CALIFORNIA BIOMASS ENERGY ALLIANCE

June 17, 2013

Comments Submitted Via Email To:
docket@energy.ca.gov
Garry.Oneill@energy.ca.gov

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 13-IEP-1M
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Comments from the California Biomass Energy Alliance (CBEA) Regarding June 3, 2013 CEC Staff Workshop on Status of Bioenergy Development in California

To Whom It May Concern:

CBEA would like to thank the Energy Commission for continuing to show leadership in the area of bioenergy production and the advancement of the executive order S-06-06. Tracking the items of the bioenergy action is an important to ensure state agencies are pursuing the whole host of agreed upon tasks.

CBEA's presentation at the workshop outline by Chairman Pat Holley outlined the current challenges facing the industry. The largest of those is the bulk of California's existing solid fuel biomass power facilities have expiring QF contracts in the next three to five years. We are currently investigating what state policies, programs and processes are in place to ensure California does not lose these valuable resources. Are current procurement policies designed in a manner to put existing resources on a level playing field with new resources? We are increasingly concerned the current RPS procurement process does not put baseload power supplies on a level playing field with wind and solar. If the current trajectory remains, California could lose existing baseload resources while at the same time bulking up on intermittent resources.

Biomass and the value of flexible power

The electric-utility companies have long complained that intermittent generating resources (wind and solar) impose operating costs on the integrated electric grid that traditional generating sources do not. These costs, which are referred to as integration costs, have been the subject of considerable study over the years, including a long running and ongoing collaborative effort involving the CEC, CAISO, and the PUC. As far as official California energy policy is concerned no conclusive results have yet emerged. As a result, intermittent

(916) 441-0702
1015 K Street Suite 200
Sacramento, CA 95814
www.calbiomass.org

generators are not being held responsible for the integration costs they impose on the system, and baseload generators that are capable of providing load-balancing services are not motivated to do so.

When the California RPS program began in 2003, ten percent of the state's electricity supply was renewable, and intermittent renewables accounted for less than 20 percent of total renewables, or 2 percent of total energy production in the state. Renewable energy production in California increased by more than fifty percent during the first decade of the state's RPS program, and it is expected to nearly double between now and 2020. Most of the growth in renewable generating capacity in the state that has been achieved to date has been in wind. Based on the portfolio of the state's projects-in-procurement, most of the growth that is likely to occur over the coming decade will be in solar generators of various kinds, with a significant contribution from wind, and little else. The result is that in 2020, when the state is mandated to procure 33 percent of its electricity supply from renewables, intermittents could account for some two-thirds of total renewables, and more than 20 percent of the state's total electricity supply. That represents a major structural change in the composition of California's electricity supply, occurring over a relatively short period of time. Grid operators at all levels would be well advised to encourage the development of renewables that not only do not impose any integration costs on the system, but are capable of providing some of the compensating services that intermittents extract from the system.

In many people's minds integration costs are associated with compensating for the short-term fluctuations of intermittent renewable generators, which occur, for example, when wind speeds oscillate and clouds drift across solar collectors. However, it is important to note that there are other significant consequences of large-scale deployment of intermittents that are in addition to the short-term fluctuations, and these consequences must be compensated for as well. Intermittent generators have their own characteristic daily and seasonal output profiles, with sharp peaks and valleys during the course of a typical day. At the high levels of deployment that are anticipated for these resources in the supply system of the future, the residual demand curve that must be served by the balance of the system (non-intermittent generators and non-generating resources) will be materially different from what it is today. In particular, the balance of the system will be left to deal with a residual demand profile that has more severe peaks and valleys than the current profile.

In order to deal with a system powered by a significant percentage of intermittent generating capacity, many are calling for a transition for the balance of the system away from traditional baseload generators, to what are currently being referred to as flexible operating resources. In fact, flexibility comes in a variety of forms. Biomass generators, for example, are not able to provide rapid-response ramping services, but they certainly are capable of providing scheduled ramping services at rates that could help to balance some of the negative consequences of intermittent renewables on the grid. In particular, a system with a significant amount of solar in the mix is likely to require predictable steep ramp-ups and downs early in the morning at the onset of the morning peak before the solar generators power up, and again late in the day when the solar generators power down and system load hits its daily peak.

Among baseload renewable options biomass is particularly suited to provide flexible operating services because it is the only one that has significant variable operating costs (fuel costs) that can be avoided when the generator is operating below capacity, thus limiting the marginal economic loss to the generator caused by operating in a flexible mode, and therefore limiting the cost to the grid operator for purchasing the service. However, current power purchase agreements with biomass generators not only lack a mechanism to compensate them for providing flexible operating services, they actually penalize biomass generators when they do perform ramps by imposing the same deviation bandwidth restrictions that are in force when they operate at steady load.

At the present time utilities often complain about the costs of accommodating intermittent generating resources, but there is no mechanism in place to either charge the costs of integration to the generators that cause it, nor to reward generators who do not impose integration costs on the system. At a macro level, the lack of price fairness in the present system is leading to a suboptimal portfolio of renewable generating resources. Moreover, current power purchase agreements for renewable power do not anticipate flexible operations by generators, and therefore do not include provisions that would elicit such operations. Some combination of rate reform and tariff reform is needed in order to provide the kinds of mechanisms and compensation that will allow biomass generators to provide the kinds of flexible operating services that they are capable of delivering.

Action item for the Bioenergy Action Plan

CBEA recommends expanding direction in the 2012 Bioenergy Action Plan Update Item 2.1: Quantify the Costs and Benefits of Bioenergy with the following:

> Analyzing and quantifying system integration benefits of renewable power generated by Biomass energy facilities and compare with costs imposed on utilities to maintain capacity and balance load utilizing intermittent renewable resources.

With this information the CPUC should then work to develop PPAs suitable for biomass facilities that are capable of providing flexible operating services.

Thank you for this opportunity to comment.

Sincerely,

Julee Malinowski Ball, Executive Director
California Biomass Energy Alliance