



March 27th, 2009

Mary Nichols, Chair
California Air Resources Board
1001 I St., P.O. Box 2815
Sacramento, CA 95812

RE: Support for the California Low Carbon Fuel Standard

Dear Chair Nichols and Members of the Board:

The Center for Energy Efficiency and Renewable Technologies (CEERT) strongly supports the Air Resources Board's (ARB) proposed Low Carbon Fuel Standard (LCFS) as a discrete early action measure in California's fight against global warming. The LCFS implements a full lifecycle based performance standard that lays the critical foundation for fostering market-based innovation needed to decarbonize California's transportation fuels. This regulation will also result in California avoiding the use of more climate impactful carbon-intensive fuels derived from tar sands, oil shales, and coal. We urge the Board to adopt this regulation at its hearings on April 23-24, 2009.

CEERT applauds the ARB's efforts to produce a regulation that can serve as a model for jurisdictions elsewhere in the United States and the world. Furthermore, CEERT commends ARB's decision to include indirect land use change (iLUC) in the life cycle analyses (LCA) for the production of fuels. Of particular note are the global warming emissions associated with the iLUC of biofuels. Research employing appropriate modeling consistently indicates that policies requiring the expanded use of agricultural commodities for biofuel production contribute to an increase in commodity prices, which then exacerbates the global expansion of agricultural cropland into previously undisturbed habitats in order to meet the global demand for both food and fuel.

Lest it be left unsaid, the ARB is not alone in its inclusion of the iLUC effects of biofuels in its regulations. The Energy Independence and Security Act of 2007 requires the US-EPA to include iLUC in its LCA determinations for fuels under RFS-2,(1) and the European Union's Renewables Directive will also require the inclusion of iLUC.(2)

1 TITLE II Subtitle A SEC. 201. (1) DEFINITIONS - (H) LIFECYCLE GREENHOUSE GAS EMISSIONS.—The term 'lifecycle greenhouse gas emissions' means the aggregate quantity of greenhouse gas emissions (including direct emissions and significant indirect emissions such as significant emissions from land use changes), as determined by the Administrator...

2 "...the Commission shall analyse, on the basis of best available scientific evidence, in particular, inter alia, the inclusion of a factor for indirect land use changes in the calculation of greenhouse gas emissions and the need to incentivise sustainable biofuels which minimise the impacts of land use change and improve biofuel sustainability with respect to indirect land use change. In developing this methodology, the Commission should inter alia address the potential indirect land use change effects of biofuels produced from non-food cellulosic material and from ligno-cellulosic material." European Parliament legislative resolution of 17 December 2008.

Page 1 of 3

Center for Energy Efficiency and Renewable Technologies

1100 11th Street, Suite 311 Sacramento, California 95814 ☎ 916/442-7785 ☎ 916/447-2940 email: info@ceert.org www.ceert.org

CEERT recognizes that there is a vigorous ongoing debate regarding approaches to estimating the carbon emissions due to the induced indirect land use changes resulting from increased agricultural commodity prices. This debate is popularly represented as one regarding the uncertainty about the estimated carbon emissions attributed to iLUC. Based on an evaluation of the growing body of scientific literature – on both the direct and indirect effects of the expanded use of biofuels – it is CEERT's determination that evidence supporting the inclusion of iLUC in the LCA of biofuels is increasing, *and*, that any uncertainty is about the magnitude rather than the direction of the effects due to iLUC. Furthermore, an examination of the literature leads CEERT to conclude that the carbon emissions values proposed by ARB staff for iLUC under the LCFS are conservative estimates.

With the current scientific consensus holding the view that the Intergovernmental Panel on Climate Change's projections underestimate the impacts of global warming⁽³⁾ and recent research indicating that humanity's influence on global warming will effectively be irreversible⁽⁴⁾, it is important that any climate mitigation policy be truly effective in delivering reductions in global warming pollution. CEERT believes that, if the indirect effects of alternative fuels – including biofuels – are not included in the regulation, or there are delays in their inclusion, a perverse outcome could result whereby the LCFS would actually increase rather than reduce global warming pollution from transportation fuels.

CEERT looks forward to working with the ARB to further develop the LCFS, and offers the following recommendations for improving the program:

- Ensure that production facilities and associated transportation and processing do not degrade local environmental health or disproportionately impact vulnerable and disadvantaged communities.
- Ensure that market conditions are created that foster the innovation necessary to deliver significant volumes of ultra low-carbon fuels;
- Ensure that the development of sustainable fuels (that avoid environmental, economic and community impacts) is incentivized;
- Adopt the recommendation of colleagues at the Union of Concerned Scientists that the effects of global warming pollution under this regulation be based on the residence time of the emissions in order to account for the physical accumulation of heat-trapping gases in the atmosphere;

While much work is still to come on the LCFS in the coming years, CEERT further applauds the ARB in developing a groundbreaking LCFS regulation that employs a full lifecycle based performance standard for fuels. CEERT also commends the ARB for its flexibility in having the foresight to offer fuel providers the option of having their fuel certified as a result of their providing appropriate data and a verified detailed life-cycle analysis.

3 Science, March 20, 2009. Projections of Climate Change Go From Bad to Worse, Scientists Report. Vol. 323. no. 5921, pp. 1546 - 1547

4 NOAA, January 26, 2009. Press-Release: New Study Shows Climate Change Largely Irreversible.
- S. Solomon, G-K. Plattner, R. Knutti, and P. Friedlingstein, online January 28, 2009. Irreversible climate change due to carbon dioxide emissions. Proceedings of the The National Academy of Sciences. vol. 106, no. 6, pp. 1704-1709

CEERT thanks the ARB for the opportunity to participate in and comment upon this rulemaking.

Sincerely


John Shears
Research Coordinator

Cc:

Anthony Eggert, Science and Technology Advisor, CARB

Mike Scheible, Deputy Executive Director, CARB

Bob Fletcher, Chief, Stationary Source Division, CARB

Dean Simeroth, Chief, Criteria Pollutants Branch, CARB

John Curtis, Manager, Alternative Fuels Section, CARB