

Frederick H. Wellons  
2710 Kelvin #2313, Irvine, CA 92614  
949-735-3752

February 26, 2009

California Energy Commission  
Dockets Office, MS-4  
Re: Docket No. 08-ALT-1  
1516 Ninth Street  
Sacramento, CA 95814-5512

**DOCKET**  
**08-ALT-1**

DATE FEB 26 2009

RECD. FEB 27 2009

RE: COMMENTS ON AB 118 – ADVISORY COMMITTEE MEETING

Thank you for this opportunity to comment on AB 118. I am a private citizen with an interest in biodiesel and would like to offer these remarks regarding the AB 118 Implementation Plan.

I participated in the first commercial biodiesel production in the US and have been involved in alternative fuels since 1994. I have served with the National Biodiesel Board on its Governing Board and as Secretary and Vice Chairman. I have been involved in state and federal regulatory and tax issues with respect to alternative fuels and have worked in production, research and product development, feedstock development, sales and marketing, process development, and the setting of quality control standards.

I am employed by Tellurian Biodiesel, Inc. with offices in San Francisco and Venice, California. I also participate in efforts by the California Biodiesel Alliance. However, the comments and remarks expressed in this letter are my own and are not meant to convey the views of any other person or any organization.

**In any strategy to reduce GHG emissions, California should include the use of locally available waste and recycled feedstocks to produce biodiesel. There is a significant volume of this material and its use can have an immediate, significant effect on Greenhouse Gas emissions.**

Through estimates available from the Pacific Coast Renderers Association and my discussions with rendering companies, I believe that there is at least 100 million gallons of in-state recycled feedstocks available to generate California-produced biodiesel.

Soybean oil or other oilseeds that are grown as biodiesel feedstock sources generate certain levels of GHG emissions reductions compared to petrodiesel. However, a significant portion of the GHG's that *are* generated from the use of biodiesel generated is ag-related: planting, cultivation, harvesting, transport of oilseed to mill, and mill processing. There are other ag-related GHG emissions attributable to fertilizer production and Land Use Changes. The current values available from the CA-GREET models are available in Table 1. This table is available from the California Biodiesel Alliance and includes an estimate of Land Use Change emissions based on the current GREET model

Since California agriculture does not generate a large volume of oilseeds, the virgin oil feedstock to produce biodiesel would typically come from the Midwest U.S., generating additional GHG's from the transportation of the feedstock or the finished biodiesel.

However, with respect to the recycled feedstocks available in California, those local feedstocks do not generate agricultural GHG emissions and they are available locally and are therefore much more valuable in reducing GHG emissions. See Table 1.

It is important to note that the use of California-produced biodiesel from local waste feedstocks such as recycled cooking oils generates more GHG reductions per unit of energy than almost all other alternative

fuels. In fact, this locally-produced biodiesel might properly be placed in the Energy Commission's Super Ultra Low Carbon category, that is, those fuels with at least an 82 % GHG reduction compared to petrodiesel.

<b>TABLE 1 CBA summary of CA-GREET model GHG emission values</b>	<b>gCO<sub>2</sub>e/MJ</b>	<b>GHG Reductions from ULSD indicated by negative values</b>
CaRFGasoline	95.85	
CARBOB	95.86	
ULSD	94.71	
Corn Ethanol Midwest avg w iLUC of 30 gCO <sub>2</sub> e/MJ	99.40	5%
Corn Ethanol California avg w iLUC of 30 gCO <sub>2</sub> e/MJ	95.66	1%
Sugarcane Ethanol Brazil w iLUC of 46 g CO <sub>2</sub> e/MJ	73.40	-23%
Cellulosic Ethanol, Midwest forest residue, no iLUC	22.20	-77%
Hydrogen, liquid from NG	133.0	40%
Hydrogen, liquid from NG, EER=2.3 in LDV's	57.83	-39%
Hydrogen, gaseous, avg NG+ renewables	76.10	-20%
Hydrogen, gaseous, avg NG+R, EER=2.3 in LDV's	33.09	-65%
Electricity, CA average	124.1	31%
Electricity, CA average, EER=3.0 in LDV's	41.37	-56%
Electricity, CA marginal NG	104.7	11%
Electricity, CA marginal NG, EER=3.0 in LDV's	34.90	-63%
CNG, Avg Natural Gas	68.00	-28%
CNG, landfill gas	11.40	-88%
<b>Soy Biodiesel from Midwest, no iLUC</b>	<b>26.90</b>	<b>-77%</b>
<b>Soy Biodiesel from Midwest, assume iLUC of 22 g*</b>	<b>48.90</b>	<b>-48%</b>
<b>RCO Biodiesel, produced in CA from CA feedstocks**</b>	<b>6.10</b>	<b>-94%</b>
Ethanol, CA forest residues	5.40	-94%

\* The CA-GREET model for Midwest Soy Biodiesel does not include Land Use Changes. Until the new number is published, the California Biodiesel Alliance has estimated a value of 22 gCO<sub>2</sub>e/MJ.

\*\* The CA-GREET model for California-produced biodiesel from California-waste feedstocks has not been completed. The California Biodiesel Alliance has calculated this number by deducting ag-related items from the Soy Biodiesel model.

\*\*\* This summary table is used with the permission of the California Biodiesel Alliance.

If California utilizes biodiesel produced from its 100 million gallons of recycled feedstock to replace 100 million gallons of petrodiesel, **then the annual GHG reductions are over 1.2 million metric tonnes of CO<sub>2</sub> equivalents.**

**Strategies for reducing GHG in California include a high priority on the utilization of biodiesel. This fuel technology exists *today* and in volumes that are available and would achieve significant reductions in GHG emissions. Due to the recycled nature of California recycled feedstocks, additional biodiesel capacity that can utilize those feedstocks is required.**

The California Biodiesel Alliance (CBA) has reported California biodiesel production capacity of about 15 million gallons currently with plans for a total of 57 million gallons per year capacity by the end of 2009. There appears to be sufficient US capacity and the expectation of increasing future California capacity that would allow California to include increased biodiesel use in its strategy to realize significant GHG reductions.

However, it is estimated that California used approximately 45 million gallons of biodiesel in 2008 with only 10 million gallons coming from in-state production using in-state feedstock sources. Remember that the estimated volume for California recycled feedstocks available for biodiesel production is about 100 million gallons annually. Therefore, current capacity is only utilizing 10 percent of the available volume.

The recycled feedstocks available in California typically require additional processing and only a small percentage of currently operating California biodiesel production facilities have the capability of utilizing those lower quality feedstocks. Therefore, it appears that California currently lacks the kind of production and capacity to fully utilize the volume of California feedstocks that are available, those feedstocks that generate the highest GHG reductions.

I believe the Energy Commission should set a high priority on the development of local, in-state production of biodiesel from locally-available recycled feedstocks and that AB 118 funds should be used to incentivize in-state production using those waste feedstocks. The use of biodiesel from these local sources shows the potential for immediate, significant reductions in GHG emissions.

### **Summary**

- The final Implementation Plan for AB 118 and the associated proposed funding levels should set a high priority on the use of biodiesel in reducing Greenhouse Gases.
- Biodiesel is an alternative, renewable fuel technology that exists *today* and volumes of fuel are available that would achieve significant reductions in Greenhouse Gases if the level of biodiesel use in California were increased.
- Biodiesel offers a GHG reduction strategy that is significantly better than other alternative fuels in that the GHG reductions are sizable and projects can be implemented quickly, thereby delivering quick results at a low cost. California should craft policy that incentivizes the production and use of locally-produced biodiesel from recycled feedstocks.

Sincerely yours,



Frederick H. Wellons