

UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System            )     Docket No. ER16-2445-000  
Operator Corporation                    )

INFORMATIONAL REPORT OF THE  
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION  
ON THE PROCESS FOR REBIDDING COMMITMENT COSTS

The California Independent System Operator Corporation (CAISO) files this informational report pursuant to the Commission's November 21, 2016 order in this proceeding.<sup>1</sup>

**I. Background**

The November 21 Order accepted the CAISO's proposed tariff revisions to allow resources to rebid commitment costs (*i.e.*, start-up costs and minimum load costs, as well as transition costs for multi-stage generating resources) in the CAISO real-time market if they were not committed in the day-ahead market.<sup>2</sup> Specifically, the tariff revisions provide that such rebidding of commitment costs is permitted except for the following trading hours: (1) trading hours in which the resource has received a day-ahead schedule or a start-up instruction in the residual unit commitment; and (2) trading hours that span the minimum run time

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<sup>1</sup> *Cal. Indep. Sys. Operator Corp.*, 157 FERC ¶ 61,138 (2016) (November 21 Order).

<sup>2</sup> *Id.* at P 18. The Commission accepted the tariff revisions on a permanent basis, after previously accepting them on an interim basis in a different proceeding. *Id.* The Commission also accepted other tariff revisions in the November 21 Order that are not relevant to this informational filing.

of the resource after the CAISO has committed the resource or the scheduling coordinator has self-committed the resource in the real-time market.<sup>3</sup>

The Commission accepted the tariff revisions effective as of November 30, 2016, as requested by the CAISO.<sup>4</sup> The Commission declined to sunset the tariff revisions, as requested by some commenters, but noted a suggestion the CAISO had made in its answer to the comments to “assess the process used to rebid commitment costs in real-time through the summer of 2017 to determine whether further tariff revisions are necessary.”<sup>5</sup> Consistent with the CAISO’s answer, the Commission directed the CAISO to “submit an informational report by October 1, 2017, detailing its assessment of the effectiveness of the rebidding process and its efforts to automate the monitoring and enforcement process” to ensure that market participants are following the requirements of the tariff revisions.<sup>6</sup>

## **II. Informational Report**

As directed in the November 21 Order, this informational report assesses: (1) the effectiveness of the process for rebidding commitment costs set forth in the tariff revisions through the summer of 2017; and (2) the CAISO’s efforts to automate the monitoring and enforcement of compliance with the rebidding process.

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<sup>3</sup> Tariff section 30.5.1(b).

<sup>4</sup> November 21 Order at Ordering Paragraph (A).

<sup>5</sup> *Id.* at P 20.

<sup>6</sup> *Id.* October 1 being a Sunday, the informational report was due the next day on which the Commission was open for business, *i.e.*, October 2. See 18 C.F.R. § 385.2007(a)(2).

### **A. Effectiveness of the Rebidding Rules**

The CAISO assessed the extent to which market participants followed the tariff rules for rebidding commitment costs through the summer of 2017 (*i.e.*, May to September). The CAISO found that no market participant violated the requirements of the rebidding tariff rules during that time. A detailed explanation of the methodology the CAISO used to perform the assessment is provided in attachment A to this informational filing. Based on the results of its assessment, the CAISO has concluded that scheduling coordinators have been bidding consistently with the tariff rules. Therefore, no further tariff revisions are necessary, particularly in light of the fall 2017 implementation of the remaining software changes to fully automate the tariff rebidding rules as described below.

### **B. Automation Efforts**

For the day-ahead market, the CAISO implemented software to automate the monitoring and enforcement of compliance with the rebidding process on June 2, 2016. The day-ahead market software ensures that scheduling coordinators satisfy all of the requirements of the rebidding process, apart from its prohibition on rebidding commitment costs for trading hours that span the minimum run time of the resource after the CAISO has committed the resource or the scheduling coordinator has self-committed the resource in the real-time market.

The CAISO plans to implement software for the real-time market that will automate such monitoring and enforcement as part of the CAISO's fall 2017

software release, which is currently scheduled for November 1, 2017. As noted above, market participants have been bidding consistently with the real-time rebidding tariff rules.

### **III. Conclusion**

For the reasons explained above, this informational report satisfies the directives in the November 21 Order. Please contact the undersigned with any questions.

Respectfully submitted,

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Dated: October 2, 2017

**Attachment A – Methodology to Perform the Assessment**  
**Process for Rebidding Commitment Costs**  
**Informational Report of the**  
**California Independent System Operator Corporation**

## ATTACHMENT A

### Objective

Identify any resource with real-time market commitment re-bid its commitment costs – start-up cost and minimum load cost. This check only applies to resources that were committed in the real-time market short-term unit commitment (STUC) and fifteen-minute market (FMM) based on economics. It is not applicable to resources that were started up due to day-ahead commitments or self-schedules.

### Methodology

The following steps were used to identify resources that have re-bid commitment costs in SIBR after getting a binding commitment instruction via ADS.

1. For any trade date, the commitments issued by the real-time market were identified; these are only the commitments issued by the market optimization based on economics.
2. For each resource commitment instruction, the time period during which the resource should not re-bid the start-up cost was identified ( $T_{SUC}$ ). This will be the time between getting a start-up/transition instruction up to the actual time of start.

$$T_{SUC} = T_{Notification} + T_{SU}$$

Where,  $T_{SUC}$  = Start-up cost check applicability time,  
 $T_{Notification}$  = The resource notification time, and  
 $T_{SU}$  = Start-up time

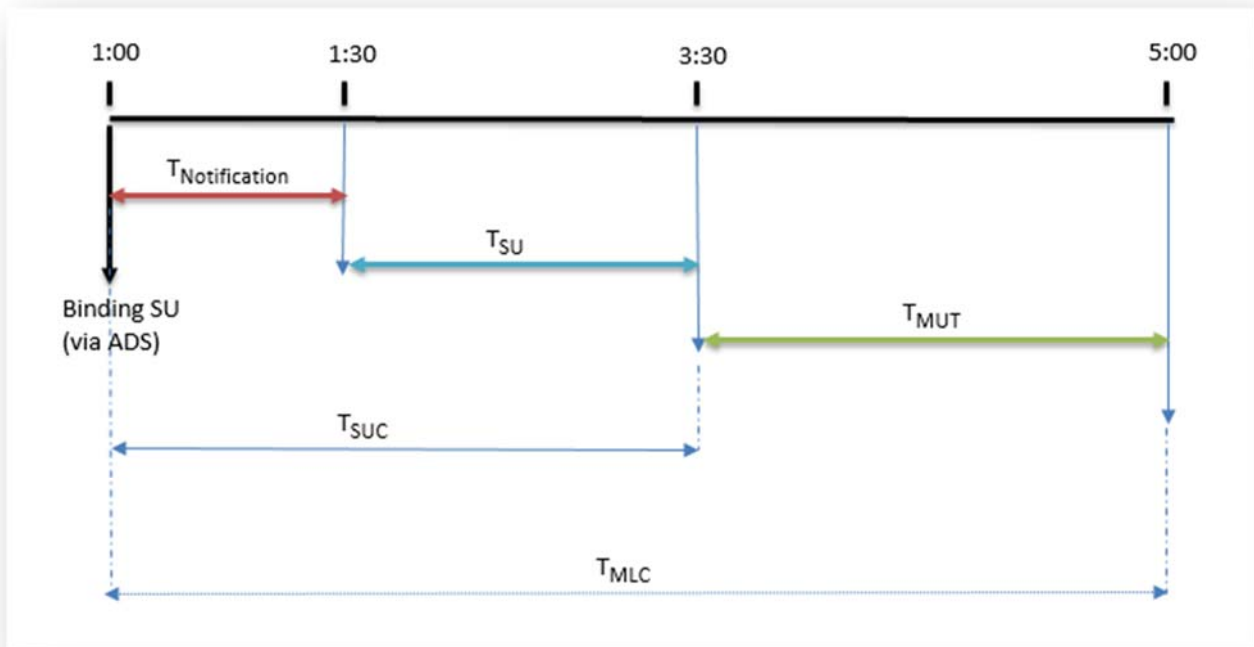
3. For each resource commitment instruction, the time period during which the resource should not re-bid the minimum load cost was identified. This is the time between getting a start-up/transition instruction up to the actual time of start plus its minimum up time.

$$T_{MLC} = T_{Notification} + T_{SU} + T_{MUT}$$

Where,  $T_{MLC}$  = Minimum load cost check applicability time, and  
 $T_{MUT}$  = Minimum up time of resource

Figure 1 below illustrates the time period defined above with an example. The resource is issued a binding start-up instruction at 1:00 via ADS. The resource has a 30-minute notification time, two-hour start-up time, and 1.5 hour minimum up time. The resource should not re-bid its start-up cost (SUC) for hour ending 4 within  $T_{SUC}$ , and should not re-bid its MLC (minimum load cost) for hours ending 4 and 5 within  $T_{MLC}$ .

Figure 1. Example of time line used for analysis



4. For each resource, the components of submitted bids were obtained, including start time, bid stop time, and external submit time stamp.  
For example, if resource A submitted a start-up cost bid on 9/20/2017 at 5 PM for time interval 9/21/2017 4 AM – 5 AM, then  
Bid start time = 9/21/2017 4 AM,  
Bid stop time = 9/21/2017 5 AM, and  
External submit time stamp = 9/20/2017 5 PM.
5. Data obtained in steps 1, 2, and 4 above were combined to obtain the count of bids for each resource with external submit time stamp within  $T_{SUC}$ .
6. For any resource with non-zero count, an additional check was performed to check the start-up cost submitted. If the start-up cost was changed, the resource was flagged as failing the test (not meeting the tariff requirement).
7. Data obtained in steps 1- 4 were combined to obtain the count of bids for each resource with external submit time stamp within  $T_{MLC}$ .

8. For any resource with non-zero count, an additional check was performed to verify the MLC submitted. If the MLC was changed, the resource was flagged as violating the tariff requirement.

## **Results**

The methodology described above was applied to the months of May – September, 2017. No resources were found in violation of the tariff requirement, i.e., no resource with economic CAISO commitment from real-time market re-bid its commitment costs after getting a commitment instruction via ADS.



## CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon all of the parties listed on the official service list for the above-referenced proceeding, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California, this 2<sup>nd</sup> day of October, 2017.

*/s/ Grace Clark*  
Grace Clark