

**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

(Filed May 5, 2011)

**OPENING COMMENTS OF ORMAT TECHNOLOGIES INC. TO  
SECTION 399.16 RULING DATED JULY 12, 2011**

Paul Thomsen  
Director, Policy & Business Development  
Ormat Technologies Inc.  
6225 Neil Road  
Reno, Nevada 89511  
Telephone: (775) 356-9029  
Facsimile: (775) 823-5401  
Email: pthomsen@ormat.com

August 8, 2011

**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

(Filed May 5, 2011)

**OPENING COMMENTS OF ORMAT TECHNOLOGIES INC. TO  
SECTION 399.16 RULING DATED JULY 12, 2011**

In accordance with the July 12, 2011 Administrative Law Judge's Ruling Requesting Comments on Implementation of New Portfolio Content Categories for the Renewables Portfolio Standard Program ("ALJ Ruling"), Ormat Technologies Inc. ("Ormat Technologies") respectfully submits these comments.

The ALJ Ruling requests comments on the appropriate interpretation of the language in SB 2 (1X) as it relates to portfolio content categories identified in Pub. Util. Code § 399.16.

Proposals made are to:

- (a) Further the fair, efficient, and transparent administration of the RPS program, particularly facilitating efficient contract review by the Energy Division;
- (b) Provide RPS market certainty;
- (c) Avoid creating unnecessary transaction costs and encourage least-cost best-fit procurement; and
- (d) Enable clear delineation among the three portfolio categories.

Ormat Technologies' comments will be limited to a subset of the 24 issues identified where clarification appears most needed.

## **Specific Issues**

### **1. Definition of “Electricity Products” in 399.16(b)(1).**

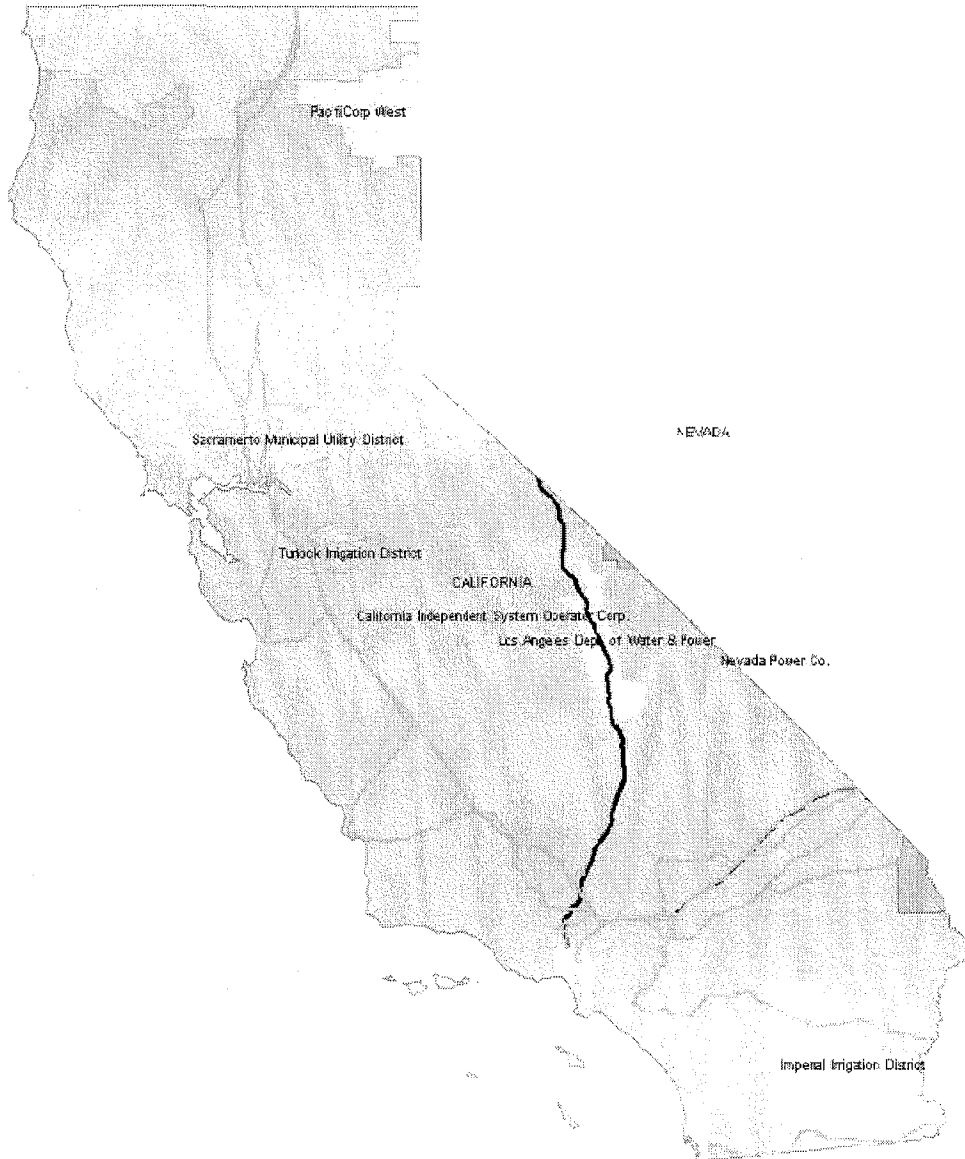
In the context of this section, which is intended to guide the Commission’s assessment process for RPS transactions, defining “electricity products” as RPS procurement transactions appears to be reasonable and appropriate.

### **2. Interpretation of first sentence of 399.16(b)(1)(A).**

Referring to the “RPS-eligible generation facility” for the location-specific requirements: “first point of interconnection with a California balancing authority” or “first point of interconnection with distribution facilities used to serve end users within a California balancing authority area” is appropriate, though the differentiation between the two seems rather obscure. Because the third criterion allows the facility to be outside California, it is appropriate to refer to the “electricity produced by the RPS-eligible generation facility” as being scheduled into a California BAA.

3. List of California Balancing Authority Areas.

Figure 5 – Map of the California ISO Balancing Authority Area



Map taken from Page 46 of the CTPG Final Statewide Transmission Plan.<sup>1</sup>

<sup>1</sup> [http://www.ctpg.us/public/images/stories/downloads/2011-02-09\\_final\\_statewide\\_transmission\\_plan.pdf](http://www.ctpg.us/public/images/stories/downloads/2011-02-09_final_statewide_transmission_plan.pdf)

Clearly included in the definition are: Imperial Irrigation District (IID), California Independent System Operator (CISO), Los Angeles Department of Water and Power (LDWP), Sacramento Municipal Utility District (SMUD), and Turlock Irrigation District (TID). Less clearly included BAAs are: Pacificorp West (PACW), California Pacific Electricity Company, Bear Valley Electric Service, Surprise Valley Electric Cooperative, and Western Area Power Administration, all of which have significant service areas within California. Ormat Technologies believes that the guiding principles of the ALJ order require an inclusive standard for including BAAs and that as a result, all BAAs that serve load in California should qualify.

**4. Interpretation of “scheduled from the eligible renewable energy resource into a California balancing authority without substituting electricity from another source.”**

Because this definition is specifically separated from “firmed and shaped eligible renewable energy resource,” it would appear to be applicable only to physically dispatchable renewable resources that can be predictably scheduled into a California BAA , and to exclude distant intermittent resources that require additional steps to be reliably deliverable. Absent implementation of proposals, such as the one promulgated by the Bonneville Power Authority (BPA) to designate variable (intermittent) resources with the Firm Contingent Energy Product code (G-FC), requiring the G-FC code<sup>2</sup> on E-Tags from dispatchable renewable resources would appear to meet the Guiding Principles. It allows for fair, efficient and transparent administration by using a readily available, widely understood product definition. Using an existing, well-

---

<sup>2</sup> WECC Standard INT-BPS-018-0 (<http://www.wecc.biz/Standards/WECC%20Criteria/Interchange%20Criteria/INT-018-WECC-CRT-1%20Energy%20Product%20Codes.pdf>) defines G-FC as “Firm Contingent. The energy is from a designated generating unit or source. This product may be interrupted only to the extent the output capability of the designated unit or source has been reduced due to a deration or outage of the designated unit or source. A G-FC product cannot be interrupted for economic reasons.

defined Energy Product Code would facilitate market certainty in that only energy generated from the designated renewable resource would be delivered using the product code. As an existing, available, product code, implementation would not create any significant transaction costs. Using G-FC clearly delineates between physically delivered and quasi-delivered firm and shaped transactions. However, requiring G-FC schedules may not be sufficient to meet the apparent intent of this section. Since §399.16(b)(2) references “firmed and shaped” products, it would appear to suggest that only scheduled imports that do not require any firming and shaping should qualify as scheduled “without substitution.” To assure that the G-FC product code meets the “without substitution” test, it may be necessary to require a demonstration that the metered output of the eligible renewable resource is consistent with the scheduled deliveries. To the extent metered usage is within 10 percent of the scheduled deliveries (after accounting for transmission losses in the originating BAA) for 90 percent of scheduled hours each month should be sufficient to differentiate between scheduled without substitution and firmed and shaped.

**5. Meeting requirements of Ordering Paragraph 26 of D.10-03-021, regarding transactions using firm transmission.**

The inclusion of resources scheduled without substituting electricity from another source, as described in Ormat Technologies’ response to #4 above, appears to be a straightforward restatement and that provides a simple solution for the potentially complex issue of defining “transactions using firm transmission.”

**6. Tracking and verification of scheduling process.**

The use of the Firm Contingent Energy Product Code on E-Tags scheduled into California BAAs is the mechanism that tracks the scheduled energy from the resource to load. The resource would have to be a CEC-certified renewable project in order to qualify for the

process. Verification of delivery could be accomplished through the WREGIS process using the criteria Ormat described in the answer to Question 4.

**7. Relevance of real-time ancillary services provision.**

One of the provisions of the G-FC product is that the host BAA does not carry ancillary services for it. Instead, the importing BAA assumes the responsibility to carry operating reserves for the schedule, just like it does for internal generating resources. Thus, the situation described in the second sentence of §399.16(b)(1)(A) would not come into play any more than it would for a renewable resource within a California BAA that went off-line. The generation from that resource would simply not be available.

**8. The interpretation proposed appears reasonable.**

**9. The definition appears reasonable.**

**10. Should “Unbundled renewable energy credits” from an RPS-eligible generator having a first point of interconnection within a California BAA be included in §399.16(b)(1)?**

The primary place where this might apply is in the sale of RECs from behind the meter RPS-eligible generators located in California that have not been included in bundled RPS transactions. They would need to be registered in the WREGIS database as available from a source within California.

**11, 12, 13, 14. No comment.**

**15. Should the firmed and shaped provisions apply only to energy generated outside a California BAA?**

Generally speaking, “firming and shaping” is a process undertaken with intermittent resources that will need to be scheduled across BAAs using fixed hourly schedules. To the extent it is necessary to package generation in that way to move it between California BAAs, it

might be considered as applicable to §399.16(b)(2). However, as long as it qualifies for §399.16(b)(1) by having a first point of interconnection with a California BAA, it would not appear to be appropriately categorized as applicable to §399.16(b)(2).

**16. Does scheduled without substitution mean that no firmed and shaped electricity qualifies for §399.16(b)(1)(A)?**

A resource scheduled without substitution effectively firms and shapes itself. Typical examples include biomass facilities which can adjust their fuel burn rate or geothermal resources which are designed to use a consistent, non-variable energy source. It could also consist of a wind farm that has an onsite battery storage system through which the variable generation produced by the wind farm is shaped into flat hourly blocks which can then be scheduled across BAAs without substituting energy from another source. Based on the apparent intent of §399.16(b)(2), however, a wind farm that contracted with a separate grid-connected storage facility for the purpose of absorbing or releasing energy to offset the variability of the wind farm generation, would be using firming and shaping services because the energy absorbed or released would be provided by some resource than the wind farm.

**17, 18, 19. No comment.**

**20. RPS Delivery requirement elimination.**

Eliminating the delivery requirement for REC-only transactions could be characterized as a quid pro quo for the portfolio content limitations set forth in §399.16(d). It would therefore be applicable only to new resources subject to the limitations. Thus, any grandfathered transactions not subject to the portfolio content limitation, should continue to operate under the terms of the existing, Commission-approved, PPA. Any contract terms developed to meet the delivery



obligation should remain in force unless the buyer agrees to include the revised PPA within the portfolio content limitations.

**21. No comment.**

**22. No comment.**

**23. Value to buyer, seller and ratepayers.**

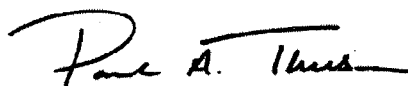
Ormat Technologies' comments focus primarily on implementing SB 2 (1x) in a manner that makes the most cost-effective and valuable renewable resources available to California consumers in a way that assures that California ratepayers get the full benefit of the RPS resources for which they are paying without burdening the transactions with costly and complicated conditions. By treating high capacity factor, predictable, schedulable and consistently available generation that does not require any transactional manipulation such as "firming and shaping" to fit within existing transmission delivery options, as functionally equivalent to in-state generation, Ormat Technologies' proposal for renewable generation scheduled without substituting electricity from another source allows the most efficient use of transmission capacity and thus lower costs to California consumers. By using existing product descriptions in the way they are intended to be used, buyers in California can be assured that the renewable generation they commit to purchase was produced by the renewable resource with which they contracted. As §399.16 makes clear, the use of RECs and firming and shaping transactions is intended to have a limited role in California's renewable future, but predictable base load generation resources are to be accorded status comparable to RPS resources within California.

**24. Timing.**

The Commission should move ahead and implement the provisions of SB 2 (1x) as if the terms of the legislation were already in effect. Doing so will allow all the contracts executed as a result of the 2011 RPS solicitations to be considered in a consistent manner.

Dated: August 8, 2011

Respectfully submitted,



---

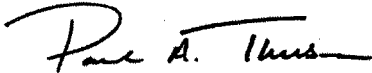
Paul Thomsen  
Director, Policy & Business Development  
Ormat Technologies Inc.  
6225 Neil Road  
Reno, Nevada 89511  
Telephone: (775) 356-9029  
Facsimile: (775) 823-5401  
Email: pthomsen@ormat.com

## 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 OPENING COMMENTS OF ORMAT TECHNOLOGIES INC. TO SECTION 399.16 RULING DATED JULY 12, 2011 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 August 8, 2011 at Reno, Nevada.



---

Paul Thomsen

---

Director, Policy & Business Development, Ormat Technologies Inc.

**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served a copy of the

**OPENING COMMENTS OF ORMAT TECHNOLOGIES INC. TO  
SECTION 399.16 RULING DATED JULY 12, 2011**

on all known parties to R.11-05-005 by sending a copy via electronic mail and by mailing a properly addressed copy by first-class mail with postage prepaid to each party named in the official service list without an electronic mail address.

Executed on August 8, 2011, at San Francisco, California.

\_\_\_\_\_  
s/ Lisa Schuh

Lisa Schuh