BEFORE THE
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
AIR RESOURCES BOARD

Preliminary Draft Regulation for the California Cap-and-Trade Program

Comments of Biotechnology Industry Organization

January 11, 2010

Brent Erickson
Executive Vice President
Industrial and Environmental Section
Biotechnology Industry Organization
1201 Maryland Avenue, S. W. Suite 900
Washington, D.C. 20024
Phone (202) 962 9200
Fax: (202) 488-6301
WWW.BIO.ORG/IND/

BEFORE THE
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
AIR RESOURCES BOARD

Comments of Biotechnology Industry Organization on
Preliminary Draft Regulation for the California Cap-and-Trade Program

I. Introduction

The Biotechnology Industry Organization ("BIO") is pleased to comment on the California Air Resources Board's (the "Board" or "CARB") preliminary draft regulation ("PDR"). BIO is the world's largest biotechnology organization, with more than 1,200 member companies worldwide. BIO represents leading technology companies in the production of conventional and advanced biofuels and other sustainable solutions to energy and climate change. BIO also represents the leaders in developing new crop technologies for food, feed, fiber, and fuel.

California's cap-and-trade program is intended to set the State on a path to reduce greenhouse (GHG) emissions to 1990 levels by 2020, the target established in AB 32. The essence of the cap-and-trade program is the establishment of an aggregate cap on GHG emissions from all covered sectors and covered entities within those sectors. Within this aggregate cap, all sectors should be treated under a common accounting framework that counts GHG emissions consistently. Put simply, a ton is a ton and the State's cap-and-trade program should not favor or penalize any covered sector or covered entity through inconsistent treatment of GHG emissions.

BIO is concerned that the PDR may contemplate inconsistent, discriminatory and unjustified treatment of GHG emissions associated with biofuels used in the transportation sector. BIO firmly believes that biofuels should play a pivotal role in reducing GHG emissions in transport. To do so, the cap-and-trade program must recognize biomass as a renewable energy

resource that produces no net GHG emissions upon combustion. It is well-understood that the carbon content of biomass released upon combustion is offset completely by the uptake of atmospheric carbon in the biomass. Thus, biomass, when combusted as a fuel source, whether in power plants or in automobiles and trucks, produces no net GHG emissions that contribute to global warming. Expansion of biomass as a fuel source, including biofuels, will allow California to displace large volumes of fossil fuels, thereby achieving substantial and immediate reductions in the State's GHG emissions.

BIO's comments focus on how the cap-and-trade program should be consistent in its treatment of biomass, reflecting its recycling of carbon and thus reflecting its inherent potential to reduce GHG emissions. BIO's comments focus specifically on the open options under consideration in section 95950, which will establish the basic accounting rules for all covered sectors: industrial facilities, electricity generation, and transportation fuel delivery. Option (1) under section 95950 is the only design option that treats biofuels consistently with other fuels used in transportation and with other uses of biomass, e.g., as a fuel for electricity generation. Options (2), (3), and (4) under section 95950 would unfairly penalize biofuels, vitiating the principle central to all cap-and-trade programs that "a ton is a ton," or, in the case of biomass and biofuels, "no ton is no ton."

I. A Principled and Consistent Framework for GHG Accounting for Biomass and Biofuels

GHG emissions should be consistently accounted for based on the direct, net carbon content of all fuels used in all covered sectors.

1. Section 95950 imposes a surrender obligation for each ton of CO2 equivalent GHG emissions directly emitted by certain covered facilities or embedded in fuels used in covered

sectors. In both cases, the surrender obligation is consistently applied to the direct net emissions or carbon content of the fuels used in covered sectors.

2. Transportation fuel should be treated on a consistent basis, by measuring the carbon content of fuel delivered to or for end users. This should be the rule for gasoline, diesel fuel, natural gas, hydrogen, and liquid biofuels.

3. Biomass should be accounted for consistently as a "no net carbon" fuel. Biomass has no direct net carbon emissions due to the recycling of carbon in biomass. This is the rule proposed under section 95950 (b) (2) for biomass used in electricity generation and it should be the rule for biomass used in liquid biofuels. While the PDR leaves open the possibility of exceptions to this treatment of biomass used in electricity generation, none is proposed and, therefore, BIO believes that consistency and nondiscrimination require that biofuels be treated on the same basis as other biomass combusted in covered sectors.

4. Option (2), which contemplates measuring only "tailpipe" emissions, without recognition of the recycling of carbon in biomass-based fuels, would create discriminatory treatment of biomass used in biofuels, as opposed to its use as a fuel for electricity generation. Such discrimination is unwarranted, and risks undermining the ability of obligated parties to reduce the state's GHG emissions at the lowest possible cost to the consumer.

5. Option (1) under Section 95950 consistently implements the use of direct net carbon content of biofuels. It is the only option that gives the same full effect to the recycling of carbon inherent in biomass that underlies the treatment of biomass fuels in non-transportation uses. Option (1) is consistent with the treatment of biomass used for electricity generation and for all fuels used in transportation, electricity generation and covered industrial processes. Option (1) is

the only option that is consistent with the accounting of other sectors and fuels and it should be adopted by CARB.

Lifecycle measurements should not be taken into account for purposes of the surrender obligation under the cap-and-trade program.

1. Section 95950 of the PDR rests upon use of direct, rather than lifecycle, GHG emissions as the measure of an entity's surrender obligation. Lifecycle considerations are not taken into account for biomass used in electricity generation. It would be discriminatory to account for lifecycle emissions, on top of direct emissions, for only one type of covered fuel, such as biofuels, or even for one covered sector, such as transportation.

2. The cap-and-trade program should not be designed to incentivize or penalize one particular type or use of fuels. As noted in the PDR (at p.39), the Low Carbon Fuel Standard ("LCFS") is appropriately viewed as a legislatively mandated "transformational policy" applicable to transportation fuels only. The cap-and-trade program being adopted under AB 32 should be designed on the neutral and non-discriminatory principle that "a ton is a ton" for all covered sectors and fuel types. Any incentives that the State wishes to achieve for displacing the use of gasoline and diesel fuels in vehicles should be adopted as part of the LCFS or other statutorily mandated program. Transportation fuels should be covered under the cap-and-trade program, but should not bear special penalties or receive special incentives through special accounting rules for emissions from different fuel types.

3. Even if gasoline and diesel were subjected to lifecycle measurements, as under options (3) and (4), carbon emissions from the transportation sector would not be measured consistently with carbon emissions from industrial and electricity sectors, violating the principle that "a ton is a ton."

4. Life cycle estimates of GHG emissions from transportation fuels are highly complex and remain the subject of vibrant scientific debate, particularly with respect to possible indirect emissions. CARB has already elected to utilize lifecycle estimates of GHG emissions, including postulated indirect land use change (ILUC) emissions from transportation fuels within the context of its LCFS. BIO has previously commented as to the inappropriateness of this action. Use of these life cycle estimates within the context of an economy-wide, multi-sector cap-and-trade program is even more clearly unsuitable. Under a cap-and-trade program, life cycle estimates would be directly monetized. Emissions calculations under a cap-and-trade system thus demand the highest level of confidence in their accuracy. Life cycle GHG calculations for transportation fuels are simply inadequately developed for use under a cap-and-trade regime.

5. Life cycle emissions from transportation fuels are already regulated under California's LCFS. Further regulation of life cycle emissions from transportation fuels under California's cap-and-trade program would be duplicative, and would impose a double burden on biofuels borne by no other covered sector. This regulatory double jeopardy risks suffocating California's leading position in the development of advanced biofuels. CARB should restrict itself to "transformational" incentives and penalties in programs specially designed to serve legislatively articulated policy objectives, such as the LCFS. CARB should abstain from making policy judgments about different types of fuel or different sectors in designing a multi-sector GHG cap-and-trade program. Thus, options (3) and (4), which would impose lifecycle treatment only on some types of fuels or in some sectors, should be rejected.

Indirect land use change ("ILUC"), which represents an indirect consequence of the use of biofuels, should not be singled out as an adjustment to the direct net carbon emissions from biofuels.

1. Options (3) and (4) suggest that an ILUC adjustment would be made to net direct carbon emissions, without consideration of other lifecycle GHG emissions associated with covered transportation fuels. This partial lifecycle approach is discriminatory and unjustified. It would penalize biofuels as compared to gasoline and diesel, which have other lifecycle and indirect emission consequences that would not be taken into account. It would also penalize the use of biomass for transportation fuels, rather than as fuel for use in electricity generation.

2. ILUC is highly controversial, requiring a myriad of arbitrary assumptions that need to be tailored to specific feedstock sources. There is no standardized methodology with consensus scientific support. CARB should avoid this "thicket" of controversy and complexity. Many biofuels will be produced from feedstocks that may actually improve land use, such as allowing cultivation of unproductive lands. Since biofuels are indistinguishable as a transportation fuel, regardless of the feedstock used, any policy to take account of ILUC represents nothing less than establishing agriculture policy under the guise of the cap-and-trade program. It would be administratively cumbersome to design a system that appropriately measures the different degree of land use change associated with different types of biofuel feedstocks.

3. International considerations predominate under most ILUC methodologies. CARB should avoid measuring indirect, international land use changes for purposes of establishing a neutral and non-discriminatory cap-and-trade program. The biofuel industry should not bear the burden of demonstrating appropriate methodologies for accounting for indirect emissions, when no other fuel or covered sector is subject to such special treatment.

Land use change is more appropriately addressed under the offset program envisioned by Section 13 of the PDR.

1. The PDR does not address the likelihood that substantial expansion of the production of advanced biofuels using non-food crops will likely enhance land productivity and reduce lifecycle GHG emissions.

2. Improved land use is envisioned as a possible offset under Section 13 of the PDR. However, because the PDR only allows project-based offsets, it will be difficult to account for the indirect GHG emission reductions associated with domestic use of biofuels. BIO therefore recommends that, if indirect emissions are taken into account in any way under Section 95950, CARB must allow for sectoral offsets to reflect the particular advantages of improved land use, both in the U.S. and abroad, that will accompany growth in production of advanced biofuels which use non-food crops.

BIO believes that a successful cap-and-trade program will espouse a fair and consistent approach to GHG emissions accounting for all sectors and fuels and will not impose insufficiently justified penalties only on biofuels. The Board's adoption of the aforementioned program, inclusive of Option (1) in Section 95950, will allow it to secure substantial carbon intensity savings from the use of biofuels in California.

We thank you for your consideration of these comments.