



**LEGISLATIVE POSITION: UNFAVORABLE**

**Senate Bill 590**

**Renewable Energy Portfolio Standard - Eligible Sources - Alterations  
(Reclaim Renewable Energy Act of 2023)**

**Senate Education, Energy, and the Environment Committee**

**February 28, 2023**

The Honorable Brian Feldman, Chair, Senate Education, Energy, and the Environment Committee  
The Honorable Cheryl Kagan, Vice Chair, Senate Education, Energy, and the Environment Committee

Dear Chair Feldman, Vice Chair Kagan, and Members of the Committee:

The American Forest & Paper Association<sup>1</sup> (AF&PA) appreciates the opportunity to share our perspective on Senate Bill 590 on behalf of our members and their employees who are an integral part of the circular economy. In Maryland, the forest products industry employs nearly 6,000 individuals in 29 facilities that produce packaging, sales displays, corrugated boxes and other products with an annual payroll of over \$395 million.<sup>2</sup>

Through the highly efficient use of biomass residuals of the forest products manufacturing process, AF&PA members generate renewable bioenergy and have improved their energy efficiency and reduced fossil fuel use and greenhouse gas (GHG) emissions by 23.3 percent since 2005. Bioenergy from forest products manufacturing residuals provides large GHG reduction benefits – roughly equivalent to removing 35 million cars from the road. SB 590 would prevent these clean technologies from qualifying as a Tier 1 renewable source, which would unfairly discriminate against AF&PA members who are committed to the continued use of carbon beneficial bioenergy as part of the circular economy. Accordingly, AF&PA must respectfully ask the Committee to give SB 590 an unfavorable report.

**AF&PA Members Generate Renewable Energy While Reducing GHG Emissions**

The forest products industry produces and uses renewable energy for manufacturing operations and is a significant contributor to our country's existing base of renewable energy. On average, approximately two-thirds of the energy used at AF&PA member pulp and paper mills is generated from carbon-neutral biomass.

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<sup>1</sup> The American Forest & Paper Association (AF&PA) serves to advance U.S. paper and wood products manufacturers through fact-based public policy and marketplace advocacy. The forest products industry is circular by nature. AF&PA member companies make essential products from renewable and recycle resources, generate renewable bioenergy and are committed to continuous improvement through the industry's sustainability initiative — [Better Practices, Better Planet 2030: Sustainable Products for a Sustainable Future](#). The forest products industry accounts for approximately 5% of the total U.S. manufacturing GDP, manufactures nearly \$350 billion in products annually and employs approximately 925,000 people. The industry meets a payroll of approximately \$65 billion annually and is among the top 10 manufacturing sector employers in 43 states.

<sup>2</sup> Data sources: U.S. government, AF&PA, and RISI. Figures are the most recent available as of December 2020.

The industry also strives to use all types of energy as efficiently as possible. The industry is a leader in the use of combined heat and power (CHP) technology, which is extremely efficient because it uses the same fuel to produce both thermal energy used in the manufacturing process as well as electricity, some used on-site and some sold to the grid. In 2018, over 98 percent of electricity produced by the industry was CHP-generated. The use of CHP provides energy efficiencies in the range of 50 to 80 percent at forest products mills, far beyond non-CHP electrical stations such as utilities, which are only about 33 percent energy efficient. Unfortunately, under SB 590, these clean technologies would not qualify as Tier 1 renewable sources.

Our commitments to renewable biomass energy and energy efficiency, including our extensive use of CHP, have led to a major decrease in the sector's use of fossil fuel and GHG emissions. Energy purchased by member pulp and paper mills has decreased dramatically.

### **Bioenergy from Forest Products Manufacturing Residuals Provides Enormous GHG Reduction Benefits**

SB 590 expands upon Chapter 673<sup>3</sup> that was enacted in 2021 to remove black liquor. SB 590 would remove wood waste renewable energy credits from the Renewable Portfolio Standard (RPS). It also removes thermal biomass and most other combustion-based renewable energy sources from the Maryland RPS.

Over the years that the Maryland legislature has been considering changes to the RPS, some have raised questions about the carbon neutrality and GHG reduction benefits of the bioenergy produced in the forest products industry. We respectfully submit that the scientific literature clearly shows that those concerns are unfounded. In fact, the scientific evidence shows there are enormous GHG reduction benefits from using forest products manufacturing residuals for energy. For example, an extensive, peer-reviewed study by the National Council for Air and Stream Improvement shows that each year, the bioenergy produced in U.S. forest products industry avoids the emission of approximately 181 million metric tons of CO<sub>2</sub>e.<sup>4</sup> (This is roughly equivalent to removing about 35 million gasoline-powered cars from the road.)

During the Obama-Biden Administration, the U.S. Environmental Protection Agency (EPA) closely examined the carbon benefits of the bioenergy produced by the U.S. paper and wood products manufacturing industry and stated that "the EPA generally acknowledges the CO<sub>2</sub> and climate policy benefits of waste-derived biogenic feedstocks and certain forest- and agriculture-derived industrial byproduct feedstocks, based on the conclusions supported by a variety of technical studies, including the revised [EPA] *Framework for Assessing Biogenic Carbon Dioxide for Stationary Sources*."<sup>5</sup> An article

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<sup>3</sup> SB 65, Enacted under Article II, Section 17(c) of the Maryland Constitution - [Chapter 673](#)

<sup>4</sup> 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, [Greenhouse Gas and Fossil Fuel Reduction Benefits of Using Biomass Manufacturing Residuals for Energy Production in Forest Products Facilities](#), Technical Bulletin No. 1016 (rev. Aug. 2014).

<sup>5</sup> U.S. Environmental Protection Agency, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Clean Power Plan Rule," 80 Fed. Reg. 64,661, 64,885-86 (Oct. 23, 2015).

authored by experts in fields including lifecycle analysis and forestry concluded that "if [paper and wood products] mill residues were not used for energy, most of these materials . . . would be wastes that would be either incinerated, in which case the atmosphere would see the same biogenic CO<sub>2</sub> emissions as if the material had been burned for energy, or disposed in landfills . . . [in which case] the net impact of burning for energy on biogenic emissions, in terms of warming (i.e., CO<sub>2</sub> equivalents), can actually be less than zero because of the warming potency of the methane generated in landfills."<sup>6</sup> These and additional examples are provided in the Appendix to this statement.

In addition, many governments around the world recognize the carbon neutrality of forest products manufacturing residuals, and competitors in Europe are rewarded with renewable energy credits. Thus, this bill would set an adverse precedent for energy policy in the U.S. and Maryland, placing U.S. forest products mills at a competitive disadvantage. For many years, there has been bipartisan support in the U.S. Congress for an amendment that was agreed to in the 2017 Omnibus Appropriations Act passed in May 2017, which affirms the carbon benefits of bioenergy and requires three federal agencies (EPA, USDA, and DOE) to work together to create a consistent policy on biomass carbon neutrality. Former U.S. Senator for Maryland, Barbara Mikulski, signed a letter stating that there has been no dispute about the carbon neutrality of biomass derived from residuals of forest products manufacturing and agriculture.<sup>7</sup> That provision also has been included in the appropriations acts for 2018, 2019, 2020 and 2021 (in the recently enacted stimulus bill).

### **SB 590 is Inconsistent with the Goals of the RPS**

When it was enacted, Maryland legislators provided several goals for the RPS, including the recognition of the economic, environmental, and security benefits of renewable energy resources, and to establish a well-functioning, diverse market for renewable electricity. SB 590 would work contrary to these goals. It does not recognize the benefits of numerous renewable energy resources and decreases fuel diversity, while interfering with the functioning of the market by creating favored resources and upending investor expectations. Furthermore, the legislature's frequent changes to the RPS make business planning in the state challenging.

### **Conclusion**

The forest product industry has played an important role in helping Maryland and the nation meet their renewable energy objectives. SB 590 could impede our ability to continue using clean bioenergy, displace fossil fuels, and reduce greenhouse gas emissions in a highly sustainable manner. We request that the Committee give the bill an unfavorable report.

We look forward to continuing our work with the State of Maryland. Please feel free to contact Elizabeth Olds, Government Affairs Manager, AF&PA at [Elizabeth\\_Olds@afandpa.org](mailto:Elizabeth_Olds@afandpa.org) for further information.

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<sup>6</sup> Reid Miner, Robert Abt, et al., "Forest Carbon Accounting Considerations in U.S. Bioenergy Policy," *Journal of Forestry* (Aug. 29, 2014).

<sup>7</sup> U.S. Senator Barbara Mikulski [letter](#) to the Honorable Gina McCarthy, the Honorable Dr. Ernest Moniz, the Honorable Tom Vilsack. Washington DC, June 30, 2015.

Maryland Senate Education, Energy, and the Environment Committee

February 28, 2023

Page 4

Thank you.

/s/

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American Forest & Paper Association

## APPENDIX

### **There is Widespread Recognition of Forest Products Manufacturing Residuals as Carbon Neutral**

- **U.S. Environmental Protection Agency**, Memorandum from Janet G. McCabe, Acting Assistant Administrator, Office of Air and Radiation, to Air Division Directors, Regions 1-10 (Nov. 19, 2014) (“Information considered in preparing the second draft of the Framework, including the [Science Advisory Board] peer review and stakeholder input, supports the finding that use of waste-derived feedstocks and **certain forest-derived feedstocks are likely to have minimal or no net atmospheric contributions of biogenic CO<sub>2</sub> emissions, or even reduce such impacts**, when compared with an alternative fate of disposal.”) (p. 2)
- **U.S. Environmental Protection Agency**, *Draft Framework for Assessing Biogenic CO<sub>2</sub> Emissions from Stationary Sources* (Nov. 19, 2014) (“The information in this appendix, including example calculations of alternative fate-related biogenic emissions, supports that a 0 or negative [biogenic] assessment factor for black liquor may be reasonable.”) (Appendix D, p. D-22); (**calculating negative biogenic assessment factors for black liquor** and stating that “avoided emissions associated with disposal of black liquor as compared with the current management practice (burning for energy and chemical recovery in a recovery furnace) **resulted in hypothetical example [biogenic assessment factors] BAFs ranging from different negative values to 0**, depending on the treatment method.”) (Appendix D, p. D-31)
- 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 (“[The ongoing use of manufacturing residues for energy in the forest products industry has been yielding net benefits for many years . . . [T]he **use of biomass residues from forest products manufacturing, including black liquor, to produce energy in the U.S. forest products industry for 1 year avoids, over a 100-year period, 181 million t CO<sub>2</sub>-eq/yr**. The avoided disposal of the forest products manufacturing residues alone (i.e., ignoring [fossil fuels] substitution and chemical recovery benefits) results in a GHG benefit of approximately 5 million t CO<sub>2</sub>-eq/yr.”)
- **Dr. Timothy Searchinger, Dr. Steven Hamburg**, et al., “Fixing a Critical Climate Accounting Error,” *Science* (Oct. 22, 2009) (“Instead of an assumption that all biomass offsets energy emissions, **biomass should receive credit to the extent its use results . . . from the use of residues** or biowastes.”)  
Note: Steve Hamburg is the Chief Scientist of the Environmental Defense Fund.
- **Dr. Timothy Searchinger** and Ralph Heimlich “Avoiding Bioenergy Competition for Food Crops and Land.” World Resources Institute (2015) (supporting bioenergy produced during **paper making**” as an “advisable” sources of biomass energy) (pp. 22, 24)

- Reid Miner, Robert Abt, et al., “Forest Carbon Accounting Considerations in U.S. Bioenergy Policy,” *Journal of Forestry* (Aug. 29, 2014) (“... if mill residues were not used for energy, most of these materials . . . would be wastes that would be either incinerated, in which case the atmosphere would see the same biogenic CO<sub>2</sub> emissions as if the material had been burned for energy, or disposed in landfills . . . [in which case] the net impact of burning for energy on biogenic emissions, in terms of warming (i.e., CO<sub>2</sub> equivalents), can actually be less than zero because of the warming potency of the methane generated in landfills.”)
- U.S. Environmental Protection Agency, “Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Clean Power Plan Rule,” 80 Fed. Reg. 64,661, 64,885-86 (Oct. 23, 2015) (“The EPA recognizes that the use of some biomass-derived fuels can play an important role in controlling increases of CO<sub>2</sub> levels in the atmosphere. The use of some kinds of biomass has the potential to offer a wide range of environmental benefits, including carbon benefits. . . . With regard to assessing qualified biomass proposed in state plans, the EPA generally acknowledges the CO<sub>2</sub> and climate policy benefits of waste-derived biogenic feedstocks and certain forest- and agriculture-derived industrial byproduct feedstocks, based on the conclusions supported by a variety of technical studies, including the revised *Framework for Assessing Biogenic Carbon Dioxide for Stationary Sources*.”)
- Linda A. Joyce (U.S. Forest Service), Steven W. Running (U. of Montana), et al., *Climate Change Impacts in the United States: The Third National Climate Assessment*, Ch. 7: Forests, U.S. Global Change Research Program, doi:10.7930/JOZ60KZC (2014) (“Forest biomass energy could be one component of an overall bioenergy strategy to reduce emissions of carbon from fossil fuels, while also improving water quality, and maintaining lands for timber production as an alternative to other socioeconomic options.”) (p. 182)
- Dr. Roger A. Sedjo, Resources for the Future, “Carbon Neutrality and Bioenergy: A Zero-Sum Game?” RFF DP 11-15 (April 2011) (noting that both sides in the carbon neutrality debate [see two letters below] recognize that “some biomass, such as dead wood and forest debris, can constructively be used for bioenergy, since it will otherwise release carbon through natural decomposition . . . thus no net emissions result from its use as energy”) (p. 3)
- Dr. Bruce Lippke, Professor Emeritus, University of Washington School of Forest Resources, et al., Letter to Congress from Forest Scientists (July 20, 2010) (“equating biogenic carbon emissions with fossil fuel emissions . . . is not consistent with good science and, if not corrected, could stop the development of new emission reducing biomass energy facilities. It also could encourage existing biomass energy facilities to convert to fossil fuels or cease producing renewable energy. This is counter to our country’s renewable energy and climate mitigation goals.”)

- Dr. William H. Schlesinger, Member, National Academy of Sciences, et al., Letter to Congress from Scientists (May 17, 2010) (“Bioenergy can reduce atmospheric carbon dioxide if . . . bioenergy can use some vegetative residues that would otherwise decompose and release carbon to the atmosphere rapidly.”)
- Environmental Defense Fund, “Comments on the Science Behind EPA’s Proposed Accounting Framework for Biogenic CO<sub>2</sub> Emissions From Stationary Sources” (Oct. 18, 2011) (“enterprises should be allowed . . . to demonstrate that they are using biomass sourced from materials with no or limited impacts on net emissions. . . . Those who can demonstrate they are using wastes and other low emissions feedstocks would be assigned a BAF of 0 or near 0.”) (p.5)