

**From:** [Lee Samelson](#)  
**To:** [Staff, CAO \(PUC\)](#)  
**Subject:** Commentary on Docket 23-215, CenterPoint Innovation Plan  
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Dear Executive Secretary Will Seuffert and members of the MN Public Utilities Commission,

I'd like to offer my comments on some of the [18 different pilot projects](#) that CenterPoint Energy proposed under its Natural Gas Innovation Act (NGIA) [Plan](#), Docket 23-215. The time has come for piloting approaches that make customer homes and businesses less reliant on fossil gas. I concur with the Citizens' Utility Board (CUB) and the City of Minneapolis that some of the pilot projects merit support and PUC approval (particularly Pilots L, N and I), and that other NGIA pilots should be opposed (Pilot P), with a more nuanced take on modifying Pilots A-D to be in the public interest.

(Note: I have embedded hyperlinks as sources throughout my comment and I really hope that they will be preserved to be in clickable format when my comments are published and that the system does automatically not remove the links by default)

Because CenterPoint customers will be asked to pay for the NGIA pilots through a rider on our utility bills, it is important that we avoid an Innovation Plan that commits customers to paying for diversionary solutions for decades.

In general, electrification of gas end uses, deep energy efficiency retrofits, electric air source heat pumps and networked geothermal are all needed solutions to reduce dependency on fossil gas (aka "natural" gas) which is now the largest source of greenhouse gas (GHG) emissions in Minneapolis (and still growing). I urge the MN PUC to support pilots in these areas so that we do not miss a huge opportunity to learn about applying important solutions. Specifically, I call for supporting:

**1) Electrification:** (Pilot L) is a proven pathway for reducing GHG emissions. There has already been a lot of study devoted to this including the [E 21 Report on Decarbonizing Gas End Uses](#), which compared the effectiveness of Renewable Natural Gas and Hydrogen with electrification and energy efficiency. Electrification would improve community and indoor air quality by eliminating gas end-use indoor sources of PM, NOx and CO pollution.

**2) Deep Energy Efficiency Retrofits with Electric Air Source Heat Pumps:** (Pilot N) holds the most promise for reducing GHG emissions & creating opportunities for participating customers to save money. Heat pumps work in all seasons, provide heating in the winter **and** cooling in the summer and are up to 300-400% efficient. There is more info on this in [the Clean Heat Fact Sheet](#). Clean heating, or more specifically moving gas customers over to electric heat pumps, is a growing movement. 25 governors, including Governor Walz, pledged back in September to install 30 million heat pumps by 2030. It is good to help people get air source heat pumps as quickly as we can because they could use it to plug into a networked

geothermal system later.

**3) Networked Geothermal / Thermal Energy Networks: (Pilot I)** is a healthy and promising solution for reducing emissions from heating and cooling. When a group of buildings share energy thermal loops, it reduces the marginal cost of each individual building switching to the heat pumps as described above, making it more accessible. Rather than methane, it involves pipes that carry ambient temperature liquid to transfer energy when and where it's needed. Ground Source heat pumps located in each building could use this energy for space and water heating and cooling.

This currently known solution needs to be scaled up quickly in order to accommodate electrification efforts. If we were to instead rely upon electric resistance heating for electrification, then we would have to overbuild far more new electricity generation than we would otherwise need to, something which would drastically raise electric bills.

That being said, this is a new technology which we need to learn more about. So, this is exactly the kind of scenario the NGIA was designed for.

One of the pilots that commenters such as the City of Minneapolis and Citizens Utility Board (CUB) **oppose is Pilot P, for Gas Heat Pumps**. It appears to be inconsistent with the spirit of the NGIA as well as state and local climate goals. Electric Air Source heat pumps are cheaper, more efficient and should therefore be encouraged instead.

To conclude this section, each of these 3 NGIA pilot projects (L, N and I) has a special synergy with each other. If everyone has a heat pump, then networking it into a system when the time comes makes sense. When someone does home energy efficiency improvements such as air sealing and insulation then it saves on cost and coordination to have electrification (such as induction stoves) and air source heat pumps come at the same time rather than operating in a different silo.

**Pilots A - D involving hydrogen and renewable gas must be structured very carefully so that they do not come at the expense of clean electricity and networked geothermal for homes and buildings.**

These projects involve CenterPoint blending Renewable Natural Gas (RNG) and Hydrogen (H2) into their existing gas distribution system [should be reserved for](#) dedicated industrial users as a way to decarbonize any hard-to-electrify industrial operations. Pilot A has been withdrawn for the moment, but the same lessons still apply for when CenterPoint brings it back. The City of Minneapolis only supports pilots B and C with conditions.

Both, H2 and RNG are currently limited in supply and would thereby [be an expensive procurement measure if put for widespread](#) residential and commercial use in a significant way. Furthermore, blending RNG and hydrogen into the gas distribution system does not reduce the harm to customers associated with combusting natural gas in buildings and competes with more appropriate uses of these currently limited resources.

What makes RNG worth exploring is that it is generally good to look for circular economy opportunities to capture a waste stream and turn it into a resource. Contracts under the Renewable Natural Gas Pilot should be evaluated to see if the source is reasonably cost-

effective in terms of life cycle GHG emissions reductions. Among the various feedstocks for RNG, [the Natural Resources Defense Council](#) is most supportive of wastewater and they also offer a review on some of the other options. A big reason why green hydrogen should be reserved for a dedicated industrial use is that hydrogen [is prone to leaking](#) in the current pipe system. Pilot D, which this is related to and is the one which the City of Minneapolis is the least supportive of, would need some way to mitigate safety and climate risks that it proposes.

In principle, the reason for undertaking pilot projects is to learn along the way about how to deploy a new technology, or a new financial mechanism for doing so. While it is good to err on the side of “let’s try it out and see how it works”, I have one chief overriding concern about the precedent that pilots A-D could set. CenterPoint’s proposal to add H2 and RNG to their existing gas system could serve as a greenwashed pretext for CenterPoint (and similar gas utilities) to keep investing in their gas distribution infrastructure. I am concerned if the logical conclusion of this path could lock us into relying upon climate-polluting methane gas as a primary fuel source for decades to come.

Networked geothermal, in contrast, would enable us to leverage avoided costs of gas system investment to make it a financially viable pathway for utilities.

## **Observations on how CenterPoint has interacted with the City of Minneapolis**

When the city of Minneapolis asked CenterPoint to contribute solutions to help meet the city’s climate goals in the Minneapolis Clean Energy Partnership space back in 2022 (prior to their NGIA filing in June of 2023), proposals to blend in RNG and H2 were the only alternatives that CenterPoint initially expressed eagerness for. This is understandable because CenterPoint gets guaranteed profits for making continued investments in their gas infrastructure in the same way that electric utilities do for adding new transmission and generation infrastructure.

More recently however, CenterPoint [did propose Networked Geothermal and a broader array of solutions to the Minneapolis Clean Energy Partnership](#) in response to NGIA requirements. Overall, as the City of Minneapolis echoes in their comments, CenterPoint should prioritize customer-facing benefits rather than relying on such procurement measures that will drive up costs for individual consumers without many opportunities for us to participate.

I have to add that Minneapolis City officials pressed CenterPoint to discontinue its use of Builders Club rewards at [the Clean Energy Partnership’s February 2023 meeting](#). While this may be beyond the official scope of the docket, I have to draw attention to offering kickbacks, points redeemable for free luxury vacations, sports tickets, and other perks to builders who install gas appliances as being clearly against the spirit of the Natural Gas Innovation Act. But CenterPoint has so far refused to abide by the City’s wishes, as their [‘Builders Club North’](#) webpage is still up.

This means CenterPoint is incentivizing further reliance on fossil gas (aka 'natural' gas) despite:

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Data that shows that electric options to be more efficient, [saves customers money](#), and better for our environment

- The [rising evidence of](#) the public health risks of gas stoves and furnaces
- Increasingly volatile gas prices
- CenterPoint's public commitments to help the City of Minneapolis achieve its climate and electrification efforts in the Minneapolis Clean Energy Partnership

To put this in larger context rather than singling out CenterPoint, an [expansive investigation recently published by the Guardian](#) uncovers a disturbing national story where dozens of US gas utilities are using extensive incentive programs to mold builders and contractors into becoming anti-electrification gatekeepers.

### **Important note regarding state statute to put the above comments into context:**

The NGIA state statute requires 50% of the first NGIA plan budget be dedicated to alternative fuels like RNG and Hydrogen. Unless the statute is amended, there is no real way all pilots regarding fuels like H2 and RNG could be opposed, so we have to make do with what we have for the time being. The NGIA statute also places a ceiling of 20% on how much can be used for district energy solutions which present a much more viable path for widespread basis. To make it the central focus on how gas utilities in Minnesota should innovate would be to essentially advocate for amending the statute, to unstack the playing field, which I believe is in SF 4760 and HF4423, is beyond what the MN Public Utilities Commission could do. That being said, intentional efforts should be made to explore how to direct H2 and RNG to dedicated industrial uses and avoid setting a precedent for deploying these niche fuels for widespread use in a way that comes at the expense of electrification, deep energy efficiency, electric heat pumps and networked geothermal.

### **Additional points in favor of Networked Geothermal**

Networked geothermal needs to start with one project doing it first then more people will get sold on it. If a building is over a certain size, then networked geothermal will pencil on day 1. If we can get someone to be the hub of a networked geothermal system, then the system could spread to other buildings nearby. What we need is a foresighted property developer who starts a networked geothermal hub either in one big downtown building renovation, some government building, or with the construction of a big building elsewhere. The Upper Harbor Terminal would be an example of an ideal place for this because the city of Minneapolis has site control. As more people will see a demonstration of networked geothermal then it is no longer pie-in-the-sky hypothetical. You can then introduce it to a neighbor who could also have the system and not heat and cool this building with gas. More developers get sold on the idea when they see the finances of networked geothermal pencils.

If someone builds the system, then it becomes easier to ask the later developers who are building more buildings nearby to join it as part of their projects. The big selling point that developers will hear and understand is that, “there is no risk in this project, you will save

money immediately on day one, and you will save even more money over time because the cost of renewables are more locked in than rising prices for fossil (natural) gas that CenterPoint can't control, and I can market my building as a green building that is better for our environment and nicer to live in.”

The heat pumps work really well most of the time for air conditioning, and for heating except for when it is really cold. This will mean people will only use their gas furnace during the coldest days of the year and all other days will be getting heating and cooling from low carbon sources. The nice thing about it is that if you have an air source heat pump then it could easily become a water source heat pump if we have the geothermal system. The heat pump technology itself does not care whether it is air or water. It can use either of those things. If those who have heat pumps can get themselves hooked up to networked geothermal then gas furnaces are no longer needed as backup. So then when we have the networked geothermal ready to go, it can be a water source heat pump not just an air source pump.

Thank you for considering my commentary,

Lee Samelson, Energy Democracy Staff for Community Power (comments are my own)