

November 15, 2010

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

Dear Chairwoman Nichols,

In letters to you dated April 28 and May 28, I strongly encouraged the California Air Resources Board (ARB) to immediately integrate the latest land use change (LUC) estimates for corn ethanol from Purdue University into the Low Carbon Fuels Standard (LCFS) in lieu of the existing LUC estimates. The Purdue work, conducted by Prof. Wally Tyner and others, used a substantially improved version of the Global Trade Analysis Project (GTAP) model, which is the same model used by ARB contractors for the LCFS LUC analysis.

The ARB response to my letters, both in writing and in discussions with you and your staff, indicated that ARB would not consider immediate adoption of the new Purdue results. Rather, you indicated that the LCFS Expert Workgroup (EWG) convened by the Board would be asked to evaluate the new Purdue results and make recommendations to staff on whether to adopt them as part of the LCFS LUC analysis.

As you know, the EWG, which held its final meeting November 5, did in fact strongly endorse the use of the Tyner et al. work in lieu of the current ARB analysis. Therefore, I am writing you today to again request the immediate adoption of the LUC values from Tyner et al. as interim values in lieu of the current LUC penalties. I am also writing to make you aware of the results of new GTAP modeling that adopts some of the EWG's key recommendations and further reduces corn ethanol LUC to ***less than 12 grams CO₂-equivalent/megajoule (g/MJ), 60 percent lower than ARB's current estimate of 30 g/MJ.***

Not only did the EWG's final recommendations overwhelmingly favor the adoption of the latest Purdue work as the new "starting point" for ARB's LUC analysis, but they also recommended several additional enhancements that would further improve the reliability of the newest Purdue results. We were encouraged by the ARB staff's indication at the final EWG meeting November 5 that it "...supports the Expert Workgroup recommendation that ARB use the [Tyner et al.] 'Group 2' simulation methodology." As you may recall, the "Group 2" simulations from Tyner et al. resulted in average LUC emissions of 17.7 g/MJ, more than 40 percent lower than ARB's current estimate of 30 g/MJ. This reduction is important because it moves most corn ethanol from being no better than gasoline in ARB's current analysis to being viable for compliance in the early years of the LCFS.

In addition to adopting the EWG's recommendation to use the "Group 2" results from Tyner et al. as the new starting point, ARB staff indicated that it intends to implement the EWG's recommendation to improve the emissions factors used in both ARB's original analysis and the Tyner et al. work. Specifically, it was recommended that ARB consider using emissions factors derived from Winrock

International databases (which were used by the U.S. Environmental Protection Agency for its LUC analysis for the expanded Renewable Fuels Standard) and other resources. In response to this recommendation, ARB staff has reportedly initiated a contract to develop a new carbon stocks database. The choice of emissions factors is critically important in estimating LUC emissions for biofuels; results can vary widely based on the selection of these factors.

In an attempt to better understand the likely impacts of key EWG recommendations, including integration of Winrock emissions factors into the GTAP model, we commissioned Air Improvement Resource, Inc. (AIR), to conduct new GTAP modeling runs. A report detailing the results of these modeling runs was shared with the ARB staff and EWG members on November 4 and is attached to this letter for your reference. The modeling conducted by AIR shows that inclusion of the Winrock emissions factors reduces the Tyner et al. "Group 2" results from 17.7 g/MJ to slightly less than 12 g/MJ.

ARB staff also indicated its support for additional near-term recommendations, including revising sugarcane ethanol and soy biodiesel LUC values, adopting a consistent set of model inputs for all biofuels, and re-evaluating distillers grains co-product credits. It is likely that integrating these recommendations into the LUC analysis will further reduce LUC values for all biofuels modeled by ARB for the LCFS.

Given that the substantive portions of the LCFS will become effective Jan. 1, 2011, and given that regulated parties will begin reducing their use of corn ethanol based on ARB's current LUC penalty of 30 g/MJ, we are again urging ARB to immediately adopt the Tyner et al. "Group 2" value of 17.7 g/MJ as an interim LUC value for corn ethanol. There is no need to further delay the adoption of Tyner et al.'s "Group 2" results, given that they have been endorsed by the EWG and CARB staff as state-of-the-art and the new starting point. Indeed, ARB staff's acceptance of the latest Purdue work is recognition that the current estimates in the LCFS regulation are too high.

While we share ARB staff's view that the new Purdue analysis is the best available to date, we also agree that much more research and analysis is needed on the issue of LUC and we are encouraged that ARB staff is developing a long-term research plan to continue to refine its LUC analysis. In the meantime, if the Tyner et al. "Group 2" value were adopted immediately as an interim value, it could be replaced in the spring of 2011 when ARB completes its efforts to address the other enhancements recommended by the EWG.

We appreciate your consideration of this request and your attention to the attached GTAP results from AIR showing LUC in the range of 12 g/MJ. Further, we appreciate your commitment to ensuring the best available science is appropriately integrated into the LCFS regulation.

Sincerely,

A handwritten signature in black ink, appearing to read "Bob Dinneen", with a long horizontal flourish extending to the right.

Bob Dinneen
President and CEO

Cc:

Robert D. Fletcher, Deputy Executive Officer

John R. Balmes, M.D., Board Member

Sandra Berg, Board Member

Dorene D'Adamo, Board Member

Lydia H. Kennard, Board Member

Ronald O. Loveridge, Board Member

Barbara Riordan, Board Member

Ron Roberts, Board Member

Daniel Sperling, Board Member

John G. Telles, Board Member

Ken Yeager, Board Member

Charyl Frazier, Board Member Liaison

Sandra Bannerman, Clerk of the Board