

Governor Gavin Newsom

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Liane Randolph Chair, California Air Resources Board

California Air Resources Board 1001 | Street Sacramento, CA 95814

CC: Matthew Botill, Industrial Strategies Division Chief Natalie Lee, Industrial Strategies Division Assistant Chief

Subject: OPR's comments on the Proposed 15-Day Changes to the Low Carbon Fuel Standard Regulation

Dear Lianne,

Thank you for the opportunity to comment on the 15-day proposed regulatory amendments to the Low Carbon Fuel Standard (LCFS) Program. The Governor's Office of Planning and Research (OPR) is a member of the Wildfire and Forest Resilience Task Force's Executive Committee and has been tasked with leading the state's efforts to develop a sustainable wood products market. Under the direction of the Wildfire and Forest Resilience Action Plan (Key Action 3.10), OPR launch the Woody Feedstock Aggregation pilot program to investigate how to build the institutional capacity at the local level to unlock the biomass supply chain bottleneck and establish reliable access to biomass sourced from California's forested lands.

At OPR, we are encouraged by the direction of the proposed changes such as the cap on crop-based fuels and sustainability guidelines for biomass feedstocks. However, we have significant concerns regarding the treatment of forest biomass waste and where forest biomass can and cannot be sourced. We believe that these amendments risk undermining the state's ongoing efforts to meet its ambitious wildfire prevention, forest resilience and climate goals. With this letter, we provide comments on the definition of forest biomass waste and the treatment of forest biomass waste as a specified source feedstock within the proposed Low Carbon Fuel Standard amendments.

Background

The 2022 Scoping Plan identified the need for an expansion in woody biomass residue utilization, particularly from forest and agricultural residues, as necessary for achieving carbon neutrality by 2045. This is because biomass conversion into products, such as clean hydrogen with carbon capture and

sequestration, can provide carbon removal needed to compensate for residual emissions remaining in the economy beyond mid-century. Non-combustion technologies (i.e. gasification, pyrolysis) can also provide clean, non-fossil fuels for decarbonizing aviation, shipping and other hard-to-abate industries.^{1,2} Additionally, state-sponsored research has identified biomass conversion to liquid and gaseous transportation fuels as a key option for addressing the forest health and wildfire crisis.³

A robust and innovative wood products market is needed to increase forest management and restoration in California and drive biomass residue utilization at the scale necessary for meeting the state's ambitious wildfire prevention and climate goals.⁴ The state has developed a number of biomass utilization market and technology development programs, including the Department of Conservation's forest biomass to carbon-negative biofuels <u>pilot program</u>, the Infrastructure and Economic Development Bank's <u>Climate Catalyst Fund</u>, and the Department of Forestry and Fire Protection's wood products and bioenergy <u>grant program</u>.

As a matter of practice, however, biomass utilization projects have been difficult to get off the ground. A key barrier to achieving this vision, that we have learned as part of implementing the pilot program at OPR, is a lack of a recurring revenue incentive for prospective project developers. The Low Carbon Fuel Standard is a policy tool which has the potential to support the development of woody biomass residue utilization projects as this program can provide recurring incentives for these earlier stage projects.

Definition of "forest biomass waste"

CARB is proposing to define "forest biomass waste" as small-diameter, non-merchantable residues, limited to forest understory vegetation, ladder fuels, limbs, branches, and logs that do not meet regional minimum marketable standards for processing into wood products. This definition effectively excludes all forest biomass waste as eligible under the LCFS as all small diameter, non-merchantable residues can be converted into "wood products" such as wood pellets. We recommend amending the definition of forest biomass waste in a manner that is consistent with Section 95488.8(g)(1)(A)(3). The definition could be amended as follows:

"Forest Biomass Waste" means small-diameter, non-merchantable residues that are removed for wildfire mitigation, forest restoration projects, or the protection of public safety.

Eligibility of Carbon Capture and Sequestration

OPR supports the use of CCS to reduce carbon intensities and generate carbon negative emissions where possible. The proposed amendments, however, limit sequestration to geologic storage and limit the use of captured carbon to fuels production. These restrictions exclude the use of biochar, which can be a co-

¹ Lawrence Livermore National Laboratory. 2020. Getting to Neutral: Options for Negative Carbon Emissions in California. <u>https://gs.llnl.gov/sites/gs/files/2021-08/getting_to_neutral.pdf</u>

² Lawrence Livermore National Laboratory. 2023. Roads to Removal: Options for Carbon Dioxide Removal in the United States. <u>https://roads2removal.org/</u>

³ Joint Institute for Wood Products Innovation. 2020. Literature review and evaluation of research gaps to support wood products innovation. <u>https://bof.fire.ca.gov/media/9688/full-12-a-jiwpi_formattedv12_3_05_2020.pdf</u>

⁴ Joint Institute for Wood Products Innovation. 2020. Joint Institute Recommendations to Expand Wood and Biomass Utilization in California. <u>https://bof.fire.ca.gov/media/31nfixsv/final-board-approved-joint-institute-wood-and-biomass-utilization-recommendations- 11-4-20 ada.pdf</u>

⁵ Climate Action Reserve. 2024. US & Canada Biochar Protocol. <u>US & Canada Biochar Protocol - Climate Action</u> <u>Reserve : Climate Action Reserve</u>

product of hydrogen, electricity or biofuels production from waste biomass. The scientific literature supports the conclusion that biochar can be used for carbon sequestration in soil or to reduce emissions from enteric fermentation, livestock manure management and compost.⁵ Biochar can also be used in the production of concrete, pavement, and other products to sequester carbon. Excluding the use of biochar will harm the economic viability of forest waste projects and contradicts the recommendations in the 2022 Climate Change Scoping Plan to increase the use of bioenergy with CCS (BECCS).

OPR recommends to CARB to revise the definition of CCS in section 95490(a) as follows:

(a)(1) Alternative fuel producers, petroleum refineries, and oil producers that capture CO2 onsite, including at the location of the production of hydrogen used as an intermediate input, and geologically sequester CO2 geologically or in the form of biochar, either on-site or off-site.

OPR recommends to CARB to revise the definition of CCS on page 8 as follows:

"Carbon capture and sequestration (CCS) project" means either (1) a project that captures CO₂ by an eligible entity specified in section 95490(a) of this subarticle, transports the captured CO₂ to an injection site, and injects and permanently sequesters the captured CO₂ pursuant to the Carbon Capture and Sequestration Protocol and as specified by section 95490 of this subarticle; or (2) a project that captures carbon in the form of biochar during the conversion of waste biomass to fuels and that biochar is used in a manner that sequesters carbon as specified in the US & Canada Biochar Protocol.

Forest biomass waste as a specified source feedstock

CARB is proposing to include forest biomass waste from non-industrial forestland removed for the purpose of wildfire fuel reduction or forest restoration as a specified source feedstock under the LCFS Program. We find this troubling as this amendment would significantly restrict the amount of material available for biomass utilization projects. Industrial forestland owners are currently the only entities in the State capable of offering reliable, long-term forest feedstock supply agreements. At OPR, our staff has been working with state, federal and local government partners to enhance the biomass mobilization and processing capacity of rural economies throughout Northern California.

Since 2022, OPR has awarded \$7 million to six projects that cover 18 counties in the Central Sierra, Lake Tahoe Basin, Northeast California, North Coast, Lake County and Marin County. The OPR biomass pilots have been designed to rebuild the bioeconomy in forest communities, attract private capital and leverage public investments to restore the infrastructure and workforce capacity needed to mobilize forest biomass, develop biomass markets and improve landscape resilience to wildfire. Each pilot is working to develop biomass management plans to improve feedstock supply chain logistics within each target region through the deployment of a new public entity with the authority and resources to aggregate biomass at scale and facilitate long-term feedstock contracts between industrial, non-industrial forest landowners and biomass off-takers.

Nearly 60% of California's forested lands are currently excluded from applying for biofuels credits as biomass sourced from federal lands is excluded by federal rules. This amendment would exclude an additional 14% of California's forestlands. Allowing industrial forestlands to offer qualified biomass to

biofuels projects is needed to kick-start a robust biomass utilization market in California. We recommend the following amendment:

Forest biomass waste from non-industrial forestlands removed for the purpose of wildfire fuel reduction or forest stand improvement, to reduce the risk to public safety or infrastructure, to create defensible space, or for forest restoration; and from a treatment in which no-clear cutting occurred and that was performed in compliance with all local, State, and federal rules and permits."

Conclusion

In closing, we respectfully urge our state partners at CARB to reconsider the proposed amendment to the definition of forest biomass waste, to reconsider the definition of CCS to include biochar, and address the treatment of forest biomass waste as a specified feedstock source within the Low Carbon Fuel Standard regulation. We believe that changes to the proposed definitions are needed to continue progress towards achieving the state's wildfire and forest resilience targets, and advancing a sustainable bioeconomy in California. We appreciate your careful consideration of our comments and look forward to continued collaboration between our agencies.

Sincerely,

Samuel Assefa

Samuel Assefa Director, Governor's Office of Planning and Research