

## **California Air Resource Board Testimony**

### **Submitted by Biotechnology Industry Organization**

**December 16, 2011**

The Biotechnology Industry Organization (“BIO”) appreciates this opportunity to provide comments to the California Air Resource Board (“CARB”), on your Low Carbon Fuel Standard (“LCFS”). This issue is of paramount importance to BIO and its members, and to their ability to do business in the State of California.

To provide background, BIO is the world’s largest biotechnology organization, providing advocacy, business development, and communication services to more than 1,100 member companies worldwide. BIO’s Industrial and Environmental Section (“I&E”) includes more than 85 member companies representing the value chain of biofuels and biobased products, from dedicated energy crop and other feedstock producers, to enzyme companies, commercial scale integrated biorefinery developers, and large chemical and energy companies.

California is home to nearly one third of BIO I&E members, including many of the world’s leading advanced biofuel developers and their partner technology providers. A full list of BIO I&E California companies is attached to my testimony. California is also one of only a handful of states actively piloting next generation purpose-grown energy crops, suggesting an important future for the state as a source of sustainable feedstocks.

California is also home to a myriad of other biotechnology companies – the industry provides employment for more than 13 million Californians – including companies engaged in research and development for advanced biofuels, human health, agriculture, environmental remediation, and biobased products.

Nationally, at least 15 commercial advanced biofuels projects representing nearly 200 million gallons of production a year are now under construction and scheduled to come on line by 2014. The advanced biofuels market stands poised and ready to deliver fuel to the California market and elsewhere in the near term.

Environmental Protection Agency (“EPA”) rulemaking for the federal Renewable Fuel Standard (“RFS”) recognizes that advanced biofuels can substantially reduce greenhouse gas (“GHG”) emissions. CARB should make clear to advanced biofuels developers and their investors through the LCFS rulemaking that it also recognizes that advanced biofuels are vital to meeting the state’s GHG reduction goals. BIO and its member companies believe that CARB does recognize advanced biofuels’ role, but we do have concerns that the LCFS has imposed obligations on the biofuels sector that provide undue hurdles to commercialization. The unique obligation of biofuels developers to account for indirect land use change emissions (which the National Research Council recently described as highly uncertain) and supplemental environmental reporting requirements proposed by the LCFS Sustainability Working Group are two examples of program elements that could inhibit deployment of promising technology

solutions. We urge CARB to work with BIO to ensure that the LCFS sends a clear signal to investors of California's support for low-carbon advanced biofuels.

The industry is also growing in ways we never considered, such as the recent strong interest in advanced biofuels from the U.S. military. California, in particular, is a center for companies that are leading the effort to provide the U.S. military with low-carbon, domestically produced biofuels for jets and ships. Algal and sugar-based biofuels are being researched and developed in California by companies such as Solazyme, Sapphire Energy, and Amyris, with assistance from federal programs. And since California is home to many military installations, this national effort will benefit the State. CARB should thus take care to ensure pathway availability for new and innovative technologies, such as military biofuels.

In sum, California's LCFS should incentivize investment in advanced biofuels as part of the solution to a low-carbon economy. We appreciate CARB's recognition of the ability of the advanced biofuels sector to provide meaningful GHG reductions in the state of California. BIO and its members believe that there are several things that CARB can do to assist in making the market signal clearer, and to enable the program construction to drive investment in advanced biofuels. For example:

- Conduct a more comprehensive economic analysis in 2012. Ensure that the anticipated pricing mechanism is defined in a way that educates market players as to how carbon intensity (CI) values will create a differential value. Include scenarios with cellulosic numbers that are greater than Energy Information Administration ("EIA") values.
- The nascent compliance market is not yet sending a meaningful signal to investors. Create a price transparent credit trading system that presents market information in a way that protects specific transactions, but is transparent about market level trends in real time. Quarterly information is not sufficient.
- Create an alternative compliance mechanism (ACM) that directly incentivizes investment into low-carbon fuel technologies that, once constructed, will create compliance credits.
- Do not lower the 10% reduction targets.

We look forward to working with CARB to continue to evolve the LCFS into a leading driver of advanced biofuels investment in California and throughout the United States. We hope that the ideas we have shared here today – in combination with BIO's formal comments submitted over the past several months – have been helpful towards this goal.

Thank you for your consideration.