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March 27, 2026

In the Matter of CenterPoint Energy's Natural Gas Innovation Plan **Docket No. G-008/M-23-215**

SUPPLEMENTAL COMMENTS OF FRESH ENERGY

Fresh Energy appreciates the opportunity to provide these Supplemental Comments in response to the Minnesota Public Utilities Commission's January 30, 2026 Notice regarding CenterPoint Energy's request to modify the budget for its Natural Gas Innovation Act (NGIA) hydrogen blending pilot (Pilot D)[1], as well as CenterPoint's reply comments.[2]

I. Updated cost-effectiveness analysis raises significant concerns

Fresh Energy thanks CenterPoint for providing the updated cost-effectiveness analysis for Pilot D in its reply comments, as requested in initial comments.[3] This information helps clarify the expected emissions reductions and associated costs of Pilot D from the perspective of the utility cost test.

The revised estimates confirm that Pilot D is a high-cost, low-impact emissions reduction pathway, and the requested budget increase along with associated contingencies introduces additional uncertainty and risk for ratepayers without a commensurate increase in expected benefits.

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[1] Minnesota Public Utilities Commission. Notice of Comment Period. *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*. PUC Docket Number G-008/M-23-215 (January 30, 2026) https://efiling.web.commerce.state.mn.us/documents/%7B00AE109C-0000-C819-82AE-6D8253101289%7D/download?contentSequence=0&rowIndex=1.

[2] CenterPoint Energy. Reply Comments. *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*. PUC Docket Number G-008/M-23-215 (March 17, 2026) https://efiling.web.commerce.state.mn.us/documents/%7B40C0FD9C-0000-CC10-91C4-E3BA956820BB%7D/download?contentSequence=0&rowIndex=8.

[3] Fresh Energy. Initial Comments. *In the Matter of CenterPoint Energy's Natural Gas Innovation Plan*. PUC Docket Number G-008/M-23-215 (March 3, 2026) https://efiling.web.commerce.state.mn.us/documents/%7B4056B69C-0000-CD1E-8D41-AD6ECB50C360%7D/download?contentSequence=0&rowIndex=17.

While high-cost pilots can be appropriate in NGIA plans where they demonstrate clear scalability or deliver broader system benefits, Pilot D does not appear to meet that standard. More cost-effective and scalable alternatives for reducing emissions from residential heating are available. In addition, the comparison of Pilot D to other pilots, such as electrification and thermal energy networks, is likely conservative, as those alternatives provide broader societal benefits that are not captured under the utility cost test. By relying solely on the utility cost test rather than the societal cost test, CenterPoint's analysis does not reflect the full range of costs and benefits, including the well-documented public health impacts associated with burning hydrogen in homes.[4]

In addition, the scale of the requested investment highlights a significant opportunity cost for ratepayers. Based on CenterPoint's updated lifetime cost estimates, these funds could instead support the deployment of hundreds to potentially thousands of cold-climate heat pumps for residents of Mankato. Such investments would deliver more immediate, measurable, and scalable emissions reductions for Minnesota households, while also providing direct customer benefits through improved efficiency and reduced energy burden. This comparison further underscores the relatively limited emissions impact and scalability of Pilot D compared to available alternatives.

Below is an updated version of the table from our initial comments, reflecting CenterPoint's revised lifetime cost estimates and cost-effectiveness results to enable comparison across pilots.

[4] Andee Krasner & Barbara Gottlieb, *Hydrogen Pipe Dreams: Why Burning Hydrogen in Building is Bad for Climate and Health* (Physicians for Social Responsibility, 2022), https://psr.org/wp-content/uploads/2022/07/hydrogen-pipe-dreams.pdf;
Sarah Baldwin et al., *Assessing the Viability of Hydrogen Proposals: Considerations for State Utility Regulators and Policymakers* (Energy Innovation, 2022), https://energyinnovation.org/wp-content/uploads/2022/03/Assessing-the-Viability-of-Hydrogen-Proposals.pdf.

	Estimated Lifetime Utility Cost[5]	Estimated Lifecycle GHG Reductions (Metric Tons CO2e)	Cost per Metric Tons CO2e Reduced
RNG Produced from Hennepin County Organic Waste	REMOVED	REMOVED	REMOVED
RNG Produced from Ramsey & Washington Counties' Organic Waste	$17,538,491	92,414	$190
Renewable Natural Gas RFP Purchase	$83,367,472	423,134	$197
Green Hydrogen Blending into Natural Gas Distribution System	$22,305,727-$33,563,098	27,993	$797-$1199
Industrial or Large Commercial Hydrogen and Carbon Capture Incentives	$2,720,474	107,196	$25
Industrial Methane and Refrigerant Leak Reduction	$1,132,645	33,763	$34
Urban Tree Carbon Credits	$299,909	4,500	$67
Carbon Capture Rebates for Commercial Buildings	$30,481	23,757	$1
New Networked Geothermal Systems	$42,224,178	107,355	$393
Decarbonizing Existing District Energy Systems	-$3,419,905	124,030	-$28
New District Energy System	-$784,412	40,882	-$19
Industrial Electrification Incentive	$113,108	11,896	$10
Commercial Hybrid Heating	$5,545,369	25,609	$217
Residential Deep Energy Retrofit and Electric Air Source Heat Pump	$10,590,172	66,760	$159
Small/Medium Business GHG Audit	$1,694,181	4,380	$387
Residential Gas Heat Pumps	$343,823	235	$1,463
Gas Heat Pumps for Commercial Buildings	$635,129	2,154	$295
Industrial and Large Commercial GHG Audit Pilot	-$242,238	35,560	-$7

II. Reliance on the utility cost test understates true costs and limits comparability

The Commission established a cost-effectiveness objective for CenterPoint's NGIA plan that GHG reductions across all NGIA pilots be achieved at no more than $200 per metric ton of CO_2e on a lifetime basis, using the utility cost test. CenterPoint's analysis relies solely on the utility cost test, which does not capture the full range of societal impacts associated with pilot investments.

The Commission's NGIA Frameworks Order in Docket No. 21-566 states that the Commission will consider cost-effectiveness primarily from the societal perspective.[6] Consistent with this directive,

[5] 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.
[6] *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, Establishing Framework for Implementing

the Commission required revisions to the following objective in Xcel Energy's NGIA plan to incorporate consideration of societal costs:

"Overall GHG savings achieved by all approved pilots is achieved at a cost of $205/MTCO$_2$e, on a portfolio basis. For this objective, costs are measured on a lifetime basis using both the utility cost test and the societal cost test, and GHG savings are also measured on a lifetime basis, across all projects."[7]

The Commission should require CenterPoint to do the same. The societal cost test captures broader societal costs and benefits that are not reflected in the utility cost test and allows for a more complete comparison across resource options, including potential externalities associated with different technologies such as hydrogen blending and electrification. Requiring both the utility cost test and societal cost test would provide a more accurate and consistent basis for evaluating pilot performance and aligning investments with state policy goals.

Accordingly, Fresh Energy recommends that, consistent with Xcel Energy's NGIA plan, the Commission require CenterPoint to evaluate its cost-effectiveness objective using both the utility cost test and societal cost test for Pilot D and in all future NGIA reporting.

III. Growing body of research since plan approval raises concerns about hydrogen blending

Since the Commission's initial approval of CenterPoint's NGIA pilots, a growing body of research has raised concerns about the viability of hydrogen blending in gas distribution systems.

Notably, a 2025 Minnesota-focused analysis by 5 Lakes Energy found that hydrogen's most promising applications are in hard-to-electrify industrial sectors and emerging low-carbon industries, including low-carbon ammonia production, low-carbon iron and steel, sustainable aviation fuels, and high-temperature industrial heat.[8] The report evaluates these industrial uses as key opportunities for hydrogen deployment in Minnesota, while not identifying hydrogen blending into the gas distribution system as a priority decarbonization pathway.

This aligns with broader national research published in the last several years since the plan was approved indicating that limited supplies of low-carbon hydrogen should be prioritized for

Minnesota's Natural Gas Innovation Act at 20 (June 1, 2022).

[7] Xcel Energy, Compliance Filing – Order Points 32.B and 34: Natural Gas Innovation Act Plan, Docket Nos. G002/M-23-518 & G999/CI-21-566, Exhibit A, p. 7 of 9 (June 16, 2025), https://efiling.web.commerce.state.mn.us/documents/%7B40E37A97-0000-C11B-ABEE-FAA46A3EDF49%7D/download?contentSequence=0&rowIndex=6.

[8] Maxim Kostylev et al., *The Potential for Hydrogen to Support Low-Carbon Industry in Minnesota* (5 Lakes Energy, May 2025), https://mn.gov/commerce-stat/pdfs/energy-data-reports/the-potential-for-hydrogen-to-support-low-carbon-industry-in-minnesota_5-lakes-energy_may-2025-2.pdf.

applications with few viable alternatives, rather than for residential or commercial heating, where electrification and efficiency solutions are more cost-effective and scalable.[9]

Fresh Energy recognizes the Commission's prior decision to approve Pilot D and its interest in supporting pilot-level innovation. However, this evolving body of evidence provides a basis for the Commission to reassess the role of hydrogen blending in the NGIA portfolio, particularly in light of its high cost, limited demonstrated benefits, and the availability of more cost-effective alternatives.

IV. Alternative proposal: targeted electrification pilot in Mankato

Fresh Energy recommends that the Commission consider denying CenterPoint's request to further increase the budget for Pilot D for the aforementioned reasons and instead direct CenterPoint to work with stakeholders to develop a targeted electrification pilot in Mankato focused on deploying cold-climate heat pumps for low and moderate-income residents. CenterPoint should be required to collaborate with community-based organizations and other stakeholders to design this pilot and include a detailed proposal in its 2026 NGIA annual report for Commission review and approval.

A targeted electrification pilot in Mankato would provide a significantly more cost-effective and lower-risk pathway for reducing emissions while delivering direct, tangible benefits to participating households. In addition, it would generate valuable, place-based insights that can inform future NGIA and Energy Conservation and Optimization (ECO) investments and broader decarbonization strategies across CenterPoint's service territory.

Specifically, such a pilot would provide important learnings on cold-climate heat pump performance in southern Minnesota, including performance during extreme winter conditions, interaction with existing heating systems, and impacts on local electric distribution systems. Mankato's housing stock, comprised of a mix of older single-family homes and smaller multifamily buildings, also presents an opportunity to better understand electrification pathways in building types that are common across Greater Minnesota but underrepresented in current pilot programs.[10]

A Mankato-based pilot could also enable evaluation of program design strategies for low- and moderate-income households and renters, including approaches to address split incentives between landlords and tenants and the effectiveness of different delivery models, such as direct-install programs versus rebate-based programs. By prioritizing low-income households, the pilot

[9] Environmental Defense Fund & Switchbox, *Blending Hydrogen & Natural Gas: A Road to Nowhere for New Yorkers* (2024) https://library.edf.org/AssetLink/s8f1821gt5082xc1208116630l2uib7c.pdf;
Paul Martin et al., *A review of challenges with using the natural gas system for hydrogen*, Energy Science & Engineering (2024), https://scijournals.onlinelibrary.wiley.com/doi/10.1002/ese3.1861.
Jan Rosenow, *Is Heating Homes with Hydrogen All but a Pipe Dream? An Evidence Review* (2022), https://doi.org/10.1016/j.joule.2022.08.015.
[10] Maxfield Research & Consulting, *Comprehensive Housing Needs Analysis for the City of Mankato* (City of Mankato, April 2025), https://www.mankatomn.gov/residents/housing/housing-study-and-plan.

could assess impacts on energy burden, customer bills, and household comfort, particularly when paired with weatherization and other efficiency measures.

Equally important, this approach would allow CenterPoint to test community-based implementation strategies by partnering with trusted local organizations. These partnerships could improve program participation and enhance outreach to underserved households, while also providing insight into how to design equitable and scalable electrification programs. The pilot could also generate lessons related to contractor availability, workforce development, and program delivery in a regional city context.

Mankato could serve as a strong proxy for other regional centers in Greater Minnesota. Lessons learned from a targeted electrification pilot in this community, including cost per household, effective incentive structures, and implementation challenges, would be highly transferable and support more efficient scaling of similar efforts across the state.

For these reasons, a targeted electrification pilot in Mankato would better align NGIA investments with the Commission's cost-effectiveness objectives, as well as state climate, affordability, and equity goals, while providing actionable insights to guide future utility programs. This approach would also ensure that NGIA funds are directed toward technologies with clear, scalable benefits for Minnesota customers.

V. RNG pilot budget status and portfolio review

CenterPoint notes in initial comments that the RNG RFP pilot (Pilot C) is currently under budget, reflecting slower-than-anticipated deployment and expenditures to date. Rather than reallocating these unspent funds to support additional investment in Pilot D, Fresh Energy recommends that the Commission take a more comprehensive approach during its review of CenterPoint's upcoming 2026 NGIA annual report. At that time, the Commission should evaluate the status and performance of the full NGIA portfolio and determine whether, and how, any unspent funds from Pilot C should be reallocated to higher-performing pilots or returned to ratepayers. This approach would better ensure that NGIA investments remain aligned with cost-effectiveness objectives and deliver the greatest possible value to customers.

VI. Further investigation into hydrogen opportunities for hard-to-electrify industrial customers in needed

Fresh Energy recommends that the Commission direct CenterPoint to conduct a targeted assessment of hydrogen opportunities within its service territory, with a focus on hard-to-electrify industrial customers. Emerging research, including recent Minnesota-specific analysis, indicates

that limited supplies of low-carbon hydrogen are best suited for sectors with few viable alternatives to electrification.[11]

CenterPoint should report in its 2026 annual report on potential industrial end users of hydrogen, including any specific customers within its service territory that may have viable applications in areas such as high-temperature industrial heat, chemical production, or other processes that are difficult to electrify. This should include documentation of any outreach or discussions with industrial customers regarding potential hydrogen demand, as well as an assessment of the scale and timing of any such opportunities.

This analysis would help ensure that NGIA investments are directed toward higher-value applications and aligned with broader policy and research indicating that hydrogen should be prioritized for uses where electrification is not feasible. It would also provide the Commission with clearer information to evaluate whether there is an appropriate role for hydrogen within CenterPoint's service territory in future NGIA filings.

VII. Summary of Recommendations

Fresh Energy respectfully recommends that the Commission:

1. Consider denying CenterPoint's request to increase the budget for Pilot D and instead direct CenterPoint to work with stakeholders to develop a targeted electrification pilot in Mankato focused on deploying cold-climate heat pumps for low- and moderate-income residents, including collaboration with community-based organizations and a focus on equitable program design, with a detailed proposal submitted in its 2026 NGIA annual report for Commission review and approval.
2. Require evaluation of cost-effectiveness using both the utility cost test and societal cost test when assessing the Commission's $200/MTCO$_2$e objective in all future NGIA reporting, consistent with prior Commission direction and practice in Xcel's NGIA plan.
3. Direct CenterPoint to conduct and report on a targeted assessment of hydrogen opportunities within its service territory focusing on industrial customers and applications where electrification is not feasible, consistent with evidence that hydrogen is best suited for hard-to-electrify sectors, and to document any outreach to potential industrial end users in its 2026 annual report.
4. Reevaluate the RNG RFP pilot (Pilot C) during the 2026 annual report review, including a comprehensive assessment of overall NGIA portfolio performance and a determination of whether unspent funds should be reallocated to higher-performing pilots or returned to ratepayers.

[11] Maxim Kostylev et al., *The Potential for Hydrogen to Support Low-Carbon Industry in Minnesota* (5 Lakes Energy, May 2025), https://mn.gov/commerce-stat/pdfs/energy-data-reports/the-potential-for-hydrogen-to-support-low-carbon-industry-in-minnesota_5-lakes-energy_may-2025-2.pdf.

If the Commission decides to approve the budget increase request for Pilot D, given the increased cost, uncertainty, and potential risk exposure associated with the proposed budget modification, require CenterPoint to provide enhanced oversight and reporting in future annual reports, including:

a) Documentation of outreach to and engagement with potential industrial customers regarding hydrogen use, including identification of any prospective offtake opportunities relevant to Pilot D;
b) Detailed reporting on community outreach and engagement in Mankato, including how customers are informed of hydrogen blending activities and any customer questions or concerns received;
c) Evaluation of system safety and impacts on customer appliances, including performance and any changes in failure or maintenance rates;
d) Assessment of impacts on distribution system infrastructure, including mains and service lines, such as material compatibility, leak risk, and implications for system integrity; and
e) Monitoring and reporting on any changes in maintenance, repair, and replacement frequency or costs associated with hydrogen blending, including impacts on both utility infrastructure and customer-owned equipment.

Respectfully submitted,

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