX carbon

[266] Department Comments at 46.
[267] Petition, Exhibit D at 22.
[268] Minneapolis Comments at 5.
[269] Petition, Exhibit O at 3 (citing The Nature Conservancy, https://www.nature.org/content/dam/tnc/nature/en/documents/Public_Health_Benefits_Urban_Trees_FINAL.pdf).
[270] Green Cities Accord, Urban Tree Carbon Offset Program, https://www.greenminneapolis.org/projects/climate-resiliency-initiative/carbon-offset-program/
[271] CEOs Comments at 32.

> capture systems manufactured by Canadian company CleanO2. These units connect to existing natural gas heating equipment, capture CO_2, and convert it into chemicals that are resold for commercial uses.

The Department, CUB, the CEOs, Minneapolis, and the OAG provided comments on Pilot H specifically. This feedback is summarized below.

The Department argued that this Pilot could be reasonably included in the Company's CIP/ECO portfolio and specifically the ECO R&D budget and therefore should be excluded from the Company's NGIA Plan.[272]

CUB and the CEOs expressed concern about duplication of this pilot with the Company's first pilot of this technology, which was initiated through CIP/ECO, and suggested that Pilot H should be postponed until final results are available from the CIP/ECO pilot.[273]

Minneapolis expressed support for Pilot H and specifically the Company's plan to leverage energy benchmarking data for customer recruitment.[274]

The OAG expressed concern about how captured carbon would be sequestered and the efficiency of storing captured carbon in concrete and what that means for the overall capture rate of the Pilot.[275]

The Company addresses concerns below, but first we summarize proposed modifications to this Pilot, also described above. As discussed in Section IV (Proposed Modifications and Reallocations of Funding), the Company is proposing a longer ramp up period for this Pilot in its revised portfolio as compared to the originally filed pilot. Proposed modifications for this Pilot can be found in Exhibit A and Exhibit E. The Company continues to observe significant customer interest in this technology and is optimistic about high levels of customer demand. However, since the Petition, the Company has gained additional insight into market barriers as it continues to implement the CIP/ECO CarbinX pilot, and believes that these barriers are likely to slow the rate of adoption, making the original Pilot participation goals of 75 units per year starting in year two of the Plan unrealistically high. Specifically, while the Company has a waitlist for customers interested in installing CarbinX at their facilities, the Company has experienced barriers in the permitting process in multiple jurisdictions, which will require time to address through additional education efforts and coordination. Accordingly, the Company is proposing a slower ramp up for Pilot H and plans to invest significant time in the early years addressing market barriers that have been identified in the CIP/ECO pilot.

The Company has already addressed the Department's general approach to distinguishing pilots that are appropriate for CIP/ECO versus appropriate for NGIA in Section III.g above. Specific to this Pilot, the Department did not respond to CenterPoint Energy's rationale for

[272] Department Comments at 47.
[273] CUB Comments at 10; CEOs Comments at 33.
[274] Minneapolis Comments at 6.
[275] OAG Comments at 4.

inclusion of Pilot H in NGIA as opposed to CIP/ECO as articulated in the Petition, Exhibit I: "CarbinX units are appropriately included in NGIA because a substantial portion of the GHG savings from the units is associated with carbon capture rather than energy efficiency."[276] While the Company began piloting CarbinX units through CIP/ECO prior to the passage of NGIA, its primary focus in that context has been energy efficiency savings made possible by the units. CenterPoint Energy has not claimed carbon capture savings for CarbinX units through CIP/ECO because, unlike NGIA, CIP/ECO is not intended to enable carbon capture pilots.

With respect to commenters that expressed concern about duplication of learnings between the CIP/ECO pilot and Pilot H, the Company reiterates that the CIP/ECO pilot is primarily focused on what level of energy savings is made possible by the units, as the Company did not have a pathway to claim carbon capture savings from the units prior to the enactment of NGIA. The carbon capture savings achievable by the units is well established and accordingly Pilot H is focused not on testing the units but instead on deploying them to a larger number of customers.

The OAG's concern appears to be based on some confusion between Pilots H and E. The OAG combines percentage savings estimated for Pilot H with various assumptions regarding concrete sequestration made for Pilot E to conclude that CenterPoint Energy's estimates regarding GHG reduction in Pilot H are flawed. Storage of carbon in concrete is not contemplated for Pilot H. Instead, carbon is stored in solid potassium carbonate which is harvested by CleanO2 periodically and sold for use in various manufacturing processes such as for soap, detergents, and fertilizer. Estimated emissions reductions are based on a GHG lifecycle assessment of the CarbinX units conducted by the University of British Columbia. [277]

Pilot I. **New Networked Geothermal Systems:** CenterPoint Energy proposes to develop a new networked geothermal system to provide building heating and cooling for a neighborhood currently served by the Company. This Pilot starts with a study phase to identify the location, technologies, and business model for the system.

The Department, CUB, the CEOs, CEE, Minneapolis, GeoExchange, and the OAG provided comments on Pilot I specifically. This feedback is summarized below.

The Department asserted that the Company's support for the Pilot was limited and not based on locally-developed cost estimates. They recommended rejecting Pilot I but approving a comprehensive feasibility study for a new networked geothermal system to be targeted to new construction on a greenfield or brownfield site. The Department also provided a series of recommendations for what should be included in the feasibility study.[278]

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[276] Petition, Exhibit I at 1.
[277] With respect to Pilot E, as explained in the Company's Petition, the Company used a conservative estimation aligned with the fact that concrete utilization is being modeled as a representation of one of various approaches CenterPoint Energy is willing to explore. Petition, Exhibit F at 12-13.
[278] Department Comments at 51, 92.

CUB expressed general support for the Pilot and stated a preference for prioritizing low- and moderate-income or disadvantaged communities for program participation.[279]

The CEOs stated that they generally supported the Pilot I proposal and believe that the Pilot will "deliver significant benefits," and presented detailed arguments for why they believe the cost for the Pilot is justified.[280] The CEOs also stated their desire that "the Company adequately plans for ample stakeholder engagement opportunities at every phase of the project" and requested additional information on how stakeholder feedback would be incorporated into Pilot implementation.[281] The CEOs also recommended that the Pilot be prioritized for low-income and environmental justice areas, with special attention to neighborhoods with segments due for pipe replacements or upgrades.[282]

CEE expressed support for Pilot I as an opportunity to learn about how networked geothermal systems will work in Minnesota.[283]

Minneapolis recommended approving an expanded Pilot design including two geothermal systems, dedicated support staff to assist customers with utility and federal incentive opportunities, robust monitoring and evaluation plans, and evaluation of whether more customers could be served by reallocating funding between budget years.[284]

GeoExchange expressed support for Pilot I as helping to "demonstrate the value that networked geothermal systems can provide to utility customers, workers, and the climate."[285]

The OAG expressed concern that CenterPoint Energy's Pilot description lacked sufficient details and opined that only funds for a feasibility study should be approved at this time.[286]

The Company addresses concerns and suggestions below.

The Company first clarifies that the Pilot as proposed by the Company begins with a detailed feasibility study and site selection, which will be filed with the Commission in an annual status report to provide updated information on expected costs and GHG reductions. Stakeholders will have opportunities, through Commission processes, to provide feedback on the more detailed planning for the new networked geothermal system and the Commission will have the ability to

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[279] CUB Comments at 2, 19.
[280] The CEOs also stated that the Company had not accounted for potential IRA tax savings for ground source heat pumps owned by participants. CEOs Comments at 37. This is accurate, as there is uncertainty about the amount of the credit or rebates available to participants. Petition, Exhibit D at 28. It depends both on the design of the system, because participants cannot claim tax benefits for components they do not purchase, as well as participants' financial picture, because some customers may not meet requirements to claim tax credit or may have no tax burden to be offset.
[281] CEOs Comments at 34.
[282] CEOs Comments at 37.
[283] CEE Comments at 5.
[284] Minneapolis Comments at 6.
[285] GeoExchange Comments at 1.
[286] OAG Comments at 9.

adjust budgets for the Pilot through the annual status report process.[287] The Company thanks the Department for its suggestions on the content of that feasibility study and will incorporate its recommendations into this first stage of work.

The Company appreciates the support of the CEOs and CUB and their recommendations to target Pilot I at low-or-moderate income, disadvantaged communities, or environmental justice areas. The Company, however, is cautious about committing to this targeting for two reasons. First, the most suitable sites from an engineering and technological perspective, or a customer preference perspective, may not align with the locations of these communities within CenterPoint Energy's service area. The feasibility study should provide more information on communities in which this project is possible. Second, networked geothermal systems are a novel approach to providing heat to a community in the United States and will be entirely new for the Company. The Company is hesitant to make an upfront commitment to make some of its most vulnerable customers part of the initial run for this approach before it has a track record of success, and before engaging any community members of candidate sites for input. The Company believes this is something that can and should be considered during the site selection process. Accordingly, CenterPoint Energy commits to including whether the candidate site is a low- or moderate-income, disadvantaged community, or environmental justice area as an evaluation criterion when evaluating potential sites.

With respect to the CEOs' recommendation to target the Pilot at areas of the Company's distribution system that may otherwise require near-term investments, the Company agrees this could bring value to customers and has no objection to considering this in its site selection process. The Company will also consider whether the system aligns well with new construction developments, as suggested by the Department. However, the Company notes that there will be many additional evaluation criteria, and any single site is unlikely to meet all desired characteristics.

The Company appreciates Minneapolis's suggestions for Pilot I. The Company does not believe that the budget it has proposed is sufficient for multiple networked geothermal sites, nor does CenterPoint Energy believe that it will be possible to reallocate substantial budget away from year 1 to later years, as the Company will need early funding to complete the contemplated feasibility study and site selection process. With respect to the suggestion to maintain dedicated staff to assist customers with securing utility or federal incentives, participants in this Pilot would have access to all Company resources developed under NGIA or CIP/ECO to understand available funding. Finally, CenterPoint Energy agrees with Minneapolis's suggestion to develop an evaluation and monitoring plan for Pilot I and will incorporate this suggestion into its feasibility study and site selection process.

Pilot J. **Decarbonizing Existing District Energy Systems:** CenterPoint Energy proposes to help existing district energy systems that currently use geologic gas to identify opportunities to reduce the lifecycle GHG impact of their systems via

[287] Minn. Stat. § 216B.2427, subd. 2(g) ("When evaluating a utility's annual report, the commission may… approve the continuation of a pilot program included in the plan, with or without modifications…").

funding for feasibility studies and financial support for following through with study recommendations.

The Department, the CEOs, and Minneapolis provided comments on Pilot J specifically. This feedback is summarized below.

The Department recommended denial of Pilot J because it does not satisfy the statutory definition of district energy and stated that if the Company wished to include the Pilot as strategic electrification or energy efficiency it should provide a narrative to show why such reclassification is reasonable.[288] The Department also acknowledged its appreciation for CenterPoint Energy's proactive engagement with potential participants for this Pilot but expressed concern that the Company was assuming Pilot J would be approved because the Company stated that it planned to provide funding for the Hennepin County Energy Center decarbonization study.[289]

The CEOs took the position that to the extent that Pilot J is an energy efficiency and strategic electrification Pilot, as opposed to a district energy pilot, it should not count toward the 20 percent budget cap on district energy.[290] The CEOs also opined that feasibility studies conducted through the Pilot should include a full electrification/decarbonization scenario,[291] and recommended prioritizing district energy pilots that meet the statutory definition.[292]

Minneapolis expressed support for Pilot J but recommended increasing the incentive for feasibility studies to 50 percent of costs up to $30,000.[293]

The Company addresses concerns and suggestions below.

CenterPoint Energy does not disagree with the Department that projects implemented within this Pilot may not meet the NGIA's definition of district energy.[294] The Company specifically acknowledged and addressed this in its Petition, explaining that, depending on the specific projects implemented within this Pilot, the projects and associated costs may be classified as another innovative resource rather than district energy under the NGIA.[295] However, all projects implemented within this Pilot need not meet the definition of district energy in order to qualify as innovative resources under the NGIA and be approved by the Commission. The fact that projects under the Pilot may meet the definition of strategic electrification, energy efficiency, or another innovative resource does not provide a justification to exclude this Pilot from the approved plan. As noted by CEOs, "Pilot J is essentially an energy efficiency and strategic

[288] Department Comments at 53, 93.
[289] Department Comments at 52.
[290] CEOs Comments at 38.
[291] CEOs Comments at 38.
[292] CEOs Comments at 50.
[293] Minneapolis Comments at 7.
[294] Minn. Stat. § 216B.2427, subd. 1(e) defines district energy to mean "a heating or cooling system that is solar thermal powered or that uses the constant temperature of the earth or underground aquifers as a thermal exchange medium to heat or cool multiple buildings connected through a piping network."
[295] Petition, Exhibit D at 32-33 and 35-36.

electrification pilot since it is decarbonizing existing district energy systems that currently use natural gas."[296] The Company proposed this Pilot partially as an energy efficiency and strategic electrification Pilot, including by discussing coordination with CIP/ECO in the Petition, Exhibit I, but in fact, projects undertaken pursuant to Pilot J could include any of the innovative resources under the NGIA. The fact that projects within the Pilot may not qualify as district energy does not justify exclusion from the approved Plan.

With respect to the CEOs' statement that the Pilot should not count against the 20 percent district energy cost cap to the extent it facilitates innovative resources other than district energy, the Company did not count the Pilot against the 20 percent district energy cost cap, as described in the Petition, and agrees with the CEOs that it should not be counted against that cost cap.[297]

As explained in the Company's Petition, the Hennepin County Energy Center decarbonization study is aligned with the goals of the NGIA and has potential to lead to projects that significantly reduce GHG emissions that would be eligible for incentives under Pilot J. Accordingly, CenterPoint Energy stated its intent to provide funding for this study prior to Plan approval and is proposing recovery as part of its NGIA Plan as a cost "to develop and administer programs."[298] The Company does not assume approval of all pilots as proposed, as the Department suggests, however, the NGIA does anticipate incremental costs to develop and administer programs are recoverable.[299] CenterPoint Energy also notes the inconsistency in the Department's view of the Plan overall, on the one hand suggesting that only Pilots that have identified participants and projects should be approved at the full budget proposed and on the other hand, faulting the Company for undertaking steps to develop pilot projects and engage with potential participants.[300] A variety of approaches in participant selection and identification of project sites will be necessary with a diverse innovation portfolio; this study presents one such approach.

Regarding the CEOs' recommendations that all feasibility studies include a full decarbonization scenario and that the Company prioritizes projects that employ "district energy," as the term is defined in NGIA, the Company disagrees. In this Pilot, CenterPoint Energy is providing incentive support to customers who are making their own decarbonization choices in consultation with vendors they select. The Company does not wish to limit customer choice by mandating

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[296] CEOs Comments at 38.
[297] Petition at 29.
[298] Petition, Exhibit D at 33.
[299] Minn. Stat. § 216B.2427, subd. 1(r).
[300] *See, e.g.*, Department Comments at 33-35 (recommending reductions to proposed RNG pilot budgets based on the Department's conclusion that additional participants had not yet been identified, despite the fact that the Company had not yet issued its planned RFP); 44 (concluding participation for Pilot E should be reduced, despite acknowledgement that CenterPoint Energy had not yet performed its planned scoping study to identify viable projects); 45 (recommending reductions to Pilot F based on the conclusion that "[t]he Company has not undertaken any additional effort to understand the potential interest among its current commercial and industrial customers to estimate a realistic budget for this pilot."); and 52 (criticizing CenterPoint Energy's plans to provide funding for the Hennepin County Energy Center decarbonization study prior to Plan approval).

consideration of full decarbonization options or favoring “district energy” systems over other GHG reducing options that may work better in a customer’s particular circumstances.

CenterPoint Energy appreciates Minneapolis’s suggestion to increase the incentive for the feasibility study from 20 percent of costs up to 50 percent of costs. The Company chose the incentive structure proposed because the study itself does not result in direct savings, and requiring a significant customer cost share discourages less motivated customers from completing the study just because it is low cost. For this reason, the Company believes the proposed incentive structure is appropriate and does not intend to make such a change at this time.

Pilot K. **New District Energy System:** CenterPoint Energy proposes a Pilot to help current natural gas customers considering developing district energy systems by providing funding for feasibility studies and financial support to follow through with feasibility study recommendations.

The Department, the CEOs, and Minneapolis provided comments on Pilot K specifically. This feedback is summarized below.

The Department recommended denial of Pilot K because it may not satisfy the statutory definition of district energy for all projects and stated that if the Company wished to include the Pilot as strategic electrification or energy efficiency it should provide a narrative to show why such reclassification is reasonable.[301]

The CEOs took the position that to the extent that Pilot K is an energy efficiency and strategic electrification Pilot, as opposed to a district energy pilot, it should not count toward the 20 percent budget cap on district energy.[302] The CEOs also opined that feasibility studies conducted through the Pilot should include a full electrification/decarbonization scenario.[303]

Minneapolis expressed general support for Pilot K and requested clarification on whether incentives would all be awarded up front or whether there are incentives that would extend beyond the five-year Plan budget.[304]

The Company addresses concerns and suggestions below.

CenterPoint Energy clarifies that its expectation is that most potential participants in Pilot K would satisfy the statutory definition for district energy. However, CenterPoint Energy is aware of one potential project that would not meet the definition because the project involves one large building rather than multiple buildings. The Company does not believe the legislature intended to exclude such projects from participating in NGIA pilots and, in fact, there is a simple way to

[301] Department Comments at 54-55, 93. The Department also recommended denial of Pilot K because it would incentivize systems “powered by fossil fuel.” Department Comments at 93. The Company believes that there must be some confusion as Pilot K will not incentivize systems powered by fossil fuels.
[302] CEOs Comments at 38.
[303] CEOs Comments at 39.
[304] Minneapolis Comments at 7.

include it because the type of system the project envisions is a type of "strategic electrification" as defined by NGIA.[305] Accordingly, the Company has proposed this Pilot to include both district energy and strategic electrification projects and included information on CIP/ECO coordination in Exhibit I of the Petition.

As discussed in CenterPoint Energy's Petition, the Company did not count this Pilot against the 20 percent district energy cost cap.[306] However, even if this Pilot and Pilot J were included along with Pilot I in the calculation of the 20 percent cost cap, the three together remain under the statutory cap. The Company will include information in its annual NGIA reports on actual projects and spending and will monitor proposed future R&D spend to ensure that the 20 percent cap is not exceeded during the course of the five-year Plan.

With respect to their recommendation that all feasibility studies be required to include a full electrification/decarbonization scenario, CenterPoint Energy interprets this recommendation to be a requirement that the feasibility study consider the possibility that the entire heating and cooling load of the building or buildings be fully decarbonized as opposed to decarbonizing only part of the heating/cooling load. The Company is hesitant to make this a requirement as the feasibility studies will be conducted by the customer in consultation with a vendor they will select. If a full electrification/decarbonization scenario is not of interest to the customer, the Company would prefer not to force them to include such a scenario.

Regarding Minneapolis's request for clarification, the Company's proposal is to pay 50 percent of the costs of an engineering study up to $10,000 and then to pay a rebate of between $10/Dth and $25/Dth of annual geologic natural gas savings for measures installed up to $1.5 million per project. More details are available in the Petition, Exhibit D. All incentives are contemplated to be paid prior to the end of the Plan period and will be based on estimated annual savings at the time of installation.

Pilot L. **Industrial Electrification Incentives:** CenterPoint Energy would support industrial customers to electrify low-to-medium heat processes using heat pump technologies. This Pilot begins with a study phase to identify promising heat pump technologies and potential industrial applications.

The Department, CUB, CEE, Minneapolis, and GeoExchange provided comments on Pilot L specifically. This feedback is summarized below.

The Department opined that Pilot L would be a better fit for the Company's CIP/ECO plan and noted that CenterPoint Energy's Triennial Plan does not use all available CIP/ECO R&D funding. In response to the Company's rationale for including Pilot L in NGIA as opposed to CIP/ECO, the Department noted that other electrification measures are included in the Company's CIP/ECO plan.[307] The Department also questioned whether there would be enough

[305] The project contemplated would use a geothermal exchange mechanism to heat and cool one building.
[306] Petition at 29.
[307] Department Comments at 57, 93.

interest in the Pilot by customers,[308] and criticized CenterPoint Energy's proposal to fully fund measures installed through the Pilot, thereby potentially reducing available IRA funding for participants.[309]

CUB, CEE, and Minneapolis noted support for the Pilot.[310] Minneapolis echoed the Department's recommendation that the Company not fully fund measures completed through the Pilot.[311]

GeoExchange encouraged the Company to study and consider geothermal heat pump options as they implement this Pilot.[312]

The Company addresses concerns and suggestions below.

The Company has already addressed the Department's general approach to distinguishing pilots that are appropriate for CIP/ECO versus appropriate for NGIA in Section III.g above. With respect to this Pilot in particular, while the Department did partially respond to the Company's rationale for including this Pilot in NGIA, their response is incomplete. The Company noted in the Petition, Exhibit I that the Company did not include any *industrial* strategic electrification in its Triennial Plan filed June 30, 2023.[313] Industrial strategic electrification projects are available through custom rebate programs if they meet the cost effectiveness qualifications for CIP/ECO, but less developed or commercially viable projects remain more appropriate for NGIA. Industrial strategic electrification technologies are generally nascent and have limited commercial availability, in contrast with some residential and commercial strategic electrification technologies. Accordingly, the Company has proposed this Pilot in NGIA with significant customer support and evaluation to help industrial customers identify and test technologies that may fit their needs.

The Company has already addressed the Department's proposal to limit budget based on already identified customers in Section III.f above. Specific to Pilot L, the Company notes that the first step in this Pilot is a study phase, which would include a customer identification component. This was included because the Company believes that finding the appropriate customers requires a level of effort and technical expertise that was not appropriate for the scope of the general innovation plan development work. Customer outreach to recruit specific customers will be more effective if informed by the output of the study phase. The total participation for this Pilot is estimated at just three customers, and based on general conversations with customers and knowledge of many customers' interest in decarbonization,

[308] Department Comments at 57, 93.
[309] Department Comments at 57.
[310] CUB Comments at 2; CEE Comments at 2; Minneapolis Comments at 7.
[311] Minneapolis Comments at 7.
[312] GeoExchange Comments at 2.
[313] The Department asserts that CenterPoint Energy claimed that it did not include any strategic electrification measures in its Triennial Plan. It appears to have missed the word "industrial."

the Company is optimistic that the study's customer identification process and subsequent targeted outreach will result in full participation for this Pilot.

Regarding the Department and Minneapolis's recommendation to fund less than the full cost of measures, the Company proposed to pay full measure cost in recognition of the nascence of these technologies and the complications that participants will have to navigate to adjust existing processes to use heat pump technology. While the Company is committed to using NGIA projects to bring IRA benefits and other federal funds to the state of Minnesota, the Company notes that there is significant uncertainty about whether projects funded under this Pilot would be eligible for IRA benefits, even if the Company were to require a customer copayment, and whether requiring a customer copayment would make it more likely that customers receive IRA funding.[314] Accordingly, it is not reasonable to require a customer contribution in the hopes of securing additional IRA funding.

The Company thanks GeoExchange for their suggestion and confirms that geothermal heat pumps will be considered for inclusion in the Pilot.

Pilot M. **Commercial Hybrid Heating:** CenterPoint Energy proposes to provide support for small-to-medium commercial buildings interested in replacing Heating, Ventilation, and Air Conditioning ("HVAC") systems with hybrid systems using electric heat pumps and gas backup.

The Department, CUB, CEE, Minneapolis, and GeoExchange provided comments on Pilot M specifically. This feedback is summarized below.

The Department opined that Pilot M would be a better fit for the Company's CIP/ECO plan. In response to the Company's rationale for including Pilot M in NGIA as opposed to CIP/ECO, the Department noted that similar measures are being provided in bundles by other utilities and an overall package of measures including commercial hybrid heating can be cost effective under the Minnesota Test.[315] The Department also reached out to the entity that submitted a response to the Company's RFI inspiring this Pilot, and that entity indicated that it believed it could create a cost-effective bundle of measures including commercial hybrid systems.[316]

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[314] The only applicable IRA tax benefit that the Company identified was the Advanced Energy Production Credit under IRA, 26 U.S.C. § 48C. Among other things, this credit applies to owners of manufacturing facilities that re-equip their facilities to reduce GHG emissions by at least 20 percent. The total amount of credits that may be awarded under this IRA provision is limited to $10 billion. The credit is equal to 30 percent of the taxpayer's qualified investments if labor-related requirements are satisfied, or 6 percent otherwise. Participation in this Pilot may not result in facility energy savings of 20 percent on its own. It may actually be possible that by leveraging utility support through this project, the facility may be able to achieve 20 percent savings in combination with other investments, thereby becoming eligible for the tax benefit when they would have otherwise fallen short of the 20 percent threshold. Accordingly, it is not clear that covering 100 percent of costs makes IRA benefits less likely for participating customers.
[315] Department Comments at 58, 93.
[316] Department Comments at 57.

CUB, CEE, and Minneapolis expressed support for Pilot M.[317] Minneapolis noted that the Company's proposed incentives may be too low for small businesses in environmental justice areas.[318]

GeoExchange encouraged the Company to consider geothermal heat pump options as they implement the Pilot.[319]

The Company addresses concerns and suggestions below.

The Company has already addressed the Department's general approach to distinguishing pilots that are appropriate for CIP/ECO versus appropriate for NGIA in Section III.g above. With respect to this Pilot in particular, the Company notes that although it may be possible for other utilities to offer commercial hybrid heating measures in bundles that are cost-effective under the CIP/ECO tests, the particular program that CenterPoint Energy has proposed is not cost effective under those tests because it includes significant customer support elements which other utilities are not offering in combination with these measures. CenterPoint Energy believes these customer support elements are valuable to encourage a market shift towards broader adoption of these technologies. With respect to the Department's conversation with the entity that submitted an RFI response inspiring Pilot M, the Company clarifies that it has not selected a vendor for this Pilot and the entity with whom the Department communicated does not speak for the Company. CenterPoint Energy appreciated the RFI response provided, but the Company did not simply copy the RFI respondent's suggestions while designing Pilot M.

The Company appreciates CUB's, CEE's, and Minneapolis's support for Pilot M. With respect to Minneapolis's concern about the incentive levels for small businesses in environmental justice areas, the Company is willing to monitor the location and type of customers that enroll in this Pilot and discuss its findings in annual status reports. If there is disproportionately low participation in environmental justice areas or among small businesses, the Company will consider modifications to the Pilot to improve their participation.

With respect to GeoExchange's comment encouraging consideration of geothermal heat pumps, as stated in the Petition[320] this Pilot is generally focused on dual-fuel rooftop units rather than geothermal systems.

Pilot N. **Residential Deep Energy Retrofits and Electric Air Source Heat Pumps:** CenterPoint Energy would provide support for residential customers interested in retrofitting their homes to significantly improve energy efficiency and installing air source heat pumps with gas back-up. This Pilot starts with a study phase to identify appropriate measures and home characteristics for deep energy retrofits.

[317] CUB Comments at 2; CEE Comments at 2; Minneapolis Comments at 7.
[318] Minneapolis Comments at 7.
[319] GeoExchange Comments at 2.
[320] Petition, Exhibit D at 39.

The Department, CUB, the CEOs, CEE, and Minneapolis provided comments on Pilot N specifically. This feedback is summarized below.

The Department proposed to reduce Pilot N's proposed budget due to concerns about lack of participation.[321]

CUB, the CEOs, CEE, and Minneapolis expressed support for Pilot N.[322]

CUB recommended that Pilot N be excluded from being cut or reduced in size through the Company's budget flexibility proposal.[323]

CEE suggested that focusing on a fixed set of measures with high savings impact, which were identified in their 2021 building weatherization study,[324] would be appropriate for the program design.

The CEOs recommended that in addition to evaluating what measures would be required to meet the statutory definition of "deep energy retrofit" that the Company investigate how different retrofits impact the need for natural gas backup heating during the heating months and that the Company pursue the goal of conducting field testing in low-income residences.[325]

Minneapolis suggested that Pilot N should be expanded beyond what CenterPoint Energy proposed.[326]

The Company addresses concerns and suggestions below.

In response to the Department's recommendation that Pilot N's budget should be scaled back to align with information contained in RFI responses, the Company points out that the scope of the proposed Pilot is broader than what was included in either RFI response because it includes deep energy retrofits of multi-family buildings, whereas the RFI responses were focused on just single family buildings. This augmented scope resulted in additional budget as compared to the RFI responses. Additionally, the RFI responses were simply a starting point to inform Pilot design, and the Company drew from other information and conversations to inform the development of Pilot budgets; cost and participation estimates were not in all cases taken directly from RFI responses.

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[321] Department Comments at 60, 92.
[322] CUB Comments at 2; CEOs Comments at 39-42; CEE Comments 2-5; Minneapolis Comments at 8.
[323] CUB Comments at 19.
[324] Exploring High-Performance Envelope Retrofits, The Next Step in Single-Family Building Weatherization (included as Attachment A to CEE Comments), funded by the Minnesota Department of Commerce Conservation Applied Research and Development program.
[325] CEOs Comments at 41-42.
[326] Minneapolis Comments at 8. Minneapolis also requested that the Company clarify that it intends to pursue cold climate heat pumps through the Pilot. Minneapolis Comments at 8. CenterPoint Energy confirms that this is its intention.

Regarding the Department's additional statement that the budget should be reduced because the Company has not conducted additional outreach to justify the increased participation, the Company addressed the Department's general approach to limiting budgets based on pre-identified participants in Section III.f above. With respect to Pilot N in particular, the Company expects the initial research and field testing components of this Pilot to provide insight on what customers to target and with what measures during Phase 3 of the Pilot.

In response to Minneapolis's suggestion that this Pilot's budget should make up a larger share of the overall Plan budget, the Company notes that this Pilot represents approximately 13 percent of the total incremental costs of the Plan counting towards the statutory cost cap. It is the second largest single Pilot budget, with only Pilot C's budget being larger. The Company agrees that deep energy retrofits are a promising decarbonization opportunity that is worthy of investment and believes that the comparably large budget within the portfolio reflects this. Accordingly, the Company does not intend to increase the budget at this time. The Company also notes that participation estimates may be refined during the design of Phase 3 of the Pilot.[327]

Regarding CUB's recommendation that Pilot N be excluded from being cut or reduced in size, while CenterPoint Energy does not have any plans to reduce the size of Pilot N, participation in this Pilot is optional and the Company cannot force customers to participate.

Regarding CEE's suggestion to consider measures identified in their 2021 study, the Company appreciates the suggestions and will consider the identified measures in Phase 1.

Regarding the CEOs' recommendation to evaluate how different retrofits affect the use of gas backups, the Company agrees that this represents an important source of learning from this Pilot and plans to collect and analyze information on demand for gas backup as part of this Pilot.

In response to the CEOs' recommendation that field testing be up to 100 percent in low-income residences, while the Company recognizes the importance of program access to low-income residents, the field testing selection process should not be prescriptive. Low-income residences have diverse priorities and circumstances that may influence their desire to participate in an opportunity that could be considered disruptive to their lives, and it may be difficult for the Company to test the technologies in an optimal variety of housing types if it is limited to including only low-income households in field testing. The Company seeks to balance the learning opportunities of access to a wider variety of home types and situations with achievement of other goals such as reaching lower-income households while always respecting customer choice, and accordingly does not intend limit the types of residences which might participate in this Pilot.

Pilot O. **Small/Medium Business GHG Audit:** CenterPoint Energy proposes to expand its existing CIP Natural Gas Energy Analysis ("NGEA") project to include

[327] Petition, Exhibit D at 47.

identification of non-CIP GHG reducing opportunities for small and medium-sized businesses.

The Department, CUB, and Minneapolis provided comments on Pilot O specifically. This feedback is summarized below.

The Department proposed to reduce Pilot O's proposed budget due to concerns about lack of participation.[328] The Department also made a comment regarding Pilot R, which the Company believes may have been intended to be applied to Pilot O stating that "The Department will defer on making any recommendations on this pilot until it has an opportunity to review the Company's reply comments. Given the Department's recommendations for Pilots H, L, and M, it is not clear there are any remaining proposed NGIA pilots that can be recommended to the auditee."[329]

CUB expressed support for Pilot O.[330]

Minneapolis suggested that Pilot O should focus on insulation and high efficiency appliances rather than CarbinX units.[331]

The Company addresses concerns and suggestions below but first discusses its own proposed modifications to this Pilot.

As discussed in Section IV (Proposed Modifications and Reallocations of Funding), the Company is proposing a longer ramp up period for the CarbinX technology in its revised portfolio as compared to the originally filed Plan. This change primarily affects Pilot H: Carbon Capture Rebates for Commercial Buildings. But, additionally, a small number of CarbinX units and commercial hybrid heating units (from Pilot M) were assumed to be implemented under Pilot O, and Pilot O's participation levels for these incented measures have been reduced slightly accordingly. The number of GHG audits to be completed under this pilot has not changed. Proposed modifications for Pilot O can be found in Exhibit A and Exhibit E. The Company describes the reasons for these proposed modifications in the Pilot H section above.

With respect to suggestions and concerns from parties, first, the Company agrees with the Department that Commission approval of Pilot O may not provide much value if the Commission adopts the Department's recommendations to deny Pilots H and M. Pilot O is intended to promote NGIA measures that may be of interest to small to mid-sized commercial customers through the CIP/ECO NGEA project which provides audits and recommendations to those customers. The Department has recommended denial of all other proposed NGIA pilots targeting the small and medium business customer segment pursuant to their approach to CIP/ECO coordination, leaving nothing to promote through NGEA. While CenterPoint Energy agrees that Pilot O does not provide much value if the Commission adopts the Department's

[328] Department Comments at 62, 92.
[329] Department Comments at 92.
[330] CUB Comments at 3.
[331] Minneapolis Comments at 8.

recommendations with respect to Pilots H and M, the Company wishes to highlight this as a demonstration of why the Department's approach to CIP/ECO coordination is problematic, as it excludes entire customer segments from the NGIA framework.

Regarding the Department's recommendation that this Pilot's budget be scaled down to 200 participants per year, the Company notes that participation levels in this Pilot were chosen to align exactly with participation goals for NGEA in the Company's approved 2024 – 2026 ECO plan.[332] This Pilot is designed to be an expansion of NGEA, and NGIA services offered through this Pilot would be integrated seamlessly with the NGEA offering. To set budgets based on different participation levels would be problematic since it could lead to NGIA services running out of budget and being cut off, while CIP/ECO NGEA services were still short of goal. This could lead to customer confusion and would cause administrative burden and possibly additional costs if integrated implementation systems or marketing materials needed to be adjusted to remove NGIA-related content.

With respect to Minneapolis's recommendation that Pilot O focus on promoting CIP/ECO measures, the Company reiterates that this Pilot is an expansion of an existing CIP/ECO project which promotes CIP/ECO measures through small business audits. Traditional efficiency measures such as efficient appliances are already promoted through the existing NGEA program which this Pilot would expand.

Pilot P. **Residential Gas Heat Pumps:** CenterPoint Energy proposes to fund the development and testing of a small number of 'combi' space and water heating gas heat pump systems in Minnesota homes.

The Department, the CEOs, and Minneapolis provided comments on Pilot P specifically. This feedback is summarized below.

The Department expressed concerns about the potential for commercialization of this technology in the near-term relative to air source heat pumps and accordingly recommended a reduced budget for the Pilot.[333] The Department also opined that it may be best to delay this Pilot until after the Minnesota Efficient Technology Accelerator ("ETA") evaluates gas heat pump technology[334] and faulted CenterPoint Energy's Pilot design for failing to take advantage of federal support.[335]

The CEOs opined that funding any gas-fired appliance goes against the spirit of NGIA and noted that electric heat pumps are more cost effective and efficient than gas heat pumps at this time.[336] The CEOs asserted that gas heat pumps do not provide a pathway to full

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[332] *In the Matter of CenterPoint Energy's* 2024-2026 Natural Gas Energy Conservation and Optimization Triennial Plan, Docket No. G-008/CIP-23-95, CenterPoint Energy's 2024-2026 Energy Conservation and Optimization Plan at 168 (Jan. 26, 2024).
[333] Department Comments at 62-63, 92.
[334] Department Comments at 62.
[335] Department Comments at 63.
[336] CEOs Comments at 16, 44-45.

decarbonization while electric heat pumps do.[337] The CEOs' faulted CenterPoint Energy for including as a potential benefit of gas heat pumps that they may help reduce a future electric winter peak that "it is not the role of a gas utility to speculate on the electric system impacts of fuel switching…"[338] The CEOs stated that electric heat pumps are healthier and safer than gas heat pumps due to the lack of combustion in homes.[339] Finally, the CEOs recommended that, if the Commission wishes to approve this Pilot and Pilot Q, it should only approve the market research aspect of the Pilots and should require the Company to re-file the Pilots with the results of its market research and with a summary of its initial outreach efforts to contractors and customers.[340]

Minneapolis opposed Pilot P, stating that Pilot costs were expensive relative to other options[341] and that the Pilot was inconsistent with state and local goals for GHG reductions.[342]

The Company addresses concerns and suggestions below.

With respect to the Department's recommendation that the Company should wait for ETA's evaluation of the technology, the Company's understanding is that gas heat pumps are a lower priority for ETA and will not be investigated for several years. In addition, the Company understands that ETA has not yet determined whether its project will include residential gas heat pumps, commercial gas heat pumps, or both.

Regarding the Department's concerns that the technology might not be commercialized in the near term, the timelines for technology development can be challenging to forecast, but it should be noted that one manufacturer of gas heat pumps, Stone Mountain Technologies Inc., announced in February of 2024[343] the market availability of its Anesi-branded gas absorption heat pumps for residential and commercial applications. The same company noted at the end of January 2024 that its manufacturing facility in Tennessee had started producing, shipping, and taking orders for the gas heat pumps targeted at residential customers.[344]

With respect to the Department's recommendation that this Pilot should not be funded because electric heat pumps have higher efficiencies, higher adoption levels, and are more cost-effective, the Company suggests that this incorrectly assumes that gas heat pumps need to be better than electric heat pumps in most ways in order for them to also play an important role in supporting the Company's customers in reducing GHG emissions. CenterPoint Energy is not suggesting that gas heat pumps will be more important or achieve more adoption than electric heat pumps with gas back-up. The Company suggests that both technologies might play an

[337] CEOs Comments at 45.
[338] CEOs Comments at 45.
[339] CEOs Comments at 46.
[340] CEOs Comments at 46.
[341] Minneapolis Comments at 8.
[342] Minneapolis Comments at 9.
[343] Anesi, Product Release (Feb. 5, 2024), available at https://stonemountaintechnologies.com/product-release/
[344] https://ammonia21.com/production-under-way-for-ammonia-absorption-home-heat-pumps-in-north-america/

important role in reducing emissions in Minnesota. Gas heat pumps have some fundamental differences from electric heat pumps, with different strengths and weaknesses. For example, there may be building types that are more challenging to outfit with electric heat pumps, due to hydronic heating systems, electric capacity issues on part of the grid, or even customer preferences. Gas heat pumps could offer a significantly more efficient space and water heating option in such buildings, as opposed to such customers continuing to use standard efficiency gas equipment.

Regarding the Department's comment faulting this Pilot's design for not taking advantage of federal tax support, the Company notes that this Pilot's expected participation is just six systems. This means that the maximum amount of federal tax incentives that could result from this Pilot would be $12,000.[345] While every federal incentive dollar that is brought to the state is valuable, this amount is very small in comparison to the total estimated federal incentives that the overall Plan would leverage, which is conservatively estimated at $17 million. Furthermore, to leverage the full $12,000 in incentives noted above, a customer contribution of $28,000 or $4,600 per customer would be required, and each customer would have to have a large enough tax liability to take advantage of the credit. This Pilot involves an emerging technology not widely adopted, and the customers must also be willing to allow ongoing measurement and verification activities in their homes. For these reasons, CenterPoint Energy believes this level of required contribution is too high to persuade customers to participate, and that the Pilot's value will be maximized by paying 100 percent of the customer's cost thereby minimizing barriers to participation. This is similar to the approach for other emerging technologies in the proposed Plan.

The CEOs suggested that funding any gas-fired appliance goes against the spirit of the NGIA. The Company disagrees. Gas heat pumps fit precisely within the NGIA definition of "energy efficiency."[346] They present a significantly more efficient alternative to furnaces for customers who want the benefits of gas heating.[347] The NGIA also supports the development of low-carbon fuels that can be used in efficient gas burning appliances.[348] Pursuing gas efficiency aligns with the intent of NGIA and is entirely consistent with the goal of reducing the overall amount of

[345] IRA § 13301 allows nonbusiness taxpayers to claim a credit equal to 30% of costs up to a maximum of $2,000 for qualifying heat pumps including gas heat pumps.
[346] Minn. Stat. § 216B.2427, subd. 1(f) (defining energy efficiency by reference to Minn. Stat. § 216B.241, under which energy efficiency is defined to mean "measures or programs, including energy conservation measures or programs, that: (1) target consumer behavior, equipment, processes, or devices; (2) are designed to reduce the consumption of electricity or natural gas on either an absolute or per unit of production basis; and (3) do not reduce the quality or level of service provided to an energy consumer.").
[347] With respect to the CEOs' assertion that only electric heat pumps offer systems without combustion in homes, new gas heat pump technologies place the combustion in an outdoor unit or within a sealed system that allows the outside air to be combusted and exhausted.
[348] *See* Minn. Stat. § 216B.2427, subd. 2(d)(1) (requiring that 50 percent or more of the utility's costs approved by the commission for recovery under the plan are for the procurement and distribution of renewable natural gas, biogas, hydrogen produced via power-to-hydrogen, and ammonia produced via power-to-ammonia).

natural gas produced from conventional geologic sources delivered to customers.[349] It is also incorrect to assert that gas heat pumps are incompatible with a fully decarbonized future that meets state and local goals for GHG reduction. Pairing gas heat pumps with zero or negative GHG fuels, such as certain kinds of RNG, would result in a zero or negative emissions heating system while valuing technological diversity and reducing gas load.

Minnesota is only at the start of its journey towards net-zero GHG emission targets, and significant uncertainty remains in the complex changes required to reach these objectives. Given that uncertainty, and the potential for gas heat pumps to play an important role in supporting some Minnesota residential consumers, even if that is a smaller number of consumers than might use electric heat pumps, the Company feels that this technology is worthy of further investigation through the NGIA. It is also worth noting that there has been less investment in gas heat pump technology, as compared to more common electric heat pump technology, which means that the lessons learned through an NGIA pilot might be even more impactful.

Pilot Q. **Gas Heat Pumps for Commercial Buildings:** CenterPoint Energy proposes to fund the development and testing of a small number of gas heat pump systems in in commercial buildings.

The Department provided comments on Pilot Q specifically. They recommended approval of the Pilot but recommended a change to the Pilot's structure to require customers to pay a portion of project costs in order to secure more federal funding.[350] The CEOs provided feedback on the concept of gas heat pumps generally relating to both Pilots P and Q. The Company addressed this feedback in the discussion of Pilot P above.

The Company addresses the Department's feedback on this Pilot below.

Regarding the recommendation to require a customer copay for this pilot, the Department and others made the same recommendation for Pilot L: Industrial Electrification Incentives, and the Company offers a similar response here. As with Pilot L, the Company proposed to pay the full project cost of for this technology because it is an early-stage, emerging technology. Additionally, as with projects funded under Pilot L, there is significant uncertainty whether the projects completed under this pilot would be eligible for IRA benefits, and even if they were, the dollar amount of the IRA benefits would be a fraction of the participant co-pay. Additionally, fully funding gas heat pumps may make additional IRA benefits more likely by helping a customer to achieve the 20 percent GHG savings threshold required for IRA tax credit eligibility.[351] Accordingly, the Company does not propose to require a copay for Pilot Q.

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[349] Minn. Stat. § 216B.2427, subd. 10 ("It is the goal of the state of Minnesota that through the Natural Gas Innovation Act and Conservation Improvement Program, utilities reduce the overall amount of natural gas produced from conventional geologic sources delivered to customers.").
[350] Department Comments at 63, 92.
[351] As with Pilot L, the only applicable IRA tax benefit that the Company identified was the Advanced Energy Production Credit under IRA, 26 U.S.C. 48C.

Pilot R. **Industrial and Large Commercial GHG Audit:** CenterPoint Energy proposes to expand its existing CIP/ECO Process Efficiency and Commercial Efficiency projects to include identification of non-CIP/ECO GHG reduction measures and payment of incentives for the installation of identified non-CIP/ECO measures.

The Department and Minneapolis provided comments on Pilot R specifically. This feedback is summarized below.

The Department observed that if the Commission agrees with the Department that they should deny Pilots H, L, and M there would be no resources offered specifically for industrial/large commercial customers through NGIA and therefore, there would be nothing to recommend through Pilot R.[352] As discussed below, the Company believes this comment may have been intended for Pilot O. The Department also recommended capping pilot incentives at $15/Dth asserting that a higher incentive would not be reasonable given the cost of GHG emissions reduction via RNG purchased through Pilot C.[353]

Minneapolis expressed general support for the Pilot concept but expressed concern with the small size of the Pilot and that customer incentives may be low relative to project delivery costs.[354]

The Company addresses concerns and suggestions below.

The Department's comment that due to their recommendations to deny Pilots H, L, and M there remaining no resources left to offer through Pilot R, was possibly intended for Pilot O. Pilot O would promote measures available through other NGIA offerings to small/medium business customers. Pilot R in contrast would target industrial and large commercial customers and promote a wider variety of measures including custom offerings not available through any other CIP/ECO project or NGIA pilot.

The Company also disagrees with the Department's proposed incentive cap. As discussed above, CenterPoint Energy contends that that neither the value of this Pilot or any of the NGIA pilots should be boiled down to exclusively GHG emissions, and therefore incentives should not be determined by simple comparison to pilots of other innovative resources on cost per emissions reduction basis. That said, the Company notes that the Department's comparison of incentive levels in Pilot R and Pilot C is not apples to apples. CenterPoint Energy's proposed incentive level for Pilot R is $25 per Dth of *annual* gas savings calculated for the project, paid to the customer one time upfront. The measure or measures installed would continue to accrue Dth savings over the lifetime of the project with no additional rebates paid out on an ongoing basis. This is similar in structure to the Company's custom rebates offered through its CIP/ECO plan. In Pilot C, the Department's cited cost of $21.75 is on a per Dth purchased basis and would be paid on an ongoing basis as additional Dth of RNG are purchased over the term of the contract. Therefore, it is incorrect to say that the Company is proposing to provide a higher

[352] Department Comments at 92.
[353] Department Comments at 63.
[354] Minneapolis Comments at 9.

incentive in Pilot R than in Pilot C, even when accounting for the negative carbon intensity in Pilot C. In fact, Pilot R is estimated to have one of the lowest costs per ton of GHG reduction, and is a good demonstration of why it is the policy of the state that "cost-effective energy savings are preferred over all other energy resources…"[355] Even at the high end of the proposed incentive range ($25/Dth), Pilot R projects would result in some of the lowest cost GHG savings in the portfolio. As summarized in the Petition, CenterPoint Energy's proposed incentive levels for the Pilot are based on a comparison with incentives available for energy efficiency through CIP/ECO and the Company's expectations of what incentives will be necessary to drive customer action. Accordingly, the Company does not agree with the Department's proposed incentive levels.

With respect to Minneapolis's concern that incentives for the Pilot are roughly equal to project delivery spending, the Company notes that the Pilot has a substantial audit/customer assistance component to help customers identify GHG solutions that will satisfy their needs. In response to Minneapolis's concern that the Pilot is small in terms of customer participation, the Company notes that it has requested the ability to vary NGIA pilot budgets by up to 25 percent and it would endeavor to use this flexibility to increase resources for Pilots with higher customer demand than anticipated.

R&D. Research and Development Projects

The Company's R&D proposal is described in the Petition, Section VII, and in Exhibit J. The Company proposed to reserve R&D budget for spending on projects to be identified in future years. The Company would include future R&D projects in annual status reports for later Commission approval. For the first 1-2 years of the Plan, the Company identified and proposed seven R&D initiatives. The Department, CUB, and the CEOs commented on CenterPoint Energy's R&D proposals and those comments are summarized below.

The Department recommended approval of six of the seven proposed R&D pilots identified by the Company, but recommended denying the R&D pilot "Assessing Next-Generation Micro-Carbon Capture for Commercial Buildings."[356] This R&D Pilot would test the next generation of CleanO2's CarbinX technology and the Department opposed the Pilot for the same reasons they opposed Pilot H above. The Department also recommended that the Commission not approve all R&D costs that CenterPoint Energy had proposed to reserve for future proposals.[357]

CUB expressed support for the "Weatherization Blitzes" R&D Pilot and recommended this R&D Pilot be excluded from being cut or reduced in size through the Company's budget flexibility proposal.[358]

[355] Minn. Stat. § 216B.2401.
[356] Departments Comments at 66.
[357] Department Comments at 71, 92.
[358] CUB Comments at 3, 19.

The CEOs expressed concern that the Company proposed to reserve spending for future unspecified R&D projects[359] and asserted that it is not appropriate to fund business ventures through NGIA pilots.[360] With respect to the pilots proposed for the first 1-2 years of the Plan, the CEOs:

- Requested a stakeholder process for the "CenterPoint Energy Minnesota Net Zero Study;"[361]
- Expressed support for the "Weatherization Blitzes" R&D Pilot;[362]
- Recommended that the Company consider promotion of a bonus rebate in the "Weatherization Blitzes" Pilot when customers pair installation of air source heat pumps with building shell improvements;[363]
- Expressed support for the "High Performance Commercial New Construction Building Envelope Initiative";[364]
- Stated, regarding "Assessing Next-Generation Micro-Carbon Capture for Commercial Buildings" that "ratepayer money shouldn't be used for investment in capital funding to test new technologies that don't directly affect the Company's customers or reduce natural gas throughput…"[365]
- Expressed support for "Green Ammonia Novel Technology";[366]
- Requested a stakeholder process for the "RNG Potential Study";[367] and
- Expressed support for "Utilization of Green Ammonia for Thermal Energy Applications."[368]

The Company addresses concerns and suggestions below.

The Company first clarifies that its plan to use R&D funding for future, at this time unspecified, R&D projects is not intended to circumvent Commission review. The Company's proposal is to propose additional R&D pilots in future annual NGIA status reports, providing opportunity for comment from interested parties, and ultimately culminating in approval, denial, or modifications to the proposals by the Commission. The Company explained its rationale in the Petition:

> In this filing, CenterPoint Energy proposes to utilize the full available budget for R&D over the five-year Plan term but proposes specific projects for only the first two years of the Plan. Additional R&D pilots

[359] CEOs Comments at 46.
[360] CEOs Comments 46-47.
[361] CEOs Comments at 47. The CEOs also recommended that the study include a full decarbonization scenario. The Company clarifies that the purpose of the study is to model pathways to full decarbonization so it will certainly include at least one such scenario.
[362] CEOs Comments at 47.
[363] CEOs Comments at 47.
[364] CEOs Comments at 47.
[365] CEOs Comments at 47.
[366] CEOs Comments at 47-48.
[367] CEOs Comments at 48.
[368] CEOs Comments at 48.

> will be proposed in annual NGIA status report filings. CenterPoint Energy received many promising R&D proposals in response to its RFI. The full list is included in Exhibit L. Accordingly, the Company believes that the full 10 percent of budget will be well-used on R&D opportunities. However, selecting the full list of R&D pilots for the next five years is not in the best interests of customers, given the rapidly changing landscape of GHG reduction technologies. Over the next several years CenterPoint Energy and the industry at large will learn a great deal about how best to deploy innovative resources. In particular, the recently enacted federal Inflation Reduction Act, will likely spur innovation with respect to resources such as power-to-hydrogen, strategic electrification, and energy efficiency. At the same time, CenterPoint Energy expects to learn through implementation of its first innovation Plan, and better understand the specific R&D needs that best support future efforts to reduce our customers' natural gas GHG emissions. By deferring selection of R&D projects until future annual NGIA status report filings, CenterPoint Energy will be able to consider the most relevant R&D projects at those future dates that will best advance NGIA's objectives.[369]

Neither the Department nor the CEOs addressed the Company's rationale for reserving funding for future years.

With respect to the Department's opposition to "Assessing Next-Generation Micro-Carbon Capture for Commercial Buildings," the Company responded to their concerns in its discussion of Pilot H.

Regarding the CEOs' request for stakeholder processes for the "CenterPoint Energy Minnesota Net Zero Study" and the "RNG Potential Study," the Company is open to stakeholder input on both R&D projects. As described in Exhibit J, the Company anticipates holding at least one stakeholder meeting in relation to the "CenterPoint Energy Minnesota Net Zero Study." The Company is also open to stakeholder input in relation to the "RNG Potential Study," however, notes that the budget for this study is only $60,000 and the R&D project is not intended to be a full quantification of RNG potential in CenterPoint Energy's service area, but rather merely a study RNG potential near three particular sites.

CenterPoint Energy appreciates the CEOs' recommendation to implement bonus rebates for customers who pair installation of electric air source heat pumps with building shell improvements. This R&D project is designed to test novel outreach tactics and their impact on participation in *existing* CIP/ECO programs and rebates, and CenterPoint Energy does not currently include any separate or additional rebates in its ECO offerings. In response to prior comments from the CEOs on the Company's CIP/ECO Triennial plan, the Company already

[369] Petition at 16.

agreed to consider such bonus rebates as a part of CIP/ECO starting no later than January 1, 2026.[370]

Regarding the CEO's concerns about "Assessing Next-Generation Micro-Carbon Capture for Commercial Buildings," the Company believes there must be some confusion. This R&D project would test the next generation of CleanO2's CarbinX technology. It does not involve capital expenses by CenterPoint Energy and it is intended to explore potential for the technology to reduce GHG emission from gas use by the Company's customers.

In response to CUB's recommendation that the "Weatherization Blitzes" R&D Pilot be excluded from being cut or reduced in size through the Company's exercise of budget flexibility, while the Company does not foresee any reason the proposed scope of the Weatherization Blitz R&D program would be in any way reduced, it is possible the cost to deliver this R&D project could be higher or lower than the Company's estimate.

VI. Additional Issues Raised in Comments

This section of the Company's Reply Comments responds to other non-pilot specific issues raised in parties' Comments including recommendations regarding CenterPoint Energy's proposed cost recovery approach for Plan costs; recommendations to include additional pilots beyond those proposed in the Company's Plan; responses to the Department's recommendations to update the benefit/cost assumptions, including the calculation of avoided geologic gas costs; and recommendations regarding annual NGIA report filings. Responses to the Department's questions regarding environmental attributes, M-RETS, and RTCs are included together as Exhibit G.

a. Recommendations and Questions Regarding Cost Recovery

As discussed in the Company's Petition and acknowledged by various parties in their comments, under the NGIA, prudently incurred costs under an approved NGIA plan are recoverable either (1) via the utility's purchased gas adjustment ("PGA"), (2) through base rates in a general rate case, or (3) through a rider mechanism with annual adjustments.[371] CenterPoint Energy has proposed recovery using each of these authorized mechanisms. The Department, CUB, OAG, and Minneapolis provided comments on the Company's cost recovery proposals.

The Department expressed support for the Company's proposed PGA recovery and agreed that CenterPoint Energy's proposal satisfied the requirements for rule variances.[372] With respect to proposed recovery through base rates and the rider mechanism, the Department recommended

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[370] See *In the Matter of CenterPoint Energy's 2024-2026 Natural Gas Energy Conservation and Optimization Program Triennial Plan*, Docket No. G-008/CIP-23-95, Decision at 279, (Dec. 1, 2023).
[371] *See* OAG Comments at 9-10; CUB Comments at 11-12; Department Comments at 6, 88-90 ("The NGIA statute allows for recovery of NGIA costs through the Purchased Gas Adjustment (PGA). The Commission should approve the requested variance to Minn. R. 7824.2400.").
[372] Department Comments at 88-90.

modifying recovery to be based on forecasted customer volumetric usage across all non-exempt customers rather than matching cost recovery to the classes participating in or receiving benefits from each proposed pilot, as proposed by the Company.[373]

CUB stated that it generally supported the Company's proposed PGA recovery but recommended that the requested PGA variance be subject to annual review and requested that CenterPoint Energy provide additional information on the application of the PGA rule variance to purchases of unbundled environmental attributes.[374] CUB also advocated for further evaluation of potential pathways to lower the amount of Plan costs assessed to income-eligible customers, such as exempting customers enrolled in the Low-Income Home Energy Assistance Program ("LIHEAP") from the Innovation Act Adjustment rider rate.[375] Finally, CUB recommended that the Commission specify that certain costs are only recoverable as part of a future rate case proceeding (as opposed to through the PGA or other annual adjustments). For example, CUB recommended requiring any investments in biogas upgrading equipment to be included in a general rate case.[376]

Minneapolis abstained from taking any position on the Company's cost recovery proposal but requested clarification on whether the inclusion of income taxes on the rate of return was consistent with standard ratemaking treatment.[377]

The OAG expressed concern that CenterPoint Energy's proposed budget flexibility could "shift the mix of proposed Pilots in ways that may harm smaller users."[378]

The Company addresses the questions and recommendations raised below.

i. Purchased Gas Adjustment Variance

CenterPoint Energy has proposed to recover RNG costs and costs for purchased electricity for the Green Hydrogen Blending Pilot through the PGA mechanism. In order to implement recovery through the PGA consistent with the NGIA statute, CenterPoint Energy requested that the Commission grant variances, as necessary, to applicable PGA rules pursuant to Minn. R. 7829.3200.[379]

In its Comments, the Department states that it reviewed CenterPoint Energy's proposal and concludes that "the Company has shown that its proposal meets the criteria for granting a rule variance and recommends the Commission approve the Company's request for variance."[380]

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[373] Department Comments at 87.
[374] CUB Comments at 13.
[375] CUB Comments at 18.
[376] CUB Comments at 12.
[377] Minneapolis Comments at 9.
[378] OAG Comments at 10.
[379] Petition at 21.
[380] Department Comments at 88-90.

CUB states that it "generally supports CenterPoint's request for a variance to allow cost recovery of bundled RNG and electricity used in the production of Green Hydrogen through the PGA mechanism. However, CUB believes such a variance should be subject to annual review during the yearly NGIA Plan evaluation…."[381] CUB recommends that the Commission clarify such variance will expire one year from the date of its order and that if the Company seeks to extend the variance, it should do so through its annual NGIA report filing.[382]

The Company does not oppose ongoing review of authorized PGA recovery to ensure that such recovery continues to be reasonable and consistent with the public interest. However, rather than approving the variance for one year, CenterPoint proposes that the Commission grant a variance for an initial five year period, at which point the Company would need to request to extend the variance to continue recovery through the PGA mechanism. In accordance with Minn. R. 7829.3200, the Commission retains full authority to revoke the variance during that time in response to changes in circumstances.[383] The Company's monthly PGA filings, AAA reports, and annual NGIA reports will provide opportunities for parties and the Commission to continue to review PGA recovery of NGIA Plan costs. CenterPoint Energy also agrees to file the information recommended by CUB in its annual NGIA reports including information about the costs that will pass through the PGA and any details about costs negotiated in RNG contracts. Such information will ensure parties and the Commission are able to review the continued reasonableness of PGA recovery of these costs.

Requiring that the PGA variance expire annually, as proposed by CUB, would increase regulatory workloads for the Department and Commission unnecessarily and would impose unreasonable timing pressure on approval of the Company's annual NGIA reports, to ensure such variances are reviewed and extended prior to expiration. Approving a one year variance with extensions through the Company's annual NGIA report as proposed by CUB would not be workable as the variance would expire before the Commission could reasonably take action on the Company's first annual report.[384]

Allowing PGA recovery to terminate simply because action was not taken within the one year term to extend the variance without a finding that such recovery mechanism is no longer in the public interest or otherwise appropriate would create unreasonable complication in the recovery of NGIA costs. Additionally, terminating PGA recovery would risk creating intergenerational inequities in the recovery of costs to the extent those costs are not recovered contemporaneously with the costs being incurred and benefits delivered to customers.

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[381] CUB Comments at 13.
[382] CUB Comments at 13.
[383] Minn. R. 7829.3200, subp. 3 provides "Unless the commission orders otherwise, variances automatically expire in one year. They may be revoked sooner due to changes in circumstances or due to failure to comply with requirements imposed as a condition of receiving a variance."
[384] As described in the Company's Plan, CenterPoint Energy requested Commission action by July 2024 and proposed to file its first NGIA Report on June 1, 2025, covering the period July 1, 2024 through December 31, 2024. As such, there would be approximately one month between the Company's filing of its annual report and the date CUB proposes for expiration of the PGA variance (i.e., the one year anniversary of the Commission's order approving the NGIA Plan).

CUB also questions whether purchases of unbundled environmental attributes associated with RNG are proposed to be recovered through the PGA, whether a variance is required for such recovery, and whether additional analysis of such variance is required under Minn. R. 7829.3200.[385]

CenterPoint Energy clarifies that it is proposing to recover all costs related to RNG purchases under Pilots B and C through the PGA mechanism including bundled RNG (i.e., environmental attributes plus gas commodity) and unbundled purchases of environmental attributes, as applicable. As noted in the Company's Petition, CenterPoint Energy is proposing "to give a preference to bundled RNG (i.e. sale of both environmental attributes and commodity gas) but would consider purchasing unbundled RNG (i.e. without the commodity gas)."[386]

Recovery through the PGA mechanism of all RNG, whether bundled or unbundled, is reasonable, consistent with the public interest, consistent with the NGIA, and meets the criteria set forth in Minn. R. 7829.3200 for any necessary variances from the Commission's PGA rules. The NGIA expressly authorizes recovery of "prudently incurred costs under an approved plan, including prudently incurred costs to obtain the third-party analysis required in paragraph (a), clauses (6) and (7). . . via the utility's purchased gas adjustment."[387]

Minn. R. 7829.3200 provides that the Commission shall grant a variance to its rules when it determines that the following requirements are met: A. enforcement of the rule would impose an excessive burden upon the applicant or others affected by the rule; B. granting the variance would not adversely affect the public interest; and C. granting the variance would not conflict with standards imposed by law. Each of these criteria is met with respect to RNG purchases of unbundled environmental attributes for the same reasons as discussed in the Company's Petition and as described below.

1. *Enforcement of the Rule Would Impose an Excessive Burden*

Granting a variance to the PGA rules to allow recovery of RNG costs, including for unbundled environmental attributes, through the PGA will enable the Company to reasonably and timely recover the costs associated with RNG. Enforcement of the Commission's PGA rules in a way that would disallow recovery of costs through the PGA mechanism would impose an excessive burden on CenterPoint Energy and customers as recovery of the identified costs through the PGA mechanism most appropriately recognizes the nature of the identified costs and ensures timely recovery in a manner consistent with cost causation and the established PGA mechanism. As noted in the Department's Comments, "[n]ot granting the variances would result in CenterPoint having to recover those costs through base rates or it [sic] proposed annual tracker mechanism. This would delay the recover[y] of those costs significantly thereby increasing CenterPoint's costs of doing business."[388] Such delay would also likely to result in intergenerational inequities, as customers who receive the benefits of the RNG purchases may

[385] CUB Comments at 13.
[386] Petition, Exhibit D at 7.
[387] Minn. Stat. § 216B.2427, subd. 2(c)(1).
[388] Department Comments at 89.

not be the same customers paying the costs associated with those resources. Finally, the PGA mechanism ensures customers only pay the actual costs incurred with respect to RNG purchases, as monthly PGA recoveries are subject to annual true-up through the AAA mechanism.

2. *Granting the Variance Would not Adversely Affect the Public Interest*

Granting the requested variance to allow recovery of RNG costs, including for purchases of unbundled environmental attributes, through the PGA mechanism would not adversely affect the public interest. Further, as noted by the Department in its Comments, "there is nothing in the Company's proposal that would preclude the Commission from exercising its authority in the future to disallow imprudent or unreasonable transactions, which provides further protection of the public interest."[389]

CenterPoint Energy's proposed recovery structure is designed to recover costs in a similar manner to the ways comparable costs are already recovered from customers and does not seek to recover more costs than are reasonable or permitted by the NGIA statute. Unbundled environmental attributes associated with RNG, like a bundled RNG (environmental attributes and commodity gas), are associated with specific volumes of RNG, which justifies similar recovery through the PGA mechanism. The public interest is not adversely affected by allowing reasonable cost recovery mechanisms for prudently incurred costs.

3. *The Variance Does Not Conflict with Standards Imposed by Law*

The proposed recovery of RNG costs through the PGA, including for the procurement of unbundled environmental attributes, does not conflict with law. Granting the requested variances will allow CenterPoint Energy to implement cost recovery in accordance with the NGIA statute, which expressly authorizes the recovery of costs incurred to implement an NGIA Plan via the utility's PGA. Further, the Commission has authority to vary its own rule designating accounts included in the cost of purchased gas. As such, the variance is consistent with the purpose of the PGA statute and rules and does not conflict with any other laws. In recommending approval of the proposed PGA rule variance, the Department similarly stated it was not aware of any laws with which the proposed variance would conflict.[390]

Each of the criteria set forth in Minn. R. 7829.3200 is satisfied for the Commission to grant a variance from its PGA rules to allow for the recovery of costs associated with RNG, including the unbundled environmental attributes of RNG, and the cost for purchased electricity under the Green Hydrogen Blending Pilot. CenterPoint Energy respectfully requests that the Commission grant the requested variance for an initial five-year period, recognizing that the Commission retains full authority to modify or revoke the variances sooner in response to changed circumstances or a finding that continued recovery through the PGA would adversely affect the public interest. CenterPoint Energy further agrees to provide information regarding the costs

[389] Department Comments at 89.
[390] Department Comment at 89.

recovered through the PGA mechanism in its annual NGIA reports to allow parties and the Commission to monitor these costs and recoveries.

ii. Recommendations Regarding Apportionment of Cost Recovery

First, regarding Minneapolis's request for clarification on whether "customers are normally billed for income taxes resulting from the company's revenue from the rate of return customers pay,"[391] CenterPoint Energy confirms that customers are normally billed for income taxes on the Company's authorized rate of return in base rates. CenterPoint Energy's proposal is consistent with both standard ratemaking treatment and the NGIA statute.[392]

With respect to the OAG's concern that the Company's proposal to allow for budget flexibility in implementation of the approved Plan could shift costs to smaller users, CenterPoint Energy notes that the Commission retains authority to establish reasonable rate design for the recovery of costs through the established statutory cost recovery mechanisms. Further, to the extent the Company determines an increase to spending on a particular pilot is warranted in response to participant demand or other considerations, the associated benefits will also benefit the same customer classes.

With respect to the Department's recommendation that the Commission use annual forecasted throughput for cost recovery of both the IAC and the IAA,[393] the Department acknowledged that it had "not calculated the effects of this proposed change on rates, or customer bills, but assuming the Residential and Commercial classes have similar level of annual volumetric sales, the effects on rates should be minimal."[394] CenterPoint Energy conducted an evaluation of the forecasted impacts of the Department's proposed volumetric recovery methodology as compared to the Company's proposal to allocate pilots to customer classes. The Department's proposal is expected to increase the Residential customer bill impact for an average Residential customer by approximately 6 percent or approximately $4 over the five years of the Plan.[395]

[391] Minneapolis Comments at 9.
[392] Minn. Stat. § 216B.2427, subd. 2(c)(3).
[393] Department Comments at 87.
[394] Department Comments at 87.
[395] As detailed in the Company's Petition, actual recovery is likely to vary based on the charge implementation timeline, actual expenses, and customer natural gas usage and is unlikely to equal the estimates provided. Petition at 22.

Table 4. Average Residential Bill Impacts (CenterPoint Energy Methodology Versus Department Recommended Volumetric Methodology)[396]

Year	CenterPoint Energy Proposed Allocation	Department Recommended Volumetric Allocation	Difference
2025	$8.99	$11.26	$2.27
2026	$12.56	$14.86	$2.30
2027	$14.66	$16.02	$1.36
2028	$17.01	$16.06	($0.95)
2029	$9.72	$8.88	($0.84)
Total	$62.95	$67.08	$4.13

Regarding CUB's inquiry into an exemption for LIHEAP-enrolled customers with respect to the IAA rider, CenterPoint Energy recognizes this as representative of the shared concern for helping income-eligible households manage their energy costs. Rather than creating new exemption processes with additional administrative burden, the Company suggests building on stakeholder processes surrounding the Gas Affordability Program ("GAP") and the resulting 2024 changes that simplify enrollment for LIHEAP-eligible customers. The Company prioritizes energy affordability and sees GAP as the most effective tool for addressing overall customer programs and rates, including the IAA rider, while avoiding the challenges associated with customer exemptions.

Finally, CenterPoint Energy does not agree with CUB's recommendation to require recovery of certain investments solely through base rates in a general rate case[397] as inconsistent with the NGIA statute. The NGIA expressly provides that prudently incurred costs under an approved plan *are recoverable either* (1) via the utility's PGA, (2) in a general rate case, *or* (3) "via annual adjustments, provided that after notice and comment the commission determines that the costs included for recovery through rates are prudently incurred."[398] Further, CUB's rationale for this recommendation "to hold CenterPoint accountable for insuring that investment is prudent and cost-effective" is not supported in light of the fact that the NGIA specifies costs recovered through the rider are subject to review for prudence.

Consistent with the NGIA, all spending will be subject to review for prudence in subsequent cost recovery proceedings.[399] Actual NGIA Plan costs proposed for recovery will be reviewed for

[396] Note that all residential bill impacts reflected in this table are based on the revised NGIA Plan costs as described in these Reply Comments and include forecasted recoveries through all proposed recovery mechanisms (i.e., the PGA, IAA, and IAC). Bill impacts of this methodology across rate classes are included in Exhibit A.
[397] CUB Comments at 12.
[398] Minn. Stat. § 216B.2427, subd. 2(c).
[399] Minn. Stat. § 216B.2427, subd. 2(c) ("In seeking to recover costs under a plan approved by the commission under this section, the utility must demonstrate to the satisfaction of the commission that the

prudence either (1) in the Company's annual NGIA status reports, where the annual rider mechanism true-up will be presented; (2) in CenterPoint Energy's AAA report, where costs recovered through the purchased gas adjustment ("PGA") mechanism are reviewed annually; or (3) in general rate case proceedings.

b. Recommendations for Additional Heat Pump Measures

The CEOs recommended that the Company include cold climate air source heat pumps, ground source heat pumps, or heat pump water heaters in the Company's Plan because they are not included in the Company's CIP/ECO plan.[400] The Company clarifies that cold climate air source heat pumps are included in the Company's proposed Plan, as part of Pilot N, and qualify for several programs in the Company's CIP/ECO plan, including Home Efficiency Rebates.

The Company considered incentivizing heat pump water heaters as part of its Plan in response to RFI responses proposing heat pump water heaters for inclusion but concluded that a market transformation approach would be the best way to increase penetration of heat pump water heaters and a full-fledged market transformation program is unlikely to be a good fit for NGIA.[401] The Company's perspective has not changed since it made that determination and CenterPoint Energy believes the same to be true of ground source heat pumps. [402]

c. Recommendations on Structural Values

As detailed in CenterPoint Energy's Petition, the Company relied on the Commission's Frameworks Order to quantify the NGIA plan cost and benefits and to compute the value of avoided commodity purchases for purposes of applying the NGIA cost cap.

In its Comments, the Department recommends a number of modifications to the structural values that should be used in the NGIA portfolio.[403] In particular, the Department recommends:

1) that the Company use the most recent BenCost inputs for the 2024-2026 Triennial filings approved by the Department on March 31, 2023;[404]

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actual total incremental costs incurred to implement the approved innovation plan are reasonable. Prudently incurred costs under an approved plan, including prudently incurred costs to obtain the third-party analysis required in paragraph (a), clauses (6) and (7), are recoverable").

[400] CEOs Comments at 48.

[401] Petition, Exhibit K, Part 2 of 3, Final Shortlist Summary at 20.

[402] Pilots I, J, and K do include ground source heat pumps as part of a networked geothermal system. We interpret the CEOs comment here to relate to ground source heat pumps intended for a single residential home.

[403] Department Comments at 76-84, 90.

[404] Department Comments at 90. This recommendation includes approved BenCost assumptions for the costs and escalation rates associated with gas commodity costs, gas demand costs, and retail rates. *See In the Matter of 2024-2026 CIP Cost-Effectiveness Methodologies for Electric and Gas Investor-Owned Utilities*, Docket No. E,G-999/CIP-23-46, Decision (Mar. 31, 2023); *see also* Department Comments at Attachment B.

2) that the Company use the annual percentage change in normalized load growth for Non-CIP Exempt customers to determine the escalation rate for variable O&M costs;[405]
3) that the Company use New York Mercantile Exchange ("NYMEX") futures prices to calculate the avoided geologic gas costs.[406]

Table 5 below shows the revised portfolio budget with the pilot modifications described in section IV of these Reply Comments along with two alternative scenarios that illustrate the budgetary impacts of the Department's recommendations regarding the methodology and use of the NGIA structural values.

Scenario A incorporates the first and second Department recommendations listed above[407] and Scenario B incorporates all three recommendations, replacing the gas commodity cost and variable O&M escalation inputs from the 2024-2026 BenCost with the NYMEX futures pricing and normalized load growth for non-CIP exempt customers. Overall, using the most recent BenCost inputs increases the amount of revenue credits applied to the Plan's incremental costs, which results in total incremental costs below the statutory cap. By contrast, using the NYMEX futures prices for avoided geologic gas costs decreases the expected commodity savings, which results in total incremental costs in excess of the statutory cap. Nevertheless, in both cases the overall impact on total incremental costs is less than +/- 1.5 percent. The impact of the Department's recommended changes to the variable O&M costs is also minimal, offering slightly higher O&M savings, but the overall impact on total incremental costs is less than 0.01 percent.

[405] Department Comments at 83-84.
[406] This recommendation includes the NYMEX futures values as of October 2, 2023, adjusted for delivery to CenterPoint Energy's system as the monthly commodity prices for geologic gas in the model for years 1 through 5, consistent with CenterPoint Energy's response to Department Information Request No. 73. *See* Department Comments at Attachment A.28 (CenterPoint Energy Response to Department Information Request No. 73).
[407] Scenario A applies the inputs from the Deputy Commissioner's March 31, 2023 Decision in Docket No. E,G-999/CIP-23-46 except with respect to the escalation rate for variable O&M costs, which is calculated based on the Department's recommendation to use annual percentage change in normalized load growth for non-CIP exempt customers. The Company applied an annual escalation rate of 0.41% based on net weather-normalized sales for non-CIP exempt customers from 2017 through 2022.

Table 5. Comparison of Impacts to Revised Portfolio from Alternative Structural Values

Budget Component	Revised Portfolio	Scenario A	Scenario B
Fixed O&M	$69,586,000	$69,117,300	$70,089,270
Est. Revenue Requirement for Capital Projects	$3,131,329	$3,131,329	$3,131,329
Incentives	$18,606,019	$18,606,019	$18,606,019
Less Peak Demand Savings	($1,543,434)	($1,975,395)	($1,975,395)
Less Commodity Savings	($4,296,141)	($4,598,584)	($4,158,309)
Less Variable O&M Savings	($36,703)	($45,754)	($45,754)
Subtotal 5-year NGIA Pilot Cost	$85,447,069	$84,234,913	$85,647,158
Subtotal 5-year R&D Budget	$10,570,462	$10,570,462	$10,570,462
Subtotal 5-year Overhead costs	$9,683,983	$9,683,983	$9,683,983
Total 5-Year Incremental Cost	**$105,701,515**	**$104,489,359**	**$105,901,604**
Statutory Budget Cost Cap[408]	*$105,704,618*	*$105,704,618*	*$105,704,618*
Over Cap (if positive) / Under Cap (if negative)	*($3,104)*	*($1,215,260)*	*$196,985*
Low-Carbon Fuels %	*51.3%*	*51.3%*	*51.6%*

Taken together, the Department's recommendations regarding the structural values do not have a significant impact on estimated costs. However, it is important to note that the Department's recommendations regarding structural values are not consistent with the methodologies and approaches approved in the Frameworks Order. In particular, Order Point 28 states that "utilities shall use structural cost-benefit values following the methods described in Appendix H of the Minnesota Department of Commerce's February 11, 2020, CIP BenCost Input Decision in Docket No. G-999/CIP-18-782, Inputs 1–13, with the modifications reflected in the Structural Values Modifications to CIP Approach table filed by the Joint Commenters." Furthermore, Order Point 29 states that "Utilities shall update structural cost-benefit values with the filing of each innovation plan or each annual NGIA report filing." In rejecting the Department's recommendation to wait to incorporate 2024-2026 cost-effectiveness assumptions into NGIA, the Commission concluded "that the potential benefit of waiting to see what the advisory committee recommends for future CIP filings does not outweigh the interest in providing clear guidance for the gas utilities seeking to develop NGIA innovation plans in the near future."[409] For these reasons, the Company does not support modifications to the structural values at this time.[410]

d. Annual Status Reports

The NGIA requires utilities with approved innovation plans to file annual status reports and specifies certain items for inclusion in those annual reports.[411] In its Petition, CenterPoint

[408] Includes additional amount allowed for the purchase of certain kinds of RNG under Minn. Stat. § 216B.2427, Subd. 3(b).
[409] Frameworks Order at 15.
[410] The Company also notes that in quantifying actual observed costs and benefits of the Plan in annual status reports or other filings it will use actual gas commodity costs rather than forecasts.
[411] Minn. Stat. § 216B.241, subd. 2(f).

Energy proposed to file annual status reports in June for the prior calendar year.[412] No party opposed this suggestion and CUB indicated support.[413]

As noted above, CUB recommended that the Commission consider GHG reduction information on a pilot-by-pilot basis in addition to considering plan-aggregate emissions reductions. The Company agrees with this suggestion and proposes to include pilot specific GHG information in annual reports. CUB also recommended that the Company include updates regarding IRA implementation as it affects the Company's Plan in annual reports. The Company has no objection to this recommendation.[414] The Company has also committed in these Reply Comments to providing information on measurement and verification processes for the pilots in annual reports and to provide information on the location and type of customers that enroll in Pilot M.

VII. Conclusion and Recommendations

The Company thanks the Commission for consideration of these Reply Comments. The Company respectfully requests that the Commission approve the Company's Petition with the following modifications discussed above:

1) The Company's proposed modifications and reallocations of funding described in Section IV above and Exhibits A, B, C, D, and E.

2) The Company's revised cost recovery estimates shown in Exhibit A.

3) The Company's proposed modifications to estimated participation, GHG savings, Dth savings, and other costs and benefits for pilots A, B, C, D, H, and O as described in Sections IV and V above and Exhibits A, B, C, D, and E.

4) Modified geographical preferences in the Pilot C draft RFP, included in the Petition as Exhibit Q, to read express geographic preference in this order:

    a. RNG interconnected with CenterPoint Energy's Minnesota distribution system;
    b. RNG within Minnesota;
    c. RNG in neighboring regions; and
    d. Other RNG.

5) Inclusion in the Pilot C draft RFP included in the Petition as Exhibit Q, a preference that bids be submitted for contract terms of 5, 10, or 15 years.

6) The Company's proposed modifications to cost-effectiveness objectives shown in Exhibit B.

[412] Petition at 32-33.
[413] CUB Comments at 17.
[414] CUB Comments at 17.

7) Modification of Pilot E to limit participation to projects expected to reduce GHG emissions by 9,000 $MTCO_2e$ or more over the lifetime of the project.

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In the Matter of
CenterPoint Energy's Natural Gas Innovation Act (NGIA)
Innovation Plan

Reply Comments of CenterPoint Energy

EXHIBIT A: REVISED QUANTITATIVE METRICS, COST RECOVERY, AND PILOT DETAILS

Docket No. G-008/M-23-215

March 15, 2024

Table A.1: Summary Quantitative Metrics for Proposed Pilots[1]

Pilot	Estimated Lifetime Utility Cost*	Cost Counting Against NGIA Budget**	Estimated Lifecycle GHG Reductions (Metric Tons CO2e)	Estimated Net Job Creation (FTEs)***
RNG Produced from Hennepin County Organic Waste	REMOVED	REMOVED	REMOVED	REMOVED
RNG Produced from Ramsey & Washington Counties' Organic Waste	$17,538,491	$6,520,485	92,414	244
Renewable Natural Gas RFP Purchase	$83,367,472	$40,271,426	423,134	884
Green Hydrogen Blending into Natural Gas Distribution System	$23,053,705	$4,646,943	27,993	148
Industrial or Large Commercial Hydrogen and Carbon Capture Incentives	$2,720,474	$3,793,912	107,196	459
Industrial Methane and Refrigerant Leak Reduction	$1,132,645	$1,247,828	33,763	21
Urban Tree Carbon Credits	$299,909	$329,301	4,500	1
Carbon Capture Rebates for Commercial Buildings	$30,481	$612,377	23,757	195
New Networked Geothermal Systems	$42,224,178	$11,625,947	107,355	430
Decarbonizing Existing District Energy Systems	($3,419,905)	$598,794	124,030	315
New District Energy System	($784,412)	$215,644	40,882	125
Industrial Electrification Incentive	$113,108	$504,436	11,896	23
Commercial Hybrid Heating	$5,545,369	$7,068,602	25,609	88
Residential Deep Energy Retrofit and Electric Air Source Heat Pump	$10,590,172	$13,617,633	66,760	171
Small/Medium Business GHG Audit	$1,694,181	$1,997,007	4,380	36
Residential Gas Heat Pumps	$343,823	$380,761	235	4
Gas Heat Pumps for Commercial Buildings	$635,129	$749,464	2,154	8
Industrial and Large Commercial GHG Audit Pilot	($242,238)	$950,494	35,560	46
Total for full Pilots	$184,842,581	$95,131,053	1,131,617	3,196
R&D Pilots	$10,570,462	$10,570,462	-	-
Total	**$195,413,043**	**$105,701,515**	**1,131,617**	**3,196**

[1] Replacing Petition at 9, Table 1. Table notes continue in footnote on the next page.

COST RECOVERY

The following tables provide information about the estimated recovery from customers during the term of the Plan. Actual recovery is likely to vary based on the charge implementation timeline, actual expenses, and customer natural gas usage and is unlikely to equal the estimates provided.

Table A.2: NGIA Cost Recovery by Mechanism (Millions)[2]

Mechanism	2025	2026	2027	2028	2029	Total
PGA	$4.2	$9.8	$11.1	$11.3	$5.8	$42.4
IAC	$15.0	$15.0	$15.5	$15.3	$15.3	$76.0
IAA	$-	$(0.01)	$-	$-	$(6.8)	$(6.8)
Total	$19.2	$24.8	$26.6	$26.7	$14.3	$111.6

Table A.3: NGIA Recovery by Class (Thousands)[3]

Class	2025	2026	2027	2028	2029	Total
Residential	$7,500	$10,476	$12,220	$14,181	$8,108	$52,486
Comm Firm A	$327	$413	$419	$361	$207	$1,727
Comm/Ind Firm B	$926	$1,171	$1,189	$1,032	$566	$4,884
Comm/Ind Firm C - Sales Service	$5,771	$7,384	$7,510	$6,615	$3,409	$30,691
Comm/Ind Firm C - Transport	$101	$101	$96	$75	$39	$411
Large General Firm Sales Service	$201	$253	$256	$231	$96	$1,037
Large Firm Transport	$316	$317	$300	$233	$121	$1,286
Small Dual Fuel A - Sales Service	$663	$817	$820	$724	$332	$3,356
Small Dual Fuel A - Transport	$38	$38	$36	$28	$14	$154
Small Dual Fuel B - Sales Service	$461	$578	$582	$519	$230	$2,371
Small Dual Fuel B - Transport	$58	$58	$55	$43	$22	$235
Large Vol. - Dual Fuel Sales Service	$1,116	$1,408	$1,417	$1,285	$510	$5,736
Large Vol. - Dual Fuel Transport	$914	$916	$866	$675	$349	$3,721
Large Vol. -Transport-MR	$175	$175	$166	$129	$67	$713
Large Vol.-Dual Fuel Sales Service-MR	$193	$243	$245	$222	$88	$991
Large Vol. - Dual Fuel Transport-MR	$439	$440	$416	$324	$168	$1,787
Total	$19,200	$24,787	$26,593	$26,677	$14,327	$111,584

Table A.1 Notes (from p.2)

* This represents the expected net cost impact to customers over the lifetime of each pilot. Many pilots will require continued investment by CenterPoint Energy after the end of the five-year term of this NGIA plan. For example, the new networked geothermal system is expected to operate, and require maintenance, for decades. These figures are also net of expected savings due to reduce need to purchase gas and other avoided operations and maintenance costs. Participant costs are not included.

** This represents project costs that count against the budget cap described in the NGIA. These only include utility costs expected to be incurred during the five-year plan and are net of certain savings, including savings due to reduced need to purchase gas, during the term of the five-year plan. Participant costs are not included.

***Includes direct, indirect, and induced estimated Full Time Equivalent ("FTE") positions employed in Minnesota for one year over lifetime of each pilot.

[2] Replacing Petition at 22, Table 4.
[3] Replacing Petition at 23, Table 5.

It is important to note that the NGIA cost cap is defined by reference to total *incremental* cost, which is defined to be certain utility expenses less certain savings estimated to be achieved by the plan.[4]

The total estimated annual bill impact by customer class is shown in the table below.

Table A.4: Estimated Annual Bill Impact by Class for an Average Customer[5]

Class	2025	2026	2027	2028	2029
Residential	$9	$13	$15	$17	$10
Comm Firm A	$11	$14	$15	$13	$7
Comm/Ind Firm B	$45	$57	$58	$50	$28
Comm/Ind Firm C - Sales Service	$271	$347	$353	$311	$160
Comm/Ind Firm C - Transport	$239	$239	$226	$176	$91
Large General Firm Sales Service	$9,115	$11,522	$11,621	$10,486	$4,376
Large Firm Transport	$9,034	$9,049	$8,560	$6,664	$3,449
Small Dual Fuel A - Sales Service	$779	$960	$964	$850	$390
Small Dual Fuel A - Transport	$590	$591	$559	$436	$225
Small Dual Fuel B - Sales Service	$3,204	$4,012	$4,043	$3,606	$1,600
Small Dual Fuel B - Transport	$2,315	$2,318	$2,193	$1,707	$884
Large Vol. - Dual Fuel Sales Service	$8,859	$11,171	$11,247	$10,201	$4,046
Large Vol. - Dual Fuel Transport	$11,290	$11,308	$10,697	$8,328	$4,310
Large Vol.-Transport-MR	$15,923	$15,949	$15,088	$11,746	$6,079
Large Vol.-Dual Fuel Sales Service-MR	$17,537	$22,114	$22,265	$20,195	$8,010
Large Vol. - Dual Fuel Transport-MR	$36,591	$36,650	$34,672	$26,993	$13,969

PILOT REVISIONS

Pilot B. RNG Produced from Ramsey & Washington Counties' Organic Waste

Table A.5: RNG Produced from Ramsey & Washington Counties' Organic Waste Participation Estimates[6]

Unit of Participation	Dths				
Year	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Dths Purchased	-	-	95,383	95,383	95,383

[4] Minn. Stat. § 216B.2427, subd. 1(r).

[5] Replacing Petition at 24, Table 6.

[6] Replacing Petition, Exhibit D at 5, Table 4.

Table A.6: RNG Produced from Ramsey & Washington Counties' Organic Waste Five Year Spending Estimate[7]

	Year 1	Year 2	Year 3	Year 4	Year 5
Project Delivery	$0	$10,094	$1,926,921	$1,948,777	$1,970,932
Advertising & Promotion	$0	$0	$0	$0	$0
Allocation of General Portfolio Costs	$144,932	$98,728	$96,486	$97,424	$98,390
Revenue Requirement for Capital Investment	$0	$0	$0	$0	$0
Customer Incentives	$0	$0	$0	$0	$0
Total	$144,932	$108,822	$2,023,407	$2,046,201	$2,069,323
UCT Savings	$0	$0	$0	$0	$0
Total Incremental Cost	$144,932	$108,822	$2,023,407	$2,046,201	$2,069,323

Table A.7: RNG Produced from Ramsey & Washington Counties' Organic Waste GHG and Geologic Gas Savings[8]

	During Five-Year Plan	Over Contract Lifetime
Lifecycle GHG Emissions Reduction (metric tons CO_2e)	27,724	92,414
Geologic Gas Savings (Dth)	286,150	953,833

Pilot C. Renewable Natural Gas Request for Proposal ("RFP") Purchase

Table A.8: Renewable Natural Gas Request for Proposal Purchase Participation Estimates[9]

Unit of Participation	Dths				
Year	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Dths Purchased	-	518,750	518,750	518,750	518,750

Table A.9: Renewable Natural Gas Request for Proposal Purchase Five Year Spending Estimate[10]

	Year 1	Year 2	Year 3	Year 4	Year 5
Project Delivery	$49,000	$8,861,745	$8,960,691	$9,087,578	$9,207,932
Advertising & Promotion	$0	$5,000	$0	$0	$0
Allocation of General Portfolio Costs	$895,122	$609,758	$595,910	$601,704	$607,671

[7] Replacing Petition, Exhibit D at 6, Table 5.
[8] Replacing Petition, Exhibit D at 6, Table 6.
[9] Replacing Petition, Exhibit D at 8, Table 7.
[10] Replacing Petition, Exhibit D at 8, Table 8.

Revenue Requirement for Capital Investment	$0	$0	$0	$0	$0
Customer Incentives	$0	$0	$0	$0	$0
Total	$944,122	$9,476,504	$9,556,601	$9,689,281	$9,815,603
UCT Savings	$0	$0	$0	$0	$0
Total Incremental Cost	$944,122	$9,476,504	$9,556,601	$9,689,281	$9,815,603

Table A.10: Renewable Natural Gas Request for Proposal Purchase GHG and Geologic Gas Savings[11]

	During Five-Year Plan	Over Contract Lifetime
Lifecycle GHG Emissions Reduction (metric tons CO_2e)	169,254	423,134
Geologic Gas Savings (Dth)	2,075,000	5,187,500

Pilot D. Green Hydrogen Blending into Natural Gas Distribution System

Table A.11: Green Hydrogen Blending into Natural Gas Distribution System Participation Estimates[12]

	Year 1	Year 2	Year 3	Year 4	Year 5
Audits	-	-	1	-	-

Table A.12: Green Hydrogen Blending into Natural Gas Distribution System Five Year Spending Estimate[13]

Year	Year 1	Year 2	Year 3	Year 4	Year 5
Project Delivery	$49,800	$150,094	$187,955	$156,767	$157,088
Advertising & Promotion	$0	$0	$0	$0	$0
Allocation of General Portfolio Costs	$103,289	$70,360	$68,762	$69,431	$70,119
Revenue Requirement for Capital Investment	$0	$0	$459,241	$731,143	$684,640
Customer Incentives	$0	$0	$0	$0	$0
Total	$153,089	$220,454	$1,406,140	$1,411,995	$1,743,346
UCT Savings	$0	$0	$133,260	$126,264	$119,636
Total Incremental Cost	$153,089	$220,454	$1,272,880	$1,285,730	$1,623,710

Table A.13: Green Hydrogen Blending into Natural Gas Distribution System GHG Savings[14]

	During Five-Year Plan	Over Lifetime
Lifecycle GHG Emissions Reduction (tons CO_2e)	4,199	27,993
Geologic Gas Savings (Dth)	63,481	423,204

[11] Replacing Petition, Exhibit D at 9, Table 9.
[12] Replacing Petition, Exhibit D at 11, Table 10.
[13] Replacing Petition, Exhibit D at 11, Table 11.
[14] Replacing Petition, Exhibit D at 12, Table 12.

Pilot H. Carbon Capture Rebates for Commercial Buildings

Table A.14: Carbon Capture Rebates for Commercial Buildings Participation Estimates[15]

	Units Installed				
	Year 1	Year 2	Year 3	Year 4	Year 5
Units of Participation	3	8	18	38	73

Table A.15: Carbon Capture Rebates for Commercial Buildings Five Year Spending Estimate[16]

	Year 1	Year 2	Year 3	Year 4	Year 5
Project Delivery	$49,000	$50,470	$51,984	$53,544	$55,150
Advertising & Promotion	$5,000	$5,000	$5,000	$5,000	$5,000
Allocation of General Portfolio Costs	$13,611	$9,272	$9,062	$9,150	$9,240
Revenue Requirement for Capital Investment	$0	$0	$0	$0	$0
Customer Incentives	$18,000	$48,000	$108,000	$76,000	$146,000
Total	$85,611	$112,742	$174,046	$143,693	$215,390
UCT Savings	$1,879	$6,529	$16,310	$35,703	$70,687
Total Incremental Cost	$83,732	$106,213	$157,736	$107,990	$144,704

Table A.16: Carbon Capture Rebates for Commercial Buildings GHG and Geologic Gas Savings[17]

	During Five-Year Plan	Over Lifetime
Lifecycle GHG Emissions Reduction (metric tons CO_2e)	2,080	23,757
Geologic Gas Savings (Dth)	22,326	250,049

Pilot O. Small/Medium Business GHG Audit

Table A.17: Small/Medium Business GHG Audit Participation Estimates[18]

	Year 1	Year 2	Year 3	Year 4	Year 5
Audits	220	240	260	260	260

[15] Replacing Petition, Exhibit D at 23, Table 22.
[16] Replacing Petition, Exhibit D at 23, Table 23.
[17] Replacing Petition, Exhibit D at 24, Table 24.
[18] Replacing Petition, Exhibit D at 48, Table 43.

Table A.18: Small/Medium Business GHG Audit Five Year Spending Estimate[19]

Year	Year 1	Year 2	Year 3	Year 4	Year 5
Project Delivery	$238,200	$256,870	$275,584	$277,144	$328,750
Advertising & Promotion	$5,000	$5,000	$5,000	$5,000	$5,000
Allocation of General Portfolio Costs	$44,388	$30,237	$29,550	$29,838	$30,134
Revenue Requirement for Capital Investment	$0	$0	$0	$0	$0
Customer Incentives	$84,480	$92,160	$99,840	$89,440	$89,440
Total	$372,068	$384,267	$409,975	$401,421	$453,324
UCT Savings	$4,434	$8,784	$13,027	$16,801	$20,142
Total Incremental Cost	$367,634	$375,483	$396,947	$384,621	$433,181

Table A.19: Small/Medium Business GHG Audit GHG Savings[20]

	During Five-Year Plan	Over Lifetime
Lifecycle GHG Emissions Reduction (tons CO_2e)	703	4,380
Geologic Gas Savings (Dth)	10,400	60,564

[19] Replacing Petition, Exhibit D at 49, Table 44.
[20] Replacing Petition, Exhibit D at 49, Table 45.

In the Matter of
CenterPoint Energy's Natural Gas Innovation Act (NGIA)
Innovation Plan

Reply Comments of CenterPoint Energy

EXHIBIT B: UPDATED COST-EFFECTIVENESS OBJECTIVES

Docket No. G-008/M-23-215

March 15, 2024

Proposed Cost-Effectiveness Objectives for the Plan based on the Cost-Effectiveness Framework

The NGIA requires the Commission to establish cost-effectiveness objectives for the Plan based on the cost-benefit framework established in the Frameworks Order.[1] CenterPoint Energy proposed cost-effectiveness objectives in its Petition and provides updated proposed cost-effectiveness objectives below, incorporating feedback from parties' initial comments and reflecting the revised NGIA Plan presented in the Company's Reply Comments. The Company developed and updated these objectives based on the categories of costs and benefits identified in the Frameworks Order: Perspectives, Environment, Socioeconomic, and Innovation. Deletions from the Petition are crossed out and additions are underlined.

Perspectives

- Overall GHG savings achieved by all approved pilots is achieved at a cost of no more than \$200/MTCO_2e.[2] For this objective, costs are measured on a lifetime basis using the utility cost test and GHG savings are also measured on a lifetime basis.
- <u>At least</u> 40 percent[3] of residential units served by the Residential Deep Energy Retrofit and Electric Air Source Heat Pumps Pilot and the Weatherization Blitzes R&D Pilot qualify as low-income, as that term is defined in CIP/ECO, or are located in a disadvantaged community, as that term is defined for the Inflation Reduction Act programs.[4]
- Over the course of the five-year Plan, CenterPoint Energy supports the development of four new sources of low-carbon fuels produced in Minnesota. This may include one or more anaerobic digesters that produces RNG, projects that produce hydrogen via power-to-hydrogen, biogas projects, or projects that create ammonia via power-to-ammonia.

In addition to the objectives for the Perspectives category, listed above, CenterPoint Energy proposes to track and report on residential, commercial/industrial, low-income, tribal, and urban vs. rural participation. While CenterPoint Energy does not believe it has an adequate baseline to propose an objective related to tribal participation, for example, the Company is interested in

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[1] Minn. Stat. § 216B.2427, subd. 2(e).

[2] This is based on the cost per ton, using the utility cost test, of the RNG Produced from Ramsey & Washington Counties Organic Waste pilot. Because NGIA requires CenterPoint Energy to make a significant investment in low-carbon fuels and provides additional budget for food waste derived RNG, CenterPoint Energy thought it was appropriate to look towards these two pilots to develop this metric. The remaining RNG pilot (the RNG RFP Purchase pilot), is less appropriate to include in developing this metric because it is not entirely eligible for additional budget and is based on assumptions about hypothetical projects that may respond to a future RFP.

[3] Selected to align with the federal government Justice40 initiative which aims to direct at least 40 percent of the benefits of certain federal investments towards disadvantaged communities.

[4] Disadvantaged communities are shown on an interactive map here: https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5

developing objectives for future plans based on increasing participation for certain customer types and seeks to establish sufficient baseline knowledge to make that possible in the future.

Environment

- The Plan achieves overall lifetime GHG emissions reductions equivalent to ~~14~~ 13 percent of emissions from CenterPoint Energy's 2020 sales.[5] For purposes of this objective, CenterPoint Energy's 2020 sales include only sales to non-exempt customers and no transport volumes.
- Over the five-year term of the Plan, the Plan achieves annual, first-year GHG emissions reductions[6] equal to one percent of emissions from CenterPoint Energy's 2020 sales. For purposes of this objective, CenterPoint Energy's 2020 sales include only sales to non-exempt customers and no transport volumes. Annual, first-year GHG emissions reductions are the sum of GHG reductions expected to be achieved by all projects implemented under the Plan in the first full year of their operation. [7]
- In year five of the Plan, CenterPoint Energy has reduced annual emissions from sales of natural gas by ~~53,000~~ 51,000 metric tons as a result of low-carbon fuels included in the NGIA Plan.[8] This goal includes reductions from RNG, power-to-hydrogen, biogas, and power-to-ammonia provided to non-exempt sales customers.
- To support the state's renewable energy goal,[9] CenterPoint Energy procures ~~602,000~~ 610,000 Dth of sales gas from renewable resources.[10] This goal includes RNG, biogas, power-to-hydrogen, and power-to-ammonia provided to non-exempt sales customers.
- To support the state's economy-wide net zero GHG emissions goal,[11] CenterPoint Energy completes an analysis of pathways that would allow it to achieve net zero emissions by 2050. CenterPoint Energy anticipates satisfying this goal through the proposed R&D pilot, CenterPoint Energy Minnesota Net Zero Study.

Socioeconomic

- The Plan supports 4 projects that satisfy Inflation Reduction Act requirements around prevailing wages and support for apprenticeships.

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[5] Achievement of this objective would represent a total lifetime GHG reduction of approximately ~~1,185,000~~ 1,131,000 tons CO_2e and is the expected total lifetime GHG emissions reductions from all pilots.

[6] First-year GHG reductions is conceptually similar to first-year savings reported in CIP.

[7] Achievement of this objective would represent annual, first-year, GHG emissions reductions of approximately ~~86,000~~ 82,000 metric tons and is the expected annual, first year reduction from all pilots.

[8] This is approximately the expected GHG emissions reductions from the RNG (Pilots B and C). Achievement of this objective would represent approximately an 0.5 percent reduction in GHG intensity of supplied fuels, assuming total throughput (on a Dth basis) equal to 2020 sales gas to non-exempt customers.

[9] Minn. Stat. § 216C.05, subd. 2, clause (3).

[10] Objective is measured as renewable volumes procured or produced in program year 5 from RNG or hydrogen. Achievement of this objective would represent procuring renewable resources equivalent to approximately 0.5 percent of 2020 sales gas to non-exempt customers (on a Dth basis) and the figure proposed is based on the expected amount to be procured or produced from RNG (Pilots A, B, and C).

[11] Minn. Stat. § 216H.02, subd 1.

- The Plan supports workforce development through trainings, tours, educational conferences, or similar supportive activities reaching 200 participants per year, or 1,000 participants over the five-year Plan period.

Innovation

- The Plan supports projects using at least six of the eight innovative resources.
- 100 percent of completed R&D projects result in a report summarizing learnings and suggesting next steps that will be filed with the Commission and the Company take action on learnings that are within CenterPoint Energy's control and reasonable to pursue, such as incorporating insights into a subsequent NGIA plan or other Company initiative.

The NGIA provides that the utility's statutory budget cap will increase in subsequent NGIA plan filings if the Commission determines that the utility has successfully achieved the cost-effectiveness objectives established in its most recently approved plan.[12] CenterPoint Energy has proposed numerous objectives, reflecting the many different goals of the NGIA statute and the broad cost-effectiveness framework established in the Frameworks Order. However, some of these objectives are in tension with one another. For example, objectives to increase the use of renewable resources or deploy many different innovative resources may be in tension with objectives to maximize GHG reductions or minimize the cost per ton reduced. While CenterPoint Energy will strive to satisfy each of the proposed objectives, it would be an unreasonably high bar to require achievement of all of them before allowing additional funding for future NGIA plans. CenterPoint Energy proposes that the test for an increase in funding be achievement of the majority of these proposed objectives. If CenterPoint Energy achieves a majority of these objectives, it will have demonstrated substantial value to its customers and the state and it would be appropriate to begin increasing the scale of future NGIA plans.

[12] Minn. Stat. § 216B.2427, subd. 2(c) & (d).

In the Matter of
CenterPoint Energy's Natural Gas Innovation Act (NGIA)
Innovation Plan

Reply Comments of CenterPoint Energy

EXHIBIT C: UPDATED PILOT COST ESTIMATE DETAILS (EXHIBIT E TO ORIGINAL PETITION)

Docket No. G-008/M-23-215

March 15, 2024

Pilot	Project Delivery	Advertising and Promotion	Allocation of General Portfolio Costs	Trade Ally Incentives	Workforce Development	Increased Electricity/ Water Costs	Revenue Requirement for Capital Investment	Customer Incentives	Total Costs (Not Net of Savings)	UCT Savings	Total Incremental Costs
RNG Produced from Hennepin County Organic Waste	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
RNG Produced from Ramsey & Washington Counties' Organic Waste	$5,856,724	$0	$663,761	$0	$0	$0	$0	$0	$6,520,485	$0	$6,520,485
Renewable Natural Gas RFP Purchase	$36,166,946	$5,000	$4,099,480	$0	$0	$0	$0	$0	$40,271,426	$0	$40,271,426
Green Hydrogen Blending into Natural Gas Distribution System	$701,704	$0	$473,041	$0	$0	$1,976,334	$1,875,024	$0	$5,026,103	$379,160	$4,646,943
Industrial or Large Commercial Hydrogen and Carbon Capture Incentives	$712,221	$5,000	$386,206	$0	$0	$0	$0	$3,030,000	$4,133,427	$339,515	$3,793,912
Industrial Methane and Refrigerant Leak Reduction	$1,418,515	$50,000	$127,024	$0	$0	$0	$0	$75,351	$1,670,890	$423,062	$1,247,828
Urban Tree Carbon Offsets	$295,780	$0	$33,522	$0	$0	$0	$0	$0	$329,301	$0	$329,301
Carbon Capture Rebates for Commercial Buildings	$260,148	$25,000	$62,338	$0	$0	$0	$0	$396,000	$743,485	$131,108	$612,377
New Networked Geothermal Systems	$9,575,777	$50,000	$1,183,478	$0	$0	$0	$1,256,305	$0	$12,065,559	$439,612	$11,625,947
Decarbonizing Existing District Energy Systems	$102,030	$0	$60,955	$0	$0	$0	$0	$2,560,000	$2,722,984	$2,124,191	$598,794
New District Energy System	$102,030	$0	$21,952	$0	$0	$0	$0	$533,270	$657,251	$441,607	$215,644
Industrial Electrification Incentives	$681,606	$2,500	$51,350	$0	$0	$0	$0	$0	$735,455	$231,019	$504,436
Commercial Hybrid Heating	$2,398,803	$25,000	$719,557	$0	$0	$0	$0	$4,374,000	$7,517,361	$448,759	$7,068,602
Residential Deep Energy Retrofits and Electric Air Source Heat Pumps	$5,910,323	$120,000	$1,386,224	$0	$0	$0	$0	$6,497,850	$13,914,397	$296,765	$13,617,633
Small/Medium Business GHG Audit	$1,376,548	$25,000	$203,288	$0	$0	$0	$0	$455,360	$2,060,195	$63,188	$1,997,007
Residential Gas Heat Pumps	$342,030	$5,000	$38,760	$0	$0	$0	$0	$0	$385,790	$5,029	$380,761
Gas Heat Pumps for Commercial Buildings	$723,992	$2,500	$76,293	$0	$0	$0	$0	$0	$802,784	$53,320	$749,464
Industrial and Large Commercial GHG Audit	$661,492	$8,000	$96,757	$0	$0	$0	$0	$684,188	$1,450,436	$499,942	$950,494
Research and Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,570,462
Total Portfolio	**$67,286,666**	**$323,000**	**$9,683,983**	**$0**	**$0**	**$1,976,334**	**$3,131,329**	**$18,606,019**	**$101,007,331**	**$5,876,278**	**$105,701,515**

Pilot	Estimated Lifecycle GHG Reductions (Tons CO2e)	Estimated GHG Reductions During Plan (Tons CO2e)	Quantitative UCT Costs Only (Not Net of Savings) Lifetime	Quantitative UCT Costs Only (Not Net of Savings) 5-Year Plan	Quantitative UCT Savings Lifetime	Quantitative UCT Savings 5-Year Plan	Net UCT Costs Lifetime	Net UCT Costs 5-Year Budget*
RNG Produced from Hennepin County Organic Waste	-	-	$0	$0	$0	$0	$0	$0
RNG Produced from Ramsey & Washington Counties' Organic Waste	92,414	27,724	$16,874,730	$6,520,485	$0	$0	$16,874,730	$6,520,485
Renewable Natural Gas RFP Purchase	423,134	169,254	$79,267,992	$40,271,426	$0	$0	$79,267,992	$40,271,426
Green Hydrogen Blending into Natural Gas Distribution System	27,993	4,199	$23,781,939	$5,026,103	$1,201,275	$379,160	$22,580,664	$4,646,943
Industrial or Large Commercial Hydrogen and Carbon Capture Incentives	107,196	15,706	$4,751,624	$4,133,427	$2,417,356	$339,515	$2,334,268	$3,793,912
Industrial Methane and Refrigerant Leak Reduction	33,763	30,387	$1,421,407	$1,670,890	$415,786	$423,062	$1,005,621	$1,247,828
Urban Tree Carbon Offsets	4,500	4,500	$266,387	$329,301	$0	$0	$266,387	$329,301
Carbon Capture Rebates for Commercial Buildings	23,757	2,080	609,779	$743,485	641,635	$131,108	(31,857)	$612,377
New Networked Geothermal Systems	107,355	4,358	$43,571,155	$12,065,559	$2,530,455	$439,612	$41,040,700	$11,625,947
Decarbonizing Existing District Energy Systems	124,030	18,902	$2,452,298	$2,722,984	$5,933,158	$2,124,191	-$3,480,860	$598,794
New District Energy System	40,882	4,685	$581,298	$657,251	$1,387,662	$441,607	-$806,364	$215,644
Industrial Electrification Incentives	11,896	2,173	$643,816	$735,455	$582,058	$231,019	$61,758	$504,436
Commercial Hybrid Heating	25,609	4,536	$6,149,191	$7,517,361	$1,323,379	$448,759	$4,825,812	$7,068,602
Residential Deep Energy Retrofits and Electric Air Source Heat Pumps	66,760	3,153	$11,047,557	$13,914,397	$1,843,608	$296,765	$9,203,949	$13,617,633
Small/Medium Business GHG Audit	4,380	703	$1,680,269	$2,060,195	$189,376	$63,188	$1,490,893	$1,997,007
Residential Gas Heat Pumps	235	55	$317,469	$385,790	$12,406	$5,029	$305,063	$380,761
Gas Heat Pumps for Commercial Buildings	2,154	574	$677,495	$802,784	$118,659	$53,320	$558,837	$749,464
Industrial and Large Commercial GHG Audit	35,560	5,147	$1,226,292	$1,450,436	$1,565,286	$499,942	-$338,994	$950,494
Research and Development	-	-	$10,570,462	$10,570,462	$0	$0	$10,570,462	$10,570,462
Total Portfolio	**1,131,617**	**298,136**	**$205,891,160**	**$111,577,793**	**$20,162,101**	**$5,876,278**	**$185,729,060**	**$105,701,515**

* For this plan, this is the same as costs counting towards the NGIA budget.

Pilot	Estimated Lifecycle GHG Reductions (Tons CO2e)	Estimated GHG Reductions During Plan (Tons CO2e)	Net Quantified Costs Lifetime*
RNG Produced from Hennepin County Organic Waste	-	-	$0
RNG Produced from Ramsey & Washington Counties' Organic Waste	92,414	27,724	$12,816,856
Renewable Natural Gas RFP Purchase	423,134	169,254	$61,424,944
Green Hydrogen Blending into Natural Gas Distribution System	27,993	4,199	$21,563,601
Industrial or Large Commercial Hydrogen and Carbon Capture Incentives	107,196	15,706	$64,459,336
Industrial Methane and Refrigerant Leak Reduction	33,763	30,387	($822,731)
Urban Tree Carbon Offsets	4,500	4,500	$54,958
Carbon Capture Rebates for Commercial Buildings	23,757	2,080	($554,920)
New Networked Geothermal Systems	107,355	4,358	$43,130,762
Decarbonizing Existing District Energy Systems	124,030	18,902	($4,163,506)
New District Energy System	40,882	4,685	$15,170,736
Industrial Electrification Incentives	11,896	2,173	$24,217
Commercial Hybrid Heating	25,609	4,536	$5,216,041
Residential Deep Energy Retrofits and Electric Air Source Heat Pumps	66,760	3,153	$26,058,504
Small/Medium Business GHG Audit	4,380	703	$1,645,867
Residential Gas Heat Pumps	235	55	$319,065
Gas Heat Pumps for Commercial Buildings	2,154	574	$446,795
Industrial and Large Commercial GHG Audit	35,560	5,147	($1,803,104)
Research and Development	-	-	$10,570,462
Total Portfolio	**1,131,617**	**298,136**	**$255,557,881**

*The Net Quantified Costs seeks to capture 'all the value and cost streams' that have been quantified in this analysis. It includes costs to the utility, to the participant, and the value of GHG and other pollutant savings. Net Quantified Costs ($2023) = UCT test costs + PCT test costs – UCT test benefits - PCT test benefits + social cost of GHG emission reductions + social cost of non-GHG emission reductions + third party funding

Pilot	Estimated Lifecycle GHG Reductions (Tons CO2e)	Estimated GHG Reductions During Plan (Tons CO2e)	Lifetime Net Participant Costs	Lifetime Net Non-Participating Customer Costs	Upfront Equipment and Installation Costs*
RNG Produced from Hennepin County Organic Waste	-	-	$0	$0	$0
RNG Produced from Ramsey & Washington Counties' Organic Waste	92,414	27,724	$0	$5,808,590	$17,132,589
Renewable Natural Gas RFP Purchase	423,134	169,254	$0	$36,395,596	$82,215,625
Green Hydrogen Blending into Natural Gas Distribution System	27,993	4,199	$0	$4,257,515	$7,414,364
Industrial or Large Commercial Hydrogen and Carbon Capture Incentives	107,196	15,706	$58,744,599	$3,477,973	$12,872,056
Industrial Methane and Refrigerant Leak Reduction	33,763	30,387	-$100,759	$1,411,375	$582,305
Urban Tree Carbon Offsets	4,500	4,500	$0	$299,909	$219,226
Carbon Capture Rebates for Commercial Buildings	23,757	2,080	600,977	499,344	5,371,918
New Networked Geothermal Systems	107,355	4,358	$3,721,380	$10,520,853	$24,879,156
Decarbonizing Existing District Energy Systems	124,030	18,902	$5,862,748	$688,704	$4,933,706
New District Energy System	40,882	4,685	$14,918,235	$338,502	$18,932,519
Industrial Electrification Incentives	11,896	2,173	$547,391	$509,910	$374,861
Commercial Hybrid Heating	25,609	4,536	$1,037,147	$6,480,353	$2,555,827
Residential Deep Energy Retrofits and Electric Air Source Heat Pumps	66,760	3,153	$18,687,352	$12,165,044	$25,536,912
Small/Medium Business GHG Audit	4,380	703	$182,228	$1,827,299	$1,516,278
Residential Gas Heat Pumps	235	55	-$11,879	$355,702	$165,994
Gas Heat Pump for Commercial Buildings	2,154	574	-$69,236	$716,022	$328,003
Industrial and Large Commercial GHG Audit	35,560	5,147	$311,245	$855,059	$1,362,270
Research and Development	-	-	$0	$10,570,462	$10,570,462
Total Portfolio	**1,131,617**	**298,136**	**$104,431,428**	**$97,178,211**	**$216,964,071**

*The upfront equipment and installation costs simply looks at the total upfront cost to purchase and install the relevant technology, stripping out the impacts of different incentive levels and/or supplemental pilot budgets for programmatic support (like program administration, marketing and customer recruitment, etc). This perspective may help better understand the ongoing cost of a technology at scale separately from start-up administrative costs (but does not capture the full lifecycle / operating costs).

In the Matter of
CenterPoint Energy's Natural Gas Innovation Act (NGIA)
Innovation Plan

Reply Comments of CenterPoint Energy

EXHIBIT D: UPDATED COMMISSION COST-BENEFIT FRAMEWORK (EXHIBIT M TO ORIGINAL PETITION)

Docket No. G-008/M-23-215

March 15, 2024

Perspectives	RNG Produced from Ramsey & Washington Counties' Organic Waste	Renewable Natural Gas Request for Proposal ("RFP") Purchase	Green Hydrogen Blending into Natural Gas Distribution System	Industrial or Large Commercial Hydrogen and Carbon Capture Incentives	Industrial Methane and Refrigerant Leak Reduction	Urban Tree Carbon Offsets	Carbon Capture Rebates for Commercial Buildings	New Networked Geothermal Systems	Decarbonizing Existing District Energy Systems	New District Energy System	Industrial Electrification Incentives	Commercial Hybrid Heating	Residential Deep Energy Retrofits and Electric Air Source Heat Pumps	Small/Medium Business GHG Audit	Residential Gas Heat Pumps	Gas Heat Pump for Commercial Buildings	Industrial and Large Commercial GHG Audit Pilot
NGIA Utility Perspective	($16,874,730)	($79,267,992)	($22,580,664)	($2,334,268)	($1,005,621)	($266,387)	$31,857	($41,040,700)	$3,480,860	$806,364	($61,758)	($4,825,812)	($9,203,949)	($1,490,893)	($305,063)	($558,837)	$338,994
NGIA Participants Perspective (including specific impacts on low and moderate-income participants) Quantifiable Costs/Benefits	$0	$0	$0	($58,744,599)	$100,759	$0	($600,977)	($3,721,380)	($5,862,748)	($14,918,235)	($547,391)	($1,037,147)	($18,687,352)	($182,228)	$11,879	$69,236	($311,245)
NGIA Participants Perspective (including specific impacts on low and moderate-income participants) Qualitative Costs/Benefits				May assist MN businesses in achieving GHG goals	May assist MN businesses in achieving GHG goals; may improve workplace safety		May assist MN businesses in achieving GHG goals				May assist MN businesses in achieving GHG goals	May assist MN businesses in achieving GHG goals	May improve thermal comfort	May assist MN businesses in achieving GHG goals		May assist MN businesses in achieving GHG goals	May assist MN businesses in achieving GHG goals
NGIA Nonparticipating Customers Perspective (including specific impacts on low and moderate-income customers) Quantifiable	($5,144,829)	($32,296,116)	($3,784,473)	($3,091,767)	($1,284,350)	($266,387)	($437,007)	($9,337,375)	($627,749)	($316,550)	($458,561)	($5,760,796)	($10,778,821)	($1,624,012)	($316,941)	($639,729)	($758,302)
NGIA Nonparticipating Customers Perspective (including specific impacts on low and moderate-income customers) Qualitative	Provides widespread benefits to all sales customers	Provides widespread benefits to all sales customers	Provides widespread benefits to all sales customers			Shade can reduce cooling and heating costs for nearby buildings											
Effects on Other Energy Systems and Energy Security	Fuel made in MN and reduces import of fuel from outside of MN	Company will give preference to fuel made in MN that will reduce import from outside of MN	Fuel made in MN and reduces import of fuel from outside of MN; hydrogen may place burden on electric grid	Fuel made in MN and reduces import of fuel from outside of MN; hydrogen production may place burden on electric grid		Shade can reduce need for cooling in summer months	Reduces overall energy consumption	System will also support cooling reducing demand on electric system	May promote strategic electrification; may reduce overall energy use	System will also support cooling reducing demand on electric system	Promotes strategic electrification	Promotes strategic electrification	Promotes strategic electrification	Reduces overall energy consumption	Reduces geologic gas throughput; may reduce electric build out needs	Reduces geologic gas throughput; may reduce electric build out needs	Reduces overall energy consumption
GHG Emissions ($) Quantifiable Costs/Benefits	$4,721,635	$21,942,528	$1,322,111	$5,066,270	$1,828,044	$244,951	$1,102,461	$4,532,936	$5,897,033	$1,806,585	$568,493	$1,259,651	$2,865,728	$212,414	$11,636	$107,512	$1,680,938
GHG Emissions Qualitative Benefits					Quantified benefits do not include avoided refrigerant leaks										Use refrigerants with lower global warming potential	Use refrigerants with lower global warming potential	
Other Pollution (including any environmental justice costs or benefits) Quantifiable Costs/Benefits	$0	$0	($1,439)	($167,811)	$26,572	$0	$83,918	$592,289	$709,316	$228,494	$67,789	$137,250	$353,293	$20,936	$1,243	$11,586	$191,173
Other Pollution (including any environmental justice costs or benefits) Qualitative Costs/Benefits		Dairy manure projects can have local water quality, odor benefits				Trees can reduce urban heat effects, reduce stormwater runoff, prevent air pollution from reaching homes; pilot targets areas of low tree coverage which correspond with poverty											
Waste reduction and reuse (including reduction of water use)	Supports community organics recycling	Wastewater projects make a useful product from waste; dairy projects make a useful product from waste; Food waste projects can have landfill avoidance benefits; foodwaste projects all make a useful product from waste															
Policy (e.g., natural gas throughput, renewable energy goals)	Reduces geologic gas throughput; avoids landfilling; increases use of renewable energy	Reduces geologic gas throughput; increases use of renewable energy	Reduces geologic gas throughput; increases use of renewable energy	Reduces geologic gas throughput; increases use of renewable energy	Reduces geologic gas throughput		Reduces geologic gas throughput	Reduces geologic gas throughput; increases use of renewable energy	Reduces geologic gas throughput; may increase use of renewable energy	Reduces geologic gas throughput; increases use of renewable energy	Reduces geologic gas throughput; increases use of renewable energy	Reduces geologic gas throughput; increases use of renewable energy	Reduces geologic gas throughput; increases use of renewable energy	Reduces geologic gas throughput	Reduces geologic gas throughput	Reduces geologic gas throughput	Reduces geologic gas throughput; increases use of renewable energy
Net Job Creation	Creates 112 direct jobs, 62 indirect jobs and 70 induced jobs.	Creates 395 direct jobs, 237 indirect jobs and 252 induced jobs.	Creates 43 direct jobs, 59 indirect jobs and 45 induced jobs.	Creates 187 direct jobs, 124 indirect jobs and 148 induced jobs.	Creates 9 direct jobs, 5 indirect jobs and 7 induced jobs.	Creates 1 direct jobs, 0 indirect jobs and 0 induced jobs.	Creates 88 direct jobs, 51 indirect jobs and 55 induced jobs.	Creates 115 direct jobs, 129 indirect jobs and 129 induced jobs.	Creates 142 direct jobs, 84 indirect jobs and 89 induced jobs.	Creates 49 direct jobs, 31 indirect jobs and 45 induced jobs.	Creates 11 direct jobs, 5 indirect jobs and 6 induced jobs.	Creates 40 direct jobs, 23 indirect jobs and 25 induced jobs.	Creates 44 direct jobs, 31 indirect jobs and 96 induced jobs.	Creates 16 direct jobs, 10 indirect jobs and 10 induced jobs.	Creates 2 direct jobs, 1 indirect jobs and 1 induced jobs.	Creates 3 direct jobs, 2 indirect jobs and 2 induced jobs.	Creates 21 direct jobs, 13 indirect jobs and 13 induced jobs.
Economic Development	Will pay prevailing wages; will seek apprentices; will seek to hire from local community		Will pay prevailing wages; will seek apprentices; will seek to hire from local community; will take advantage of higher IRA credits due to labor practices; hydrogen projects represent clean energy opportunity for workers from traditional geologic fuel jobs; will help MN build hydrogen workforce as hydrogen poised for growth due to IRA	Likely that many projects will satisfy IRA labor requirements; hydrogen projects represent clean energy opportunity for workers from traditional geologic fuel jobs; will help MN build hydrogen workforce as hydrogen poised for growth due to IRA; will help MN build carbon capture workforce as carbon capture poised for growth due to IRA			Manufacturer intends to establish MN office in 2023	Will pay prevailing wages; will seek apprentices; will seek to hire from local community; will take advantage of higher IRA credits due to labor practices; networked geothermal projects represent clean energy opportunity for workers from traditional geologic fuel jobs; locally produced technologies will be considered	Projects may follow IRA labor requirements to take advantage of higher tax credits	Projects may follow IRA labor requirements to take advantage of higher tax credits		Projects may follow IRA labor requirements to take advantage of tax benefits				
Public Co-Benefits	Supports local government waste management	Pilot would support wastewater treatment, which is often a public and publicly funded service				Reduces stormwater runoff costs; supports Minneapolis Park and Recreation Board and other local government tree planting and maintenance											
Market Development	May produce biochar			May help MN businesses appeal to customers interested in sustainability. May help MN businesses appeal to customers interested in sustainability; carbon capture may produce by-products for resale	May help MN businesses appeal to customers interested in sustainability		May help MN businesses appeal to customers interested in sustainability; carbon capture will produce by-products for resale				May help MN businesses appeal to customers interested in sustainability	May help MN businesses appeal to customers interested in sustainability		May help MN businesses appeal to customers interested in sustainability		May help MN businesses appeal to customers interested in sustainability	May help MN businesses appeal to customers interested in sustainability
Direct Innovation Support	Opportunity for Company to learn about purchasing RNG	Opportunity for Company to learn about purchasing RNG	Opportunity for Company to learn about purchasing RNG	Opportunity for customers to learn about novel options for reducing GHGs from their systems	Opportunity for customers to learn about novel options for reducing GHGs from their systems; will reduce uncertainty about GHG potential of leak detection programs		Opportunity for customers to learn about novel options for reducing GHGs from their systems; version 4 unit is forthcoming with expected larger carbon capture percentages and application to more building	Major opportunity for gas utility to learn about delivering energy in a new way			Opportunity for customers to learn about novel options for reducing GHGs from their systems	Opportunity for customers to learn about novel options for reducing GHGs from their systems; opportunity to collaborate with ETA program	Opportunity to collaborate with ETA program	Opportunity for customers to learn about novel options for reducing GHGs from their systems	Opportunity to collaborate with ETA program	Opportunity to collaborate with ETA program	Opportunity for customers to learn about novel options for reducing GHGs from their systems
Resource Scalability and Role in a Decarbonized System	Realistic pathways to decarbonization include RNG	Realistic pathways to decarbonization include RNG	Realistic pathways to decarbonization include RNG	Hydrogen poised to become more affordable and scalable as a result of IRA; hydrogen may be best decarb options for high heat load processes; carbon capture poised to become more affordable and scalable as a result of IRA; carbon capture may be best decarb options for high heat load processes; carbon capture can be used in conjunction with RNG to drive net negative emissions	Even in full decarbonized system likely to have some methane gas and continuing need for leak detection		Carbon capture may be used in conjunction with RNG to drive net negative emissions				Strategic electrification necessary part of net zero strategy	Strategic electrification necessary part of net zero strategy	Strategic electrification necessary part of net zero strategy				

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In the Matter of
CenterPoint Energy's Natural Gas Innovation Act (NGIA) Innovation Plan

Reply Comments of CenterPoint Energy

EXHIBIT E: REVISED PILOT PORTFOLIO AND QUANTITATIVE CALCULATIONS

Docket No. G-008/M-23-215

March 15, 2024

Exhibit E is filed separately as an Excel file. CenterPoint Energy has designated information in Exhibit E as trade secret. The information meets the definition of trade secret in Minn. Stat. § 13.37, subd. 1(b), as follows: (1) the information was supplied by CenterPoint Energy, the affected organization; (2) we have taken all reasonable efforts to maintain the secrecy of the information, including protecting it from disclosure in this proceeding; and (3) the protected information contains a complex spreadsheet calculation tool developed by ICF for CenterPoint Energy's use, which derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means, by other persons who could obtain economic value from its disclosure or use. Note that in addition to certain non-public information, there is proprietary value in the calculations in the tool and interaction between cells, so CenterPoint Energy is filing a public version of this Exhibit, with certain information redacted, as public but considers the spreadsheet with links to be trade secret.

In the Matter of
CenterPoint Energy's Natural Gas Innovation Act (NGIA)
Innovation Plan

Reply Comments of CenterPoint Energy

EXHIBIT F: COMPARISON OF FEDERAL TAX INCENTIVES FOR PILOT D

Docket No. G-008/M-23-215

March 15, 2024

Exhibit F is filed separately as an Excel file

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In the Matter of
CenterPoint Energy's Natural Gas Innovation Act (NGIA)
Innovation Plan

Reply Comments of CenterPoint Energy

EXHIBIT G: DEPARTMENT OF COMMERCE QUESTIONS REGARDING M-RETS TRACKING SYSTEM

Docket No. G-008/M-23-215

March 15, 2024

Department's Questions about M-RETS Tracking System

With respect to the systems used to track and verify environmental attributes of innovative resources included in the Plan, the Department requested that the Company provide additional information related to M-RETS, RTCs, and the scope of services for RNG.[1] The Company responds to the Department's specific questions below.

a. If the goal above is to support the qualitative benefit, for example driven by corporate sustainability goals and customer preferences, or for example large end users of natural gas maybe looking into RNG as an option to reduce their GHG emissions, does M-RETS offer the ability to purchase environmental attributes without the RNG commodity?

M-RETS allows the user to track and retire renewable thermal certificates ("RTCs"), which are inclusive of all environmental attributes, without also taking ownership of the underlying physical gas.[2] This is analogous to the process that electric utilities use to track and claim the benefits of renewable electricity (i.e., Renewable Electricity Certificates or "RECs") without customers necessarily receiving the associated electrons.

M-RETS does not support any financial transactions, so users do not purchase environmental attributes within or from M-RETS. Rather, M-RETS allows users to transfer RTCs (which represent the environmental attributes only, not the underlying physical gas) between parties, while the associated financial transactions take place outside of M-RETS.

b. In reference to the above question in subpart (a), does it have to be bundled with the RNG commodity?

No, users can hold RTCs (again, inclusive of all environmental attributes) without taking ownership of the underlying physical gas.

c. In reference to the above questions in subparts (a) and (b), would this be considered offsets for customers in Minnesota?

No. As noted in subpart (a), trading RTCs is generally analogous to trading RECs for renewable electricity generation – these differ from trading registered carbon offsets in that RTCs and RECs are linked to the underlying activity of energy generation and consumption, and are tracked in units of Dth and kWh, respectively, whereas carbon offsets are linked to greenhouse gas reductions, and tracked in units of MTCO2e.

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[1] Department Comments at 72-75.

[2] A Renewable Thermal Certificate is a unique representation of the Environmental Attributes associated with the production and use of one dekatherm ("Dth") of renewable thermal energy. M-RETS uses a book-and-claim accounting process. Book-and-claim refers to the decoupling of the physical commodity from the environmental attributes. The environmental attribute is then tracked by the M-RETS without regard to actual physical traceability. M-RETS Renewable Thermal Operating Procedures, available at https://www.mrets.org/wp-content/uploads/2021/06/M-RETS-Thermal-Tracking-System-6-2021.pdf.

However, M-RETS does have the capability to track the CO2 reduction associated with each RTC.

d. Above the Company mentioned that M-RETS defines an RTC as a "whole RTC" and includes all environmental attributes. In its tracking, certification, and verification system, does M-RETS offer anything other than a "whole RTC"?

No, M-RETS does not offer anything other than a "whole RTC."[3]

e. Do the RTC's in M-RETS system expire? If they do expire, what is the duration or shelf life of the RTC's before expiration?

No, RTCs in the M-RETS system do not expire.

f. Above, given that CenterPoint claims that RTCs may not also be claimed by any other party, does M-RETS track, verify, and certify the RTCs by cross validating with for example, including but not limited to EMTS? California LCFS? Oregon LCFS?

This depends on whether the claims are subject to the allowance of stacking across multiple programs. For example, certificates may be used for both the RFS and the California LCFS. In theory there could be RNG sold to an entity that will be using it for a transportation end use, in which case the entity could generate RINs under the RFS in addition to RTCs for a state program where both the EPA and the applicable state allow for stacking. Upon registration of a renewable thermal generator, M-RETS requires an attestation of whether or not the energy produced will be used in the RFS or LCFS. If it is, M-RETS requires that the generator use an Independent Reporting Entity ("IRE") that also reports into those compliance programs. The IRE is subject to annual audits and documentation requirements to verify compliance in both programs. This imputes significant legal liability if there is a case of double counting on the part of the IRE and the participant, including risk of state or federal prosecution.

g. Are the M-RETS RTCs tradeable?

RTCs can be transferred until they are retired (i.e., transferred to a retirement M-RETs account) within M-RETS, but as described above, M-RETS does not support any financial transactions, so users do not purchase environmental attributes within or from M-RETS.

h. Can the M-RETS RTCs be banked?

Yes, RTCs can be banked (i.e., held in an active M-RETs account) before they are retired within M-RETS.

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[3] M-RETS only issues Certificates in whole numbers. A certificate created and tracked within MRETS represents all renewable attributes from one Dth of renewable generation. M-RETS Certificates are "Whole Certificates," meaning that none of the renewable and/or environmental attributes may be split off from the Certificate while it is in circulation in the M-RETS system. M-RETS Renewable Thermal Operating Procedures at 28, available at https://www.mrets.org/wp-content/uploads/2021/06/M-RETS-Thermal-Tracking-System-6-2021.pdf.

i. Can the M-RETS RTCs be transferred?

Yes, RTCs are transferable, without limit, until they are retired (i.e., transferred to a retirement M-RETs account).but M-RETS is not involved in the negotiation process between parties transferring or retiring certificates. M-RETS uses retirement accounts to prevent RTCs from being subject to a double claim. Retirement accounts exist to hold certificates permanently removed from circulation. The purpose of the retirement account is to demonstrate that those certificates are subject to a voluntary or compliance claim. Once an organization completes the retirement, they cannot later change the retirement reason.

j. Does M-RETS submit data on the RTCs to the Department of Treasury, Internal Revenue Service? Is the data based on a calendar year basis?

No, M-RETS does not submit data on RTCs to the Department of Treasury, Internal Revenue Service.

k. Is M-RETS participation limited in any way, for example to the Midwest? The Lower 48 States? North America? North America and Europe?

M-RETS is currently limited to renewable thermal projects located in North America, but Generators outside of North America may request to use M-RETS, subject to the approval of the M-RETS board.

l. Does an entity have to take title to the gas to own the environmental attributes?

No, an entity does not have to take title to the gas to in order to hold the RTCs (inclusive of the environmental attributes) within M-RETS.

In the Matter of the Company's First Natural Gas Innovation Act ("NGIA") Innovation Plan ("Plan")	Docket No. G-008/M-23-215 REPLY COMMENTS

CERTIFICATE OF SERVICE

Melodee Carlson Chang certifies that on Friday, March 15, 2024, she served the attached Reply Comments of CenterPoint Energy on the attached service list for Docket No. G-008/M-23-215 by having the document delivered via electronic filing or depositing in the U.S. Mail as indicated on the attached service lists.

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