



117 South First Street • Montevideo, MN 56265

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April 2, 2025

Chair Frentz  
Senate Energy, Utilities, Environment, and Climate Committee  
Re: S.F. 2710

Chair Frentz and Committee Members,

CURE is a rurally based, non-profit organization dedicated to protecting and restoring resilient towns and landscapes by harnessing the power of the people who care about them. We appreciate the opportunity to testify in strong opposition to S.F. 2710.

In 2023, the legislature passed the 100% carbon-free law. The law explicitly states that “‘carbon-free’ means a technology that generates electricity without emitting carbon dioxide.” That language is not ambiguous. It is crystal clear. If a technology emits carbon dioxide in the process of generating electricity, it is not “carbon-free.”

Despite this, S.F. 2710 seeks to defy logic and science by declaring that “carbon-free” includes a method that by its very nature, *emits carbon*.<sup>1</sup> In comments to the Public Utilities Commission about how the Commission should interpret the unambiguous “carbon-free,” even the Minnesota Forest Industry acknowledged the reality that **“CO<sub>2</sub> is emitted when burning woody material.”**<sup>2</sup> The irrefutable fact is that the combustion of wood chips—or any biomass feedstock—emits carbon dioxide.

Beyond this, there are additional concerns that come with burning biomass. First, despite arguments from industry that biomass is “carbon neutral,” the reality is much more complex<sup>3</sup> and ample research has shown that the lifecycle emissions of CO<sub>2</sub> for forest biomass is often worse than the same amount of energy generated by fossil fuels, accounting for feedstock, the fossil fuel replaced, and the efficiency of combustion.<sup>4</sup> Additionally, detailed analyses have shown that biomass plants can emit greater amounts

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<sup>1</sup> For a primer on biomass energy, see *Biomass Energy Basics*, Partnership for Policy Integrity, <https://www.pfpi.net/biomass-basics/>. See also, CURE, MNIPL, & PFPI, Comment on PUC Docket Numbers E-999/CI-23-151, eDockets Document No. [20246-208145-01](https://www.pfpi.net/biomass-basics/).

<sup>2</sup> Minnesota Forest Industry, Comment on PUC Docket Numbers E-999/CI-23-151, eDockets Document No. [20246-207530-01](https://www.pfpi.net/biomass-basics/). The comment also notes that, “Carbon will still be emitted from biomass combustion.” Further, MFI recognizes the inescapable fact that “all wood, either used by humans or left naturally, eventually release that carbon back into the atmosphere through fire or decomposition.” Burning it in plants removes it from the landscape and doesn’t allow for any carbon storage through decomposition and retention in soil carbon.

<sup>3</sup> See, e.g., Craig Hanson & Janet Ranganathan, *Insider: Why Burning Trees for Energy Harms the Climate*, World Resources Institute, <https://www.wri.org/insights/insider-why-burning-trees-energy-harms-climate> (Dec. 6, 2017).

<sup>4</sup> Thomas Buchholz, et al., *A global meta-analysis of forest bioenergy greenhouse gas emission accounting studies*, GCB Bioenergy, (Mar 2016), <https://onlinelibrary.wiley.com/doi/10.1111/gcbb.12245>; Niclas Bentsen, et al., *Carbon debt and payback time – Lost in the forest?*, Renew. Sustain. Energy Rev, (Jun 2017), <https://www.sciencedirect.com/science/article/abs/pii/S1364032117302034>; John D. Stermann, et al., *Does replacing coal with wood lower CO<sub>2</sub> emissions? Dynamic lifecycle analysis of wood bioenergy*, Environmental Research Letters, Jan 18,



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of other pollutants, like nitrogen oxides, volatile organic compounds, particulate matter, and carbon monoxide, than coal plants generating the same amount of energy.<sup>5</sup> That this bill includes the catch-all “discarded wood products” is especially concerning, as this could allow for the combustion of treated lumber such as creosote railroad ties and other contaminated wood products, which produce additional toxic air pollutants.<sup>6</sup> Even just storing wood chips in large piles emits methane, carbon monoxide, carbon dioxide, and volatile hydrocarbons, and piles of chips meant for biomass also tend to spontaneously combust resulting in additional uncontrolled emissions and potential catastrophe.<sup>7</sup> Those living near biomass facilities are exposed to these additional emissions, as well as elevated dust levels and increased noise from truck and plant operations. That these facilities are often sited in low-income and minority communities that are already disproportionately burdened by pollution cannot be ignored either.<sup>8</sup>

Given the above, CURE encourages you to reject this bill.

/s/ Sarah Mooradian

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2018, <https://iopscience.iop.org/article/10.1088/1748-9326/aaa512>; Jerome Laganier, et al., *Range and uncertainties in estimating delays in greenhouse gas mitigation potential of forest bioenergy sourced from Canadian forests*, GCB Bioenergy (2017) 9, 358–369, <https://onlinelibrary.wiley.com/doi/epdf/10.1111/gcbb.12327>.

<sup>5</sup> Mary S. Booth, *Trees, Trash, and Toxics: How Biomass Energy Has Become the New Coal*, PFPI, <https://www.pfpi.net/wp-content/uploads/2014/04/PFPI-Biomass-is-the-New-Coal-April-2-2014.pdf> (Apr. 2, 2014).

<sup>6</sup> *Id.*

<sup>7</sup> Esa Alakoski et al., *From wood pellets to wood chips, risks of degradation and emissions from the storage of woody biomass – A short review*, Renewable and Sustainable Energy Reviews, Vol. 54, pp. 376-383 (February 2016), <https://doi.org/10.1016/j.rser.2015.10.021>.

<sup>8</sup> Duluth’s Hibbard Energy Center, for example, is a source of significant ongoing public health impacts. *See, Incorporating Health and Equity Metrics into the Minnesota Power 2021 Integrated Resource Plan*, Apr. 2022, Prepared by PSE Healthy Energy on Behalf of Fresh Energy, Minnesota Center for Environmental Advocacy, and the Sierra Club (available at <https://fresh-energy.org/wp-content/uploads/2022/04/Minnesota-Power-IRP-EquityAnalysis-Final-4.28.22.pdf>).