

## Scientists argue against indirect land use

By Erin Voegele at Biodiesel Magazine

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On March 2, 111 of the nation's top scientists submitted a letter to California Gov. Arnold Schwarzenegger questioning the California Air Resources Board's plan to include an indirect land use change (iLUC) for biofuels, such as biodiesel and ethanol, under the state's intended Low Carbon Fuel Standard (LCFS).

In the letter, the scientists argued that the ability to predict alleged iLUC effects depends on the use of an economic model to predict worldwide carbon effects, the outcomes of which are unusually sensitive to the assumptions made by the researchers conducting the model runs. "In addition, this field of science is in its nascent stage, is controversial in much of the scientific community, and is only being enforced against biofuels in the proposed LCFS," the letter stated.

The scientists who signed the letter say they believe that the enforcement of any indirect effects – including iLUC – is highly premature. They base this belief on two principles. First, that science is far too limited and uncertain for regulatory enforcement. Second, indirect effects are often misunderstood and should not be enforced selectively.

The letter criticized the model used by CARB to measure iLUC. According to the scientists, the model is set to a static world economic condition and doesn't allow for shifts in policy, weather, world economic conditions or other economic, social or political variables. The model also assumes zero innovation in agricultural practices and other factors. "We are only in the very early stages of assessing and understanding the indirect, market-mediated effects of different fuels," the scientists said in the letter. "Indirect effects have never been enforced against any product in the world. California should not be setting a wide-reaching carbon regulation based on one set of assumptions with clear omissions relevant to the real world."

Aside from the issue of whether these effects can be predicted with precision or accuracy, the scientists argue that indirect effects should not be enforced against only one fuel pathway. According to the letter, petroleum has a price-induced effect on a variety of markets, and electric cars will increase pressure on the grid. However, CARB is only proposing to enforce indirect effects against biofuels. "This proposal creates an asymmetry or bias in a regulation designed to create a level playing field," states the letter. "It violates the fundamental presumption that all fuels in a performance-based standard should be judged the same way."

The letter ultimately recommended that CARB adopt a LCFS regulation based on direct carbon effects, while the state of California spearheads an international effort to investigate the carbon effects of all fuels.

The 111 scientists signing the letter don't represent the official views of their home institutions, universities, companies, the U.S. DOE, the USDA, or any National Laboratories.

CARB is expected to release a completed initial plan for the LCFS by March 6 and submit a final rule to the California Board in late April. On March 5, the U.S. EPA will hold a public hearing regarding the agency's reconsideration of California's request to implement the LCFS. Written comments will be accepted by EPA until April 6.

To view a complete copy of the letter submitted to Schwarzenegger, click on the PDF below. More information on the EPA's public hearing can be found on the EPA's Web site.