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Docket No. 09-ALT-1  
2010-2011 Investment Plan for the  
Alternative and Renewable Fuel and Vehicle  
Technology Program  
COMMENTS

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To the CEC Commissioners, Staff and Advisory Committee,

I appreciate the hard work that has gone into preparing the draft 2010-2011 Investment Plan, but I feel that inadequate resources have been allocated to biodiesel. As you know, biodiesel made from yellow grease was given one of the two best GHG impact ratings by CARB (11.76 g/MJ CO<sub>2</sub>e) as part of the Low Carbon Fuel Standard (LCFS). With the exception of biomethane, no other fuel even came close. If the LCFS was used as the method for establishing the 2010-2011 Investment Plan, biodiesel would have been allocated the highest proportion of funds instead of the lowest.

The justification for not strictly allocating AB118 funds based on the LCFS is called the “gap analysis.” As explained by Peter Ward during the Stockton workshop, “I would like to go over the Investment Plan, a summary for the allocation for Fiscal Year 2010 and 2011, and the funding allocation methodology is one that we are sticking to from the first Investment Plan, where we set out a methodology to capture the most GHG reductions for the year 2020 that triggers AB 32 and 2050, that was a goal devised by the Governor’s Executive Order to achieve a 80 percent below 1990 levels by the year 2050. We performed a gap analysis in the First Investment Plan, as well, and that is to determine the available gaps, that is the strategic use of ARRA funding that would fill those gaps that are left by public and private investments in these fuel areas and technology areas... we are guided by the methodology to attain the highest GHG reductions, but we also have to marry that up with what are the most viable and needed projects in the California landscape right now, so it is the combination of those two, the methodology and hearing of the good project opportunities that are out there for us to fund.”<sup>1</sup>

There is some tension between finding the greatest GHG reduction, and finding unfilled “gaps.” For example, an unfilled gap for natural gas (LCFS NG non-biomethane rating 67.7-93.37) fueling infrastructure costs millions of dollars, but only ends up being capable of filling a

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<sup>1</sup> Page 9 & 18-19, Transcript of CEC Workshop, May 25, 2010, Stockton, CA

very small number of vehicles per day in a relatively small state-wide fleet. The “gap” may be apparent, but the impact of filling that “gap” is minimal.

It is clear that biodiesel made from yellow grease can have the greatest impact on GHG reductions both because of its low LCFS rating and its compatibility with an extremely large installed base of diesel vehicles and fueling infrastructure. According to CARB in its March 2009 *Proposed Regulations to Implement the Low Carbon Fuel Standard*, there are approximately 875,000 diesel fueled vehicles in California that consume 4.2 billion gallons of diesel fuel annually. The CARB report goes on to state, “Staff anticipates, as demonstrated in the scenarios discussed in Chapter VI, that various types of renewable biofuels, natural gas, and electricity will be necessary to achieve the required GHG reduction goals for diesel. Staff anticipates advanced renewable and advanced biodiesel to provide the majority of the GHG benefits for the heavy-duty fleet. Advanced electric, fuel cell, and compressed natural gas vehicles are not expected to result in significant GHG benefits by 2020.”<sup>2</sup> Even with the ongoing introduction of non-petroleum vehicle technology (hybrids and flex-fuel vehicles account for only 1.3% of the 24 million vehicles in California), existing gasoline and diesel engines will continue to dominate the transportation market for the foreseeable future.

If the AB 118 investment plan were based on GHG reduction potential both now and in the future, biodiesel has the lowest LCFS rating for any fuel that has a substantial installed vehicle and fueling infrastructure base. Of the projects that have already been funded, or are subject to funding approval, there needs to be public notice of the projected impacts and cost per ton of GHG mitigation.

What then are the “gaps” to more widespread use of advanced LCFS biodiesel? A 2010 CEC Staff Report<sup>3</sup> states that, “Biodiesel is the second most widely used biofuel in California. About 50 million gallons were consumed in California in 2009, primarily at the B5 blend level (5% biodiesel and 95% petroleum diesel). California has 11 biodiesel plants with a combined production of 87 million gallons per year (mgy). Due to biodiesel’s inability to compete<sup>4</sup> with petroleum diesel prices, however, six of these plants are idle and the remainder will likely produce less than 25 mgy. California’s biodiesel plants currently use yellow grease as their lowest cost feedstock but also use more expensive and abundant soybean, palm, and a variety of plant and animal byproducts for biodiesel production. As of September 2009, the ratio of biodiesel production to consumption was 6 mgy or 12%.”

The biodiesel industry in California has significant installed production capacity, but is incapable of meeting its potential for a number of reasons. These are the “gaps” that need to be filled, and the proposed allocation of \$10,000,000 in the 2010-2011 Investment Plan is inadequate, and should be increased to a minimum of \$20,000,000 to fund the following programs.

**(1) Feedstocks:** The single largest cost of producing biodiesel is the cost of feedstocks. To be price competitive with petroleum and to meet sustainability standards have to be the top

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<sup>2</sup> Proposed Regulations to Implement the Low Carbon Fuel Standard, CARB, March 5, 2009, page VII-6

<sup>3</sup> 2009 Progress to Plan, Bioenergy Action Plan for California, CEC-500-2010-007, April 2010, page 18.

<sup>4</sup> A situation made worse by the delay in reauthorizing the Biodiesel Blenders Tax Credit during in 2010.

priorities if biodiesel (or renewable diesel) is to be viable. Increased emphasis on advanced feedstocks such as algae, aquatic species, jatropha, canola, peanuts and agricultural waste has the greatest potential. Multiple projects involving collaborations between private enterprise, academia and government laboratories should be supported over the entire funding period provided by AB 118. A minimum of \$5,000,000 per year should be allocated for this purpose.

**(2) Energy:** Most biodiesel facilities consume electricity and process heat derived from fossil fuels. The use of fossil energy is expensive, unreliable and unsustainable. To improve the energy footprint innovative technologies using biodiesel by-products such as glycerin and wash water should be encouraged. It is possible that these alternative energy support systems cannot only make biofuel production self-sufficient, but also generate significant additional renewable heat and power for use by local communities. A minimum of \$5,000,000 per year should be allocated for this purpose.

**(3) Production Infrastructure:** As stated in the CEC Draft Report for the 2010-2011 Implementation Plan, “Up to 30 new biorefineries could be needed in California to meet the LCFS carbon intensity reduction requirements for diesel fuel.”<sup>5</sup> Not only do the existing dormant production facilities need to be revitalized using new feedstocks and alternative energy support systems, new facilities need to be opened as well. Grants for feasibility studies need to be made more widely available and low interest loans for conversions of old facilities, and construction of new facilities need to become top priorities. In addition, refurbished and new facilities using advanced feedstocks and alternative energy support systems will need to develop new LCFS pathways under Methods 2A and 2B. A minimum of \$5,000,000 per year should be allocated for this purpose.

**(4) Distribution Infrastructure:** New bulk storage terminals at California ports should not be funded if they encourage the use of imported biodiesel and biodiesel feedstocks such as palm oil. Instead, blending infrastructure at the rack should be supported. If fully funded over the remaining term AB 118 funding, every major petroleum distribution rack in California could be retrofitted to accommodate biodiesel. If all four of these recommendations are adopted, California will have a sufficient local supply of biofuels and there will be no need to import biodiesel and biodiesel feedstocks. A minimum of \$5,000,000 per year should be allocated for this purpose.

If these recommendations are adopted, a viable and robust biodiesel industry will emerge in California, and the GHG footprint of the industry will be significantly reduced beyond its already very low levels. I urge you to seriously consider these proposed changes to the draft Investment Plan.

Respectfully submitted,

  
Russell Teall

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<sup>5</sup> CEC-600-210-001-SD-Rev2, April 2010, Page 53