RFA RENEWABLE FUELS ASSOCIATION

January 11, 2010

Mary D. Nichols, Chairwoman
California Air Resources Board
Headquarters Building
1001 "I" Street
Sacramento, CA 95812
email: (mnichols@arb.ca.gov)

RE: Preliminary Draft Regulation for a California Cap-and-Trade Program

Dear Chairwoman Nichols,

As the leading national trade association representing the U.S. ethanol industry, the Renewable Fuels Association (RFA) appreciates the opportunity to submit the following comments on the Preliminary Draft Regulation (PDR) for a California Cap-and-Trade Program.

RFA promotes policies, regulations and research and development initiatives that increase the production and use of fuel ethanol from all feedstocks. RFA membership includes a broad cross-section of ethanol producers and suppliers, ranging from early-stage cellulosic and advanced ethanol producers to larger scale grain ethanol companies, as well as other businesses, individuals and organizations dedicated to the expansion of the U.S. fuel ethanol industry.

Our comments on the PDR focus primarily on 1.) the implications of the decision to include liquid biofuels under the cap and 2.) the PDR's proposed options for accounting of emissions from the combustion of biomass.

Inclusion of Liquid Biofuels Under the Cap

In general, we are greatly concerned by the decision to include liquid biofuels under the cap, given that the carbon neutrality of biomass and biofuels is universally accepted and recognized in carbon accounting practices. When biomass is combusted for energy, it releases into the atmosphere the same amount of carbon dioxide (CO_2) that it absorbed from the atmosphere during growth. When harvested biomass is replanted, this cycle is repeated. In this way, use of biomass for energy simply recycles atmospheric carbon. In contrast, emissions from the combustion of fossil fuels like petroleum and natural gas result in a net increase of CO_2 in the atmosphere. Thus, while it is logical to include fossil fuel combustion emissions under the cap, it is unnecessary to include biogenic emissions from biomass combustion under the cap since these emissions have no net effect on atmospheric CO_2 levels. For these reasons, existing cap-and-trade frameworks (e.g., European Union Emissions Trading Scheme) and pending federal legislation (e.g., H.R. 2454, American Clean

Energy and Security Act of 2009) exempt all emissions from biomass combustion (stationary and mobile), or, at the maximum, require reporting of these emissions for informational purposes only.

Further, the PDR proposes options that would establish widely disparate treatment of biomass, depending on whether it is combusted by stationary or mobile sources. The PDR states that stationary source emissions from the combustion of biomass would not create an obligation to surrender allowances. Though it is not explicitly stated, it is assumed that this exemption for biogenic emissions from stationary sources is based on the carbon neutrality of the biomass, as discussed above. Biomass is considered a carbon neutral energy feedstock because it neither increases nor decreases atmospheric carbon levels when it is combusted. We believe the carbon neutrality treatment for stationary combustion of biomass is proper and supported by universally accepted carbon accounting methods.

However, it appears that the same carbon neutrality assumption is not being consistently applied to some of the PDR options being considered for determination of surrender obligations for liquid biofuels used for transportation. If biomass used for stationary combustion is treated as carbon neutral, *all biomass* used for *all combustion* should be treated as carbon neutral under the program.

Finally, we are concerned that the PDR proposes some options that would consider both direct upstream lifecycle emissions and indirect emissions for liquid biofuels in determining surrender obligations, while only direct combustion emissions would be considered for most other energy sources. This establishes an asymmetrical platform for accounting for the emissions from various sources. If full lifecycle emissions accounting is to be performed for some fuels, it should be conducted for all fuels.

Proposed Options for Accounting of Combustion Emissions from Biomass and Biofuels

Following are our comments on each of the four options proposed in the PDR for calculating the surrender obligation for transportation fuels, including liquid biofuels.

Option 1: Surrender obligation could be based on the net "carbon content" of the fuel. In this case, providers of gasoline and diesel would have an obligation for the direct combustion emissions of the fuel they sell. Biofuel deliverers would have no obligation for biofuels (under the assumption that biofuel carbon content is offset by feedstock carbon sinks). This approach would be consistent with the emissions accounting framework proposed for biomass derived fuels combusted at stationary sources.

This is the only option proposed in the PDR that is scientifically defensible and consistent with both universally accepted carbon accounting metrics and other emerging cap-and-trade programs. Further, this is the only option that would ensure consistent treatment of emissions from all biomass combusted for energy under the California cap-and-trade program. Finally, this option ensures that fossil carbon emissions from all capped energy producers (mobile *and* stationary sources) and importers are accounted for in the same way.

Option 2: Surrender obligation would be based on the direct combustion emissions for gasoline, diesel, and biofuels. Obligation for transportation fuel providers would be based on the 'tailpipe' emissions of fuels.

This option is deeply flawed for two primary reasons. First, universally accepted carbon accounting practices hold that tailpipe emissions of CO_2 from the combustion of biofuels are equivalently offset by the amount of CO_2 removed from the atmosphere during photosynthesis and conversion to organic carbon. In this way, the use of biomass for liquid biofuel results in the relatively rapid "recycling" of atmospheric carbon, whereas combustion of the carbon in fossil fuels—which has been sequestered underground for millions of years—results in a net increase in atmospheric carbon levels.

Failure to treat all biogenic emissions as carbon neutral goes against the recommendations of the Intergovernmental Panel on Climate Change (IPCC)[1], contradicts the practices of the U.S. Environmental Protection Agency[2] and other federal regulatory agencies[3], and deviates from the treatment of biogenic emissions under other GHG mitigation policies (e.g., European Union Emissions Trading Scheme[4]). Further, the House-passed American Clean Energy and Security Act of 2009 (ACES, Waxman-Markey) provides an exemption for emissions from combustion of "renewable biomass" based on the carbon neutrality of the feedstock. CARB itself recognizes the carbon neutrality of biomass in other regulations, such as the Low Carbon Fuels Standard[5]. This PDR option effectively treats biogenic CO_2 emissions identically to fossil carbon emissions, which is neither supported by good science nor good policy.

Second, this option creates a glaring disparity in the treatment of biogenic emissions from stationary sources and biogenic emissions from mobile sources. There should be no distinction whatsoever between CO_2 emissions resulting from biomass combustion at a stationary source (e.g., electricity generation for electric vehicles) and biogenic emissions from a mobile source (e.g., liquid biofuels for internal combustion engines). The PDR offers no clear rationale explaining why biomass combustion emissions from stationary sources would be exempt from creating an obligation to surrender allowances, while biomass combustion emissions from liquid biofuels would (under Option 2) create a surrender obligation. This discrepancy could lead to unintended perversions of the biomass marketplace, whereby biomass would be favored as a feedstock for

[1] According to IPCC guidelines, "…emissions from combustion of biofuels are reported as information items but not included in the sectoral or national totals…" 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Vol. 2 (Energy).
[2] EPA has found that "the CO2 emitted from biomass-based fuels combustion does not increase atmospheric CO2 concentrations, assuming the biogenic carbon emitted is offset by the uptake of CO2 resulting from the growth of new biomass." 74 Fed. Reg. 24,904, 25,039 (May 26, 2009).
[3] See for example the U.S. Department of Energy Voluntary Reporting of Greenhouse Gases Program. Section1605 (b) of the Energy Policy Act of 1992. Reporting guidelines for the program state, "CO2 emissions from biogenic fuels, including bagasse, wood, wood waste, ethanol, black liquor, and municipal greenwaste, should be omitted from your emissions inventory as they are not considered to be anthropogenic emissions."
[4] According to the European Commission guidelines for monitoring and reporting of GHG emissions, "Biomass is considered as CO2 neutral. An emission factor of 0 [tCO2/TJ or t or Nm3] shall be applied to biomass." The guidelines also classify specific liquid biofuels, including "bioethanol," as being carbon neutral. 2007/589/EC: Commission Decision of 18 July 2007 establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC.
[5] For the LCFS, CARB treats biofuel combustion emissions as follows: "For corn ethanol, since the feedstock was produced by 'capturing' CO2 from the atmosphere, the net CO2 released from the use of ethanol is considered 'carbon neutral' and assigned a value of zero." Proposed Regulation to Implement the Low Carbon Fuel Standard, Volume I, Staff Report: Initial Statement of Reasons (March 2009).

stationary energy production, but not as a feedstock for biofuels. Under this option, a ton of biomass feedstock, such as rice straw, could be used to generate electricity without creating a surrender obligation for the resulting emissions. However, if that same ton of rice straw were instead converted into cellulosic ethanol, the associated tailpipe emissions would create a surrender obligation. This is inequitable and scientifically indefensible.

Option 3: Surrender obligation would be based on the net "carbon content", as specified above, plus some portion of the fuel's lifecycle emissions, such as direct and indirect land use emissions.

This option is not practical or equitable for several reasons. While basing surrender obligations on either net carbon content *or* lifecycle emissions may be appropriate (provided that all fuel combustion emissions are accounted for using the same methods and boundaries), using a mix of both approaches for one type of fuel but not for others establishes an accounting system that is both asymmetrical and prone to double-counting. If particular lifecycle emissions that are not capped (e.g., certain agriculture-related emissions associated with biofuels production) are considered for one type of fuel, uncapped upstream emissions related to the production and use lifecycle of all fuels must be considered.

Further, it is unclear what lifecycle emissions might be considered under this option. This type of approach could easily result in double-counting of certain emissions depending on what lifecycle emissions are considered for biofuels. If, for instance, the emissions from lime production are included in the portion of lifecycle emissions considered for biofuels (lime is sometimes used as an input in crop production), double-counting could occur because lime production is already a covered entity under the cap-and-trade program. Another example would be emissions from fossil fuels used in the transportation of biofuels from point of production to point of sale, since fossil fuel combustion emissions would already be capped. Finally, as a point of clarity, indirect land use emissions are *not* part of the biofuels lifecycle. In keeping with the principles of the international standard on lifecycle assessment (ISO 14040), lifecycle emissions are those emissions that are directly related to the supply chain for a certain product.

Option 4: Surrender obligation would be based on the lifecycle carbon intensity factor (as determined by the LCFS) for gasoline, diesel, and biofuels. To avoid double-counting the same emissions from covered entities in the fuel pathway, the already-covered portion of the fuel production pathway would need to be netted out from the emissions factor.

This option is also untenable because it results in an accounting framework that is asymmetrical in several ways. First, the LCFS carbon intensity values are based on emissions related to the full fuel lifecycle (as well as potential economically-derived indirect emissions for biofuels). Thus, adoption of those values for the cap-and-trade program would create a situation where transportation fuels are being held accountable for upstream emissions related to feedstock extraction, transportation, and refining/conversion, while other energy sources are only held accountable for direct emissions from the point of energy generation. In other words, under this option, producers and importers of biofuels would be accountable for the emissions associated with cultivation of the biomass

feedstock used to produce the biofuel, while electricity producers using the exact same feedstock would not be held accountable for those upstream emissions. Additionally, by defaulting to the LCFS carbon intensity values, this option considers uncapped, indirect emissions (e.g. land change emissions) for some fuels but not for others. Finally, ensuring that double-counting is avoided would likely prove to be difficult and burdensome from a regulatory perspective.

Conclusions and Recommendations

In closing, the RFA offers the following recommendations related to accounting of biogenic emissions from the combustion of biofuels and biomass under the proposed California cap-and-trade program.

- *Recognize the carbon neutrality of all biomass and exempt all biofuels and biomass from an obligation to surrender allowances.* As discussed above, Option 1 is the only option that ensures the carbon neutrality of biomass is uniformly recognized under the California cap-and-trade framework. It is a universally accepted and scientifically supported approach to treat CO_2 combustion emissions from biomass as carbon neutral. Further, *all* biomass should be treated as carbon neutral, regardless of whether it is used as a feedstock by stationary energy sources (i.e., electricity production) or for liquid biofuels. Failure to treat all biomass consistently will only lead to unintended perverse incentives in the marketplace.

- *Do not attempt to indirectly regulate uncapped sources*. Emissions from agriculture and land use change are not capped, yet several proposed transportation fuel emissions accounting options in the PDR would likely require biomass processors to surrender allowances for such uncapped emissions. This establishes an unlevel playing field for some covered entities. Such options would make some covered entities responsible for emissions outside of the cap that may or may not be related to their products, while most other covered entities would not be held similarly responsible for uncapped emissions that may be related to their products.

- *Avoid attempting to capture emissions from changes in carbon stocks due to land use change, since those emissions are outside the scope of the cap-and-trade program.* By considering options that would hold certain biomass processors responsible for potential land use change emissions, the PDR extends the cap-and-trade program's coverage of emissions well beyond its intended boundary. Speculative emissions related to land use change are already being dealt with separately through the LCFS (although there is significant controversy and disagreement surrounding the methods used by CARB to estimate such emissions). Potential changes in land-based carbon stocks should not obfuscate or interfere with the carbon neutrality of biomass. Indeed, land use change emissions and the biomass carbon cycle are two distinctly separate issues and should be treated as such.

- *Ensure that emissions are not double-counted*. Several of the options proposed in the PDR related to accounting of emissions from liquid biofuels combustion substantially increase

the likelihood that certain emissions may be double-counted. Selectively mixing upstream emissions from lifecycle accounting with direct combustion emissions under the cap is undesirable and susceptible to accounting errors. The only way to ensure that such accounting errors are avoided is to adopt Option 1 as proposed in the PDR. Under this option, the direct emissions from all transportation fuels are treated in the same way as emissions from stationary sources and biogenic emissions from biofuels combustion are considered carbon neutral.

Thank you again for the opportunity to provide comment and recommendations. We welcome a further dialog on this subject and look forward to responses to any of the comments offered herein. We will continue analyze developments related to the cap-and-trade proposal and respond with comments as appropriate.

Sincerely,

Bob Dinneen
President & CEO
Renewable Fuels Association