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To: Jeffrey Crawford, State Implementation Plan and Clean Air Act, Maine Department of Environmental Protection (DEP)

From: Patrick Strauch, Executive Director Maine Forest Products Council

Date: August 3, 2018

RE: Maine Forest Products Council comments in Support of Clean Air Act (CAA) Section 176A(a)(2) Ozone Transport Region (OTR) Petition.

INTRODUCTION

Since 1961, the Maine Forest Products Council (MFPC) has represented our state's diverse forest products community, including logging contractors, sawmills, paper mills, biomass energy facilities, pellet manufacturers, furniture manufacturers, and the owners of more than eight million acres of commercial forestland in Maine. As a group, our members directly provide many thousands of well-paying jobs to hard-working Mainers, and many more thousands of jobs indirectly.

MFPC believes the Department's proposed petition is an important step to help preserve the competitiveness of Maine's forest products industry. Therefore, on behalf of its more than 300 member companies, MFPC submits comments in support of the Department's proposed petition.

ENVIRONMENTAL STEWARDSHIP

The forest industry in Maine supports this petition based on our strong belief in environmental stewardship. We've demonstrated our land management stewardship through sustainable certification standards, monitoring of inventory levels of tree growth and harvests, forest products role in sequestering carbon, and wildlife management success stories like the health of the eastern brook trout fisheries and the current USWFS delisting of Canada Lynx. This working forest model is dependent on the health of wood markets and providing an alternative to land development pressures.

Forest manufacturers also manage air and water resources to the standards established by regulatory agencies to protect public health. Our manufacturing processes sequester carbon in wood products and replace more intensive carbon dioxide producing materials like steel and concrete. In essence Maine's forest economy produces products that are part of our green economy.

MAINE'S FOREST ECONOMY MARKETS

Recent closures of six paper mills, two biomass energy plants represents a loss of around 4 million tons of low grade softwood markets (20%). These closures also represent a significant reduction in emissions which we feel should be banked into the future recapture of these markets. The effect on rural Maine communities is felt when the industry moves from a \$9.5 (2014) billion dollar industry to an estimated \$8.5 billion (2016).

The US Economic Development Agency, University of Maine, MDF, State Administration & congressional delegation have participated in an industry strategic planning effort, the Forest Opportunity Roadmap (FOR/Maine) project. Our collective efforts have identified a tremendous inventory increase in spruce fir wood; the same species where significant market losses occurred. Much of the opportunity to rebuild these markets will be dependent on the expansion of existing mill capacity as well as new manufacturing site investments. These expansions and new facility investments will be faced with significantly higher air emissions standards than the manufacturing capacity being replaced.

IMPLICATIONS OF THE CURRENT OTR STRUCTURE

The Department's proposed petition has direct implications for the paper mills, wood pellet mills, OSB plants and biomass energy plants -- basically any forest products manufacturing process -- because the companies process wood that contains naturally-occurring VOCs and combustion sources that emit NOx to power their manufacturing processes. . Due to inclusion in the OTR, projects that involves siting significant new forest products facilities or expansion/upgrades to existing facilities may need to apply the Lowest Achievable Emission Rate (LAER) requirements, instead of Best Available Control Technology (BACT) emissions controls, and obtain offsets. These requirements can add significant cost and uncertainty to a project.

Current OTR regulatory structures "create additional barriers without appreciable value," according to Maine DEP, which means that Maine's mills are subject to the more stringent air quality requirements mentioned above that are not imposed in other competing wood industry states, including Wisconsin, Minnesota, Washington and states in the southeast, without being justified by corresponding environmental value.

Maine has been in attainment with ambient air quality standards for ozone for many years, even though the standard has been lowered. The DEP's technical analysis demonstrates that Maine sources have a negligible impact on the ozone attainment status of any part of the OTR.

Yet, due to inclusion in the OTR, Maine companies have been required to implement Reasonably Achievable Control Technology (RACT) requirements for VOCs and NOx for existing sources everywhere in the state, in addition to the more stringent LAER and offset requirements that apply to new major sources and major modifications of NOx and/or VOCs.

These requirements not only burden existing businesses, but deter much-needed new investments without any benefit to the state's air quality. Simply put, capital flows to projects that will provide the most return on investment. The OTR requirements put Maine facilities at a disadvantage when trying to attract investment compared to locations where the OTR requirements do not apply under the Clean Air Act, a state may obtain a waiver of the LAER and offset requirements for NOx if it can demonstrate, to EPA's satisfaction, that emissions of NOx do not significantly contribute to exceedances of the ozone standard elsewhere in the OTR. NOx waivers were obtained for northern Maine in 1995, 2006, and

2013. In effect, the current DEP proposal would simply build on this precedent established by three different prior Administrations to secure a similar waiver for VOC requirements.

FOREST PRODUCT SECTOR IMPLICATIONS

I. Pulp & Paper Mills

- Steam is the lifeblood of a pulp and paper mill. Steam is produced by burning fuel or, in the case of kraft pulp mills, burning black liquor to recover and recycle process chemicals. Combustion in kraft mill lime kilns is also necessary to create recycled lime for the process. In addition, drying paper with fuel-burning hoods creates NOx emissions. Combustion of any fuel, even biomass, creates NOx emissions.
- VOCs are a naturally occurring component of wood. Therefore, wood pulp contains these naturally occurring VOCs. VOCs are released from the wood pulp during the pulping process and when drying the resulting paper or tissue products.
- The OTR requirements for Lowest Achievable Emission Rate (LAER) and offsets for new major sources and major modifications of NOx and VOC could require:
 - For NOx: urea or ammonia injection systems on larger boilers, costing over a million dollars with annual operating costs well into the six figures.
 - For VOCs: production limits for paper and/or tissue. Such production limits can impede the ability to maximize production and efficiency and thus jeopardize long-term competitiveness.
- The availability of offsets is extremely limited and, therefore, obtaining offsets can add huge costs to a project. Historically, offsets have been in the thousands of dollars per ton potentially adding over seven figures to the cost of the project.
 - Most recently, Woodland Pulp had to obtain offsets for installation of two new tissue machines. WP was fortunate that it had acquired the old adjacent OSB/Chip and Saw facility, which generated emission offsets by virtue of WP's commitment to permanently shut-down the facility.
 - However, not all mills have the ability to generate offsets in that manner. Furthermore, obtaining offsets in that manner can also be viewed as requiring existing mills that want to make a major expansion to find another facility to shut down – thus pitting one “winning” community against another that loses.
- To avoid these onerous requirements, mills often limit their production to ensure the LAER and offset requirements are not triggered. This has been done by many different mills for many projects over time. Most recently, this was done by the Catalyst Rumford Mill when adding a new tissue machine ***Restricting Maine business to anything less than full potential production puts***

Maine’s facilities at a competitive disadvantage when trying to attract capital investment and negatively impacts their long-term competitiveness with mills in other regions.

II. Biomass Boilers

- As noted above, steam is the engine of a pulp and paper mill. Steam also is an important engine of sawmills and other wood products facilities and is used to generate a lot of electricity. Biomass boilers are used to generate the steam needed by pulp-and-paper mills, sawmills, Oriented Strand board, wood paneling plants, and other foresting product manufacturers. These facilities typically use bark, sawdust, woodchips, and other by-products of their production processes as fuel to produce steam. These biomass by-products may be seen as “waste” by some, but in our industry these materials are recycled as valuable fuel. Thus, biomass boilers are an important source of energy and a key component of the forest products industry’s use of the “whole tree.”
- Urea and ammonia injection systems to control NOx are typically found on larger, utility-sized boilers but, under certain circumstances, could be considered LAER for the types of boilers to be upgraded or installed at the pulp and paper, sawmill, and OSB plants in Maine. These LAER controls could add over a million dollars to the cost of a boiler with hundreds of thousands of dollars per year in operating costs. These costs could make investments or upgrades to a biomass boiler economically infeasible – especially if the same added costs do not apply to a similar investment made to another similar facility in Wisconsin, Michigan, or New Brunswick.
- By opting out of the OTR, the DEP would then be able to apply the Best Available Control Technically (BACT) emissions controls to a new or modified biomass boiler, instead of LAER controls. For BACT, the DEP determines the most appropriate level of control considering all factors, including the economic feasibility of controls and the environmental costs and benefits. Whereas under LAER, DEP cannot consider these factors. LAER requires the best controls regardless of cost or environmental benefit.

III. Sawmills/Lumber Mills.

- Virtually all sawmills and lumber mills burn their sawdust, bark, and waste wood from the process in biomass boilers. (See above for talking points for NOx from biomass combustion).
 - Wood contains naturally occurring VOCs, such as terpenes. When wood is dried, these terpenes are emitted. Normally, this process takes place when a tree dies in the woods. However, the process is expedited when wood is sawn, chipped, or dried at saw mills. Additions of new lumber drying kilns or upgrades to existing kilns could trigger the need for LAER on a kiln. LAER might be considered a regenerative thermal oxidizer (RTO), which is essentially an incinerator. An RTO would require combustion of a fossil fuel to burn the VOCs from the lumber drying process at a capital cost typically over a millions dollars, with annual operating costs from a half a million to a million dollars. The fossil fuel necessary to operate an RTO creates NOx and other fuel burning emissions. An RTO on a kiln would be trading one pollutant for another at a huge cost – a tradeoff DEP cannot balance under LAER, but could consider under the BACT control requirement that would apply if opt-out is approved.

- Opting out the OTR would allow DEP to apply BACT, instead of LAER. Application of BACT allows DEP to take a holistic view of whether the costs or the need for VOC reductions outweighs the negatives of the high costs and increased NOx emissions and other impacts.
- In addition to the onerous LAER controls, investments in new or upgraded biomass boilers and/or drying kilns at sawmills could also trigger the need for the plant to obtain NOx and/or VOC offsets, at significant added cost.
- In view of these onerous requirements, sawmills have accepted production limits on recent investments to avoid triggering the more erroneous LAER and offset requirements. As with pulp and paper mills, anything that limits a sawmill or lumber mill from achieving its maximum product rate can render it less competitive in the long run, and as such, a less attractive investment opportunity.
- Maine has seen a number of lumber mills shut down. Restarting these facilities would trigger LAER and offset requirements in most cases. These requirements render the restart of these facilities much less likely.

IV. Wood Pellet Plants.

- Like the drying of lumber, the drying of wood pellets involves removing the naturally occurring VOCs from the wood pellets. Virtually every pellet plant constructed to date has accepted production limits to avoid triggering LAER and offset requirements. These limits on production mean that these facilities cannot use their equipment to the fullest production and efficiency, impacting their ability to compete with similar plants in other states and Canada.
- One notable exception was the proposed pellet plant in Millinocket by ThermoGen. That pellet plant was licensed with applicability of LAER and offsets. LAER required the plant to use a thermal oxidation (RTO) for the pellets process. The plant was also required to obtain offsets. That plant has not been constructed. We can't say that the RTO and offsets were the only reason the project did not proceed, but these requirements certainly didn't help the economics of the project.

V. OSB/Panel Plants.

- These use biomass boilers (see above points).
- These manufacturing processes involve the creation of VOC emissions from both drying of wood (producing naturally occurring VOCs) as well as VOCs from the glues, adhesives, coatings, and other inputs to the production process.
- EPA has developed a Maximum Achievable Control Technology (MACT) standard for all such plants: plywood, particle board, OSB, fiberboard, laminated strand lumber, etc. This regulation, 40 CFR Part. 63 Subpart DDDD- MACT for "plywood and composite wood products," establishes VOC emission units that are based on the average of the top 12% best performing similar plants in the county. It should be sufficient that Maine's facilities are held to such high standards, which also put them on a competitive level with counterparts in other regions such as the Lake States, Pacific Northwest and the Southeast. . Holding them to even higher and potentially more expensive levels of LAER and offsets would put them at a competitive disadvantage and renders them a less attractive target for investment than their counterparts in other states or Canada.

VI. Forest Management.

- Forests provide the raw material for Maine's forest products industry.
- Proper forestry management is necessary for healthy forests. Forest landowners have great incentives to maximize forest health – this is especially so when they have a market for their product. Healthy forests provide multiple benefits to Maine, including acting as a greenhouse gas sink, providing recreation and enjoyment of the public, and providing jobs for hardworking Mainers. The irony here is that a healthy forest also produces vast amounts of biogenetic or naturally occurring VOCs. In fact, the level of VOCs from the forest products industry mentioned above is dwarfed by the amount of VOC emissions in Maine that come from forests naturally.
- Thus, taking all of the above into consideration, making it more expensive and difficult to productively use wood from Maine's forests is counterproductive to a healthy environment.

CONCLUSION

The Department petition specifically sites FE Wood-Natural Energy, LLC (a proposed pellet plant) as not proceeding due to the potential LAER and offset requirements. As noted above, the ThermoGen plan is fully licensed in Millinocket but has not proceeded. While other factors may be at play, the requirement for a thermal oxidizer and offsets could not have helped the economics of the project. Lastly, who can forget the incident in 1995 when Louisiana Pacific announced that it would be investing in New Brunswick instead of New Limerick/Houlton because of the offset requirements?

The challenges of remaining in the OTR are significant at a time when the forest industry is rebuilding capacity. The industry is still a strong economic engine for Maine with a 8.5 billion dollar contribution to the economy and represents 33,538 direct and indirect jobs (1 in 24). But recent market losses have affected some rural communities drastically along with the quality of life for those citizens. The forest economy has the opportunity to grow to replace lost markets with new innovative and environmentally friendly products and strengthen our rural regions. But as a State we need to be realistic about what it means to support manufacturing; establishing regulatory science-based standards that are reasonable and evaluated periodically to ensure public safety are appropriate.

Thus, between the numerous facilities that have accepted enforceable license limits on production to avoid the LAER and offset requirements and these examples of actual lost investment, it is clear that the negative economic impacts of these requirements are very real, and not hypothetical. When weighed against the fact that Maine's air quality meets health-based standards and does not contribute to any area that is not attaining the ozone standard, we believe the conclusion is clear that the Department's proposal to opt out of the OTR is in the best interest of Maine.