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Submitted via eDockets

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Re: *In the Matter of a Commission Investigation into a Fuel Life-Cycle Analysis Framework for Utility Compliance with Minnesota's Carbon-Free Standard,* Docket No. E-999/CI-24-352

Executive Secretary Bergman:

CURE submits these supplemental comments in response to two parties, and includes several attachments to assure a full record for the Commission's consideration.

1. **Saint Paul Co-Generation and District Energy St. Paul**[1]

St Paul Co-Generation and District Energy St. Paul (SPC) perform a necessary service, supplying heat to many large buildings in Saint Paul's downtown area. The Commission knows better than anyone that this type of thermal energy network needs to be updated and expanded,[2] and SPC's role will continue as a heat provider for many years to come regardless of the heat source. In the future this heat provider can provide that heat without burning biomass, and indeed will likely

[1] St. Paul Cogeneration, LLC and District Energy St. Paul Reply Comments, Aug. 20, 2025, eDockets No. 20258-222255-02.
[2] Minnesota Public Utilities Commission, Thermal Energy Network Deployment Work Group, https://mn.gov/puc/activities/economic-analysis/distributed-energy/stakeholders-resources/thermal-energy-network/ (last visited Sept. 17, 2025).

do so using geothermal heat pump technology, which is already deployed at scale in Minnesota in places like Carleton College[3] and by SPC itself.[4]

SPC's value as an electric provider is questionable at best.[5] There is no proof in this record or anywhere that a small plant such as SPC operates cannot be replaced with lots of clean renewable energy and storage – indeed, to run the heat pump technology that will be required, SPC's electric demands will go up and could easily be met with distributed solar generation. The fact that their current contract with Xcel bundles dirty biomass energy and renewable energy credits is merely a backwards-looking statement about how they did things before the carbon-free standard (CFS) was passed in 2023, but most policy in the state now would argue for SPC transitioning to clean renewable energy and clean heat. The gas industry should help fund this transition and expansion of the SPC thermal network.

It is incorrect to state, as SPC does, that the Commission cannot implement both the CFS 2035 standard and the eligible energy technologies standard for 2035 at the same time. Ninety percent is a larger number than 55 percent, so the Commission needs to apply both standards and one is more comprehensive than the other, but the law leaves open the possibility that some non-CFS-eligible energy resources operate in 2035 under the 10 percent of carbon intensive energy that is still allowed at that date. SPC's argument about the standards being inconsistent also ignores the existence of non-renewable carbon-free energy sources such as legacy nuclear power plants and potentially similar energy provided through net market purchases. As such this statutory interpretation is invalid because it is based on a false understanding of what carbon-free energy sources are available. Xcel gets far more energy from its nuclear power plants than it will ever receive from SPC.

It is categorically false that SPC's biomass burner is needed in the future to deal with wood waste. Indeed, there are businesses that are using urban wood waste to make high-value

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[3] U.S. Department of Energy, Carleton College: Steam to Hot Water District Energy Transition, https://betterbuildingssolutioncenter.energy.gov/solutions-at-a-glance/carleton-college-steam-hot-water-district-energy-transition (last visited Sept. 17, 2025).

[4] "The Heights Community Energy will own and operate the geothermal system under the direction of District Energy St. Paul, a long-standing nonprofit utility partner to the City of Saint Paul, and the Saint Paul Port Authority, owner and master developer of The Heights." City of St. Paul Press Release, *The Heights Awarded $4.7 Million for Geothermal Energy System* March 27, 2024, https://www.stpaul.gov/news/heights-awarded-47-million-geothermal-energy-system.

[5] While the plant claims to produce 55MW that is clearly very intermittent, because instead of the 482,130 MWh this would create as always-on baseload, the plant claims to provide 153,300 MWh (presumably annually). *See* Ever-Green Energy, St. Paul Cogeneration, https://www.ever-greenenergy.com/our-work/st-paul-cogeneration/ (last visited Sept. 17, 2025). This intermittent generation is only producing the equivalent of peak load for 32 percent of the time, which is an intermittent resource that could be replaced effectively with a large amount of solar generation and significant battery capacity.

products that create more jobs than burning biomass ever would.[6] Moreover, Minneapolis has a moonshot idea to take the same wood waste and make it into biochar.[7] Even if the biochar promises are significantly overblown,[8] its promise to store some of the carbon rather than emitting all of it as SPC does by burning it is significantly different and apparently better than the status quo of burning wood for electric heat. Minneapolis's biochar project still needs to be fully vetted, but it is a clear alternative to biomass burning that will gladly accept the wood waste that SPC currently destroys.

It is true that the carbon-free standard was meant to create a cleaner and healthier electric system, meaning operating at the status quo is simply not going to cut it. As a result, SPC will need to evolve and grow in order to provide clean heat to its customer base. If it would like to continue earning money from the electric market, it will likely also be able to provide electric power to Xcel using distributed solar and significant storage capacity. Far from being bad things, these are necessary improvements that will move SPC away from polluting technology and make it part of the clean energy future that it must join sooner rather than later. Its threats to convert the facility to burn only gas are merely another attempt to pretend that an older status quo will continue into the future, even as Minnesota's energy system moves away from gas to heat buildings.[9]

A counterfactual analysis of burning biomass must reckon with the fact that Minnesota policy has already shifted towards thermal energy networks running on clean heat pump technology, and that municipal and nonprofit entities have been incentivized by the Minnesota state government to build distributed solar resources. It is not correct or even logical to assume that "how we've done it" is the correct counterfactual when state policy has already changed and favors clean renewable energy and not burning waste.

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[6] MPCA, *Wood from the Hood turns downed trees into something good*, July 10, 2025, https://www.pca.state.mn.us/news-and-stories/wood-from-the-hood-turns-downed-trees-into-something-good.

[7] Susan Du, *Minneapolis is on the leading edge of biochar, a carbon sequestering material full of promise and still under research*, Star Tribune, July 14, 2024 https://www.startribune.com/minneapolis-is-on-the-leading-edge-of-biochar-a-carbon-sequestering-material-full-of-promise-and-still-under-research/600380658.

[8] As biochar proponents admit, their claims of biochar being a cure-all for a host of environmental ills is "obnoxious," which CURE substantially agrees with without endorsing the technology. *See id.*

[9] "Thermal Energy Network (or "TEN" for short) is as a project that provides heating and cooling to multiple buildings connected via underground piping containing fluids that, in concert with heat pumps, exchange thermal energy from the earth, underground or surface waters, wastewater, or other heat sources." Minnesota Public Utilities Commission, Thermal Energy Network Deployment Work Group, https://mn.gov/puc/activities/economic-analysis/distributed-energy/stakeholders-resources/thermal-energy-network/ (last visited Sept. 17, 2025).

CURE agrees that burning biomass is not a competitive energy source, and only works for SPC through subsidies granted by state government and through local governments providing it with artificially cheap fuel of dead boulevard trees. Studies of the biomass industry indicate that it does not break even without heavy subsidy.[10] SPC already benefits from the mass die-off of ash trees due to a once-in-a-lifetime crisis created by an invasive species. Creating a permanent standard based on a tree die off that will peak in 2028, notably before the 2040 deadline for full carbon-free compliance, is patently absurd. Applying SPC's permanent and uneconomic proposal to a much larger rural power plant would be disastrous, as the supply of wood would be impossible to collect affordably and consistent with good forestry practices. SPC's desire to maintain its current operating system for a handful of years is no reason to set a permanent state-wide standard regarding biomass that would harm rural communities and fail to achieve carbon-free energy as required by the legislature.

Economists and forestry researchers have found:

> The potential benefits of substituting biomass for coal to produce energy might be greatly exaggerated. Indeed, depending on the source of biomass and the perceived urgency with which society should mitigate climate change, using biomass to generate electricity might result in greater warming rather than less. . . .
>
> While electricity from biomass has merit in some cases, a nostalgic return to the past might also bring with it energy poverty, which many experienced in the past and still is the experience of many living in developing countries. Misguided policies to increase reliance on wood biomass for energy yield little if anything in the way of reduced CO_2 emissions.[11]

SPC's comment utterly fails to treat the issue of carbon emissions at the center of this docket with the seriousness that the carbon-free standard and the climate crisis require. Their anecdotal example from an urban setting, based on a glut of wood waste that is not assured to occur again,

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[10] Even researchers with a clearly stated intention to promote burning biomass can't make the numbers work out. *See* Robert M. Campbell, Nathaniel M. Anderson, *Comprehensive comparative economic evaluation of woody biomass energy from silvicultural fuel treatments*, 250 J. of Envt'l Management (2019) (finding that even with accounting for all imagined benefits of wildfire prevention and economic activity, biomass harvest an burning in a Colorado example would still have negative value in the tens of millions of dollars); *see also* Craig M.T. Johnston, G. Cornelis van Kooten, *Back to the past: Burning wood to save the globe*, 120 Ecological Economics p. 185-193 (2015) (observing that "Yet, trees take decades to recover the CO_2 released by burning, so assumed emissions neutrality (or near neutrality) implies that climate change is not considered an urgent matter.").

[11] Craig M.T. Johnston, G. Cornelis van Kooten, *Back to the past: Burning wood to save the globe*, 120 Ecological Economics p. 192 (2015). Attached to this comment as Attachment A.

should not be used to set permanent statewide policy. Instead, they should partner with utilities to convert their district energy system to a thermal energy network powered by clean renewable energy and storage.

2. Minnesota Municipal Power Agency[12]

The Minnesota Municipal Power Agency (MMPA) attempts to shoehorn a lifecycle analysis within the statutory language on partial compliance,[13] which nowhere discusses lifecycle analysis. It also makes much of "avoided methane emissions" outside of the energy industry[14] even though "avoided methane emissions" in other parts of the economy is entirely outside of the Commission's authority in statute. Nowhere in the industry comments on lifecycle analysis have any commenters explained how "methane" is "carbon dioxide" – which is in fact the explicit and scientifically clear language used by the legislature in the applicable law.

Partial compliance, which is defined in the applicable statute, is not an unlimited category including whatever industry wants to burn and offset against something else outside of the scope of the law. The legislature did not, for example, say that utilities could burn coal so long as someone in China traded in a gas-powered car in favor of taking an EV bus. Yet MMPA's comment would suggest that the Commission can offset any carbon dioxide emissions from utility electricity generation in Minnesota so long as there's an arguable concept of another non-specific greenhouse gas emission somewhere else that could be reduced. This is an impossible standard to apply and will require the Commission to engage in decades of lifecycle analysis dockets to stay on top of data proffered by utilities under the headings of "partial compliance" and "lifecycle analysis." All to allow the burning of things that emit carbon dioxide, in violation of the law.

CURE agrees with MMPA that it is arbitrary to apply a lifecycle analysis to some electric generating sources and not others.[15] The solution is to never open the door to a lifecycle analysis that violates the law, not to open the floodgates to this limitless concept of all-GHG all-industry offsetting in order to continue business as usual or even to increase the burning of carbon-heavy materials.

Conclusion

CURE continues to believe that the Commission should apply the statutory definition as written and not attempt to create a "carbon neutral" standard where none exists.

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[12] Minnesota Municipal Power Agency, Reply Comments, Aug. 20, 2025, eDockets No. 20258-222261-01.
[13] *Id.* at 2, 3.
[14] "These views fail to account for avoided methane emissions and the verifiable net benefits confirmed through life-cycle analysis." *Id.* at 3.
[15] *Id.* at 3.

CURE also is including attachments that illustrate the issue of biomass and the large scope of the issue if the Commission does not definitively define it as not being carbon-free in this docket. The years of investment in harmful projects (Attachment B) and potentially years of litigation (Attachment C) could be avoided by following the clear letter and intent of the law.

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