

CDFR Remarks

Biomass Collaborative Annual Conference Sacramento, California March 27, 2006

- Promising future based on current conventional facilities.
- Poly fuels from poly technologies
- Enzymes, acids, syn-gas, Fischer-Tropsch, all seem to have potential
- Existing residuals from ag, forests urban sources, and potential dedicated energy crops
- Ca Leadership is evident with passage of AB 32 and implementation of other laws. Some detail to follow.
- Concept of Energy Sheds
- Linkage between energy and water is critical in the arid west.
 - Energy crops initiative for the west
 - Energy and water systems efficiency opportunities – e.g. “Transfer electrons rather than water.”

- AB 1493 (2002)
 - CARB GHG emission standards for light duty vehicles including upstream emissions associated with the production of the fuel
 - In effect starting in 2009 – 2016 resulting in a 20% and then 30% emissions reduction fleet wide.
 - Pending legal issues -
- AB 1007 (2005)
 - CEC alt fuels assessment
 - Prepare the State Alternative Fuels Plan, as required by AB 1007, by the June 30, 2007 Legislative deadline, with a progress report by December 31, 2006, that, among other things, will identify actions and incentives to increase the production and use of biofuels and to develop an extensive and convenient E-85 network in new and retrofitted service stations in California.
- CAT
 - http://www.climatechange.ca.gov/climate_action_team/index.html
 - Established in June 2005 by Exec Order S-03-05
 - CalEPA, RA, BT&H, CEC, CARB, IWMB, CDFR, PUC
 - GHG reduction strategies
 - Needs more input on the role of biofuels

- AB 32 (2006)
 - Puts into statute many of the recommendations and of the CAT
 - By 2020, Reduce to 1990 Emission Levels
 - Establish 1990 baseline by 1/1/08
 - Establish reporting and verification system by 1/1/08

- Establish cap of 5 major sources and perhaps others
 - Identify early actions by 6/30/07 with regulations for implementation by 1/1/10
 - Prepare a plan to achieve maximum technologically feasible and cost effective GHG reductions for 2020 by 1/1/09. Will include market mechanisms.
 - Establish emission limits by 1/1/11 and make operative by 1/1/12. that decline through 2020.
 - Adopt methodologies for voluntary reductions.
 - Real, permanent, quantifiable, verifiable, enforceable.
 - Provides for an emergency adjustment of deadlines by the governor of up to 1 year.
 - CARB may adopt fees.
 - Four advisory committees formed in March 2007. Will meet through January 2008.
 - Under the PUC and the CEC – Joint Development of Electricity Sector Recommendations
 - Under CARB – Market Advisory Committee
 - Under CARB – Environmental Justice Advisory Committee
 - Under CARB – Economic and Technology Advancement Advisory Committee
- Governor’s Executive Order S-17-06
 1. The Secretary for Environmental Protection shall continue to be the statewide leader for California’s greenhouse gas emission reduction programs, shall work with the Climate Action Team, and shall coordinate with the State Air Resources Board in the development of all ongoing efforts related to the implementation of greenhouse gas emission reduction policies and Assembly Bill 32, Health and Safety Code, Division 25.5; and
 2. The Secretary for Environmental Protection shall coordinate with the State Air Resources Board, State Energy Resources and Conservation Development Commission, Public Utilities Commission, Integrated Waste Management Board, Resources Agency, Department of Forestry and Fire Protection, Department of Water Resources, Department of Food and Agriculture, Business, Transportation and Housing Agency, and State and Consumer Services Agency to further implement the recommendations in the March 2006 Climate Action Team report; and
 3. The Secretary for Environmental Protection shall create a Market Advisory Committee of national and international experts to make recommendations to the State Air Resources Board on or before June 30, 2007, on the design of a market-based compliance program; and
 4. The State Air Resources Board shall work with the Secretary for Environmental Protection and the Climate Action Team to bring both

regulatory measures and market-based mechanisms forward on a concurrent and expeditious schedule; and

5. The State Air Resources Board shall collaborate with the Secretary for Environmental Protection and the Climate Action Team to develop a comprehensive market-based compliance program with the goal of creating a program that permits trading with the European Union, the Regional Greenhouse Gas Initiative and other jurisdictions. The State Air Resources Board shall consider the recommendations of the Market Advisory Committee in the development of the market-based compliance program; and

6. The Secretary for Environmental Protection will oversee the transition of the greenhouse gas emission inventory development responsibilities and the California Climate Action Registry responsibilities from the State Energy Resources and Conservation Development Commission to the State Air Resources Board; and

7. The State Air Resources Board in coordination with the Secretary for Environmental Protection shall work with the California Climate Action Registry to develop reporting and reduction protocols, including reporting and reduction protocols for local governments and agriculture, and shall support the California Climate Action Registry efforts to develop a multi-state registry; and

8. The State Air Resources Board shall consult with the California Public Utilities Commission and the State Energy Resources and Conservation Development Commission as they develop regulations that will affect electricity and natural gas providers in order to avoid duplicative or inconsistent regulatory requirements. The Secretary for Environmental Protection will facilitate and coordinate these efforts; and

9. The Secretary for Environmental Protection and the Climate Action Team shall coordinate with the State Air Resources Board to develop an economic analysis of efforts to reduce greenhouse gas emissions, including a cost-effectiveness analysis; and

10. The Secretary for Environmental Protection shall coordinate with the Climate Action Team to develop a plan by June 1, 2008 which is based on input from the Economic and Technology Advancement Advisory Committee, that will incentivize investment and compliance, enhance research, and develop and demonstrate greenhouse gas emission reduction technologies through a variety of options including, but not limited to: research tax credits, monetary and non-monetary incentives, public/private partnerships, investment tax credits, and accelerated depreciation.

- Low Carbon Fuel Standard Executive Order – January 18, 2007 S-01-07. Report to the Legislature by January 1, 2008. Reduce carbon emissions by 10% by 2020.

- Interagency Bioenergy Work Group
 - Exec. Order S-06-06 of April 25, 2006
 - The following targets to increase the production and use of bioenergy, including ethanol and bio-diesel fuels made from renewable resources, are established for California:
 - Regarding biofuels, the state produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050;
 - Regarding the use of biomass for electricity, the state meet a 20 percent target within the established state goals for renewable generation for 2010 and 2020; and
 - 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
 - Bioenergy Action Plan – July 13, 2006
 - http://www.energy.ca.gov/bioenergy_action_plan/index.html
 - Air Resources Board
 - California Energy Commission
 - California Environmental Protection Agency
 - California Resources Agency
 - Department of Food and Agriculture
 - Department of Forestry and Fire Protection
 - Department of General Services
 - Integrated Waste Management Board
 - Public Utilities Commission
 - State Water Resources Control Board
 - Maximize the contributions of bioenergy toward achieving the state's petroleum reduction, climate change, renewable energy, and environmental goals.
 - Establish California as a market leader in technology innovation, sustainable biomass development, and market development for bio-based products.
 - Coordinate research, development, demonstration, and commercialization efforts across federal and state agencies.
 - Align existing regulatory requirements to encourage production and use of California's biomass resources.
 - Facilitate market entry for new applications of bioenergy including electricity, biogas, and biofuels.
 - 62 specific and coordinated actions

- California Biomass Collaborative
 - Lead by Prof. Bryan Jenkins at UC Davis and funded by the CEC.
 - Resource assessment
 - Roadmap
 - Facilities reporting
 - 30 Members of executive board

- California Biomass Industry
- California Energy Commission and Other State Agencies
- University of California
- California Energy Suppliers
- Environmental Groups
- US Federal Agencies and Programs
- Industry Research and Other Groups/Consultants
- Commodity Commissions and Boards
- University of California Cooperative Extension
- Other Universities and Programs
- National Laboratories
- Technology Providers
- International Programs
- Professional Societies and Standards Programs
- AB 1811 appropriation
 - \$25 million to CARB and CEC
 - encumbered this year – completed by 6/30/09
 - Five purposes:
 - Clean vehicle incentives
 - Fuel production incentives
 - Refueling infrastructure incentives – E-85 and others
 - R & D grants for clean fuels and vehicles
 - State fleet incentives
 - Due date to submit proposals closed March 19, 2007
 - Projects will be selected and announced before June 30, 2007.
- Low Carbon Fuel Standard Executive Order – January 18, 2007 S-01-07. Report to the Legislature by January 1, 2008. Reduce carbon emissions by 10% by 2020.
- Strategic Growth Plan 2 – The Governor’s next infrastructure development bond measure will be crafted and debated over the next 12+ months and is expected to be placed on the ballot for voter approval in 2008. While the emphasis is on water storage, other infrastructure issues, including transportation and energy are sure to be discussed.
- 25 x 25 Initiative
 - 25x25.org
 - National initiative recently endorsed by Governor Schwarzenegger
 - Set a goal of 25% of energy from farms and forests by 2025
 - 22 governors
 - Action Plan - \$13 billion/yr for five years
- Farm Bill
 - CDFA prepared a Governor approved white paper on the Farm Bill with specific recommendations to better serve California. It includes recommendations on the Energy Title. The white paper can be found on the CDFA web site: <http://www.cdfa.ca.gov/>
 - Congressman Cardoza has a marker bill – http://www.house.gov/list/press/ca18_cardoza/eatbill.html

- Fund agronomic research, development, and demonstration of crops and cropping systems specific to arid and irrigated lands in the west. Take advantage of synergies within the conservation, energy and rural development titles to achieve multiple objectives of resource conservation, strategic rural development, wildlife habitat enhancement and renewable energy production.
- Fund and make more flexible programs under the Conservation Title that allow for multiple objectives management of land, water and vegetation for habitat, environmental quality and sustainable biomass production.
- Increase incentives and provide more funding for research and distribution/transmission infrastructures that capitalize upon agriculture as an energy source.
- Fund research, development, and demonstration of new emerging technologies for agricultural and forestry energy production.
- Establish an agricultural residues refinery program that will fund construction and operation of pilot plants to produce energy from agricultural residuals recognizing regional differences in the types of residuals needed.
- Fund rural development initiatives that support planning, construction and operation of regional biomass energy processing facilities that also provide other resource management benefits such as water supply and quality improvements.