BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Policies, Procedures and Rules for Development of Distribution Resources Plans Pursuant to Public Utilities Code Section 769.	Rulemaking 14-08-013 (Filed August 14, 2014)

JOINT COMMENTS OF THE BIOENERGY ASSOCIATION OF CALIFORNIA, THE CALIFORNIA ASSOCIATION OF SANITATION AGENCIES AND WASTE MANAGEMENT ON THE ORDER INSTITUTING RULEMAKING ON DISTRIBUTED RESOURCES PLANS

GREG KESTER
Director of Renewable Resource Programs
California Association of Sanitation Agencies
1225 8th Street, Suite 595
Sacramento, CA 95814
gkester@casaweb.org
Phone: 916-844-5262

JULIA A. LEVIN
Executive Director
Bioenergy Association of California
PO Box 6184
Albany, CA 94706
jlevin@bioenergyca.org
Phone: 510-610-1733

CHARLES WHITE
Director of Regulatory Affairs, West
Waste Management
915 L Street, Suite 1430
Sacramento, California 95814
Phone: 916.552.5859
E-mail: cwhite1@wm.com

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The Bioenergy Association of California (BAC), the California Association of Sanitation Agencies (CASA) and Waste Management (WM) submit these Joint Comments on the Order Instituting Rulemaking on Distributed Resources Plans. BAC, CASA and WM intend to be active parties in this Rulemaking as it is very important to the business interests of both associations' members and to WM.

BAC represents more than 50 private companies, public agencies, local governments and others working on sustainable bioenergy development, particularly the development of distributed energy, pipeline biogas and transportation fuels produced from organic waste. CASA is a statewide association of cities, counties, special districts, and joint powers agencies that provide wastewater collection, treatment, water recycling, and biosolids management services to more than 90% of the sewered population of California. Many BAC and CASA members

currently own, operate or are developing distributed generation projects in California, including projects to provide power for onsite use and export to the electricity grid. WM is the leading provider of comprehensive waste management and environmental services in North America, including 137 landfill gas projects that account for about one-quarter of all landfill gas-to-energy projects in the United States.

BAC, CASA and WM submit the following general comments and answers to the specific questions in the Order Instituting Rulemaking (OIR) below.

A. GENERAL COMMENTS

BAC, CASA and WM strongly support the goals of AB 327 and the OIR to better integrate distributed generation into the utilities' planning, operations and investments, and to maximize ratepayer benefits while minimizing costs.[1]

1. Maximize Ratepayer Benefits, Especially Greenhouse Gas Reduction.

BAC, CASA and WM urge the Commission to give greater weight to maximizing ratepayer benefits rather than lowest cost resources, particularly where costs are defined solely by dollars per kilowatt hour. As the OIR recognizes, the magnitude of the climate change threat, especially, warrants giving significant weight to a project's potential to reduce greenhouse gas emissions.[2] The Public Utilities Code also recognizes the importance of reducing greenhouse gas emissions and other pollutants in the definition of "ratepayer interests," which include:

> "[The] reduction of health and environmental impacts from air pollution, and greenhouse gas emissions related to electricity and natural gas production and use, and increased use of alternative fuels."[3]

We urge the Commission, therefore, to give significant weight to the ability of projects and resource types to reduce greenhouse gas emissions, not just from the displacement of fossil fuels, but from the reduction in lifecycle greenhouse gas emissions associated with the project. For bioenergy projects, methane reductions (biogas projects) and black carbon reductions

[1] OIR at page 5; AB 327, section 769.
[2] OIR at page 9.
[3] Public Utilities Code section 740.8.

(forest biomass projects) can provide many times the greenhouse gas reductions other renewable electricity projects can provide. As the Air Resources Board (ARB) notes in the AB 32 Scoping Plan Update, methane and black carbon are much more potent climate pollutants than carbon dioxide.[4] According to the latest assessment by the Intergovernmental Panel on Climate Change, methane is 84 times more damaging than carbon dioxide over a 20-year period and 28 times more damaging over 100 years. Black carbon is more than 270 times as potent as carbon dioxide in the first 20 years and more than 100 times more potent over a hundred year period.[5]

Bioenergy projects can reduce climate pollutants much more significantly than any other form of distributed generation, including other forms of renewable distributed generation, because bioenergy projects can reduce methane and black carbon emissions and displace fossil fuel consumption. In the case of forest biomass projects, the forest fuel treatments used to collect the fuel for distributed biomass plants are a proven means to reduce greenhouse gas emissions from wildfire, which causes more than half of all the black carbon emissions in California.[6] A recent study by the US Forest Service for the California Energy Commission found that forest biomass projects can reduce greenhouse gas emissions from wildfire by as much as 65 percent.[7]

Forest biomass projects are also a proven means to reduce wildfire threats and impacts, including the costs and other impacts of utility-caused fires as well as wildfire impacts on utility infrastructure. The Secretary of the California Natural Resources Agency emphasized the importance of increasing small-scale forest biomass facilities to reduce wildfire threats in a 2012 letter to CPUC President Michael R. Peevey, which is attached as Exhibit A.

Wastewater treatment plants generating on-site renewable energy from biogas produced during anaerobic digestion should be considered in Distributed Resource Plans (DRPs) since they avoid purchasing fossil fuel generated power from the grid. They can also provide short-

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[4] *First Update to the Climate Change Scoping Plan,"* Adopted by the California Air Resources Board, May 2014, at pages 17-18.
[5] Id. At page 18.
[6] Id. At page 19.
[7] USDA Forest Service, Pacific Southwest Research Station. 2009. *Biomass to Energy: Forest Management for Wildfire Reduction, Energy Production, and Other Benefits.* California Energy Commission, CEC-500-2009-080.

term storage and demand response ability to go off the grid temporarily during peak demand periods.

The land application of biosolids can also reduce GHG emissions by reducing the need for fossil fuel based commercial fertilizer and through long-term carbon sequestration in the soil. Biosolids are also effective for reclaiming land ravaged by fire, reducing the severity of future fires, and improving water quality at these sites through erosion control.

2. Need to Diversify Renewable Electricity Portfolio as California Moves Beyond 33% RPS.

As California moves beyond 33 percent renewables, diversifying the renewables portfolio will be very important to maintain overall costs and system reliability.[8] A recent study by Energy and Environmental Economics (E3) found that diversifying the renewables portfolio could reduce costs by 50 to 70 percent of increasing the renewable energy supplied to the grid from 33 to 50 percent.[9] Diversifying the portfolio would reduce capital costs and operating costs by substantially reducing the need for curtailment that would occur if California relies on solar to go from 33 to 50 percent renewables.[10] As E3 points out, in a heavily solar based portfolio, rate increases will be much higher due to the "exponential increase in renewable curtailment as the RPS target increases toward 50%, requiring a significant 'overbuild' of the renewable portfolio to meet the RPS target. . . The Diverse Scenario shows a substantially lower rate impact than the more heavily solar dominated cases, primarily because the diverse portfolio results in less overgeneration."[11]

3. Need to Redefine "Optimal Location" for Resources with Fixed Locations or Locations Required by Statute.

BAC, CASA and WM urge the Commission to consider broader definitions of "optimal location" and "strategically located" that address statutory requirements, the need for baseload and load

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[8] Andrew Mills and Ryan Wiser, "*Strategies for Mitigating the Reduction in Economic Value of Variable Generation with Increasing Penetration Levels*," March 2014. Available at: http://emp.lbl.gov/reports/re.

[9] "*Investigating a Higher Renewables Portfolio Standard in California,*" Energy and Environmental Economics (E3) January 2014, at page 24. Available at: www.ethree.com.

[10] Id. at page 20.

[11] Id. at page 20.

following resources, and other factors. The current definition of "strategically located" would preclude many or perhaps most bioenergy projects, including those eligible under SB 1122,[12] from connecting to the distribution grid. Unlike solar and wind projects which have flexibility about location, bioenergy projects generally must be located at or near the site of the waste (fuel) production. SB 1122 requires that forest biomass facilities be located close to high fire risk areas;[13] however, facilities such as wastewater treatment plants, landfills, dairies, food processing plants, farms and orchards cannot be moved. California's first feed-in tariff statute, AB 1969, which focused on energy production at wastewater treatment facilities, recognized that and deemed wastewater treatment facilities as "strategically located."[14]

To maintain cost-containment wherever possible while fulfilling the requirements of SB 1122 and other state policies, BAC, CASA and WM recommend the following revised definition of "strategically located":

> "Strategically located" means that the generator is interconnected to the distribution, as opposed to, the transmission system and either (1) sited near load or (2) <u>located in a geographic area necessary to meet state legislative requirements</u>. "Sited near load" means in an area where interconnection of the proposed generation requires $300,000 or less in upgrades to the transmission system or the generator bears any costs above $300,000, whether or not such costs are determined before or after the execution of the contracts.

B. ANSWERS TO SPECIFIC QUESTIONS POSED IN THE OIR

1) What specific criteria should the Commission consider to guide the IOUs' development of DRPs?

BAC, CASA and WM recommend that the Commission consider the following criteria:

- Overall costs of the utility's portfolio;

[12] Senate Bill 1122 (Rubio, 2012).

[13] See, eg, CalFire's letter to the CPUC dated June 14, 2013.

[14] AB 1969 (Yee, 2006), adding section 399.20 to the Public Utilities Code. Section 1(f) declares that: Public water and wastewater facilities are strategically located and interconnected to the electric transmission system in a manner that optimizes the deliverability of electricity generated at those facilities to load centers.

- Need to diversify the portfolio;
- Need to increase flexible generation (load following power) to complement intermittent renewables;
- Statutory requirements and intent, including SB 1122's requirement to procure 250 MW from small-scale bioenergy facilities and the Legislature's intention to commercialize the small-scale bioenergy industry (so it will expand beyond the 250 MW of new capacity);
- Greenhouse gas reductions that result from the utility's overall portfolio and from individual projects;
- Need to address other ratepayer interests, including environmental sustainability;
- Need to coordinate with other state agencies to meet other statutory mandates, such as CalReycle's 75 percent waste diversion goal established by AB 341[15] and CalFire's goals to protect public safety, maintain forest carbon sequestration and reduce wildfires.

2) What specific elements must a DRP include to demonstrate compliance with the statutory requirements for the plan adopted in AB 327?

We recommend that the Commission require DRP's to include at least the following elements:

- Net change in resource mix and diversity of the portfolio;
- Total greenhouse gas reductions and reductions by project;
- Other ratepayer benefits such as public health, safety and environmental protection, including impact on wildfire;
- Impact on the grid;
- Distribution and transmission costs;
- Whether the DRP helps to further other statutory goals.

3) What specific criteria should be considered in the development of a calculation methodology for optimal locations of DERs?

[15] Assembly Bill 341 (Chesbro), Statutes of 2011, Chapter 476.

As noted in our general comment number 3 above, the terms "optimal location" and "strategically located" need to distinguish between resources that do not require a fixed location (such as solar, wind and fossil fuel generation) and resources that have little or no flexibility about location, such as bioenergy, hydro, and geothermal. We urge the Commission to revise the definition of "strategically located" for connection to the distribution grid and to broaden the definition of "optimal location" to include more than just impact on the grid.

4) **What values should be considered in determination of "Optimal Location"**

As noted above, we urge the Commission to consider whether a particular location is required or necessitated by statute, such as SB 1122. We also agree with the de Martini white paper that "optimal location" should be assessed on a regional or system-wide basis, not project-by-project. Finally, optimal location should also consider other ratepayer interests, such as waste diversion (away from landfills), air and water quality protection, reduced wildfire hazards, and resource/fuels diversity.

5) **What specific considerations and methods should be considered to support the integration of DERs into IOU distribution planning and operations?**

We urge the Commission to consider the following:

- Safety and reliability;
- Ratepayer interests as defined by Public Utilities Code section 740.8;
- Greenhouse gas reductions;
- Flexible generation versus intermittent;
- Costs, including indirect costs such as an integration adder, and opportunities to reduce costs such as the costs of utility-caused fires and wildfire through forest biomass.

6) **What specific distribution planning and operations methods should be considered to support the provision of distribution reliability services by DERs?**

- Better integrating utility resource forecasting

7) **What types of benefits should be considered when quantifying the value of DER integration in distribution system planning and operations?**

- All ratepayer benefits, including greenhouse gas reduction, reduction in air and water pollution, fuel diversity (including reliance on natural gas) and other public health benefits;
- The direct and quantifiable benefits of forest biomass projects to reduce wildfire impacts,[16] including impacts on public safety, utility infrastructure such as transmission lines and substations, water quality and supply, including hydropower supplies, air quality and more.
- The benefits and opportunities afforded by the wastewater community through enhanced anaerobic digestion, diversion of waste from landfills, on-site power generation, short term energy storage, peak demand response capabilities, and greenhouse gas reductions from the land application of biosolids.
- Other statutory requirements and benefits identified in those statutes.

8) **What criteria and inputs should be considered in the development of scenarios and/or guidelines to test the specific DER integration strategies proposed in the DRPs?**

BAC, CASA and WM have no comment on this at this time.

9) **What types of data and level of data access should be considered as part of the DRP?**

We urge the Commission to increase access to data to facilitate third party renewable development. We also urge the Commission to make data as transparent as possible. As the De Martini white paper recommends, the Commission should move toward an open grid network:

> "California's distribution system planning, design and investments should move towards an open, flexible, and *node-friendly network system* (rather than a centralized, linear, closed one) that enables seamless DER integration. California's vision for significant DER contribution to resource adequacy and safe, reliable operation of the grid requires a move

[16] USDA Forest Service, Pacific Southwest Research Station. 2009. *Biomass to Energy: Forest Management for Wildfire Reduction, Energy Production, and Other Benefits.* California Energy Commission, CEC-500-2009-080.

to a network system. The evolution to an open platform will involve foundational investments in information, communication and operational systems not seen in existing utility smart grid plans."[17]

10) Should the DRPs include specific measures or projects that serve to demonstrate how specific types of DER can be integrated into distribution planning and operation? If so, what are some examples that IOUs should consider?

BAC, CASA and WM have no comment on this at this time.

11) What considerations should the Commission take into account when defining how the DRPs should be monitored over time?

The Commission should monitor progress against at least the following:

- How the DRPs are helping to meet the RPS;
- How the DRPs are helping to meet AB 32 mandates and goals;
- How the DRPs affect overall system reliability;
- How the DRPs affect ratepayer benefits, as defined by Public Utilities Code section 740.8 and other statutes;
- How the DRPs are helping to meet other state policies, including the Governor's Clean Energy Jobs Plan, plans to reduce wildfire and improve forest sustainability, waste diversion goals, and other policies whose goals include reduction of greenhouse gas emissions, increasing beneficial use of waste and generation of cleaner energy.
- How the DRPs are helping to meet additional state mandates, including the recycling of 75% of its solid waste and achieving a 10% reduction in the carbon intensity of transportation fuel.

12) What principles should the Commission consider in setting criteria to govern the review and approval of the DRPs?

As AB 327 requires, the Commission should maximize ratepayer benefits,[18] which includes, but is not limited to, minimizing costs. The Commission should base review and approval on

[17] *"More than Smart: A Framework to Make the Distribution Grid More Open, Efficient and Resilient,"* prepared by the Resnick Institute, and attached to the OIR as Exhibit B, at page 4.
[18] Section 769(c).

whether DRPs will help California to meet its 2020 and 2050 goals for greenhouse gas reduction, the state's plans for climate resilience (adapting to climate change), clean energy, waste diversion, wildfire reduction and similar policy goals that improve California's environment and create jobs.

13) Should the DRPs include discussion of how ownership of the distribution may evolve as DERs start to provide distribution reliability services? If so, briefly discuss those areas where utility, customer and third party ownership are reasonable?

BAC, CASA and WM have no comment on this at this time.

14) What specific concerns around safety should be addressed in the DRPs?

DRPs should address the following safety issues:

- Worker, customer and public safety;
- Impacts on public safety and infrastructure due to fire, including utility-caused fires and wildfire, and how distributed forest biomass projects can reduce those threats;
- Overall grid reliability and the ability of distributed resources to provide greater system reliability and resilience.

15) What, if any, further actions, should the Commission consider to comply with Section 769 and to establish policy and performance guidelines that enable electric utilities to develop and implement DRPs?

The Commission should incorporate evidence presented in Rulemaking 08-11-005 on ratepayer benefits of wildfire reduction due to forest biomass facilities.[19] Given the substantial costs of wildfire to utility customers – both utility caused fires for which the utilities must reimburse the US Forest Service and CalFire and the impacts of wildfire on utility infrastructure – the data presented in Rulemaking 08-11-005 is important to this Rulemaking as well.

16) Questions about White Paper attached as Appendix B

[19] See, eg, "*California Department Of Forestry And Fire Protection's Pre-Hearing Conference Statement Regarding The Scope And Schedule For Phase 3,"* submitted by CalFire and the State Fire Marshall in R. 08-11-005 on April 18, 2012.

a. Integrated Grid Framework -

BAC, CASA and WM agree with the multi-dimensional framework presented in the De Martini white paper, with one recommended change. "Operational excellence" requires more than just "emissions management." In order to meet the goals of AB 32, air quality requirements and other state policies, the goal should be "emissions reduction," not just "emissions management."

b. Integrated Distribution Planning –

BAC, CASA and WM agree with the De Martini white paper's call for more integrated and holistic Distribution Planning, but the white paper omits numerous values that would make for a more holistic approach. Instead, the white paper focuses heavily on locational benefits and optimal location, without discussion of how those should be defined for fixed location resources, such as bioenergy from dairy, landfill or wastewater treatment facilities. Maximizing ratepayer benefits includes many values beyond direct benefits to the grid and cost minimization. BAC, CASA and WM recommend taking the principles of the white paper and expanding the factors to be included in a truly holistic approach to integrated distribution planning.

c. Distribution System Design-Build -

BAC, CASA and WM agree with the recommendations on Distribution System Design-Build. In particular, we support the recommendation to accelerate the adoption of flexible generation resources. As the white paper notes,

> "It is essential for California that well defined technology adoption onramps into operational deployment are established for grid infrastructure and operational systems technology. This would include lessons learned and shared information about technology testing and pilots. Likewise, it is important that scale pilots to demonstrate operational readiness of a wide range of flexible distributed resources (e.g., dispatchable generation, energy storage, electric vehicles and customer load) are conducted soon."[20]

[20] White Paper at page 15.

d. Integrated Distribution System Operations –

BAC, CASA and WM urge the Commission to more fully explore the potential for flexible generation resources to provide distributed generation. While we agree with many of the comments and recommendations on Integrated Distribution System Operations, most seem focused on the need to integrate intermittent resources and fail to plan for higher levels of integration of flexible generation resources such as small-scale bioenergy.

e. Integration of DER into Operations -

BAC, CASA and WM agree with the recommendations in this section. We particularly agree with the statement on Open Access Participation:

> "Reducing the barriers to participate in these new services is a fundamental factor to successfully integrate flexible DER at the scale envisioned in California. It is vital that the current barriers involving participation, complex and expensive measurement and verification schemes and related settlement processes be simplified."[21]

f. Integrated Grid Roadmap

BAC, CASA and WM recommend the following addition to the Integrated Grid Roadmap:

- Both Distribution Planning and Distribution Design should include elements focused on whether the DPR will meet statutory/policy goals such as SB 1122 and other similar policies

Finally, we urge the white paper authors to include a more comprehensive list of Relevant California Policies in Appendix A. In particular, the list should include SB 1122, which requires procurement of 250 megawatts of distributed bioenergy. The list should also include relevant California policies to increase waste diversion (ie, AB 939, AB 341), reduce wildfire and increase forest carbon sequestration, and other state mandates that distributed generation can help to meet.

[21] White Paper at page 23.

DATED: September 5, 2014

Respectfully submitted,

/s/ Julia A. Levin

JULIA A. LEVIN
Executive Director
Bioenergy Association of California
PO Box 6184
Albany, CA 94706
510-610-1733
jlevin@bioenergyca.org

VERIFICATION

I am a representative 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 5th Day of September, 2014, at Kensington, California.

/s/ Julia A. Levin

JULIA A. LEVIN
Executive Director
Bioenergy Association of California
PO Box 6184
Albany, CA 94706
510-610-1733
jlevin@bioenergyca.org

ATTACHMENT A

(Letter from CNRA Secretary John Laird to CPUC President Michael Peevey,
dated April 26, 2012)

CALIFORNIA natural resources AGENCY

EDMUND G. BROWN JR., Governor
JOHN LAIRD, Secretary for Natural Resources

April 26, 2012

Michael Peevey, President
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Re: Support for Forest-Based Biomass Procurement

Dear President Peevey:

I am writing to urge the California Public Utilities Commission (CPUC) to require investor Owned Utilities to procure 75 to 100 megawatts of biomass energy from facilities in high fire risk areas of the state. Thank you for meeting with CalFire and the U.S. Forest Service to discuss the critical role of forest-based biomass in reducing wildfire risks. In order to spur the development of small-scale forest biomass facilities to reduce wildfires, I urge the CPUC to require procurement of forest biomass energy from high fire risk areas. A procurement requirement of 100 megawatts over the next five to 10 years would significantly reduce fire risks on an additional 60,000 acres per year.

Strategically located forest biomass facilities can significantly reduce wildfire dangers to public health and safety, utility infrastructure and other property, and the environment. Those risks are increasing due to a changing climate and include: drought, increased temperatures and winds, and invasive forest pests. Forest treatments that reduce excess fuel loads are proven to reduce wildfire risks and impacts. A procurement requirement for forest biomass will also reduce the utilities' environmental compliance costs by reducing greenhouse gas emissions and other air pollutants. Finally, a procurement requirement for forest biomass will save ratepayers money by reducing the costs of fire to utilities, including the direct costs of utility-caused fires, fire impacts on utility facilities, the costs of fire insurance, impacts on watersheds and water quality, hydropower supply, and more.

For all these reasons, I urge the CPUC to require the utilities to procure 75 to 100 megawatts of biomass energy from facilities in high fire risk areas of the state.

Sincerely,

John Laird,
Secretary for Natural Resources

cc: Cliff Rechtschaffen, Senior Adviser to Governor Brown
Ken Pimlott, Director, CalFire
Randy Moore, Regional Forester, U.S. Forest Service

1416 Ninth Street, Suite 1311, Sacramento, CA 95814 Ph. 916.653.5656 Fax 916.653.8102 http://resources.ca.gov