



California Independent
System Operator Corporation

California ISO

Proposal to Add Further Detail to Tariff Provisions Pertaining to the Calculation of Bid-Based Reference Prices in Currently Effective ISO Tariff

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Prepared by: DMM/L&R
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CAISO Proposal to Add Further Detail to Tariff Provisions Pertaining to the Calculation of Bid-Based Reference Prices

I. INTRODUCTION

As provided in the ISO Tariff, the CAISO uses bid-based reference prices as part of its Automatic Mitigation Procedure (“AMP”) and to settle bids dispatched out-of-sequence for Intra-Zonal Congestion. The bid-based reference prices are calculated for the CAISO by an independent entity, Potomac Economics (“Potomac”). The ISO Tariff specifies, at a fairly detailed level, how these reference prices are to be calculated. Other details were provided in documents drafted by Potomac and made publicly available by the CAISO through a market notice and a posting on the CAISO website. The CAISO intends to file an amendment to the ISO Tariff with the Federal Energy Regulatory Commission (“FERC”) to incorporate details specified in those Potomac documents: the exclusion of non-positive bids from Potomac’s calculations of both incremental bid reference prices and decremental bid reference prices.

II. BACKGROUND

The CAISO uses bid-based reference prices (also called bid-based reference levels) as part of its AMP and to settle bids dispatched out-of-sequence for Intra-Zonal Congestion. Pursuant to authority granted by FERC,¹ Potomac calculates the bid-based reference prices independently of the CAISO, pursuant to two similarly but not identically worded sections of the ISO Tariff: Section 27.1.1.6.1.1,² which is used to manage Intra-Zonal Congestion and specifies how decremental bid reference prices are calculated, and Section 3.1.1.1 of Attachment A to Appendix P (“Section 3.1.1.1”), which is used to impose market power mitigation measures under the AMP and specifies how incremental bid reference prices are calculated. Section 3.1.1.1 and Section 27.1.1.6.1.1 each contain a five-step process for determining bid-based reference prices. Only the first of these five steps is relevant to the issues addressed in this paper.

An incremental bid or a decremental bid can be either positive or non-positive. As relevant here, an incremental bid is an offer to increase output of a resource, so a non-positive incremental bid is an offer to increase output for no compensation, or, if the bid is negative, an offer to pay for increasing output. In practice, a resource owner submitting a non-positive incremental bid is not indicating its willingness to accept no compensation for its energy or to pay for the privilege of providing it. Rather, the resource owner is attempting to ensure that its resource’s output is included in the CAISO’s energy market and it receives the market clearing price established by other resources’ positive incremental bids. A non-positive decremental bid is an offer to decrease

¹ See *California Independent System Operator Corp.*, 101 FERC ¶ 61,061, at P 38 (2002); *California Independent System Operator Corp.*, 103 FERC ¶ 61,265, at PP 40-41, 54 (2003); *California Independent System Operator Corp.*, 107 FERC ¶ 61,042, at P 46 (2004).

² Section 27.1.1.6.1.1 was numbered as Section 7.2.6.1.1 in the old conformed ISO Tariff, and was assigned its current section number in the Simplified and Reorganized ISO Tariff that went into effect in 2006.

output for no compensation, or, if the bid is negative, an offer to reduce output if the resource is paid the bid amount.

Incremental Bid Reference Prices

Section 3.1.1.1 is used “[f]or purposes of establishing reference levels”³ based on incremental bids. Section 3.1.1.1 states in relevant part that, under step one of the five-step process, “[a] reference level for each bid segment⁴ shall be calculated” by “[e]xcluding proxy and mitigated bids” and shall be based on “the accepted bid, or the lower of the mean or median of a resource’s accepted bids if such a resource has more than one accepted bid in competitive periods over the previous 90 days for peak and off-peak periods”⁵

Section 3.1.1.1 does not explicitly address whether non-positive (*i.e.*, negative or zero) incremental bids should be included in or excluded from the calculations of bid-based reference prices. Potomac has always excluded, and continues to exclude, all non-positive incremental bids from its calculations of bid-based reference prices under Section 3.1.1.1. Potomac’s practice of excluding non-positive incremental bids was disclosed to Market Participants in a document containing “Frequently Asked Questions” that was posted on the ISO Home Page in December 2002 (the “FAQ”).⁶ The economic logic underlying the exclusion of non-positive incremental energy bids is that: (a) the bid reference prices are intended to serve as proxies for the marginal cost of a resource, based on the bids submitted by its owner during workably competitive periods; and (b) non-positive incremental energy bids do not typically reflect the resource’s marginal cost, but instead signal the resource’s willingness to be a “price-taker,” *i.e.*, to accept whatever clearing price results in the CAISO market.

The CAISO understands that the New York ISO employs a practice of excluding non-positive incremental bids from its calculations of bid-based reference prices under its tariff, and that this detail is also not expressly stated in its tariff.⁷

Decremental Bid Reference Prices

Section 27.1.1.6.1.1 states in relevant part that, under step one of the five-step process, “[d]ecremental bid reference levels shall be determined by . . . [e]xcluding proxy bids, mitigated bids, and bids used out of merit order for managing Intra-Zonal Congestion” and shall be based on

³ Section 3.1.1.1(a).

⁴ Under Section 3.1.1.1, for purposes of establishing reference prices, the capacity of each generation is divided into 10 equal energy bid segments between its minimum (Pmin) and maximum (Pmax) operating point. Section 3.1.1.1(a)(1).

⁵ Section 3.1.1.1(a)(1).

⁶ The FAQ is available at <http://www.caiso.com/docs/2002/12/03/2002120315594923347.pdf>. A copy of the FAQ is included in the attachments to this paper.

⁷ See New York ISO Services Tariff, Attachment H, at Section 3.1.4 (containing the steps the New York ISO uses to determine reference prices).

“the accepted decremental bid, or the lower of the mean or the median of a resource’s accepted decremental bids if such a resource has more than one accepted decremental bid in competitive periods over the previous 90 days for peak and off-peak periods”⁸

Section 27.1.1.6.1.1 also specifies a test that Potomac must use to determine when decremental bids have been accepted in “competitive periods”:

The test will require that the ratio of a unit’s accepted out-of-sequence decremental bids (MWh) for the previous 90 days be less than 50 percent. If this ratio is greater [than] or equal to 50%, accepted decremental bids will be determined to have been accepted in non-competitive periods and cannot be used to determine the decremental reference price.⁹

Pursuant to FERC orders issued in the proceeding on Amendment No. 50 to the ISO Tariff (“Amendment No. 50”), the CAISO started using decremental bid reference prices in Intra-Zonal Congestion Management in 2003.¹⁰ From then until July 21, 2006, Potomac excluded all non-positive decremental bids from its calculations of decremental bid reference prices under Section 27.1.1.6.1.1, though that section, like Section 3.1.1.1 dealing with incremental bid-based reference prices, does not explicitly address the treatment of non-positive decremental bids. In June 2003, Potomac prepared a memorandum (the “Potomac Memorandum”) describing how decremental bid reference prices would be calculated and the CAISO circulated that memorandum by market notice issued on June 23, 2003.¹¹ The Potomac Memorandum indicated that Potomac would be calculating decremental bid reference prices in the same way that it calculated incremental bid reference prices, except for specifically identified differences. The Potomac Memorandum did not identify Potomac’s practice with regard to the exclusion of non-positive bids as a difference between how Potomac would calculate decremental bid reference prices and how it was already calculating incremental bid reference prices (as disclosed in the FAQ). Therefore, it was implicit in the Potomac Memorandum that Potomac would be excluding non-positive decremental bids from its calculations of decremental bid reference prices, just as Potomac excluded non-positive incremental bids from its calculations of incremental bid reference prices.

⁸ Section 27.1.1.6.1.1(a)(1). Section 27.1.1.6.1.1 addresses how decremental bids may be used to determine reference prices for purposes of managing Intra-Zonal Congestion, but the section contains no mention of incremental bids. This is because the CAISO does not use reference prices based on incremental bids to manage Intra-Zonal Congestion, but instead performs Intra-Zonal Congestion Management by using available Imbalance Energy bids in real time and through other means specified in the ISO Tariff. See Section 27.1.1.6.2 of the ISO Tariff.

⁹ Section 27.1.1.6.1.1(a)(1).

¹⁰ See *California Independent System Operator Corp.*, 103 FERC ¶ 61,265, at PP 40-41, 54; *California Independent System Operator Corp.*, 107 FERC ¶ 61,042, at P 46.

¹¹ On June 23, 2003, the CAISO issued a market notice stating that the CAISO had held a conference call earlier that day with Market Participants and Potomac to discuss “the decremental reference pricing methodology” and that the methodology would be implemented on July 1, 2003. The market notice included as an attachment the Potomac Memorandum, dated June 23, 2003 and entitled “Plan for Calculating Decremental Reference Levels,” which the market notice stated was provided to “clarify[] some points that were brought up in today’s discussion.” The market notice and the Potomac Memorandum are included as attachments to this paper.

Economic theory supports the exclusion of non-positive decremental bids from the calculation of decremental bid reference prices because: (a) the decremental bid reference prices are intended to serve as proxies for the avoided cost of a resource; and (b) non-positive decremental energy bids would rarely – if ever – reflect the resource’s avoided cost.¹² Instead, non-positive decremental bids would typically signal the resource’s unwillingness to have its output reduced for non-economic reasons (such as operational issues) and/or a generator’s attempt to take advantage of uncompetitive market conditions, which might require the CAISO to instruct a generator to reduce its output at no cost or even to pay a generator to reduce its output. This latter possibility was, of course, the rationale for including in Amendment No. 50 a means to mitigate the exercise of market power through the submission of negative decremental bids (*i.e.*, the so-called “negative dec” game).¹³

Potomac changed its practice of excluding non-positive decremental bids from its calculations of decremental bid reference levels on July 21, 2006 following an inquiry from a single Market Participant that had erroneously submitted a high positive decremental bid (*i.e.*, a bid that exceeded the Market Participant’s avoided costs), which had resulted in the establishment of a high (positive) decremental bid reference price. Potomac determined that inclusion of non-positive decremental bids in the calculation of the decremental bid reference price would have resulted in a lower decremental bid reference price because the erroneous high bid would have been offset, in part, by non-positive decremental bids. Because Potomac was not constrained by specific ISO Tariff language stating that non-positive decremental bids were required to be excluded, Potomac recalculated the decremental bid reference price and, ever since July 21, 2006, Potomac has included all non-positive bids in its decremental bid reference price calculations.

Except for the one Market Participant inquiry described above, the CAISO is not aware of any instance where a Market Participant had raised any concerns about how decremental (or incremental) references prices are calculated with respect to the treatment of non-positive bids.

III. CAISO PLAN FOR FILING AN ISO TARIFF AMENDMENT

The CAISO believes the exclusion of non-positive incremental bids to calculate incremental bid reference prices is authorized by the ISO Tariff, consistent with the economic logic discussed in Section II, above, and was disclosed to participants as being incorporated in the methodology to calculate incremental bid levels.. The CAISO also believes that both methods of calculating decremental bid reference prices—with and without including non-positive bids—are consistent with the ISO Tariff in that both methods are based on accepted bids. In addition, both methods result in the establishment of decremental bid reference prices that should not exceed avoided costs, provided the bids offered on behalf of a resource are not in excess of avoided costs. However, the CAISO believes that the bid-based reference prices for both incremental and decremental bids should be calculated consistent with the publicly disclosed information provided

¹² The Potomac Memorandum noted that “a competitively-priced incremental bid for a particular output segment of a supply resource may not be the same as a competitively-priced decremental bid for the same output segment. This is because the marginal cost of producing may not be the same as the avoided cost of not producing for all parts of all units.” Potomac Memorandum at 3.

¹³ See *California Independent System Operator Corp.*, 103 FERC ¶ 61,265, at P 3.

in the FAQ and the Potomac Memorandum. Accordingly, the CAISO has determined that the appropriate course of action is to file an ISO Tariff amendment to provide the detail that non-positive bids are excluded from the calculation of both incremental and decremental bid reference prices.

This conclusion is supported and informed by FERC's recent pronouncement in Order No. 890 that implementation details not included in the tariff must be publicly available and should not be changed without notice to affected Market Participants.¹⁴ Moreover, the detail in question could, in a circumstance such as the one that prompted Potomac to start including non-positive bids in its calculation of decremental bid reference prices, substantially affect rates. If rates are substantially affected, the "rule of reason" employed by the courts and FERC suggests that the detail should be included in the ISO Tariff.¹⁵

The CAISO will not be seeking authorization from the Board of Governors as the proposed ISO Tariff amendment would contain implementation detail that relates to ISO Tariff provisions that were subject to stakeholder review and comment, and that were accepted by FERC, in the Amendment No. 50 proceeding. Accordingly, no new policy change requiring Board approval is under consideration. Finally, because both methods of calculating decremental bid reference prices (with and without including non-positive bids) are consistent with the ISO Tariff and both methods result in the establishment of decremental bid reference prices that should not exceed avoided costs, the CAISO is not proposing that decremental bid reference prices calculated since July 21, 2006 be recalculated.

¹⁴ *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 72 Fed. Reg. 12266 (Mar. 15, 2007), FERC Stats. & Regs., Regs. Preambles ¶ 31,241, at PP 1649-1655 (2007).

¹⁵ The rule of reason requires the filing, pursuant to Section 205 of the Federal Power Act, of all rates, charges, classifications, practices, and regulations that have a significant effect on FERC-jurisdictional rates or otherwise alter the terms of documents already on file with FERC, are "reasonably susceptible to specification," and are not "so generally understood in any contractual arrangement as to render recitation superfluous." *City of Cleveland v. FERC*, 773 F.2d 1368, 1376 (D.C. Cir. 1985).