

September 12, 2011

VIA ELECTRONIC MAIL

Michelle Buffington
Air Pollution Specialist
Advisory Panel Co-Chair
Headquarters Building
1001 I Street
Sacramento, CA 95814

Reference: *Comments on Advisory Panel August Meeting's Documents*

Dear Ms. Buffington:

The Brazilian Sugarcane Industry Association (UNICA) welcomes the opportunity to provide specific comments on the August meeting's documents, which the staff of the California Air Resources Board (CARB) published on August 25, 2011.

After a brief introduction of UNICA, the comments of this letter will focus on two (out of five) outlines/chapters: one concerning technology assessment, supply and availability and the other on advances in lifecycle assessment.

Given our extensive experience with and knowledge of sugarcane biofuels production, and given our direct and significant interest in the successful implementation of California's Low Carbon Fuel Standard (LCFS) program, we request that CARB carefully and thoroughly considers the comments of this letter as it continues to improve the development of the LCFS program.

I – Introduction

The Brazilian Sugarcane Industry Association (UNICA) is the largest organization representing sugar, ethanol, and bioelectricity producers in Brazil. UNICA's members are responsible for more than 50% of all ethanol produced in Brazil and 60% of overall sugar production. UNICA's priorities include serving as a source for credible scientific data about the competitiveness and sustainability of sugarcane biofuels. The association works to encourage the continuous advancement of sustainability throughout the sugarcane industry and to promote ethanol as a clean, low carbon, reliable alternative

to fossil fuels. In fact, gasoline is now the alternative fuel in Brazil, with more ethanol consumption than gasoline. In terms of sustainability, sugarcane ethanol production uses about 1.5% of Brazil's arable land and reduces greenhouse gases (GHG) by 90%, on average, compared to conventional gasoline. Moreover, thanks to our innovative use of ethanol in transportation and biomass for power cogeneration, sugarcane is now the number one source of renewable energy in Brazil, representing 18% of the country's total energy needs. And this industry is expanding existing production of renewable, bioplastics and, with the help of innovative companies here in the United States and elsewhere, are beginning to offer bio-based hydrocarbons that can replace carbon-intensive fossil fuels.

II – Technology Assessment, Supply and Availability

In chapter **IV Technology Assessment, Supply and Availability**, UNICA noticed that Brazilian sugarcane ethanol was not mentioned as one of transportation fuels available for California. Given the importance of this advanced, low carbon fuel for the successful implementation of California's LCFS program, and given the fact that more than 40 Brazilian mills have registered to supply the Californian market, UNICA would like to suggest to CARB that a session on Brazilian sugarcane ethanol be added to this chapter, under item **IV. B. Technology Assessment, Fuel Supply, Vehicle Supply, Infrastructure and Barriers**. Considering the relatively low carbon intensity of this fuel, and considering the direct and indirect effects as measured by CARB and many scientific studies, it is surprising and disappointing that this fuel was not considered in the draft. UNICA would be available to collaborate with CARB to provide information about the latest technology and developments in the Brazilian sugarcane industry.

III – Advances in Lifecycle Assessment

The outline presented on item **Chapter V, Item C. Lifecycle Assessment – Indirect Effects**, includes a summary of the initial modeling effort, the advances in modeling indirect effects, work under development and work still to be done. UNICA have revised the presentations available for this section at the LCFS program website, and we have noticed that it is expected that the GTAP group will conduct short and long-term revisions on GTAP runs to update land use change (LUC) values for existing pathways and develop additional ones. CARB's presentation cites several short-term revisions, including the revised estimates for yield on new cropland. However, the GTAP presentation prepared by Dr. Wally Tyner, presented on July 22, 2011 and cited in this section of chapter V, which explains the revisions recently conducted in modeling, does not make any reference to the improvement in the representation of yields in recent converted lands (a parameter initially referred as *Elasticity of Crop Yields with Respect to Area Expansion*). As the GTAP model has presented strong sensitivity in the results due to this parameter, and the GTAP group has made important improvements to estimate such parameter using a terrestrial ecosystem model, we would like to highlight the



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importance of ensuring that this improvement be properly addressed in the outline and in future lifecycle estimates done by CARB using GTAP.

It also came to our attention that there is no reference in the outline of possible future improvements in the land supply nesting structure, in the direction recommended by the CARB LCFS Expert Workgroup. There was a recommendation to increase flexibility in the function that determines own and cross price substitution elasticities across land cover types, as considering two levels of substitution with two different elasticities of transformation (the upper level considers the substitution between forest land and total arable land). Such improvement would allow a more realistic representation to the land use substitution possibilities, and better use of estimated parameters in the literature. UNICA would like to request that CARB take these comments and recommendations into consideration in order to continue to improve the modeling effort in measuring the lifecycle effects of alternative biofuel pathways.

I hope these comments will contribute to improving the development of the LCFS in California and I remain at your disposal to answer any questions you or your colleagues may have.

Sincerely,

A handwritten signature in black ink that reads "Leticia Phillips". The signature is written in a cursive style.

Leticia Phillips
Representative – North America