



August 3, 2011

VIA ELECTRONIC MAIL

Mr. Michael Cohen
Division of Ratepayer Advocates
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102

Re: ISO Response to the DRA Data Request No. LTTP2010-CAISO-0003a

Dear Mr. Cohen:

Enclosed please find the ISO response to Data Request No. LTTP2010-CAISO-003a propounded in the Long Term Procurement Proceeding, CPUC Docket R.10-05-006.

Please do not hesitate to contact me if you have any questions.

Sincerely,

/s/ Judith B. Sanders

Judith B. Sanders
Senior Counsel
California Independent System Operator

cc: Service List R.10-05-006

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

**Order Instituting Rulemaking to Integrate)
And Refine Procurement Policies and) R.10-05-006
Consider Long-Term Procurement Plans)**

**RESPONSE OF
THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
TO DATA REQUEST No. LTPP2010-CAISO-003a
BY THE DIVISION OF RATEPAYER ADVOCATES,
CALIFORNIA PUBLIC UTILITIES COMMISSION**

Below are responses by the California Independent System Operator Corporation to Data Request No. LTPP2010-CAISO-003a, the Division of Ratepayer Advocates, California Public Utilities Commission.

RESPONSES

The following questions all pertain to the CAISO response to DRA Data Request LTPP2010-CAISO-003, questions no. 5, no. 6, and no. 16 (see attachment A for reference to the data requests and responses.)

Preface: In response to question no. 5, CAISO indicated how renewable energy resources located outside of the CAISO balancing area would be affected by the introduction of intra-hourly scheduling. In the response to question no. 6, CAISO indicates that a limited amount of dynamically-scheduled, external resources currently provide ancillary services to the CAISO balancing area. In the response to question no. 16, CAISO indicates that the model already includes the effect of intra-hour scheduling across the interties, as it affects renewable resource imports; and CAISO indicated that “outside resources are not allowed to provide ancillary service (except a few dynamic resources as discussed in answer to Question 6).”

Please clarify the following with respect to potential ancillary service provision to the CAISO balancing area in 2020, from non-renewable, non-dynamically-scheduled external resources:

Request No. 1

1. Please confirm or explain otherwise, that as indicated in response to no.16, the prohibition on external resource provision of ancillary services to the CAISO is only in the current market structure, and that future market structures could allow for such provision; and that FERC initiatives such as suggested by those in the FERC NOPR on

variable energy resources tend to promote such cross-region ancillary service market structures.

ISO RESPONSE TO No. 1

The current market structure does not prohibit ancillary services from being provided from other balancing authority areas. However, due to the requirement that operating reserves need to be delivered in 10 minutes, parties offering operating reserves must arrange with their host balancing authority areas to make intra-hour schedule changes in order to provide the operating reserves. Some entities have made such arrangements. However, in most cases, the expectation is that conversion of these reserves to energy will be infrequent and will be limited to actual contingency events rather than more frequency balancing. With regards to regulation, provision of regulation requires the external resource be directly responsive to the ISO's automated generation control. Dynamic transfers, which are able to dynamically change their actual delivery within the hour, are more suited to provide ancillary services. While future market structures such as 15 minute schedules across the ties may provide more flexibility for variable resources to adjust their deliveries intra-hour, a 15 minute schedule adjustment would not satisfy the requirement that operating reserves must be delivered in 10 minutes, or regulation needs to be under direct control by the ISO. At this point the cross-regional policies and practices of more granular scheduling timelines are not clear, and as a result it is not clear the extent to which more flexible schedule practices, that are yet to be developed, would support additional transfer of ancillary services from external balancing authority areas.

Request No. 2

2. Please confirm, or explain otherwise, that if intertie energy scheduling were to move to 15-minute (vs. 1 hour, as exists today) intervals, it would afford the opportunity for a market-based response to 15-minute energy price signals (at the CAISO borders) that effectively would allow non-renewable, non-dynamically-scheduled external resources the opportunity to provide what amounts to load-following up or down provision to the CAISO balancing area.

ISO RESPONSE TO No. 2

If intertie schedule were to move to 15 minutes, it would provide both flexibility for renewable resources to adjust their scheduled deliveries, and non-renewable to also adjust and respond to imbalance needs. Use of 15 minute scheduling by renewable resources may transfer and increase the ISO requirements for flexibility when compared to a firm hourly schedule that would need to be balanced by host balancing authority area. Currently a "load following" service does not explicitly exist. The ISO is

considering future market structures to support renewable integration. While one of the objectives of these efforts is to incent flexibility, it is premature to conclude the extent to which intra-hour scheduling on the interties will develop and be able to meet the flexibility needs of the ISO. One option under consideration in the ISO's Renewable Integration Market and Product Review Phase 2, would be to institute 15 minute Real-Time prices instead of the current 5 minute real time prices. This option also proposes a new ancillary service, Real Time Imbalance Service, which would be established every 15 minutes and dispatched every minute. If scheduling on the interties were to change to 15 minutes, resources outside the ISO Balancing Authority Area would be able to participate in the proposed 15 minute Real Time Market, which could be consider load following. They would not, however, be able to provide the proposed Real Time Imbalance Service unless they were dynamically scheduled and able to respond to 1 minute dispatch.

Request No. 3

3. Please confirm that other than the dynamically-scheduled resources referred to in response to question number 6, the Step 2 PLEXOS modeling process does not make available any non-renewable, flexible resources (such as CTs or CCGTs) located outside of the CAISO balancing area to provide any of the load-following up or down requirements needed for the CAISO balancing area.

ISO RESPONSE TO No. 3

Correct.

Request No. 4

4. Please confirm or explain otherwise that one potential outcome of either 15-minute intertie scheduling, and/or allowance of external provision of ancillary services (not from dynamically-scheduled resources) is that existing non-CAISO, WECC-based non-renewable resources in the PLEXOS database could be made available in the model to serve a portion of ancillary service needs, in accordance with their capabilities.

ISO RESPONSE TO No. 4

Please refer to response to Request 1

Request No. 5

5. Lastly, does CAISO have any insight into the potential level of load-following up or down capability (overall MW, or overall MW.min ramping rate) that might be made available to the CAISO balancing area from existing or new external non-renewable resources if such intra-hour scheduling or modified cross-region ancillary service markets were to be put in place by 2020? Please discuss.

ISO RESPONSE TO No. 5

Please refer to response to Request 1 and 2