December 14, 2010

Chairman Mary Nichols and Members of the Board
California Air Resources Board
1001 "I" Street
Sacramento, CA 95812

**Re: Request to include bioenergy emissions under the cap and account for the greenhouse gas emissions associated with biomass production and combustion.**

Dear Chairman Nichols and Members of the Board:

We appreciate the opportunity to comment on this provision within the cap-and-trade rule. The undersigned respectfully request that ARB adjust the treatment of energy produced from biomass (in particular – forest biomass) in the cap-and-trade rule to include this source under the cap and account for greenhouse gas emissions associated with the production and combustion of this material. An approach that incorporates emissions from bioenergy production into compliance obligations is, we believe, consistent with the approach taken by US EPA and will create opportunities for landowners and energy producers better utilize biomass that results in the lowest net greenhouse gas emissions.

Section 95852.2 exempts a number of fuel source categories from compliance obligations. Exempted categories include direct combustion of several sources of cellulosic biomass, including solid waste, construction and manufacturing debris, mill residues, range land maintenance residues, all agricultural crops or waste, and wood or wood waste. Covered entities must report emissions from the combustion of these fuels but are not required to obtain allowances for those emissions. Furthermore, neither users nor suppliers of biomass for energy are required to identify the sources of biomass material or report the biological greenhouse gas impacts associated with the removal of biomass for energy or fuel.

Under the Clean Air Act, US EPA correctly determined that biogenic emissions should be considered when evaluating whether facilities are subject to the Prevention of Significant Deterioration and Title V Programs. Once facilities are subject to these federal provisions they trigger additional control requirements and regulatory oversight. If California were to accurately incorporate biomass emissions into the cap and base compliance requirements based on those emissions, the program would complement EPA's effort to accurately account for emissions, and would create an incentive to identify and reward use of the lowest carbon biomass available.

ARB has not explicitly made a determination regarding the overall carbon impacts of these fuel sources and does not provide explicit explanation for the exemption. However, exempting these categories from compliance obligations is equivalent to assuming an identical flux of carbon into and out of the atmosphere associated with all biomass growth, harvest, production, and combustion. In effect, by exempting bioenergy, the rule assumes "carbon neutrality" for all biomass fuels, which is not scientifically accurate. [1] Rather, different forest biomass feedstocks and their management can incur very different "carbon debts" over different time scales. As currently written, the cap-and-trade rule provides a significant incentive to produce biomass energy from forest materials through the exemption, but does not provide the accounting infrastructure to require or ensure that the emissions from the combustion of these materials are carbon neutral within the timeframe relevant to AB 32.

[1] Searchinger, T., Hamburg, S., Melillo, J., Chameides, W., Havlik, P., Kammen, D., Likens, G., Lubowski, R., Obersteiner, M., Oppenheimer, W., Robertson, G.P., Schlesinger, W., Tilman, G.D. 2009. Fixing a critical climate accounting error. *Science* 326: 527-528.

Of course, in some instances the use of biomass to make energy will result in "de minimus" or net carbon negative emissions (i.e. biomass fired power plants that burn only agricultural wastes which otherwise would be burned in the open or anaerobic digesters that handle food waste). Other examples may include use of harvest or mill residue for bioenergy. However, in other cases, such as conversion of standing forests to bioenergy without forest replacement, the production of biomass based energy could cause an increase in overall GHG emissions in the atmosphere. The cap and trade regulation currently before the board represents an opportunity to promote and reward the use of fuels that provide the most emissions reductions while moving away from biomass that can increase overall greenhouse gas emissions – such an opportunity should not be missed.

**Accordingly, emissions from bioenergy produced through use biomass derived fuels—including especially forest biomass, and "wood and wood wastes" identified in section 95852.2(a)(4)—should, as a default matter, be included under the cap and generate compliance obligations. Entities combusting these fuels should be excused from compliance obligations only to the extent that they can demonstrate that the production and use of the biomass fuel resulted in reduced or avoided greenhouse gas emissions over a timeframe relevant to AB 32, that is, by 2020. To this end, ARB should begin work, including collaboration with relevant stakeholders and experts, to develop scientifically defensible quantitative assessments reporting requirements to evaluate the net carbon flux associated with harvest and combustion of different biomass-derived fuels. Exemptions from compliance obligations should be based on the use of agency approved models and reporting requirements and should be limited to fuel sources that result in zero or negative total GHG emissions, such as food waste digesters.**

We understand that ARB may be assuming that future carbon sequestration associated with overall statewide forest growth will offset any emissions from combustion of woody biomass fuels. Such an assumption does not support a wholesale exemption from compliance obligation as currently proposed, but rather, supports the development of a quantitative framework to measure and verify this phenomenon. To the extent that harvesting biomass affects both overall carbon stocks and the overall rate of sequestration, all bioenergy should not be considered inherently "carbon neutral," but rather, should generate a carbon debt that must be considered. Thus, the timeframe over which a particular harvested area can re-sequester the carbon associated with biomass removal is essential to understanding the carbon implications of the particular fuels. It is important to note that any re-sequestration must be equal to the sequestration that would occur under a business-as-usual scenario for a net carbon value of zero.

**Developing a transparent carbon accounting framework based on geographic and operational origin of forest biomass materials is critical if ARB and covered entities are to develop a scientifically defensible methodology for bioenergy under the cap and trade regulation. Such a program should include information associated with the production of biomass material (i.e. allowing for tracking from the point of combustion back to the point of production). However, in order to ensure the program is of reasonable size and scope, and doesn't create a costly disincentive to utilize biomass overall, CARB should consider easing the reporting and tracking requirements for certain sources of bioenergy where there is clarity on atmospheric carbon flux values. In such circumstances, CARB could allow landowners or biomass users to certify the source of their bioenergy and utilize lookup tables with default emissions factors and carbon flux values.**

In addition to the cap and trade rule's exemption of bioenergy emissions, we also understand that the Mandatory Reporting Rule does not generally require reporting of the type of information necessary to calculate net carbon flux associated with bioenergy feedstock production. . As stated above, accounting for changes in sequestered carbon (at the local and regional scale), along with other parameters are needed to calculate net GHG emissions. However, these additional reporting requirements must be counterbalanced by the need avoid unnecessarily overburdensome requirements. Accordingly, as CARB

endeavors to determine the actual carbon impact of bioenergy production, important modifications to the MRR will be necessary, but must be dome in a thoughtful and balanced manner. . Without an improved accounting framework, ARB will not accurately account for the GHG impacts of biomass energy and will incur risk of significant uncounted increases in GHG emissions.

Thank you for considering our comments.

Sincerely,

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