

CALIFORNIA INDEPENDENT SYSTEM OPERATOR MEMORANDUM

Date: March 11, 2009
Subject: Background and History on the Design Principle of Settling Demand Response/Participating Load at the Custom Load Aggregation Point (LAP)

Introduction

During the stakeholder process for development of ISO's demand response market design enhancements, one or more stakeholders voiced a concern regarding the MRTU design component which provides that Demand Response/Participating Load shall be settled at the Custom Load Aggregation Point (Custom LAP).¹ The purpose of this memorandum is to provide background and context regarding this MRTU design component. The following discussion demonstrates that the scheduling and settlement of Demand Response/Participating Load at the Custom LAP is an established part of the MRTU Release 1 market design, has been vetted by stakeholders, and has been established through actions by the CAISO Board of Governors and FERC orders.

Modification of the July 22, 2003 MRTU Market Design for Clearing of Demand Bids

The determination that the Demand Response/Participating Loads should be scheduled and settled at the Custom LAP was a component of the demand settlement that was the subject of extensive discussion and activity in 2005.

Change of the July 22, 2003 MRTU Market Design. The 2005 modification of the design proposal for clearing of demand bids, to clear at the Custom LAP, was a modification of the ISO's July 22, 2003 Amended Comprehensive Market Design Proposal.

The LEGC Report and Design Change Recommendation. In late 2004 and early 2005, the CAISO undertook a broad review of the MRTU design. A primary component of this effort was a market design review undertaken by William Hogan, Scott Harvey and Susan Pope of the consulting firm LECG. LECG summarized its evaluation in a February 22, 2005 report entitled *Comments on the California ISO MRTU LMP Market Design.*²

¹ The concern was first raised at a November 5, 2008 working group meeting discussing details regarding the proposed design for Proxy Demand Response (PDR) and Dispatchable Demand Response (DDR). The question was also raised as to whether the CAISO had sufficiently discussed with stakeholders the design component that Demand Response would be settled at the Custom LAP. CAISO's response at the November 5 meeting was that the design component had been part of the MRTU Market Design for some time prior to the development of the proposed DDR product, and that DDR proposal was not newly introducing the settlement construct of settling Demand Response at the Custom LAP.

² The LEGC Report is attached as Attachment C to the CAISO's May 13, 2005 filing to FERC seeking conceptual approval of three modifications to the Market Design, including the request to modify the MRTU design proposal for clearing of demand bids. The May 13, 2005 filing, entitled "Further Amendments to the CAISO's Amended Comprehensive Market Design Proposal," is posted on the CAISO Web site at <http://www.aiso.com/docs/2005/05/13/2005051314175518804.pdf>.

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LECG determined that having Demand Response/Participating Loads buy their day-ahead load schedules at the Default LAP price, together with the capability to sell demand reductions at the nodal price, in geographic areas where those nodal prices tend to be predictably higher than the Default LAP price, would present a major opportunity for gaming. LECG concluded that this potential gaming opportunity could be readily avoided by requiring demand response to both buy and sell at the nodal price, i.e., at Custom LAPs.

CAISO May 13 2005 Filing Seeking Modification Re Clearing of Demand Bids

The CAISO's May 15, 2005 FERC filing summarized the modification proposal as follows:

The first modification that the CAISO is proposing to its July 22, 2003 Comprehensive Market Design Proposal is to clear LAP-level load bids based on LAP prices. The CAISO ... [is] modifying its original proposal in response to concerns raised by LECG that the CAISO's proposed approach of distributing load bids to individual nodes using Load Distribution Factors ("LDFs"), and then re-aggregating the nodal loads cleared in the IFM back to the LAP level, is problematic and could have adverse consequences.

[¶] In particular, LECG described how the proposed re-aggregation of nodally cleared load bids into LAP-level schedules would distort the nodal load distribution inherent in the LAP LDFs and result in infeasible Day-Ahead schedules, which in turn could produce revenue inadequacy in Real-Time settlements. Further, the CAISO's original approach would provide incentives for inefficient bidding to exploit predictable inconsistencies between Day-Ahead schedules and Real-Time operating requirements.

[¶] The CAISO's revised proposal addresses these concerns and will ensure that final Day-Ahead schedules are feasible and, in particular, that LAP-level load bids result in schedules that are consistent with the LDFs for each LAP. The CAISO's approach proposed herein is consistent with the approach that has worked effectively in the NYISO markets. During the stakeholder process, no stakeholder has raised concerns with the CAISO's proposed adoption of LECG's recommended modification of the design to address this issue.³

Stakeholder Involvement

Stakeholder involvement began in February 2005, and the activities are documented in white papers, filings, and decision items that the CAISO staff presented to the CAISO Board, covering the period from February through October 2005. The activities included some 18 days of stakeholder meetings, and five formal rounds of stakeholder comments, as well as several iterations of white papers.

On February 23, 2005, the CAISO circulated the following documents to stakeholders for review: (1) the LECG Report; (2) a White Paper entitled Comprehensive Market Redesign Update ("Draft Design White Paper"); and (3) a White Paper entitled Proposed

³ CAISO May 13, 2005 filing at p. 6-7.

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MRTU Market Power Mitigation Provisions (“Draft MPM White Paper”). The Draft Design White Paper included, inter alia, a discussion of CAISO proposals for an Hour-Ahead Scheduling Process and the clearing of demand bids at the load aggregation point (“LAP”) level. The Draft MPM White Paper set forth the CAISO’s proposed market power mitigation measures under MRTU.

The CAISO held a stakeholder conference on March 1-2, 2005 to discuss, inter alia, (1) the CAISO’s HASP, market power mitigation and demand clearing proposals; (2) the elements that would be included in the initial release of the MRTU design that would be implemented on February 1, 2007 and those items that would not be included until Release 2; and (3) the main findings of the LECG Report.

On March 9, 2005, the CAISO held a stakeholder conference call to address further questions on the LECG Report.

On March 11, 2005, stakeholders provided their written comments to the CAISO on the two White Papers.

On March 15, 2005, the CAISO’s Market Surveillance Committee (“MSC”) held an open meeting in San Francisco to discuss issues pertaining to the CAISO’s proposed market design and market power mitigation measures, as well as resource adequacy. Subsequently, the MSC issued an opinion dated April 26, 2005 entitled “Opinion on the California ISO’s Market Redesign and Technology Update (MRTU) Conceptual Filing.

On April 7, 2005, Commission Staff held a telephone conference with the CAISO and LECG to discuss certain aspects of the LECG Report.

On April 12-13, 2005, the CAISO held a second stakeholder conference. The stakeholder conference included a discussion of the issues raised in stakeholders’ March 11 written comments pertaining to the CAISO’s demand clearing, HASP and market power mitigation proposals. In addition, the ISO discussed the rationale for which design elements were being included in MRTU Release 1 and which were being deferred to Release 2. The CAISO also identified remaining MRTU policy issues that need to be resolved and the schedule for resolving such issues in order to incorporate their resolution into a MRTU tariff filing to be submitted to the Commission by November 30, 2005. Stakeholders were then provided with an opportunity to submit additional written comments on the White Papers and the LECG Report by April 21, 2005.

On May 6, 2005, the CAISO’s Board of Governors approved the revised MRTU conceptual market design elements, including the modification of Demand clearing, in an open board meeting. The items, including stakeholder comments, were described in a publicly available Board Memo dated April 29, 2005. This Board Memo noted that with respect to the modification for Demand Clearing, while a few parties (PG&E) requested more time to consider this issue, no party disagreed with the ISO’s proposal.”⁴

The progress of resolution of the issues identified by LECG was also discussed at Board meetings in September, and October 2005. A Board Memo dated October 12, 2005

⁴ April 29, 2005 Board Memo at p. 5. The Board Memo is attached as Attachment D to the May 15, 2005 FERC filing.

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notes, with respect to Demand Clearing, that, while the default scheduling of load remains at the three default LAPs and includes provisions for not opting out of these LAPs, there are “a few exceptions dealing with ETCs and Participating Load entities.”

In addition to this series of events, FERC held a technical conference on demand response in San Francisco on September 13, 2005, and received initial and reply comments after the technical conference. In the CAISO’s initial comments on September 27, 2005, the CAISO stated that Participating Load scheduled in the Day-Ahead will pay the Day-Ahead nodal price, and any demand response in Real-Time would be priced at the Real-Time nodal price.⁵ The CAISO then repeated the statement of nodal pricing for Participating Load in its reply comments, submitted on October 4, 2005.⁶

Pertinent Tariff Provisions

The provisions for scheduling and settling Participating Load at Custom LAPs were part of the MRTU Tariff as filed at FERC by the CAISO in February 2006 based on the Board’s unanimous approval, as part of MRTU Release 1. Market Participants cannot use these provisions as an “opt out” opportunity, because the MRTU Tariff defines Participating Load as an entity that provides Curtailable Demand. Accordingly, if a Market Participant registers as a Participating Load but does not actually provide Curtailable Demand, it would no longer be a Participating Load.

The pertinent sections of the MRTU Tariff that establish scheduling and settlement of Participating Load using Custom LAPs include sections 11.2.1.3 and 30.5.3.2. Furthermore, Participating Loads are required to submit a Participating Load Implementation Plan wherein details of their PL resource, and how the participant plans to achieve the intended demand reduction, are to be documented and submitted for review and approval by the CAISO.

Treatment of Participating Load and Demand under FERC Orders

FERC’s decisions on the CAISO’s proposals have made it clear that Participating Loads are to be scheduled and settled at their locations, not at the Default LAPs. For example, FERC’s July 1, 2005 Order on Further Amendments to the California Independent System Operator’s Comprehensive Market Redesign Proposal (*California Independent System Operator Corporation*, Docket No. ER02-1656-026, 112 FERC ¶ 61,013 (July 1, 2005)), approving the revised conceptual proposal,⁷ notes that exemptions to the CAISO’s proposal for establishing load aggregation zones will be loads served under ETCs, demand reduction by participating loads, and entities that can operate as either loads or generators.⁸

⁵ These comments are available on the CAISO Web site at <http://www.aiso.com/docs/2005/09/27/200509271344503256.pdf>.

⁶ Reply comments are available at <http://www.aiso.com/docs/2005/10/04/2005100413483825317.pdf>

⁷ This decision is available at <http://www.aiso.com/docs/2005/07/05/2005070515204617613.pdf>.

⁸ July 1, 2005 Order at Paragraph 10, footnote 18.

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Subsequently, in FERC's September 21, 2006 Order⁹ the Commission ordered the CAISO to schedule and settle Participating Loads at the nodal level:

We further direct the CAISO to make a compliance filing within 60 days of the date of this order clarifying section 30.5.3.2 to indicate that participating load will be scheduled and settled at the nodal level.¹⁰

Importantly, the portion of the September 21, 2006 Order which addressed Demand Response and Participating Load (Paragraphs 686 to 703) treats "demand response" and "participating load" in tandem, and virtually synonymously. In addition, FERC's September 21, 2006 Order strongly encourages the CAISO to expand its Participating Load program.

Finally, FERC's follow on order of April 20, 2007¹¹, which clarified certain aspects of the earlier September 21, 2006 Order, again orders the CAISO to schedule and settle Participating Loads at the nodal level. For example, at Paragraph 347 of the Order, FERC ordered that, "we direct the CAISO to remove from the MRTU Tariff provisions, including sections 11.5.2 and 11.5.2.2, language that results in participating load being settled on a LAP basis," and further ordered the CAISO to provide additional opportunities for Demand Response resources to participate in the CAISO market.¹²

⁹ *California Independent System Operator Corporation*, Docket Nos. ER06-615-000, ER02-1656-027, ER02-1656-029, ER02-1656-030, ER02-1656-031, Order Conditionally Accepting the California Independent System Operator's Electric Tariff Filing to Reflect Market Redesign And Technology Upgrade, 116 FERC ¶ 61,274 (September 21, 2006). This order can be accessed at <http://www.caiso.com/1878/1878f9725ef80.pdf>.

¹⁰ September 21, 2006 Order, at Paragraph 697.

¹¹ Order Granting in Part and Denying in Part Requests for Clarification and Rehearing (April 20, 2007); this order is available at <http://www.caiso.com/1bcb/1bcb7bd7f40.pdf>.

¹² Paragraph 347 of the April 20, 2007 Order provides as follows:

347. As stated in the November 2005 Order and cited by State Water Project, we agree that participating load should be settled on a nodal basis. Accordingly, we grant State Water Project's request for rehearing. Therefore, we direct the CAISO to remove from the MRTU Tariff provisions, including sections 11.5.2 and 11.5.2.2, language that results in participating load being settled on a LAP basis and to make a compliance filing, in conjunction with the compliance filings it will make on or before August 3, 2007, reflecting these changes.

And Paragraph 345 of the order directing the CAISO to expand Demand Response resources reads as follows:

345. As the Commission noted in the September 2006 Order, we recognize the importance of demand response in the effective operation of electricity markets.²⁹⁵ We are committed to working with states to increase the number of effective demand response programs available. As such, the Commission directed the CAISO to "work with market participants to present additional opportunities for demand response resources to participate in the CAISO market.