



Plugging dairies into a renewable future.

March 8, 2013

Mary Nichols, Chairman  
California Air Resources Board  
1001 "I" Street  
Sacramento, CA 95814

**Re: Allocation of Cap and Trade Proceeds for Bioenergy**

Dear Chairman Nichols:

California Bioenergy LLC (CalBio) submits these comments on the Draft Concept Paper for the Cap-and-Trade Auction Proceeds Investment Plan. We urge the Air Resources Board to invest cap and trade proceeds in bioenergy development, which is critical to reduce greenhouse gas emissions and environmental justice impacts, with a special focus on California-based dairy digester projects.

Bioenergy provides renewable electricity, low carbon fuels, combined heat and power, and renewable natural gas. It significantly reduces methane emissions from dairies, landfills and wastewater treatment facilities and converts those emissions into clean energy and low carbon fuels. Excess agricultural and organic urban waste can also be used to create clean energy. Bioenergy from forest biomass diverts excess biomass away from business as usual pile/burn practices while helping to mitigate wildfire behavior thus protecting and enhancing carbon sequestration in California's forests.

Bioenergy is also important to reduce environmental justice impacts by replacing heavily polluting diesel and other fossil fuels with cleaner, low carbon fuels. Bioenergy also reduces environmental impacts by reducing landfill waste and the air, water and odor pollution from dairies, landfills and wastewater treatment facilities in or affecting environmental justice communities.

For all these reasons, we urge the Air Board to invest cap and trade proceeds in:

1. Dairy digesters to convert methane to low carbon fuels and renewable electricity. This is our focus as a dairy digester biogas company and thus our area of knowledge. The dairy digester industry is in its infancy in California. There are only 12 active digesters on 1,700 California dairies. Funding to support the development of these projects will help build the momentum to create a California-based dairy digester industry. The results will be substantial: There is the potential to generate 5 to 6 million tonnes of CO2e credits per year from dairy biogas from California-based projects. These are high-quality credits

– since methane is destroyed. Also, uniquely, the investment in these projects will directly help the success of the AB 32 program, which faces a potential shortage of credits. And these are California-generated credits. Simultaneously these projects produce storable renewable energy, assist a struggling farm sector, and create Central Valley jobs.

2. Forest biomass to divert excess forest biomass that is currently piled and burned into bioenergy and reduce wildfire risks that will enhance and maintain forest carbon sequestration
3. Energy production from municipal solid waste, wastewater treatment facilities, food processing and other urban organic waste sources
4. Production and use of low carbon fuels from organic waste in environmental justice communities.

## **I. Bioenergy Reduces Greenhouse Gas Emissions**

Bioenergy is critical to reducing greenhouse gas emissions. In addition to providing the lowest carbon fuels, bioenergy is the most effective means to reduce greenhouse gas emissions from urban organic waste, wastewater treatment facilities, dairies and other agricultural waste. It is also one of the most important means to maintain carbon sequestration in California's forests. Finally, bioenergy can provide low carbon fuels and renewable electricity to power the construction and operation of High Speed Rail, reducing its emissions significantly.

Within the dairy sector we estimate there is the potential to generate 5 to 6 million tonnes of carbon credits a year. There are approximately 1.8 million milking cows in the state with the manure from the majority of these cows going into flush lagoons, which in turn generate and release methane, at a rate of 3 to 4 tonnes per cow per year. This methane is an asset that should be harnessed, not vented, while destroying a greenhouse gas.

California is the home to the largest dairy industry in the United States. It is the largest sector of California's remarkable agricultural economy.

## **II. Role of Bioenergy in Addressing Environmental Justice**

Bioenergy is also important to address environmental justice impacts. Biofuels can replace highly polluting and toxic diesel emissions from heavy-duty vehicles, which tend to be concentrated in and near environmental justice communities. Bioenergy can also reduce air and water pollution caused by fossil fuel-burning power plants. Diverting organic waste from landfills, dairies and wastewater treatment facilities also reduces pollution and odors that impact environmental justice communities. Finally, developing anaerobic digestion and methane capture onsite reduces pollution and odors and makes waste handling much cleaner with fewer impacts on neighboring communities.

### III. Environmental and Economic Benefits of Bioenergy

Bioenergy has many other co-benefits as well. It helps to create jobs and new businesses, especially in rural and low-income communities. It provides clean energy and fuels, helping California meet its RPS, energy storage and other clean energy policies. It reduces organic waste going into landfills and prevents flaring of gas from landfills and wastewater treatment facilities. Bioenergy can also reduce air, water and odor pollution, and it helps to protect forests and forest ecosystems.

Dairy methane can be harnessed in three valuable ways: electricity, fuel and pipeline gas. For example let's look at electricity: covered dairy lagoons can store gas for two to three days. As a result dairy projects produce a form of storable renewable energy. This is a great complement to intermittent solar, assisting the need to balance energy delivery to the state's electrical system.

### IV. Specific Recommendations

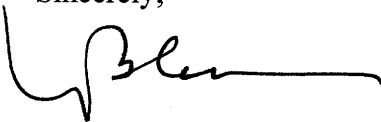
Because of the unique benefits of bioenergy, including its significant benefits for disadvantaged communities, CalBio recommends that ARB invest cap and trade revenues to:

Build dairy digesters. These projects will capture methane emissions and convert them to renewable electricity and low carbon fuels, producing organic fertilizers and creating carbon offsets under one of only four approved carbon offset protocols in California.

We also strongly support the investment in the other sectors of bioenergy:

- Commercialize community-scale forest biomass facilities that are located to maximize benefits for wildfire reduction, watershed protection and carbon sequestration.
- Expand the development of energy from municipal solid waste and wastewater treatment facilities, including investments in combustion technologies that meet the South Coast AQMD's Rule 1110.2 so that facilities do not resume flaring methane instead of converting it to renewable energy and fuels.
- Produce low carbon fuels from wastewater treatment facilities, landfills and other urban organic waste sources that directly benefit environmental justice communities by reducing fossil fuel use, especially diesel, in those communities.

Sincerely,



Neil Black  
President