



March 31, 2025

Senator Nick A. Frentz  
Chair, Energy, Utilities, Environment, and Climate Committee  
Minnesota State Senate

**Re: S.F. 2710, An act relating to energy; amending the definition of "carbon-free"**

To Chair Frentz and Members of the Committee:

The Partnership for Policy Integrity (PFPI) is a science-based nonprofit organization that works nationally and internationally on issues related to forest biomass energy. Together with several Minnesota environmental organizations, PFPI submitted extensive comments last year to the Minnesota Public Utilities Commission on the treatment of woody biomass combustion in the newly-created Minnesota Carbon-Free standard. PFPI appreciates the opportunity to share our concerns about S.F.2710 with the Legislature.

**1) Burning wood is not carbon-free**

To begin with, the combustion of woody biomass is not carbon-free. Combustion of biomass – regardless of the feedstock – results in the emission of carbon dioxide. Because of their high moisture content, biomass feedstocks are inherently inefficient and typically emit more CO<sub>2</sub> (and also harmful co-pollutants) per unit energy generated than their fossil fuel counterparts. In fact, wood-burning power plants generate roughly 50% more CO<sub>2</sub> out the stack than coal plants per megawatt hour.

**2) Adding biomass to the carbon-free definition undermines the statute's goals**

The purpose of Minnesota's carbon-free law is to eliminate carbon emissions from the electricity sector. Changing the definition of "carbon-free" to allow carbon-emitting biomass power plants to qualify makes a mockery of this law and will significantly undermine its intent.

**3) Burning wood wastes is neither carbon-free nor "carbon neutral"**

S.F.2710 assumes that burning wood wastes is "carbon neutral," in other words, that the CO<sub>2</sub> emissions from burning wood wastes will be absorbed by new tree growth. But this does not happen instantaneously – it can take many decades to over a century for trees to grow back. Even if only "limbs, branches, and other by-products of timber harvesting operations" are burned, the CO<sub>2</sub> emissions from bioenergy are still net additive to the atmosphere for decades, and thus cannot be construed as "carbon neutral" within a climate-relevant

timeframe.<sup>1</sup> Scientists from the Canadian Forest Service found that burning harvest residues instead of natural gas to generate electricity results in a carbon debt of over 100 years.<sup>2</sup>

#### **4) Discarded wood products contain hazardous materials**

S.F.2710 also allows “discarded wood products” to qualify as carbon-free fuels. This introduces a significant risk of additional hazardous air pollution, since this would allow for chemically treated lumber, such as creosote railroad ties, and construction and demolition waste, including painted wood, to be burned. Biomass power plants are already a significant source of harmful air pollution; allowing contaminated wood to be burned adds to the health impacts for surrounding communities.

#### **5) Biomass energy is extremely costly to ratepayers**

The average levelized cost of electricity from biomass in the US is more than twice that of on-shore wind, natural gas, geothermal, or stand-alone solar.<sup>3</sup> Ratepayers should not be forced to subsidize power that is highly polluting, extremely expensive, and does not advance Minnesota’s goal to reduce carbon emissions.

#### **6) This legislation is premature**

The Minnesota Public Utilities Commission has ordered a new docket to address, among other things, whether biomass should be eligible as a fully or partially carbon-free generation resource based on a fuel life-cycle analysis. The Commission notes in its Nov. 7, 2024 order that this is “the most reasonable course of action” and that the process, which will conclude December 31, 2025, “will aid successful implementation of the statute in a manner consistent with legislative policy goals and the public.”

For all of the above reasons, PFPI urges the Committee to vote no on S.F.2710. Thank you for the opportunity to submit written testimony.

Sincerely,



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<sup>1</sup> Mary S. Booth, Not carbon neutral: Assessing the net emissions impact of residues burned for bioenergy. *Environmental Research Letters* (Feb. 21, 2018), <https://iopscience.iop.org/article/10.1088/1748-9326/aaac88>.

<sup>2</sup> 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>3</sup> U.S. Energy Information Administration, Levelized Costs of New Generation Resources in the Annual Energy Outlook 2022, March 2022, Table 1b, at [https://www.eia.gov/outlooks/aeo/pdf/electricity\\_generation.pdf](https://www.eia.gov/outlooks/aeo/pdf/electricity_generation.pdf).