

# California Ethanol Vehicle Coalition

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## **Staff Report on AB 1007, Bioenergy Action Plan and Low Carbon Fuel Standard California Alternative Transportation Fuels “Plan”**

**June 8, 2007**

The California Ethanol Vehicle Coalition (CEVC) is pleased to submit comments on California’s Alternative Transportation Fuels Plan to increase the use of alternative fuels, reduce petroleum fuel consumption, and greenhouse gas emissions, and support air quality improvement, relative to the requirements of Assembly Bill 1007.

Assembly Bill 1007 requires the California Energy Commission, in partnership with the California Air Resources Board to prepare a state plan no later than June 30, 2007, to increase the use of alternative fuels in California to 20 percent of on-road transportation fuels in 2020 and 30 percent in 2030.

CEVC is working to become the state’s primary advocate for the advancement of ethanol use in California as a transportation fuel through increasing the use of E10 and E85, increasing the number of flex-fuel vehicles (FFVs), and supporting Biofuels market development.

In collaboration with the National Ethanol Vehicle Coalition (NEVC) and the Ethanol Promotion and Information Council (EPIC) -- national non-profit membership organizations that serve as the nation’s primary advocacy groups promoting the use of E10 and E85 as alternative transportation strategies -- we represent a wide range of organizations, including state and local interest groups, state and local elected officials, ethanol producers, vehicle manufacturers, agricultural interests, ethanol suppliers, and industry interests.

CEVC wishes to express its support for the Energy Commission’s Alternative Transportation Fuels Plan as it relates to the increased use of E10, E85 and FFVs capable of operating on any combination of gasoline and ethanol up to 85% blend. The following comments provide a basis for CEVC’s support of California’s Alternative Transportation Fuels Plan and offer several suggestions to increase alternative fuel use including government incentives, standards and programs, development of infrastructure and overcoming market and regulatory barriers to increased availability of E85 and FFVs.

Comments will also be provided on the Full Fuel Cycle analyses conducted by TIAX for the Energy Commission. CEVC looks forward to working with the Energy Commission

and CARB in the future toward achieving the goals of the Plan through proactive implementation of these suggestions.

CEVC believes that our nation needs alternative transportation fuels to address the projected growth in transportation energy demand as well as petroleum fuel supply and price concerns and that a variety of alternative fuel and propulsion technology options should be considered. The ongoing volatility in global petroleum markets, refined product supply and consumer pricing is likely to continue to be the subject of public concern and demand for action for the foreseeable future. The Energy Policy Act of 2005 and California initiatives have established specific objectives to increase the use of alternative fuels with a focus on ethanol, renewable fuels and biomass fuel sources.

The 2005 Integrated Energy Policy Report documents California's concerns about petroleum fuel supply and price issues and recommends aggressive targets for alternative fuel use that parallel national policy goals. Governor Schwarzenegger's Low Carbon Fuel Standard (LCFS) goes beyond national policy by establishing a specific CO<sub>2</sub> driver as a means of attaining California's aggressive petroleum fuel use policy goals. The LCFS and legislation such as AB 1007 indicate the State's resolve to address these issues and place California in a leadership role for alternative fuel policy that will help guide other states and future national energy policy. California actions have already spawned new organizational activity in the Western States Governor's Association by creating interstate and international stakeholder partnerships to reduce petroleum consumption and greenhouse gas emissions.

Ethanol, especially E10 and E85, represent *the* best near term alternative to address petroleum fuel use concerns. While Propane, L-CNG, Biodiesel, Hybrids and Plug-In technologies must be included in a comprehensive plan, a growing body of research indicates that in 15 to 20 years, at least 30 percent of domestic gasoline consumption could be supplied (displaced) by ethanol on an energy equivalent basis. *No other alternative fuel offers the impending fuel supply and replacement potential of ethanol in the near term.*

With only minor modifications to the existing CARB specification of gasoline, E10 can displace an additional 600 million to 800 million gallons of petroleum-based fuel. Additionally, E85 can use the existing liquid hydrocarbon infrastructure with moderate facility and dispensing upgrades to fuel the growing California fleet of flexible fuel vehicles (FFVs), currently estimated at about 350,000 vehicles. The nearly six million FFVs on U.S. roads today makes E85 an attractive alternative to increase the use of ethanol as soon as the infrastructure can be built. AB 1811 funding has made the first substantial down payment in establishing E85 infrastructure and has primed the pump for E85 fuel market development.

In addition to offering the best near term alternative to reducing petroleum fuel consumption, ethanol is one of the most effective ways to reduce greenhouse gases from the transportation sector, according to research and analysis by the US Department of Energy's Argonne National Laboratory. According to Argonne, E85 made

with corn-derived ethanol reduces greenhouse gas emissions by more than 20 percent. When ethanol is made from cellulosic biomass sources, greenhouse gases can be reduced 70 percent or more.

CEVC is in the process of building up public sector and private stakeholder partnerships to establish 100 E85 stations in 24 months and 500 stations in 5 years. While this is an aggressive goal, it is one that is supported by California ethanol producers, industry and equipment suppliers and government policymakers.

### **CEVC Comments on Achieving 20% Alternative Fuel use by 2020, 30% by 2030**

- Implement December 2006 EPA state guidance that waives Stage 2 vapor recovery requirements for new E85 pumps.
  - Adopting the EPA Waiver for Stage 2 Vapor Recovery will require fast tracking S.I.P. integration with support from Air Districts.
  - EPA determined that enough of current FFV fleet is equipped with ORVR.
- Support CEVC as a statewide advocacy organization to assist in E85 fuel market development to help achieve policy goals.
- Advocate for US Congressional support for California programs through local congressional delegation.
- Actively participate in the Western States Governor's Association stakeholder processes that support California petroleum fuel use and greenhouse gas emission goals.
- Integrate selected Midwest state models to develop education/outreach and expand fueling stations.
- Allocate annual funding program for California based DOE Clean Cities Coalitions.
- Establish biofuel stations concentrated in major cities that will be most receptive to alternative fuels where the highest concentration of FFVs exist; create regional and statewide fueling corridors; interstate corridor partnerships with bordering states (Cascade Sierra, Wash.-Ore.), and the Mexico border crossing.
  - Support CEVC Trade Mission to consult with officials in Minnesota, Illinois, Wisconsin, and other states where effective ethanol policies have already been implemented.
  - Support the development and use of blending pump technology that will allow maximum flexibility for E85 and biodiesel retailers to purchase ethanol and biodiesel, which will support energy equivalent market pricing.
- Support legislation such as AB 1811, providing long-term funding incentives for E85 / biodiesel dispensing stations, education/outreach and alternative fuels market development.
- Address barriers for the certification of new flexible fuel vehicles to California emission requirements.
  - Study and implement ARB regulatory revisions that address certification test procedure issues related to PZEV and SULEV standards.
  - Consider the overlap of federal and California testing requirements.

- Maximize the use of ethanol to 10% in low level blends throughout the state.
  - Resolve permeation evaporative emissions and tailpipe NOx emissions issues through revisions of the ARB Predictive Model for gasoline formulation that are currently under consideration.
  - Maintain the air quality improvements that have been achieved with California's reformulated gasoline program since its implementation in 1996.
  - Implement the RFA Dual Model proposal to maximize the accuracy of the Predictive Model and to maximize the produceability of California reformulated gasoline.
- Work with ethanol producers, refiners and auto manufacturers to develop a new E85 specification.
  - Base the specification on work that is currently underway within ASTM
  - Maintain the air quality improvements of California reformulated gasoline
  - Provide maximum flexibility for blending components to maintain a high quality, clean fuel that is produceable at the lowest possible cost.
- Create state incentives for fuel providers and E85 retailers to support the sale of E85 at energy equivalent prices to unleaded regular gasoline.
  - Revise the motor fuel tax structure to an energy equivalent tax calculated on the basis of energy content instead of per gallon of fuel. Such a tax "revenue neutral" proposal has been developed by NEVC and is supported by CEVC for California.

**Comments on Energy Commission Full Fuel Cycle Analysis presented at  
March 2, 2007 joint Energy Commission / CARB workshop**

- CEVC supports the use of full life cycle analysis methods as used in the Full Fuel Cycle Analysis and commends the Energy Commission in its ambitious and comprehensive look at propulsion systems and fuels.
- The following comments should be addressed and more time should be permitted to fully consider stakeholder comments and their effects on the conclusions.
- The so called "marginal" analysis is highly dependent on the supply contribution of each alternative fuel to overall supply growth, and may distort the advantages and disadvantages of technologies such as PHEVs
- State, national and global analysis boundaries were applied inconsistently to petroleum, fossil and non-fossil fuels
- Several key assumptions may significantly affect conclusions:
  - New petroleum fuel supply assumed to produce no additional refinery emissions
  - Blended fuels applied to existing fleet while new fuels applied only to newer technologies
  - It is not clear whether all new (marginal) corn and cellulose derived ethanol is assumed to be produced in CA, or some imported.

- Electricity generation assumptions are critical to GHG emissions for CNG
  - The source of emission, fuel economy and engine mapping data for various propulsion technologies is not clear, and the use of multiple sources may not support direct comparison of technologies.
  - HEVs are credited with lower criteria pollutant emissions in proportion to FE improvement, but this is likely not the case since HEVs are certified to the same emission standards as non-HEVs, and engine restart emissions may offset gains.

Finally, we wish to convey our thoughts on the current status of the “Stage II” vapor recovery requirements for E85 infrastructure.

In California, the cost and time associated with certification to “Stage II” vapor recovery requirements has been a deterrent to the development of E85 infrastructure. Recently, CARB has provided some helpful assistance with these requirements in providing a pathway to permit a small quantity of new stations to be certified as research facilities.

However, more is needed to support an aggressive ramp up of E85 dispensing stations to help achieve the time and fuel volume recommendations to support AB 1007 goals.

At the request of the NEVC and others early in 2006, the US Environmental Protection Agency (EPA) studied the potential impact of waiving Stage II vapor recovery requirements on new E85 stations considering that the majority of E85 Flexible Fuel Vehicles (FFVs) in the fleet are equipped with Onboard Vapor Recovery (ORVR). In a regulatory guidance letter to the states dated December 12, 2006 entitled “Removal of Stage II Vapor Recovery in Situations Where Widespread Use of Onboard Refueling Vapor Recovery is Demonstrated”, EPA determined that the air quality impact of removing Stage II from new E85 dispensers would likely be minimal in most non-attainment areas. In order to take advantage of EPA’s determination, a SIP demonstration is required that shows that any increase in emissions caused by operating E85 fueling facilities without Stage II controls does not interfere with attainment of the ozone standard.

Clearly, removal of the State II requirement would help to jump-start E85 infrastructure, and would have very little environmental impact due to the small number of stations in the first several years, and ORVR controls on the majority of E85 FFVs. When the entire FFV fleet is equipped with ORVR, Stage II would be redundant control of refueling vapor emissions. An analysis of the benefits of Stage II on E85 pumps and ORVR on FFVs could determine when the phase-in of ORVR equipped FFVs will provide the same level of VOC control that Stage II could provide on E85 pumps according to the bioenergy action plan recommendations.

Based on prior analysis and EPA’s 2006 regulatory guidance letter, Illinois has not required Stage II controls on their 100 E85 stations located primarily in the Chicago area. Other states are expected to take advantage of EPA’s well-reasoned guidance to

facilitate development of E85 infrastructure. CEVC recommends that California follow EPA's regulatory guidance as well and revise their SIP request a waiver of the Stage II vapor recovery requirement for new E85 dispenser facilities, including a demonstration as recommended by EPA that attainment of the ozone standard will not be affected.

Until SIP revision is approved, it is further recommended that E85 dispenser facilities be permitted as research facilities without Stage II equipment so as to avoid confusion in the construction and approval of future E85 stations.

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CEVC appreciates the opportunity to provide comments on California's Alternative Transportation Fuels Plan, AB 1007 and working with the Energy Commission, the Air Resources Board and other California agencies on the implementation of the Plan.

We also look forward to providing support on technical and policy issues related to ethanol and E85, financial support from US DOE grants and public education and marketing support. Please contact me if you have any questions or need further clarification. Thank you again for your good work on the AB 1007 Report.

Sincerely,

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