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**PUC PROJECT NO. 24770**

**REPORT OF THE ELECTRIC  
RELIABILITY COUNCIL OF TEXAS  
(ERCOT) TO THE PUCT  
REGARDING IMPLEMENTATION  
FO THE ERCOT PROTOCOLS**

§ **PUBLIC UTILITY COMMISSION**  
§ **OF TEXAS**  
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**ERCOT'S RESPONSE TO ORDER 17: COMMENTS ON MOD'S COMPETITIVE  
SOLUTION METHOD PROPOSAL**

The Electric Reliability Council of Texas (ERCOT) respectfully submits these comments in response to Order No. 17 wherein parties were invited to file comments on the "Competitive Solution Method" (CSM) proposed by the Market Oversight Division (MOD) of the Public Utility Commission of Texas (PUCT, Commission). In this response, ERCOT does not address a timeline for implementation of CSM or cost estimates for implementation.

The Competitive Solution method was discussed in "Commission Staff's Initial Brief" (Staff's Initial Brief) dated January 25, 2002. In the Brief, Commission Staff sets forth the elements of the Competitive Solution Method as follows:

- Step 1: Apply Competitive Sufficiency Test. If the conditions are not met, go to step 2.
- Step 2: Post Indicative (Market Clearing Price) MCP and extend the Day-Ahead Market Closing.
- Step 3: Apply the MCP Limit if Competitive Sufficiency Test is not met after the close of the extended Day-Ahead Market and in the Adjustment Market.

The PUCT's Report entitled "Application of Competitive Solution Method to Data from ERCOT Ancillary Capacity Services"<sup>1</sup> (MOD's Analysis) documents MOD's analysis of the impact of the Competitive Sufficiency Test as applied to historical data from the ERCOT markets.

ERCOT applauds the work of MOD in providing the in-depth study underlying MOD's Analysis. The effort required the analysis of large amounts of data and was performed and presented professionally. It is very instructive regarding the operation of the ERCOT Ancillary Services markets in ERCOT to date.

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<sup>1</sup> Undated report filed by PUCT MOD in Docket 24770 October 11, 2002.

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## Comments

ERCOT understands that CSM is being proposed by the PUCT to remedy potential market shortcomings in the Ancillary Service markets<sup>2</sup> administered by ERCOT including prevention of the ability to exercise market power by generation entities. ERCOT's understanding of the elements of the proposed Competitive Solution Method, as well as comments and questions about the Commission proposal as currently understood, are set forth below.

As described in Staff's Initial Brief, the Competitive Sufficiency Test (CST) component of the Competitive Solution Method requires ERCOT to:

- Test whether the total quantity of bids submitted for each ancillary service exceeds the amount to be procured by ERCOT by at least 15% (excluding amounts self arranged by Market Participants)
- Ensure that the MCP is not set by a "pivotal bidder"<sup>3</sup> by removing pivotal bidder's capacity plus 5% of the highest price capacity remaining in the bid stack after removal of the pivotal bidder(s)
- Track the affiliations of each Market Participant to the sub-QSE level

In the event that evaluation shows a failure<sup>4</sup> of the CST, the proposed method would have ERCOT post an "indicative price equal to the marginal bid needed from the unadjusted bid stack and...extend the closing of the day-ahead market for one hour."<sup>5</sup> This condition anticipates that the CSM will be applied in real-time during the day-ahead market. During the market extension, participants may withdraw bids (using the withdrawn capacity for self arranged provision) or submit bids (with the provision that they are price takers).

Though not explicitly stated, ERCOT understands that at the close of the extension, the day-ahead market would again be executed. If the conditions do not pass the CST on the second

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<sup>2</sup> ERCOT Ancillary Service markets include Regulation Service Down (RGSD), Regulation Service Up (RGSU), Responsive Reserve Service (RRS), Non-Spinning Reserve Service (NSRS), Replacement Reserve Service (RPRS).

<sup>3</sup> Commission Staff's Initial Brief defines a pivotal bidder as follows: "A bidder is considered pivotal if removing all of its offered quantities from the bid stack will result in a bid stack that is less than the total quantity to be procured by ERCOT."

<sup>4</sup> Is failure deemed to occur only in the event that all CST conditions fail simultaneously, or is failure of a single condition sufficient to warrant implementation of the market extension? The methodology employed by MOD in its "Application of Competitive Solution Method to Data from ERCOT Ancillary Capacity Services," applies mitigation in the event that any single condition fails, but this is not clear from the discussion contained in Staff's Initial Brief.

<sup>5</sup> Staff's Initial Brief, page 17.



iteration, ERCOT is expected to apply an “MCP limit.” Specifically, RCOT would calculate an MCP

*by removing from the stack bids from all pivotal bidders and the highest priced 5% of the quantity needed from non-pivotal bidders, and increasing the highest bid price from the remaining stack by 50% (MCP limit). The MCP will be the lower of the MCP limit or the marginal bid from the unadjusted bid stack (unadjusted MCP). This MCP will be paid to all the procured quantities selected out of the unadjusted bid stack in order of ascending bid price, including quantities from pivotal bidders with bids lower than this MCP. For any additional quantities needed, ERCOT will OOM available capacity and pay it the higher of its verifiable, incremental costs directly attributable to the service provided or the marginal price corresponding to 90% of the quantity procured from the bid stack. Resources will be OOMed on a non-discriminatory basis, regardless of whether they were bid into the ERCOT-administered markets.<sup>6</sup>*

It may be the case that the removal of pivotal bidders would “leave the market short.” In such an event, ERCOT assumes the pivotal bidder’s capacity could be available for to OOM service if needed for reliability needs. That being understood, it appears that this approach may be feasible given that the expectation exists that pivotal bidder capacity would be ‘reinserted’ into the bid stack for portions of the capacity with offer prices below the MCP calculated by ERCOT in this process.

It appears that pivotal bidders would be potentially penalized for being “pivotal” (i.e. offering large quantities of a service to the market) when it could be the case that their offer prices are in line with those of other bidders and would not in themselves cause price anomalies. On one occasion, a particular market participant was not able to submit all of its usual bids for services on September 9, 2001. MOD’s analysis identified that the lack of this bidder’s offers caused the price for the service to increase. Thus, it may be the case that removing the bids of the pivotal bidder, as proposed under the CSM, may in fact raise prices above what the MCP might have been were the pivotal bidder’s offers considered in the solution. Removal of capacity of the pivotal bidder does not, in and of itself, prevent against price spikes that may be caused by bidders with less – but more expensive – capacity offered for a particular service. The pivotal bidder test as described in both Staff’s Initial Brief and MOD’s Analysis seems to disregard the possibility that the bids of a pivotal bidder may in fact serve to dampen overall clearing prices prior to implementing corrective measures. The CSM proposal makes no check to see whether

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<sup>6</sup> Staff’s Initial Brief, pp 17-18.

the minimum of the MCP limit or the marginal bid from the unadjusted bid stack (unadjusted MCP, developed as described by MOD above) is below what the MCP would have been were the bids from the pivotal bidder allowed to be included in the determination of the MCP. Moreover, as demonstrated in MOD's analysis, the proposed CSM method would not consistently protect against price spikes.

Based on MOD's analysis of ERCOT Ancillary Service markets for the period August 1, 2001, through July 31, 2002, one might conclude that for the entire first year of operation, ERCOT Ancillary Service markets do not appear to have demonstrated anti-competitive conditions, even in the absence of the type of automatic mitigation plan (AMP) proposed under the CSM. As MOD noted, "the data showed few historical instances of price spikes even with no mitigation plan in place."<sup>7</sup> This monitoring effort is critical in reviewing the performance of ERCOT Ancillary Services markets, and ERCOT urges MOD to continue this work. There are other market design changes already in progress that will enhance the markets and address potential market abuse, such as simultaneous selection of Ancillary Services, which is expected to increase the sufficiency of bid stacks for higher quality ancillary services with a potential impact of further reducing the potential need for mitigation due to the removal of offers from pivotal bidders.<sup>8</sup> The effectiveness of such enhancements should be considered prior to implementing significant market design changes.

ERCOT, Market Participants, and MOD are working toward simultaneous procurement of ancillary services to comply with the Commission Order on Rehearing in Docket 23220, through the efforts on Protocol Revision Request (PRR) 342. ERCOT anticipates that it is the

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<sup>7</sup> "Application of Competitive Solution Method to Data from ERCOT Ancillary Capacity Services." PUCT Market Oversight Division, page 3. MOD further notes on page 5 that were the CSM in place during the period from August 1, 2001 through July 31, 2002, the "CSM would have triggered an MCP limit to mitigate market clearing prices five times in the four hourly markets during the 365 day period examined. This means that approximately five out of 35,000 intervals (4 services times 8760 hours) may have been subject to modification under this proposal. MOD identified the fact that its own analysis may "overstate the frequency of [potential instances of] price mitigation under CSM." This is the case because the analysis is inherently limited to available data, and there is no way to reconstruct what might have occurred under a different set of conditions—a point which MOD correctly noted, "The analysis could not take into account what would happen had ERCOT extended the day-ahead market, which would happen under CSM if the competitive sufficiency test were not met." See "Application of Competitive Solution Method to Data from ERCOT Ancillary Capacity Services," page 3.

<sup>8</sup> On page 5 "Application of Competitive Solution Method to Data from ERCOT Ancillary Capacity Services," MOD states: "...it could be expected that the sufficiency of bid stacks in the higher quality services would improve after simultaneous optimization was implemented."

expectation of the Commission that the CSM would be implemented during or after the implementation of the simultaneous procurement of Ancillary Services. ERCOT requests guidance on how evaluation of the simultaneous Ancillary Service market clearing would work with the CSM approach that is conducted in a sequential manner.<sup>9</sup> Additionally, ERCOT requests guidance on how application of the CSM would work with provisions MOD has proposed to modify PRR 342, in particular:

- Whether it is the intent of MOD's proposal to re-solve all markets in the event the CST conditions are not met for a single service. [ERCOT presumes this to be the case because simultaneous selection requires a solution for all Ancillary Services (except Replacement Reserve Service) to occur simultaneously. Thus, suspending market close for one service would suspend market close for all services—and removal of bids for the service in question may impact the clearing prices of the other services that may not originally have been in violation of the CST conditions.]
- Whether the removal of the pivotal bidder for one service would remove the bidder from the bid stack for other services in the event of simultaneous selection. [ERCOT does not imagine this to be the case but requests specific clarification.]
- As described in Staff's Initial Brief, the application of the MCP limit process is applicable to, "all procured quantities selected out of the unadjusted bid stack in order of ascending bid price, including quantities from pivotal bidders with bids lower than MCP."<sup>10</sup> [This seems to indicate that capacity from a pivotal bidder offered below the MCP calculated through the process envisioned by the Commission might be "put back" into the bid stack. How would this work with the simultaneous selection process?]

### **Conclusion**

MOD's analysis points out that bidders in ERCOT markets have been "well-behaved" approximately 99% of the time. As noted by MOD, anomalous behavior occurred mainly in 2001, primarily in August, the first full month of operation.<sup>11</sup> Given the potential complexities in implementation and unanswered questions regarding the interaction of the CSM with simultaneous selection of Ancillary Services and MOD's current discussions of changes to the

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<sup>9</sup> MOD attempted to address this question in its analysis by noting, "The steps used to apply the CSM....would be unchanged [in the implementation of CSM to simultaneous selection]. The mechanisms for applying each step would be revised to fit with simultaneous optimization." However, MOD's conclusion that "a bid for a higher quality service will automatically be considered to be used for a lower quality service," may not stand up to scrutiny due to disparities in the requirements placed on different ancillary services. [For example, a unit that provides RRS cannot count more than 20% of its capability toward provision of this service.] MOD did not address this complication in its discussion of simultaneous selection and CSM. See "Application of Competitive Solution Method to Data from ERCOT Ancillary Capacity Services," page 5.

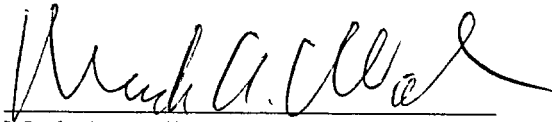
<sup>10</sup> Staff's Initial Brief, pp 17-18.

<sup>11</sup> Application of Competitive Solution Method to Data from ERCOT Ancillary Capacity Services." PUCT Market Oversight Division, page 5.

simultaneous selection process making its way through the PRR process, ERCOT believes that beginning the process to implement CSM at this time may be premature.

ERCOT appreciates this opportunity to submit comments on MOD's CSM proposal.

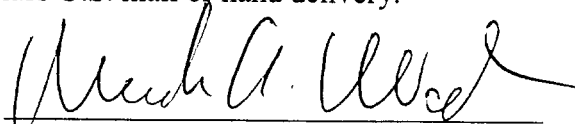
Respectfully submitted,



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#### **CERTIFICATE OF SERVICE**

I, Mark A. Walker, attorney for ERCOT, certify that a copy of this document filed in this docket by ERCOT was served on all parties of record in this proceeding on November 22, 2002, in the following manner: by facsimile, first class U.S. mail or hand delivery.



Mark A. Walker