



August 1, 2013

Ms. Caroll Mortensen, Director
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1001 I Street
Sacramento, CA 95812

**RE: Draft Waste Sector Management Plan
Comments on the Biomass Conversion Technical Paper**

The California Refuse Recycling Council (CRRC) is a statewide non-profit trade association comprised of over 120 companies involved in the collection and processing of materials that also operate approximately 20 compositing facilities, 50 material recovery facilities (MRFs), 35 construction and demolition debris processing facilities, and 12 landfills statewide. Our industry, in partnership with local government, has been instrumental in our state's efforts to attain the recycling mandate of 50% waste diversion from landfills, required by the California Integrated Waste Management Act of 1989 (AB 939), and will remain critical to the attainment of future greenhouse gas (GHG) reduction goals.

This Technical Paper touches upon the development of Small Community-Scale Biomass Conversion Facilities for rural communities, but misses the opportunities at siting small-scale biomass gasification plants at compost facilities and material recovery facilities to meet their on-site energy demand. This Technical Paper should include more analysis and discussion on distributed green energy initiative by the Governor and SB 1122 legislation, and the role of biomass gasification to achieve those goals.

CalRecycle has adopted Strategic Directive No. 6 to divert 50% of organic material by 2020, and must prepare a Recycling Plan to reach a state wide goal to recycle 75% by 2020. Converting half of the 5.7 million tons of urban biomass (lumber) disposed of in landfills in 2008 could produce 2.85 million tons of wood chips, which could fuel 250 of these biomass gasification plants rated at 1 MW and generate 250 MW of distributed energy. Each plant would need to employ 2 workers per shift with 2.5 shifts per day, or 5 employees per facility and 2 wood grinder employees per day, and could create 1,750 direct jobs. The 2012 Bioenergy Action Plan projected that 4.82 million tons of biomass (from urban, agricultural, and forestry) could be utilized to install 500 MW of biopower,

creating 2,500 direct jobs by 2020, where the urban sector would shoulder about half of the responsibility.

Governor's Clean Energy Jobs Plan

California Governor Jerry Brown wants 12,000 megawatts of distributed generation (DG) to be part of the 20,000-plus megawatts of renewable capacity the state's utilities have been ordered to put in place by 2020. That's a lot of solar, small and community wind, small biomass/biogas production, combined heat and power and other such local renewables. The Technical Report should differentiate from the centralized biomass facilities listed in Table 3 and carve out an estimate for distributed biomass energy, and reference the efforts to develop small-scale biomass energy projects and the goals of SB 112 to accomplish that.

SB1122 Draft Report – Support Distributed Renewable Energy up to 3 MW

The 2012 Bioenergy Action Plan clearly intended to include urban biomass; we do not believe that SB 1122 intended to not include bioenergy from urban wood waste as the draft Report suggests in the effort to develop distributed renewable energy in California for up to 3 MW.

We urge the report authors to include a list of definitions that is consistent with CalRecycle's California waste regulations defining different waste types, as well as the categories set forth in SB 1122. Without consistent and accurate terminology, it is impossible to assess whether the report's findings on resource availability and costs are accurate. We also urge the report authors to use one term – bioenergy – to encompass the different technologies and outputs that are eligible for SB 1122, rather than limit specific sectors to "biomass" or "biogas" as the draft report does. SB 1122 defines eligible waste categories and project size, but it does not limit eligible technologies or outputs.

The Technical Report should reference the efforts to develop small-scale biomass energy projects and the goals of SB 112 to accomplish that.

Distributed Renewable Energy Projects

A typical distributed renewable energy project has on-site energy demand, on-site heat demand, and a ready supply of fuel from biomass. This type of biomass gasification plant is a replicable model for local and self-contained renewable energy sources and environmental sustainability throughout the state, and could be located at any one of the 60 material recovery facilities, 50 composting facilities, or the additional 100 planned facilities needed to meet state recycling laws. This type of project could fuel the development of recycling and composting technologies at other Resource Recovery Parks and Renewable Resources Projects will result in reduced impacts on the environment by increasing recycling and composting, reducing contributions to global

climate change, reducing reliance on oil and other fossil-fuel sources, helping to comply with statewide CalGreen solid waste reduction mandates and decreasing consumption of natural resources.

This type of Project includes the installation and operation of a 50-foot tall biomass plant that would generate 1.0 MW of renewable energy for on-site operations, and for off-site community need. The plant would operate 24-hours a day, seven days per week, operating at 80% capacity, and utilize an average of 32 tons per day of clean wood chips that would be generated on-site at a material recovery facility or a compost facility.

Recommendations:

We urge CARB and other state agencies to set targets for the energy sector that promote a diversity of renewable energy sources, including specific targets for distributed generation from urban biomass. We also urge the participating agencies to develop life-cycle analyses of the emissions benefits and other co-benefits of different forms of distributed generation to ensure that the state prioritizes the most cost-effective strategies to reduce emissions and achieve other goals.

Given its potential to reduce greenhouse gas emissions, bioenergy should play a much larger role in the energy sector strategy under AB 32. The June 12 presentation on the Draft Update includes bioenergy under the 2050 goals, but it should be included as an action item for 2020 as well. In addition to offsetting fossil fuel use, bioenergy can provide significant greenhouse gas reductions from methane conversion, production of organic fertilizers and other soil amendments, and reduction in catastrophic wildfire risks. In order to fully realize these greenhouse gas reductions, it is critical to develop the full life-cycle analyses of these benefits and incentivize additional bioenergy development based on its greenhouse gas and other co-benefits.

Specifically, we recommend that the energy sector strategy:

- A. Include significant expansion of sustainable bioenergy systems by 2020, not just 2050.
- B. Include CDFA, CalFire and CalRecycle in the energy sector Working Group given their expertise and interest in promoting bioenergy development.
- C. Recognize and address the most significant challenges to bioenergy development, which are financing and interconnection to pipelines and transmission lines.
 1. Bioenergy needs a meaningful feed-in tariff price or infrastructure financing mechanism to maximize greenhouse gas reductions and other co-benefits.
 2. Bioenergy costs and benefits need to be allocated across sectors, rather than sector by sector, to grow significantly in California.
 3. Interconnection to both pipelines and transmission lines needs predictable costs, technology requirements and timelines.
 4. Need assistance meeting new air quality standards.
- D. Include near-term measures to move beyond 33 percent renewables, not wait

until after 2020. Bioenergy, as a baseload renewable and with capacity to provide energy storage, will only become more important to complement intermittent renewables as the percentage of renewables increases.

- E. Integrate climate adaptation and greenhouse gas reduction strategies in the energy sector. Distributed renewable generation not only reduces greenhouse gas emissions, but it helps to protect against extreme climate events – floods, heat waves, fires, severe storms – by decentralizing and diversifying power sources. Bioenergy from forest biomass also helps protect against wildfires, which are an increasing risk in California’s changing climate, and maintain carbon sequestration and other co-benefits.

Should you have any questions, please contact me at (916) 739-1200.

Sincerely,

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