



BioEnergy Producers Association
Clean Technology for Renewable Energy

James L. Stewart
Chairman of the Board

David Roberti, Senator (Ret.)
President

Kay Martin
Vice President

December 31, 2010

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 10-BAP-01
1516 Ninth Street
Sacramento, CA 95814-5512

DOCKET 10-BAP-1
DATE <u>Dec 31 2010</u>
RECD <u>Dec 31 2010</u>

COMMENTS ON THE DRAFT 2011 BIOENERGY ACTION PLAN, DATED DECEMBER 2010 (DOCKET NO. 10-BAP-01)

Dear Members of the Bioenergy Interagency Working Group:

The BioEnergy Producers Association is a coalition of private and public entities dedicated to the development and commercialization of environmentally preferable industries that produce renewable sources of power, fuels and chemicals from agricultural, forestry and urban biomass. Our membership includes bioenergy firms, electric utilities and waste management companies.

We welcome this opportunity to comment on the draft 2011 Bioenergy Action Plan, dated December 2010.

The world's organic waste streams represent one of its most promising and immediately available sources of renewable energy. America generates between 1.5 and 2.0 billion tons of carbon-based wastes annually—some 500 million tons of which are readily available for conversion to energy in our local communities.

The Argonne National Laboratory projects the total potential production of ethanol from all available organic waste resources nationally at 100 billion gallons—more than enough to eliminate our need to import petroleum.

Under the United States Environmental Protection Agency's final rule for the Renewable Fuels Standard (RFS2), the biogenic portion of post-recycled municipal solid waste qualifies as renewable biomass for the purpose of meeting the federal mandate for the production of 21 billion gallon of advanced, non-food derived biofuels by the year 2020.

According to the EPA's modeling, depending upon the feedstock and conversion process, cellulosic ethanol achieves GHG reductions of 72-130% as compared to an energy-equivalent amount of gasoline. On a life-cycle basis, GHG reductions are highest for organic wastes, which do not require the growing, harvest and transport of cellulosic feedstocks. Further, the use of organic wastes as feedstocks for biofuels production has zero impact on Indirect Land Use Change.

The California Air Resources Board confirms that the production of ethanol from organic wastes is one of the only pathways that absolutely can meet or exceed its GHG reduction goals for the Low Carbon Fuel Standard. The ARB has projected that approximately 70% of the total petroleum displacement in California required to meet the 2020 goals of the Low Carbon Fuel Standard must come from advanced biofuels.

Early in 2010, the ARB listed the "increased use of biofuels from waste materials" as its #1 solution to meet this goal. It has forecast the need for 24 new commercial scale advanced biofuels facilities in California by 2020.

In 2006, the California Energy Commission authored a comprehensive and visionary Bioenergy Action Plan. We continue to support and urge further progress on the goals for the recovery of energy from biomass set forth in the 2011 Draft of this Plan. And specifically, with regard to productive utilization of urban biomass wastes, we would urge that CalRecycle activities include advancement of the full range of conversion technologies, not just anaerobic digestion.

In the category of advanced biofuels, it isn't the Bioenergy Action Plan that needs updating. It is California statute. California has an antiquated and repressive statutory and regulatory environment that is driving biobased technology providers and investment capital out of the state--inhibiting the development of its biofuels industry.

Legislation or executive/regulatory action is needed to make possible the implementation of a wide range of new technologies for the production of advanced biofuels and green power from the state's vast, sustainable and locally available resources of organic waste. In particular, the BioEnergy Action Plan calls for a review of the definitions of gasification, transformation, fermentation, pyrolysis, and manufacturing.

For example, California has a scientifically inaccurate definition of gasification that requires zero air emissions from the entire biorefining process, a standard

required of no other manufacturing facility in the state, and one that would shut down every power plant and petroleum refinery in the state.

The logic of our case and the need appear so clear that we wonder why Democrats on the legislature's environmental committees have yielded to opposition orchestrated by lobbyists for the traditional recycling industry for six years and have blocked legislation that addresses the very objectives set forth in the BioEnergy Action Plan. In the 2009-2010 session, this was AB 222.

Following Assembly passage and approval by the Senate Energy, Utilities and Communications Committee, and in the face of almost certain Senate passage and signature by the Governor, the five Democrats on the Senate Environmental Quality Committee gutted and amended AB 222 to make it even more difficult than it already is to permit and operate non-combustion solid waste conversion technologies in California, forcing the bill's proponents to abandon this legislation. In so doing, these five Democrats ignored, literally swept aside, endorsements of this legislation by more than 100 statewide associations, cities and counties, sanitation districts, labor, waste management firms, electric utilities and biobased technology providers--and by the California Energy Commission, the Air Resources Board and CalRecycle.

Among its provisions, AB 222, as originally drafted, would have qualified waste feedstocks, when processed by conversion technologies, as landfill reduction (rather than as disposal) and would have qualified the electricity produced from the biogenic portion of solid waste as renewable under the state's Renewable Portfolio Standard (as landfill gas does today).

Today, other than gasification, all conversion technologies, including low temperature, acid or enzymatic, biochemical or mechanical processes, are categorized as "transformation," equating them with incineration and subjecting them to permitting pathways more rigorous than those required to site a major solid waste landfill.

The uncertainty of this permitting process, and the unscientific statutory definitions which govern it, have caused biobased technology providers to turn their backs on a state that heretofore has been a leader in technology innovation.

In all, California-based companies have now located or have moved to other states conversion technology projects representing capital expenditures approaching \$1 billion in value, depriving the state of economic growth, jobs and one of its most practical pathways to energy independence.

For example, BlueFire Renewables uses concentrated acid hydrolysis to convert biomass, including cellulose from MSW, into ethanol. Frustrated in its attempts to do business in California, they moved a major project from Riverside County to Fulton, Mississippi and took an \$88 million DOE grant along with them.

In announcing the move, Arnold Klann, BlueFire's CEO, said, "Navigating the development and licensing process in California in a time effective manner coupled with the challenging business climate in the State convinced BlueFire to petition the DOE for a site change to Mississippi."

During 2010, Bluefire filed applications for an additional \$250 million loan guarantee to facilitate this project with both the USDA and USDOE.

Fulcrum BioEnergy, headquartered in Pleasanton and funded at least in part by California venture capital, located its first thermal biomass conversion facility 20 miles east of Reno, where it was permitted in approximately six months, a process that could have taken from three to five years in California. The \$120 million Sierra BioFuels Plant will co-produce 10.5 million gallons of ethanol annually and 16 megawatts of renewable electricity from post-sorted municipal solid waste,

In November, Fulcrum announced that its had entered the final application phase for a U.S. Department of Energy Loan Guarantee to assist in the project's construction. When operational in 2012, it will stimulate economic growth in Northern Nevada by creating 53 full-time and more than 450 temporary green jobs.

In November 2010, Waste Connections, Inc. entered into a strategic partnership with Fulcrum to supply municipal solid waste as the feedstock for the project from its waste processing facility in El Dorado County. This waste will be trucked from El Dorado County through the Lake Tahoe region for processing in Nevada. It is likely that at least some of the power and/or ethanol produced at this facility will be sold back into California.

This is of note because electricity produced from the gasification of municipal solid waste qualifies as renewable under the California's RPS, and the solid waste diverted to these facilities counts as landfill reduction. However, due to scientifically inaccurate definitions in statute and repressive permitting pathways, biobased technology providers will not risk doing business in the state.

By shipping California waste for gasification in Nevada, El Dorado County will qualify this waste for landfill reduction and Fulcrum can qualify the electricity it sells back to California utilities for pricing under the RPS.

Ronald Mittelstaedt, Waste Connections' Chairman and Chief Executive Officer, recently stated, "Converting El Dorado County's solid waste to biofuel will dramatically increase El Dorado County's recycling rates and compliance with California's AB 939 requirements for the foreseeable future." In effect, by exporting its waste for processing in Nevada, El Dorado County has circumvented the very obstacles in California statute that AB 222 was designed to correct.

And California-based venture capital is going out-of-state, as well. In July, Los Angeles based Ares Management committed \$100 million to Plasco Energy, a Canadian plasma technology that has had full environmental validation and is about to commence construction on a commercial facility in Ottawa. It will convert 400 tons of MSW per day to electricity.

Further, Enerkem, a Canadian company, chose Mississippi as the site for a 10 million gallon per year ethanol plant, which will use a proprietary gasification technology to convert approximately 95,000 tons of unsorted MSW per year as its feedstock. In December 2009, the company received a \$50 million direct grant from the United States Department of Energy to support this project, and it has further applied for an \$80 million USDA loan guarantee, a decision on which is expected from the USDA in early January.

Earlier this year, Enerkem informed the City of San Diego that, if AB 222 did not pass, it would not do business in California. This is a quote from their formal presentation:

"Enerkem recently became interested in California because of active legislation that seeks to make the State more friendly towards waste-to-energy projects. Currently these technologies are considered Gasification and are not allowed to release any emissions. AB 222 will allow them to operate as long as they meet all local and state air quality regulations. If this bill does not pass, Enerkem would likely not be interested in operating in California because the permitting would be much too difficult."

Approximately 60 non-combustion biomass power projects and 90 advanced, non-food derived biofuels projects are now in development, construction or operation in North America, all of which, if located in California, would have been

covered by AB 222. And the Obama administration is encouraging these technologies and committing billions of dollars of federal funding in the form of direct grants and loan guarantees to commercialize them.

One year ago, the U.S. Department of Energy announced \$600 million in Section 932 grants intended to support biorefinery projects involving a total investment of almost \$1.3 billion.

Seven federal grants and loan guarantees totaling \$323 million (supporting total project costs of \$651 million) involved California-based companies, but most of them have sited their projects in other states. Only 14% of that federal support and 9% of the total project costs will be spent in California.

Within the next few days, the U.S. Department of Energy will announce \$300 million in loan guarantees for advanced biofuels plant construction. None of the projects benefitting from this federal support will be located in California.

During 2010, the nation endured a massive oil spill in the Gulf--likely the most devastating environmental disaster in its history--two wars in the Middle East, and it paid something approaching \$1 billion per day to import petroleum, not including the cost of the military presence necessary to protect this activity. And a meaningful portion of that money is finding its way to organizations whose goals are to destroy this nation's value system, its economy and its way of life.

In 1989, the year AB 939 established the state's recycling program, 40 million tons of municipal waste were landfilled in California. We are placing virtually the same amount in landfills today. The state's progress in recycling has been almost totally offset by its growing population and increased per capita disposal.

Los Angeles County and its 88 cities have spent billions of dollars to comply with state waste reduction mandates, but they still landfill 38,000 tons of trash per day--enough to fill the Rose Bowl every twelve days.

However, the era of siting new landfills is coming to an end. And with our growing need to achieve energy independence, the time has come to re-evaluate our historical concept of recycling--and to embrace a new approach that is critical to this nation's security--the recycling of carbon. The recovery of energy from materials that otherwise have no financially feasible value for re-use complements current recycling practices and is consistent with nature's own cycle of CO₂ generation and recovery.

Bioenergy Interagency Working Group
December 31, 2010
Page Seven

The successful implementation of the goals set forth in the 2011 Bioenergy Action plan will move the state and nation toward energy independence, the low-cost production of advanced, non-food derived biofuels, compliance with the state's Global Warming Solutions Act (AB 32), Low Carbon Fuel Standard and RPS, and a more productive use of its residual solid wastes.

Sincerely,



James L. Stewart
Chairman of the Board



Senator David A. Roberti (ret.)
President



Kay Martin, Ph.D.
Vice President