Michael Redemer
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Testimony Regarding the Low Carbon Fuel Standard before the California Air Resources Board
Presented by Michael Redemer, President of Community Fuels
April 23, 2009

Chairperson Nichols and members of the Board, my name is Michael Redemer and I am the President of Community Fuels. I am delighted to be here today to address the Board with respect to the proposed Low Carbon Fuel Standard (LCFS). Community Fuels operates a 10 million gallon per year multi-feedstock biodiesel plant at the Port of Stockton 45 miles south of Sacramento. We currently sell renewable biodiesel throughout Northern California. This plant utilizes Community Fuels proprietary process technology which maximizes precision in production to ensure the highest quality fuel. The plant also is designed to scale; we can increase production capacity quickly and cost-effectively as demand for biodiesel increases in California. In addition to our commercial-scale biodiesel plant, we also have active research projects related to algae-based biodiesel and advanced biodiesel process technologies.

While we appreciate the ARB staff's efforts to craft a workable rule, Community Fuels has several concerns regarding the proposed LCFS and its impact on the California biodiesel industry. These concerns primarily relate to the modest demand for biodiesel projected from year 2011 thru 2013, to the lack of credit for biodiesel displacing low efficiency gasoline powered vehicles, and to the preliminary indirect land use impacts for biodiesel produced from vegetable oils.

- **LCFS: Modest Demand for Biodiesel from year 2011 to 2013**

The proposed LCFS regulation does not provide adequate support for biodiesel in the early years of implementation. Projections in the ARB staff report indicate only a modest demand for biodiesel from year 2011 to 2013 with combined volume of conventional biodiesel ramping from 6, 12, and 24 million gallons per year. These volumes are so low that the demand for conventional biodiesel in 2011 and 2012 could be satisfied by the existing Community Fuels' biodiesel plant alone. We recommend increasing the Conventional Biodiesel demand as follows:

2011: 30 million gallons per year (existing biodiesel capacity in CA could support this)
2012: 50 million gallons per year
2013: 75 million gallons per year

As shown in the staff report table E-7a (see the attachment), the proposed regulation also favors highly speculative advanced renewable biodiesel technology over conventional biodiesel. Conventional biodiesel production is just now emerging in California as a commercially viable industry. Companies like Community Fuels have invested millions of dollars to develop biodiesel manufacturing facilities in California. We believe the regulation should place a priority on supporting the existing industry while also providing a road map for encouraging the development of advanced biodiesel. A gradual shift from conventional to advanced biodiesel

could then occur after new, commercially viable technologies emerge. The net impact of the regulation as currently drafted will be to undermine the current investments in biodiesel manufacturing in California.

- **LCFS: Lack of Credit for Biodiesel Displacing Gasoline**

The proposed LCFS regulation does not provide a credit for more efficient biodiesel powered vehicles displacing light and medium duty gasoline vehicles. This is reflected in the staff report, Table ES-7 (shown in the attachment), where an Energy Economy Ratio (EER) is used to account for differences in energy efficiency among different types of fuels and vehicles. The EER is defined as the ratio of the number of miles driven per unit energy consumed for a fuel of interest to the miles driven per unit energy for a reference fuel. While EERs are provided for CNG, hydrogen and electricity displacing diesel fuel for heavy duty vehicles, biodiesel use in light duty diesel vehicles is not given a credit under the current proposal.

In general diesel vehicles are 20 to 25% more energy efficient then gasoline vehicles. The conversion of low efficiency gasoline powered vehicles to high efficiency biodiesel is a readily available technology. Furthermore, the use of biodiesel as a fuel source could produce significant reductions in carbon emissions in the near term allowing acceleration of the LCFS program.

- **LCFS: Preliminary Indirect Land Use Impacts (ILUC) for Biodiesel Vegetable Oils**

The establishment of preliminary indirect land use carbon emission impact estimates on the use of vegetable oils (particularly soy oil) to make biodiesel undermines the use of conventional biodiesel. The current staff report adopts a number of preliminary assumptions with respect to the indirect land use impacts of vegetable oils used as a biodiesel feedstock that reduce the attractiveness of biodiesel as a means to reduce fuel carbon intensity. The lack of specificity and clarity related to the ILUC for vegetable oil biodiesel also has implications for capital investment decisions that will be necessary to build additional biodiesel capacity.

On the Federal level we have seen the Renewable Fuels Standard impacted by the lack of commercial installations for cellulosic and other second generation biofuel production. For the LCFS, the adoption of specific indirect land use for advanced renewable biodiesel implies these technologies are closer to commercial reality than most industry experts currently anticipate. We are concerned that the proposed regulations, which include setting an ILUC benchmark and substantial volume assumptions for advanced biodiesel, may put the regulations far ahead of the commercial realities.

In summary, Community Fuels would like the ARB to consider the following changes in order to promote California-based biodiesel production that will be critical to reducing our dependence on fossil fuels and will aid in the development of a low carbon fuel industry:

1. Increasing conventional biodiesel demand for years 2011 to 2013.

2. Providing EER credit for biodiesel powered light duty vehicles.

3. Adjusting indirect land use factors for conventional biodiesel in a manner that recognizes the uncertainty of the model assumptions and takes into consideration the variety of vegetable oils available in the market.

Thank you for this opportunity to present our views. We look forward to working with the ARB as we move forward in producing commercially viable renewable biofuels in the State of California under an LCFS. I want to conclude by extending an invitation to the members of the Board and staff to make the short trip to Stockton to tour our renewable fuel manufacturing facility.

Michael Redemer
President
Community Fuels

Attachment to the Testimony Regarding the Low Carbon Fuel Standard before the California Air Resources Board

Table E-7a
Year-by-Year Analysis of Compliance Scenarios
for Diesel Fuels and Fuels that Substitute for Diesel Fuel
Scenario 6 – Some CNG Used by HDVs

Year	% Reduc.	HD CNG (Veh. and %)	HD PHEVs (Veh. and %)	Conv. Biodiesel (M gal/yr)	Adv. Renew. Diesel (M gal/yr)	Total Diesel (M gal/yr)	Bio. and Renew. % of Diesel
2011	0.25	413 (0.06%)	0	6	11	4482	0.4
2012	0.5	844 (0.13%)	0	12	23	4573	0.8
2013	1.0	1,724 (0.30%)	0	24	47	4664	1.5
2014	1.5	2,643 (0.4%)	0	36	72	4756	2.3
2015	2.5	4,502 (0.6%)	0	61	122	4846	3.8
2016	3.5	6,519 (0.8%)	0	88	174	4946	5.3
2017	5.0	9,406 (1.2%)	0	131	257	5049	7.7
2018	6.5	12,817 (1.6%)	0	173	338	5149	9.9
2019	8.0	16,373 (2.0%)	0	216	426	5252	12.2
2020	10.0	20,917 (2.5%)	0	276	546	5352	15.4

Table ES-7
EER Values Proposed for Use in the Low Carbon Fuel Standard

Light- and Medium Duty Applications (Fuels Used In Vehicles Substituting for Gasoline Vehicles)		Heavy-Duty/Off-Road Applications (Fuels Used In Vehicles Substituting for Diesel Vehicles)	
Fuel/Vehicle Combination	EER Values Relative To Gasoline	Fuel/Vehicle Combination	EER Values Relative to Diesel
Gasoline (including 6% and 10% ethanol blends) Used In Gasoline Vehicles or 85% Ethanol/15% Gasoline Blends Used In Flexible Fuel Vehicles	1.0	Diesel Fuel Used in A Diesel Vehicle or Biomass-Based Diesel Blends	1.0
Compressed Natural Gas Used in Spark-Ignited Vehicles	1.0	Compressed or Liquefied Natural Gas Used in a Heavy-Duty Spark Ignited or Compression Ignition Engine	0.9
Electricity Used in a Battery Electric or Plug-In Hybrid Electric Vehicle	3.0	Electricity Used in a Battery Electric or Plug-In Hybrid Electric Heavy-Duty Vehicle	3.0
Hydrogen Used in a Fuel Cell Vehicle	2.3	Hydrogen Used in a Heavy Duty Vehicle	1.9