



MINNESOTA

PUBLIC UTILITIES COMMISSION

Staff Briefing Papers

Meeting Date June 4, 2026

Agenda Item 5***

- Company
1. Northern States Power Co. d/b/a Xcel Energy
 2. Great Plains Natural Gas Co.
 3. CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas
 4. Minnesota Energy Resources Corp.
 5. Greater Minnesota Gas, Inc.

Docket No. G999/CI-21-565

In the Matter of a Commission Evaluation of Changes to Natural Gas Utility Regulatory and Policy Structures to Meet State Greenhouse Gas Reduction Goals

Issues What action(s), if any, should the Commission take to modify existing gas line extension policies for rate regulated gas utilities?

Staff	Tera Dornfeld	Tera.dornfeld@state.mn.us	651-201-2195
	Sophie Nikitas	Sophie.nikitas@state.mn.us	651-539-1062
	Casey MacCallum	Casey.maccallum@state.mn.us	651-539-1081

✓ Relevant Documents	Date
Notice of Comment	
PUC, Notice of Comment Period	5/5/2025
Initial Comments	
Housing First Minnesota, Letter	7/2/2025
American Council for an Energy-Efficient Economy (ACEEE; filed as Public Comment)	7/8/2025
DOC DER, Comments, and Attachments 1 through 5	7/8/2025
Rewiring America, Comments	7/8/2025
Xcel Energy, Comments	7/8/2025

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The attached materials are work papers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.

✓ Relevant Documents	Date
Local Governments, Comments	7/8/2025
Minnesota Energy Resources Corporation (MERC), Comments	7/8/2025
CenterPoint Energy (CPE), Initial Comments and Attachment A	7/8/2025
MWBDC, Sierra Club, RCC, Coop Energy Futures, Community Power, NSCPD, JIVE, Just Us Gardens (Public Comment)	7/8/2025
OAG-RUD, Comments and Attachments	7/8/2025
MN350 Action (Public Comment)	7/8/2025
Fresh Energy and Minnesota Center for Environmental Advocacy (MCEA) Comments and Attachment A	7/8/2025
Center for Energy and Environment (CEE), Comments	7/8/2025
Citizens Utility Board of Minnesota (CUB), Comments	7/8/2025
LIUNA Minnesota/North Dakota, Comments	7/9/2025
American Lung Association, Jon Hunter (Public Comment)	7/9/2025
COPAL, Tania Perez Barrios (Public Comment)	7/9/2025
Reply Comments	
Coalition of Greater Minnesota Cities, Reply Comments	8/6/2025
<i>CenterPoint Energy, Comments, Supplemental Attachment A to CenterPoint Energy's July 8 Initial Comments Filing,</i>	8/7/2025
OAG-RUD, Reply Comments	8/8/2025
MERC, Reply Comments	8/8/2025
Xcel Energy, Reply Comments	8/8/2025
CURE, Reply Comments	8/8/2025
CPE, Reply Comments	8/8/2025
Rewiring America, Reply Comments,	8/8/2025
Great Plains Natural Gas Co., Reply Comments,	8/8/2025
Center for Energy and Environment, Reply Comments,	8/8/2025
Fresh Energy and Minnesota Center for Environmental Advocacy, Reply Comments	8/8/2025
Citizens Utility Board of Minnesota, Reply Comments	8/8/2025
LIUNA Minnesota/North Dakota, Reply Comments	8/11/2025
Housing First Minnesota, Reply Comments	8/11/2025

✓ Relevant Documents	Date
Supplemental Comments	
MN Blue Flame Gas Association, Greg Olson (Public Comment)	8/29/2025
Sherburne County, (Public Comment)	9/3/2025
Minnesota Multi Housing Association, Comments	9/5/2025
IUOE Local 49, Supplemental Comments	9/5/2025
IBEW Locals 23, 160 and 949., Comments	9/5/2025
Minnesota Pipe Trades Association, Comments	9/8/2025
Minnesota Grocers Association, Reply Comments	9/8/2025
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DOC DER, Supplemental Comments	9/9/2025
Housing First Minnesota, Supplemental Comments	9/9/2025
Minnesota Housing Finance Agency, Supplemental Comments	9/9/2025
City of Minneapolis, Reply Comments	9/9/2025
CenterPoint Energy, Supplemental Comments	9/9/2025
LIUNA Minnesota/North Dakota, Comments	9/9/2025
MERC, Supplemental Comments	9/9/2025
Xcel Energy, Supplemental Comments,	9/9/2025
Center for Energy and Environment, Supplemental Comments	9/9/2025
CEE, Xcel Energy, LIUNA MN and ND, and Energy CENTS Coalition, Supplemental Comments, Joint Proposed Decision Options	9/9/2025
Minnesota Biofuels Association; Minnesota Corn Growers Association; Minnesota Farm Bureau Federation, Supplemental Comments,	9/9/2025
OAG-RUD, Supplemental Comments, Schedules A-C,	9/9/2025
Great Plains Natural Gas Co., Supplemental Comments,	9/9/2025
Citizens Utility Board of Minnesota, Supplemental Comments	9/9/2025
Energy CENTS Coalition, Letter	9/9/2025
Fresh Energy and Minnesota Center for Environmental Advocacy, Supplemental Comments, and Attachments A-D	9/9/2025
Joint Commentors, Letter	9/9/2025
City of Brooklyn Park (Public Comment)	9/10/2025
Phius Alliance (Public Comment)	9/10/2025

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ISSUE

The question before the Commission now is, “What action(s), if any, should the Commission take to modify existing gas line extension policies for rate regulated gas utilities?” This issue has a defined scope: line extensions only apply to new construction or existing locations that convert to natural gas. Commenters focused on line extension policies for residential customers; commercial, industrial, and agricultural customers are also subject to extension policies though these may differ from residential policies, especially with respect to whether an extension allowance is offered (Appendix A, Table A1).

Staff clarifies that no statute, rule, or Commission Order is ending the use of geologic natural gas. In a related proceeding, the gas integrated resource plan (IRP), the Commission will consider the resources gas which utilities can use to serve their customers. To this extent, at its agenda meeting the Commission may decide to:

- Eliminate line extension allowances (**Decision Option 1**),
- Make no substantial changes to line extension allowances (**Decision Options 2-4**), or
- Modify the existing methodology for calculating free footage allowances as well as how allowances are justified and discussed in rate cases (**Decision Options 5-14**). More, the Commission could contemplate additional protections for low-income customers if line extension allowances are retained (**Decision Options 7- 10**).

As discussed further below, the cost of a line extension for a residential customer can typically vary from approximately \$1,800 to \$2,200.

Commenters also introduced issues related to the gas system beyond the issue of line extensions; the Commission may decide these issues now or not. To this extent, commenters’ proposals included a new Energy Conservation and Optimization (ECO) program (**Decision Option 15**), exploration of a novel rate design (**Decision Option 17**), and additional analyses and workgroups (**Decision Options 18-23**).

BACKGROUND

In 2021, the Minnesota Legislature directed the Commission to initiate a proceeding to evaluate changes to natural gas utility regulatory and policy structures needed to meet or exceed Minnesota’s greenhouse gas emissions reduction goals.¹ The Commission opened docket no. G999/CI-21-565, referring to this docket as “The Future of Gas,” to meet this gas regulatory and policy directive.

One aspect of gas utility policy is service and main line extension policy. Specifically, Commission jurisdiction over gas line extension policy (LEP) was discussed in the

¹ Minnesota Laws 2021 1st Special Session, Chapter 4, Article 8, Section 27

Commission's 1991 Order, citing Minnesota Statutes §§ 216B.01, 216B.09, and 216B.23.² The Commission has not engaged in an in-depth examination of utility line extension policy since its 1995 Order.³ However, most⁴ gas utilities examine their LEPs in individual rate cases by answering six questions.⁵ Rate cases also provide the venue in which to affirm line extension allowances,⁶ modify line extension policies,⁷ and require further study.⁸

In several recent rate cases, utility responses to these six questions have sparked interest in a broader conversation about potential modifications to gas utility line extension policies. The Commission stated that the Future of Gas docket "provides an appropriate forum for evaluating the parties' request to pursue these matters [modification to free footage allowance policy] on an industry-wide basis."⁹

² Order Initiating Study Group issued June 4, 1991 in docket no. G999/CI-90-563 see p 2-3.

³ Order Terminating Investigation and Closing Docket issued March 31, 1995, in Docket No. G999/CI-90-563

⁴ See Xcel rate case G002/GR-23-413 Findings of Fact, Conclusions of Law, and Recommendation to Approve Settlement, at 21, "For purposes of this Settlement, the Settling Parties agree that the Company's request is reasonable and the Company should no longer be required to comply with the reporting requirements identified above from the Commission's Order in Docket No. G999/CI-90-653." The Commission accepted the settlement and adopted the ALJ Report in its March 5, 2025 Order in docket no. G-002/GR-23-413.

⁵ 1) Should the 'free' footage or service extension allowance include the majority of all new extensions with only the extremely long extensions requiring a contribution in aid of construction ("CIAC"); 2) How should the local distribution company ("LDC") determine the economic feasibility of service extension projects and whether the excess footage charges are collected; 3) Should the LDC's service extension policy be tariffed in number of feet without consideration to varying construction costs among projects or should the allowance be tariffed as a total dollar amount per customer; 4) Is the LDC's extension charge refund policy appropriate; 5) Should customers be allowed to run their own service line from the street to the house (or use an independent contractor) if it would be less expensive than having the utility construct the line; and 6) Should the LDC be required to offer its customers financing for service extension charges; this could be offered as an alternative to paying extension charges in advance of construction?

⁶ Xcel replies at 29, explaining that rate case test years affirm line extension allowances.

⁷ CenterPoint's 2021 rate case, Docket no. G008/GR-21-435, for settlement purposes, the Company agreed to reduce the free main footage allowance from 150 feet to 100 feet. Xcel's 2021 rate case, Order Accepting Agreement Setting Rates and Updating Base Cost of Gas issued April 13, 2023, docket no. G-002/GR-21-678 at 6, "Seventh, in the Settlement and consistent with issues raised by OAG and [the Clean Energy Organizations], the Company agreed to reduce its free footage allowance for main line extensions from 100 feet to 80 feet, while maintaining the 75-foot allowance for new service extensions. The Parties further agreed to recommend the Commission explore main and service line extension policies in Docket No. G999/CI-21-565."

⁸ MERC rate case in Docket G011/GR-22-504, MERC agreed to work with stakeholders to examine its line extension policies and subsequently filed a study on November 14, 2024 in its rate case docket.

⁹ Docket No. G002/GR-21-678, In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy's Petition for Authority to Increase Natural Gas Rates in Minnesota, Order, p. 9 (April 13, 2023). AND Order Accepting and Adopting Agreement Setting Rate in Docket No. G008/GR-21-435, issued September 23, 2022 at 7.

By July 9, 2025, 17 groups filed initial comments. By August 11, 2025, 13 groups filed reply comments. By September 10, 2025, 27 groups filed supplemental comments.

Staff also appreciates the time and insights of the 38 members of the public who filed comments. All asked that the Commission eliminate line extension allowances (LEAs). Commenters spoke on the topics of: Commission authority to evaluate LEA, behavioral changes that may be prompted by eliminating LEA, the State's net zero goals, the viability of electrification and dual fuel systems, the risk of stranded assets, public health, green jobs, the lack of customer choice that may surround fuel use, and affordability.

CURRENT LINE EXTENSION PRACTICES

The Commission has explained that “the purpose of a tariffed service extension policy is to ensure that all new customers receive the same treatment” when determining how costs are determined and paid for between the new customer(s) and the utility.”¹⁰

Line extension allowances are a certain amount of “free” footage available to customers newly connecting to the gas system and / or a set price paid of cost per foot for pipe needed beyond a free footage. These allowances have been justified with the rationale that revenues from a new customer will more than offset the costs required to serve that new customer.

However, as the OAG explained, “a free footage allowance is not actually free. Although the new customer will not pay an upfront fee for free footage to connect to the system, the utility will add the cost of the service line to its rate base and that cost, plus a return, will ultimately be paid by all of the utility's ratepayers.”¹¹ In this way, utilities are incentivized to continue LEA as such policies, “can help expand a utility's capital base and increase its customer base, which could increase its revenue.”¹² Conversely, any upfront payment that new customer makes, in the form of a CIAC, will not increase the utility's investment in rate base.¹³ Current practices are shown in Appendix A.

When customers require pipes longer than the “free footage,” or, anytime an extension is requested for some customer classes, utilities require a contribution in aid of construction (CIAC). A CIAC is paid by new customers to connect to the gas system. Utility tariffs have a formula to determine the amount paid to offset their cost to the system while also recognizing the benefit of a new customer. CenterPoint (CPE) and Xcel allow for a refund of a customer's CIAC for gas mains “If the installation of a gas main is expected to be supported by

¹⁰ Order Terminating Investigation and Closing Docket issued March 31, 1995, in Docket No. G999/CI-90-563 at 6.

¹¹ OAG initial at 3

¹² OAG initial at 14

¹³ CUB initial at 7

future annual revenues”¹⁴ or when additional customers are connected¹⁵ for up to five years.

Scale of the Issue

To put the current issue into perspective, Staff includes recent costs and numbers of residential gas line extensions. Center for Energy and Environment (CEE) reviewed recent, relevant rate case proceedings from MERC and CPE and found that the cost of service to residential customers currently provided through line extension allowances ranged from \$1,888 to \$2,215.¹⁶ Xcel shared, “[t]he 2025 cost of the Company’s residential line extension allowance, inclusive of line and main service, is approximately \$2,400 per residential customer.”¹⁷ Utilities report the number of new line extension requests each year in gas service quality proceedings. In 2024, utilities reported 63 (Great Plains, “GP”), 1,996 (MERC), 2,256 (Xcel), and 6,167 (CPE) new residential installations.¹⁸

DISCUSSION

Staff structured the briefing paper to assist the Commission in navigating potential modifications to line extension policy by presenting arguments for and against modifications. The paper begins with larger, theoretical questions about line extensions:

- How commenters conceptualize the role of line extension allowances, including discussions about how a change to LEA may impact behavior.
- Regulations and LEP.
- Minnesota’s net zero goals and the readiness of the electric system to meet net zero goals as well as the role of the gas system in meeting net zero goals.
- Also in the context of net zero goals, Staff discusses the potential for decreased gas consumption and stranded gas assets. This section of the briefing paper ends by considering the role of the gas system in a net zero future and with this, potential updates to the method by which gas utilities calculate line extension allowances.

Next, in contemplating any modifications to gas line extension policies, the Commission can

¹⁴ CPE Tariff Section VI Fifth Revised Page 6 at 4.06

¹⁵ Xcel Minnesota Gas Rate Book General Rules and Regulations Section No. 6 Sheet No. 18.01

¹⁶ CEE initial at 10 citing, Page 26 of MERC’s Line Extension Policy Study stated \$25.18 for the average residential installation cost per foot for new service lines, multiplied by MERC’s 75-foot allowance for service line extensions. AND Direct Testimony of Ron Nelson on behalf of Clean Energy Organizations identified \$885 in average costs for CenterPoint Energy’s 125-foot allowance for gas main extensions, and \$1330 in average costs for service line extensions. Docket No. G008/GR-21-435. Filed February 7, 2022. Page 18.

¹⁷ Xcel initial at 4

¹⁸ See dockets G002/M-25-31; G004/M-25-32; G008/M-25-33; G011/M-25-34. In 2024 utilities had these average counts of residential customers: 19,229 (GP), 219,349 (MERC), 1,339,161 (Xcel gas & electric), 853, 173 (CPE)

consider arguments about the corresponding impacts to:

- Public health
- Housing supply and cost
- Workforce
- Economic competitiveness and viability
- Customer fuel choice
- Affordability and cost of gas
- Consumer protections

Then, Staff presents additional actions the Commission may consider to address the gas system more broadly:

- A new Energy Conservation and Optimization (ECO) program offering
- A topic for the MN gas utility innovation roundtable facilitated by Great Plains Institute
- Establishing a decommissioning fund
- Rate design based on practices of Énergir and Hydro-Québec

Last, Staff includes three appendices: (A) Existing line extension policies for MN gas utilities, (B) States that have eliminated or modified LEAs, and (C) Research cited in the record.

I. Behavior and Intention of LEA

Several commenters framed gas line extension allowances as subsidies, a form of grant given to assist a company in providing a service deemed advantageous to the public. In this way, some commenters, like Fresh Energy and MCEA, argued that LEAs incentivize new customers to join the gas system.

Beyond use of the term “subsidy,” some commenters characterized LEAs as inherently negative, stating that, “by covering part of the cost of gas infrastructure, utilities tilt the playing field toward gas rather than letting building owners and developers pursue electric options that are increasingly cleaner, healthier, and cost-competitive.”¹⁹ In agreement with Phius Alliance, Fresh Energy and MCEA argued that subsidies are only appropriate for things society wants to incentivize; as such, gas subsidies are inappropriate because gas is not socially beneficial nor is gas a new technology for which costs would eventually decrease if demand were allowed to increase.²⁰

Several commenters invited the Commission to consider the practice for wastewater system connections, a public good where the cost of connecting a new customer is borne entirely by that new customer.²¹ As a member of the public explained,

¹⁹ Phius Alliance at 1

²⁰ Fresh Energy and MCEA replies at 14. See also Fresh Energy and MCEA supplemental.

²¹ Department supplemental at 12. Fresh Energy and MCEA supplemental at 14, citing a public comment.

“for wastewater in Minnesota not only do new customers typically pay for connections costs but in addition they actually pay for the capacity availability in the pipes and wastewater treatment plants.” “Wastewater treatment clearly is a public good, yet, the state requires, in some cases (like MCES) and in other cases allows charging new customers for connection charges AND availability in the existing system. Natural gas extension should require both too.” -Jason W.

To this extent, by removing line extension allowances, the Department explained that a neutral stance would be taken towards gas, neither incentivizing nor discouraging gas use.²² The Department supports removing line extension allowances with **Decision Option 1.**²³

Some commenters believed that removing LEA would incentivize electric space heating²⁴ and thus, removing LEA would not be a neutral stance but would instead shift behavior toward electrification. CUB referenced testimony from the Rocky Mountain Institute (RMI):

By shifting costs onto existing ratepayers, developers of new buildings are not responsible for the true cost of construction. If developers were faced with the full cost of gas service—including several thousand dollars that are usually subsidized— they would be more likely to build all-electric. Line extension allowances create a situation in which developers do not have incentive to guard against the risks that gas customers may face down the line. That is, the decision makers in building design (e.g., developers, builders, and engineers) choose the option cheapest for them, while other gas system customers bear the up-front costs and the risk of escalating future costs on a transitioning gas system.²⁵

Members of the public commented that:

"I truly believe by getting rid of [line extension allowances] we will help individuals and companies re-invest in energy efficient solutions and resources

²² Department initial at 11

²³ See also the letter of the Joint Commenters supporting this position. The letter was signed by: Department of Commerce, Minnesota Housing Finance Agency, Minnesota Pollution Control Agency, American Council for an Energy Efficient Economy, American Lung Association in Minnesota, Ayada Leads, Building Decarbonization Coalition, CUB, City of Minneapolis, City of St. Paul, Community Power, Cooperative Energy Futures, COPAL, CURE, ELPC, Fresh Energy, Health Professionals for a Healthy Climate, Just Housing SBC, Midwest Building Decarbonization Coalition, Mn CEA, MN350 Action, MN IPL, MSR Design, Native Sun Community Power Development, NRDC, Yarrow Architecture, Resilient Cities & Communities, Rewiring America, Sierra Club, TE Studio Passive House Design, Unidos MN, Union of Concerned Scientists, and Dr. Curtis Norgaard, pediatrician

²⁴ LIUNA replies at 4

²⁵ Abigail Alter, Sherri Billimoria, Mike Henchen, Overextended: It’s Time to Rethink Subsidized Gas Line Extensions, Rocky Mountain Inst. at 11 (2021).

that help improve home air health and incentivize everyone to move towards non-fossil fuel reliant energy sources"- Julia K.

"Eliminating LEAs will provide a more level playing field for homeowners to more seriously consider purchasing heating systems and appliances that are not powered by fossil fuels."- Sherri K.

While some saw eliminating LEAs as a positive shift, other parties argued that it would so negatively impact housing prices and customer choices so as to be burdensome and harmful (LIUNA, Housing First, Utilities). CEE offered a counterpoint, arguing that the actual cost of a new gas extension, \$2,000, may not be sufficient to change behavior nor would eliminating LEAs meaningfully move market towards electrification.²⁶ Groups recommending that line extension allowances be retained support:

- **Decision Option 2:** Standardize the extension allowance across utilities
- **Decision Option 3:** Maintain existing line extension allowances as established in individual utility tariffs
- **Decision Option 4:** Underscore that line extension policy should instead be discussed in rate cases. However, staff notes, this contradicts Commission order in recent rate cases, as discussed above.

II. Regulations Around LEP

Per Minn. Stat. § 216B.04, "Every public utility shall furnish safe, adequate, efficient, and reasonable service." Some participants, like MERC, explained that ending LEA would go against that obligation. The Department offered a distinction. Though it was not disputing a utility's obligation to provide service, the Department stated that it was not aware of any statute or rule that requires the provision of the free footage allowance by gas utilities.²⁷

III. Enabling a Renewed Consideration of LEP

Commenters like Rewiring America, the OAG, MCEA, Fresh Energy, CUB, and CEE cited several laws that would enable the Commission to explore line extension policy as well as those related to greenhouse gas (GHG) emissions reductions that should prompt consideration of the appropriateness of line extension allowances.

Under Minn. Stat. § 216B.03 the Commission has authority to ensure that rates charged to customers are "just and reasonable." More, Minn. Stat. § 216B.03 requires the Commission to "set rates to encourage energy conservation and renewable energy use and to further the goals of sections. . . 216C.05." Minn. Stat. § 216C.05 in turn encourages energy efficiency and

²⁶ CEE supplemental

²⁷ Department initial at 7

use of renewable energy resources.²⁸

Commenters also emphasized Minnesota's net zero and emissions reductions goals:

- ECO and the Natural Gas Innovation Act ("NGIA," Minn. Stat. § 216B.2427) which both serve to decrease geologic natural gas throughput,
- Minn. Stat. § 216H.02, the State's goal of reaching net zero emissions by 2050,
- Minn. Stat. § 216B.1691 requiring carbon free as well as renewable electricity provision
- Xcel's electric space heating rate in docket no. E002/M-23-524,
- Minn Stat. § 116D.02 State Environmental Policy Act including, "(9) practice thrift in the use of energy and maximize the use of energy efficient systems for producing, distributing, and using energy, including recovering and reusing waste heat, and minimize the environmental impact from energy production and use;"

These commenters concluded that subsidies to fossil fuels are incompatible with state climate goals.²⁹ More, that removal of line extension allowances should be a first step in the Future of Gas docket, "to ensure that this docket drives toward the statutory goals of evaluating the regulatory and policy changes needed to meet or exceed Minnesota's greenhouse gas emission reduction goals."³⁰

Many members of the public cited climate concerns as the reason to eliminate LEA, specifically-that continued subsidies for the buildout of gas infrastructure runs counter to Minnesota's climate goals, especially Net Zero by 2050. To this extent, eliminating LEA would be a step towards addressing the threats posed by climate change. Members of the public stated that rather than burn gas, which releases pollution, utilities should instead invest in a clean, sustainable future with technologies that reduce emissions. As explained by a MIGZI program student, "The Public Utilities Commission has a responsibility to protect Minnesota's plant relatives and Indigenous rights to harvest medicines by regulating gas use to reduce greenhouse gas emissions that harm the environment."

The Commission may also consider alignment of LEP with work undertaken across state agencies and jurisdictions. For example, in considering the relationship between housing and energy, the MN Housing Finance Agency wrote about its role in "mitigating climate change by financing energy efficient housing that is powered by clean energy" and its role as a member of Governor Walz's Climate Change Subcabinet.³¹ The City of Minneapolis has its own goals,

²⁸ Fresh Energy & MCEA initial at 14-15 citing 2021 Minn. Laws 1st Sp. Sess. ch. 4, art. 8, sec. 27, available at <https://www.revisor.mn.gov/laws/2021/1/Session+Law/Chapter/4/>.

²⁹ Conclusion reached in comments from: the Department, Local governments; Midwest Building Decarb Coalition, Sierra Club, RCC, Coop Energy Futures, Community Power, NSCPD, JIVE, Just Us Gardens; MN350 action; Fresh Energy & MCEA; CURE; ReWiring America; Plius Alliance.

³⁰ Joint Commenter's supplemental filing letter dated September 9, 2025 (Dept. of Commerce et al.)

³¹ Minnesota Housing Finance Agency Supplemental comments filed September 9, 2025 at 1. Subcabinet established under EO 19-37.

as well as a climate equity plan which prioritizes electric and geothermal over new replacement gas infrastructures.

Those opposed to a reexamination of LEP repeated arguments from gas IRP proceedings, stating that the State's climate policies are goals, not mandates, and that GHG emissions reductions goals should not be prioritized over or at the expense of affordability and reliability.³² CEE, Xcel, LIUNA, and Energy CENTS offered **Decision Option 14** which would delegate authority to the Executive Secretary to open a new comment period on line extensions if and when the policy or technology climate had changed significantly so to warrant renewed consideration.

While Staff reiterates that the question before the Commission is not whether to end service with geologic natural gas, parties referenced different possible pathways for the future of space heating in Minnesota as context for their arguments about LEP. Thus, below, Staff reviews several larger-scale discussions about the viability of space heating electrification, dual fuel opportunities, changes to gas demand, and the risk of stranded assets.

IV. The Viability of Electric Space Heating

When considering how to meet ambitious state climate goals, commenters debated the viability of electrification to meet Minnesota customers' heating demands. For example, COPAL explained that electrification of space and water heating is "both feasible and cost-competitive with gas in most residential applications, particularly when paired with weatherization."³³ Importantly, in exploring viability of different heating options, commenters noted that "affordability must consider both the up-front construction costs with the long-term lifecycle costs of a home for its residents."³⁴

Parties cited multiple studies (see Appendix C, Part B) that explored the cost, viability, and emissions impact of different levels of electrification, and these studies ended with a range of conclusions. Overall, they predicted a significant degree of electrification mandated through policy and acted upon through consumer choice but concluded that the most cost-effective way to reduce emissions may vary between full electrification, dual fuel, and alternative fuel approaches.

Commenters also argued that bills for all-electric homes can be lower, if utilities carefully design rates, like Xcel's new winter electric space heating rate (ACEEE, see Appendix C, Part D). CPE argued that this analysis was unreliable.³⁵

³² LIUNA, Minnesota Multi Housing Association supplemental comments, IBEW locals 23, 160, and 949.

³³ COPAL et al. Initial Comments, p. 5

³⁴ MN Housing Finance Agency supplemental at 2

³⁵ CPE replies at 3.

Many commenters agreed that the future of electric air-source heat pumps is bright. CEE surveyed heat pump contractors, existing customers, and potential customers to assess the current and future market landscape. CEE concluded that contractors are expecting to sell more heat pumps, that customers are satisfied with heat pumps, and that contractors are learning more about performance and are more confident in recommending heat pumps, including for use as a primary heat source.³⁶

Further, cold-climate heat pumps have become more common. For example, CUB shared that in Xcel’s first year of offering efficient fuel switching (“EFS”) measures,” Xcel “saw significant customer interest in EFS incentives,” and in particular, uptake of incentives for cold-climate heat pumps (“ccASHPs”) far exceeded initial estimates for adoption. The [2024-2026 ECO] Triennial assumed ccASHPs to represent only 38 percent of participation but resulted in 70 percent of actual rebates paid.³⁷ More, as climate change produces even warmer temperatures, the thermal range under which heat pumps will be expected to perform will narrow, decreasing the number of very cold winter nights.³⁸

Several members of the public shared that all-electric homes were meeting their needs:

“We were more than impressed by the performance of our heat pump despite repeated suggestion by the HVAC contractors we consulted that we would need a lot of additional back-up heat.” Sharing their usage, another commenter explained that their “decision to go with an all-electric home has proved to be very affordable – and now that we have an all-electric system we can offset our energy use with onsite solar, which offset 47.9% of our electricity usage over the time period.” -Garrett H.

Several architects, designers, and passive house proponents also commented on the viability of electrification. For example,

“Recent advancements in cold-climate heat pumps, combined with air-sealing and high-performance envelope assemblies, have eliminated the need for gas equipment in new construction...The long-term benefits of investing in electric solutions make this money well spent—and ultimately money saved.” - Anna K. AIA Architect Phius Certified Passive House Consultant

“I haven't connected a new home to a natural gas line in more than 7 years, and I refuse to design new homes with natural gas because we can build well-

³⁶ CEE replies at 5-8.

³⁷ CUB initial at 10 quoting Xcel Energy, 2024 Status Report and Associated Compliance Filings: Minnesota Electric & Natural Gas Energy Conservation & Optimization Program, Docket No. E,G002/CIP-23-92 at 125 fn. 3 (Apr. 1, 2025) (hereinafter Xcel 2024 ECO Report).

³⁸ Fresh Energy and MCEA supplemental comments at 7

insulated new housing powered by super-efficient electric appliances.” - Rachel W., business owner and residential designer living and working Northern MN for ~30 years.

Some commenters explained that even if electrification technology cannot meet all customer needs *now*, the technology continues to improve and costs continue to decrease.³⁹ More, Fresh Energy and MCEA expect greater potential for innovation on the electric system, versus the gas system.⁴⁰ Though Staff notes, the goals of NGIA (to incentivize gas utilities to explore innovative resources to reduce the throughput of conventional natural gas) may conflict with this expectation.

While some commenters provided support for the current viability of full space heating electrification, others argued that other options are more cost effective and/or suited to Minnesota’s extreme climate. For example, despite its positive forecasts of heat pump sales and uptake, CEE’s “New Home Energy Cost Analysis” concluded that “Minnesota is not yet at a point of cost-parity for all-electric homes in the new construction built-to-code market from a first-year operational cost perspective, compared to homes with standard gas appliances and central air conditioning units.”⁴¹ Further, LIUNA, Xcel, and Housing First Minnesota argued that gas is more reliable, especially on the coldest winter days.⁴²

More, as explained by the Minnesota Blue Flame Gas Association, any reduction in access to reliable heat would put people at risk because “Minnesota winters are among the harshest in the nation, with long periods of extreme cold. Natural gas provides dependable and immediate heating capacity when it is needed most.”

Here, Staff takes a moment to note the Commission previously opened an investigation following Winter Storm Uri after finding that “while Minnesota’s utilities were well prepared to deliver natural gas service without interruption to customers during this time period of severe weather and did so without damage to their distribution systems, the jump in natural gas prices has raised questions about the potential impacts to Minnesota’s customers and the utilities’ efforts to protect against such impacts.”⁴³ Among many actions, the Commission found that “natural gas resource planning is in the public interest” and began a process to establish integrated resource planning for the state’s three largest gas utilities.⁴⁴

³⁹ OAG initial at 24

⁴⁰ Fresh Energy and MCEA supplemental at 8

⁴¹ CEE replies at 4

⁴² LIUNA initial comments, Xcel replies, and Housing First Minnesota supplemental comments

⁴³ Order Opening Investigation issued March 2, 2021, docket no. G-999/CI-21-135

⁴⁴ ORDER REQUIRING ACTIONS TO MITIGATE IMPACTS FROM FUTURE NATURAL GAS PRICE SPIKES, SETTING FILING REQUIREMENTS, AND INITIATING A PROCEEDING TO ESTABLISH GAS RESOURCE PLANNING REQUIREMENTS issued February 17, 2023, docket no. G-999/CI-21-135 at ordering paragraph 16

V. Dual Fuel: Gas Utilities' Role in Meeting Emissions Goals

Though providing energy with electricity powered by renewables moves Minnesota closer to meeting its GHG emissions reductions goals, parties debated the suitability of the current electric system to meet 100% of Minnesota customers' heating needs. Thus, many commenters argued that the gas system could still play an important role in reducing GHG emissions.

CPE and Xcel underscored how gas utilities are already contributing to emissions reductions via ECO and NGIA; more, Xcel has its own company net zero vision. Commenters spent more time, however, explaining that a dual fuel future, with electric space heating and natural gas as a backup fuel on the coldest nights, could be the most cost-effective way to meet climate goals.

Multiple parties pointed to the G21 stakeholder process summary and recommendations – “Decarbonizing Minnesota’s Natural Gas End Uses (see Appendix C)”⁴⁵ – but came to different conclusions based on its results. Parties agreed that the report demonstrated that the High Electrification with Gas Backup scenario was the most likely to be cost effective (as opposed to exclusively electrification or high reliance on decarbonized gas such as RNG and hydrogen). However, while Xcel and LIUNA argued that this justified the need to continue to expand the gas system to allow all buildings to have gas backup,⁴⁶ CUB pointed out that the Electrification with Gas Backup scenario assumed all-electric new construction, meaning no additional expansion of the gas system.⁴⁷

CEE also cited several reports that concluded that cost-effectiveness and significant emissions reductions could be realized from dual fuel systems that switch from electric to gas at low temperatures (see “Minneapolis 1-4 Unit Residential Weatherization” and “Report from Hydro-Quebec Distribution & Énergir in Response to Decarbonization Objectives For Building Heating in the 2030 Green Economy Plan” in Appendix C).

In support of a dual fuel future, commenters like Housing First Minnesota, Xcel, MERC, CPE, and LIUNA emphasized the low cost of gas, compared to electricity and delivered fuels. However, other commenters countered this point by arguing that the price of gas has been

⁴⁵ <https://e21initiative.org/wp-content/uploads/2021/07/Decarbonizing-NG-End-Uses-Stakeholder-Process-Summary.pdf>

⁴⁶ Xcel initial at 5 AND from e21 report at p. 58: “Stakeholders highlighted that the modeling results showed that this scenario would be the lowest cost option. Stakeholders observed that this scenario lowers costs by requiring a smaller electric system build-out compared to the high electrification scenario, largely because of lower winter peak demand as well as avoided transmission and distribution system investments. Similarly, this scenario reduces the costs of decarbonized gaseous fuels by avoiding significant amounts of the most expensive gaseous fuel, synthetic natural gas, as compared to the high decarbonized gas scenario.” (*Modeling on p. 45 Staff has chosen this excerpt -- it was not specifically cited by LIUNA beyond reference to the report in general*)

⁴⁷ CUB 7-8-25 Initial Comments at 12.

volatile and that past low prices have insulated consumers from the true cost of infrastructure investment.⁴⁸

In support of a dual fuel future, commenters also highlighted the benefit of using gas to avoid the enormous costs required to build out the electric grid for complete electrification and in this same way, using gas to avoid high prices during peak use.⁴⁹ LIUNA and the utilities also critiqued the studies that will be referenced throughout this briefing paper for not also modeling or presenting costs to the electric system associated with full electrification.⁵⁰

Not all commenters agreed with the benefit of a dual fuel future, however. Some found the continued expansion of the gas system to be redundant.⁵¹ Commenters explained that "delivered fuel customers already have an existing heating system that they can choose to utilize as a backup fuel source. Therefore, there is no need for a new gas connection for these customers."⁵² In some instances, like contemplating extending service to rural areas, it may be uneconomical to extend gas service, due to price / foot of pipe and declining throughput.⁵³

VI. Changes to Gas Demand

Many commenters provided analysis to argue that there will likely be less geologic natural gas consumed in the future. Commenters said this may be the result of dual fuel in which gas is a backup and from conservation efforts through ECO and NGIA.⁵⁴ CPE countered that at present, gas use continues to rise, considering weather-normalized dekatherms sold in 2014 versus 2024.⁵⁵

Considering CPE's sales data, Staff also offers 2020-2025 EIA Data for Minnesota⁵⁶ showing, from 2024 to 2025, increasing gas delivered to residential (blue) and commercial (orange) customers but decreasing delivery for electricity generation (yellow).

Figure 1. Natural Gas Delivered to Minnesota Customers, annual

⁴⁸ CUB initial comments at 16

⁴⁹ LIUNA initial at 1

⁵⁰ LIUNA reply comments at 6 and CPE reply comments at 5.

⁵¹ For example, CURE and RWA.

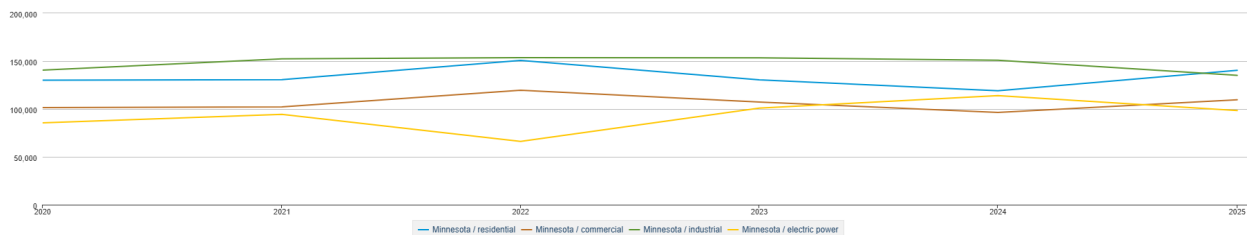
⁵² Fresh Energy & MCEA supplemental comments at 11.

⁵³ Department supplemental

⁵⁴ See for example OAG initial at 42.

⁵⁵ CPE replies at 5.

⁵⁶ <https://www.eia.gov/states/mn/data/dashboard/natural-gas>



Gas demand may also change if customers choose to electrify and leave the gas system. Conversely, customers may build new gas homes or customers may change from delivered fuels to geologic natural gas.

As described in Appendix C, parties submitted several studies that examined the future of gas utilities' customer base and infrastructure costs. These studies all predicted a potential decrease in natural gas demand by customers, acknowledging that this may be driven by a combination of policy and consumer behavior.

VII. The Risk of Stranded Assets

Commenters referenced the risk of stranded assets such that gas use would decline, wealthier customers would be able to fully electrify and leave the gas system, and then the remaining customers, many of whom would be lower income, would be left to pay for infrastructure and their bills would increase. At this point the risk of stranded assets may be theoretical. For example, staff notes that in recent gas service quality proceedings, neither CPE, GMG, GP, nor MERC reported a decrease in total customer counts. Regarding new service extension requests, GP's number of requests declined from 2019-2024 and CPE, MERC, and Xcel's number of requests decreased from 2022-2023 but then increased from 2023-2024.

The MN Housing Finance Agency voiced concern that, "that continued subsidy for the natural gas system will put more long-term burden on those Minnesotans with fewer financial resources, who may be at increased risk for rate increases as the natural gas infrastructure ages."⁵⁷ Members of the public were also concerned by the potential for stranded assets. As explained by Aaron K. and Drew H., "As Minnesota advances toward its carbon reduction targets, gas demand must decline. The costs of maintaining pipelines and infrastructure, however, will not disappear—they will be shifted onto a shrinking customer base."

Commenters' worry was amplified by gas utilities' projected increased spending and voiced concern that ratepayers are not protected from the risk of stranded assets. Commenters were concerned that while some infrastructure may be "used and useful" or technically still "functional" in a future of decreased consumption, some infrastructure may not.⁵⁸

⁵⁷ MN Housing Finance Agency supplemental at 2

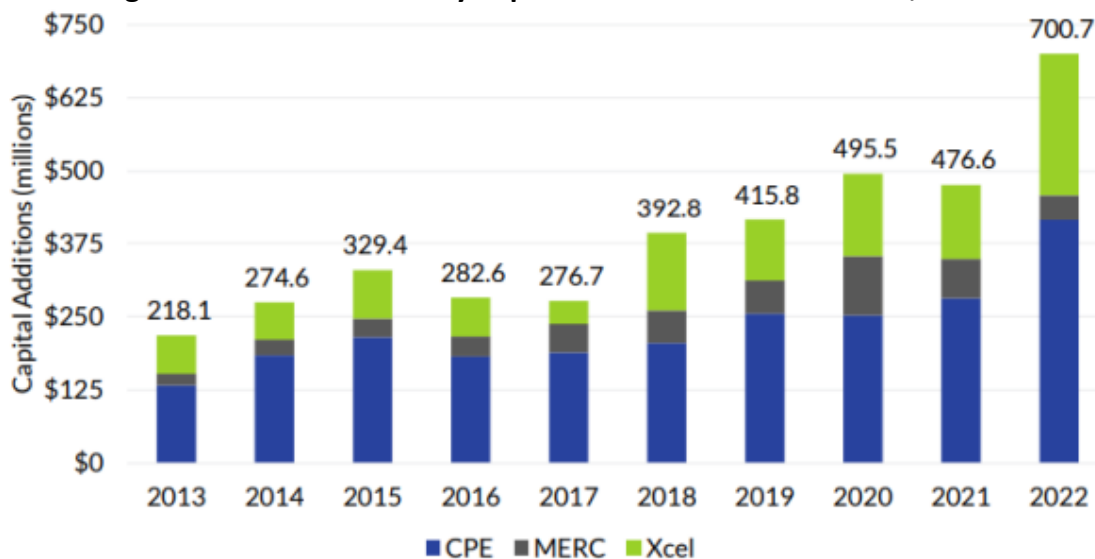
⁵⁸ CUB Initial Comments, p. 17

CUB's concern was heightened following an analysis that demonstrated exponential increases in gas utility capital spending, which had nearly tripled in the 10 years reviewed (Figure 2).⁵⁹ Staff extends the dataset and includes 2022 for a within-table comparison (Table 1); more recent values show increased spending compared to 2020 and 2021 but a decrease from 2022.

Table 1. Utility Capital Additions, plant-in-service values, in millions of dollars

	2022	2023	2024
Xcel ⁶⁰	209	152.5	180
MERC	44	64.1	57.3
CPE ⁶¹	415	338.4	355.6
Total	668	555	593

Figure 2. Natural Gas Utility Capital Investment in Minnesota, 2013-2022



LIUNA offered a study that refuted this report's analysis and conclusions (Appendix C).⁶²

⁵⁹ CUB Initial Comments, pp. 15-16, referencing: DHInfrastructure, prepared for Citizens Utility Board of Minnesota, Investor-Owned Utility Gas Distribution Capital Expenditures: A Study on the Potential Bill Impacts of Business-as-Usual in Minnesota at 3 (July 2023) (hereinafter DHInfrastructure Report)

⁶⁰ The DHInfrastructure Report at 19, explained that Xcel's data were gathered from Plant-in-Service 16 and additions were calculated as the difference between beginning- and end-of-year balances, for total gas plant in service, row 33, assuming a one percent plant retirement rate. Staff could not recreate this calculation and yield the same results. Staff instead presents values from following the calculation. Staff did not assume retirement.

⁶¹ Following the DHInfrastructure Report at 18, staff viewed CPE's and MERC's GJAR reports and used data from Tab 16 Plant In Service at row 33, total gas plant in service, under the "additions" column.

⁶² LIUNA replies at 1

VIII. Re-Calculating Line Extension Allowances

The OAG as well as Fresh Energy and MCEA evaluated the current mechanism by which utilities model the cost feasibility of extending service to new customers. The OAG explained that the balance between new and existing customers, and the value proposition of a LEA, should be revisited in light of GHG emissions reductions goals that may prompt decrease gas use as well as fears that payments for an expanding gas system will eventually be placed on the bills of those least able to afford it (**Decision Option 6**). The OAG reminded participants that changes to what new customers pay versus what is shared across ratepayers has implications:

An increase in utility revenues due to customer expansion can also help existing customers, but limiting or eliminating new customer CIAC lowers the benefit for existing customers while increasing the benefit for the utility.⁶³

LIUNA also recommended review of the threshold for line extension approval so that a utility's overall extension program be cost neutral (**Decision Option 5**) though LIUNA, which Xcel noted, did not explain how cost-neutrality would be demonstrated.

Here Staff references the Commission's earlier contemplations of LEP where two theoretical approaches to LEP were explained: either the new customer pays for their line in full or new customers are extended service without charge in the "rolled-in-rates" approach. The Commission opted to compromise the two opposing approaches:

The Minnesota approach recognizes that residents benefit from having access to natural gas service and Minnesota LDCs benefit from being able to provide that service. In addition, the LDCs policies try to balance the interests of existing customers with new customers so that both groups are able to receive reasonably priced service. Consideration is also usually given to making service extension policies as simple as possible for customers to understand and for utilities to administer.⁶⁴

Assumptions Behind the Line Extension Policy

When considering cost feasibility of adding a new customer, assumptions regarding usage, cost, payback period, asset lifespan, and externalities could be reconsidered. These assumptions all inform the general calculation in which a utility attempts to determine how utility revenues compare to the costs to serve a new customer (see Appendix A).

⁶³ OAG initial at 15

⁶⁴ Order Terminating Investigation and Closing Docket issued March 31, 1995, in Docket No. G999/CI-90-563 at 6

1. Gas usage

Commenters like Rewiring America, the OAG, Fresh Energy and MCEA, CUB, and CURE critiqued the utilities' practice of assuming constant gas usage throughout the life of a newly installed asset. Commenters found the assumptions to be incorrect in two ways:

- 1) First, that initially, consumption should not be approximated by taking the average consumption of existing customers. This is because new buildings, which make up some of the gas line extensions, are more energy efficient.
- 2) Second, gas use should be expected to decline over time to comply with net zero goals and as programs like ECO and NGIA are reducing throughput.

Fresh Energy and MCEA and the OAG explained that without modeling a decline in use over time, the utilities' model would overestimate revenues from new customers. As the OAG explained, "If revenues from gas sales are lower than anticipated, it will take longer for a customer to both start contributing to shared infrastructure and pay back the entire cost of the service extension."⁶⁵

CUB pointed to rate case testimony and its commissioned study, "*Investor-Owned Utility Gas Distribution Capital Expenditures: A Study on the Potential Bill Impacts of Business-As-Usual Investment in Minnesota*," (See Appendix C, Part C) to argue that gas utilities are projecting consistent growth (in spending and customers) which ignores the reality of net zero policies and electrification uptake.⁶⁶

Xcel dismissed critiques that usage is incorrectly estimated in its customer expansion calculations. Xcel assumes customers will be revenue neutral in year four; therefore, Xcel does not see a need to consider declining gas use over time.⁶⁷ More, Xcel said it does not estimate usage but instead considers house size and appliances. In this way, Xcel said it considers increasing efficiency over time. Fresh Energy and MCEA responded to Xcel stating that in fact, Xcel rarely uses customer specific forecasts in its Residential Extension Model (REM)- just 42 times in 2024, out of a total 3,574 extensions.⁶⁸

2. Costs to serve new customers

Fresh Energy and MCEA, referencing the Javelina report (see Appendix C), said that utilities typically omit certain costs in calculating their line extension analyses, and thus overestimate the benefits of new customers without accounting for the true costs of serving them. The report listed construction costs, meters, and customer service costs (e.g. call center

⁶⁵ OAG initial at 28

⁶⁶ CUB initial at 15

⁶⁷ Xcel replies at 9

⁶⁸ Fresh Energy and MCEA supplemental at 3. Xcel's REM is used to determine the potential CIAC for a project stated in Xcel's MN Gas Rate Book section no. 6, original sheet no. 18.02 at 5.3.

representatives and meter readers) as missing from some or all utility calculations.⁶⁹ For example, with respect to construction costs, CUB and Fresh Energy and MCEA wrote that construction costs have been underestimated such that, according to the Javelina report, “across the four utilities who responded to Fresh Energy and MCEA’s information requests (“IR”) in this docket, the average installation cost for a two-inch distribution main in Minnesota increased from \$30.57/foot in 2020 to \$44.33/foot in 2024, an increase of 45 percent in just five years.” Concluding, “In nearly all cases, Minnesota’s gas utilities do not appear to be using up-to-date costs in their calculations (see Appendix C of this briefing paper Table C1).”⁷⁰

Considering the costs of additional customer service employees, Great Plains replied that one new customer does not mean that one new employee must be added and more, Xcel replied that it does include fixed labor costs in its calculations.

3. Payback Period and Costs

A utility incurs costs when it adds a new customer. Commenters like the OAG and Fresh Energy and MCEA contend that the values presented by utilities when justifying LEAs may underestimate the actual costs and the time it will take a new customer to pay back those costs to existing customers.

The OAG and utilities debated the length of time it will take the new customer to pay off the cost of their extension and contribute to fixed system costs, thereby offering a benefit to existing customers on the gas system.⁷¹ The OAG considered CPE’s cost justification calculation and showed how use of different methodologies produced a different length of time for a new customer to pay back their new line:

- **Revenue deficiency / excess in a particular year:** The OAG’s analysis showed that for CPE, the requirement from extension is greater than new customer revenue until the 6th year of the extension.
- **Cumulative net present value of the revenue excess or deficiency:** The OAG argued that it may be appropriate to consider that for the first five years of a CPE customer’s service, their costs were greater than revenues. So, for existing customers to benefit, the new customer must *also* pay off the debt accrued in years 1-5 that had been covered by existing customers. The net present value of that debt would be positive in Year 13.⁷²
- **Cash Flow Analysis:** In this computational consideration, the OAG concluded that the

⁶⁹ Xcel and MERC include the cost of meters, GP does not, and staff could not conclude if CPE does or does not.

⁷⁰ Fresh Energy and MCEA initial Attachment A, Javelina report, at 4-5

⁷¹ OAG initial at 12

⁷² OAG initial at 13 citing CPE response to information request 12

length of time for full recovery of the capital asset for CPE occurs in year 18.⁷³

Considering the cost of a new line extension, Fresh Energy and MCEA referenced the Javelina report to show that the cost of new line is greater than the absolute capital cost. The report considered CPE's 2021 rate case to explain the impacts of rate base increases:

- The capital costs to connect the customer to its system = \$2,606.
- CPE's shareholders also earn a return = \$4,179
- Customers also pay the property taxes on the new infrastructure.
- In total, CenterPoint would need to collect = \$9,000.⁷⁴

The utilities reached different conclusions as to when benefits are realized to existing customers. CPE argued that new customers begin to offer a benefit existing customers beginning in fifth year after adding the new customer's extension. A new customer, CPE stated, "results in a net positive amount of \$4,522 over the life of the assets which directly help offset the fixed costs of the current customers. Additionally, if the Company were to target collection of costs from the new customers by the 6th year after installation, then the main free footage amount could be increased to 113 feet."⁷⁵ As mentioned above, Xcel expects existing customers receive benefit from the addition of a new customer in year four.

The OAG noted that "a shorter payback period would likely reduce free footage allowances and increase upfront costs for new customers, but would reduce the amount of money socialized to all ratepayers. Further, it would lower the risk to existing customers that the new customer does not fully payback the cost of the extension due to a decline in natural gas consumption."⁷⁶ In sum, different payback periods introduce a different value proposition when compared to the expected asset lifespan (see below). In supplemental comments, the OAG shared a concern that when payback reaches asset life of the line extension, benefits materialize only a few years before asset is replaced.

4. Asset Lifespan

Utilities expect assets to remain used and useful for varying amounts of time: GP 29 years, CPE 39.5 years, and MERC 49 years.⁷⁷ Fresh Energy and MCEA disagreed with MERC's assertion that "a line extension will continue to serve customers for at least the assumed approximately 48 years, no matter if customer usage changes"⁷⁸ as this assumes customers

⁷³ OAG initial at 13 citing CPE response to information request 13.

⁷⁴ Over the 40-year time period of the study. Fresh Energy and MCEA initial Attachment A, Javelina report, at 3. Javelina critiqued that this amount omits O&M and customer service costs.

⁷⁵ CPE initial at 6

⁷⁶ OAG initial at 32

⁷⁷ Fresh Energy & MCEA initial comments Attachment A, Javelina Report at 10

⁷⁸ Fresh Energy and MCEA initial at 15

should pay for infrastructure they do not need, and perhaps do not want, just because it is technically still “functional.”⁷⁹ Similarly, CURE found it problematic to base lifespan on how long an asset *could* serve customers, rather than how long customers want to be served by that asset.⁸⁰

Additionally, Fresh Energy and MCEA observed that none of these asset lifespans account for Minnesota’s net zero by 2050 goal. To this extent, Fresh Energy and MCEA said it is, “inappropriate to consider time periods that assume gas usage beyond 2050, especially if externality and statutory compliance costs are not included.”⁸¹ As such, the Javelina study suggested an asset lifespan of 25 years to align with the 2050 goal. In opposition, the OAG argued that the utilities should use the depreciation period authorized in their most recently approved depreciation certifications.⁸² Xcel and MERC responded that their calculations use values set in tariff (Xcel) and authorized by the Commission in its most recent Five-Year Depreciation Study (MERC).

5. Externalities

Fresh Energy and MCEA, CUB, and the Department stated that line extension calculations should include inputs for environmental externalities and for regulatory compliance. Environmental externalities could account for both indoor and outdoor air pollution, among other factors.⁸³ CUB cited Javelina’s estimate that, “each new customer’s gas usage would produce 109 tons of CO₂ emissions over a 25-year period, equivalent to \$6,643 in externality costs for each new customer.”⁸⁴ However, for example, MERC’s Customer Extension Model does not include any consideration of GHG. MERC stated that further discussion should precede selecting values to model environmental costs and more, that consideration should also be given to the carbon and GHG emissions of the alternative home heating source(s) what would be used if natural gas service were not to be extended.

In terms of regulatory costs, the Department and Fresh Energy and MCEA reasoned that adding new customers to the gas system may increase costs, because of the increased cost to abate GHG emissions.⁸⁵ Environmental costs could represent expenses like methane leak remediation and the NGIA rider. The Javelina report questioned the exclusion of these costs in calculations: “MERC’s calculation assumes that a customer added in 2025 will continue to

⁷⁹ CUB initial at 17

⁸⁰ CURE replies at 16

⁸¹ Fresh Energy and MCEA initial at 6

⁸² OAG replies at 6

⁸³ Fresh Energy and MCEA initial and CUB replies

⁸⁴ CUB replies at 9 quoting Javelina Energy report at 14

⁸⁵ Dept initial citing Oregon Commission

use the same amount of gas annually through 2073— i.e. over two decades beyond the state’s net zero emissions target—all without including any costs for complying with state statutes.”⁸⁶ More, Fresh Energy and MCEA acknowledged that current line extension calculations do not include regulatory compliance costs but if Xcel is banking on other sectors needing to decrease their emissions to allow the utility sector to keep using gas, this means that utilities would need to purchase offsets and this should be included in calculations.⁸⁷

Conversely, the OAG, LIUNA, Xcel, and CPE found that regulatory compliance costs were not sufficiently developed to be included as numerical inputs in utility modeling. LIUNA suggested the costs be discussed qualitatively and the OAG thought perhaps costs could inform the reasonable payback period that would be decided by the Commission. Ultimately, the OAG said that it may not be easy to find an accurate way to include such costs in a LEP model, though the OAG agreed that costs to meet energy savings goals are likely to increase.⁸⁸

6. New Ideas for Rate Cases and Ratepayer Protections

If the Commission did wish to update line extension policy, it could consider several options.

First, the existing discussions of policy in utility rate cases could be updated, as proposed by the OAG as well as CEE, Xcel, LIUNA, and Energy CENTS, filing together. Both groups included at least one question about how existing LEP is reasonable in light of state policy and the potential for stranded assets; however, the OAG focused more on the utility’s line allowance calculation methodology, including consideration of the balance of benefits between new and existing customers (**Decision Option 11**) while CEE et al. focused more on requiring the utility to make broad considerations for things like alignment of LEP with other State policies like ECO and NGIA and customer needs like affordability and job impacts (**Decision Option 12**).

Second, the OAG contemplated offering two types of protection for low-income customers. Utilities could extend the time allowed to pay a CIAC (**Decision Option 9**). The OAG explained, “There is precedent in Minnesota for allowing CIAC to be paid over the course of a few months. Currently, CenterPoint’s tariffs allow customers to pay for the cost of a gas main extension over the course of 90 days.”⁸⁹ The OAG also considered CIAC waivers for customers who demonstrate they cannot afford to connect to the gas system (**Decision Option 10**).⁹⁰

Third, when a new customer requires longer pipe than is offered by a utility’s “free” footage

⁸⁶ Fresh Energy and MCEA initial, citing Javelina at 9

⁸⁷ Fresh Energy and MCEA supplemental at 4

⁸⁸ OAG replies

⁸⁹ OAG initial at 43 citing CenterPoint Minnesota Rate Book, Section VI, Eleventh Revised Page 5, Replacing Tenth Revised Page 5.

⁹⁰ OAG initial comments at 43

allowance, the utilities have a set price the customer must pay for each additional foot of pipe needed (see Appendix A, Table A1 for the excess footage charges set by each utility). The OAG posited that the Commission could remove the cap for excess footage charges (**Decision Option 8**).⁹¹ Staff interprets this to mean the amount paid would equal the actual amount to serve that customer, beyond the free footage amount. MERC explained that it regularly updates those footage charges: “MERC’s tariff specifies that the incremental cost is based upon annually renegotiated rates via a competitive bidding process, and that incremental cost per foot is capped at \$6.00.” That being said, MERC stated that it “would be open to OAG’s recommendation of removal of the cap for incremental footage from MERC’s Tariff Sheet 9.04.” Removal of cost caps would also eliminate the need for an administrative process to update cap for overruns.⁹²

Finally, if utilities can waive CIAC payments or increase free footage, then, the OAG considered, low-income customers who are more sensitive to rate increases would be negatively impacted.⁹³ From 2020-2024, the OAG found that for 376 services and 11 mains over the footage allowance CPE did not assess a CIAC.⁹⁴ “Allowing utilities to essentially increase their free footage on an ad hoc basis, throws off this balance and unfairly burdens existing ratepayers.”⁹⁵ As such, there may be “potentially discriminatory application that depends on factors that are not stated in the tariff.”⁹⁶ Further, and as mentioned above, waiving CIAC serves to increase rate base. The OAG offered **Decision Option 7** that would prohibit additional CIAC waivers.

7. Methodology Updates May Decrease or Eliminate LEAs

The OAG acknowledged that its recommendations in **Decision Option 6** may significantly decrease the LEP allowance. “It is possible that the application of the OAG’s recommended modifications to calculate a reasonable ‘free footage’ allowance, along with a Commission determined reasonable payback period, would result in a utility offering no or very little free footage to new customers. In that case it may be appropriate to eliminate that utility’s free footage allowance.”⁹⁷

Fresh Energy and MCEA, referencing the Javelina report, proposed updating extension

⁹¹ OAG initial at 30, citing CenterPoint response to OAG Information Request 003, in 2024, CPE’s average cost per service line was nearer to \$18

⁹² MERC reply at 13

⁹³ OAG initial at 41

⁹⁴ OAG initial at 6 citing CenterPoint response to OAG Information Requests 003 and 004.

⁹⁵ OAG initial at 33

⁹⁶ OAG initial at 34

⁹⁷ OAG initial comments at 37, footnote 114

allowances to correct perceived deficiencies. Both found that utilities would offer much shorter free footage allowances, nearer to 10 feet and perhaps even shorter, considering environmental compliance and declining gas use as time progresses. To this extent, RMI noted that in considering line extension policies, the Massachusetts Department of Public Utilities (DPU) declined to update line extension calculations as the DPU did not need such granular calculations to know that retaining line extension allowances contravened climate policy.⁹⁸

IX. Potential Impacts from Modifications to Line Extension Allowances

Many comments focused on the various potential impacts of eliminating or shortening LEA. Many of these impacts also serve as commenters' arguments as to *why* LEA should be eliminated or maintained. The first argument focused on public health impacts.

Public Health

Several commenters highlighted negative health impacts of combusting natural gas to make the case for eliminating line extension allowances. MN350 Action, COPAL et al., and the American Lung Association provided research demonstrating that exposure to pollutants in natural gas – including nitrogen dioxide, methane, and benzene – has been linked to increased asthma rates in children and heightened cancer risk, as well as climate change.⁹⁹ COPAL et al. and the American Lung Association noted that these health impacts tend to disproportionately affect low-income and BIPOC communities.¹⁰⁰

COPAL et al. gathered testimony from Twin Cities residents about the negative health impacts of natural gas. A mother of two teenage boys who rents their home, suffers from asthma, and is often hit with a \$500 heating bill in the depths of winter, said that paying for other people's gas line extensions through her bills feels deeply unfair given its health impacts:

We don't deserve to keep paying for more harm. We're already paying enough—not just with money, but with our health. The big companies should be the ones covering those costs, not the families barely getting by. This is a chance to be more human—to prioritize people's health and lives, to create resources that help us make real change. We're not asking for luxuries. We just want clean air to breathe.¹⁰¹

Many members of the public urged the Commission to eliminate LEA to remove a known

⁹⁸ RMI supplemental at PDF p4

⁹⁹ Public Comment of MN350 Action, pp 1-2 as well as COPAL et al. Initial Comments, p. 8. The full results of the various air quality studies conducted by commenters are available on pp. 11-19.

¹⁰⁰ COPAL et al. Initial Comments, p. 6 as well as American Lung Association Initial Comments, p. 3

¹⁰¹ COPAL et al. Initial Comments, p. 16

source of indoor air pollution, one that leads to negative health outcomes. Members of the public voiced concerns for the safety of future generations: "I am deeply concerned about the impact of fossil fuels on our climate and health and the health of my grandchildren." - Sherri K. Members of the public also mentioned safety concerns result from gas use, like fires and accidents. Finally, as cautioned by one commenter, a college student, "health risks [from natural gas] occur predominately in under-privileged communities who largely come from BIPOC communities."

Further, commenters explained how vulnerable populations can experience a disproportionate level of exposure and thus negative impacts due to home situations that are often smaller, lacking in adequate ventilation, and have more people living in them and thus, cook more frequently.¹⁰²

CPE and Housing First Minnesota offered points in opposition to these public health concerns; specifically, that burning kerosene and solid fuels would be more dangerous than burning natural gas, that appliance standards effectively minimize the risks associated with burning natural gas, and that increased safety standards should be used to address public health risks, not this proceeding on line extension allowances.¹⁰³

COPAL also voiced concerns about the outdoor air pollution associated with the gas system. Commenters highlighted the pollution that may be concentrated outdoors when gas appliances are vented outside as well as the risk of gas leaks and explosions. In defense of the gas system, LIUNA argued that the electric system can also be dangerous and MERC explained that safety is a priority of the gas system and it is heavily regulated to ensure safety.

Housing

One set of commenters argued that line extension allowances have produced more housing across Minnesota by lowering upfront costs (MN Multi Housing). Thus, this group of commenters argued that removing line extensions would exacerbate housing shortages by increasing housing costs or by shifting costs from ratepayers to developers, and thus would prevent homes from being built in the first place. Commenters from cities in Greater MN said specifically that this area would be negatively impacted by reducing LEA. Without allowances, rural customers would have to pay for even longer lines than they already do, as homes are

¹⁰² COPAL et al. Initial Comments, p. 9

¹⁰³ Housing First MN in replies; CPE supplemental comments at 2, 12; according to the meta-analysis CPE cited, smoke from cooking using solid fuels or kerosene is worse compared to burning gas, considering adverse health impacts (at 12, citing <https://www.thelancet.com/action/showPdf?pii=S2213-2600%2823%2900427-7>) or other studies that found no association between gas use and adverse health impacts. The WHO study also concluded at 292, "However, given that our review has identified a small or modest increase in risk from use of gas compared with electricity for acute lower respiratory infections or pneumonia and chronic obstructive pulmonary disease (albeit from studies with methodological limitations), electricity might ultimately be the priority option for clean cooking when possible to effectively scale for exclusive use."

further from one another and infrastructure; in these areas, Greater MN argued that LEAs maintain affordability and equivalent costs across customer geographies.¹⁰⁴

In contrast, several groups argued that the impact to housing costs would not be as great as some commenters have argued. First, Fresh Energy and MCEA argued that line extension allowances are a cost recovery tool, not a housing market improvement tool. More, the parties argued that housing crisis already exists in the current line extension policy structure; therefore, the existence of allowances is not a mechanism to alleviate housing shortages.¹⁰⁵

Second, commenters questioned whether the cost of a line extension, about \$2,000, would meaningfully impact housing prices and therefore, limit access to housing.¹⁰⁶ Similarly, some commenters argued that the market sets housing costs, not construction costs.¹⁰⁷ However, Housing First Minnesota argued that "Market forces do not negate cost pass-through. If buyers cannot afford higher prices, projects are not built. That is exactly why Minnesota faces a shortage of starter homes."¹⁰⁸

Finally, some commenters stated that LEAs will mainly apply to new homes which are small portion of total housing stock. More, low and moderate-income customers are less likely to be building new homes and thus less likely to feel the impact of the increased cost if new customers were made to pay the full cost of a line extension.¹⁰⁹ Similarly, the OAG explained,

Where the line and main extensions are serving new housing developments, lowering the free footage allowance would likely increase the cost for developers to build new apartments. While the costs may be passed on to homeowners or renters in these developments, the relationship of the increase is not as direct.¹¹⁰

¹⁰⁴ Greater Minnesota Cities are a group of more than 110 cities outside the metro area and include Luverne, Winona, Grand Marais, Roseau, and East Grand Forks with the largest being Moorhead and Mankato.

¹⁰⁵ Fresh Energy and MCEA replies at 11

¹⁰⁶ CUB replies at 13-14; CEE initial at 11

¹⁰⁷ Fresh Energy and MCEA replies at 12 citing In the Matter of the Proposed Amendments to the Commission's Rules Regulating Gas Utilities, Colorado PUC Proceeding No. 21R-0449G. Post-Hearing Comments of Western Resource Advocates, Natural Resources Defense Council, and Southwest Energy Efficiency Project (Oct. 7, 2022) at 12-13. Available at https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=981843&p_session_id=

¹⁰⁸ Housing First Minnesota supplemental at 3

¹⁰⁹ Fresh Energy and MCEA supplemental at 10

¹¹⁰ OAG initial at 42

However, it is important to note that not all line extensions go to newly built homes. Some serve existing customers who switch from delivered fuels to gas. These data are not currently provided with gas service quality filings but could be requested. Presently, the Commission only knows that MERC put 31% of extensions to existing premises in 2023 as this information was included in MERC's required LEP study.¹¹¹

Workforce

Several representatives from the trade unions highlighted the strength of the unions, stating that working on the gas system provides local jobs and that membership in the trade unions has never been higher.¹¹² Because of the strength of the industry, the IUOE Local 49 equated ending the line extension allowance with putting an end to an industry and stated that doing so would not be supporting Minnesota workers and their families. Finally, IBEW locals 23, 160, and 949 underscored the importance of gas workers for continued investment in the safety of the gas system. The unions countered claims that gas workers could find new work on the electric system, as suggested by CURE, to be “offensive” and would ignore time spent investing in pipeline-related careers.¹¹³ Though not speaking to the potential loss of gas-related jobs, members of the public, Drew H., Emily R., and Aaron K., underscored the job creation and economic benefit to local communities that could come from expanding the use of renewable energy and investing in locally generated electricity.

From the perspective of commercial customers who rely on gas, the Minnesota Biofuels Association, Corn Growers Association, and Farm Bureau Federation explained that farmers have been largely switching from propane – the dominant fuel for drying grain – to natural gas. However, electric options do not perform as well and “for grain drying do not yet exist at-scale or at an economical price point.”¹¹⁴

Economic Competitiveness

CPE, GP, LIUNA, and the Coalition of Greater Minnesota Cities argued that homebuyers may choose to live in other states with lower housing costs if Minnesota were to eliminate gas line subsidies. Alternatively, as explained by the City of Brooklyn Park, without LEA the city may have to subsidize development costs. Further, the Minnesota Biofuels Association, Minnesota Corn Growers Association, and the Minnesota Farm Bureau Federation argued that the same could be true for business, sending business to neighboring states rather than Minnesota. For example, grocery and food processing businesses may choose to locate elsewhere and

¹¹¹ MERC Line Extension Policy study in Docket No. G011/GR-22-504 filed November 14, 2024 at 14-15

¹¹² LIUNA as well as Minnesota Pipe Trades Association

¹¹³ Minnesota Pipe Trades Association

¹¹⁴ Supplemental comments at 3

thereby create food deserts.¹¹⁵

The City of Minneapolis and Fresh Energy and MCEA countered these arguments by observing that some businesses may instead choose to locate in Minnesota precisely *because* of sustainability goals.¹¹⁶ The City of Minneapolis explained that line extension allowances are incompatible with city goals to electrify and move away from the use of geologic natural gas.

Customer Choice

Housing First Minnesota and the Minnesota Blue Flame Gas Association argued that removing line extension allowances restricts access to geologic natural gas and thus removes customer choice.¹¹⁷ The utilities underscored the point that customers want to choose gas, because utilities continue to get requests for new gas service. More, Xcel reasoned that customers seek the cheapest fuel, so line extension allowances should be preserved so that natural gas is available when customers choose it.¹¹⁸

The Department offered a counterpoint that when a developer builds a multi-family living complex, like an apartment building, where homes will be rented, those renters do not have the choice whether they will use gas versus another fuel.¹¹⁹ To this extent, some customers may want to electrify but may not be able to because they are renters. Advocates like COPAL emphasized a "clean energy transition" that is specifically electric, not gas. Public commenters gave examples of when they themselves have not gotten a choice in their energy source. For example, renters are beholden to the choices of their landlords or previous developers. One homeowner opined that he was limited by the training and practices of the contractor that he worked with:

They weren't interested [in renewable technologies] and one has to think that that was at least partly because they 'always' use fossil gas and didn't want to 'experiment' with a 'new' technology. Making the developer pay for extension of fossil gas lines and associated infrastructure might have made the other options more attractive and worth the risk.- David R.

MERC, Coalition of Greater MN Cities, Minnesota Multi Housing Association, LIUNA, GP, and Xcel provided another picture of customer choice, explaining that *if* natural gas were not an option for customers, *then* those customers would choose a more expensive and more

¹¹⁵ Minnesota Grocers Association in supplemental comments filed September 8, 2025.

¹¹⁶ Fresh Energy and MCEA supplemental comments

¹¹⁷ Housing First Minnesota supplemental comments at 3; MN Blue Flame Gas Association listed as public comment Greg O., August 29, 2025.

¹¹⁸ Xcel replies at 18

¹¹⁹ Department supplemental at 7

polluting delivered fuel, like propane, to meet their energy needs. If gas were not available, customers may also face higher up-front costs to electrify.¹²⁰

RMI countered these arguments with several points. First, the Massachusetts Department of Public Utilities (DPU) noted that instances of customers being forced to use delivered fuels were not supported by utility evidence and were rare instances. Second, some parties argued that electrifying space heating could significantly decrease bills for delivered fuel households.¹²¹

Lastly, the Department offered the alternative perspective that even in a dual fuel future, customers may continue to use delivered fuel, rather than natural gas, as their back up fuel. In some rural scenarios, it is currently uneconomical to expand gas, due to price / foot of pipe and declining throughput, so it may continue not to be cost effective for utilities to extend gas service and thus, using delivered fuels would be the practical choice.¹²²

Staff notes that throughout discussions of customer choice, economic competitiveness, and housing, commenters have included broader themes of equity between rural and urban customers. As rural customers live further from one another and potentially, from existing gas infrastructure, they would be more likely to need longer service line extensions.¹²³ This would mean higher CIAC payments and perhaps greater importance for free footage allowances to offset those larger connection costs. Xcel explained that for rural customers, LEAs provide equal access to gas for customers who live on periphery of urban or in rural areas.¹²⁴

Affordability

Discussions of affordability were contentious because parties argued different positions on whether LEAs decrease barriers to accessing natural gas, which was framed as a low-cost fuel, or increase the burden for low-income customers when line extension costs are subsidized across all rate payers.

The utilities and the Minnesota Blue Flame Gas Association argued that gas LEAs remove upfront cost barrier to accessing affordable heating.¹²⁵ The OAG and CEE agreed with

¹²⁰ MERC line extension policy study at 16

¹²¹ RMI supplemental at PDF p5; RMI modeled for rural families converting to space and water heat pumps saved \$550 annually or \$8,000 over the lifetime of an asset. AND ACEEE report at 9.

¹²² Department supplemental at 5.

¹²³ MERC LEP study at 12, average length of service line extension for urban 65ft vs 114ft for rural.

¹²⁴ Xcel replies at 3 and supplemental at 3.

¹²⁵ Xcel initial at 5-6; GP replies at 5; CPE initial at 2 and in replies.

statements that removing LEA may increase immediate costs for low-income customers.¹²⁶ The public comment of Jason W. also acknowledged that geologic natural gas is a cost-effective fuel.

Fresh Energy and MCEA offered the counterpoint

very few line extension subsidies actually go to low-income customers. For example, MERC's 2024 Line Extension Policy Study found that just 8% of extensions were to premises either previously or currently occupied by Low Income Home Energy Assistance Program (LIHEAP) customers. This figure likely overstates the share of current LIHEAP households that may be looking to connect to gas, since it includes past LIHEAP participants as well.¹²⁷

While some commenters argued that line extension allowances make gas service more affordable for new customers, other commenters like CURE and COPAL explained that socializing the cost of extensions burdens low-income customers. Further, many public commenters were concerned about the cost of line extensions for ratepayers, in general; Adam F. shared personal feelings of financial burden across all aspects of his life and the desire for affordable energy bills.

Xcel countered this argument by sharing the low cost of LEAs per customer,

the line extension allowance policy in effect spreads across all customers a portion of the cost of providing gas service to new customers, including low-income customers. As we note above...providing this benefit to new customers comes at an estimated cost to all of the Company's Minnesota residential customers of approximately 1 cent a month.¹²⁸

Consumer Protections

The utilities and LIUNA argued that line extension allowances should be maintained so that customers can remain connected to the protections offered by the regulated gas system and more, so that customers can receive assistance from programs like utilities' Gas Affordability Program (GAP). These protections are important whether customers heat with gas rather than electricity or move from delivered fuels to gas. Commenters like Rewiring America, Fresh Energy, and MCEA disputed this benefit because electric utilities also offer assistance programs that could benefit customers.

¹²⁶ OAG initial and CEE supplemental

¹²⁷ Fresh Energy and MCEA supplemental at 10 citing MERC reply comments at 32

¹²⁸ Xcel replies at 16

X. Staff Analysis

Table 2. summarizes commenters' main arguments. Staff presents arguments in favor of eliminating LEA on the left side and arguments to retain LEA on the right side. Arguments have been categorized; categories are shown in bold in the middle of the table. Arguments that could be considered both in favor of and against LEA are shown in the middle.

Table 2. Commenters' Main Arguments for Line Extension Allowances (LEA)

Eliminate LEA	Keep LEA
Behavior and Intention	
LEAs incentivize customers to join gas system; Removal would incentivize electrification	
~\$2,000 is not enough to influence behavior Eliminating is a fuel-neutral stance	
Viability of Electrification	
Minnesotan's heating needs can be met with electrification and heat pumps are cost-competitive to install and operate	Geologic natural gas costs less and is needed at the coldest winter temperatures when heat pumps still cannot fully meet needs
Dual Fuel Systems	
Electric heating with gas back up is most cost-effective decarbonization scenario	
A dual fuel future with gas is redundant as homes already have electricity and existing delivered fuels could be used as backup. A dual fuel future as imagined in the G21 report includes all-electric new construction.	Gas connections support a dual fuel future.
Gas Demand	
Gas demand will decrease and existing customers will leave the gas system.	Gas demand is consistent over last decade, and new customers are connected annually.
The Risk of Stranded Assets	
Stop expanding gas system; stranded assets may result if customers leave system and pipes are no longer used.	New pipes will be used, even if throughput decreases, for example, in a dual fuel future.
Public Health	
Burning gas causes negative health outcomes for the most vulnerable populations.	Address concerns by updating appliance standards. Gas is cleaner than other options like delivered fuels.
Housing	
The cost of extensions is minimal, relative to the cost of a new home. The market sets housing costs. LEAs mainly impact new homes.	Removing LEA would increase housing prices or cause homes not to be built thus worsening the housing crisis, especially in rural areas.
Workforce	
Workers on the gas system could re-train in other industries, including renewable	Eliminating LEAs would negatively impact the work available for unions.

energy.	
Economic Competitiveness	
Potential residential and commercial customers will choose Minnesota because of its sustainability goals.	Eliminating LEAs would increase prices, relative to other cities, so potential home and business owners would locate elsewhere.
Customer Choice	
Customers can still have gas, could retain delivered fuels as a backup, and in some instances, natural gas may not be feasible anyway.	Without LEAs, customers would be deprived of ability to choose gas and would be forced to choose delivered fuels or more expensive electrification.
Affordability	
LEAs can increase the burden for low-income customers when costs are shared across all rate payers.	LEAs can decrease barriers to accessing natural gas, a low-cost fuel.
Consumer Protections	
Electric system has bill assistance programs	Gas system has bill assistance programs

Ultimately, the issue before the Commission is, “What action(s), if any, should the Commission take to modify existing gas line extension policies for rate regulated gas utilities?”

Staff concludes with a final framing of the decision before the Commission as a financial issue, rather than a question of housing or environmental policy. As a financial issue, Staff believes it is reasonable to revisit the concept of line extension allowances. This is first because of the OAG’s contention that the balance of financial responsibilities between new and existing customers should be reviewed. Second, it is reasonable because of the Commission’s commitment to considering state policy goals in gas resource planning, initiatives like ECO and NGIA , aimed at reducing geologic natural gas throughput, and broad acknowledgement of the value of a dual-fuel future.¹²⁹ If consumption of natural gas may decline, the appropriate balance of financial responsibilities between new and existing customers could be examined.

Both financial concepts include expected new customer revenues; thus, if modified, either could address the balance between new and existing customers:

- The economic feasibility cost extension model of each utility that determines any necessary CIAC payment
- The free footage allowance granted to new, mainly residential, customers.

¹²⁹ Order Clarifying and Expanding Framework for Natural Gas Integrated Resource Planning issued October 28, 2024, in docket nos. G-008,G-002, G-011/CI-23-117 AND G-999/CI-21-565 at comprehensive requirements document paragraph 4., “The scope of integrated resource planning considers the State’s economy-wide greenhouse gas reduction statutory goals.”

The free footage allowance calculation methodology is not published in a utility's tariff like the extension models (for those models see Appendix A, Tables A3-A6). However, the free footage allowance has received the greater portion of examination in this record.

The free footage allowance was interrogated by the Javelina report (filed by Fresh Energy and MCEA) which found that utility calculations were overestimating new customer benefits and underestimating their cost. Javelina proposed new extension allowances that would correct perceived deficiencies. Their findings showed that utilities should offer much shorter free footage allowances, nearer to 10 feet and perhaps even shorter, when considering environmental compliance and declining gas use as time progresses.

Xcel countered the majority of Javelina's claims that calculations were incorrect, saying that appropriate values had been included. However, with respect to analyzing decreased energy use Xcel explained that while it uses build-specific data to project future usage, "system customers begin to see a benefit in year 4 [four] from new customers with typical line extensions. The Company believes it is a reasonable assumption that customers purchasing new construction homes will have new heating equipment which likely will maintain the same level of usage over this payback period."¹³⁰ Thus, Xcel does not model declining usage.

Mr. A. Twite authored the Javelina report; analyses from that report are similar to those undertaken by Mr. A. Twite with the OAG in recent Xcel rate case testimony. In Xcel's rate case, Mr. Twite explained that Xcel was overestimating the appropriate free footage allowance.¹³¹ Mr. Twite's recalculation removed harm to existing customers by reducing Xcel's free footage allowance. Xcel's test year revenue requirement was also reduced by \$7,075,103.¹³² The results are shown in **Table 3** and include the Net Present Value (NPV) expected to benefit or harm existing customers and the OAG's shorter proposed free footage allowance.

Table 3. Xcel and OAG free-footage allowance statistics

	Xcel Proposed	OAG Proposed
Main footage allowance	100	40.6
Service footage allowance	75	30.4
Total Capital Cost	\$2,745	\$1,797
NPV existing customer benefit/ harm	(\$1,287)	\$0

In a recent CPE rate case, the Clean Energy Organization's Mr. J. Dammel and Mr. R. Nelson

¹³⁰ Xcel replies at 9

¹³¹ Xcel Rate Case [download](#) Testimony of A. Twite Docket No. G-002/GR-21-678 filed August 30, 2022. At 47.

¹³² Xcel Rate Case [download](#) Testimony of A. Twite Docket No. G-002/GR-21-678 filed August 30, 2022, at 52-53.

responded to CPE’s proposal to reduce its free footage for mains to from 150 feet to 125 feet, so that existing customers would recover costs from new customers within six years.¹³³ Service lines were not under discussion.

Mr. Nelson questioned CPE’s explanation of the economic feasibility of extensions and argued that, like the OAG’s calculations discussed earlier in this briefing paper, time to recoup line extension costs from new customers would not take six years but instead, 18 years.¹³⁴ More, given the potential for declining gas use over time, rather than constant gas use over the full lifespan of an asset, recovery could take longer.

CPE explained that when calculating recovery, it meant only “the portion of the annual revenue requirement due to the new line extension,” which would be between \$368 to \$317 in years 1-6 following installation.¹³⁵ Non-gas revenues would be \$324/year for the full asset life; these include fixed and volumetric delivery charges that assume constant gas sales for 39 years but exclude the gas fuel cost.

According to the Company’s assumptions, if, by Year 6, annual non-gas revenues (\$324) exceed the annual revenue requirement attributable to the new line extensions (\$317) then “extension costs” will be “recovered,” even though the line extension assets will not be fully paid off until Year 18. The Company has clarified that “extension costs” refer only to “the revenue requirement from extending service” – a fraction of extension costs. The Company agrees that full recovery of extension costs would not occur until Year 18– a timespan that is also a substantial underestimate given the questionable assumption of constant gas sales.¹³⁶

Mr. Nelson ultimately recommended a reduction in free footage allowances that would align with CPE’s stated five-year recovery timetable (Table 4 reproduced by staff below).

Table 4. Recommended Free Footage Allowances by Testimony of Mr. Nelson in CPE Docket No. G-008/GR-21-435 Rate Case

	Allowable Footage	Cost
Main Line	40	\$283
Service Line	24	\$425

¹³³ Direct Testimony of Ron Nelson, Docket No. G-008/GR-21-435, February 7, 2022 at 23-24 citing Poppie Direct at 16-18, 25 and CPE response to CEO IR #12.

¹³⁴ Direct Testimony of Ron Nelson, Docket No. G-008/GR-21-435, February 7, 2022 at 24

¹³⁵ Direct Testimony of Ron Nelson, Docket No. G-008/GR-21-435, February 7, 2022 at 25

¹³⁶ Direct Testimony of Ron Nelson, Docket No. G-008/GR-21-435, February 7, 2022 at 26

Average Cost of Meter		\$392
TOTAL	64	\$1,101

Mr. Dammel showed that in 2019 and 2020, CPE spent \$17.8 and \$20.5 million on service and main line extensions; of this, CIAC payments covered 6.5 to 7.5% meaning that, Mr. Dammel reasoned, existing customers paid millions of dollars toward extending service.¹³⁷

Note, testimony of Ms. S. Peirce concluded that CPE had satisfactorily responded to the Commission's rate case question of appropriate cost and load justifications but did not comment on how the economic feasibility of service extensions should be determined.¹³⁸

The CPE rate case and testimony of Mr. Nelson underscore that not only can revenues and costs impact the balance between new and existing customers, so can the payback period. The payback period sets the parameters under which the new customer costs must equal revenues and thus provide benefit to existing customers. If revenues from new customers decreased, the free footage allowance and the time over which costs were paid back would also need to decrease OR the free footage allowance would stay the same but the time to pay back would need to increase, potentially approaching the lifespan of the asset.

Conclusion

Utilities rely on detailed formulas to determine the amount of "free" footage that should be allotted to new customers as well as the amount that should be charged to customers beyond that footage allowance as a CIAC. Commenters showed that there may be underestimated or missing variables from these formulas. Commenters also demonstrated the impacts of selecting one value over another to use in a formula, for example, the payback period discussion above. If the Commission is interested in modifying line extension allowance calculations, the OAG's **Decision Option 6** details components of a recalculation.

However, in reviewing the record concerning "methodology," Staff considers that numbers can be selected to reach several different conclusions, that sometimes the numbers selected can be done so deliberately to reach a favorable endpoint, and that the values selected can have large impacts on the output of calculations. Staff is concerned that there is a risk of introducing an over-complicated model into line extension policy, one over which groups may continuously argue who "got it right" or not. In this way, calculations related to line extension policy may become a search for a set of numbers that can offer an objective and unobjectionable conclusion about the appropriate number of free feet gas utilities can offer their customers. Staff reminds that the Commission found in favor of simplicity in 1995; more, staff brings up the example of the Value of Solar when the Commission, especially when

¹³⁷ Testimony of J. Dammel in Docket No. G-008/GR-21-435 filed Feb 7, 2022.

¹³⁸ Direct testimony of Susan L. Peirce, Dept. of Commerce, Feb 7, 2022, Docket No. G008/GR-21-435 at 7-13

considering avoided fuel costs, found in favor of a simple model.¹³⁹

As such, the Commission may find that the added complexity of including all variables commenters have recommended for consideration in free footage allowance calculations (e.g. externalities) does not adequately “prove” the value of line extension allowances and opts to make this policy decision based on the arguments above by selecting to either eliminate (**Decision Option 1**) or retain (**Decision Options 2-4**) allowances.

XI. Broader Considerations for the Gas System

In addition to arguments over the LEA policies, commenters also offered additional options to address the issues raised in this docket. These methods were not as fully developed in the current record but could be explored further in existing proceedings, as explained below.

ECO

CEE proposed a new ECO offering, focused on single-family homes, that could “drive the market toward the state’s emissions reduction and savings goal” (**Decision Option 15**).¹⁴⁰ The program represents a carrot approach, rewarding conservation measures, versus what may be seen as a punishment for developers, if LEA costs were to be eliminated and thus, passed onto developers. Highlights of the new program include:

- Requiring homes to achieve minimum energy savings of 10 percent better than Minnesota’s residential building code requirements.
- Requiring a heat pump, rather than central air conditioner, to improve cooling efficiency and to provide heat in shoulder seasons. At present, no gas utilities require a heat pump in their ECO program.
- No requirements for OR rebates contingent on installing gas appliances. This provision prevents gas utilities from disincentivizing the installation of electric appliances. CEE explained that CPE and MERC’s high-efficiency new construction programs cap rebates if a natural gas water heater is not installed.

¹³⁹ The Value of Solar (VOS) determined customer compensation by calculating the various costs the utility could avoid or defer because of the solar energy generated. In considering the avoided-fuel-cost component of the VOS, groups recommended more complicated but precise methods. “The Commission concluded that any increase in precision that may result from the proposed alternatives would not justify the likely reduction in transparency and accessibility.” Order Approving Xcel’s 2021 Value-of-Solar Rate issued March 9, 2021, in docket no. E-002/M-13-867 at 10. AND Order Terminating Investigation and Closing Docket issued March 31, 1995, in Docket No. G999/CI-90-563

¹⁴⁰ [download](#) CEE initial comments at 15

- Bonus rebates for homes that are better than code as measured by UA.¹⁴¹

Commenters arguing against CEE's proposed ECO program said that new homes already have stringent building codes and that ECO funding would be better spent on retrofits or efficient fuel switching (EFS) for rural customers.¹⁴² Later the joint commenters' supplemental comments expressed concern for a new ECO program that would exist "while continuing to allow for line extension allowances as this would effectively double down on ratepayer-funded incentives for gas expansion."¹⁴³ MERC and CPE opposed the new ECO program.

CPE had concerns with the proposed ECO program, including the following. See **Decision Option 15 E**.

- Heat pumps vs. Central air: CPE was concerned with effectively phasing out "equipment that qualifies as cost-effective and energy efficient" and a concurrent modification to the TRM [Technical Reference Manual].
- Increasing air source heat pumps (ASHPs): CPE provides EFS and is not opposed to ASHP but believes that requiring only ASHP could be a barrier to participation and result in "customer backsliding to less efficient options." CPE would favor a different policy approach to ASHP, like bonus incentives.
- Performance at 10% above building codes: as these codes continue to improve, a static goal would be continually more difficult to attain.¹⁴⁴

Staff mentions here that much time has passed since comments were submitted in this docket and as such, new ECO triennial plans will be filed shortly. The coming ECO triennial has a new efficient fuel switching incentive which may change motivation to offer programs like the one proposed by CEE. Also, the PUC does not have authority over which ECO programs get explored or implemented, but of course, the Commission certainly can express its opinion.

Establishing Decarbonization Benchmarks

CUB recommended the following:

To inform its future consideration of "regulatory and policy structures needed to meet or exceed Minnesota's greenhouse gas ('GHG') emissions reduction goals" in this docket, and to evaluate coming gas integrated resource plans, it would be

¹⁴¹ CEE initial at 16, The "U" is the U-value common in measuring building shell or window efficiency: the lower the U-value, the better the efficiency. The "A" represents the area of the building shell, so less surface area means less heating and cooling loss and therefore greater efficiency.

¹⁴² Fresh Energy & MCEA replies at 15 and supplemental at 11

¹⁴³ Supplemental comments filed by the Department of Commerce, Housing Finance Agency, and Pollution Control Agencies and various Minnesota organizations.

¹⁴⁴ CPE supplemental comments at 8

helpful for the Commission to have some measure of the pace at which the gas utilities must decarbonize in order to support achievement of net zero by 2050. CUB continues to believe that this complex question would benefit from stakeholder input and additional modeling, building on the analyses conducted in the G21 and Synapse studies. For this reason, CUB continues to recommend the Commission request that the Gas Utility Innovation Roundtable consider what decarbonization benchmarks the gas utility sector must meet to enable the state to reach its statutory net zero goal, and that GPI report on its process and conclusions to the Commission. We have spoken with GPI and understand they are amenable to this request.¹⁴⁵ **Decision Option 18.**

CPE recommended additional direction be given to the process if the Commission chose to establish decarbonization benchmarks (**Decision Option 19**) as well as to take a stance on intervenor compensation (**Decision Option 19 A – C**).

Staff first acknowledges the understanding and consensus building that have taken place at the Minnesota Gas Utilities Innovation Roundtable (MN GUIR) facilitated by the Great Plains Institute (GPI). Most recently, by working together, the MN GUIR produced and recommended to the Commission comprehensive proposals for Minnesota's first ever gas integrated resource plans (IRP). To date, the MN GUIR has not been funded by the Commission or utilities nor has the MN GUIR been limited to specific directions delegated by the Commission. Instead, GPI has considered Commission timelines and Orders when organizing the group's meetings. In recognition of past practice, Staff does not believe it would be necessary for the Commission to direct the MN GUIR's work. The record did not focus on decarbonization benchmarks but if the Commission felt sufficiently convinced that this topic, above others like the forthcoming Xcel gas IRP or others listed in the Commission's Order¹⁴⁶ should be discussed by the MN GUIR, it could signal that CUB's request should be considered by GPI.

Decommissioning

CURE recommended that all natural gas utilities be required to fully fund the decommissioning of their assets:

to date, natural gas utilities have not planned or prepared for the eventual cost of decommissioning this infrastructure. These gas utilities have neglected a core tenant of our society: those who make the mess must clean it up. Without requiring

¹⁴⁵ CUB supplemental comments at 14

¹⁴⁶ Order Establishing Framework for Natural Gas Utility Integrated Resource Planning issued March 27, 2024 in docket nos. G-008,G-002,G011/CI-23-117 AND G-999/CI-21-565, e.g., at ordering paragraph 56

utilities to account for decommissioning costs now, the Commission runs the risk of allowing natural gas utilities to take advantage of servicing existing needs without properly addressing the environmental and safety costs down the line.¹⁴⁷

Staff takes no position on the merits of a decommissioning fund but does not believe the issue was developed fully in the current record. If the Commission wishes to pursue this matter further, the record could be developed in additional comment periods in this docket or in individual rate cases.

Rate Design

CEE included research on and ultimately recommended the Commission consider the novel rate structure used by Énergir and Hydro-Québec (**Decision Option 17**). CEE explained,

Hydro-Quebec and Énergir will collaborate to convert 90 percent of Énergir's residential, commercial, and institutional customers who currently heat with natural gas to dual fuel systems. The dual fuel customers will heat their buildings with electricity except on the coldest days of the year, at which point their systems automatically switch to natural gas. As a result, the dual fuel customers only add load to the electric system outside of peak hours, avoiding a major increase to the system peak while still achieving necessary emission reduction targets. Due to the added capacity provided by Énergir's natural gas system, Hydro-Quebec avoids many of the costs it would face under a full electrification scenario. An innovative component of the dual fuel agreement is an annual payment from Hydro-Quebec to Énergir that partially compensates Énergir for the system benefits it provides to Hydro-Quebec.¹⁴⁸

Commission Staff has met with representatives from these utilities to understand their model. Staff notes that important differences exist between Minnesota and Énergir and Hydro-Québec. Ultimately, Staff sees merit of learning more about Énergir and Hydro-Québec to gauge the suitability of transferring portions of the utilities' model to Minnesota.

However, given the time that has passed since CEE's comments were submitted and when this issue is being heard by the Commission, it is not feasible to ask Xcel to pursue the topic in their July 1, 2026 gas IRP. Alternatively, the Order language in the IRP docket requires:

63. The Commission delegates authority to the Executive Secretary to begin a stakeholder process, followed by a notice of comment period in Docket No. G-999/CI-21-565, to consider changes to rates needed to maintain affordable and

¹⁴⁷ CURE replies at 19

¹⁴⁸ CEE replies at 11-12

equitable utility service.¹⁴⁹

The model would be an appropriate topic to consider when stakeholders address Ordering paragraph 63.

DECISION OPTIONS

I. Eliminate Line Extension Allowances

If selecting 1, the Commission need only consider 15-23.

1. Require that all regulated gas utilities eliminate line extension allowances. (Department of Commerce, Minnesota Housing Finance Agency, Minnesota Pollution Control Agency, American Council for an Energy Efficient Economy, American Lung Association in Minnesota, Ayada Leads, Building Decarbonization Coalition, CUB, City of Minneapolis, City of St. Paul, Community Power, Cooperative Energy Futures, COPAL, CURE, ELPC, Fresh Energy, Health Professionals for a Healthy Climate, Just Housing SBC, Midwest Building Decarbonization Coalition, Mn CEA, MN350 Action, MN IPL, MSR Design, Native Sun Community Power Development, NRDC, Yarrow Architecture, Resilient Cities & Communities, Rewiring America, Sierra Club, TE Studio Passive House Design, Unidos MN, Union of Concerned Scientists, and Dr. Curtis Norgaard, pediatrician)

II. Retain Line Extension Allowances

If not selecting 1, the Commission may choose from 2-4.

If selecting 2, stakeholders recommend also selecting 12-15 and 17)

2. For rate-regulated natural gas utilities that include footage allowances in line extension tariffs, establish maximum distances of 75 feet for service lines and 80 feet for mains as the portion of installation costs not charged to the customer, unless the utility demonstrates that a greater maximum distance is consistent with the public interest. (CEE, Xcel, LIUNA, and Energy CENTS Coalition), **OR**

If selecting 3, the OAG recommends also selecting 6, 7, and 11)

3. Continue to allow utilities to offer residential line and main extension allowances. (OAG; Housing First Minnesota; Minnesota Blue Flame Gas Association), **OR**
4. Any modifications to a gas utility's line extension policy, along with the topics and policy questions required in Docket No. G999/CI-90-563, should continue to be presented and addressed within a utility rate case. (Great Plains).

¹⁴⁹ Order Clarifying and Expanding Framework for Natural Gas Integrated Resource Planning. October 28, 2024 docket nos. G-008,G-002, G-011/CI-23-117 AND G-999/CI-21-565; comprehensive document at paragraph 63

III. Modify and Justify Tariffs and Allowance Calculation

5. Change the threshold for approval of line extensions from the current requirement that each line extension must be at least cost-neutral to customers, to a requirement that a utility's overall extension program be cost-neutral (LIUNA; Xcel wants more information on how cost neutrality would be demonstrated; MERC does not oppose).

Modify the Calculation that Justifies Main and Service Line Extension Allowances

6. No later than six months from the order in this docket, require utilities to file new line- and main-extension allowance justifications that set allowance amounts for residential customers that include the following assumptions: (OAG)
 - A. All costs to extend and provide service to new customers, including but not limited to:
 - i. Line- and main-extension costs per foot using the most recent available costs;
 - ii. The cost of a meter using the most recent available cost;
 - iii. Ongoing costs to provide service to new customers, including but not limited to
 - a. Per customer estimates of customer accounts expenses (FERC Account Nos. 901-910).
 - b. Per customer estimates of other system wide operations and maintenance costs;
 - B. Estimates of non-gas revenues based on a use per customer that accounts for either:
 - i. New building usage with declining usage beginning the year when a customer is likely to begin replacing any gas appliance with more efficient gas appliances or electric appliances;
 - ii. Average customer usage with declining usage beginning in year 1 or year 2.
 - C. A depreciation period that matches the utility's authorized depreciation period for service lines and mains in its most recently approved depreciation certification;
 - D. A payback period that ensures new customers pay back the full cost of the extension and that balances the interests of new and existing customers considering various public-interest factors, including but not limited to:

- i. the risk that an extension is not used and useful for its assumed depreciable life;
 - ii. the risk of receiving less revenues than assumed in the extension allowance justification;
 - iii. the interests of new consumers in accessing consumer protections and economic benefits offered by regulated natural gas service;
 - iv. the interests of existing and new low-income customers;
 - v. Minnesota's greenhouse gas emissions-reduction goals; and
 - vi. intergenerational inequities arising from current natural gas customers paying for benefits received by future natural gas customers.
7. Prohibit utilities from applying additional CIAC waivers beyond the standard free footage or main- and line-extension allowance for residential extensions. (OAG; Xcel supports)
 8. Remove the cap for excess footage charges (OAG; MERC does not oppose)

Low-Income Payment Options

9. Require utilities to allow customers to pay CIAC over the course of their first year of service. (OAG, MERC not opposed)
10. Require utilities to waive CIAC payments for customers who show they lack the ability to pay. (OAG, MERC not opposed)

Rate Case Discussions of Line Extension Tariffs

11. Following an initial reset of extension allowances in line with the above principles through compliance filings in this docket, utilities must review their extension allowance policies and file information about the following items either in each general rate case or [for a set period of time] in a notice and comment docket (OAG; Xcel supports or does not oppose all except where specified):
 - A. Whether the utility's free footage or service extension allowance included the majority of all new extensions with only the extremely long extensions requiring a CIAC.
 - B. Whether the utility's free footage or extension allowance ensures that existing customers will benefit from new customers' additions to the system within a reasonable time period. Utilities shall include a determination that:



- i. The assumed revenues from the new customer include a reasonable estimate of use per customer that accounts for potential declining customer usage from energy efficiency and electrification of heating and appliances. (Xcel opposes)
 - ii. All costs of serving the new customer are included in the calculation.
 - iii. The length of the payback period and the methodology used to calculate it are reasonable.
 - C. If offered, whether the utility's extension charge refund policy is appropriate.
 - D. Whether the utility's extension allowance should be measured in number of feet (i.e. free footage) or be based on an estimate of the customer's estimated usage (taking into account square footage, number of gas appliances, non-gas heating equipment, etc.).
 - E. Whether offering free footage or an extension allowance continues to be reasonable in light of current and forecasted gas-system utilization, advances in technology, state and federal policy, and risks to ratepayers of stranded assets or an overbuilt system, **OR**
12. Require that rate-regulated natural gas utilities filing a rate case or new or modified line extension tariffs demonstrate that the proposed tariff has considered the following (CEE, Xcel, LIUNA, and Energy CENTS Coalition):
- A. How does the tariff consider Minnesota's greenhouse gas emission reduction goals?
 - B. How does the tariff consider the utility's efforts and actions taken by the Commission and the Department in other proceedings, including but not limited to Gas Integrated Resource Plans, Natural Gas Innovation Act Plans, Energy Conservation and Optimization Plans, and other utility pilots, programs, and rate design offerings?
 - C. How does the tariff consider affordability and ratepayer protections related to both existing and new customers?
 - D. How does the tariff consider the differences in serving various customer types, such as whether service is being extended to new structures or existing structures without gas service?
 - E. How does the tariff consider the viability and affordability of alternative heating fuels?
 - F. How does the tariff consider economic development and local job impacts?

Additional Filings

13. Within 30 days of the Commission's Order, require all rate-regulated gas utilities to file a compliance filing with updated line extension tariffs reflecting the changes made through the Commission's decision in this matter. The compliance filing does not need to include new considerations for line extension tariffs approved by the Commission in this proceeding. (CEE, Xcel, LIUNA, and Energy CENTS Coalition)
14. Delegate authority to the Executive Secretary to, [at a relevant future date] in an appropriate docket or proceeding, issue a notice of comment period to consider modifications to the line extension considerations due to significant changes in Minnesota's policy or technology landscape. (CEE, Xcel, LIUNA, and Energy CENTS Coalition)

IV. The Gas System

ECO

The Commission can consider 15 and in doing so, can select any combination of A-C, but only one of D or E.

15. Require rate-regulated natural gas utilities that include a footage allowance in their line extension tariffs following the Commission's decision in this matter to file a new or amended single-family new construction ECO program with the Department that includes the components listed below. Utilities may include provisions in their filing to monitor the ongoing impact of these requirements and propose modifications if needed, consistent with ECO procedures and protocols. (CEE, Xcel, LIUNA, and Energy CENTS Coalition; staff modification to remove expired date)
 - A. Require participating homes to achieve minimum energy savings of at least 10 percent better than Minnesota's residential building code requirements.
 - B. Do not require installation of specific natural gas appliances to be eligible for the program and do not make rebate levels contingent on installation of specific natural gas appliances.
 - C. Provide a bonus rebate for homes with a UA threshold that is better than Minnesota's residential building code requirements.
 - D. Require installation of an air source or ground source heat pump in lieu of a central air conditioner to be eligible to participate in the program. (CEE, Xcel, LIUNA, and Energy CENTS Coalition), **OR**
 - E. Do not require installation of an air source heat pump in order to receive a new construction rebate (CPE)

16. Redirect incentives away from gas towards energy efficiency and weatherization, strategic electrification, and all-electric new construction. (Phius Alliance)

Rate Design Discussion

17. Xcel Energy shall review and evaluate dual fuel models, including the Hydro-Quebec Énergir model. In its first gas IRP due on July 1, 2026, Xcel Energy shall discuss potential implementation challenges and propose a next step, such as an analysis, roadmap, pilot, etc., toward considering greater collaboration and integration in dual fuel system planning in an area where the Company's electric and gas service territories overlap, or explain why the examined models lack applicability in Minnesota if necessary. (CEE, Xcel, LIUNA, and Energy CENTS Coalition)

Additional Analyses and Work with Stakeholders

18. Request the ongoing Gas Utility Innovation Roundtable, convened by the Great Plains Institute ("GPI"), develop benchmarks for gas utility decarbonization through 2050. (CUB; CPE opposed, preferred)
19. Delegate authority to the Executive Secretary to provide the Gas Utility Innovation Roundtable direction on meeting topics, the envisioned timeline, and preferred deliverables for discussion. (CPE, if 18 is selected though not preferred)
- A. Determine that participation in the Gas Utility Innovation Roundtable is eligible for participant compensation. **OR**
 - B. Determine that participation in the Gas Utility Innovation Roundtable is not eligible for participant compensation. **OR**
 - C. Defer any decision on whether participation in the Gas Utility Roundtable may be eligible for participant compensation until a request for compensation is received under Minn. Stat. § 216B.631.
20. Require an economic analysis on impacts to a variety of industries, sectors, and individuals in Minnesota by changes to natural gas policy, including fees for line extensions. (Minnesota Biofuels Association Minnesota Corn Growers Association Minnesota Farm Bureau Federation)
21. Request that participants in any future proceeding that could alter long-standing line-extension frameworks conduct Minnesota-specific analysis of technology performance, costs, and housing impacts. (Staff interpretation of Housing First Minnesota)
22. Require utilities in all resource planning and pilot proposals to include information to

allow explicit evaluation of housing affordability and supply impacts. (Staff interpretation of Housing First Minnesota)

23. Request that the Executive Secretary engage housing industry stakeholders directly in any future policy development affecting residential infrastructure. (Housing First Minnesota)

APPENDICES A-C

Appendix A. Existing Line Extension Policies for Minnesota Gas Utilities

Table Appendix A1. Current Free Footage Allowance Policies

Utility	Residential Services	Residential Main	Commercial Main and Services
CPE ¹⁵⁰	75 feet \$4/ft excess	100 feet \$3/ft excess	All C&I projects justified with formula in Table XX
GP	75 ft. Excess use formula in Table XX	100 ft. Excess use formula in Table XX	No difference to residential. Difference is firm v interruptible.
GMG	125 feet. Excess charged estimated material and contractor costs	0 ft. Extend if water and sewer connected. If needed for capacity. If projected annual gross margins (revenue – cost of gas) ≥ 18% of GMG’s projected project costs.	
MERC ¹⁵¹	75 feet. Not to exceed \$6/ft excess	0 ft. Use Customer Extension Model (CEM) for Main + Service	No allowance for C&I customers. Calculate with CEM shown in table XX.
Xcel ¹⁵²	75 feet. \$9.10/ft	80 feet. CIAC charged with REM for 81+ ft	Xcel funds amount justified by the anticipated annual revenue.

¹⁵⁰ CenterPoint Initial Comments, p. 3. For services, CenterPoint Energy Gas Rate Book, Section VI, Page 12, 5.10. For Mains, CenterPoint Energy Gas Rate Book, Section VI, Page 6, 4.06. Services measured from the property line or 105 feet from the center of the publicly dedicated street, alley, or utility easement, whichever is greater.

¹⁵¹ The actual per-foot installation cost is renegotiated annually through a competitive bidding process. When costs have exceeded cap, MERC requested that the Commission increase the cap: MERC requested cap increase from \$5.00 per foot to \$6.00 per foot in Docket No. G011/M-22-55, and currently has a request before the Commission in Docket No. G011/M-25-288 to increase the cap from \$6.00 per foot to \$7.00 per foot.

¹⁵² Xcel Energy Initial Comments, p. 3

	excess but waived if gas/electric installed jointly		CIAC for additional costs. No CIAC for mains and services if expected revenues > installation costs from previous year's averages for main, services, meter, & regulators.
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Table Appendix A2. Additional Policy Information

	CPE	MERC	Xcel	GP
Waivers for CIAC?	May refund if more customers added. May install gas mains or services without charge if CPE deems the anticipated revenue is sufficient.	No	Has not used for several years. May refund if more customers added.	May not charge CIAC if extension is cost justified using Maximum Allowable Investment or if project benefits all customers.
Meters Included in Extension Model?	?	Yes	Yes	No
New customers start to benefit existing customers	5 th year after extension made		By year four	

Table Appendix A3. Great Plain's Maximum Allowable Investment

GP	
LARR ensures revenue stream over the life of the project is sufficient to cover the annual revenue requirement over the life of the investment. ¹⁵³	
Annual 3 rd Year Revenue from Project	÷ Levelized Annual Revenue Requirement (LARR)
*Third year volumes are used in case it takes longer to get project in service.	LARR includes authorized rate of return, depreciation expense, O&M associated with mains and services, and taxes. Costs include the main extension, values, lines, cathodic protection equipment and any payments to accommodate the extension to transmission company.

Table Appendix A4. CPE's Customer Extension Model (CEM)

CPE
Economic Feasibility: consider total cost of serving the applicant and expected revenues. Used for all Commercial/Industrial main line extension projects and service line extensions.

¹⁵³ GP's Current LARR is 13.917% per rate case 19-511. This means a \$1,000 extension would need to generate at least \$139.17 in annual revenue.

Allowable investment = Annual gas margin / cost of service factor			
Annual Gas Margin =	basic charge + (delivery charge / therm)	X	estimated sales
Cost of service factor =	annual costs as percent of original investment	X	Net investment balance as percent of original investment
	depreciation, property taxes and pre-tax rate of return from rate case.		Original investment – (accumulated depreciation + accumulated deferred income taxes)

Table Appendix A5. MERC’s Customer Extension Model to determine revenue deficiency

MERC			
Economic Feasibility: total revenue requirement for each year of the average service life of the plant installed (less 75ft) vs. retail revenue generated from customer served (less CCRC)			
Net Present Value of revenue excess or deficiency calculated using discount rate equaling approved overall rate of return. If NPV = \$0, project is self-supporting.			
Project Revenue Requirement =	Allowed Return + Book Depreciation + O&M Expense + Property Tax		
Revenue Excess or Deficiency =	Retail Revenues – Total Revenue Requirement		
NPV of Excess or Deficiency	Use Discount Rate (the overall rate of return)		
If the Cumulative Cash Flows are not \$0 (i.e. negative, or a deficiency), a CIAC is assessed			
Retail Revenue =	various retail billing rates (basic charge and delivery charge) from rate case	X	expected average annual number of customers connected to project each year
Allowed Return =	Allowed rate of return from rate case	X	Average Rate Base
Book Depreciation =	Straight line. Cost of recovery of the life of assets for Gross Plant Investment		*Depreciation rate comes from most recent rate case
O&M	Average incremental cost / customer		*Includes incremental distribution and customer accounting expenses
Property Tax			*Gross plant investment, after CIAC, based on actual taxes paid
Additional CEM definitions			
Average ADIT = from taxes on depreciation and taxes on CIAC. Balance will be \$0 at end of service life.	Accumulated Depreciation Reserve = book depreciation for current year + all previous years		Net Plant in Service = difference between Gross Plant Investment and Accumulated Depreciation Reserve

*Formula provided in LEP Study; if a revenue deficit exists then, a CIAC is required. “Under

MERC’s current, Commission-approved CEM, the “breakeven” installed asset cost is \$3,070. Using the average residential installation cost per foot for new service lines from the 2023 Rate Cases of \$25.18, the computed “breakeven” footage is 122 feet (i.e. \$3,070 / \$25.18 = 121.9) (MERC LEP study at 26).”

Table Appendix A6. Xcel’s Residential Extension Model (REM) used to calculate CIAC

Xcel		
REM = total revenue requirement for each year of the book service life of the project vs. retail revenue*		
Revenue Requirement = required equity return + debt return + Book Depreciation + Deferred Income Tax + Income Tax** + Operating		
Net Present Value of any revenue deficiency will be used to calculate CIAC		
REM includes:		
Estimations of: <ul style="list-style-type: none"> • Average use in therms expected per customer • Capital costs for project 	Plant in Service Additions. Costs for pipeline interconnects, pressure regulating facilities, measurement and instrumentation, lateral delivery lines, distribution mains, mapping, customer service lines, meters, and regulators.	Operating costs. Transmission and distribution system O&M + customer accounting expenses, like meter reading.

*Includes 5% contingency factor for cost overruns. Escalation rate applied operating costs.

**Income Tax calculation formula =

$$[(T / [1-T]) * (\text{Customer provided CIAC} + [\text{Book depreciation} - \text{Tax depreciation}] + \text{Deferred Income Tax} + \text{Salvage})] + (T * \text{Equity Return})$$

T= Minnesota jurisdiction income tax rate established in the most recent gas general rate proceeding.

Appendix B. States that Eliminated or Modified LEAs

Staff has compiled references to other states into an annotated table for comparison, drawn from party comments.

Table Appendix B1. States that have modified or eliminated LEAs

State	By Commission Order (no highlight), <u>or</u> Legislature (grey highlight)
California	Decision 22-09-026 ¹⁵⁴ : Ended gas line extension allowances

¹⁵⁴ Fresh Energy Initial Comments, p. 5, referencing *Order Instituting Rulemaking Regarding Building Decarbonization*, Cal. PUC Rulemaking 19-01-011, Phase III DECISION ELIMINATING GAS LINE EXTENSION ALLOWANCE, TEN-YEAR REFUNDABLE PAYMENT OPTION, AND FIFTY PERCENT DISCOUNT PAYMENT OPTION UNDER GAS LINE EXTENSION RULES (Sept. 20, 2022), available at <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M496/K987/496987290.PDF>. Also referenced by COPAL et al. in Initial Comments, p. 6

	Decision Proposed Decision of Commissioner Houck (mailed 11/3/2023) ¹⁵⁵ Ended subsidies for electric line extension where new construction would use natural gas ¹⁵⁶
Colorado	Commission decision modified State's gas line extension allowances in 2022, legislature acted afterwards. ¹⁵⁷
Colorado	Code of Colorado Regulations (CCR) 723-4 ¹⁵⁸ : Directed utilities to update their line extension allowances to be solely paid for by the customer requesting interconnection. S.B. 23-291 ¹⁵⁹ : Ended gas line extension allowances.
Connecticut	Decision ¹⁶⁰ : Ended the System Expansion Program, which provided incentives (including line extension allowances) to new customers connecting to gas.
Illinois	Future of Gas docket may examine Line Extension Policy.
Maryland	Order On Stakeholder Proposals For Revision Of Gas Policy ¹⁶¹ Order in June

¹⁵⁵ Fresh Energy Initial Comments, p. 5, referencing *Order Instituting Rulemaking Regarding Building Decarbonization*, Cal. PUC Rulemaking 19-01-011, DECISION ELIMINATING ELECTRIC LINE EXTENSION SUBSIDIES FOR MIXED-FUEL NEW CONSTRUCTION AND SETTING REPORTING REQUIREMENTS (Nov 3, 2023), available at <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M521/K448/521448384.PDF>

¹⁵⁶ Fresh Energy MCEA initial at 5 citing CPUC Eliminates Last Remaining Utility Subsidies for New Construction of Buildings Using Natural Gas (Dec. 14, 2023), available at <https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-eliminates-last-remaining-utility-subsidies-for-new-construction-of-buildings-using-gas-2023>.

¹⁵⁷ Fresh Energy MCEA initial at 5 citing Amendments to Gas Rules Implementing SB 21-264 & HB 21-1238, Colo. PUC Docket 21R-0449G, Decision No. C22-0760 Commission Decision Adopting Rules (Dec. 1, 2022), available at https://www.dora.state.co.us/pls/efi/EFI_Search_UI.Show_Decision?p_session_id=&p_dec=29605.

¹⁵⁸ Fresh Energy Initial Comments, p. 5, referencing *Amendments to Gas Rules Implementing SB 21-264 & HB 21-1238*, Colo. PUC Docket 21R-0449G, Decision No. C22-0760 Commission Decision Adopting Rules (Dec. 1, 2022), available at https://www.dora.state.co.us/pls/efi/EFI_Search_UI.Show_Decision?p_session_id=&p_dec=29605 (Staff note: See Attachment A for redline and Attachment B for clean version of adopted changes to rules)

¹⁵⁹ Fresh Energy Initial Comments, p. 5, referencing S.B. 23-291, 74th Gen Assem., 1st Reg. Sess. (Co. 2023), available at <https://leg.colorado.gov/bills/sb23-291>. Also referenced by COPAL et al. in Initial Comments, p. 6

¹⁶⁰ Fresh Energy Initial Comments, p. 5, referencing *Petition of William Tong, Attorney General for the State of Connecticut, and the Office of Consumer Counsel for an Investigation Into Eversource Energy Regarding Gas Expansion Marketing*, Conn. PURA Docket No. 21-08-24, Decision (April 27, 2022), available at [https://www.dpuc.state.ct.us/dockcurr.nsf/4b3c728dd1c0d642852586db0069aa70/b09c5c63c09c2a25852588310054086c/\\$FILE/210824-04272_2.pdf](https://www.dpuc.state.ct.us/dockcurr.nsf/4b3c728dd1c0d642852586db0069aa70/b09c5c63c09c2a25852588310054086c/$FILE/210824-04272_2.pdf). Also referenced by COPAL et al. in Initial Comments, p. 6.

¹⁶¹ Fresh Energy Initial Comments, p. 6, referencing: *Petition of the Office of People's Counsel for Near-Term, Priority Actions and Comprehensive, Long-Term Planning for Maryland's Gas Companies*, Md. PSC Case No. 9707, Order No. 91683 Order on Stakeholder Proposals for Revision of Gas Policy (Jun. 13, 2025), available at https://opc.maryland.gov/Portals/0/Files/Publications/Others/2025061314347_Order_StakeholderProposals_970..pdf. See also *Maryland Public Service Commission, Maryland PSC Orders Revisions to Gas System Connection*

	<p>2025 in its Future of Gas proceeding eliminated gas line extension subsidies.</p> <p>“Legislation does not explicitly mandate net-zero requirements, nor does it call out specific benchmarks for the regulated gas utility sector.”¹⁶²</p>
Massachusetts	<p>DPU Order 20-80¹⁶³ created a regulatory framework for gas distribution utilities to meet MA’s net zero GHG emissions goals by 2050, and directed the companies to review their line extension policies.</p> <p>In a February 5, 2025 memorandum,¹⁶⁴ straw proposal to eliminate line extension allowances, with limited exceptions.</p> <p>Order DPU 20-80-E Aug 8, 2025 required utilities to file tariff language to implement straw proposal</p>
New York	Assembly Bill A8888 and Senate Bill S8417 ¹⁶⁵ will repeal the statewide “100 foot rule” for line extension
Oregon	<p>Order No. 24-359¹⁶⁶ In rate cases, PUC ordered Avista and NW Natural Gas to phase out LEAs on a gradual annual basis until \$0 by November 1, 2027.</p> <p>“Potential statutory compliance costs were one of the primary considerations cited by the Oregon Public Utilities Commission in its order eliminating</p>

Policies (June 13, 2025) available at https://www.psc.state.md.us/wp-content/uploads/MD-PSC-Orders - Changes-to-Gas-Connection-Policies_06132025.pdf

¹⁶² *Id.* Maryland Order pp. 8-9. Referenced in CUB’s initial comments in this docket at 20.

¹⁶³ Fresh Energy Initial Comments, p. 5, referencing: *Investigation by the Department of Public Utilities on its own Motion into the role of gas local distribution companies as the Commonwealth achieves its target 2050 climate goals*, Mass. Dept. of Public Utilities, Order 20-80 Order on Regulatory Principles and Framework (Dec. 6, 2023), available at <https://fileservice.eea.comacloud.net/V3.1.0/FileService.Api/file//iadhhaj?Kc28B1RUJcyf7TDOLT%20zteGFJ0ioKRMXdZYr4j7j/42qk9v9pxUxyG6LkaCeWBSjqbmMINqhcSkxPf0qUr1gASPKrYE1qeivebf677PtC%20VStUdHoHpEGELGLGjR+ZpYgt>. Also referenced by COPAL et al. in Initial Comments, p. 6.

¹⁶⁴ Fresh Energy Initial Comments, p.6, referencing *Investigation by the Department of Public Utilities on its Own Motion into the Role of Gas Local Distribution Companies as the Commonwealth Achieves its Target 2050 Climate Goals*, Docket No. D.P.U. 20-80-B, Hearing Officer Cargill’s Memorandum (Feb. 5, 2025) available at <https://fileservice.eea.comacloud.net/V3.1.0/FileService.Api/file//iadhhaj?Kc28B1RUJcyf7TDOLTzteGFJ0ioKRMXdZYr4j7j/42qk9v9pxUxyG6LkaCeWBSjqbmMINqhcSkxPf0qUr1gASPKrYE1qeivebf677PtCVStUdHoHpEGELGLGjR+ZpYgt>.

¹⁶⁵ Fresh Energy Initial Comments, p. 7, referencing: Alison F. Takemura, *New Yorkers to stop paying for other people’s gas hookups under new bill*, Canary Media (June 25, 2025) available at <https://www.canarymedia.com/articles/fossil-fuels/new-york-repeal-gas-hookup-incentive>. A

¹⁶⁶ Fresh Energy Initial Comments, p. 5, referencing *In the Matter of Northwest Natural Gas Company, dba NW Natural, Request for a General Rate Revision*, Or. PUC Docket No. UG 490, Order No. 24-359 (Oct. 25, 2024), available at <https://apps.puc.state.or.us/orders/2024ords/24-359.pdf>. Also referenced by COPAL et al. in Initial Comments, p. 6.

	Northwest Natural Gas' line extension subsidies." ¹⁶⁷
Washington	<p>Order 10/04 (Avista Rate Case)¹⁶⁸ ordered Avista to phase out its line extension allowances by January 1, 2025.</p> <p>Order 24/10¹⁶⁹ ordered the same for Puget Sound Energy.</p> <p>Order 05 ¹⁷⁰ordered Cascade Natural Gas Corp. to phase out its line extension allowances by March 1, 2027.</p>

LIUNA disagreed with looking to other states, “We do not tend to find the mere fact that a policy has been undertaken or is being considered in another state persuasive, under the general principle that if your best friend jumped off a bridge, it does not mean you should too. However, we consider these examples particularly unpersuasive.” More, “the Department provides absolutely no evidence that the very recent changes in Maryland and Oregon have produced any actual savings or other positive results for customers.”¹⁷¹ CPE and MERC agreed that neighboring states that are closer in climate (such as Michigan and Iowa, however, those states use different methods to calculate allowances) that have not eliminated LEAs.¹⁷² More, Xcel and MERC agreed that not enough time has passed to evaluate the impacts of LEA removal.¹⁷³

In response to arguments to avoid comparisons to other states, Fresh Energy and MCEA supplemental provided early evidence from those states suggesting elimination of LEA are

¹⁶⁷ Fresh Energy & MCEA supplemental at 6 citing Oregon Public Utilities Commission, [Order No. 24-359](#), October 25, 2024 at 10-12

¹⁶⁸ Fresh Energy Initial Comments, p. 7, referencing: *In the Matter of the Electric Service Reliability Reporting Plan of Avista Corporation d/b/a Avista Utilities*, Wash. Utilities and Transportation Commission Docket Nos. UE-220053, UG-220054, UE-210854, Final Order (Dec. 12, 2022) available at <https://apiproxy.utc.wa.gov/cases/GetDocument?docID=1433&year=2022&docketNumber=220053>. Also referenced by COPAL et al. in Initial Comments, p. 6.

¹⁶⁹ Fresh Energy Initial Comments, p. 7, referencing: *In the Matter of the Petition of Puget Sound Energy for an Order Authorizing Deferred Accounting Treatment for Puget Sound Energy's Share of Costs Associated with the Tacoma LNG Facility*, Wash. Utilities and Transportation Commission Docket Nos. UE-220066, UG-220067, UG-210918, Final Order (Dec. 22, 2022) available at <https://apiproxy.utc.wa.gov/cases/GetDocument?docID=3215&year=2022%20&docketNumber=220066>. Also referenced by COPAL et al. in Initial Comments, p. 6.

¹⁷⁰ Fresh Energy Initial Comments, p. 7, referencing: *Washington Utilities and Transportation Commission v. Cascade Natural Gas Corporation*, Wash. Utilities and Transportation Commission Docket No. UG-240008, Order 05 at 33-39 (Feb. 24, 2025) available at <https://apiproxy.utc.wa.gov/cases/GetDocument?docID=1043&year=2024&docketNumber=240008>.

¹⁷¹ LIUNA replies at 7

¹⁷² CenterPoint Initial Comments, pp. 9-10 AND MERC replies at 7

¹⁷³ Xcel Initial Comments, p. 7 AND MERC replies at 7

influencing decisions to build without gas.¹⁷⁴

V. Appendix C: Research Cited in the Record

Parties introduced various studies into the record throughout comments. Staff has compiled these studies in this appendix and organized by theme.

A. Gas Line Extension Policies

1. *Evaluation of Minnesota Investor-Owned Gas Utilities' Line Extension Subsidies, Javelina Energy (July 2025)*

Javelina was retained by Fresh Energy to examine Minnesota utilities' calculation of their line extension policies. Javelina reviewed the policies of CenterPoint, Xcel Gas, Great Plains, and MERC, and concluded that their flawed calculations overestimate the benefits of new customers and bias utilities' line extension calculations towards larger rate based subsidies and lower CIAC requirements. Javelina concluded that the utilities' calculations are flawed because they:

- Underestimate construction costs, See Javelina's Figure 2, labeled below as Table C1.

Table C1.

Figure 2, Minnesota investor-owned utility service line and distribution main cost comparison

	Cost used in utility calculations	Actual 2024 cost
CenterPoint Energy		
Service line	\$17.73 / foot	\$18.07 / foot
2" distribution main	\$7.08 / foot	\$35.24 / foot
Great Plains		
Service line	Not provided	Not provided
2" distribution main	\$15.33 / foot	\$34.66 / foot
MERC		
Service line	\$19.13 / foot ¹¹	\$30.64 / foot ¹²
2" Distribution main	Not provided	\$37.25 / foot
Xcel Energy		
Service line	\$9.10 / foot	\$21.38 / foot ¹³
2" Distribution main	\$12.09 / foot	\$96.02 / foot

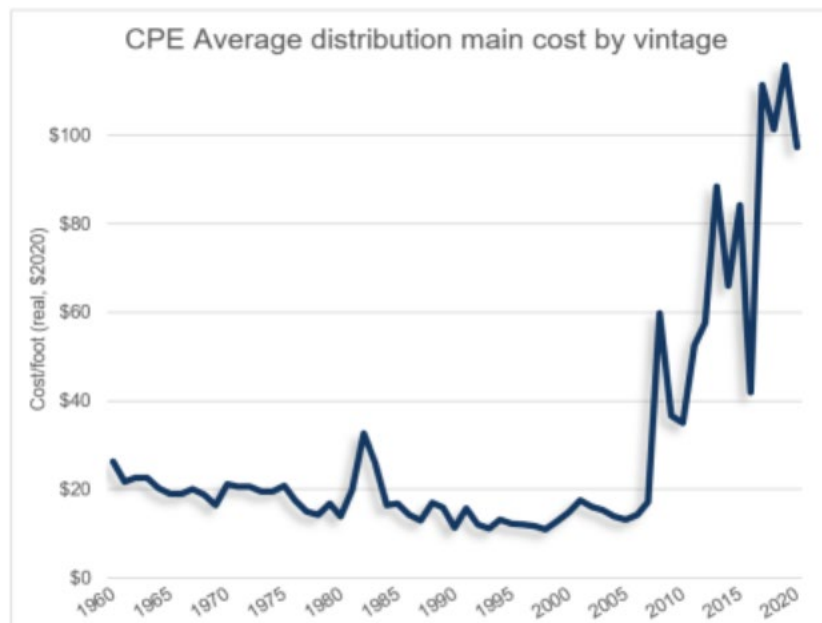
- Omit metering costs,
- Omit ongoing customer costs,
- Overestimate new customers' gas usage,
- Omit statutory compliance costs,

¹⁷⁴ Fresh Energy and MCEA supplemental at 12-13 citing RMI publication, Henchen, M & Dammel, J, Cutting These Subsidies Could Save States Millions of Dollars (August 2025), available at <https://rmi.org/cutting-gas-system-subsidies-could-save-states-millions-of-dollars/>.

- Assume unreasonably long time periods for cost recovery,
- Omit fixed labor costs, and
- Omit the capital costs of service line extensions for residential customers.

At the same time, Javelina pointed to evidence submitted by the OAG in a rate case that CenterPoint's calculation of connecting new customers has rapidly increased since 2008.

Figure Appendix C1. Minnesota OAG's Depiction of Distribution Main Installation Cost Increases, 1960-2020¹⁷⁵

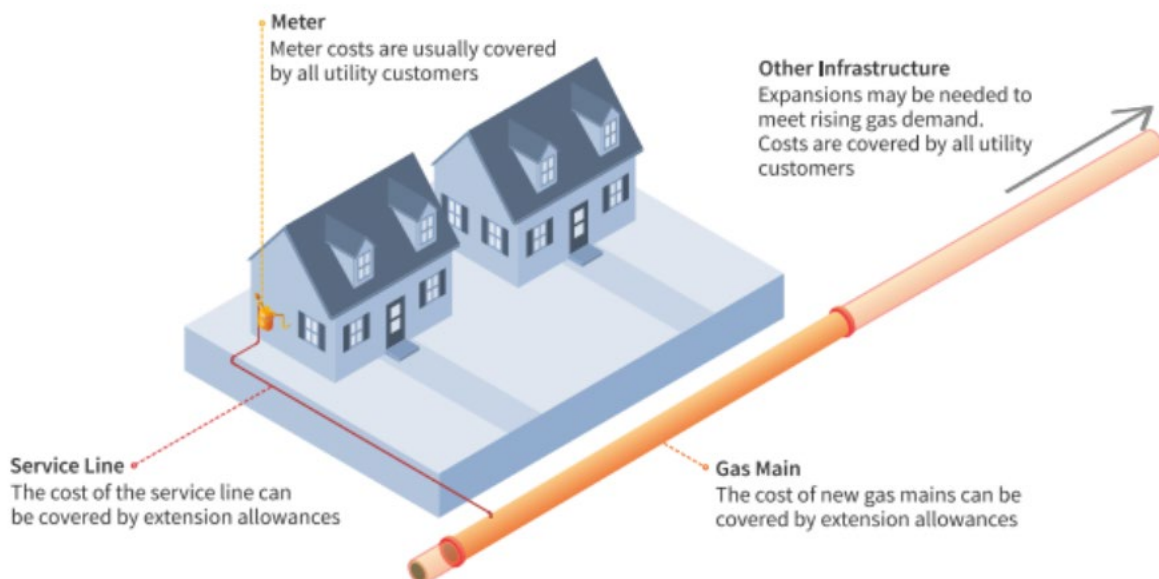


2. *Overextended: It's Time to Rethink Subsidized Gas Line Extensions*, [Rocky Mountain Institute \(December 2021\)](#)

RMI examined the underlying rationale for line extension allowances and pointed to the changing policy and energy landscapes as reasons to challenge the practice. RMI argued that line extension allowances unfairly shift the risk of stranded assets onto existing customers, and away from developers who might otherwise be incentivized to build with greater all-electric options. RMI also compared gas utilities' line extension policies to water utilities, which "typically place much of the capital burden of system expansion on new customers" by charging fees for new hookups, and not providing any line allowances. RMI concluded that states should end or reform gas line extension allowances, expand electric line allowances for carbon-free buildings, and evaluate the potential for line extension allowances for new carbon-free energy services (such as geothermal heating loops).

¹⁷⁵ *Evaluation of Minnesota Investor-Owned Gas Utilities' Line Extension Subsidies*, Javelina Energy (July 2025), at 4 (PDF p. 6).

Figure Appendix C2. Residential Gas Infrastructure



3. *From our Homes to Our Health: Indoor Air Quality Community Project, [COPAL \(2025\)](#) (begins p. 11)¹⁷⁶*

Between 2024 and 2025, Comunidades Organizando el Poder y la Acción Latina (COPAL) and Ayada Leads, in partnership with Fresh Energy, carried out a community-based indoor air quality study focused on homes located in Minnesota’s environmental justice communities. The organizations worked with eight families over eight weeks to install air quality monitors and capture data during typical cooking activities, and to compare results to electric stovetop cooking.

The study revealed consistently elevated indoor concentrations of NO₂, CO, CO₂, and VOCs associated with gas stove use for cooking, rivaling the places in the state with the highest outdoor pollution (including by I-35). Participants reported an improvement in asthma symptoms when avoiding gas stoves, a greater comfort with electric stovetops after use, and learning to open windows for better ventilation.

Participants also wrote testimonies, sharing the impacts of gas stoves on both their health and their wallets. One participant, Dulce de La Rosa, said she dreads the high gas bills that she’s come to expect in the winter:

“The ones benefiting from these gas expansions are the big companies, not us. For them, a \$500 bill means nothing. But for us, it pushes us further into poverty.”

¹⁷⁶ Submitted with Public Comment, Monse Perez Barrios (Wednesday, Jun 9, 2025)

Another participant, Wendy Zuniga, was unsettled at the level of air pollution found in her home, especially because of the impact on her children:

“Now, when I hear about utility companies wanting to build more gas line extensions, I can't help but feel we're going backward...And for what? More pollution? More health risks? It doesn't make sense.”

Francis Segovia, another participant, lives in a small home without good ventilation. Francis recounted having to rush a family member to the hospital because she suffers from severe asthma that seems to have worsened from years of cooking in a poorly ventilated, gas stove-powered kitchen. “The big gas companies want to keep expanding, but the costs are falling on us, the consumers.” Francis lamented. “Meanwhile, CEOs are making millions.”

B. Paths to Reducing Emissions in Space Heating

4. *Decarbonizing Minnesota's Natural Gas End Uses: Stakeholder Process Summary and Consensus Recommendations, [Great Plains Institute and Center for Energy and Environment \(July 2021\)](#) (“G21 Report”)¹⁷⁷*

This study explored pathways and potential solutions to drastically reduce or eliminate greenhouse gas emissions associated with natural gas usage in Minnesota. Between 2019-2021, Center for Energy and Environment and the Great Plains Institute convened stakeholders from government, climate, labor, and utility sectors to develop the findings and conclusions. The study examined three scenarios: high electrification, electrification with gas backup, and high decarbonized gas and green hydrogen for industrial power, all described in the table below. The study found that a dual-fuel future – where there was significant electrification in existing infrastructure with gas backup for the coldest days, and all-electric new construction – was likely to be the most affordable scenario way to achieve a drastic decrease in emissions.

5. *Minnesota Building Decarbonization Analysis: Equitable and cost-effective pathways toward net-zero emissions for homes and businesses, [Synapse Energy Economics, Inc \(June 2024\)](#).¹⁷⁸*

Synapse Energy Economics prepared a report for the Clean Heat Coalition to investigate the cost and emissions impact of fully electrifying heat in Minnesota, versus a dual-fuel future that maximizes RNG as an alternative to conventional natural gas. Synapse found that costs and emissions are most likely to be lower (by more than \$13 billion) if Minnesota fully electrifies heat. Like G21, the Synapse Study also identified concerns around future capacity of alternative low-carbon fuels, finding upper-bound projections result in only about 16 percent replacement capacity by 2040 of the natural gas currently used in Minnesota's

¹⁷⁷ Cited by CUB initial comments at 11; LIUNA initial comments at 1; Xcel initial at 5

¹⁷⁸ CUB initial comments at 14

residential and commercial sectors. Finally, the Synapse Study emphasized that, even under a high-decarbonized gas scenario, policy changes were needed to reduce current spending levels in gas infrastructure to mitigate critical affordability challenges.

6. *New Home Energy Cost Analysis, [CEE \(Date Unknown\)](#)*

CEE reported that it conducted an analysis on different single-family home types across Climate Zones 6 and 7 in Minnesota to compare performance under the current Minnesota residential energy building code to the new energy code currently under review by the Minnesota Department of Labor to evaluate the impacts of building design changes on home energy performance. CEE concluded that new, all-electric single family homes mostly achieve cost parity or savings in Xcel/CPE's service territory, but that homes in greater Minnesota would be more likely to be more expensive in the first year if all-electric. CEE noted factors such as Xcel's space heating rate likely influenced these results. CEE noted several limitations to its study, such as only a 1-year view, and excluding factors like upfront cost of mechanical equipment or the potential effect of all-electric homes on winter utility system peaks.

Table Appendix C2. First-Year Savings from Electric Home vs. Gas Home Under New Residential Energy Code (Negative Values Mean More Expensive)¹⁷⁹

House Type	Xcel-CPE (CZ6)	Dakota-MERC (CZ6)	RPU-MERC (CZ6)	MN Power-MERC (CZ7)
1	\$82	\$(190)	\$(108)	\$(314)
2	\$108	\$(196)	\$(109)	\$(319)
3	\$114	\$(213)	\$(117)	\$(369)
4	\$98	\$(362)	\$(224)	\$(571)
5	\$109	\$(419)	\$(262)	\$(645)
6	\$91	\$(160)	\$(82)	\$(273)
7	\$81	\$(250)	\$(151)	\$(396)
8	\$112	\$(326)	\$(196)	\$(539)

CEE argued through this study, and through limited surveys of equipment prices that all-electric equipment still tends to be more expensive than natural gas heating systems combined with a central air conditioning unit. CEE also reported that, based on conversations with contractors, it believes that contractors make decisions based not only on construction prices, but on customer perceptions that may influence the home price (e.g. that a natural gas heated home will be cheaper to operate).

“CEE is concerned that eliminating the free footage allowance in today's conditions will not meaningfully move the market toward electrification, and risks simply increasing costs to new customers without tangible benefit.”¹⁸⁰ However, staff notes that RMI contradicts CEE's

¹⁷⁹ CEE 7-8-25 Comments

¹⁸⁰ CEE 7-8-25 Comments at 15.

finding on equipment price with their building decarbonization prices study.

7. *The Economics of Electrifying Buildings: Residential New Construction*, [Rocky Mountain Institute \(December 2022\)](#)

RMI examined the economics of electrifying buildings in light of updated policies and construction costs across the U.S. In studying nine cities with various climate codes, RMI found that a mixed-fuel home with gas appliances would have higher upfront cost than an all-electric home that uses a heat pump for heating and cooling and has a heat pump water heater, induction stove, and electric dryer. RMI also found that mixed-fuel homes had higher average utility bills, particularly during gas price spikes. On cost-effectiveness, RMI found,

For newly constructed homes, heat pumps are usually the lowest-cost option, particularly since a heat pump provides both heating and air conditioning, and these homes avoid the cost of both furnaces and air conditioners. For retrofits of existing homes, heat pumps can be lower cost than replacing both furnace and air conditioner separately. For homes currently using natural gas heating and only needing to replace a gas furnace, it is usually more expensive to electrify than to stick with gas.¹⁸¹

Table Appendix C3. Upfront and Operating Cost Comparisons for Minnesota

	Total Upfront Cost	Annual Operating Cost
Mixed-Fuel Home	\$20,358	\$3,076
All-Electric Home	\$19,693	\$2,497

Cell shading only used for contrast between rows.

8. *Minneapolis 1–4 Unit Residential Weatherization and Electrification Roadmap*, [CEE \(February 2023\)](#)

CEE worked with the City of Minneapolis to develop a roadmap for decarbonizing 1-4 unit residential homes in order to meet the city's climate goals. CEE reviewed building stock, percentage of rental versus owned, and square footage, and explored three scenarios for decarbonization:

- 24. Full electrification including weatherization,
- 25. 50% of heating from heat pumps, and
- 26. 80% of heating from heat pumps with a 5 degree switchover temperature.

CEE concluded that, while full electrification can achieve the greatest emissions reductions, dual fuel options can still achieve significant reductions while costing less.

¹⁸¹ Text quoted from RMI report at 20. The report did not include the word "tax" so staff is working under the assumption that tax credits are not included in pricing.

9. *Report from Hydro-Quebec Distribution & Énergir in Response to Decarbonization Objectives For Building Heating in the 2030 Green Economy Plan, [Hydro-Quebec & Énergir \(September 2023\)](#)¹⁸²*

In Quebec, the electric utility Hydro Quebec and gas utility Énergir analyzed the best pathway for meeting the Quebec government's GHG emissions reductions targets for its building sector. The utilities targeted all customers under a certain amount of annual natural gas consumption (which resulted in a large majority of their customers), calculated the three-year average for natural gas consumption for those groups, estimated their contributions to space heating load, and used that data for two scenarios: dual fuel and full electrification. In the dual fuel scenario, customers would use electric heating equipment but switch over to natural gas at certain temperatures in order to avoid a major increase to electric system peak. The report had a similar conclusion to the G21 report, which was that, while greater emissions are achieved with full electrification, still-significant emissions reductions and reduced rate increases made the dual-fuel scenario more preferable.

The utilities also proposed a payment arrangement in which Hydro Quebec would compensate Énergir for the heating capacity and cost savings to Hydro Quebec for avoiding winter peaking, and this would change the rate impacts.

Table Appendix C4. Rate Impact Analysis for Three Scenarios

Utility	Full Electrification Scenario	Dual Fuel Scenario without GHG Contribution	Dual Fuel Scenario with GHG Contribution
Hydro-Quebec	3.0%	0.9%	1.4%
Énergir	5.0%	4.5%	0.9%

CEE noted that Quebec's dual fuel approach to decarbonizing space and water heating provides a possible pathway for achieving emission reduction goals while maintaining affordability for both electric and gas customers in a cold climate. However, CEE noted that the vast majority of Quebec homes *already* heat with electricity, and only a small amount with natural gas, unlike Minnesota. Hydro-Quebec also supplies the vast majority of electricity through carbon-free hydropower, and so the cost of building out Minnesota's carbon free electricity to serve this level of load will be much higher. However, CEE still concluded that this could provide a model to address recovery of gas infrastructure costs in the face of policies encouraging electrification of gas end uses.

¹⁸² CEE 8-9-25 Reply Comments at 11-23. Note that the original report is found here in French, and CEE used Google Translate to translate into English: *OFFRE D'HYDRO-QUÉBEC DISTRIBUTION ET D'ÉNERGIR EN RÉPONSE AUX OBJECTIFS DE DÉCARBONATION DU CHAUFFAGE DES BÂTIMENTS ÉNONCÉS DANS LE PLAN POUR UNE ÉCONOMIE VERTE 2030*, Hydro-Quebec & Énergir (September 2023), [R-4169-2021-B-0034-Demande-PieceRev-2021_12_08.pdf](#).

10. *Analysis of Potential Pathways to a Clean Energy Future in Illinois, McDermott, K.A. and Peterson, C.R. ([July 2025](#))*¹⁸³

This report, commissioned by the American Gas Association, attempted to develop a standard cost framework to evaluate different pathways for Illinois' clean energy by 2050 goal. The authors developed a cost forecast for a business-as-usual case, and compared it to:

27. 100% clean energy (including major electrification and alternative fuels)
28. Maximize progress toward clean energy targets by 2050 without using RNG subject to a 500 percent rate increase cap by 2050 on the total delivered price of natural gas to Illinois consumers ("Rate Cap – No RNG")
29. Maximize progress toward clean energy targets by 2050 with moderate use of RNG subject to a 500 percent rate increase cap by 2050 on the total delivered price of natural gas to Illinois consumers. ("Rate Cap – Moderate RNG")
30. Achieves emissions reductions approximately equivalent to Scenarios 2 and 3 based on decarbonization portfolios proposed by major gas utilities in New York. ("New York Model")

The authors concluded that the "Moderate RNG" scenario would be the most affordable solution.

Figure Appendix C3. Scenario Cost Comparisons

	<u>Rate Cap</u>			
	100% Clean Energy	No RNG	Moderate RNG	New York Model
Total Cost (Billion USD)	\$1,222	\$391	\$340	\$350
Total CO ₂ Reduction (million tons)	560	330	327	327
Cost per Ton CO ₂ reduction	\$1,855	\$607	\$455	\$483
Cost per Residential Customer	\$43,868	\$6,916	\$4,892	\$7,660

Results generated by Illinois Future of Gas model provided with this report. Total costs include total customer out of pocket costs, total rebate costs, and total electric and natural gas infrastructure costs of each scenario. Costs are measured in nominal dollars. Cost per residential customer equals the out-of-pocket costs to electrify housing units paid by consumers above the best alternative technology divided by the number of customers.

C. Natural Gas Utility Business Models and Ratepayer Impacts

11. *The Future of Gas Utilities Series: Transitioning Gas Utilities to a Decarbonized Future, Part 1 of 3, [Brattle \(August 2021\)](#)*

Brattle prepared a report arguing that traditional gas utility business models face increasing risk in the face of shifting environmental policy and customer behavior across the country, and that they likely need to better assess the risks and strategies to meet this transition. Brattle noted that heating electrification was outpacing gas growth across most of the

¹⁸³ MERC 8-8-25 Reply Comments

country even in 2019, and could eventually overtake gas as the main fuel for space heating. Brattle warned that this would ultimately stick a shrinking gas customer base with long-term infrastructure costs, leaving customers who are least able to afford or control their transition to electrification with higher and higher bills.

12. *Investor-Owned Utility Gas Distribution Capital Expenditures: A Study on the Potential Bill Impacts of Business-As-Usual Investment in Minnesota, [DHInfrastructure \(July 2023\)](#).*¹⁸⁴

Citizens Utility Board of Minnesota commissioned a study to examine the drivers, trajectory, and household bill impact of rising natural gas rates at Minnesota's three largest natural gas utilities. The researchers reviewed publicly available data to determine that infrastructure investments have tripled between 2013 (\$218 million) to 2022 (\$700 million), and raised a warning flag about the potential impact to ratepayers should these costs continue to increase at a similar rate.

The report also examined each of these companies' future investment projections delivered to investors, which show an expected increase in capital investments with return on equity, and no signs of the gas system not growing, all while the report found that Minnesota's gas utilities have a safer overall pipeline system compared to national averages. The report warned that, should the companies follow their stated capital investment plans but the gas rate base shrink due to electrification, a shrinking pool of ratepayers (likely the ones less able to afford/access electrification) would be left with higher and higher bills.

- iii. *North Star Policy Action's February 2024 analysis, [Building a Reliable System: The Role of Natural Gas in Minnesota's Clean Energy Transition](https://northstarpolicy.org/reliable-system/).* <https://northstarpolicy.org/reliable-system/>

LIUNA disputed the DHInfrastructure study and said showing overall capital costs distorts the actual percentage of costs that are related to line extensions. LIUNA explained that, "the cost of adding new customers is low compared to the cost of maintaining the system, and lower than the amount of revenue that new customers contribute over time."¹⁸⁵

This study largely served to challenge the assumptions and conclusions of the DHInfrastructure study commissioned by CUB on several fronts:

31. The study argued that the reason for utility capital spending growth is not simply the desire to increase revenue and shareholder returns, but by a national push by PHMSA to replace leak-prone pipelines.
32. The report claimed that the DHInfrastructure study used poor methodology (e.g. not adjusting for inflation, conflating spending in Texas and Minnesota, and arbitrarily

¹⁸⁴ CUB 7-8-25 Initial Comments at 15.

¹⁸⁵ LIUNA replies at 1-2

extending timeframes of certain growth projections), and therefore the analysis might have overestimated future gas system spending by hundreds of millions to billions.

33. The NorthStar report ultimately endorsed the G21 study process and conclusions, and pointed to the Public Utilities Commission's authority to set rates in a way that are fair and equitable as gas and electric uses shift.

D. Market Analysis

13. *Electricity Rates That Keep Bills Down After Electrification of Home Heating, [American Council for an Energy Efficient Economy \(April 2025\)](#)*

In this report, ACEEE studied the factors for containing electric bills when electrifying home heating. ACEEE simulated energy bills in four cold-climate U.S. states under different home heating electrification scenarios: Minnesota, Colorado, Maine, and Connecticut. ACEEE found that electrifying space heating has the potential to significantly decrease energy bills for households with delivered fuels, and to decrease energy bills more modestly for households on natural gas when paired with intentional rate design and energy efficiency. ACEEE found:

34. The best way to contain energy bill costs and incentivize heat pump adoption is to offer a heat pump-specific electricity rate, preferably alongside energy efficiency improvements.
35. A winter electricity discount is a key rate structure to ensure that energy bills do not increase in cold climates.
36. The more affordable that electricity is to customers overall, the more likely electrification and switching from fossil fuels will be.

*However, CenterPoint noted that the software that ACEEE used discloses "an uncertainty in energy-use intensity and cost of 3-6%, which is on par with the ~3% difference in gas-electric cost reported by ACEEE." However, CenterPoint did not cite the technical documentation for Staff to verify. CenterPoint also asserted that ACEEE used a higher natural gas usage assumption than CenterPoint had provided as its customer average.¹⁸⁶

14. *ASHRAE State of the Market Report, [Efficient Technology Accelerator \(August 2025\)](#)*

This report drew from surveys of contractors, training attendees, residential customers and more to assess the state of the heat pump market across the Midwest. Overall, the report found that most contractors have at least some experience with heat pumps, many hold a favorable opinion of heat pump technology, that contractors have a big impact on customer decisions regarding heat pumps, and contractors are talking to customers about heat pumps and including them in customer bids. In addition, the majority of contractors surveyed said that heat pump sales have increased, and anticipated that trend would continue in the next five years. The study also found that, for customers who have installed a heat pump in

¹⁸⁶ CPE replies at 3

Minnesota, overall satisfaction with purchasing, installing, and operating the heat pump is high. Finally, while cost was a major concern for most customers, utility rebates were crucial for customers to decide to purchase one. However, the study noted that there is still a high percentage of Minnesota homeowners who know little or nothing about heat pumps.