



June 14, 2013

Adam Schultz
Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

RE: CPUC Rulemaking 11-05-005

Mr. Schultz,

This letter is intended to provide further information per your request to the R.11-05-005 service list regarding the "Small-Scale Bioenergy: Resource Potential, Costs, and Feed-in Tariff Implementation Assessment" report ("Report") prepared for the California Public Utilities Commission's Energy Division by consulting firm Black & Veatch.

The Woody Biomass Utilization group based at the UC Berkeley Center for Forestry conducts research and outreach focused on understanding the resource potential, technology, and markets for wood bioenergy in California. The following are recommendations for the improvement and clarification of several issues regarding implementation for SB1122 as characterized by the Report.

(1) County-level interconnection assessment.

First and foremost, the CPUC should make publicly available all datasets used in this analysis. This ensures transparency and verifiability of the results presented in the report.

I reference my earlier letter to the service list to restate the necessity to improve the modeling approach to establish areas with interconnection issues. I direct your attention to that letter¹ for specific methodological recommendations. The problematic nature of the approach taken in the report is materially significant to the SB1122 proceedings for the following reasons.

The report is intended to inform the Commission on important considerations regarding the implementation of SB1122². The map in Figure 4-3³ clearly suggests, as does the text in preceding paragraphs that interconnection issues will be greater in counties where the ratio of resource potential to interconnection potential is greatest. The ratio does **not** reflect potential interconnection issues. As the report states in section 3-10:

"Information from these maps shows that interconnection issues will be very site specific. Counties identified as red may not necessarily have interconnection issues if the appropriate project location is selected."

Thus the use of this ratio in the context of the report actually is counteractive to the intent of the report in that it mischaracterizes the potential for interconnection issues as the county level.

As an example, using the revised method proposed in the previous letter, availability is 5 MW for Plumas County, 35 MW for Humboldt County, and 22 MW for Mendocino County. The sum of just these three counties shows existing

1 <http://goo.gl/BRyf9>

2 Section 2-1

3 "Interconnection and Resource Availability Comparison"



interconnection capacity and existing resource for 62MMV of forest-sourced biomass suggesting that PG&E alone, just in these three counties could satisfy the SB 1122 requirement for forest-sourced material. Modifying this analysis is particularly important because the current analysis shows these three counties to be the most constrained.

(2) Resource availability

The lack of economic filter on resource supply characterizes the availability of forest residues for bioenergy. The LCOE model assumes a cost for feedstock procurement however there is no clear assumption as to the availability of the resource at the specified cost.

An additional economic screen could achieve this filter to provide resource availability within the assumed price range for forest-sourced biomass (less than \$60/BDT per comments provided at the 5/2 CPUC workshop). Based on research estimating procurement costs of forest residues for biofuel production at existing petroleum refineries in the state (Tittmann, Parker, & Ogden, 2008), the most significant component of biomass harvesting costs prior to on-road transport is yarding. Yarding distance is the distance the harvested material must travel to reach a road suitable for loading high capacity on-highway chip vans. The estimated cost of yarding from above study is \$22/BDT-mi. Therefore, a 2 mile buffer from the nearest available road should capture the cost-effective available biomass. Analysis of proximity to existing road networks capable of supporting chip vans meeting California's Gross Vehicle Weight criteria is a critical aspect in establishing technically and economically available wood biomass feedstocks in the state. An additional source for estimating economically available feedstocks the wood biomass component (Downing et al., 2011; Nelson, Skog, Mallory, Rummer, & Barbour, 2008) of the Billion Ton study which makes publicly available supply curves by county on the US Dept of Energy Bioenergy Knowledge Discovery Framework website⁴.

Thank you for the opportunity to provide comment on this important proceeding.

Regards,

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References

- Downing, M., Eaton, L. M., Graham, R. L., Langholtz, M. H., Perlack, R. D., Turhollow Jr, A. F., Stokes, B., et al. (2011). U.S. Billion-Ton Update: Biomass Supply for a Bioenergy and Bioproducts Industry. doi:10.2172/1023318
- Nelson, R., Skog, K., Mallory, M. P., Rummer, R., & Barbour, R. J. (2008). *Strategic Assessment of Bioenergy Development in the West: Biomass Resource Assessment and Supply Analysis for the WGA Region* (p. —).
- Tittmann, P., Parker, N., & Ogden, J. (2008) *California Biomass Supply Potential*. Retrieved from <http://goo.gl/CkdO5>

4 <https://bioenergykdf.net/content/billiontonupdate>