

April 20, 2009

Mary D. Nichols, Chairman
California Air Resources Board
Headquarters Building
1001 "I" Street
Sacramento, CA 95812

RE: Call for Third Party Analysis of Indirect Land Use Change and Indirect Effects in Support of the CA LCFS

Dear Chairwoman Nichols,

We are writing regarding the California Air Resources Board pending rulings next week on the Low Carbon Fuel Standard (LCFS), in particular the premature and selective inclusion of indirect effects as a metric by which biofuels alone will be judged. We believe immediate action is necessary to avoid weakening an otherwise critical carbon-based fuel policy.

The issue of how to deal with indirect effects has slowed down the rulemaking already, and is increasingly controversial from a scientific perspective. We are concerned that unresolved issues related to indirect effects enforcement are needlessly eroding support for an otherwise critical fuel policy. We are therefore requesting that CARB immediately enact an LCFS based on direct carbon effects while establishing an expeditious process to assess and account for indirect effects across all fuel pathways, including petroleum.

In a letter dated March 2, 111 scientists outlined their concerns about the selective and premature enforcement of indirect effects in the proposed LCFS. We have not received a response to the letter from ARB, and have not observed any discernable shift in the approach taken by staff. As discussed, while there is general consensus around the need for an LCFS, and the decision to enforce direct "cradle to grave" carbon effects against all fuels, the inclusion of indirect land use change and indirect effects for biofuels alone are felt to be premature and erroneous based on the following two major factors:

- A. The science around indirect effects is not mature and/or robust enough to be included in something as significant as the LCFS. In addition, the GTAP model used to determine indirect effects has not been validated with any significant amount of field data and/or compared with other available models that are not commodity-based.
- B. Indirect effects should not be selectively leveraged against any fuel type, including biofuels. All fuels have direct and indirect effects that should be

considered as part of the LCFS. The notion that the GTAP model has been used and that fossil fuels have no significant indirect effects is unacceptable without validation and acceptance within the peer-reviewed literature. This result produced by the GTAP model reinforces the need for a thorough and robust comparative study of different models and different methodologies of all fuel types that must be completed before they are added as a component under the LCFS.

Although this letter has sparked significant national interest and highlighted the lack of any consensus around indirect effects, thus reinforcing the conclusion that further study is absolutely essential before inclusion within the LCFS, our concerns have not been addressed by CARB and no data has emerged to suggest that CARB's numbers for indirect land use change are well grounded. We are therefore requesting that CARB Board take the following actions:

- A. Submit an LCFS regulation based on direct carbon effects, including direct land use impacts.
- B. Commission the National Academy of Sciences to conduct an 18-month study on indirect effects of all transportation fuel candidates to develop and validate a robust science-based tool that can be used within the LCFS. CARB staff should continue to lead a corollary effort during this time.

The LCFS provides an incredible opportunity to reduce the carbon intensity of transportation fuel and promote a more sustainable transportation fuel marketplace. We commend your leadership and the CARB staff for their efforts in developing a workable LCFS regulation. However, it is critical that the LCFS stay on course with regard to its primary mission of establishing a level, carbon-based playing field for all fuels.

We are writing this letter as researchers in the field of biomass to bioenergy conversion, but the signatories do not represent the official views of the home institutions, universities, companies, the Department of Energy, the United States Department of Agriculture, or any of the National Laboratories. We look forward to working with ARB to ensure that the regulation reflects the best science available, and takes a policy approach that is balanced across all fuel pathways.

Sincerely,

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