



**American
Forest & Paper
Association**

**American Forest & Paper Association (AF&PA) Comments on
Massachusetts Proposal to Update Renewable Portfolio Standard (RPS) Regulatory Provisions
for Biomass and Environmental Justice (EJ)**

April 1, 2022

The American Forest & Paper Association (AF&PA) appreciates the opportunity to comment on the Department of Energy Resources (DOER) proposal to amend Massachusetts' Renewable Portfolio Standard Regulations. While AF&PA supports the proposed exemption for generation units using eligible biomass with a commercial operation date of December 31, 2021 or earlier, we respectfully ask DOER to reconsider the application of the proposed EJ policy to generation units using eligible biomass that have a commercial operation date after December 31, 2021.

Introduction

AF&PA serves to advance a sustainable U.S. pulp, paper, packaging, tissue and wood products manufacturing industry through fact-based public policy and marketplace advocacy. AF&PA member companies make products essential for everyday life from renewable and recyclable resources and are committed to continuous improvement through the industry's sustainability initiative, [*Better Practices, Better Planet 2030*](#) (BPBP2030). The forest products industry accounts for approximately four percent of the total U.S. manufacturing GDP, manufactures nearly \$300 billion in products annually and employs approximately 950,000 men and women. The industry meets a payroll of approximately \$55 billion annually and is among the top 10 manufacturing sector employers in 45 states.

AF&PA's sustainability initiative — *Better Practices, Better Planet 2030* — comprises one of the most extensive quantifiable sets of sustainability goals for a U.S. manufacturing industry and is the latest example of our members' proactive commitment to the long-term success of our industry, our communities and our environment. We have long been responsible stewards of our planet's resources.

We are proud to report that our members achieved most of our 2020 goals, including reducing greenhouse gas emissions 24.1 percent during 2005-2020 and improving purchased energy efficiency by 13.3 percent. Our member companies have also achieved our 2020 goal increasing wood fiber procurement from certified forestlands and certified fiber sourcing programs.

Additionally, our 2030 goal to reduce greenhouse gas emissions by 50 percent is consistent with President Biden's 2030 economy-wide goal, and a leading example for the U.S. manufacturing sector.

The entire forest products value chain provides large carbon benefits, including: (1) sequestering carbon; (2) since 1990, our mills have cut in half their scope 1 and 2 greenhouse gas emissions; (3) since 1990, the paper recovery rate for recycling has doubled from 33.5 percent to 65.7 percent in 2020, and our industry continues to optimize recycling;¹ (4) generating carbon-beneficial bioenergy from our manufacturing residuals; and (5) providing substitutes for greenhouse gas intensive products.

Background on the Proposed EJ Policy for Facilities that Use Biomass

Under proposed section 14.05 of the RPS regulation, a generation unit may qualify as an RPS Class I Renewable Generation Unit, provided it uses an eligible biomass fuel, subject to limitations in section 14.05(1)(a)(7). In proposed Section 14.05(1)(a)(7)(f), a generation unit using eligible biomass with a commercial operation date after December 31, 2021, that is either:

- (i) Sited in an environmental justice population or
- (ii) Sited within 5 miles of an environmental justice population

shall not qualify as an RPS Class I Renewable Generation Unit. AF&PA supports the proposed exemption for generation units using eligible biomass with a commercial operation date of December 31, 2021 or earlier. We also respectfully ask DOER to reconsider the application of the proposed EJ policy to generation units using eligible biomass that have a commercial operation date after December 31, 2021.

Environmental Justice and Business Certainty

We recognize the importance and value of incorporating environmental justice considerations into decision making and community engagement opportunities. Our sector believes we can achieve improved quality of life for everyone when we focus on clear and responsible regulation, sound science and active partnerships alongside the communities where we operate and where our workforce lives.

However, according to the Massachusetts Forest Alliance, nearly 90% of Massachusetts is within 5 miles of an EJ population under the Commonwealth's definition.² This impact is exceptionally broad and impractical, and we respectfully ask DOER to reconsider application of the proposed EJ policy to generation units using eligible biomass that have a commercial operation date after December 31, 2021. Our mills and new projects support good paying jobs

¹ Paper is recycled at much higher rates than other commodities, and the paper industry has planned or announced approximately \$5 billion in manufacturing infrastructure investments by the end of 2023 to further the best use of recycled fiber in our products.

² <https://www.mass.gov/info-details/environmental-justice-populations-in-massachusetts>

at the mill,³ as well as indirect jobs in the community, contribute to the local tax base, and modernizing equipment can achieve efficiencies that help to lower a mill's environmental footprint.

AF&PA Members Generate Renewable Energy, Have Improved Their Energy Efficiency and Reduced Fossil Fuel Use and Greenhouse Gas (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-beneficial biomass.

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 and electricity, some used on-site and some sold to the grid. In 2020, 99 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.

Our commitments to renewable biomass energy and energy efficiency, including our extensive use of CHP, have led to a dramatic decrease in the sector's use of fossil fuel and GHG emissions. Energy purchased by member pulp and paper mills has decreased dramatically. In 2020, we achieved our 2020 purchased energy efficiency goal with a 13.3 percent improvement since 2005, surpassing our 10 percent goal. Further, in 2020 AF&PA member GHG emissions were 24.1 percent less than the 2005 baseline year, surpassing our 2020 goal of 20 percent reduction.

Baseload Power is Needed

It would be counterproductive to remove reliable baseload renewable bioenergy from the RPS, which is exactly what is needed to complement intermittent sources such as wind and solar.

Our mills rely on thermal energy that cannot be produced by wind or solar. If our members were to switch from biomass to another fuel for thermal energy, that would likely be natural gas. If that were to happen, it would result in increased greenhouse gas emissions from use of natural gas in addition to the methane emissions associated with the disposal of our manufacturing residuals.

Pulp and paper mills generate their own renewable, carbon neutral energy to displace fossil fuels, and do so using stringent environmental controls. In 2020, AF&PA member pulp and

³ According to U.S. Bureau of Labor Statistics (BLS) data, average compensation at pulp, paper and paperboard mills exceeds the average for all private sector workers by 32%, and for all manufacturing workers by 17%. Analysis calculated by AF&PA using compensation data from the [BLS's Employment, Hours, and Earnings database](#).

paper mills self-generated 58 percent of the electricity needed to power their mills, most of which was renewable using carbon-beneficial biomass manufacturing residuals.

Our Industry Provides Clean, Renewable Power with Extensive Greenhouse Gas (GHG) Reduction Benefits

Additional insights into the greenhouse gas reduction benefits of renewable biomass energy:

- A study by the National Council for Air and Stream Improvement⁴ has found enormous greenhouse gas reduction benefits from using biomass manufacturing residuals, of which black liquor is the largest component, for energy in the industry—each year avoiding the emission of approximately 181 million metric tons of CO₂e. (Equivalent to removing about 35 million cars from the road.)
- As indicated in the Appendix, specifically regarding liquid biomass (black liquor):
 - During the Obama-Biden Administration under Administrator Gina McCarthy, EPA, based on a robust analysis of the carbon benefits of black liquor, found that black liquor is carbon neutral or *even better than carbon neutral* under certain scenarios, assigning it a zero to significantly negative biogenic assessment factor.
 - Dr. Timothy Searchinger, the scientist 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. In addition, in a joint paper by Dr. Searchinger with Dr. Steve Hamburg, the Chief Scientist of the Environmental Defense Fund and several others, the co-authors stated that “biomass should receive credit to the extent its use results . . . from the use of residues or biowastes.”

Bioenergy is Clean Energy

The forest products industry is making large investments in highly efficient biomass energy that meets stringent state-of-the-art environmental standards. Biomass is burned in industrial boilers and black liquor is combusted in recovery furnaces, both of which are operated under very exacting conditions to optimize efficiency and production of energy. Boilers and recovery furnaces are run from highly sophisticated, computerized control rooms that continuously monitor combustion conditions and are subject to stringent air emissions control requirements. EPA continuously examines air regulations to ensure they adequately protect public health and

⁴ 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).

the environment. EPA has confirmed there are no significant risks from recovery furnaces and other major parts of pulp and paper mills on the surrounding areas.⁵

For additional information on the carbon benefits of our bioenergy, see below appendix.

Conclusion

The forest products industry has played an important role in helping the nation meet its renewable energy objectives. Unfortunately, the proposal could set a precedent that could impede our ability to continue doing so. While AF&PA supports the proposed exemption for generation units using eligible biomass with a commercial operation date of December 31, 2021 or earlier, we respectfully ask DOER to reconsider the application of the proposed EJ policy to generation units using eligible biomass that have a commercial operation date after December 31, 2021.

Thank you for the opportunity to submit these comments. We also support the comments submitted by the Massachusetts Forest Alliance.

Please feel free to contact Jesse Levine Senior Director, Energy and Environmental Programs, AF&PA at (202) 463-2581 or jesse_levine@afandpa.org for further information.

Sincerely,

Jesse Levine
Senior Director
Energy & Environmental Programs
American Forest & Paper Association

⁵ EPA conclusion of no significant risks for the major parts of pulp and paper mill operations was determined in two phases, first in 2012 and then in 2017, which covered recovery furnaces, as EPA finished its risk and technology review of the 1998 and 2001 Cluster Maximum Achievable Control Technology (MACT) rulemakings.

APPENDIX I

There is Widespread Recognition of Forest Products Bioenergy, 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 CO₂ 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 CO₂ 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)
- Dr. Timothy Searchinger and Ralph Heimlich “Avoiding Bioenergy Competition for Food Crops and Land.” World Resources Institute (2015) (listing “black liquor from paper making” as “advisable” sources of biomass energy use) (p. 22 and Table 3, p. 24)
- 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.
- 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 CO₂-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 CO₂-eq/yr.”)

- 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 CO₂ 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., CO₂ equivalents), can actually be less than zero because of the warming potency of the methane generated in landfills.”)
- 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/J0Z60KZC (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 CO₂ 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)