

Ethanol Forum & Technical Roundtable

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SCAQMD

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California Energy Commission



California- An Island?



Ethanol in California

- Demonstrations of E90 and E85
 - Volkswagen Rabbits and Pickup trucks- 1981
 - Fueling Stations
- Fuel Flexible Vehicles Production-Fleets
- Fuel Flexible Vehicles Production-Retail
- As a Gasoline blend stock- replacing MTBE
 - Currently @ 5.7% volume
- E85 and Petroleum Reduction

Alcohol Plays a Critical Role

CURRENT

- *Currently @ 5.7% volume*
- *Potential for 10% volume?*

NEAR TERM

- *Use of ethanol will likely continue in California despite repeal of Federal oxygenate requirement*
- *Increase E-85 fueling station infrastructure. Maintain current rate of FFV sales (up to 1-2% of gasoline market)*

LONGER TERM

- *Up to 10% blend in all gasoline could increase ethanol demand to over 1.5 billion gallons per year (aggregate)*
- *Widely available E-85 fueling infrastructure, significant market share of FFV E-85*
- *E-Diesel: Limited demonstrations, possible 10% blend with diesel in the long term?*

E85 FFVs in California

- Estimated 250,000 FFVs now
- Future FFV production for California?
- E85 Fueling Stations- 1 Retail, 3 total
- Business Case and EVR Certification

Integrated Energy Policy Report

- Many recommendations for E85, FFVs
- Alternative Fuels and Fuel Supply
- Ethanol and other Biofuels Production
- Governor's requested Biofuels Report
- Adopted Goal of 20% Alternative Fuels Use by 2020- Ethanol a large part

Bioenergy Action Plan Status

- 3/31/06: Working Group delivered the consultant report Recommendations for a Bioenergy Plan for California to Governor
- 4/25/06: Governor Schwarzenegger issued Executive Order S-06-06
- May 2006: Working Group to release detailed Bioenergy Action Plan for California, specifying the actions and timelines they have agreed to take to implement the Executive Order
- December 2006: Energy Commission target for adoption of alternative transportation fuels report

Gov. Schwarzenegger's Executive Order S-06-06

- Established targets to increase in-state production and use of bioenergy, including ethanol and bio-diesel fuels made from renewable resources:
 - For biofuels, the state shall produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050
 - For biomass for electricity, the state meet a 20 percent target within the established state goals for renewable generation for 2010 and 2020

Executive Order S-06-06

(continued)

- Directed the Resources Agency and the Energy Commission to coordinate work among state agencies to promote the use of biomass resources, including:
 - continue the work of the Bioenergy Interagency Working Group, chaired by the Energy Commission
 - identify and secure federal and state funding for research, development and demonstration projects to advance the use of biomass resources for electricity generation and biofuels for transportation

- Directed the Energy Commission to report through its biennial *Integrated Energy Policy Report* on progress made in achieving sustainable biomass development in California

Executive Order S-06-06

(continued)

- Urged the Air Resources Board to consider as part of its rulemaking on the predictive model the most flexible possible use of biofuels, while preserving the full environmental benefits of California's Reformulated Gasoline Programs
- Requested the Public Utilities Commission to initiate a new proceeding or build upon an existing proceeding to encourage sustainable use of biomass and other renewable resources by the state's investor-owned utilities

2005 IEPR Recommendations

- *Establish flexible overarching policies to simultaneously reduce petroleum fuel use, increase fuel diversity and security, and reduce emissions of air pollution and greenhouse gases*
- *The state should establish a California renewable gasoline fuel standard so that the pool of all gasoline sold in California contains, on average, a minimum of 10 percent renewable content*
- *Sponsor transportation technology and fuels research and development*

2005 IEPR Recommendations

- *Establish a procurement requirement for alternative fuels for the State of California's fleet of vehicles*
- *Develop and certify E-85-compatible fuel dispensing systems and implement a process to expedite the permitting of E-85 stations*
- *Investigate the feasibility of requiring all or a portion of new cars sold in California to be FFVs*

2005 IEPR Recommendations

- *Establish a collaborative state/industry working group to identify fuel infrastructure changes needed to increase production and distribution of E-85 gasoline and prepare a strategic/business plan to exploit opportunities to incorporate E-85 into the existing retail fueling system*
- *Sponsor a consumer notification and education program promoting the availability of FFVs and E-85 fuel*

2005 IEPR Recommendations

- *Evaluate incentive programs in other states to determine their applicability and usefulness for creating an E-85 retail infrastructure in California*
- *Support research for the development of technologies to convert biomass resources to ethanol*

AB 1007

- Passed and signed by Governor in 2005
- Restates Goal to increase all AF use to 20%-2020
- Calls for Alternative Fuels Plan by June 2007
- Full Fuel Cycle Assessment for each fuel
- Calls for Requirements, Incentives and Policy Mechanisms
- Sets interim goals for path to 20% in 2020

Key Issues for E85

- **Enhanced Vapor Recovery Certification for Fuel Stations**
- **Securing a Competitively Priced Fuel Supply**
- **FFV California Emissions Certification**
- **In-state Ethanol Production-grain & cellulose**
- **Business Case for E85 Stations**
- **FFV Developments - Hybrids and PZEVs?**

Thank You

- Publications:

www.energy.ca.gov

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