

**BEFORE THE
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
AIR RESOURCES BOARD**

DRAFT CHAPTER ON ENVIRONMENTAL IMPACTS

COMMENTS OF THE BIOTECHNOLOGY INDUSTRY ORGANIZATION

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The Biotechnology Industry Organization (BIO) is pleased to comment on the Draft chapter on Environmental Impacts (“the draft chapter”). BIO is the world’s largest biotechnology organization, with more than 1,100 member companies worldwide. BIO’s Industrial and Environmental Section represents over 85 leading 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.

As expressed in previous comments, BIO and its member companies commend the Board for its openness, inclusiveness and transparency throughout the LCFS rulemaking process. Further, BIO supports California’s efforts to reduce the carbon intensity of transportation fuels and believes that biofuels can and must contribute significantly to this important objective.

The Draft Chapter Disproportionally Focuses on the Impacts of Biofuels

BIO is pleased that the staff of the California Air Resources Board (“CARB”) have recognized the vital role advanced biofuels can play in satisfying the requirements of the California Low Carbon Fuel Standard (“LCFS”). However, BIO and its members are concerned that the draft chapter places disproportional emphasis on biofuels. For instance, why isn’t CARB staff placing the same or similar rigor on analyzing the environmental impacts for other types of alternatives, such as power generation?

There are several places in the draft chapter that fail to account for impacts from other alternative fuels that will be produced and consumed to meet LCFS compliance. For example, on page three, CARB staff discuss the results of their health risk assessment to estimate the potential cancer risk from a biorefinery. In fairness and to fully evaluate health risks associated with the production of fuels that will be used for LCFS compliance, CARB staff should perform

and take into account similar health risks associated with facilities used to produce other types of alternative fuels, such as power generation.

On page two, CARB staff states that they “assumed that any additional electricity use would be offset by the switch to a 33 percent renewable portfolio standard and off-peak charging.” Does CARB staff also assume that there will be no additional impacts from additional electrical use, including lifecycle and land-use change emissions from even the cleanest power generation projects?

In addition, in the “Recommendations” section of the draft chapter under the subheading “Considerations for Highly Impacted Communities”, CARB staff suggest that “[a]ny environmental analysis for a new or expanding biorefinery project should include consideration of these cumulative impacts, public vetting of those impacts, and recommendations for mitigation of any significant impacts.” If new or expanding biorefinery projects are subject to this consideration and rigorous assessment, so should new or expanding facilities producing other alternative fuels for LCFS compliance.

The Draft Chapter Excludes Several Types of Advanced Biofuels That Will be Used for LCFS Compliance

The draft chapter does not take into account several types of advanced biofuels that could be available on the California market to consumers in the State. For example, on page two under the subheading “Summary of the 2009 Environmental Analysis,” CARB staff estimate ethanol, cellulosic ethanol and biodiesel facilities that could be operational in the State by 2020. But, what about other advanced biofuels and biofuel facilities that could also be operational in the State in that same time period? These may include renewable hydrocarbons, biobutanol, algae-based biofuels, solar fuels, waste derived fuels, among others.

Similarly, on page nine of the draft chapter, CARB staff discuss “the types of biofuels that could potentially be produced at a California biorefinery” which include “ethanol from grains, sugarcane, and cellulose; biodiesel; renewable diesel; biogas; hydrogen; and biogasoline.” This list does not fully represent the “the types of biofuels that could potentially be produced at a California biorefinery.” That list should include other advanced biofuels, including renewable hydrocarbons, biobutanol, algae-based biofuels, solar fuels, and waste derived fuels.

There is No Need for More Stringent Requirements

CARB staff assert throughout the draft chapter that their analysis and recommendations are based on the “most current stringent emission limits for process equipment used at biorefineries and options available to mitigate mobile source emissions associated with biorefineries...”¹ Existing state and federal law is already stringent and sufficient to effectuate significantly reduced air emissions. BIO recommends that CARB focus on enforcement of these existing laws and regulations and avoid putting in place overly burdensome and potentially competing provisions that could unintentionally prevent alternative fuel producers from doing business in California for economic reasons. Should CARB choose to put new air emissions laws and regulations in place, it should do so for all fuels, including those associated with electrical generation facilities, to ensure a level playing field.

BIO Comments on Sustainability and the LCFS

Section D of the draft chapter includes a discussion and recommendations on “[s]ustainability and the LCFS.” BIO recently submitted written comments to CARB staff on this topic and have attached them to these comments. Please see Appendix A for BIO’s

¹ See page 3 and 11.

comments on the DRAFT document by California Air Resources Board's (CARB) Low Carbon Fuel Standard (LCFS) Sustainability Working Group on LCFS Sustainability Principles, Criteria, Indicators for Principles 4, 5, 6, and 7.

Thank you for considering these comments.

Respectfully,

A handwritten signature in black ink that reads "Brent Erickson". The signature is fluid and cursive, with a prominent flourish at the end.

Brent Erickson
Executive Vice President, Industrial and Environmental Section
Biotechnology Industry Organization (BIO)

APPENDIX A

BEFORE THE CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY AIR RESOURCES BOARD

DRAFT LCFS Sustainability Principles, Criteria, Indicators

Principles 4, 5, 6, 7

Comments of Biotechnology Industry Organization

August 5, 2011

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**Comments of Biotechnology Industry Organization on
DRAFT LCFS Sustainability Principles, Criteria, Indicators**

Principles 4, 5, 6, 7

The Biotechnology Industry Organization (BIO) is pleased to comment on the DRAFT document by California Air Resources Board's (CARB) Low Carbon Fuel Standard (LCFS) Sustainability Working Group on LCFS Sustainability Principles, Criteria, Indicators for Principles 4, 5, 6, and 7 (Draft Sustainability Principles).² BIO is the world's largest biotechnology organization, with more than 1,100 member companies worldwide. BIO's Industrial and Environmental Section represents over 85 leading 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.

As expressed in previous comments, BIO and its member companies commend the Board for its openness, inclusiveness and transparency throughout the LCFS rulemaking process. Further, BIO supports California's efforts to reduce the carbon intensity of transportation fuels and believes that biofuels can and must contribute significantly to this important objective.

² http://www.arb.ca.gov/fuels/lcfs/workgroups/lcfssustain/07182011draft_principles.pdf

CARB's approach to implementing the LCFS has important implications for the future of advanced biofuels, as well as all agricultural activity and climate change policy. As such, the LCFS should be implemented in a manner that supports and encourages deployment of sustainable low carbon fuel alternatives, including advanced biofuels. BIO is concerned that, while well intentioned, the Draft Sustainability Principles would substantially hinder the goals of the LCFS. Further, as they are currently constructed, the obligations these provisions place upon feedstock and biofuels production would significantly suppress the development of innovative low carbon biofuels produced or sold in the State of California.

The Draft Sustainability Principles Appear to Go Beyond the Scope Of CARB Regulatory Authority and Unfairly Single Out Low Carbon Fuel Produced from Biomass

The requirements included under the Draft Sustainability Principles appear to go beyond the scope of CARB's authority under the LCFS. CARB and the LCFS seek to reduce and control harmful air emissions in the State of California. In the Draft Sustainability Principles, however, CARB would burden advanced and conventional biofuels and feedstock producers with requirements regulating not only sustainability of air quality, but also of conservation, biodiversity, water and soil quality. Moreover, these requirements are much more stringent than those under federal law. For instance, the requirements under the section on "Principle 5: Soil" would prohibit feedstock producers from utilizing otherwise legal pesticides and herbicides to enhance the yield and quality of crops to be used for biofuel production.

In addition, as indicated in past comments, BIO and its member companies urge CARB to use a technology-neutral approach as it implements the LCFS. The requirements in the Draft Sustainability Principles appear to be directed only to producers of one type of low carbon fuel and feedstocks used for that fuel. If sustainability requirements are applied to biofuel producers, and biofuel feedstock producers and processors, it follows that they should be applied to all

regulated parties generating compliance credits under the LCFS program. And, such requirements should be made with equal rigor to measure and report supply chain sustainability impacts of *all* forms of low carbon energy, including land, water and species impacts of all forms of electricity produced in California and imported from other states.

If imposing sustainability requirements is the direction CARB seeks to pursue, it needs to approach this radical shift in regulatory policy carefully, with proper authority, and with maximum flexibility in order to minimize economic harm and other unintended consequences. Otherwise, CARB risks arbitrarily picking winners and losers on the basis of potentially inconsistent environmental data as it implements the LCFS. Furthermore, it may be discouraging viable ways to achieve LCFS compliance and goals. To that end, the requirements would provide additional support to LCFS opponents trying to find reasons the law should be delayed or repealed.

The Draft Sustainability Principles Do Not Sufficiently Consider Economic Sustainability and Consequences

The Draft Sustainability Principles fail to consider or attempt to mitigate the economics and related consequences of placing the proposed environmental sustainability requirements on biofuel producers and biofuel feedstock producers and processors. As previously mentioned, BIO and its member companies want to help CARB and want the LCFS to succeed. However, the Draft Sustainability Principles contain reporting and recording-keeping requirements that go far beyond what is currently required in other states and under federal and international law. For instance, they would require environmental impact assessments that are costly both in terms of time and money. They would also mandate intense and specific environmental management plans requiring producers and processors to establish plans to conserve or enhance biological diversity; prevent or reverse soil degradation; minimize air pollution emissions; and, assess

potential impacts on water quality and quantity only from biomass/biofuel operations, including potential negative effects on the water supplies of “the local communities and ecosystems that rely on that water and [to] identify any mitigation measures.”

The costs of requiring these types of environmental management plans likely outweigh the benefits of producing or selling low carbon fuels in California. As the requirements are currently written, biofuel producers and biofuel feedstock producers and processors would be responsible to plan and mitigate certain potential environmental effects that may or may not happen, and which go well beyond current reporting requirements. For instance, under the section on “Principle 6: Water” biofuels producers and biofuel feedstock producers and processors must “provide evidence that the water plan identifies *any* negative impacts resulting from biomass/biofuel operations and that they are mitigated” (emphasis added). Among other things, the breadth of this requirement adds confusion and undue cost to obligated parties. For instance, how would “any” be defined? Where would the line be drawn on the types of potential negative effects that must be documented?

BIO member companies have significant concerns that, if the sustainability reporting requirements proposed here are implemented, it will not be economically feasible for them to continue to produce, buy or sell biomass in the State of California for biofuels production. They are also concerned that it will not be economically feasible to sell and import low carbon fuels into the State.

BIO Recommendations

For the reasons stated above, BIO recommends that CARB proceed with its sustainability work as follows:

1. CARB should direct its staff to continue soliciting input from all stakeholders on

appropriate ways to encourage environmental and economic sustainability, while also facilitating LCFS achievement by all obligated parties producing or processing LCFS compliant energy and energy components.

2. Sustainability gains beyond carbon reduction should be achieved through incentives or voluntary measures. CARB should make sustainability criteria and efforts that are not directly targeted at air emissions (i.e. ones applying to soil, conservation, biodiversity and water) eligible for extra credits under LCFS, thereby encouraging voluntary sustainability efforts by those entities that can afford them.

3. If CARB elects to make sustainability requirements mandatory, it should calculate compliance costs for low carbon alternative fuels producers and provide commensurate carbon intensity rewards or other mechanisms sufficiently high in value to cover the additional cost burden of complying with the new sustainability requirements. Furthermore, CARB should apply equally rigorous compliance requirements to all regulated parties producing alternative fuels under the LCFS program.

4. Also, if CARB intends to make sustainability requirements mandatory, it should provide broad guidance and requirements that may be met in various ways. Such flexibility would help mitigate the burden and expense of complying with highly detailed and specific requirements.

Conclusion

BIO and its member companies want the LCFS to succeed through the use of low carbon energy sources in California, including biofuels. For the reasons explained throughout these comments, the current Draft Sustainability Principles and the mandatory nature of its requirements risk substantially inhibiting the ability of biofuel producers and biofuel feedstock

producers and processors to conduct business in California. This unintended consequence will simultaneously inhibit the goals and compliance of the LCFS.

Thank you for considering these comments. BIO and its member companies look forward to working with CARB staff to find workable solution to the Board's sustainability goals under the LCFS.

Respectfully,

A handwritten signature in black ink that reads "Brent Er." with a stylized flourish at the end.

Brent Erickson
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Biotechnology Industry Organization (BIO)