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3:45 agenda

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February 12, 2009

RE: SB457, Relating to Clean Fuel

Thursday, February 12, 2009

2:45 p.m.

Conference Room 225

Dear Senator Gabbard, Chair, and Members of the Committees on Energy and Environment:

We wish to submit comment on SB457 and the omission of clean diesel fuels in its roster of definition. We support an amendment of this bill to include ultra low sulfur diesel (ULSD) and SunDiesel®.

Senate Bill 457 defines "clean fuel" as meaning (A) Natural gas; (B) Liquefied natural gas; (C) Liquefied petroleum gas; (D) Hydrogen; (E) Electricity or hybrid driven; or (F) Any other fuel at least eighty-five per cent of which is one or more of the following: methanol, ethanol, any other alcohol, or ether.

Conspicuously absent from this definition of 'clean fuel' is Ultra Low Sulfur Diesel (ULSD) and next generation biomass-to-liquid (BTL) clean diesel — trademarked as "SunDiesel" — now being produced in Germany and under consideration for a Hawaii-based BTL production facility by our company, SunFuels Hawaii LLC, and parent technology company, Choren Industries GmbH.

We support a transition to non-fossil fuel transportation and an emerging electric car platform. In our firm's public presentations, we purposefully encourage audiences to acquaint themselves with the electric car initiative advanced by Better Place.

However, we also strongly support encouragement for the emergence of clean ultra low sulfur diesel fuel compliant with EPA 40 CFR 80.570 and a host of new clean diesel powertrain engines and emissions technologies that provide immediate and significant reductions in Nox and CO2 emissions.

Consider. Late last year, the Green Car Journal Green Car of the Year program named the 2009 Volkswagen Jetta TDI (diesel) the Green Car of the Year, marking the first time that a clean diesel model had received that distinction. Selecting the 2009 Green Car of the Year® was a jury including four Green Car Journal editors and a larger number of invited jurors including



automotive icon Carroll Shelby; auto expert and 'Tonight Show' host Jay Leno; Sierra Club executive director Carl Pope; Natural Resources Defense Council president Frances Beinecke; and Ocean Futures Society president Jean-Michel Cousteau.

The VW Jetta TDI drives on ultra low sulfur diesel fuel. Ultra-low sulfur diesel has a sulfur content at 15 parts per million versus nearly 500 parts per million for traditional diesel fuel. The new Jetta TDI is a 50-state diesel, meaning that it is now approved for sale and use in California and in four other states -- New York, New Hampshire, Maine and Massachusetts - - that adhere to California's super-strict, tailpipe emissions-control rules.

In addition to meeting stringent emissions certification in all 50 states, the Jetta achieves EPA-estimated mileage of 41 mpg with greatly reduced greenhouse gas emissions. Should not such clean diesel vehicles running on clean ULSD fuel be included as "clean" fuels? We think it should.

In response to an E.P.A. mandate during the Clinton Administration, refiners reduced the sulfur content in diesel fuel by 97 percent. This new, ultra-clean fuel is important because sulfur tends to hamper exhaust-control devices in diesel engines, like lead once impeded the catalytic converters on gasoline cars. Just as taking the lead out of gasoline in the 1970s enabled a new generation of emissions control technologies that have made gasoline vehicles over 95 percent cleaner, so the removal of sulfur from diesel has helped to usher in a new generation of clean diesel technology. Ultra-low sulfur fuel (ULSD) is now available nationwide.

Diesel is the most efficient of all internal combustion power systems. Because of the superior efficiency of the engine and higher energy content of the fuel, diesels typically deliver 20-40 percent more miles per gallon and 10-20 percent fewer GHG emissions than comparable gasoline vehicles. According to the EPA (www.fueleconomy.gov) a simple comparison between the diesel and gasoline versions of the Volkswagen Jetta demonstrate that the diesel model would travel 36 percent more miles on a tank of fuel and save \$321 annually on fuel costs, while using nearly two fewer barrels of oil and emitting one less ton of GHG emissions each year. A similar comparison between the 2007 Mercedes E320 Bluetec diesel and its E350 gasoline equivalent finds even greater savings. The diesel model travels 43 percent more miles on a tank of fuel and saves \$492 annually on fuel costs while using 3.2 fewer barrels of oil and emitting 1.5 fewer tons of GHG emissions each year.

The European Union has sought to capitalize on diesel's inherent energy efficiency by offering tax incentives for the purchase and operation of diesel cars and trucks. Today diesel vehicles account for more than 40 percent of new vehicles purchased in the EU marketplace. Although EU transportation related GHG emissions grew 26 percent from 1990 to 2004, the average carbon dioxide emissions of new passenger cars were reduced by about 12 percent from 1995 to 2004. According to the European Environmental Agency, "The main reasons for the reductions since 1995 are fuel efficiency improvements, mainly in diesel-fueled vehicles, and a shift in fleet composition from petrol to diesel passenger cars." For this reason, advanced clean diesel technology must remain a viable option for light-duty vehicles in the United States. In 2005, diesel vehicles accounted for 3.6 percent of the light-duty

market in the U.S. This percentage may triple, reaching more than 10 percent of the U.S. market by 2015 according to JD Power & Associates.

One area of significant promise for efficiency gains from commercial vehicles is the utilization of diesel hybrids. Fuel efficiency gains of 30-50 percent are possible by combining a smaller, fuel-efficient clean diesel engine with an advanced electrical or hydraulic system that uses regenerative braking and energy storage. Diesel electric hybrid commercial trucks are in the demonstration and early implementation phases in the school bus, package delivery, local trucking and utility sectors.

Diesel hybrids have also demonstrated significant efficiency gains in transit buses and is now the technology of choice for many transit districts around the country. A National Renewable Energy Laboratory (NREL) report comparing hybrid diesel buses with standard diesel-powered and CNG buses found a respective fuel economy improvement of 37 percent and 88 percent. Similar gains have been found when combining these technologies in certain truck markets such as the utility sector. New York City and San Francisco have enthusiastically embraced Orion diesel-hybrid buses for their municipal fleets. They, too, run on ULSD.

We encourage the legislature to adopt a positive tax policy toward clean diesel fuel. Soon, we hope to inaugurate even greater improvements with island production of synthetic SunDiesel fuel created from locally grown biomass. Thank you for consideration of clean diesel in your roster of clean fuels for Hawaii's transportation future.

Sincerely,

John Ray, General Manager
SunFuels Hawaii LLC