

**DOCKET**

**09-IEP-1G**

DATE MAY 05 2009

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**BUENA VISTA  
BIOMASS POWER**

Tuesday, May 5, 2009

The Honorable Jeffrey Byron  
California Energy Commission  
Dockets Office, MS-4  
Re: Docket No. # 09-IEP-1G  
1516 Ninth Street  
Sacramento, CA 95814-5512

**RE: 09-IEP-1G: 2009 Integrated Energy Policy Report (IEPR) - Biopower in California Workshop Comments**

Dear Commissioner Byron:

Buena Vista Biomass Power appreciates the opportunity to submit comments to 2009 Integrated Energy Policy Report - Biopower in California Workshop (09-IEP-1G). Prior to providing our responses to selected inquiries from the Commission's workshop, please allow a brief introduction of our biomass project, currently under development.

The Buena Vista Biomass Power facility is a re-powered 18.5 megawatt (MW) renewable energy woody biomass electric generation facility capable of reliably providing sustainable green energy to approximately 15,000 California homes. The re-powering investment for the Buena Vista woody biomass project embraces the existing infrastructure of an idled generation facility, which was shut down (approximately ten years ago) prior to the development of the renewable portfolio standard. The capital investment employed during re-powering will include an integrated emissions control system to meet best available control technology (BACT). The development and on going operation of Buena Vista will create approximately 90 new jobs and tax base to the rural community and Amador County and neighboring rural communities.

The Buena Vista Biomass renewable energy project is strategically positioned to access sustainable waste woody biomass from three primary sources within a fifty (50) mile radius. These sources are i) hazardous fuel reduction from responsible forestry-sourced thinning and timber harvest operations; ii) agriculture waste residuals from orchard removals, pruning, nut shells, and pits, which would otherwise be disposed of through uncontrolled, open field burns; and iii) urban wood waste generated from local tree trimming, clean woody construction and demolition waste, and pallets, which would otherwise be deposited in California's local landfills.

The development of new renewable resources in the current financial environment is very difficult. However, as a shovel-ready project, Buena Vista could begin commercial

operation as soon as spring 2010. For more information related to Buena Vista and the related biomass community, please visit our site at [www.bv-biomass.com](http://www.bv-biomass.com).

Buena Vista Biomass Power appreciates the opportunity to participating in the IEPR process, especially as it relates to biomass power (09-IEP-1G). As such, Buena Vista provides the following comments for consideration and further discussion:

California currently has a mandate to achieve 20 percent of retail electricity sales from renewable resources by 2010, and the Governor and the state's energy agencies have identified a further goal of 33 percent from renewable resources by 2020. In addition, Executive Order S-06-06 calls for the state to use energy from biomass and biogas for 20 percent of the established state goals for renewable generation for 2010 and 2020. Currently, woody biomass comprises of approximately 3% of the State's total renewable portfolio.

### **Existing and Potential Biopower Resources**

#### **Q1: Can these goals be met by in-state biomass feedstock?**

Yes, significant waste wood exists and can responsibly support a reasonable renewable biomass energy portfolio strategically located throughout California. It should be noted that economical access to fuel designates the relatively small size of woody biomass generation facilities. Buena Vista Biomass Power believes that collaborative efforts to develop responsible, long-term policies will serve to protect the fragile ecological system in California and substantially reduce intentional and unintentional emissions. Buena Vista Biomass Power welcomes the opportunity to work with the Commission toward this goal, and would further offer our facility as an example for these purposes.

#### **Responsible access to Forestry residual**

The U.S. Forest Service has conceded that too much fuel exists, creating a crisis situation on tens of millions of acres in the west. Unfortunately, due to lack of collaborative policies, prescribed fires continue to be utilized as a fuel reduction tool, which is both risky and a great detriment to air quality. Each overstocked forest stand contains 30-50 tons per acre of dangerously dry excess fuel, thus the potential risk of igniting a catastrophic fire through prescribed burning is staggering and does not appear to be a natural, cost-effective solution.

The responsible hazardous fuels reduction of excess materials from the forest stand provides several important ecological, economic and societal benefits. First, as demonstrated from last summer, fire danger places a significant societal cost on California due to emissions of thousands of pounds of toxins. Forest fires and overgrowth of underbrush devastate the sensitive watershed. Responsible thinning actually strengthens the forest, as larger trees continue to grow and mature at a much faster rate than before since there is less competition for sunlight, water and soil nutrients.

#### **Agricultural Waste**

California's sustainable agricultural industry produces thousands of tons of woody waste products annually through the orchard management.

Past practices have included open-field burns, which has been identified as one of the prime contributors to the Central and Southern Valleys' historically poor air quality. California biomass industry is able to utilize much of this woody waste. Instead of open

field burning, much of this waste is now transported to rural biomass power projects, where it is combusted under environmentally sound, controlled air pollution control technology, reducing up to 98% of pollutants.

### **Urban Waste**

Over the period 1994-2002 the California biomass power projects collected and consumed between 1.2 million and 1.7 million tons per year of urban wood wastes as fuel, virtually all of which would have been deposited in landfills for disposal. Under California law, jurisdictions which operate landfills had to, by the year 2000, reduce the landfill intake by at least 50% relative to 1990 levels. This law was intended to promote recycling or reuse of materials, and obviously, reduce the need for controversial landfill construction or expansion. Most jurisdictions in California continue to struggle to comply with the 50% diversion mandate. Loss of the biomass power industry would redirect these tons of urban wood back into the landfills, resulting in a critical setback complying with the law for many cities and counties.

### **Competition for Solid-Fuel Biomass Feedstocks**

#### **Q7: What can be done to provide a steady and affordable stream of solid biomass fuel for electricity generation?**

As noted in the answer provided for Question 1 (above), education regarding the societal benefits that biomass power has to offer is essential. The significant benefits woody biomass through controlled management of waste wood to the ecological system and air quality dictates that California should embrace focused policies (including tax credits and grants) to support a sustainable, responsible management of California's precious resources. Some states (e.g., Oregon and Texas) offer incentives in the form of tax credits or grants to help offset the significant costs associated with collection, processing and transport of woody biomass material.

#### **Q8: There are uses for biomass other than generating energy. These uses include: compost and landscape mulch, animal bedding for chickens, animal feed, and daily landfill cover. What impact will these activities have on the availability and cost of solid-fuel biomass feedstock for the electricity sector?**

A wide variety of value added uses for biomass exists today. The marketplace will determine which products or uses have the highest value. As renewable energy and GHG reduction activities are progressively more valued, then the biopower market sector will be able to pay more for biomass fuel. Some end uses like alternative daily landfill cover (ADC) serve little to no societal benefits and should be discontinued. Woody biomass is much more valued as compost/mulch and biomass fuel than as part of the waste stream destined for landfills.

### **Co-firing biomass in coal power plants (Related Questions 9-13)**

Buena Vista Biomass Power is concentrated exclusively on woody biomass as the only fuel source and is not entertaining co-firing with coal.

**Other barriers to development of new solid-fuel biomass generation.**

**Q14: What are the major barriers to creating a self-sustaining biomass industry in California? Which of these barriers can be addressed through better industry practices, changes in regulations, or other measures?**

The most significant variable cost impacting the financial viability of biomass generation is the cost of biomass fuel delivered to the facilities. Due to the numerous societal benefits associated with biomass power generation, there should be tax credits or other incentives made available to offset the costs of collection, processing and transport. Other states have already embraced this policy, which can be effectively managed in collaboration with all interested parties.

**Q15: What regulatory requirements make it difficult for new biomass plants to become operational? What changes would you suggest to meet the intent of these regulations and allow new biomass plants to come on-line?**

As identified in our comments, woody biomass provides numerous positive attributes to the ecological system in California in addition to creating sustainable renewable energy. While biomass provides an important role within the state's renewable portfolio, it will not be developed in large scale due to the responsible and efficient access to fuel. The relatively small-scale nature of biomass projects presents significant hurdles in attracting capital for development, especially in the existing financial markets. The CEC has embraced an important regulatory policy to support biomass and other renewable energy with a consistent focus and commitment to long-term contracting by load-serving entities. This policy is extremely important in order to ensure that renewable resources will attract the necessary capital. In addition to long-term contracting, which support the ongoing operational cost and return on capital requirements, development grants are extremely important to encourage and ensure the most sound renewable resources are developed. The implicit support for renewable resource through long-term contracting and development grants will remain the most important regulatory policy.

**Q16: Assembly Bill 3048 (Committee on Utilities and Commerce, Statutes of 2008, Chapter 558) removed fuel restrictions for existing solid fuel biomass facilities participating in the Existing Renewable Facilities Program. Existing biomass facilities are now under the direct guidelines of the RPS statute requiring that technology used for the RPS "not cause or contribute to any violation of a California environmental quality standard or requirement." Because state harvesting requirements are not applicable on federal land, the removal of these restrictions may have made it easier for these facilities to purchase fuel harvested from federal forests. What effect, if any, has this change had on the availability and cost of solid fuel biomass? If collection and transportation costs remain a barrier, what technologies, processes, or incentives could help improve the economics and make environmentally sound use of this material practical?**

Fuel sourced from federally managed forests does not make up a significant portion of the volume of woody biomass fuel utilized in California currently. This is primarily due to the fact that relatively little land management activities are currently being implemented on the national forests. However, this is likely to change in the coming years as the federal government ramps funding support for fuels reduction and forest restoration

activities on federally managed lands. A collaborative and responsible policy should be clearly communicated to protect the vulnerable ecological balance.

**Q17: Staff has proposed various solutions to overcome many of the barriers to meeting a goal of 20 percent of the state's RPS with biomass generation. For solid-fuel biomass, these solutions include: 1) torrefication/pelletization of biomass fuel; 2) using burn piles from forest thinning projects; and 3) diverting green material, construction and building deconstruction lumber scrap from landfills; and 4) using refuse-derived fuel. Which of these solutions are likely to be available to help meet the 2010 and 2020 goals? Will these solutions be enough to meet the potential need? What other solutions should be considered?**

Buena Vista believes that strong policy commitments are essential to embracing the benefits available from renewable energy from biomass and protecting California's ecological system. We believe that the most significant positive impact on fuel availability will be derived from focused policies related to #2 and #3, above. These activities along with an ongoing collaborative process to embrace responsible management of our forests, landfills and air quality are essential.

Buena Vista Biomass Power appreciates the opportunity to submit these comments to the Commission and participating in this important process. If you should have any questions, please feel free to contact me anytime at [mthompson@bv-biomass.com](mailto:mthompson@bv-biomass.com) or by telephone at 406-490-1109.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mark D. Thompson".

Mark D. Thompson  
Managing Partner  
2724 Kilgore Road  
Rancho Cordova, CA 95670

Attachments

## What is Buena Vista Biomass Power?

The Buena Vista Biomass Power facility is a re-powered renewable energy woody biomass electric generation facility capable of reliably generating 18.5 megawatts (MW) of green energy. The renewable energy will provide a sustainable energy resource to approximately 16,000 homes in California and assist the State with achieving its renewable portfolio standard goals. The significant capital investment will create 90 new jobs and tax base to the rural community and Amador County.

The re-powering investment will embrace a modification of the Project's fuel blend to be limited to renewable wood biomass fuel only. In addition, the Project will be equipped with an integrated energy management and emissions control system to meet or exceed best available control technology, in which emissions will be significantly decreased from previous operations.

## What types of biomass fuels will the Buena Vista Biomass facility utilize and where will such fuel come from?

The Buena Vista Biomass power generation facility will primarily utilize three sustainable wood biomass sources for fuel, all of which will be sourced within a fifty (50) mile radius from the Project:

1. Forest-sourced biomass from fuels reduction and forest thinning operations;
2. Agriculture waste residuals from orchard removals, pruning, waste shells, and pits; and,
3. Urban wood waste created from local tree trimming, clean woody construction and demolition waste, and pallets.

## What are wood biomass fuels?

Wood biomass fuels primarily include waste wood materials that are generated as waste from local municipalities including scrap lumber, paper, and byproducts of wood product manufacturing (sawdust).

Wood biomass materials that have previously been piled and burned, or disposed of in landfills are well suited for biomass power generation fuels. Wood biomass that has been used in California for energy production includes:

- Dead trees or trees severely damaged by natural disaster, disease or insect attack. Agriculture waste residuals from orchard removals, pruning, waste shells, and pits; and,
- Wildfire mitigation operations that remove trees for forest fuel reduction.
- Woody biomass wastes generated from commercial agriculture operations. These include orchard removals and biomass generated from orchard pruning operations.
- Wood waste material generated from urban centers. These include tree trimmings and clean construction and demolition wood.
- Wood waste material generated from wood production manufacturing (sawdust and bark).

### What are the benefits of biomass generation?

Biomass power plants are engineered with air pollution control equipment designed to minimize discharges of particulate matter and other pollutants into the atmosphere. All plants are subject to regulation by the State and local governments. In this case, the Buena Vista Biomass power generation facility will be regulated by the Amador Air Pollution Control District and must meet specified air quality standards. While biomass waste materials that come from agricultural operations and forest treatment activities are typically burned in the open, biomass power plants provide an option that can eliminate 95-99 percent of pollutants that would otherwise be produced by the open burning of the biomass, and present an additional benefit by providing alternative to disposing construction and demolition wood waste in a landfill.

### What's the planned scale of the Buena Vista Biomass facility?

The Buena Vista Biomass power generation facility will provide 18.5 MW of renewable base-load energy, or approximately enough energy to reliably meet the demands of approximately 16,000 homes in California. Successful biomass projects are typically small-scale electric generation facilities located near agricultural and urban fuel resources, such as Buena Vista, in order to responsibly and reliably access sustainable fuel which would otherwise be burned with uncontrolled emissions or disposed of in landfills.

### How many jobs will Buena Vista Biomass facility generate?

The US Department of Energy National Renewable Energy Laboratory (NREL) conducted a study in 1999 that examined biomass facilities in the United States and found that approximately 4.9 full-time jobs were created per MW of power produced by a biomass power plant. The Buena Vista facility is rated at 18.5 MW, which leads to the creation of approximately 90 full-time jobs. A majority (approximately 3/4) of these jobs will be focused on support activities for the facility, which includes processing and transport of biomass fuels. The Project operations will support approximately 17-20 full-time skilled jobs.

### When is the Buena Vista Biomass facility expected to come on line?

The Buena Vista Biomass power generation facility is anticipated to commence operations by mid to late 2010.

### What economic and social benefits will the Buena Vista Biomass facility bring to the region?

While it is difficult to predict the full economic benefit to the Amador County region, the Buena Vista Biomass facility will create 90 family-wage full-time jobs, and produce clean reliable, carbon-neutral renewable energy. Additionally, the facility will require local regulatory oversight which includes environmental permitting and management. Byproducts created from the facility can be used to create secondary products for use within and for export out of Amador County. The Buena Vista Biomass facility will aggregate social benefits by requiring

local job talent, providing a destination for wood biomass generated as a result of forest fuels reduction activities, divert wood waste from local landfills and supplement local, state and federal tax bases through delivery of annual taxes and regulatory agency fees.

### How will the Buena Vista Biomass facility facilitate forest management?

Much of the fuel that supplies the Buena Vista facility will come from local forests located in Amador and surrounding counties. Placing a biomass power generation facility in Buena Vista creates an opportunity to promote sustainable management practices, and provides a market for woody biomass generated as a byproduct of forest management activities. Much of the forest sourced biomass would otherwise be piled and burned.

### How will the Buena Vista Biomass facility help protect communities from wildfire?

Hazardous conditions currently exist in many of California's forests on both public and private lands. Forests are overgrown, and prone to catastrophic wildfire events as have been experienced in Northern California in the past decade. The Buena Vista facility provides a means to generate revenues and value to help fund projects that would reduce the amount of dangerous fuels that exist in local forests. Fuel reduction projects would mitigate wildfire risk while improving overall watershed health and restoring forests to a more natural condition.

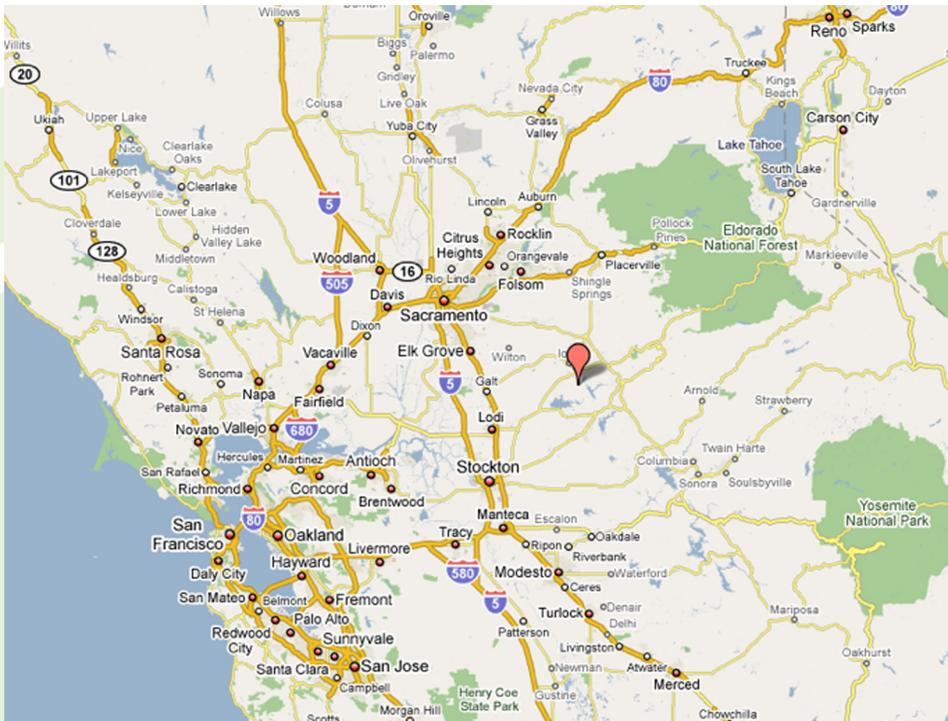
## Project Summary

Buena Vista Biomass Power (BVBP) is an 18 megawatt electric generation facility that is currently being re-powered as a long-term sustainable biomass renewable energy power generation facility. Located in Ione, California, the Project is currently under-going engineering design for the substantial capital investment required prior to the safe, reliable and environmentally-responsible commercial operation scheduled for mid-2010. When in service BVBP will generate enough renewable energy to sustain approximately 16,000 homes and will consume approximately 210,000 tons of woody biomass fuel. The fuel will be derived from a variety of sources including clean urban wood diverted away from landfills, agricultural byproducts from orchard operations and forest sourced material generated as a byproduct of forest thinning projects that reduce hazardous fuels.



## Location

The BVBP facility is located at 4655 Coal Mine Road, Buena Vista, CA, approximately 5 miles south of the City of Ione. The Project site is strategically located to access woody biomass fuel from sustainable forestry, agricultural and urban sources within a 50 mile radius of BVBP.



## Re-Powering

The BVBP Project is being reconfigured to utilize renewable woody biomass as the only fuel source. Prior to re-starting the Project, BVBP will coordinate with local, county, state and federal agencies in the review and modification of existing operating permits. The re-powering investment will include substantial efficiency upgrades; a completely integrated emissions system embracing best available control technology; a biomass fuel handling system; and an energy-management and operating control system. The permits guide each activity from construction to on-going operation of the Project to ensure that it is operated in a safe, reliable manner and meets or exceeds environment standards as set by the various oversight agencies.

## Fuel Sources

BVBP was chosen for re-powering due to its strategic access to various fuels, including forest, agricultural and clean urban wood. With proven emission control technology systems, BVBP will efficiently consume approximately 210,000 green tons of biomass fuel annually, primary derived from:

- Forest sourced wood waste generated as a byproduct of timber harvest, forest fuel treatment, and forest restoration activities.
- Agricultural waste in the form of orchard removals, orchard prunings, shells, and pits.
- Clean urban wood waste including tree trimmings, green waste, construction waste, pallets, and clean demolition wood.

## Benefits to the Greater Amador County Region

The Project will provide the following societal benefits:

- Improved Air Quality
- Reduced Landfill Waste
- Provide a Market for Hazardous Forest Fuels
- Economic Development
- Carbon Neutral Footprint
- Contribution to Tax Base

## Contact Information

Additional information related to the BVBP facility and its mission to provide renewable biomass energy for California is available at the following website: [www.bvbiomass.com](http://www.bvbiomass.com) or contact Jesus Arredondo, Communications Director at [jarredondo@bv-biomass.com](mailto:jarredondo@bv-biomass.com).