BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Implementation and Administration of California Renewables Portfolio Standard Program.	)))	Rulemaking 11-05-005 (Filed May 5, 2011)

PLACER COUNTY AIR POLLUTION CONTROL DISTRICT
COMMENTS TO SEC. 399.20 RULING, JUNE 27, 2011

I. INTRODUCTION

This rulemaking proceeding was instituted on May 5, 2011, as the successor to R.08.08-009, and as noted in the Order Instituting Rulemaking (OIR), ongoing administration of RPS procurement plans now requires a consideration of the recent RPS legislation (SB 2 [1X]) and necessary modifications to the existing program. These comments are in response to the Sec. 399.20 Ruling dated June 27, 2011. The Commission has requested comments on several issues relating to the effect of changes to the law as set forth in SB 2 1X.

This comment letter responds primarily to Section 3.3.1, but also has responses to a small number of other sections within the Ruling. The PCAPCD recognizes that there have been many other comments filed in this matter, but believes that its perspective - from a relatively small Air Pollution Control District - is unique. With an effort to be narrow in the application of our comments we hope that they will be useful and should also note that PCAPCD has discussed these comments with many other organizations that offer a wide range of interests (organizations that support these comments are listed within Attachment "A," which is attached hereto by this reference).

III. Section 3.3 Comments: Additional Pricing Proposals

PCAPCD has reviewed Section 3.3 with particular interest and has collected information that it believes will be useful in working out the issues presented within this Section. In particular the Commission asked " When responding to proposals below, explain whether a separate numerical value should be calculated for environmental benefits and/or locational benefits and added to the market price…" The PCAPCD strongly encourages that such values be calculated and offers the following information to support that assertion.

The public benefits of biomass facilities

The PCAPCD has a strong interest in the development of sustainable, small-scale (<3MW), biomass power generation (biopower) facilities strategically located throughout the forested regions of California. This interest is driven primarily by the fact that many communities and millions of acres of forest ecosystems in California are at significant risk to catastrophic wildfire. In response to wildfire issues, agencies such as CALFIRE and the US Forest Service are teaming with regional partners (e.g., Fire Safe Councils, Resource Conservation Districts, private landowners and local Fire Districts) to implement strategic projects to proactively treat hazardous forest fuels and restore resilience to fire-adapted ecosystems. The societal benefits and public good associated with fuels treatment/restoration activities includes protection of communities, forest resources, wildlife habitat, and recreational opportunities, improvement of air and watershed quality, and reduction of wildfire suppression costs. Unfortunately, the costs to treat hazardous fuels is significant.[1] Public funding to support these

[1]USDA Forest Service Pacific Southwest Research Station. 2009' *Biomass to Energy: Forest Mangement for Wildfire Reduction, Energy Production and Other Benefits.* California Energy Commission, PIER Program. CEC-500-2009-80.

treatments is dropping and will likely cause many projects to be significantly curtailed or outright eliminated.

An alternative, market based opportunity to generate funding to support these beneficial projects is utilization of woody biomass generated as a byproduct of sustainable forest management, hazardous forest fuels reduction and ecological restoration activities. In some regions of California, woody biomass from fuels reduction and restoration projects is utilized as fuel for baseload renewable power generation. Strategic and sustainable expansion of the biopower sector in California, by locating small-scale biopower facilities adjacent to at risk forest regions, could provide the following suite of societal benefits including, several of which are in addition to benefits offered by other renewable energy technologies:[2]

- *Promotes healthy forests and defensible communities*. Provides a ready market for woody biomass material generated as a byproduct of forest management, hazardous fuels reduction and forest restoration activities.[3] This facilitates defensible communities and healthy forest ecosystems through the ability to cost effectively treat additional acres.
- *Protects key watersheds*. A significant portion of California's in-state water resources flow from forested landscapes. As long as healthy forest ecosystems exist in these upland watersheds, sustainable quantities of high-quality water for both domestic and agricultural uses will continue to flow.[4, 5, 6, 7] In addition, water to support California's significant hydropower assets originates in these watersheds.

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[2]C. Mason, B. Lippke, K. Zobrist, et al., "Investments in Fuel Removals to Avoid Forest Fires Results in Substantial Benefits," Journal of Forestry, pp. 27-31, January/February 2001.

[3]North, M., P. Stine, K. O'Hara, W. Zielinski, and S. Stephens, "An Ecosystem Management Strategy for Sierran Mixed-conifer Forests," USDA Forest Service, PSW General Technical Report PSW-GTR-220, 2009.

[4]Neary, D.G., K.C. Ryan and L.F. DeBano (eds.), Wildland Fire in Ecosystems: Effects of Fire on Soils and Water, Gen. Tech. Rep. RMRS-GTR-42-vol 4. Ogden, UT, USDA Forest Service Rocky Mountain Research Station, 2005.

- *Provides net air quality benefits.* Forest biomass material otherwise piled and burned in the open can be utilized in a stringent emissions controlled manner to provide renewable energy (energy conversion units including boilers and gasifiers that are equipped with Best Available Control Technology), thus reducing air pollutant emissions and improving regional air quality. The air quality benefits are significant, with 95 to 99% reduction in particulate matter, carbon monoxide, and volatile organics, and a 60 to 80% reduction in nitrogen oxides when compared to open burning.[8,9,10] Additional climate change benefits can also result from replacing fossil fuel fired power generation with renewable biopower.
- *Provides economic development and employment.* Most biopower facilities are sited in rural areas that are currently experiencing significant economic hardship. Jobs include plant operations and maintenance as well as fuel collection, processing and transport. Approximately 4.9 jobs are created per MW of biopower generation.[11]
- *Reduces waste going to landfills*. Wood waste once destined for landfills can be recovered and utilized in biopower facilities thereby extending the service life of the landfills and reducing the need to develop additional landfill facilities.

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[5]Harris, R.R. and P.H. Cafferata, Effects of Forest Fragmentation on Water Quantity and Quality. Paper presented to the Conference on California Forest Futures, Sacramento, CA, May 23-24, 2005.

[6]Murphy, J.D., D.W. Johnson, W.W. Miller, R.F. Walker, E.F. Carrol, and R.R. Blank, "Wildfire Effects on Soil Nutrients and Leaching in a Tahoe Basin Watershed," Journal of Environmental Quality, Volume 35, 2006, pp. 479-489.

[7]Numerous studies led by Lee H. MacDonald, Colorado State University, Department of Forest, Rangeland, and Watershed Stewardship.

[8]Bruce Springsteen, Ton Christofk, Steve Eubanks, Tad Mason, Chris Clavin, and Brett Storey, "Emission Reductions from Woody Biomass Waste for Energy as an Alternative to Open Burning," Journal of the Air and Waste Management Association, Volume 61, January 2011, pp. 63-68.

[9]Greg Jones, Dan Loeffler, David Calkin, and Woodam Chung, "Forest Treatment Residues for Thermal Energy Compared With Disposal by Onsite Burning: Emissions and Energy Return," Biomass and Bioenergy, Volume 34, 2010, pp. 737-746.

[10]Carrie Lee, Pete Erickson, Michael Lazarus, and Gordon Smith, Greenhouse Gas and Air Pollutant Emissions of Alternatives for Woody Biomass Residues, prepared by the Stockholm Environment Institute for the Olympic Region Clean Air Agency, November 2010.

[11]G. Morris, The Value of the Benefits of US Biomass Power, November, 1999, NREL Publication SR 570-27541.

- *Delivers distributed, baseload generation.* Locating new, small-scale forest biopower facilities strategically across forested regions in California will mitigate the need for transmission system upgrades, as small generation facilities require relatively little transmission capacity to wheel power to load centers. This will also provide strategic 24-7 baseload generation in regions that are remote and prone to inconsistent power availability, thus minimizing the need for large diesel fired generator sets (that serve as standby generation) as well as assisting in stabilizing the local grid. Unlike other renewable energy resources (e.g., solar, wind) biopower offers baseload generation.
- *Protects transmission/distribution infrastructure*. Power distribution infrastructure in California is significant. Many of the state's generation assets utilize transmission and distribution systems that must wheel power through forested regions to deliver generation to load centers. Forest fuels treatments can mitigate potential wildfire damage to valuable power distribution infrastructure.
- *Utilizes renewable and sustainable feedstocks.* Forest biopower facilities are sized appropriately to utilize biomass from sources that continue to produce biomass in a long-term, sustainable way.
- *Helps California meet Greenhouse Gas (GHG) Reduction, Waste Reduction and Renewable Energy Objectives*. The biopower market sector helps the state meet specific policy objectives as set by the California legislature and the Governor:
    - AB 32 – Greenhouse Gas Reduction
    - AB 939 – Waste Reduction – Reduced Landfill Deposits
    - SB 1078 – Establishes a Renewable Portfolio Standard for California
    - Executive Order S-06-06 – Sets Bioenergy Production Targets

- SB 2 – Ramps up the Renewable Portfolio Standard to 33%

In conclusion, the public benefits of biomass energy production justify a need to for the quantification of those benefits in order to properly account for its value.

Comments on Section 3.3.1; technology and product specific rates are the preferred proposal

While cost of electrical generation is a consideration when setting the market price by type of generation, there should also be consideration of the public good and societal benefits delivered. Therefore, a separate forest biopower feed-in tariff rate schedule should be created.

There have been several initiatives in recent years to estimate monetary values for the societal benefits associated with biopower generation.[12] Environmental benefits associated with biopower generation when calculated in energy production terms range from 11.4 to 14.1cents/kWh (in 1999 dollars).[13] Clearly work needs to be done to update the value of environmental benefits to reflect current values.

In order to create a level playing field, one where small-scale forest biopower facilities can operate at strategic locations across the forested landscapes of California, it will be important that a single market price rate schedule be generated. Multiple rate schedules attempting to allocate market rate values based on location will provide some biopower facilities with a price advantage that will artificially skew the marketplace. In addition, due to the seasonal availability of forest fuel, some consideration should be made for an "as delivered" energy pricing schedule in addition to a "firm delivery" energy pricing schedule

Setting the right market price for the specific application (in this case small-scale forest biopower facilities) is key. If the set price is too high, then it may "over stimulate" the market.

[12]G. Morris, The Value of the Benefits of US Biomass Power, November, 1999, NREL Publication SR 570-27541.
[13]Ibid.

If it is too low, the market may not respond at all. Market price should be set so that project proponents can meet certain reasonable financial benchmarks such as a 12% internal rate of return on investment.

A primary challenge facing potential small-scale distributed generation biopower facilities is the lack of a ready market to sell power at rates that facilitate profitable operations. The relatively high financial cost to collect, process and transport forest biomass material (for use as fuel) are significant and drive the cost of generation to uncompetitive levels when compared to conventional generation technologies (e.g., hydro, combined cycle natural gas) or biopower facilities that utilize less costly feedstocks such as urban wood waste.[14]

While all renewable generation technologies provide some level of public benefits, biopower is unique in that it delivers a full suite of benefits.[15] Market price schedules should be specific to the type of generation (e.g., geothermal, solar, wind, landfill gas, biopower) in order to compensate project proponents based on the specific public goods/societal benefits delivered. Forest biopower projects are unique in the suite of benefits and public good delivered and therefore should have a separate and distinct feed-in tariff rate schedule.

Biopower facilities seeking to qualify for the 399.20 program feed-in tariff forest biopower schedule should be required to demonstrate that at least 80% of biomass fuel procured annually be sourced from forest management, restoration or fuels treatment activities. Because the market price schedule is set based on the specific societal benefits delivered (see list provided above), the 80% threshold is important. In addition, the project proponent must deliver a comprehensive fuel availability and procurement plan that

[14]USDA Forest Service Pacific Southwest Research Station. 2009' *Biomass to Energy: Forest Mangement for Wildfire Reduction, Energy Production and Other Benefits.* California Energy Commission, PIER Program. CEC-500-2009-80.
[15]G. Morris, The Value of the Benefits of US Biomass Power, November, 1999, NREL Publication SR 570-27541.

documents sustainable availability of fuel resources from forest management activities that are consistent with the California Environmental Quality Act and National Environmental Policy Act. The remaining 20% of annual fuel needs can be made up of urban wood waste (e.g., clean construction wood, tree trimmings) and/or agricultural wood waste (e.g., orchard prunings).

Comment on Section 3.3.3; Contract terms of 10-20 years are appropriate

Capital costs to install a new biopower facility scaled at 3 MW or less are significant. Private financial markets typically require power purchase agreements (like those provided by the 399.20 program) to be consistent with the debt service term. For this reason the contract term should be at least 10 years. Contract terms of 10, 15 and 20 years would be appropriate to meet the variety of debt service periods that may be required for development of new forest biopower projects.

IV. Comment on Section 4.10 Expedited Interconnection Procedures

Interconnection procedures for new power generation facilities that qualify for the 399.20 program should be structured in a manner that facilitates efficient and timely access to distribution systems. Past experience indicates that interconnection procedures have been a significant barrier to project deployment, especially with small-scale projects. These procedures need to be reviewed and modified to facilitate timely and efficient access to distribution with utilities held accountable to interconnection timelines.

V. Statements of support for specific changes made within SB 2 1X

The PCPACD supports the SB 2 1X cap on project scale at no more than 3 MW of generation (up from a cap of 1.5MW) to qualify for the 399.20 program. This relatively small scale works well for strategically locating forest biopower facilities close to sustainable sources of woody biomass, thus reducing processing and transport related diesel emissions and fuel

transport cost.[16] Small-scale generation facilities will also require fewer transmission/distribution system upgrades (as noted above).

The PCPACD also supports the change within SB 2 1X that eliminated the ownership restriction to electric generation facilities owned by a public water or wastewater agency. The PCAPCD believes that the public will benefit from allowing all types of ownership (private, public, tribal) to qualify for the feed-in tariff rates under the 399.20 program.

PCPACD also supports the choice made to *not* change the AB 32 procurement cap for the 399.20 program of 750 MW. The PCAPCD believes it is a reasonable figure, considering that this represents approximately 2% of peak power demand for the state, and hopes that other comments will illuminate the issue of proportional share discussed in Section 4.2.

VI. Many Diverse Organizations have Reviewed and Approved of the PCAPCD Comments submitted.

PCAPCD would like to emphasize that it took the time to collaborate and discuss each comment made and that many organizations are in support of PCAPCD comments submitted.

VII. CONCLUSION

In summary the PCPACD enthusiastically supports that a separate numerical value be calculated for environmental benefits and/or locational benefits and added to the market price within the Section 399.20 program, and that technology and product specific rated are used. PCAPCD also believes that it is essential that utilities are held accountable to interconnection timelines. PCAPCD appreciates the opportunity to comment and will continue to participate in

[16]Fuel Procurement Plan for the Lake Tahoe Basin Biomass Energy Facility. TSS Consultants, Rancho Cordova, CA. February, 2011.

the process.

DATED: July 21, 2011.

Respectfully submitted,

/s/ Christiana Darlington

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VERIFICATION

I am an officer of the non-profit organization herein, and am authorized to make this verification on its behalf. The statements in the foregoing document are true of my own knowledge, except as to matters which are therein stated on information or belief, and, as to those matters, I believe them to be true.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 21st day of July, 2011, at Auburn, California.

CHRISTIANA DARLINGTON
General Counsel

Attachment A

The organizations listed below would like the CA Public Utilities Commission to recognize their support for the Placer County Air Pollution Control District's stakeholder comments regarding the CPUC's pending revisions to the 399.20 tariff program and definition of "market price". The signature of the authorized representative from each organization is provided on the ensuing pages.

California Forestry Association

Forest Guild

Modoc County Partners

Norcal Society of American Foresters

Northern California Resource Center

Pacific Forest Trust

Phoenix Energy

Sierra Business Council

Sierra Forest Legacy

Sierra Institute for Community and Environment

Sierra Nevada Conservancy

The Watershed Research and Training Center

West Biofuels

Exhibit A

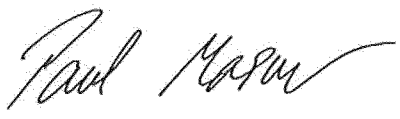
Representative's Name: Dave Bischel, President
Organization: California Forestry Association

Representative's Name: Michael DeBonis, Executive Director
Organization: Forest Guild

Representative's Name: Kim Hunter, Coordinator
Organization: Modoc County Partners

Representative's Name: Ken Nolte, Chair
Organization: Northern California Society of American Foresters

Representative's Name: Larry Alexander,
Organization: Northern California Resource Center



Representative's Name: Paul Mason, Vice President of Policy & Incentives
Organization: Pacific Forest Trust

Representative's Name: Greg Stangl, CEO
Organization: Phoenix Energy

Representative's Name: Steven Frisch, President and CEO
Organization: Sierra Business Council

Representative's Name: Craig Thomas, Executive Director
Organization: Sierra Forest Legacy

Representative's Name: Jonathan Kusel, Executive Director
Organization: Sierra Institute for Community and Environment

Representative's Name: Jim Branham, Executive Officer
Organization: Sierra Nevada Conservancy

Representative's Name: Nick Goulette, Executive Director
Organization: The Watershed Research and Training Center

Representative's Name: Matthew D. Summers, Director of Operations
Organization: West Biofuels, LLC