

April 21, 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:

With the world's leading climate scientists acknowledging at the March Copenhagen Climate Congress that the Intergovernmental Panel on Climate Change's projections underestimated the impacts of global warming, the California Climate Action Team's reminder that climate change will have dire consequences for California and its Central Valley, and research indicating that global warming will effectively be irreversible (1) it is imperative that the state reduce its global warming pollution.

Transportation is responsible for nearly 40% of California's, 30% of the US's and 15% of the World's emissions of heat-trapping gases respectively.(2) Moreover, since 1990 almost half the net increase in the US's emissions was due to transportation, reflecting the long-term global historical trend of ever-increasing personal travel.

The Low Carbon Fuel Standard (LCFS) is critical for reducing the global warming pollution contained within transportation fuels in California. Together with complimentary policies for improving vehicle efficiency, and reducing the amount of personal travel – by encouraging smart growth and more efficient transit, etc., – the LCFS implements a key component of an integrated strategy through which transportation can contribute its share of reductions in the battle against accelerating global warming.

Ultimately, the LCFS should be compatible with California's vision for Zero Emissions Vehicles and lead the state to super-ultra-low carbon or even zero carbon fuels that also have zero criteria and toxic pollutant emissions when produced and used for transportation. While we still

1 Science, March 20, 2009. Projections of Climate Change Go From Bad to Worse, Scientists Report. Vol. 323. no. 5921, pp. 1546 – 1547 *** DRAFT 2009 Climate Action Team Biennial Report to the Governor and Legislature. April 1, 2009. *** NOAA, January 26, 2009. Press Release: New Study Shows Climate Change Largely Irreversible. *** S. Solomon et. al. Irreversible climate change due to carbon dioxide emissions. Proceedings of the National Academy of Sciences. vol. 106, no. 6, pp. 1704–1709, online January 28, 2009.

2 <http://www.arb.ca.gov/cc/inventory/data/data.htm> *** <http://www.epa.gov/OTAQ/climate/index.htm> *** J. Fuglestad, et. al. Climate forcing from the transport sectors. Proceedings of the National Academy of Sciences. vol. 105, no. 2, pp. 454-458, online January 7, 2008.

have concerns about the proposed regulation – which we address below – we are writing in strong support of the California Air Resources Board's (ARB) proposed regulation implementing the first-of-its-kind LCFS in the world. This regulation recognizes many of the interconnections of the world's fuel production systems, especially as they relate to biofuels.

It is our view that in the years prior to the development of the LCFS, there was a failure to recognize the complex issues involved in pursuing biofuels policies simultaneously around the world. As a consequence when plans were announced for the development of biofuels targets such as under the Renewable Transportation Fuel Obligation in the United Kingdom and the Biofuels Directive at the European Commission, a signal was sent to the international markets – before any regulations had been put in place – that led to a massive expansion of biofuels production, often with significant and negative unintended consequences. This was compounded by the pursuit of aggressive Renewable Fuel Standard (RFS-1) targets by the United States.⁽³⁾ Together these along with other similar policies adopted around the world contributed to the rapid increase in agricultural commodities prices impacting poor and disadvantaged people around the world.⁽⁴⁾ Now, more than ever, governments need to be aware of how fuel policy linked to the use of agricultural commodities could impact the world's poor.⁽⁵⁾

We commend the ARB for its inclusion of indirect land use change (iLUC) effects in the life cycle analyses (LCA) of fuels, and for biofuels in particular. Our understanding is that appropriate modeling in this area also demonstrates a link between policies that result in the expanded use of agricultural commodities for biofuel production and an increase in global commodity prices. This induces a further expansion of agricultural cropland into previously undisturbed habitats in order to meet the global demand for both food and fuel. The resulting loss of both the above-ground carbon and the below-ground carbon released from the previously undisturbed soil must therefore be counted as part of the life-cycle emissions associated with the production of the biofuels that induce this effect.⁽⁶⁾

3 SCOPE (Scientific Committee on Problems of the Environment), April 1, 2009. Biofuels: Environmental Consequences and Interactions with Changing Land Use. *** MIT Joint Program on the Science and Policy of Global Change, January, 2009. Report 168: Unintended Environmental Consequences of a Global Biofuels Program. *** Renewable Fuels Agency, July 7, 2008. Review of the Indirect Effects of Biofuels (aka The Gallagher Review). *** Royal Society, January 14, 2008. Sustainable biofuels: prospects and challenges.

4 To clarify, this was not the only factor but it was an important contributing factor, eg.: International Institute for Applied Systems Analysis, March 18, 2009. Biofuels and food security - Implications of accelerated biofuels production. *** Chatham House (Royal Institute of International Affairs), January 2009. The Feeding of the Nine Billion: Global Food Security for the 21st Century. *** Joachim von Braun (Executive Director, International Food Policy Research Institute), June 12, 2008. Biofuels, International Food Prices, and the Poor. Testimony before the United States Senate Committee on Energy and Natural Resources. *** Congressional Research Service. May 29, 2008. Report to Congress: High Agricultural Commodity Prices: What Are the Issues? RL34474. *** International Monetary Fund, April 2008. World Economic Outlook. *** Organisation for Economic Co-operation and Development, September 12, 2007. Biofuels : Is the cure worse than the disease?

5 Financial Times, March 26, 2009. Number of chronically hungry tops 1bn. *** March 26, 2009. Record numbers of Americans apply for government food aid. *** March 19, 2009. Poor still hit by high food prices says UN.

6 eg., IIASA, March 18, 2009. Biofuels and food security - Implications of accelerated biofuels production.

It is important that the LCFS be truly effective in reducing global warming pollution from transportation fuels. It is our fear that, if either the indirect effects of biofuels are not included in the regulation, or there are delays in their inclusion, the LCFS could perversely lead to an increase rather than a decrease in global warming pollution from transportation fuels. In this regard the regulation should also contain provisions ensuring that significant volumes of ultra low-carbon fuels are being produced in a sustainable manner by 2020.

In keeping with the view of ensuring that the LCFS is effective in reducing global warming pollution, we have serious concerns with provisions allowing for credits to be exported from the LCFS program to a larger market under the AB 32 cap. We cannot support such an undertaking since this could undermine the emissions reductions being sought under the cap, and create additional uncertainty about what the appropriate value of carbon emissions should be under AB 32, should a carbon market ever get up and running.

It is also important that in developing a sustainable low carbon fuel industry in California that the ARB ensure that fuel production facilities and associated transportation and processing do not degrade local environmental health or disproportionately impact vulnerable and disadvantaged communities. We therefore recommend that the LCFS contain stronger requirements for analyzing air quality and public health impacts. Given the considerable challenges that remain in achieving state implementation goals, any growth of this industry in the state should proceed in a manner that can contribute to the reduction of overall emissions (not just global warming emissions) in order to ensure that this regulation avoids increasing the risk of public health impacts at the state, regional or local levels.

We urge the ARB to expedite and extend the development of the cumulative health impacts tool being developed by Drs. Pastor, Morello-Frosch, and Sadd, for application in the Central Valley and the rest of the state. We view this as being especially critical if market dynamics foster the clustering of fuel production facilities as has been acknowledged by the ARB. (7) Ideally, this modeling tool along with other updated data and tools should be directed towards developing an initial comprehensive public health analysis of the LCFS to be completed no later than the scheduled review of the LCFS program three years hence. This health impacts analysis should form the basis for continuous monitoring of the program in subsequent years. Furthermore, the ARB should develop guidelines for use by the air districts in reviewing the emission impacts as the industry and infrastructure associated with the LCFS grows, and in order to ensure that local and regional impacts can be mitigated.

California is suffering from one of the worst droughts in recent memory.(8) Even in the absence of the current drought conditions California is finding it increasingly challenging to meet all its water needs, and this is particularly true for the Central Valley.(9) Given the current demands

7 Eg. See ISOR Figure F2-2 at p.F-16., and AB32 Scoping Plan, October 2008 Draft. Volume II, Figures H-1 & H-2 at pp. H-24 & H-25.

8 <http://www.water.ca.gov/drought/> *** <http://www.water.ca.gov/news/newsreleases/2009/040209transmittalletter.pdf>
*** <http://www.water.ca.gov/news/newsreleases/2009/040209droughttrpt-gov.pdf>

9 <http://www.waterplan.water.ca.gov/previous/cwpu2005/index.cfm> ***
<http://www.waterplan.water.ca.gov/cwpu2009/index.cfm> *** Pacific Institute, September 2005. California Water 2030: An Efficient Future.

for allocating sufficient water to meet the needs of Valley residents and the agriculture industry, we are concerned that any deployment of a low carbon biofuels industry in the Valley does not lead to an intensification in the demand for already limited water resources. The ARB analysis notes that there could be challenges posed for water use depending on how industry chooses to achieve compliance with the LCFS using biofuels.⁽¹⁰⁾ While the biofuels industry is working to improve its overall water-use efficiency, fuel production from cellulosic feedstocks currently – as one example – use significant amounts of water and it is not at all clear, if or when they can achieve sustainable levels of water-use efficiency.⁽¹¹⁾ For this reason we support the recommendations of UC researchers who have studied this issue in the context of California's LCFS⁽¹²⁾, particularly that the ARB (in conjunction with other state authorities):

- Establish water impact regulations for the LCFS;
- Implement a water accounting system for the LCFS;
- Regulate the siting and design of biorefineries;
- Work for the incorporation of water use efficiency and sustainability standards;
- Work to ensure that California does not shift its water consumption to locales outside the state, and track the embedded water contained within feedstocks and finished fuels imported from out of state in order to assure that they are also produced in a sustainable manner;
- Fund research to develop effective approaches to manage and minimize the negative water resource effects of California's LCFS within and without the state.

We applaud the ARB's efforts to produce a regulation that can serve as a model for jurisdictions elsewhere in the United States and around the world, and strongly support the ARB's proposed LCFS as a discrete early action measure to fight global warming. The LCFS implements a ground-breaking regulation that employs a full lifecycle based performance standard for fuels and lays the foundation for the market-based innovation needed to decarbonize California's transportation fuels. This LCFS should also avoid the use of more environmentally damaging fuels derived from tar sands, oil shale, and coal.

10 ISOR, Volume II. Appendix F-12: Impacts on Water Quality and Water Consumption.

11 Yi-Wen Chiu, et al, Publication Date (Web): March 10, 2009. Water Embodied in Bioethanol in the United States. *Environ. Sci. Technol.*, v43(8): 2688–2692 DOI: 10.1021/es8031067 *** National Academies Press, 2008. Water Implications of Biofuels Production in the United States. *** UNESCO-IHE Institute for Water Education, March 2008. Water footprint of bio-energy and other primary energy carriers. *** USDOE, December 2006. Energy Demands on Water Resources: Report to Congress on the Interdependency of Energy and Water. *** <http://www.liasa.ac.at/Research/LUC/luc07/External-Watch/index.html>

12 K. Fingerma et. al., 2008. Integrating Water Sustainability into the Low Carbon Fuel Standard.

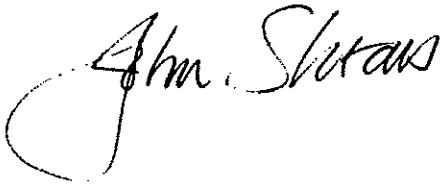
We thank the ARB for the opportunity to participate in and comment upon this rulemaking, and urge the Board to adopt this regulation at its hearings on April 23-24, 2009.

Sincerely

On behalf of the Central Valley Air Quality Coalition Energy Committee

A handwritten signature in black ink, appearing to read "Frantz", written in a cursive style.

Tom Frantz

A handwritten signature in black ink, appearing to read "John Shears", written in a cursive style.

& John Shears,
Energy Committee Co-Chairs

