

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Continue
Implementation and Administration of California
Renewables Portfolio Standard Program

R. 11-05-005
(Filed May 5, 2011)

**COMMENTS ON THE ADMINISTRATIVE LAW JUDGE'S RULING REQUESTING
COMMENTS ON PROCUREMENT EXPENDITURE LIMITATIONS FOR THE
RENEWABLES PORTFOLIO STANDARD PROGRAM**

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INTRODUCTION

Sierra Club California respectfully submits these comments in response to ALJ Simon’s January 24, 2012 ruling requesting comments on the procurement expenditure limitations for the renewables portfolio standard program. Sierra Club California has responded to each of the questions, but notes that the procurement expenditure limitation is inextricably linked to RPS procurement plans. Indeed, the statute requires the Commission to rely on “the most recent renewable energy procurement plan.”¹ Sierra Club California anticipates that Parties will have the opportunity to comment on the design of these plans shortly, and has discussed opening considerations regarding these plans in the context of the procurement expenditure limitation in light of their role in establishing the procurement expenditure limitation.

1. Section 399.15(c) provides that a procurement expenditure limitation must be established “for each electrical corporation.” How should the procurement expenditure limitation methodology reflect this instruction?

The statute requires the expenditure limitation to be established for “each electrical corporation,” but it is reasonable for the Commission to direct a common methodology to allow for accessible comparison across each of the IOUs. The methodology should be substantially the same, although the data inputs to analyze using the methodology must be IOU-specific to comply with Section 399.15(c). In many respects the inputs will be the same or similar, or be derived using the same investigatory approach. For example, the amount of combined heat and power (“CHP”), energy efficiency and demand response inputs that must be achieved can be

¹ Public Utilities Code Section 399.15(c)(1).

derived from state level studies and required assumptions but as applied to each IOU, should be based on their proportion of retail sales to total state level sales.

One key difference between each of the IOUs is that each IOU currently has a different renewable portfolio standard (RPS) percentage level of achievement. The Commission should assume for the purposes of the methodology that at the end of 2013 all IOUs will have achieved at least a 20% RPS but also allowing them to input actual RPS achieved if it exceeds the 20% minimum required. Doing so would then require a smaller gap of needed new procurement to meet the 33% and lower the costs. The Commission should also consider that load growth, may be different in each IOU but in aggregate must total to state assumptions as set by the CEC. The methodology should allow for inputs that can reflect evidence-based differences.

2. Section 399.15(c)(2) provides that “the costs of all procurement credited toward achieving the renewables portfolio standard” should count towards the procurement expenditure limitation.

Please identify the types of procurement that should be included in this requirement and identify any special rules or methods that may be required to account for the costs. Please consider at a minimum the following situations:

- Procurement from RPS-eligible qualifying facilities under the federal Public Utility Regulatory Policies Act of 1978 (Public law 95-617);**
- Procurement pursuant to the renewable auction mechanism established by D.10-12-048;**

- Procurement pursuant to the feed-in tariff program established by SB 32 (Negrete McLeod), Stats. 2009, ch. 328;
- Procurement from bilaterally negotiated contracts, not part of a utility solicitation for RPS-eligible generation resources;
- Procurement by means of utility-owned generation.

The listed situations are eligible for RPS credit, and unless a renewable energy credit (REC) has been credited elsewhere, should count towards the procurement expenditure limitation. A special method should potentially be considered in the case of procurement of RECs. The procurement expenditure limitation should only count the cost toward procurement of RECs.

Please identify all “costs” that are implicated by this requirement, taking into account those costs that are excluded by Section 399.15(d)(3).

Should the statutory characterization of “the costs of all procurement credited toward achieving the renewables portfolio standard” be interpreted as including:

- Estimates, made at the time a procurement contract is approved by the Commission, of the costs that will be incurred over a period of time.
- should the period of time be the entire period of the contract?
- should it be some other time period?

Please describe and justify the choice of another period; or

- A record of actual expenditures by the utility for the procurement contract over a period of time.

- should the period of time be the entire period of the contract?

- should it be some other time period?

Please describe and justify the choice of another period.

- how should the actual expenditures be determined?

The annualized costs of procurement of new renewable energy resources from their delivery date to 2020 should count toward the procurement expenditure limitation. Expenses after 2020 are too speculative when setting the cost limitation. To best align with the target date of 33 percent renewable portfolio standard by 2020, and to facilitate an annualized approach to avoid the inconsistencies of contracts that extend for varying amounts of time, there should be one cumulative procurement expenditure limitation through 2020. This could be derived by adding the forecast annualized costs of new renewables from 1/1/14 through 12/31/2020.

Some contracts pursuant to PURPA may include years prior to the current program, and many contracts will have a term that extends beyond 2020. To be certain that the costs implicated are the actual costs for new generation that apply to the RPS program through 2020, the Commission should evaluate on an annual basis the costs that are attributed to the RPS program in a given year, and may count toward the procurement expenditure limitation.

To ensure that the Commission is managing the IOU administration of the RPS program and that the IOUs are managing their costs well against the forecast cost cap, the Commission

should receive up to date information on actual costs. We recommend at least an annual review of the actual cost performance against the procurement expenditure limitation, or more frequent reporting at the discretion of the Energy Division. The Commission should publically report at least annually the following:

1. Actual expenditures incurred in each year and in aggregate by IOU and in total
2. A comparison of these actual expenditures to projections and the variances between them.

The Commission can utilize this information to manage the IOUS to alter practices as needed to contain cost to within the determined cost limitation cap to ensure program success.

The components of cost to be included in the cost of renewable energy sources should include standard items typically used to arrive at total Levelized Cost of Energy (LCOE) such as have been used in the CECs Comparative Costs of California Central Station Electricity Generation, January 2010 on in the National Renewable Energy Laboratory (NREL) CREST Cost of Energy Models. Certain specific indirect expenses should be excluded as provided by Section 399.15(d)(3), such as sale of excess energy. Recommended data sets should be adjusted to comply with the statute. .

Section 399.15(d)(1) calls for the limitation to be set at a level preventing “disproportionate rate impacts,” and Section 399.15(d)(2) requires that procurement *credited* toward achieving the RPS be counted.² To evaluate what is “disproportionate” requires a comparable reference point, such as an annualized approach to assessing the costs of a contract.

² Emphasis added.

Sierra Club California recommends that the Commission update, modify and utilize the methodology created in the LTPP planning process.³ A reference scenario could be created using a business-as usual scenario, informed by the prior 20% RPS program. Some of the inputs into this reference scenario should include elements from the trajectory scenario concerning already approved PPA contracts, implementation of existing legally required programs including, for example, the RAM, Section 399.20 FIT program, and the IOU PV solar programs. A new 33% RPS scenario could be created guided by the Governor's Clean Energy Jobs plan, calling for at least 8,000 MW of large scale generation and 12,000 MW of distributed generation, and recognized in the lead Commissioner's Draft of the 2012 Integrated Energy Policy Report (IEPR).⁴

- How should RPS procurement costs incurred prior to the implementation of the procurement expenditure limitation required by SB 2 (1X) be addressed in the procurement expenditure limitation methodology?

Procurement costs incurred prior to the passage of SB 2 (1X) were vetted by a wholly different cost containment mechanism. The prior RPS law required 20 percent renewable energy procurement by 2010, with provisions to extend to 2013. For the purposes of the methodology, the Commission should regard the 20% required by the prior law and Commission implementing orders as the starting point, and not include it in the procurement expenditure limitation, and for new procurement costs above 20% in furtherance of the 33% target required by SB 2 (1X) to

³ See *Long Term Procurement Plan*, Attachment 2, Standardized Planning Assumptions (Part 2 – Renewables) for System Resource Plans, Filed 2/10/11.

⁴ CEC Docket # 12-IEP-01, 2012 *Integrated Energy Policy Report Update*.

apply toward the procurement expenditure limitation. This is supported by the grandfathering of contracts entered into prior to June 1, 2010, and the initial compliance period starting at an average of 20% for the period of January 1, 2011 through December 31, 2013. The legislature recognized that effective law prior to the passage of SB 2 (1X) required IOUs and ESPs to increase renewable energy procurement to 20% of retail sales by December 31, 2010, with flexible compliance mechanisms that can extend the deadline to the end of 2013.⁵ Moreover, the legislature understood that the IOUs “are expected to achieve the 20% RPS in the 2011-2012 timeframe.” The Assembly Committee Analysis of SB 2 (1X) also recognized a “20% RPS reference case” as the current law”⁶ The recognition of the 20% reference case demonstrates unequivocal legislative intent that the prior existing law was to result in a 20% RPS program, and the purpose of the new law was to result in a 33% RPS program. The procurement expenditure limitation applies to the costs beyond 20% in furtherance of the 33% RPS program.

- How should the costs of procurement from utility-owned generation be addressed in the procurement expenditure limitation methodology? Please discuss any issues not addressed in response to other questions.

We recommend no difference at this time. Costs should be annualized, and evaluated cumulatively through 2020.

⁵ Senate Energy, Utilities and Communications Committee Analysis, February 15, 2011, p.1.
http://leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sbx1_2_cfa_20110214_141136_sen_comm.html

⁶ Assembly Committee on Utilities and Commerce Analysis, March 3, 2011. p. 9-10.
http://leginfo.ca.gov/pub/11-12/bill/sen/sb_0001-0050/sbx1_2_cfa_20110302_151611_asm_comm.html

3. Should the procurement expenditure limitation methodology provide a single limitation for the time period 2011-2020?

Yes. The limitation should start with an assumed 20% RPS at the base year and with adjustments as noted above, and continue through 2020.

4. Should the procurement expenditure limitation methodology provide a limitation for a different time period or set of time periods?

- **Annual.**
- **Each compliance period through 2020 (i.e. 2011-2013; 2014-2016; 2017-2020).**
- **The period 2011-2015 and the period 2016-2020.**
- **The year 2020.**
- **The entire time an RPS procurement obligation has been in place (i.e., beginning in 2003).**
- **Some other time period. Please specify and explain the reasons for the time period proposed.**

The Commission should avoid a constraint unless it provides a necessary purpose to achieving the RPS program. The incremental costs of renewable energy procurement are also expected to be higher in the beginning in the case of solar PV electricity products. Sierra Club California recommends that there be a single limitation for the year 2020, though it may be useful for there to be guidance and reporting to ensure that the procurement expenditure

limitation is not exhausted early. Any interim year guidance should consider the effects of market transformation with economies of scale, and associated declining costs. Since these cost decline trends are uncertain as to the degree and pace, we recommend that their role be focused on guidance.

5. Since RPS procurement obligations continue indefinitely, how should the procurement expenditure limitation methodology treat RPS procurement in the years after 2020?

It is premature to speculate on a quantitative level the costs of electricity procurement after 2020. The cost of natural gas is expected to rise significantly, and costs of renewable electricity are expected to decline. The Governor's signing statement also notes that 33% RPS may be achieved by 2017, and that a 40% RPS target "in the near future" should be envisioned.⁷ Indeed, the legislature has previously accelerated the RPS when passing SB 107 (Simitian) in 2006, accelerating the 20% requirement to 2010, after the legislature had set the 20% by 2017 goal in 2002 (SB 1078, Sher). Given the history of legislative direction as the RPS program continues, and the uncertainty in electricity cost trends, it is too speculative to design a procurement expenditure limitation in the years after 2020. The Commission should revisit this question in 2017.

6. Section 399.15(c)(1) provides that, in establishing the procurement expenditure limitation, the Commission shall rely on, among other things, "the most recent renewable energy procurement plan."

⁷ Governor Brown's signing statement available at http://gov.ca.gov/docs/SBX1_0002_Signing_Message.pdf

- What elements of an IOU's RPS procurement plan should be used in establishing the procurement expenditure limitation methodology?

Each RPS procurement plan should specify a projection for all eligible renewable generation capacity by factors that may differentiate cost, and in total. These factors include technology, project size classifications, expected generation in kWh, LCOE costs and expected online dates.. The plan should also specify expected capacity factors, expected online dates, and cost estimates for each of these factors. . The plan should identify the distributed generation to be procured. The plan should identify which specific contracts were entered into prior to the effective date of SB 2 (1X) , and identify projects procured pursuant to statutorily mandated programs so that they can be excluded from the procurement expenditure limitation methodology. All costs that are generally included in a calculation of levelized cost of energy (LCOE) should generally be used in developing the procurement expenditure limitation methodology.

The RPS procurement plan should take into account risk factors that could have potential effects on relevant issues including expected procurement costs, contract failure rates and potential delivery delays. These risk factors include transmission carrying capacity, including the expected online date of new transmission that is required to deliver planned renewable energy resources. The plan should consider what generation may be at risk of stoppage, delay, or cancellation should the transmission project fail to come online.

When considering risks associated with projects dependent on new transmission lines and upgrades, the Commission should implement the principles required by Public Utilities Code Section 1005.1. The Section requires consideration of conditions prior to finding that a new

transmission line is necessary to facilitate achievement of the renewables portfolio standard. The Commission must consider (1) utilization of rights-of-way by upgrading existing transmission facilities, (2) the expansion of existing rights-of-way, (3) creation of new rights-of-way only when justified by environmental, technical, and economic reasons, and (4) the availability of cost-effective alternatives to transmission, such as energy efficiency measures and distributed generation. These principles, particularly the consideration of cost-effective alternatives, would improve the implementation of bid evaluation to ensure a least cost-best fit methodology.

The plans should consider the procurement content category requirements when evaluating the contingencies in renewable energy procurement. RPS plans should identify the additional distributed generation capacity or other capacity that it are planned as a contingency against current rates of project failure. The California Energy Commission has identified a project failure rate of 40 percent, including delays.⁸

RPS procurement plans should be consistent with the Governor's Clean Energy Jobs Plan target of 12,000 MW of distributed generation (DG). DG projects can generally be built more reliably and quickly, can be delivered on a defined time schedule, are permitted more quickly, and are not subject to transmission construction-dependent delays or failures. The plans should identify how they are incorporating DG strategies as a means to minimize the risk of project failure. The plans should identify how they will manage integration of a portfolio of renewable resources in such a way as to minimize or avoid new gas-powered generation. The plans should discuss for creating a balanced portfolio of renewables including such resources as geothermal as a baseload resource, complementary solar and wind, how it will improve forecasting of generation from wind and solar plants, how it can utilize improved and highly sophisticated

⁸ California Energy Commission, "Renewable Power in California: Status and Issues" p. 6. December 2011. CEC-150-2011-002-LCF.

computerized balancing software to more effectively manage balancing with existing resources, what storage strategies it will use such as with batteries for energy system storage, environmentally compatible pumped storage, and other portfolio integration and optimization strategies. The plan should also reference how the deployment of its smart grid plan will increasing support the integration of increasingly higher levels of renewables, including intermittent renewables. This should include how it will upgrade distribution circuits in a prioritized way in high-DG potential areas (e.g. industrial warehouse districts with lots of rooftop space, etc.) to accommodate two-way power flow and other upgrades so as to essentially more remove capacity limits of those circuits to new generation. Plans could also describe how other components of its smart grid plan will better facilitate balancing with demand response, two-way generation and load monitoring systems, etc.

Another contingency the plan should consider is the decommissioning of fossil fuel capacity, and the expected renewables that will be required as existing plants are upgraded and taken offline, or decommissioned.

- Should the methodology include a mechanism for updating the limitation with information from the IOU's most recent RPS procurement plan?

Yes. There should be a true-up process, with an update not just from the procurement plan, but actual data on project costs to ensure review so that the expenditure limitation methodology is sufficient to achieve the 33% RPS. The methodology should incorporate the contingencies discussed above, and incorporate any costs that may be associated with these contingencies.

- Should the methodology use information from the most recent RPS procurement plan available at the time the Commission adopts the methodology, but not provide for periodic updates from more recent RPS procurement plans?

No. The Commission should generally use the most up to date information possible to ensure accuracy in its implementation of the RPS Program, and update the methodology to reflect the updated data. To provide for an adequate public process, information added to the methodology's inputs may need to be vetted in the RPS proceeding. We recommend updating the data inputs at least annually. However, we recognize that the Commission should balance this against the risk of creating uncertainty in the renewables market, which could have the effect of increased costs, due to perceived increase in financing risk. Further comment should be considered on this issue.

7. Section 399.15(c)(2) provides that, in establishing the procurement expenditure limitation, the Commission shall rely on, among other things, "procurement expenditures that approximate the expected cost of building, owning, and operating eligible renewable energy resources."

- What sources of data should be used to develop this approximation? Please provide specific examples.

The Commission should consider California Energy Commission (CEC) reports on levelized cost of energy (LCOE), such as the 2009 IEPR Cost of Generation Report,⁹ which will need to be updated, and further differentiated by technology and project size to account for changes and differences in product markets. The Commission should also evaluate the accuracy of financing and project profit assumptions. For relevant portions of procurement specific to distributed generation, the Commission should incorporate the National Renewable Energy Laboratory (NREL) CREST model, which is a tool that can be used to calculate costs based on updated assumptions for financing costs, expected rate of project profit, fixed and variable operating costs, and the rate of escalation of these costs for new contracts.

All costs are included in establishing the procurement expenditure limitation except those prohibited by the law. Since transmission upgrades are excluded pursuant to 399.15(d)(3), the CEC report will need to be adjusted to exclude transmission aspects of the CEC's methodology. Interconnection costs that are considered indirect costs must be excluded from the limitation. This would exclude the network costs that are beyond the actual physical powerplant.

- Should the methodology differentiate between utility-owned RPS-eligible generation and RPS-eligible generation owned by independent power producers?

If so, what information or parameters should differ between the two types?

The methodology should differentiate to the extent that there are real cost differences between ownership characteristics. The RPS procurement plans, and the cost limitation methodology should anticipate what generation capacity will be utility-owned, and what capacity

⁹ Klein, Joel. 2009. *Comparative Costs of California Central Station Electricity Generation Technologies*, California Energy Commission, CEC-200-2009-017-SD.

will be independently owned. Since there are potential cost implications, the cost limit should take into account the fact that utilities have access to bonds and low-cost financing, and their rate of profit is lower than independent power producers. This financing assumption may be a limited view, and we recommend a full investigation of financing opportunities and cost implications available for different types of ownership characteristics, which may vary by project type. It should be noted that the CEC Cost Comparison study does differentiate between Merchant project, IOU and POU LCOE costs for the same types of renewable resources.

- Should only publicly available data be used to develop this approximation? Please identify and explain any limitations of publicly available data for this purpose.

We expect that there is a high degree of publicly available data. Data that is used to consider the final methodology should be made publicly available. Individually identified contract cost data can be made available, as is currently done in the newly reported cost data in the Commissions quarterly RPS Status report to the Legislature. Where necessary to protect individual contract cost for a brief period e.g. one year, that individual data can be used in an aggregated way to still provide publically available aggregate data but preserving the data of individual contracts of one year form contract signing.

8. Section 399.15(c)(3) provides that, in establishing the procurement expenditure limitation, the Commission shall rely on, among other things, “the potential that some planned resource additions may be delayed or canceled.” How should the methodology take such potential into account?

The methodology should evaluate for all projects whether the project is dependent on a specific transmission line or upgrade. Next, the evaluation should examine whether the existing lines have the carrying capacity to deliver what is expected under a reasonable load delivery scenario. The evaluation should consider the financial viability of planned projects, and whether there is financing identified, and the status of these financing sources, including the status of required subsidies, to accurately verify the financial viability of these projects. The Commission should develop a comparison with an internal cost model to verify if the project's bid or contract is actually viable, or if there are any flawed or risky assumptions that would put the project at risk of failure or delay. The Commission should consider the report identifying the uncertainty of federal subsidies as a major RPS program risk, causing a high percentage of project failure.¹⁰ The methodology should take into account a reasonable assumption for failed projects and delayed projects and allow for planned over contracting to hedge against a reasonable expected failure rate. The CEC reports that contract failure rates in recent RPS solicitation projects had been about 30% and up to 40% counting delays.¹¹

- How should the methodology define a “delay”? A “cancellation” ? Please discuss usual commercial practice and provide examples in support of the proposed definition. Please provide examples of how a delay could be distinguished from a cancellation for purposes of the procurement expenditure methodology.

¹⁰ California Energy Commission, “Renewable Power in California: Status and Issues” p. 6. December 2011. CEC-150-2011-002-LCF

¹¹ Id.

We recommend adopting the CEC working definition for delay or cancellation.

- Should delays in the progress of contracted-for RPS resources be treated differently from cancellations?

Yes. Project cancellations should be removed from the plan and procurement expenditure methodology, and new projects should be substituted into the plan and methodology. Ideally, the procurement plan should plan for cancellations and provide for adequate substitute projects, including expanded distributed generation programs. A delayed project is a project where the delivery date is pushed out into the future, but such a delay could cause a new project may be needed in earlier compliance period. The Commission should rely on its renewable energy projects database.¹²

- Should the methodology use data on the historical record of delays/cancellation of RPS procurement contracts for each IOU?

- Should the methodology use each IOU's projections of likely delays/cancellations in the future?

- Should the methodology create projections of delays/cancellations of contracted-for RPS generation projects in some other way? Please describe the proposal in detail.

Yes, the commission should use historical records of delays but the Commission should closely examine the underlying cause of past delays and cancellations, and evaluate whether these records are likely to worsen or improve. The Commission should examine specific contingencies in the projects needed to make the project viable, including the use of tax credits

¹² Available at <http://www.cpuc.ca.gov/PUC/energy/Renewables/>

and other financing considerations, the need for any transmission lines or upgrades, or a number of the risk factors identified in the report.¹³

- How should the potential for delays/cancellations, however determined, be used in the procurement expenditure limitation methodology?

The methodology should plan for an expected rate of cancellations and delays along with substituted projects. Cancellations should be removed from the plan and expenditure limitation methodology, and a new project substituted. The procurement plan should specify the protocol for project succession. A delayed project may be pushed out to a future date, but a new project may be needed in earlier compliance period, and any cost difference should be factored into the plan and expenditure limitation methodology. The relative costs of cancelled/delayed projects should be compared with the substitute projects, and should generally be comparable with successful types of projects. If the costs of substitute projects are determined, based on historical information, to incur higher costs, then those costs should be factored into the procurement expenditure limitation methodology..

The RPS procurement plans should anticipate the need to oversubscribe to take into account the likelihood of project failure. If, for example, failing projects are underbidding into RPS procurement solicitations, these projects should be flagged as at risk. Similar risk profiles should be evaluated based on other project viability screening factors. This will allow the Commission to calculate a variable range of certain RPS costs. The expenditure limitation

¹³ California Public Utilities Commission, Renewables Portfolio Standard Quarterly Report to the Legislature, July, 2008.

methodology should be upwardly adjusted, or plan for any higher costs, if the substitution is required for a utility to comply with the RPS.

9. Taking into account your responses to questions 3-8, above, how often should the procurement expenditure limitation be calculated for the years through 2020, using the methodology and inputs that the Commission will adopt?

- **Annually.**
- **At the beginning of each compliance period (i.e. 2011-2013; 2014-2016; 2017-2020).**
- **Once for the period 2011-2015 and once for the period 2016-2020**
- **Once for the period 2011-2020.**
- **Once for the year 2020.**
- **Once for the entire time an RPS procurement obligation has been in place**
- **Some other time period.**

We recommend an annual update to the cumulative limit on RPS program expenses. Basing the expenditure limitation methodology on up to date data is an important part of implementing the requirement of the law to ensure that the limitation is set at a level that prevents disproportionate rate impacts,¹⁴ and excludes indirect expenses,¹⁵ as required by law. The less frequent data is updated, the weaker the feedback loop is, and this will weaken the transparency and effectiveness of the expenditure limitation methodology aspect of the RPS program.

¹⁴ Section 399.15(d)(1).

¹⁵ Section 399.15(d)(3).

The need to have up to date data requires Commission to update the expenditure limitation to be updated with sufficient frequency to respond to changes in the market. Sierra Club California reserves the right to comment further on this issue. This figure will represent the cost of generation on an annual basis from adoption through 2020, establishing a cumulative cap to limit program expenses through 2020.

10. How often should the procurement expenditure limitation be calculated for the years after 2020, using the methodology and inputs that the Commission will adopt?

The Commission should defer calculation of the expenditure limitation methodology for the years after 2020, and revisit this question in 2017. The content of the RPS law and the market for renewable energy procurement is too uncertain to speculate about program costs, so the Commission should focus on implementing the RPS through the 33% target year in 2020.

11. Section 399.13(a)(4)(D) requires the Commission to adopt “[a]n appropriate minimum margin of procurement above the minimum procurement level necessary to comply with the renewables portfolio standard to mitigate the risk that renewable projects planned or under contract are delayed or canceled.”

- How should such a margin of above-minimum procurement be addressed in the procurement expenditure limitation methodology?

The Commission should allow flexibility within the procurement expenditure limitation methodology, setting the limitation based on the margin of above-minimum procurement, conditioned on whether a level of above-minimum procurement must actually be procured. This

above-minimum procurement is required by Section 399.13(a)(4)(D), so it is necessary for the utilities to secure the capacity necessary to comply with the RPS Program.

We recommend that the Commission direct RPS Procurement plans to consider (1) the rolling three year average of the actual cancel/delay rates, (2) an examination of project-by-project risks, and (3) an examination of potential improvements in risk mitigation that can allow for reduced cancel/delay rates in the future.

Only the actual costs of “procurement credited toward achieving the renewable portfolio standard are counted toward the limitation,”¹⁶ so this flexibility is required by law in the event that projects face prolonged delay or cancellation. The methodology should be adjusted to reflect on the costs of the procurement that is credited if the delay/cancellation rate is less than projected.

- How should the methodology treat the interaction of the margin of above-minimum procurement and the potential for delays and/or cancellations?

We recommend consideration of a three year rolling average, as an interactive component. Additionally, a portion of the above-minimum procurement may also incur a delay or cancellation. The calculation of the above-minimum procurement should consider this secondary risk by applying the risk of project failure to the initial capacity expected for above-minimum procurement to calculate the true need for above-minimum procurement.

¹⁶ Section 399.15(d)(2).

12. Section 399.13(a)(4)(A) requires the Commission to adopt “criteria for the rank ordering and selection of least-cost and best-fit eligible renewable energy resources...on a total cost basis...,” taking various factors into account.

- Should the procurement expenditure limitation methodology incorporate the “total cost basis” factors set out in Section 399.13(a)(4)(A). If so, how?

No. The factors in Section 399.13(a)(4)(A) are separate and distinct from the requirements of the procurement expenditure limitation guidance, particularly the requirement in Section 399.15(d)(3) that “procurement expenditures do not include any indirect expense, including imbalance charges, sale of excess energy, decreased generation from existing resources, transmission upgrades, or the costs associated with relicensing any utility-owned hydroelectric facilities.” The “total cost basis factors” provide guidance to the Commission on how to approach “rank ordering and selection of least-cost and best-fit eligible renewable energy resources,”¹⁷ from a broad perspective of cost and value to California ratepayers, but do not equate with the procurement expenditure limitation methodology. In particular, we note that while transmission costs are incorporated in the total cost basis factors, that they are excluded from the procurement expenditure limitation methodology.

- Should the procurement expenditure limitation methodology be used as the criterion of “least-cost” for the least-cost best-fit determination? If so, how?

Sierra Club California strongly discourages the arbitrary conflation of these two concepts. The Commission should examine the whole portfolio of renewable resources, rather than

¹⁷ Section 399.13(a)(4)(A).

evaluate each contract exclusively on a project by project basis, which increases the difficulty and uncertainty associated with project approval.

The implementation of “least-cost” guidance should be modified to incorporate a system-wide approach to a benefit-cost ratio. RPS plans should consider the values that are required to achieve a “best-fit” system. This would involve geographic mapping of load needs, generation opportunities, and transmission capacity, and consider scenarios that help optimize balancing the load planning for 33% or 40% RPS. The consideration of optimized scenarios based on real-world geography, load shape and distribution, and electricity products (peaking as-available, off-peak as-available, and baseload) are increasingly important for ensuring a reliable electric grid and minimizing unnecessary use of fossil fuel generation. The Commission should consider the long-term trend as expressed by goal of 40% by 2020 as expressed in the Governor’s signing statement of SB 2 (1X) when designing potential scenarios.

See our response to Question 13.

13. Should the procurement expenditure limitation methodology take into consideration the value of diversification of resources in IOUs’ RPS procurement? Specifically,

- Should the methodology create a set of technology-specific expenditure limitations?**
- Should the methodology create a set of geographically-defined expenditure limitations?**
- Should the methodology give “extra credit” for diversification by technology?**
- Should the methodology give “extra credit” for geographic diversification?**

The Commission should implement the value of diversified resources in the IOUs RPS procurement, and is directed to do so by law. As procurement includes an increasingly

renewable portfolio, design principles need to be more reliable, and have diverse sources of energy. Renewable energy resources have different peaking patterns. A diverse portfolio provides enhanced reliability without the need for as much or any fossil fuels as baseload or backup, and avoid “single points of failure” within the operating grid due to intermittency of some renewables. Sierra Club California urges the Commission to design the grid of the future for renewables, energy security, and reliability.

The Commission could still structure procurement decisions using a rank-ordering by cost to meet RPS requirements, first starting with the least-cost resource within resource objectives that are specific to products that best fit the needs of California ratepayers. To achieve the “best-fit” principles and achieve the statutory goal of a balanced portfolio of renewable energy resources,¹⁸ the solicitation should specify portions of the procurement that will be reserved for several “best-fit” beneficial categories or combination of attributes, such as peaking as-available, geographically dispersed, proximity to areas of high load growth, including projects providing environmental benefits such as reduced emissions to communities suffering from high emission levels,¹⁹ and meeting the distributed generation goals of the Governor’s Clean Energy Jobs Plan as recognized by the lead Commissioner’s Draft 2012 Integrated Energy Policy Report (IEPR).²⁰

A starting point for constructing these scenarios would be the four major portfolios advanced in the Long-Term Procurement Plan (LTPP), incorporating a least-cost, best-fit (LCBF) approach that ranks renewables within each benefit/functional category by cost. However, the LTPP scenarios were constructed without consideration of the procurement content categories implemented by Section 399.16(b), and will need to be updated for compliance.

¹⁸ Section 399.16(b). See also Section 399.11(b)(6).

¹⁹ As called for by Sections 399.11(b)(1), 399.11(b)(3), and 399.11(b)(4), and required by Section 399.13(a)(7).

²⁰ CEC Docket # 12-IEP-01, 2012 *Integrated Energy Policy Report Update*.

For the reasons discussed above, Sierra Club California recommends sets of technology-specific, geographic-specific, project size specific and distribution circuit-connected projects, and consideration of overlapping categories in separate procurement expenditure limitations, based on the value for California ratepayers when optimizing scenarios for these benefits and evaluating the portfolio as a whole. Failing to plan for a diverse portfolio pushes costs out into the future, and increases future costs of increased renewables and reduced pollution.

The benefits of distributed generation and smaller projects should be evaluated and given appropriate value when compared with large scale projects. While the specific generation costs / KWh may be somewhat higher than larger scale projects, other characteristics of these types of projects have clear value such as increased efficiency due to essentially no line losses, no need for the expense of transmission facilities, more rapid and predictable installation, potential deferral of distribution grid circuit upgrades due to effective lowering of load on the distribution circuit, improved grid reliability due to many more, geographically dispersed generation resources, etc.

While Sierra Club California would be supportive of “extra credit” for these values, such as distributed generation, as a way to recognize their additional value to the grid, this approach doesn’t necessarily adequately address the uncertainty as to whether such projects will be prioritized within the rank order. The approach of providing distinct procurement expenditure limitations for specific benefits, values, and functions for a balanced portfolio is a preferred approach because of the increased certainty that the actual procurement will match the intent of the RPS procurement plan.

14. How should the procurement expenditure limitation be applied to the Commission's evaluation of individual RPS contracts?

- The methodology should include a way to calculate a benchmark limit on the price of RPS procurement contracts (in dollars per megawatt-hour of generation) of a particular duration and technology type.

The Commission's historical approach to reviewing each individual RPS contract would have the effect of unreasonably limiting the consideration of the diversified portfolio benefits discussed in Question 13. The historical practice, including the use of the Market Price Referent, was required by the prior law, but SB 2 (1X) repealed these provisions, and instead enacted Sections 399.15(c)-(g) providing for a procurement expenditure limitation that would be applied to the whole portfolio, and not contract by contract. If the Commission is to apply the procurement expenditure limitation to the evaluation of individual RPS contracts, the Commission should do so in a way that is consistent with the statutory scheme by including considerations that recognize the overall "budget" approach, and that some contracts will incur costs that are above-average while other contracts will incur costs that are below-average. As noted above, the Commission should request annual reporting of actual costs incurred by each IOU and can compare that by the forecast costs as a means to help provide overall management to the IOUs to help them better manage costs if they are over plan.

A contract that is competitive with other projects within an RPS solicitation, or a category within the solicitation or independent expenditure limitation designed to secure a best-fit, should typically be considered reasonable for approval. The Commission could consider a benchmark limit that would verify that a contract price is reasonable, but such a limit should not

prejudice the process against renewable energy resources that help achieve the comprehensive purposes of the RPS program. Setting a limit as a maximum percentage above historical market benchmarks for that particular resource category could be a mechanism to require further review and comment. Generally, Sierra Club California expects that the ranking of projects, providing for LCBF criteria, should work to maintain reasonable and proportionate costs. Failing to plan for a diverse portfolio, and to include mechanisms that allow for a portfolio-based approach to contract review pushes costs out into the future, and increases future costs of increased renewables and reduced pollution.

- The methodology should include a way to consider an individual RPS procurement contract, on a total expected cost basis, as a fraction of some larger procurement expenditure limitation.

- The methodology should use some other way to consider an individual RPS procurement contract in the context of the procurement expenditure limitation. Please provide a detailed explanation.

- The methodology should not be applied to individual RPS procurement contracts at all.

Sierra Club California strongly recommends that the methodology not be applied to individual RPS procurement contracts at all, or that a product-specific benchmark limit be considered that allows for necessary variability within the procurement expenditure limitation. The overall procurement expenditure limitation is the mechanism providing reasonable cost containment for the RPS program. The rank-ordering of least-cost projects, classified based on the benefits of a balanced portfolio, will ensure that ratepayers will receive the resources that are

reasonably priced. With sufficient experience in reasonable project costs, it may be possible to assess market benchmarks that require further comments from the public, or rejection of a contract, but this is not required by the RPS statute. A project-by-project review should not interfere with achieving the purposes of the RPS program, or the Commission's role in achieving a well-planned, reliable system.

A limited capacity of projects may cost higher, but would also have significant value toward the goal of a balanced portfolio. There is a system benefit for ratepayers of providing a specific service (baseload, peaking, off-peak, etc., stability in an increasingly renewable system). A balanced portfolio decreases intermittency when renewable energy resources are used together. A geographic balance helps improve reliability and stability of intermittent resources, and incorporation of distributed generation helps maximize environmental benefits, reduces transmission line losses, and lowers system distribution costs.

The RPS program to date includes elements that contribute to economic inefficiency, and we encourage approaches to mitigate these effects. The high pressure for project proponents to win a bid causes proponents to underbid, eventually resulting in high rates of project failure. The high rate of project failure increases overall project risk of delay or cancellation, increasing finance costs and required rates of return to compensate for development risks. One procurement mechanism that addresses this problem that Sierra Club California recommends is the increased procurement through administrative setting of contract price based on reasonable costs of generation for specific technology and project size through a feed-in tariff.

The RPS program must have the flexibility to be expanded beyond 33% with optimal results. The trend is an increase in the pace of renewable energy, toward a future that

fundamentally relies on renewable energy for our own reliability and security as well as mitigating the impacts of climate change. Governor Brown's signing statement calls for a 40% RPS by 2020, and the Executive Order S-03-05 sets the goal of 80 percent reduction in carbon dioxide emissions by 2050. To achieve these goals, the initial system must contemplate the needs of the future.

15. Should the procurement expenditure limitation methodology include a methodology by which Energy Division staff could "monitor the status of the cost limitation for each electrical corporation," as required by Section 399.15(g)(1)?

- What elements would be required in order to monitor the status of the cost limitation for each IOU?

The Commission should monitor what projects are being procured, the cost per project, and the consistency with the RPS procurement plan. Please see answers above.

- How often should the status of the cost limitation for each IOU be examined?

The Commission should monitor the cost limitation on an ongoing basis, but at least an annual evaluation.

VERIFICATION

I am the Senior Advocate with Sierra Club California and am authorized to make this verification on its behalf. I am informed and believe that the matters stated in this pleading are true.

I declare under penalty of perjury that the matters stated in this pleading are true and correct.

Executed on the **16TH day of February, 2012**, at Sacramento, California.

/s/ Jim Metropulos

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