Placer County
AIR POLLUTION CONTROL DISTRICT

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Erik C. White, Air Pollution Control Officer

January 4, 2019

Mr. James McGarry
Energy Division
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Re: <u>Reply Comments on BioMAT Program Review and Staff Proposal</u>

Dear Mr. McGarry:

Placer County Air Pollution Control District (Placer APCD or District) offers the following reply comments on the BioMat program based on letters that were distributed on the service list in December of 2018. At this time the District will focus on the air quality benefits of forest management activities and make some general suggestions. As the time for workshops approaches, the District strongly recommends that the Commission focus on quantifying the benefits of bioenergy more generally, including a full life cycle analysis associated with the alternative fate of the waste streams involved in this program. Ignoring what happens to wood, food, and agricultural and dairy waste if it is not used for energy is unrealistic and does a disservice to those who self-identify as "environmentalists". It is critical for the CPUC to take into consideration the work being done by the Resources Agency on working lands,[1] Cal Fire and its Forest Carbon Plan, and CARB work related to short lived climate pollutants, and its' Plan.

The most critical piece, however, is to take control of the narrative around the ecosystem services provided by the BioMat program and bioenergy more generally, and especially in terms of the benefits of the prevention of wildfire. With the requirements recently placed on the Commission through the passage of SB 901, it is clear that the legislature expects the Commission to do the analytical work to understand the economics and more specifically the associated cost savings of wildfire reduction. We suggest that the CEMA accounts that have been authorized over the past twenty years will provide important data, and we also recommend reviewing on such effort on a small scale that was done by the Sierra Nevada Conservancy.[2] Benefit we expect to see include: (1) reductions in criteria and toxic air pollution compared with open pile burning and wildfire; (2) reduction in costs and damages of wildfires, including that for fire suppression, firefighter safety, and damage to property and the environment; (3) protection of forest watershed water quality and quantity; (4) forest ecosystem habitat for animals and plants; and (5) recreation and aesthetics.

Meanwhile, we expect that the Commission will notice that concerns about air quality are clearly not taking into account the fate of the wastes streams if they are not used for energy. The use of forest biomass wastes for electricity is beyond carbon neutral (carbon negative) and provides

1 The new Working Lands Plan was released yesterday, see https://www.arb.ca.gov/cc/natandworkinglands/natandworkinglands.htm?utm_medium=email&utm_source=govdelivery
2 http://www.mokewise.org/docs/MokeWISE%20Final%20Report%20June%202015.pdf

significant reduction in criteria air pollutants and air toxics, when properly considering the forest biomass waste lifecycle. Forest biomass wastes are the byproduct of management activities that are required for ecosystem restoration and maintenance, fire hazard reduction, and merchantable timber objectives that will happen whether or not we are properly taking care of the waste produced. Forest biomass wastes never results from harvest intentionally for the sole purpose of bioenergy in California[3]. Forest biomass wastes are routinely piled and burned in the vicinity of generation. Leaving waste in piles or chipped and scattered on ground rarely meets fire hazard and ecological goals.

It is comprehensively demonstrated that the use of forest biomass wastes for electricity as an alternative to open pile burning results in significant reductions in greenhouse gases, criteria air pollutants, and air toxics[4,5,6]. This is due to:

- Elimination of the significant air pollution from open pile burning, whose smoke and soot contains the critically important short lived climate pollutants of methane and black carbon, as well as criteria air pollutant of fine particulate matter, nitrogen oxides, and carbon monoxide, and air toxics including polycyclic aromatic hydrocarbons.
- Biomass electricity operations utilization of state of art combustion and air pollution control methods including those for particulate (electrostatic precipitators) and nitrogen oxides (selective non-catalytic reduction).
- Biomass waste processing and transport engines and equipment that consume very small amounts of energy in comparison to the energy benefit of the biomass wastes, and are clean burning and low emitting.
- Displacement of the need for fossil fuels to generate equivalent electricity from biomass wastes – reduces the use of fossil fuels.

Forest biomass wastes used for electricity in California are inappropriately and inaccurately compared with coal. Biomass wastes are an unintended byproduct of vital California land management activities, and must be dealt with. Coal is a fossil fuel that is intentionally removed from permanent sequestration.

Selective forest fuel treatments (mechanical thinning of trees and brush) are a critically important forest ecology restoration tool that can also have greenhouse gas benefits. It is well established that mechanical thinning reduces wildfire severity and size. While there appears to be some concern about mechanical thinning, note that such concerns should be brought up in the proper venues: this proceeding should focus on broader contexts. Mechanical thinning can be raised with the state agencies that work directly on forestry issues.

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3 Hansen T. December 11, 2016. Guest opinion: Biomass plants run on byproducts, not trees, Mail Tribune, Medford, Oregon.
4 Springsteen B, Christofk T, York R, Mason T, Baker D, et al. 2015. Forest biomass diversion in the Sierra Nevada: Energy, economics and emissions. California Agriculture Journal July-September 142-149.
5 Springsteen B, Christofk T, Mason T, Clavin C, Storey B. 2011. Emission reductions from woody biomass waste for energy as an alternative to open burning. Journal of the Air and Waste Management Association 61:63-68
6 Springsteen B. December 6, 2016. Biomass facilities play an important role in improving air quality. The Biomass Monitor https://thebiomassmonitor.org/2016/12/09/opinion-biomass-facilities-play-important-role-in-improving-air-quality/.

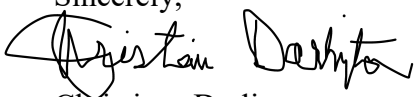
Emerging work indicates that fuel reduction can result in greenhouse gas benefits in forests of the California Sierra Nevada resulting from[7, 8, 9]:

- Existing dense and overgrown forest landscape containing unnatural levels of small diameter trees, species not resilient to fire, and brush.
- Fire return intervals that are shortening.
- Fuel treatment reduction of fire size and reduction of the extent of wildfire-scared land that is converted to grass and brush fields.
- Production of wood products that sequester carbon and displace fossil fuel intensive alternatives including concrete and steel.

Studies that show fuel treatments are not carbon beneficial in other parts of the Country and world are not relevant to the current California Sierra Nevada forested landscape.

In conclusion, the District reiterates key points from its opening letter, which include the fact that the pricing for contracts under the program need to be left at the amount they are now, as the market has already spoken, that the GHG benefits of the program can be gleaned from already existing literature so it is not necessary to ask projects to demonstrate that on a case by case basis, and the definition of strategic location should be reformulated, as well as the other items we mention such as avoiding high hazard zone fuel requirements and integration of interconnection issues with active participation of CPUC interconnection staff. Thank you for your consideration.

Sincerely,



Christiana Darlington
General Counsel, Placer APCD

7 Hurteau M. January 3, 2017. Quantifying the carbon balance of forest restoration and wildfire under projected climate in the fire-prone southwestern US, PLoS ONE, Vol. 12, 18 pages

8 Krofcheck, Hurteau, Scheller, Loudermilk. 2017. Restoring surface fire stabilizes forest carbon under extreme weather in the Sierra Nevada, Ecosphere, Volume 8, pp. 1-18.

9 Loudermilk, Stanton, Scheller, Dilts, Weisberg, Skinner, Yang. 2014. Effectiveness of fuel treatments for mitigating wildfire risk and sequestering forest carbon: A case study in the Lake Tahoe Basin, Forest Ecology and Management, Vol. 323, pp. 114-125.