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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's own motion to determine the impact on public benefits associated with the expiration of ratepayer charges pursuant to Public Utilities Code § 399.8	Rulemaking R-11-10-003

JOINT COMMENTS OF THE GREEN POWER INSTITUTE, THE CALIFORNIA BIOMASS ENERGY ALLIANCE, THE CALIFORNIA FORESTRY ASSOCIATION, AND WHEELABRATOR TECHNOLOGIES, ON THE OIR ON EXPIRATION OF THE PGC PROGRAM

October 20, 2011

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JOINT COMMENTS OF THE GREEN POWER INSTITUTE, THE CALIFORNIA BIOMASS ENERGY ALLIANCE, THE CALIFORNIA FORESTRY ASSOCIATION, AND WHEELABRATOR TECHNOLOGIES, ON THE OIR ON EXPIRATION OF THE PGC PROGRAM

Introduction

Pursuant to the October 13, 2011, *Order Instituting Rulemaking on the Commission's Own Motion to Determine the Impact on Public Benefits Associated with the Expiration of Ratepayer Charges Pursuant to Public Utilities Code Section 399.8*, the Green Power Institute (GPI) respectfully submits these *Joint Comments of the Green Power Institute, the California Biomass Energy Alliance, the California Forestry Association, and Wheelabrator Technologies, on the OIR on Expiration of the PGC Program*, in R.11-10-003, the **Order Instituting Rulemaking on the Commission's Own Motion to Determine the Impact on Public Benefits Associated with the Expiration of Ratepayer Charges Pursuant to Public Utilities Code Section 399.8**.

These *Comments* are being filed jointly by the Green Power Institute, the California Biomass Energy Alliance, the California Forestry Association, and Wheelabrator Technologies. The Green Power Institute is the renewable energy program of the Pacific Institute for Studies in Development, Environment, and Security, a public-purpose environmental research institution located in Berkeley, CA. The California Biomass Energy Alliance is the trade organization of the solid-fuel biomass energy industry in California, representing the state's 33 operating biomass power plants. The California Forestry Association is a trade association whose membership is made up of most of the remaining sawmills, veneer mills, particleboard plant and medium density fiberboard plants, as well as, many of the biomass power plants in California. Our membership includes private forest landowners in California totaling 4 million acres. Wheelabrator Technologies Inc. is an owner/operator of safe, clean and renewable power across the

United States, including the generation of electricity from wood waste at its Shasta Energy Plant in Anderson, California.

The OIR poses a series of questions concerning whether, and how, the Commission should provide for the benefits that the current PGC program provides, in light of the pending expiration of the PGC program at the end of the calendar year. One of the important programs under consideration in this proceeding is the existing-facilities program, which mainly supports the state's operating biomass industry. The joint parties submitting these *Comments* represent various organizations with an interest in the biomass industry in California (see below), and we are jointly addressing the first five questions in the category of "3.2. Renewable Energy" in the Preliminary Scoping Memo. These five questions specifically request information about the existing-facilities program for biomass.

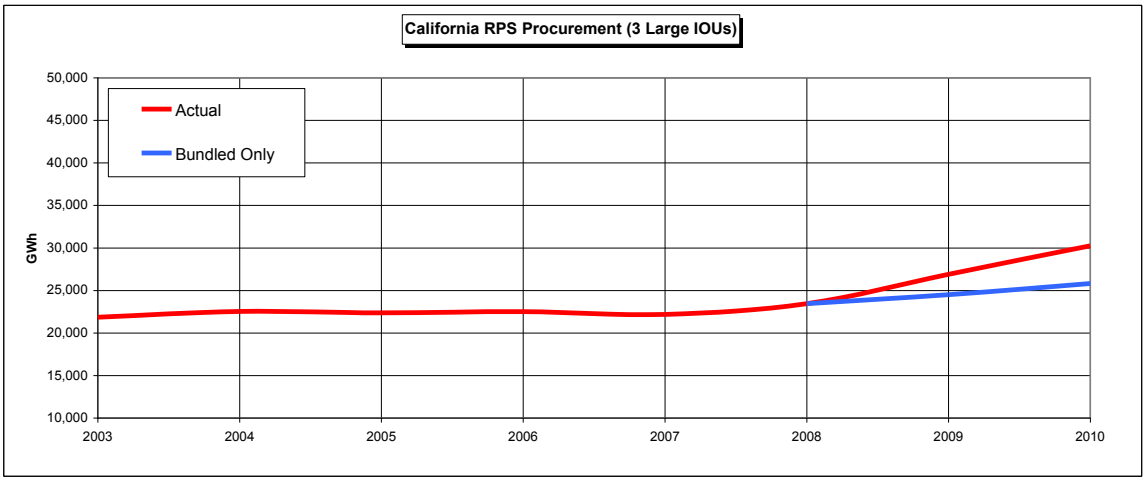
Questions on Renewable Energy

1. Given the vibrant market activities in renewables in California today, what is the unique added value or distinct rationale for state-level administration of renewables programs, as distinguished from utility procurement activities, RD&D investments, or other similar activities (if any)?

If "market activities" means only the signing of contracts, then the renewables market in California today is, indeed, vibrant. However, if "market activities" includes the construction, startup, and especially operations of renewable generators, then the market in California is a far cry from vibrant, and the premise of the question is frankly flawed. As the GPI pointed out in our April 28, 2011, *Comments of the Green Power Institute on the March 2011 IOU RPS Compliance Reports*, which was filed in the then-current RPS proceeding, R.08-08-009, the growth of renewable energy production in California over the past decade has been extremely modest, nowhere near the doubling that was intended to be achieved by the RPS program. Figure 1 illustrates the anemic growth of renewable energy production in California during the past decade. The blue line in the figure, labeled bundled only, is approximately the same as in-state generation. Over the 7-year period 2003 – 2010, in-state renewable energy generation in California increased by less

than 20 percent. Most of the gains in renewables procurement in 2009 and 2010 were the result of an easing of the rules allowing the importation of out-of-state RECs, not the result of an increase in renewable energy generation in California.

Figure 1

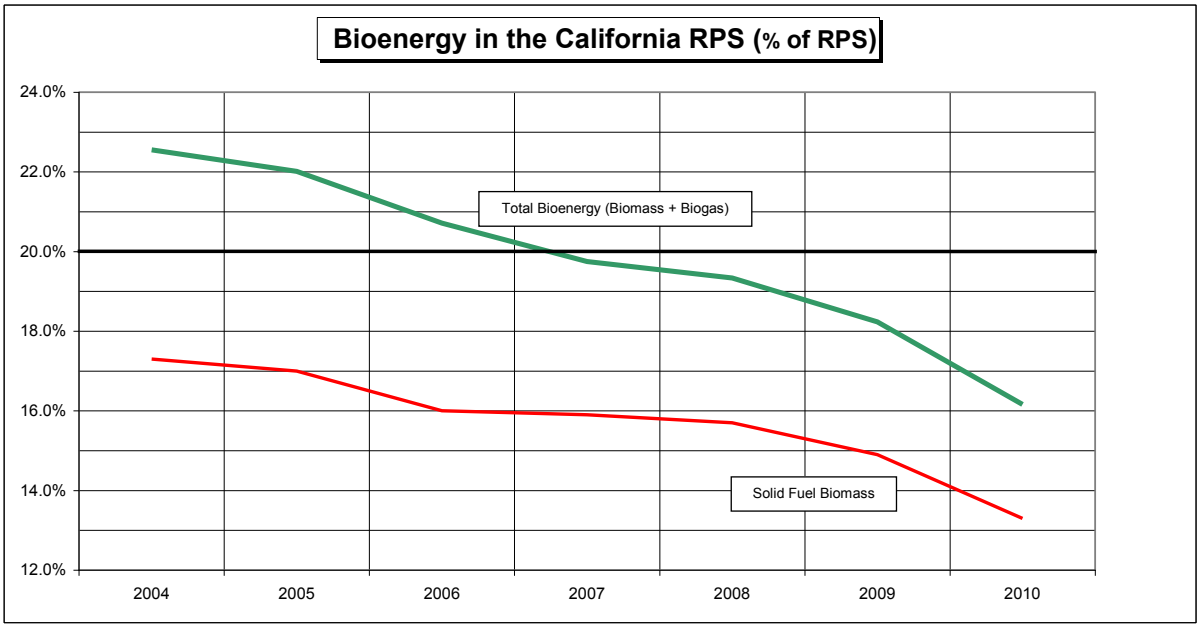


Not only has renewable energy generation in California failed to achieve robust growth in the 21st century, it is also important to note that the renewable programs that are under consideration in this proceeding are not applicable to all renewables across the board; rather they are targeted at particular segments of the renewables market that are deemed both in need of, and worthy of, receiving targeted assistance. Thus, even if the overall renewables market was vibrant, that would not preclude the desirability of providing targeted assistance to worthy targets, as was done during the past decade by the PGC renewables program.

The renewables programs that are under consideration here are the existing-facilities program, which is focused on solid-fuel biomass and solar-thermal electric, and the emerging renewables program. We focus our remarks here on the existing-facilities program, particularly as it relates to the biomass industry. The fact is that what growth and future growth there is projected for renewables in California, biomass has not been a significant part of it. Figure 2 shows the declining market share of biomass, which has

occurred despite the existence of an Executive Order on biomass during most of the Schwarzenegger Administration that attempted to keep its market share (biomass plus biogas) at twenty percent. Since the inception of the RPS program, there has been exactly one new greenfield 10 MW biomass power plant built in the state, and it was developed without participating in the Commission's RPS program.

Figure 2



Utility procurement activities and R&D investments simply have not worked to stimulate the growth of biomass power generation in California. The only new biomass development in the state's PUC-jurisdictional retail providers entails the conversion of three previously coal-fired generators, under the pressure of trying to comply with the State's greenhouse-gas Emissions Performance Standard (SB 1368), to fire biomass. Other than this one-time opportunity to save these existing coal-fired assets, there has been no other new development activity in the state's biomass sector, and it should be noted that these conversions are motivated more by the EPS than the RPS. The state needs to continue to support and nurture its biomass industry, and it does not appear that established utility RPS procurement activities are not the vehicle for getting the job done.

We favor the continuation of a state-level program to support and provide incentives for beneficial biomass power generation in California.

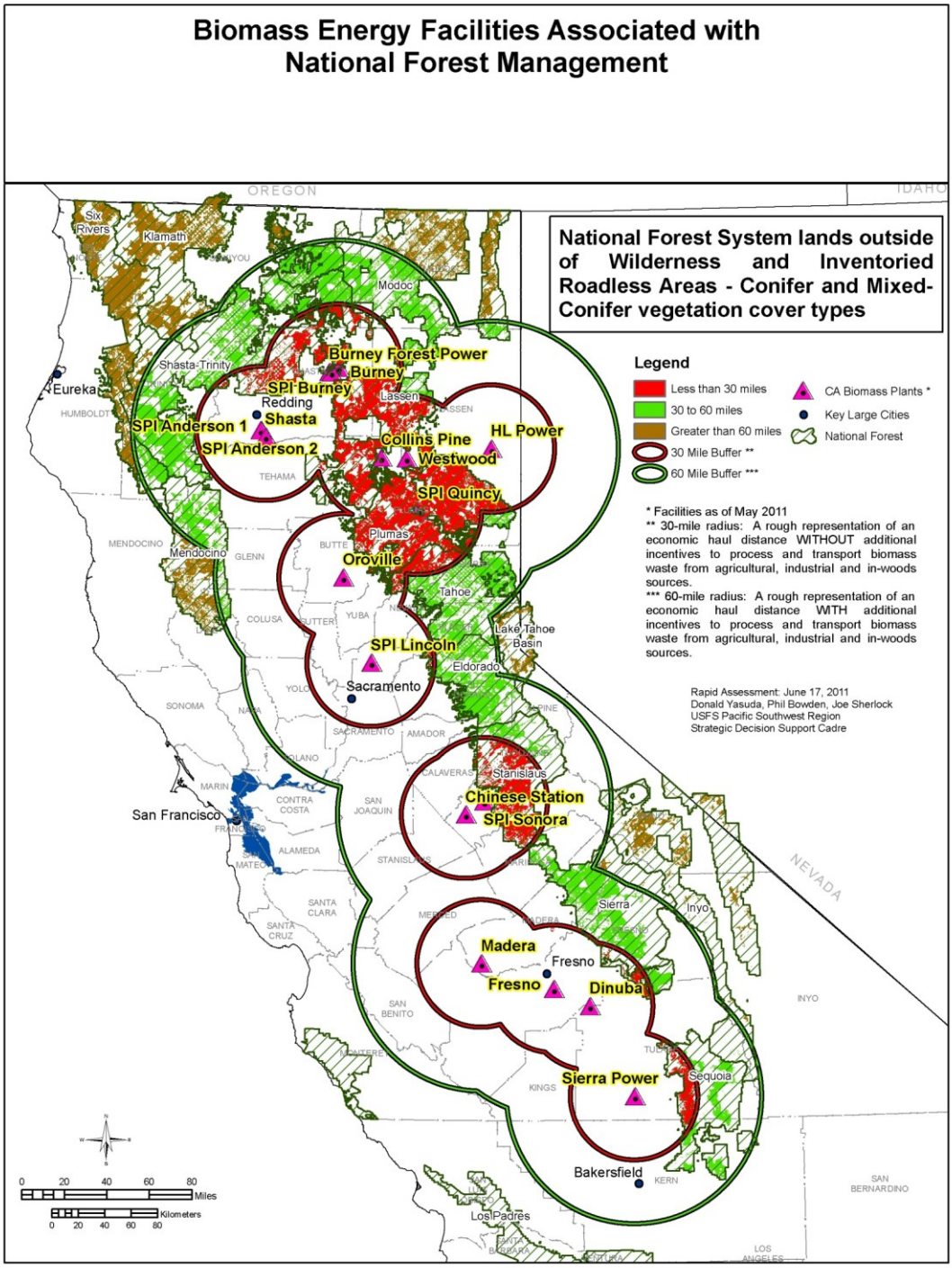
Biomass power generation provides unique public benefits that are not recognized under existing utility procurement activities. These benefits include cleaner air, improved public health, reduced disposal of wood waste in landfills, forest fire risk reduction, improved forest health and resilience from climate induced stressors including improved resistance to droughts, and insect and disease attacks. State-level administered renewables programs can better account for and value these unique bioenergy sector benefits, and facilitate the retention and expansion of markets for disposal of agricultural and forest residues where the land and resource conditions will continue to generate waste materials. Without this flexibility, future biomass residues from agricultural and forest health and fire risk reduction may not have the benefit of an open facility within reasonable hauling distance, and would therefore have to dispose byproducts in a less environmentally and publicly beneficial way, such as open burning or burial.

2. For existing renewable facilities, particularly biomass, should the existing program be continued as-is? Why or why not?

We believe that the existing-facilities program for biomass should not simply be continued as-is. Instead, we favor using the available funds for a two-pronged effort to support the existing biomass industry. The bulk of the funds should be used to target a reduction in the cost of biomass fuels from the two key sources that both provide very desirable packages of ancillary benefits, and are among the most expensive of biomass fuel sources to produce: agricultural residues, and in-forest residues. The second prong is a program to support continuing operations at specific biomass facilities that are in imminent risk of closure, for example those operating under below-market or orphan contracts. This part of the program would probably resemble the current program in its structure.

Existing facilities serve as a needed market for the disposal of biomass residues from forest fuel hazard reduction projects throughout the state. Figure 3 depicts the working

Figure 3


Biomass Energy Facilities Associated with National Forest Management
National Forest System lands outside of Wilderness and Inventoried Roadless Areas - Conifer and Mixed-Conifer vegetation cover types
Legend
Less than 30 miles
30 to 60 miles
Greater than 60 miles
30 Mile Buffer **
60 Mile Buffer ***
CA Biomass Plants *
Key Large Cities
National Forest
* Facilities as of May 2011
** 30-mile radius: A rough representation of an economic haul distance WITHOUT additional incentives to process and transport biomass waste from agricultural, industrial and in-woods sources.
*** 60-mile radius: A rough representation of an economic haul distance WITH additional incentives to process and transport biomass waste from agricultural, industrial and in-woods sources.
Rapid Assessment: June 17, 2011
Donald Yasuda, Phil Bowden, Joe Sherlock
USFS Pacific Southwest Region
Strategic Decision Support Cadre
Burney Forest Power
Burney
SPI Burney
Redding
Shasta
SPI Anderson 1
SPI Anderson 2
Collins Pine
Westwood
HL Power
SPI Quincy
Oroville
SPI Lincoln
Sacramento
Chinese Station
SPI Sonora
Madera
Fresno
Fresno
Dinuba
Sierra Power
Bakersfield
Eureka
San Francisco
Los Padres
Lake Tahoe Basin
OREGON
NEVADA
Miles
Kilometers

fuel-supply areas of existing facilities within PG&E's service area, and acreages of public lands that are within the fuel-sheds of these facilities. Some forest landowners rely upon these facilities to process byproducts of fuel reduction and forest health management activities. Public land managers have stated that they currently often cover the cost of transportation of biomass to existing facilities in many project areas rather than choosing open or pile burning. The proximity of biomass facilities to forest management projects directly affects the nature and affordability of forest management biomass disposal needs. Closures and curtailments result in difficult choices for land managers, particularly where open burning is not a viable option for public health, public safety or operational considerations.

3. Could the existing facilities be supported in a different way, such as via current competitive RPS procurement by IOUs? If so, how?

The existing biomass facilities could, indeed, be supported in a different way, although the alternative suggested in the question, relying on the current competitive RPS procurement process, is simply not a viable alternative under current market conditions. While the goals of the current program for existing renewables are laudable, which essentially means keeping biomass plants in California operational, the funds are not getting to the crux of the economic issues for the biomass industry, which is the costs of collection and transportation of the fuel. Every existing plant is constrained by its contract with its purchasing utility as to how much it can pay for procuring fuel. The cost of biomass feedstock is determined by the type of the fuel, and its location and distance from the facility.

Agricultural residues and in-forest residues are the most difficult types of biomass to collect, process, and transport, and therefore the most expensive. Diverting these resources from open burning, however, is by far the most environmentally-preferable alternative for the disposal of this material. In 2009, the California biomass industry converted 2.4 million tons of agricultural residues, and 1.1 million tons of in-forest residues into energy. In doing so, conventional air pollution from the combustion-for-

disposal of these materials, including particulates, NOx, CO, and hydrocarbons, are reduced by factors of 10 – 100 times, and in the case of in-forest residues whose use as fuel facilitates the performance of needed thinnings, the overall health and fire-resiliency of the treated forest is markedly improved. The fuel-production alternative also provides many more jobs than conventional disposal of the material.

We support the use of ratepayer funds for fuel incentives to increase the biomass industry's collection of these more expensive fuels. The public-purpose rationale for providing such incentives is to ensure that the environmental benefits continue to be provided to the state's citizenry. The use of funds for biomass fuel incentives has been established before on a limited basis in California with much success, for the category of agricultural fuels. A modest subsidy per-ton of agricultural waste collected and used as boiler fuel resulted in the collection of almost a million additional tons of agricultural wastes in the year the program ran, preventing open-burning of these residues. If the first prong of the program is structured this way, the state will realize tangible, easy-to-track results that serve the same purpose as the current Existing Renewable Facilities Program. This is an industry that needs to be preserved and enhanced if the state is ever going to realize its renewable energy, greenhouse-gas emissions reduction, and air quality goals.

4. Could and/or should the Commission or Energy Commission develop a set-aside program for projects that provide certain energy and non-energy (environmental) benefits to the state? What could a different programmatic approach look like? How would it be administered?

All renewable energy sources displace the use of fossil fuels for energy production. However, bioenergy resources are unique in producing valuable ancillary environmental services (air-quality improvement, forest fire-hazard risk reduction, insulate forests from stresses associated with climate change including drought, insect and disease attacks) in addition to renewable energy.[1] These ancillary environmental services have been shown

[1] Morris, G., *Biomass Energy Production in California: The Case for a Biomass Policy Initiative*, NREL Report No. NREL/SR-570-28805, November 2000. Also Gray, E., et. al., Clean and Diversified Energy Initiative Biomass Task Force Report, Report of the Western Governors' Association, Jan. 2006.

to be at least as valuable as, or more valuable than, the renewable energy that is the sole source of remuneration for biomass power production.[2]

The original restructuring law passed in California in 1996 recognized biomass for the special environmental benefits it produces, and solar-thermal electric for the fact that its energy profile tends to produce energy mostly during higher-demand hours than the 24 x 365 average. In recognition of these special benefits, these two energy sources were grouped into Tier 1 in the original PGC program structure, and have retained that status ever since. As the program evolved over time, support for lower tiers in the existing-facilities account was withdrawn, and only Tier 1 technologies continued to be supported. In effect, the existing-facilities program was a program for projects that provide both energy and significant non-energy benefits for the state.

Under this proceeding, we urge the Commission to develop a set-aside program for biomass fuels whose cost of production is relative high, and whose use provides both renewable energy and valuable ancillary waste-disposal services. Our suggestion to base the first prong of the program for existing facilities on providing targeted support for agricultural residue and in-forest residue fuels is, in effect, a set-aside program for projects that provide a special package of ancillary environment services to the state. We strongly support the creation of such a program.

5. What is the best approach to supporting new facilities with the same energy and non-energy benefits characteristics as the current facilities supported under the existing renewables program? Is the distinction between "existing" and "new" facilities important to maintain? Why or why not?

We believe that, with regards to the biomass industry, distinctions between "existing" and "new" facilities are not necessarily important to maintain, and indeed may lead to distorted incentives in an industry that is already stressed to the limit. All biomass facilities in the state participate in the state's biomass fuels market, each with its own

[2] Morris, G., The Value of the Benefits of U.S. Biomass Power, NREL Report No. NREL/SR-570-27541, November 1999.

unique set of fuel-procurement circumstances. Making the distinction between existing and new facilities in the way that has been done in the California RPS program in the past risks setting the stage for new facilities to simply absorb fuel supplies away from existing facilities, rather than creating conditions for overall growth in the state's biomass marketplace. This is certainly not the outcome that the state is looking to achieve by targeting support for biomass in general, or, as we suggest, for two biomass fuel sources (agricultural residues, in-forest residues) in particular.

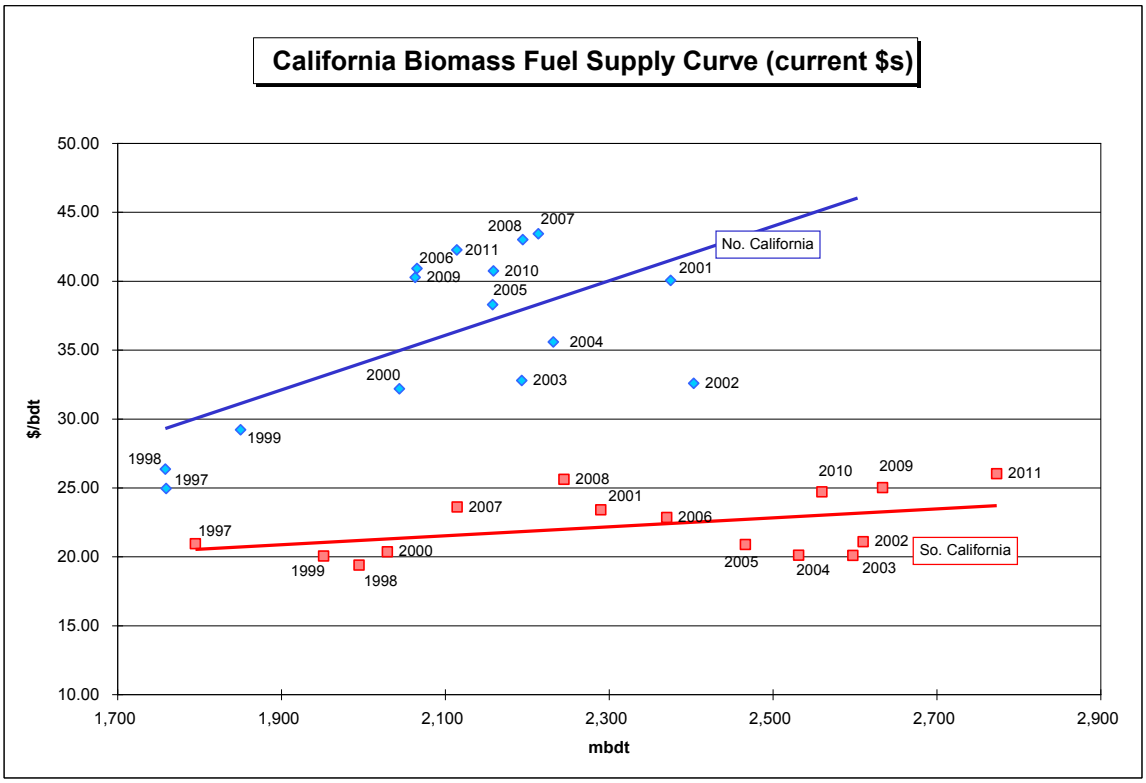
There is one distinction regarding existing facilities that is worth noting. The continuing health and viability of the existing biomass industry has major implications for the future potential to grow the industry in California. Growing the biomass industry in the future will require large amounts of investment capital, and the chances of attracting that investment capital will be seriously diminished if the market sees the state's existing biomass industry failing. In other words, it is important to preserve the existing industry in order to lay the groundwork for the expansion of biomass energy production in California.

The California biomass market has essentially two different market segments, one in the north, and one in the south of the state. Each market segment has its own biomass-fuel-supply curve, as demonstrated in Figure 4. Northern California hosts a greater amount of generating capacity, and in much of the north the marginal fuel is forest residues, which generally are among the most expensive of biomass fuels to produce, although their use provides a strong package of environmental benefits (reduced risk and extent of forest fires, enhanced functioning of watersheds, healthier forests). In Southern California the marginal fuel is urban waste wood, which is cheaper to produce than forest-residue fuel, and the use of which is supported by the state's existing solid-waste diversion program (AB 939), as well as the RPS.

Increasing the total production of biomass energy in the state will require that existing facilities be able to continue to purchase fuel, even as new facilities come on-line and enter the state's fuels market. If the new facilities have power purchase agreements that

allow them to outbid existing facilities for the existing fuel supply, it is likely that the outcome will be to shift biomass power generation from the existing facilities to the new ones, with little net increase in total biomass energy generation. On the other hand, if ratepayer benefit funds can be used to support the production of targeted biomass fuel sources, and to support particular facilities at risk of closure, then the overall supply of biomass fuels in the state can increase in size, and increases in the total operating capacity of the industry will lead to net gains in output.

Figure 4



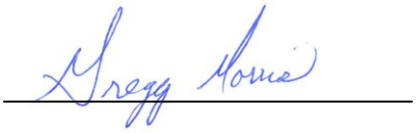
We believe that if the Commission creates an existing renewables program along the lines that we suggest, the existing biomass facilities will be able to compete for fuel with new facilities, and the conditions will have been created in which the distinction between existing and new facilities is no longer important.

Conclusion

As of now, the final quarter of 2011, California's biomass industry continues to contribute an important part of the state's portfolio of renewable generating sources, but it is clearly limping into the future. This industry provides some unique and very valuable environmental services to the state, and we still have the opportunity to preserve and grow the industry. However, failure to use this proceeding to pursue the kinds of tangible benefits that biomass provides at this critical juncture risks permanently shrinking the industry in the state, to the detriment of all.

Dated October 20, 2011, at Berkeley, California.

Respectfully Submitted,



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