

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

CLEAN COALITION COMMENTS ON SECOND ASSIGNED
COMMISSIONER'S RULING ISSUING PROCUREMENT REFORM
PROPOSALS AND ESTABLISHING A SCHEDULE FOR COMMENTS ON
PROPOSALS

Tam Hunt
Attorney for:
Clean Coalition

Kenneth Sahn White
Director, Policy & Economics
Clean Coalition

16 Palm Ct
Menlo Park, CA 94025
(805) 214-6150

November 20, 2012

CLEAN COALITION COMMENTS ON SECOND ASSIGNED
COMMISSIONER'S RULING ISSUING PROCUREMENT REFORM
PROPOSALS AND ESTABLISHING A SCHEDULE FOR COMMENTS ON
PROPOSALS

The Clean Coalition respectfully submits these comments on the SECOND ASSIGNED COMMISSIONER'S RULING ISSUING PROCUREMENT REFORM PROPOSALS AND ESTABLISHING A SCHEDULE FOR COMMENTS ON PROPOSALS, filed October 5, 2012.

The Clean Coalition is a California-based nonprofit organization whose mission is to accelerate the transition to local energy systems through innovative policies and programs that deliver cost-effective renewable energy, strengthen local economies, foster environmental sustainability, and enhance energy security. To achieve this mission, the Clean Coalition promotes proven best practices, including the vigorous expansion of Wholesale Distributed Generation (WDG) connected to the distribution grid and serving local load. The Clean Coalition drives policy innovation to remove major barriers to the procurement, interconnection, and financing of WDG projects and supports complementary Intelligent Grid (IG) market solutions such as demand response, energy storage, forecasting, and communications. The Clean Coalition is active in numerous proceedings before the California Public Utilities Commission and other state and federal agencies throughout the United States in addition to work in the design and implementation of WDG and IG programs for local utilities and governments.

I. Discussion

The Clean Coalition supports the Assigned Commissioner's Ruling's goal to (p. 2) "streamline the RPS contract review process, increase the transparency of the Commission's review of RPS procurement, establish clear standards for this

review process, issue Commission determinations on contract reasonableness on a defined timeline, and, generally, to support market certainty in RPS procurement.”

We have promoted, in particular, the Wholesale Distributed Generation (WDG) market segment as the most under-valued market segment for meeting the state’s RPS and climate mitigation goals. We comment here in an attempt to further improve the RPS procedures, and in particular the Least Cost, Best Fit methodology, with respect to WDG.

A. Shortlists to Undergo Tier 3 Advice Letter Review. P. 9

The Clean Coalition supports re-examining the appropriate level of review for IOU RPS shortlists.

B. Defined Timeline for Contract Execution and Approval.

The Clean Coalition agrees with the proposal to require RPS contract execution within one year of being shortlisted and filing of the contract with the Commission within one month of execution, as it will increase certainty in the RPS process and allow better projections of RPS fulfillment with respect to the Project Viability Calculator and related tools.

C. New Standard of Review for Unbundled REC Contracts and IOU Sales of Excess Procurement.

With respect to comparing unbundled REC contracts to “all unbundled REC contracts that were executed in the 12 months prior to contract execution,” (p. 35) it is important to keep the length of such contracts in mind during the comparison because contract prices can change, sometimes dramatically, based on the length of the contract.

Question 21 (p. 35). Is there a methodology that would accurately allow the comparison of unbundled REC contracts to bundled procurement? Please provide a quantitative example.

The value of unbundled RECs is no greater than the cost of bundled procurement minus the marginal cost of associated delivered energy. The state should be seeking the least total cost and unbundled REC prices should be compared to the highest delivered energy value of renewable purchases that would otherwise be avoided through the procurement of bundled energy.

Bundled procurement replaces RECs + non-renewable energy procurement. As such, the value of the RECs is equal to the cost of bundled procurement minus the cost of comparable non-RPS qualifying energy procurement. The state should always be seeking to avoid the most costly procurement first, and should therefore apply the marginal cost of delivered energy, not simply the average cost of procurement.

Comparison of unbundled REC costs should be made against those contracts where there is the **least cost difference** between bundled procurement and non-RPS procurement to establish the value of unbundled RECs, as this would be the least costly alternative for meeting RPS requirements.

For example, if the lowest cost of “as available” bundled energy is \$30/MWh, and comparable non-renewable generation is purchased at \$20/MWh, the REC cost is \$10. However, if bundled energy during peak periods may be procured at \$110/MWh, and the aggregate reliability of such generation is >90% (as is the case for combined solar supplies during summer peak season) and comparably reliable and deliverable non-renewable generation for the same time of delivery was also \$110/MWh, the REC value is provided at no additional cost, and this

should be the starting value for comparison with unbundled RECs. In compliance with LCBF methodology, the cost of delivery must also be added to this starting value to incorporate the total procurement cost for valid comparison. This should include High Voltage and Low Voltage transmission charges, and line and congestion losses, which can be a significant factor in determining the delivered cost of procurement, adding \$15/MWh for transmission charges alone (levelized over a 20-year contract term) relative to generation connected directly to the distribution system. It does not make sense to purchase unbundled RECs if the cost exceeds the lowest price difference between bundled energy purchases and non-RPS qualifying energy purchases, when the total relative cost is considered.

In addition, it should be recognized that unbundled RECs carry no associated value in relation to broader policy goals: The energy associated with unbundled RECs does not represent actual demand being met with renewable generation. In fact, the energy may not even be used at all if produced at a time or location in which it is subject to delivery constraints or generation is in excess of deliverable demand. The mere production of renewable energy is not the purpose of the RPS; it is the actual supply of such energy as a percentage of metered customer usage. As such, all other things being equal, bundled RECs should be preferred.

Lastly, it should be noted that unbundled RECs do not provide comparable external value to ratepayers in terms of the economic impact of investment and development, or reductions in regulated emissions and their associated compliance and health costs.

D. New Independent Evaluator Report Template.

We support the new RPS IE template recommendations (p. 36).

E. Least Cost, Best Fit methodology

24. Please describe how the Commission should implement each of the four specific topics listed in Section 399.13(a)(4)(A). Please include quantitative examples where relevant.

The Clean Coalition is strongly supportive of revising the Least Cost, Best Fit (LCBF) methodology, as required by new Public Utilities Code section 399.13(a)(4).

Section 399.13(a)(4)(A) states:

(4) The commission shall adopt, by rulemaking, all of the following:

(A) A process that provides criteria for the rank ordering and selection of least-cost and best-fit eligible renewable energy resources to comply with the California Renewables Portfolio Standard Program obligations on a total cost basis. This process shall take into account all of the following:

(i.) Estimates of indirect costs associated with needed transmission investments and ongoing electrical corporation expenses resulting from integrating and operating eligible renewable energy resources.

(ii.) The cost impact of procuring the eligible renewable energy resources on the electrical corporation's electricity portfolio.

(iii.) The viability of the project to construct and reliably operate the eligible renewable energy resource, including the developer's experience, the feasibility of the technology used to generate electricity, and the risk that the facility will not be built, or that construction will be delayed, with the result that electricity will not be supplied as required by the contract.

(iv.) Workforce recruitment, training, and retention efforts, including the employment growth associated with the construction and operation of eligible renewable energy resources and goals for recruitment and training of women, minorities, and disabled veterans.

Locational Benefits

The ratepayer benefits accruing from WDG in terms of grid stability and deferred grid upgrades, what have been described by the Commission as Locational Benefits (LBs), are the most ripe new issue for inclusion in LCBF and

should be considered under section 399.13(a)(4)(i-iv). Subsections (i) and (ii) both implicate the costs – and necessarily the benefits – of integrating RPS resources into the grid. Evaluating the costs of “transmission investments” (per section (i)) and “the cost impact of procuring the eligible renewable energy resources” (per section (ii)) requires a fuller consideration of LBs in terms of grid stability and deferred grid upgrades, especially when compared to wholesale generation connected closer to load or directly to the distribution grid (WDG). In addition, location can have a very significant impact on both project viability (subsection iii), particularly regarding areas subject to transmission constraints and related uncertainty in interconnection schedules and costs, and on workforce factors (subsection iv) as the state seeks to consider income, employment levels, and investment distribution in procurement, as discussed in the 2012 Draft Integrated Energy Policy Report. The Clean Coalition has been urging the Commission for some time now to add LBs to the LCBF methodology, and to other procurement decisions, and we feel that the time is ripe for a full discussion of LBs in this proceeding.

LBs refer to the ratepayer benefits enjoyed from RPS projects that interconnect to the distribution or sub-transmission grid and thus avoid transmission costs, reduce line losses, and provide other benefits as a result of being located close to load and generally avoiding back flow onto the transmission grid.

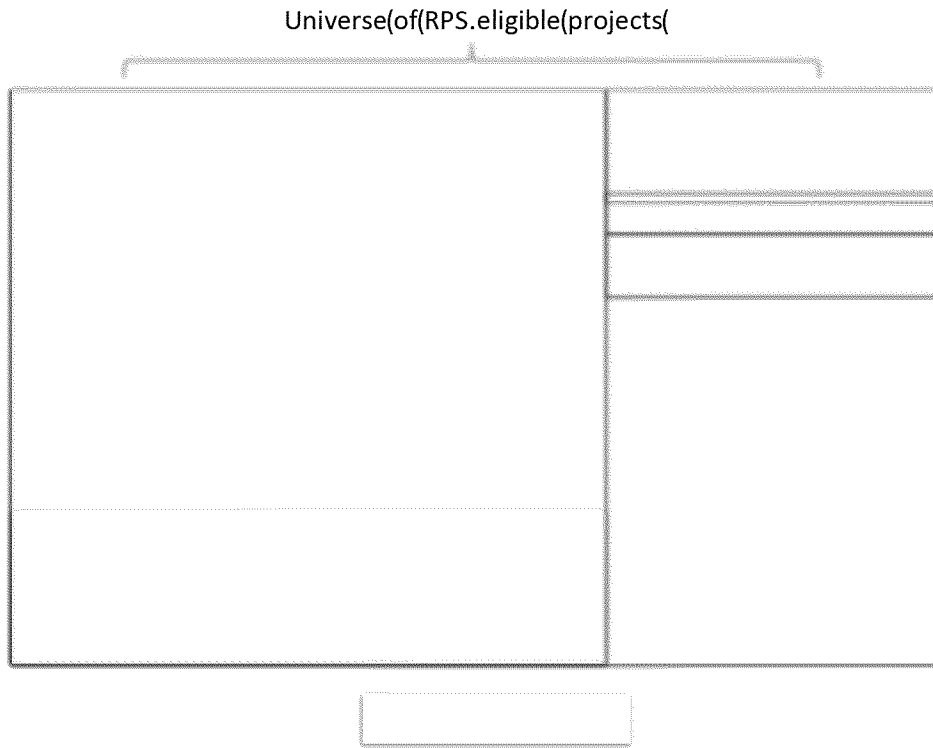
In the present context, LBs should apply to all projects that are RPS-eligible and connect to the sub-transmission or distribution grid. (Sub-transmission is a category that will generally apply only to SCE’s grid and SCE generally defines sub-transmission as those lines between 33 and 220 kV. Sub-transmission is not FERC-jurisdictional.)

While the Commission has in recent years changed procurement programs such that most 20 MW and under projects will be procured through programs other

than RPS RFOs, there are still some WDG projects that will be part of the RPS RFO process, including in particular WDG projects that seek to interconnect to the sub-transmission grid. Moreover, LBs should apply to any projects seeking to interconnect to the sub-transmission grid, whether they qualify as WDG or not. With respect to LCBF, LBs should be added as a ranking criterion for RPS RFO projects on the sub-transmission grid or the distribution grid. Only by fully assessing the ratepayer benefits from WDG can WDG be adequately evaluated with respect to other projects (“rank ordering and selection,” per section 399.13(a)(4)(A)), as is required by the LCBF methodology.

Figure 1 illustrates when LBs should apply, either in terms of providing actual compensation to developers or used merely as a ranking tool (as in the LCBF methodology). The figure is simply a graphical depiction of the various RPS-eligible programs by estimated program size (represented by the size of the box in the diagram) and color-coded to show applicability of LBs.

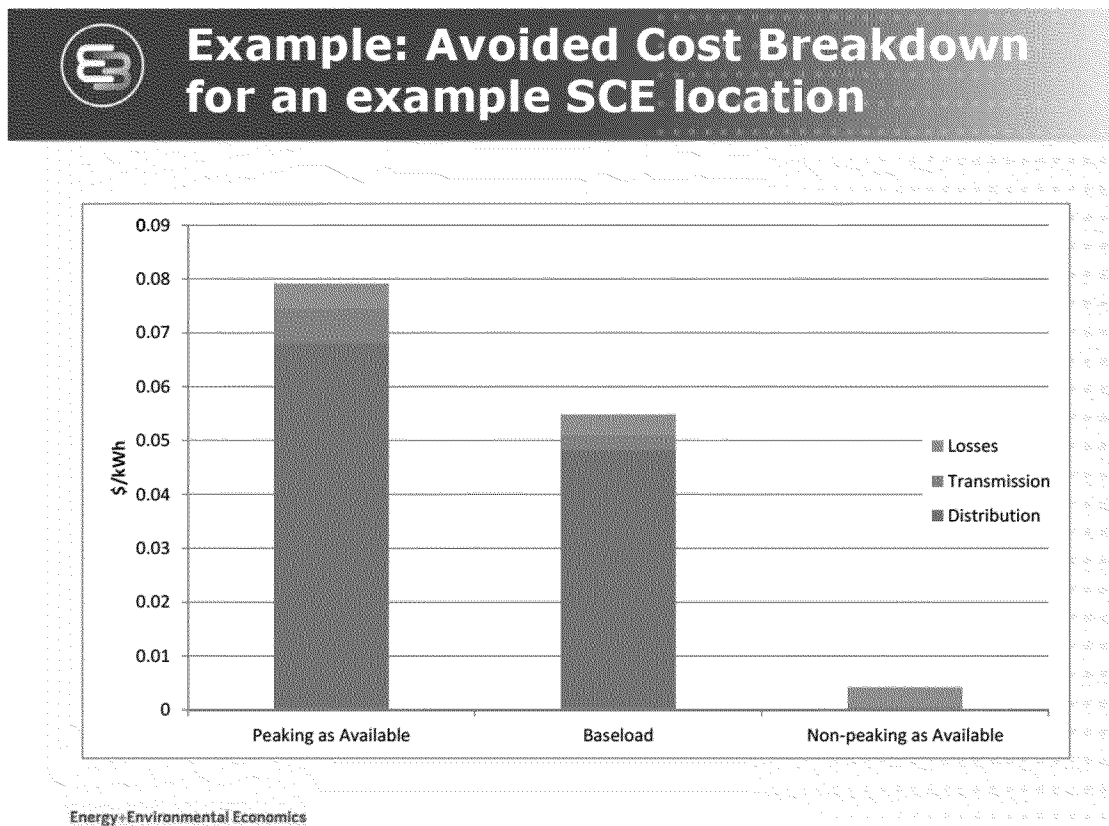
Figure 1. Where LBs should apply (source: Clean Coalition, scales are approximate).



The Commission recently considered LBs in this proceeding in its implementation of SB 32, which led to D.12-05-035, described as a “locational adder.” Commission staff proposed a detailed locational adder during development of the final decision, based on an analysis by E3,¹ as part of the price to be paid to developers under the SB 32 feed-in tariff. Figure 2 shows E3’s calculation for an example SCE location, finding that LBs were almost 8 c/kWh for a peaking, as available (generally solar) facility at that location. The final decision (D.12-05-035) opted, however, to delay including a locational adder until further study was completed. We feel that now is the time to resume and complete this conversation, at least with respect to the LCBF methodology.

¹ <http://www.cpuc.ca.gov/NR/rdonlyres/90AA83C6-1AAC-4D7E-966E-299436C4A6BD/0/E3FITAvoidedCosts9262011.pdf>

Figure 2. E3 analysis for the Commission of locational benefits for an example location in SCE territory.



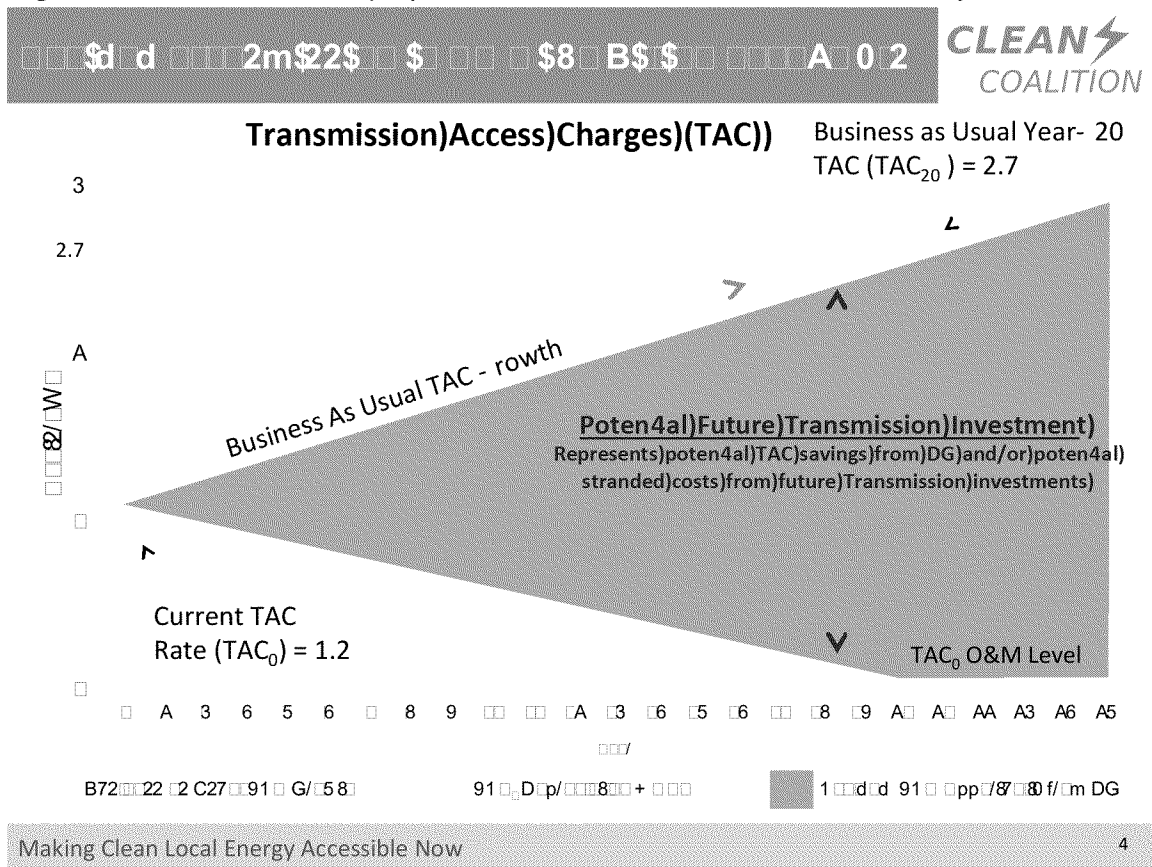
LBs should include, at the least: Transmission Access Charges (TACs), line losses, Local Capacity Requirements (LCR), transmission capacity/flexibility value and transmission development risks.

The E3 report and Commission staff proposal for setting the SB 32 feed-in tariff price is a good starting point for discussing LBs. Specifically, the staff proposal stated: “Generators located in high value locations should receive an additional payment, which should be based on the generator’s product category and the estimated avoided transmission and distribution costs of the generator’s specific location.” Again, in the RPS RFO and LCBF context, no payment is being contemplated for LBs; rather, LBs should be used as a ranking criterion only.

We agree with much of the E3 formulation regarding the locational adder, but we recommend a different formula for the locational adder in the LCBF context. The Clean Coalition feels that E3's proposed methodology fails to capture the full locational benefits of RPS-eligible projects because it doesn't include avoided or deferred transmission costs resulting from the deployment of renewable energy. Specifically, we recommend adding a deferred transmission component to the locational adder, which under E3's formulation includes only sub-transmission deferred investments, distribution grid deferred investments and line losses. The Commission should add Transmission Access Charges (TACs) to this formula, specific to each utility, as calculated by CAISO each year. This data is publicly available and more accurately reflects the full locational benefits than E3's proposal. In short, TACS represent a very good proxy for avoided transmission costs.

TACs are calculated based on the cost paid by each utility to CAISO to maintain the transmission system. This cost is passed on to ratepayers in utility rates. TACs represent the sunk cost of the existing transmission system and change over time as investments in the transmission system change. Today's TACs would go down in coming years if investments in the transmission system were halted now. However, in actuality, TACs will likely go up significantly in the future due to planned investments in new transmission and upgrades to existing transmission lines. At a three percent annual inflation rate, average TACs (across all three IOUs) increase from today's 1.1 c/kWh to 2.7 c/kWh by 2020 (figure 3).

Figure 3. Generalized TAC projections (Source: Clean Coalition and data from CAISO).



The Clean Coalition recommends that the Commission use the actual TACs for each utility, in each year of the RPS contract, as a proxy for the deferred transmission component of LBs. The value should be adjusted each year as CAISO adjusts its TAC calculations. This provides an adjusted and accurate estimate of avoided transmission costs, in each year of the RPS contract, as a key component of LBs.

We recommend that all RPS RFO projects connecting to the distribution grid or sub-transmission grid be assessed for LBs under the LCBF ranking process. The c/kWh LB calculation for each project should then be used as a quantitative tool to show the value of the proposed project in relation to other bids.

In sum, the Clean Coalition proposes the following:

- Locational Benefits (LBs) should be added as a new ranking criterion to the LCBF methodology
- All RPS RFO projects that connect to the distribution grid or sub-transmission grid should be assessed for LBs, in terms of a c/kWh calculation
- LBs should include TACs, line losses, Local Capacity Requirements (LCR), transmission capacity/flexibility value and transmission development risks.
- The c/kWh LB calculation should be used to compare these projects to other RPS RFO bids as a ranking tool

We look forward to fleshing out these ideas further in this proceeding.

Project viability criteria

P. U. Code section 399.13(a)(4)(A)(iii) requires using project viability in the LCBF methodology.² The Clean Coalition supports using a project viability calculation to implement this new language but urges the Commission to reject or significantly revise the current Project Viability Calculator (PVC) because of many flaws with that model. For example, one of the risks not explicitly mentioned in the PVC is the risk that the required transmission line(s) for new projects won't be built in time to meet the planned COD. This is a major point in favor of WDG because WDG projects don't, by definition, require new transmission lines. Rather than use the PVC, we recommend either creating a substantially revised and improved PVC or that the IOUs should publish and explain their internal viability calculators. Given the very high contract failure rates for renewables projects, it seems that there is much room for improvement in the PVC and the IOU internal calculators.

² [P.U.C. Code section 399.13\(a\)\(4\)\(A\)\(iii\)](#) appears to be the source of the language requiring the use of project viability in the LCBF methodology. We will focus, however, on project viability more generally.

25. For each of these four topics, please compare your implementation proposal with the existing LCBF methodology as set out in D.04-07-029 and applied in the 2011 RPS Procurement Plans approved in D.11-04-030.

The existing LCBF methodology does not include consideration of LBs. We strongly recommend that it be revised to include LBs, as detailed above.

26. For each of these four topics, and for your LCBF proposal as a whole, please explain how your proposal would affect costs ultimately paid by ratepayers for RPS-eligible energy, using quantitative examples where relevant.

Ratepayers will save money through rates because including LBs in the LCBF will rank projects more highly that take advantage of the existing grid and rely less, or not at all, on the transmission grid. This translates to direct cost savings because TACs and other LB components add up to real financial impacts for ratepayers.

Evaluating the relative cost of projects through specific additions or upgrades to the transmission system that are required to accommodate individual projects, as is current practice, fails to capture the full transmission delivery cost of projects. Use of valuable existing transmission infrastructure is also required, increasing congestion and using up capacity, ultimately contributing to the need for more investment in the future. Ideally, projects would be compared based on the value of existing infrastructure used for delivery of energy, even if only on a per mile standardized basis. At the very minimum, differentiation should be made based on the assessed delivery charges born by ratepayers for both high voltage (HV) and low voltage (LV) transmission, as reflected in TACs or, in the case of SCE's own LV system, a comparable charge. For example, when comparing a project that incurs both HV and LV TACs against one serving regional load using only

low voltage transmission, the difference in delivered energy costs for ratepayers is currently about \$6/MWh, or closer to \$9 if the levelized value of future increases in TAC charges over a long term contract are considered.

27. For each of the four topics, and for your LCBF proposal as a whole, please explain how your proposed criteria would contribute to the efficiency of the RPS procurement process.

As discussed above, adding LBs to the LCBF will result in ratepayer savings, making the RPS procurement process a more efficient allocation of ratepayer dollars. While precise comparison of direct and indirect costs would be most accurate, standardized values based on such factors as generation profiles, distance, zones, or TAC rates may be applied to efficiently manage the process of LCBF during procurement evaluation.

28. What additional topics, if any, should be part of the LCBF process? Please provide a detailed discussion of each topic, using quantitative examples where relevant.

We have no additional topics to suggest at this time.

II. Conclusion

The Clean Coalition appreciates the chance to provide feedback to the Commission on a revised RPS procurement process.

Respectfully submitted,

TAM HUNT

A handwritten signature in black ink, appearing to read 'TH', with a long horizontal flourish extending to the right.

Attorney for:
Clean Coalition
2 Palo Alto Square
3000 El Camino Real, Suite 500
Palo Alto, CA 94306
(805) 214-6150

Dated: November 20, 2012

VERIFICATION

I am an attorney for the Clean Coalition and am authorized to make this verification on its behalf. I am informed and believe that the matters stated in the foregoing pleading are true.

I declare under penalty of perjury that the foregoing is true and correct. Executed this 20th day of November, 2012, at Santa Barbara, California.

Tam Hunt

A handwritten signature in black ink, appearing to read 'TH', with a long horizontal stroke extending to the right.

Clean Coalition