American Forest & Paper Association

September 17, 2025

Mike Bull
Acting Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

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-999/24-352

The American Forest & Paper Association (AF&PA) appreciates the opportunity to file supplementary comments on the Minnesota Public Utilities Commission's (Commission's) investigation into a fuel life-cycle analysis framework for utility compliance with Minnesota's carbon free standard.

Executive Summary

We would like to highlight the following key points:

- We appreciate the Minnesota Department of Commerce (Department) and Minnesota Pollution Control Agency (MPCA) recommendation that "waste biomass" from forest products manufacturing be eligible for compliance under the Carbon Free Standard.

- As the Commission considers greenhouse gas quantification (GHG) methodologies, we recommend the Commission rely on existing LCAs that demonstrate the production of bioelectricity from forest products manufacturing bioenergy feedstocks at pulp, paper and wood products mills meets the carbon-free standard.

I. Introduction

The American Forest & Paper Association (AF&PA) serves to advance public policies that foster economic growth, job creation and global competitiveness for a vital sector that makes the essential paper and packaging products Americans use every day. The U.S. forest products industry employs more than 925,000 people, largely in rural America, and is among the top 10 manufacturing sector employers in 44 states. Our industry accounts for approximately 4.7% of the total U.S. manufacturing GDP, manufacturing more than $435 billion in products annually. AF&PA member companies are significant producers and users of renewable biomass energy and are committed to making sustainable products for a sustainable future through the industry's decades-long initiative — *Better Practices, Better Planet 2030*.

II. Background on the Commission's Request for Comment and Previous Comments Submitted by AF&PA

Through Commission Docket Nos. 23-151 and 24-352, the Commission has been considering implementation of a carbon-free standard enacted under a 2023 law revising Minnesota's renewable portfolio standard.[1] In 2024, AF&PA filed initial comments[2] and reply comments[3] in response to Docket No. 23-151. We incorporate these comments by reference and request that our prior comments and those herein be considered by the Commission in its implementation of the carbon free standard.

III. AF&PA Appreciates the Minnesota Department of Commerce and Minnesota Pollution Control Agency Recommendation that "Waste Biomass" from Forest Products Manufacturing Be Eligible for Compliance under the Carbon Free Standard

AF&PA appreciates the position presented in Department's and MPCA's joint comments and the Department's comments supporting the eligibility of biomass from forest products manufacturing for compliance under the carbon free standard.[4]

The paper and wood products industry uses every part of the tree responsibly to make essential and innovative products for everyday life. Manufacturing residuals, like tree bark and liquid bioenergy extracted during the pulping process, are used to make carbon beneficial bioenergy to power our mills. If not used for energy, manufacturing residuals could be wasted and emit greenhouse gases such as methane with much greater global warming potential (GWP). In addition, this bioenergy displaces the need for fossil fuel-based energy and may be consumed onsite or sold to the electricity grid.

The Department and MPCA comments and Department comments correctly classify residuals from forest products manufacturing as "waste biomass" versus "primary biomass".[5] This distinction reflects the forest products industry's use of manufacturing residuals for energy, ensuring "less GHG than the alternative disposal method".[6]

IV. As the Commission Considers GHG Methodologies, We Recommend the Commission Rely on Existing LCAs that Demonstrate the Production of Bioelectricity from Forest

[1] Minn. Stat. § 216B.1691.

[2] American Forest & Paper Association, Comments in the Matter of an Investigation into Implementing Changes to the Renewable Energy Standard and the Newly Created Carbon-Free Standard under Minn. Stat. § 216B.1691, Docket No. E-999/CI-23-151 (June 28, 2024).

[3] American Forest & Paper Association, Reply Comments in the Matter of an Investigation into Implementing Changes to the Renewable Energy Standard and the Newly Created Carbon-Free Standard under Minn. Stat. § 216B.1691, Docket No. E-999/CI-23-151 (Sept. 19, 2024).

[4] Minnesota Pollution Control Agency (MPCA) and the Minnesota Department of Commerce (Department), Comments 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 at pp. 12, App. A (June 5, 2025). Department Comments 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 at pp. 10, App. A (Aug. 20, 2025).

[5] Id.

[6] Id.

Products Manufacturing Bioenergy Feedstocks at Pulp, Paper and Wood Products Mills Meets the Carbon-Free Standard.

As the Commission considers greenhouse gas quantification (GHG) methodologies, we recommend the Commission rely on existing LCAs that demonstrate the production of bioelectricity from forest products manufacturing bioenergy feedstocks at pulp, paper and wood products mills meets the carbon-free standard.[7] This position is supported by overwhelming scientific evidence affirming the carbon neutrality of the forest products industry's use of biomass. To support this, AF&PA highlights the following scientific literature referenced in our initial comments on the docket:

- An extensive, peer-reviewed study by the National Council for Air and Stream Improvement shows that, each year, the bioenergy produced from manufacturing residuals in U.S. paper and wood products industry avoids the emission of approximately 181 million metric tons of CO2e.[8] (This greenhouse gas reduction benefit is roughly equivalent to removing about 35 million cars from the road.)

- During the Obama Administration, the U.S. Environmental Protection Agency(EPA) conducted an extensive analysis indicating that there are large climate benefits from the bioenergy produced and used by the forest products industry. Specifically, a detailed analysis of a liquid biofuel (typically referred to as pulping liquor or black liquor) produced and used by pulp and paper mills showed that it is at least carbon neutral and could be even better than carbon neutral. As a result, the analysis assigned black liquor a zero to negative biogenic assessment factor.[9]

- Dr. Timothy Searchinger, a scholar who prompted the discussion about the carbon neutrality of biomass, has stated specifically that "black liquor from paper making" is an "advisable" source of bioenergy.[10] In addition, in a joint paper with Dr. Searchinger, Dr. Steven Hamburg, the Chief Scientist of the Environmental Defense Fund, and other experts, the co-authors concluded that "biomass should receive credit to the extent its use results . . . from the use of residues or biowastes."[11]

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[7] We recognize the Department's position that the Commission rely upon Argonne GREET, EPA WARM & LandGEM, and other models as approved by the Commission for GHG quantification. To the extent the Commission adopts this position, our expectation is that if a new LCA pathway were built through GREET to estimate GHG emissions from production of electricity from forest products manufacturing bioenergy feedstocks, the result would be carbon neutral or better, consistent with LCAs conducted by the National Council for Air and Stream Improvement (NCASI),

[8] Caroline Gaudreault and Reid Miner, *Temporal Aspects in Evaluating the Greenhouse Gas Mitigation Benefits of Using Residues from Forest Products Manufacturing Facilities for Energy Production*. Journal of Industrial Ecology (Dec. 2015), at 1,004-05; National Council for Air and Stream Improvement, Inc. *Greenhouse gas and fossil fuel reduction benefits of using biomass manufacturing residuals for energy production in forest products facilities*. Technical Bulletin No. 1016 (rev. 2014). *See also,* NCASI. 2024. *Avoided Greenhouse Gas Emissions from US Pulp and Paper Industry Biomass-Derived Electricity.* White Paper (WP-24-05). Cary, NC: National Council for Air and Stream Improvement, Inc. (determining that the use of forest products manufacturing bioenergy feedstocks to produce bioenergy at U.S. paper mills has a greenhouse gas emissions rate of far less than zero).

[9] U.S. Environmental Protection Agency, Draft Framework for Assessing Biogenic CO2 Emissions from Stationary Sources (Nov. 19, 2014), Appendix D, pp. D21-30.

[10] Dr. Timothy Searchinger and Ralph Heimlich, *Avoiding Bioenergy Competition for Food Crops and Land*. World Resources Institute (2015), at 22 and 24 (Table 3).

[11] Dr. Timothy Searchinger, Dr. Steven Hamburg, et al., *Fixing a Critical Climate Accounting Error*. Science (Oct. 22, 2009).

Conclusion

Given the extensive carbon benefits of the forest products industry's use of bioenergy, we recommend that the Commission determine the U.S. pulp and paper industry's use of manufacturing residuals for biomass energy as eligible under the carbon free standard and rely on existing LCAs for GHG quantification.

If you would like further information, please feel free to contact me at (202) 463-2700.

Best regards,

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