

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

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

Rulemaking 11-05-005
Filed May 5, 2011

COMMENTS ON RPS PLANS AND NEW PROPOSALS

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June 27, 2012

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Ormat thanks the Commission for the opportunity to file reply comments addressing the RPS Plans submitted by the IOUs and other LSEs and the New Proposals listed in Section 7 of the Commissions' April 5, 2012 ruling in R11-05-005. In Section 7 of this ruling the Commission identified a number of new proposals and asked for comments regarding the strengths and weakness of the proposals included therein. Ormat's comments will address some of the New Proposals including the standardized variables in the Least Cost Best Fit (LCBF) Market Valuation formula, and the preliminary independent Evaluator Report. Ormat will also provide comments addressing the Draft RPS Procurement Plans submitted by the IOUs on May 23rd 2012.

Ormat specifically recommends the Commission take action in this proceeding to:

- i) include integration costs in the LCBF formula because different resources in fact do have different integration costs and their current exclusion means California is not achieving LCBF, and
- ii) adopt the changes proposed in the Assigned Commissioner's Ruling to the Independent Evaluator program because the current program isn't transparent enough to clearly

confirm for bidders or ratepayers that the LCBF resources were selected by the utilities.

1. COMMENTS ON NEW PROPOSALS

Standardized Variables in LCBF Market Valuation

The new proposal for the LCBF Net market value formula includes an integration cost variable. Each renewable resource type has a unique integration cost and this variable can be used to differentiate integration costs between renewable energy types. Ormat supports inclusion of an integration cost estimate.

Procurement to date has implemented LCBF in a manner that focuses on acquiring least cost per kWh generation and largely ignores the value of resources in supporting system reliability. As a result, variable generation resources have been procured in disproportionate amounts and thus the integration cost of variable generation sources should be specifically recognized in future procurement solicitations. While it is true that all renewable and generation technologies have some operating characteristics that require system support services, the procurement criteria used to select resources over the last few years has resulted in a disproportionate quantity of variable generation resources. As a result, the integration costs imposed by variable generation need to be recognized to bring the procured renewable portfolio into balance. Methodologies for estimating the integration costs of all generating resources continue to evolve, but failing to include a reasonable estimate of variable generation integration cost in upcoming solicitations will add to the imbalanced portfolios that have been procured to date and will lead to further increases in integration system costs that ultimately must be borne by consumers.

Furthermore, Ormat believes that procurement criteria should recognize and value all attributes that renewable resources can provide to the electric system. Failing to recognize all

reliability and flexibility benefits will result in sub-optimal procurement of high value renewable resources. The intent of a LCBF approach is to provide retail customers with the highest value per dollar spent on renewable resources and therefore the LCBF criteria will only be met when all cost and attributes are considered. A best current estimate of the integration cost of variable renewable resources is necessary to bring procurement into balance in California.

Ormat also supports the proposal to include Ancillary Services Value in the adjusted Net Market Value formula. Ormat supports inclusion of this variable as it is equally important to recognize the attributes of each renewable resource that is added to the electric system and to utilize all the attributes that it provides. At present, each type of renewable resource is placed in capacity buckets labeled “baseload” or “intermittent” and the ancillary services attributes they can provide do not appear to be valued. Geothermal resources in particular are considered baseload resources and are not thought of as having the flexibility to respond to over-generation situations when in fact, geothermal resources do have flexible capacity attributes.

With respect to the other variables in the Net Market Value formula, Ormat recommends that the LCBF formula recognize the value of curtailment. The ability to curtail RE resources allows IOUs to limit the amount of flexible resources that are required to support integration of renewable resources and offers more options to operators that will need added flexibility as the level of variable resources increases in the electric system. As indicated below, PG&E acknowledges the value of being able to curtail renewable energy resources and includes a value for curtailment in its resource procurement process.

New Proposal regarding Independent Evaluator:

Ormat supports the new proposal regarding the Preliminary Independent Evaluator Report. Requiring the preliminary report to be included with the RPS Procurement Plans allows

the independent evaluator to meaningfully weigh in on the IOU's procurement processes. One specific weakness in the current utility solicitations is that the specific energy and system requirements valued by the utility are not explicitly incorporated into the solicitation. As a result, responders cannot tailor their offers to specifically meet the utility's energy, capacity and system support service needs. The Independent Evaluator should be tasked with ensuring that the solicitation elicits the best possible proposals by requiring the utility to be much more specific about their needs and requirements. A stronger Independent Evaluator process will allow the Commission to make a better overall assessment of the procurement solicitations and results used by the IOUs and, if necessary, to make timely corrective action.

2. SUMMARY OF IOU'S DRAFT PROCUREMENT PLANS AND HOW THEY ARE OR ARE NOT CONSISTENT WITH THE APRIL 5 COMMISSION DECISION IN THE FOLLOWING AREAS.

Ormat has reviewed the draft procurement plans submitted by the IOUs and offers the following observations regarding these plans:

- PG&E appears to be heading in the right direction in calculating integration costs. It is already calculating these costs for intermittent resources and recognizes that integration cost will vary based upon the type of renewable resources that are considered. Recognizing the full cost of integrating each type of renewable resource is an important step in the resource procurement process and results in a process that fairly values one type of resource against another.

- PG&E and SCE both expressed concern over the uncertainty regarding the Commission's disposition towards inclusion of integration cost in the renewable energy procurement process. Ormat recommends that the Commission address these concerns.

Integration costs are a real cost associated with renewable energy procurement. Some renewable energy types trigger substantial integration needs and costs while others such as geothermal provide integration value. Not including these costs and values result in an inaccurate representation of the cost of resource acquisition and provides an unfair cost advantage to some types of renewable energy resources.

- The ability to curtail renewable energy resources offers value to the IOUs. As indicated above the ability to curtail a resource may avoid requiring the addition of costly resources that provide flexibility. Ormat notes PG&E’s recognition of the flexibility value that curtailment provides and Ormat appreciates PG&E declaring their willingness to compensate the resource for the service. PG&E specifically states:

“Number of hours of Buyer Curtailment: PG&E values the flexibility associated with Buyer Curtailment. The PPA requires Sellers to offer at least 250 hours of Buyer Curtailment, for which the seller will be compensated. The PPA also allows Sellers to offer more hours of curtailment, and to specify the price they would be paid for energy deemed delivered in those hours. For offers providing additional hours of curtailment, NMV will include the value of the difference between market energy price and contractual payments for deemed deliveries, and PAV will include any additional value to the portfolio of increased flexibility because of the additional hours of curtailment.”

- Ormat notes that none of the draft procurement plans adequately or openly address the value of Ancillary services. As noted above, in the Commission’s ruling in

R1105005, the LCBF formula was modified to include other cost and value factors. Ormat recommends that a method for capturing ancillary service value be included. Renewable resources that provide ancillary services reduce the amount of ancillary services that need to be otherwise acquired by the utility and thus reduce the cost to consumers of adding flexible capacity to support variable renewable energy generation resources.

3. SUMMARY OF COMMENTS

When selecting renewable resource additions it is important to recognize the costs associated with integrating these resources into the electric system and the attributes these resources provide. The new proposal for the LCBF Net market value formula includes an integration cost component and recognizes the ancillary service value provided by renewable energy resources. The addition of these factors moves one step closer to a process that accurately compares the cost and value of each type of renewable energy resource and has the potential to reduce the overall cost of integration and need for flexible capacity resources. Ormat recommends that a curtailment variable be included in the net market value formula and supports the Commission's modifications to the independent evaluator's role in the RPS procurement process. By adopting the measures described herein the Commission will continue down that path so that California achieves a LCBF renewable resource portfolio.

Respectfully submitted,



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June 27, 2012

VERIFICATION

I, Paul Thomsen, am the Director, Policy & Business Development of Ormat Technologies, Inc. I am authorized to make this Verification on its behalf. I declare under penalty of perjury that the statements in the foregoing copy of **COMMENTS ON RPS PLANS AND NEW PROPOSALS** dated June 27, 2012 are true of my own knowledge, except as to the matters which are therein stated on information and belief, and as to those matters I believe them to be true.

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

Executed on June 27, 2012 at Reno, Nevada.



Paul Thomsen
Director, Policy & Business Development, Ormat Technologies Inc.