

3020 Old Ranch Parkway, Suite 200
Seal Beach, California 90740
Phone: 562.493.2804
Facsimile: 562.493.4532

www.cleanenergyfuels.com

Michael Eaves
Assistant Vice President,
Technology Advancement



July 8, 2008

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

08-ALT-1

DOCKET	
08-OIR-1	
DATE	JUL 0 8 2008
RECD.	JUL 0 8 2008

Subject: Docket No. 08-OIR-1 – Committee Workshop AB118 Program Funding and Criteria

Clean Energy is pleased to submit additional comment to those provided previously by the California Natural Gas Vehicle Coalition.

Sustainability

Clean Energy agrees with the sustainability goals being adopted by the Commission in regards to GHGs. Projects funded should be required to meet the 10% threshold limit proposed. We also endorse the concept of allowing emerging technologies to have slightly higher carbon footprints in the short-term if the long-term objectives can be shown to reduce the carbon footprint more than 10% over the current standards for gasoline and diesel fuel. Clean Energy does not support funding emerging technologies whose carbon footprints are larger than those of gasoline and diesel today.

In the discussion of sustainability, the concept is presented of making funding contingent on improving air quality in regards to criteria pollutants and toxics versus not increasing criteria or toxic emissions. Clean Energy endorses the concept of promoting air quality improvements – and would support giving increased funding consideration for projects that do improve air quality. However the mechanism for making the determination that a project increases air quality on a wells-to-wheels basis is not in place at this time.

Extensive work has been done to quantify the well-to-wheels GHG assessment for all fuels under the CARB LCFS process. Relatively little work has been done to quantify upstream (well-to-tank) criteria and toxic emissions. More extensive analyses of upstream emissions needs to be done before the CEC and CARB are in a position to determine whether fuel paths deliver better overall air quality improvements.

Also in looking at air quality from a tank-to-wheels assessment, there are issues regarding CARB regulations that must be addressed before the CEC would be in a position to award funding based on an improved air quality criteria (criteria and toxics). Through 2006, CARB had “optional” standards for certifying heavy-duty engines. When the CARB standard for heavy-duty diesel engines was 2.5 gm NOX – one could certify engines to 1.8 gm NOX or at 0.3 gm NOX increments under the 1.8 gm level. That led to heavy-duty natural gas engines eventually being certified to 1.5 gram NOX then 1.2 gram NOX levels – significantly cleaner than their diesel counterparts. In the 2007-2009 timeframe, CARB eliminated the “optional” certification levels. Engines had to be certified to the CARB/EPA 1.2 gram NOX level – or the 2010 CARB/EPA level of 0.2 gram NOX. Today, the natural gas industry has engines certified at 0.8 grams and 0.2 grams – but under CARB’s guidelines – the 0.8 gram engine can’t get credit for being cleaner than diesel. In order to establish a “cleaner” criterion for AB118 disbursements, CARB needs to develop “optional” certification emission levels for heavy-duty engines.

A similar situation exists for light duty vehicles. Today, there are emission classifications for SULEV and ZEV – but nothing in between. Years ago, the cleanest emission standard for light-duty vehicles was ULEV. Natural gas vehicles demonstrated the capability to be much lower in emissions than the ULEV certification. The industry petitioned CARB to create a new designation – SULEV – to capture the lower emissions of natural gas vehicles. CARB needs to reevaluate its current emission certification levels to determine how to award credit for being cleaner than the existing standards. Without means to legally quantify the emission reductions of alternative fuels, establishing criteria that projects funded under AB118 be “cleaner” – is not realistic.

Fungibility

The CEC should look seriously at the issue of fungibility for AB118 funds. In a recent \$25 million program administered by CARB, there were seven different programs within the one overall program. Under AB118 directives, there could well be several categories of funding identified. Even if competitive RFPs are issued for those program areas, CEC staff must have some latitude to reject all proposals in a given area if they are not deemed to be responsive to the intent of the RFP. If dollars are under spent in some areas, the CEC should have the latitude to redirect those funds to spending areas that are achieving program goals and successful market penetration.

Funding Prohibitions

Language in the Health and Safety Code prohibits funding for projects that are “...required to be undertaken pursuant to state or federal law or district rules or

regulations.” The LCFS and ZEV program are cited as two examples of regulations that could impact funding under AB118. One has to be careful in looking at these regulations as a means to disqualify projects for funding. The LCFS sets requirements for the carbon content of fuels but does nothing to define specific commitments for sales of the fuels or mandate the purchase of fuels by consumers or businesses. The ZEV regulations define production quotas for OEMs but don’t mandate sales. These two regulations therefore shouldn’t impact the CEC establishing consumer/business purchase incentives for alternative fuel vehicles to encourage petroleum fuel displacement and market penetration of alternative fuels.

There are existing CARB regulations for Transit, Refuse, Cargo Handling, and Public fleets that are emission based regulations that allow an alternative fuel option. The premise for these regulations is that fleets will continue to operate on diesel fuel and must retrofit vehicles to control PM emissions and look at forced turnover of vehicles to reduce NOX emissions. Use of alternative fuels is an option but not mandated. Even with alternative fuels, there is no relief from the emission criteria in the regulations.

It is therefore not clear whether fleets under these CARB regulations would be precluded from availing themselves of AB118 funds to convert their fleets from diesel compliant fleets to alternative fuel emission compliant fleets under the state policy to diversify the transportation fuel portfolio. Under AB118 guidelines, one would qualify to purchase an alternative fuel vehicle if it meant no degradation in GHG (or other emission). Since there are no regulations that mandate alternative fuels in the state, the CEC Advisory Board should take a serious look at whether AB118 funds would violate the Health and Safety Code statutes cited.

Incentives for Vehicle Purchases

Clean Energy is supportive of AB118 funds being used for purchase incentives for alternative fuel vehicles. Purchase incentives should be designed to offset the first cost differential of alternative fuel vehicles over conventional fueled vehicles. Regardless of the economics of a fuel, the first cost premium for an alternative fuel vehicle is the major issue limiting market penetration. Clean Energy supports the CEC development of a purchase incentive fund for all alternative fuel vehicles. Clean Energy recommends that a minimum of \$50 million be considered for purchase incentives out of the AB118 funds.

In evaluating programs, one needs to consider the cost effectiveness of incentives to displace petroleum. For example, a heavy-duty natural gas vehicle may cost \$50,000 more than a comparable diesel vehicle. While \$50,000 may seem high for a purchase

incentive – these heavy-duty vehicles (transit buses, refuse trucks, port drayage trucks, long-haul trucks, etc.) consume 10,000 to 20,000 gallons of fuel per year. For a vehicle with a 13-20 year life – this means a displacement of petroleum of 130,000 gallons to 240,000 gallons over the life of the vehicle. When the incentive is spread over the life of the vehicle – the cost effectiveness of these incentives is between \$0.21 and \$0.38 per gallon of alternative fuel.

Other Incentives

Incentives are a potential way to attract OEMs into the California market. All major OEMs build and sell natural gas vehicles around the world – but not in the U.S. or North America. AB118 incentives may attract some OEMs to the California market. One type of incentive that is more important to OEMs than cash is greater ZEV credits for their alternative fuel vehicles. Light-duty natural gas vehicles receive 0.7 ZEV credits currently. OEMs have indicated that they would be much more responsive to supplying natural gas vehicles if the ZEV credits were increased to 1.5-2.0 credits per vehicle. The CEC should work with CARB to identify if a more effective alternative fuel incentive program for light-duty vehicles that includes increasing the ZEV credits for desired products.

Biomethane

The California Natural Gas Vehicle Coalition has already noted the production of LNG from landfill and other renewable sources of biomethane. In addition to the potential of generating LNG from these renewable sources, the CEC should also consider funding programs that would clean up natural gas from renewable sources and inject biomethane back into the natural gas transmission/distribution system in California. California utilities must be participants in these programs since they control access to the pipelines on their terms. Biomethane injected into the distribution system can be utilized at NGV stations in the same way that renewable electrons are transmitted through the electric grid. Greenhouse gas benefits are better for biomethane injected into the natural gas distribution system because the additional energy intensive process of making LNG from the natural gas is avoided.

Clean Energy supports the other comments made by the California Natural Gas Vehicle Coalition. If there are any questions regarding the issues and concepts in this letter, don't hesitate to call me at 562/493-7226.

Sincerely,

A handwritten signature in black ink, reading "Michael L. Eaves", is written over a set of horizontal lines. The signature is fluid and cursive, with the first name being the most prominent.

Michael L. Eaves
Assistant Vice President Technology Advancement