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DOCKET NO. 24770

REPORT OF THE ELECTRIC RELIABILITY COUNCIL OF TEXAS (ERCOT) TO THE PUCT REGARDING IMPLEMENTATION OF THE ERCOT PROTOCOLS	§ § § § §	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

COMMENTS OF THE CITY OF AUSTIN D/B/A AUSTIN ENERGY ON COMMISSION STAFF'S OCTOBER 11, 2002 REPORT ENTITLED APPLICATION OF COMPETITIVE SOLUTION METHOD TO DATA FROM ERCOT ANCILLARY CAPACITY SERVICES

NOW COMES The City of Austin d/b/a Austin Energy, ("Austin Energy") and files these Comments in the above docket as follows:

Austin Energy is pleased to provide comments on the Commission Staff's report on the Competitive Solution Method (CSM). While the Staff Report is an excellent first step in assessing the need for CSM, the paper does not provide an empirical basis for justifying a market redesign at this time. Austin Energy believes that the evidence presented by Staff can be interpreted to show that *the market* is responding appropriately to price spikes for ERCOT-procured ancillary services and that the data presented by Staff shows that short-term price spikes are providing proper pricing signals stimulating market participants' competitive responses. If Austin Energy's interpretation is correct, then adopting Staff's proposal at this time may prove counterproductive, instead discouraging this competitive market response by eliminating pricing signals, thereby failing to bring in resources to resolve price spikes to the detriment of the market and its customers.

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I. Striking the Right Balance is Critical

The Staff paper states "the goal of the CSM is to mitigate market failure without suppressing legitimate price signals and scarcity rents."[1] Austin Energy agrees that the goal of the CSM, and virtually all regulatory oversight in the market, should be to balance market intervention when necessary with the ability of the market to respond to pricing signals and resolve economic inefficiencies. That balance is at the heart of S.B.7. Unfortunately, the Staff report is an insufficient basis from which to assess this balance. The limited scope of the report is very clear. In the very first sentence, it states that "the study describes how the Competitive Solution Method (CSM) proposed by the Commission Staff would have affected [the prices of] ancillary capacity services procured by ERCOT had it been in effect..."[2] The report does not—and Staff does not claim—to evaluate empirically the market impact of adopting the Staff mechanism. Nevertheless, this is precisely the issue that can and should be investigated empirically before adopting a market change. Until then, implementing the Staff's CSM would be premature.

Austin Energy believes that the danger of adopting the CSM prematurely is that if the market is already responding appropriately to price signals, then applying the CSM will *suppress* those price signals. The data presented in the Staff report suggest, as reviewed below, that the market is responding appropriately to price spikes without any market mitigation mechanism in place. Under the CSM, market response could be squelched, with the result that an incomplete regulatory response displaces a successful competitive

[1] Docket No. 24770, *Application of Competitive Solution Method to Data from ERCOT Ancillary Capacity Services* ("Staff Report"), Market Oversight Division, October 22, 2002 at 2.
[2] Staff Report at 2.

market mechanism. If that is the case, then the balance the Staff is seeking will become skewed to the detriment of the market and of customers.

II. Review of the Data Presented by Staff

In its report, the Staff presented the instances in which the CSM would have been invoked. During the study period, the first year of wholesale market operations, Staff reports that the CSM would have been invoked for 41 total intervals and that in 35 of those intervals, the market clearing price (MCP) mitigation method would have failed, leading to mitigation by applying OOM pricing. Application of CSM would have resulted in MCP mitigation in only six intervals over the course of the 35,000 plus intervals studied.[3]

The report presents tables for each ancillary service, which list the intervals in which the CSM would have been applied. In the text, the report describes for some of these intervals the market conditions surrounding the price spike incident. The table below reprints the intervals in which the CSM would have been applied. Where possible, the table also summarizes the market conditions that occurred at the time of the price spike and the response in the market following the price excursion. Since only the Commission Staff has access to the data for this study, the table relies on the descriptions provided by Staff for the summary of market conditions and of the market response. Because the Staff does not provide information on all the intervals, there are some holes in the table.[4]

[3] Staff Report at 6, Table 1; total intervals calculated as 365 days * 24 intervals/day * 4 services = 35,040.
[4] Staff reported in Table 1 that the CSM would be invoked for 41 total intervals. In summarizing information from Tables 2 through 5 and from descriptions in the text, only 39 intervals were identified in which the CSM would be applied. Therefore, some of the numbers reported here may be internally inconsistent.

Table 1: Intervals Qualifying for CSM as Reported by Staff

Date	Number of Intervals	CSM Outcome	Market* Conditions	Market* Resolution
Regulation Down Service				
August 20, 01	1	Mitigation from $499 to $228	Supply reduction	Resolved in 1 interval
September 9, 01	2	OOM	Shortage	Resolved in 2 intervals
September 9, 01	7	OOM	Shortage	Large block of low priced offers entered market
November 17, 01	2	OOM	Shortage	Resolved in 2 intervals
November 17, 01	3	OOM	Shortage	Resolved in 3 intervals
Regulation Up Service				
November 17, 01	1	OOM	Increase in procurement accompanied by decrease supply	Additional supply in next interval dropping MCPC to $4
November 17, 01	4	OOM	Sharp increase in procurement by ERCOT	New entry cleared market in 4 intervals, MCPC dropped from $500 to $12.99
Responsive Reserve Service				
August 10, 01	1	OOM	Sharp increase in procurement by ERCOT	Resolved in 1 interval
August 20, 01	1	Mitigation from $230 to $19.50	Decrease in supply	Resolved in 1 interval reducing MCPC to $9
October 15, 01	1	Mitigation from $999 to $750	Greater than 10 times increase in procurement by ERCOT	Procurement level returned to normal in 1 interval
November 17, 01	4	OOM	Increase in procurement by ERCOT	Increase in offers resulting in MCPC of $3.90 after 4 intervals
November 17, 01	1	Mitigation from $19.5 to $1.5	Sharp decrease in supply	Resolved in 1 interval
Non-spin Reserve Service				
April 30, 02	1	Mitigation from $999 to $225	No information provided in report	No information provided in report
April 30, 02	10	OOM	No information provided in report	No information provided in report

* From descriptions of each instance in text of report.

The table shows that by applying the Staff's CSM, the market would have been mitigated 14 times, covering 39 intervals. CSM would have invoked MCP mitigated prices five times for five total intervals. In the remaining 34 intervals, application of CSM would have led to OOM pricing.

Reviewing each mitigation example individually appears to show that the market resolved most price spikes in short order. Note that seven of the price spike episodes were resolved by the market in only one interval. Staff's descriptions indicate that in other cases, although the price spike lasted more than one interval, the price spikes were resolved with new resources. Take, for example, the price excursion for regulation down service on September 9th from 3:00 pm through 9:00 pm. Staff reports that large blocks of low-priced offers resolved the price spike. In other words, additional supply cleared the market at low prices.

The example of regulation up service on November 17th from 7:00 am through 10:00 am shows a similar outcome. After four intervals, increased supply caused the MCPC to drop from $500 to $12.99. After a one-interval spike occurring at 1:00 am on that same day, the MCPC returned to $4 in the next interval.

On November 17th from 7:00 am through 10:00 am in the responsive reserve service market, prices spiked for four intervals. After those four intervals, the MCPC dropped to $3.90. Also in the responsive market, on October 15, ERCOT increased its procurement by more than ten times its normal procurement. The procurement level returned to normal in one interval, clearing the price spike.

For each of the price excursions identified by Staff, there is an underlying behavioral story. And in almost all of these incidents, the story is the same: *the market cleared the price spikes, often in only one interval.*

There are several other important observations from the data presented by the Staff. First, note that in every case, except for the two cases in which the CSM would have led to mitigation in the non-spinning reserve service market, the price spikes occurred in the first months of the market. Staff reports that there were three cases in August of 2001, two in September, one in October, and six in November. The data suggest one possible explanation—that the price spikes occurring in these months were associated with the transition to the new market.

The six episodes in November are particularly noteworthy. All six occurred on the same day for regulation up, regulation down, and responsive reserve services. The sequence depicted by staff is as follows:

Table 2: Intervals on November 17, 2001 in which CSM would have Mitigated Prices, by Service Type

Interval	Regulation Up	Regulation Down	Responsive
1:00 am	X		X
7:00 am	X	X	X
8:00 am	X	X	X
9:00 am	X		X
10:00 am	X		X
11:00 am		X	
12:00 pm		X	
1:00 pm		X	

The CSM would have mitigated both regulation up and responsive reserve service at 1:00 am, though the mitigation for responsive reserve service would have reduced the MCPC from only $19.50 to $1.50. Beginning at 7:00 am, Staff reports that mitigation would

have occurred in regulation up, regulation down, and responsive, lasting until 1:00 pm. At the very least, this situation calls for further investigation. What can account for simultaneous spikes in both regulation up and regulation down service, and why would spikes in regulation up and responsive from 7:00 am to 10:00 am be followed immediately by spikes in regulation down from 11:00 am to 1:00 pm? The Staff paper suggests that for regulation up and responsive, ERCOT sharply increased its procurement for these intervals. For regulation down, large blocks of capacity were not bid for a number of intervals. Are these incidents just coincidence; is there a behavioral explanation; or did ERCOT experience a transitional problem in its operation of the new market?

To summarize the instances in the first four months of the market in which ERCOT's CSM would have been applied, half were cleared in only one interval, and in most of the other cases, the price spikes were resolved in only a few intervals, in some cases resulting in very low prices.

The price excursions in the non-spin market in late April were sustained for a greater number of intervals, even rolling over for multiple days. This case is much more important for evaluating the impact of the CSM because of the day-ahead design of the AS market. In all of the cases discussed above, bidders did not have the opportunity to react to price signals since ERCOT awards all AS selections simultaneously for each day. In other words, within the day, bidders do not have any mechanism to respond to AS prices. Since none of the episodes identified by Staff for 2001 were multi-day episodes, there is only a limited opportunity to evaluate whether high prices stimulated a market response. The April episode is much more robust. It is the only example that allows for

evaluating the critical balance between application of a regulatory fix versus allowing the market to respond.

ERCOT did not procure non-spin for the entire month of March and the balance of the month of April preceding the price spike. Data presented by Staff show that in the days preceding the event, bidders offered somewhere between 300 and 600 MW of non-spin in each interval.[5] ERCOT public data extracts utilized in development of these comments indicate that for April 28th, ERCOT procured non-spin in the day-ahead market for the first time. From noon through 10:00 pm, ERCOT procured between 142 and 157 MW of non-spin at prices between $25 and $40. For April 29th, ERCOT procured a similar amount at much higher prices for some intervals. For one hour, the price rose to $999, but the CSM would not have mitigated the price for that interval. From 4:00 pm through 7:00 pm, the price varied between $125 and $199. For the rest of the intervals, price varied between $24.59 at 11 pm and $99 at 1:00 pm. The CSM would not have been invoked in any interval for April 29th.[6]

The CSM would have been invoked on April 30th. For the operating day of the 30th, ERCOT procured between 519 and 790 MW from noon through 11:00 pm, at $999 per MW for each interval. In some of those intervals, ERCOT procured as much as five times the amount of non-spin it procured in the two days before.

For the next day, May 1st, ERCOT again procured large quantities of non-spin, ranging between 657 and 693 MW from noon through 11:00 pm. However for May 1st, the

[5] Staff Report at 18, Figure 8.

[6] Another issue not addressed in the Staff Report is what is the value of the reserves offered to ERCOT for these days? April 29th and 30th were unseasonably hot days during a shoulder month when many units across the state were down for maintenance. The prices seen in these intervals may simply have reflected the market value of the reliability needs of ERCOT at that point in time.

MCPC was much more moderate, exceeding $100 per MW in only one interval, at $150. The total offers to ERCOT suggest why prices moderated on May 1st, even as ERCOT's procurement was similar on May 1st to April 30th. For May 1st, suppliers bid as much as 1,504 MW of non-spin. Compare that amount to the total offers for April 28th, the first day that ERCOT procured non-spin. For the 28th, the maximum offered in any interval was 741 MW. For April 30th, the day that prices rose to $999 for a number of intervals, total offers hovered around 1,000 MW. Comparing April 30th to May 1st, for the hours of noon through 11:00 pm, the average offer for the 30th was 1,031 MW compared to an average offer of 1,335 MW for May 1st.

The Staff Report does not offer any analysis of the prices in the non-spin market during this period. The report simply notes the number of intervals in which the CSM would have mitigated prices. The cursory review presented above suggests, however, that the market responded to changing circumstances; new resources entered the market in response to price signals and prices were mitigated by this market-based activity.

Austin Energy believes that this episode demonstrates how markets should operate and does not call for regulatory mitigation. After a long period of not procuring non-spinning reserve, ERCOT began procuring non-spin. ERCOT then for April 30th greatly increased its procurement. For the first day, prices rose to the cap, but the next day, while ERCOT continued to procure large quantities of non-spin, prices moderated because offers increased significantly.

Data presented by Staff in the report demonstrate the market response quite vividly. Figure 1, below, reproduces Figure 8 from the Staff report. The figure shows that up until the last days of April, offers for non-spin service almost never exceeded 600 MW in

any interval. After ERCOT began to procure large quantities of non-spin, however, offers rose significantly, almost never falling below 600 MW, which had been the ceiling previously. The horizontal line—which is drawn over the top of the Staff figure—shows visually the market response. Before ERCOT began procuring non-spin, offers were almost always below the line. But after prices rose, offers almost never fell below the line, and in some intervals were triple that represented by the line.

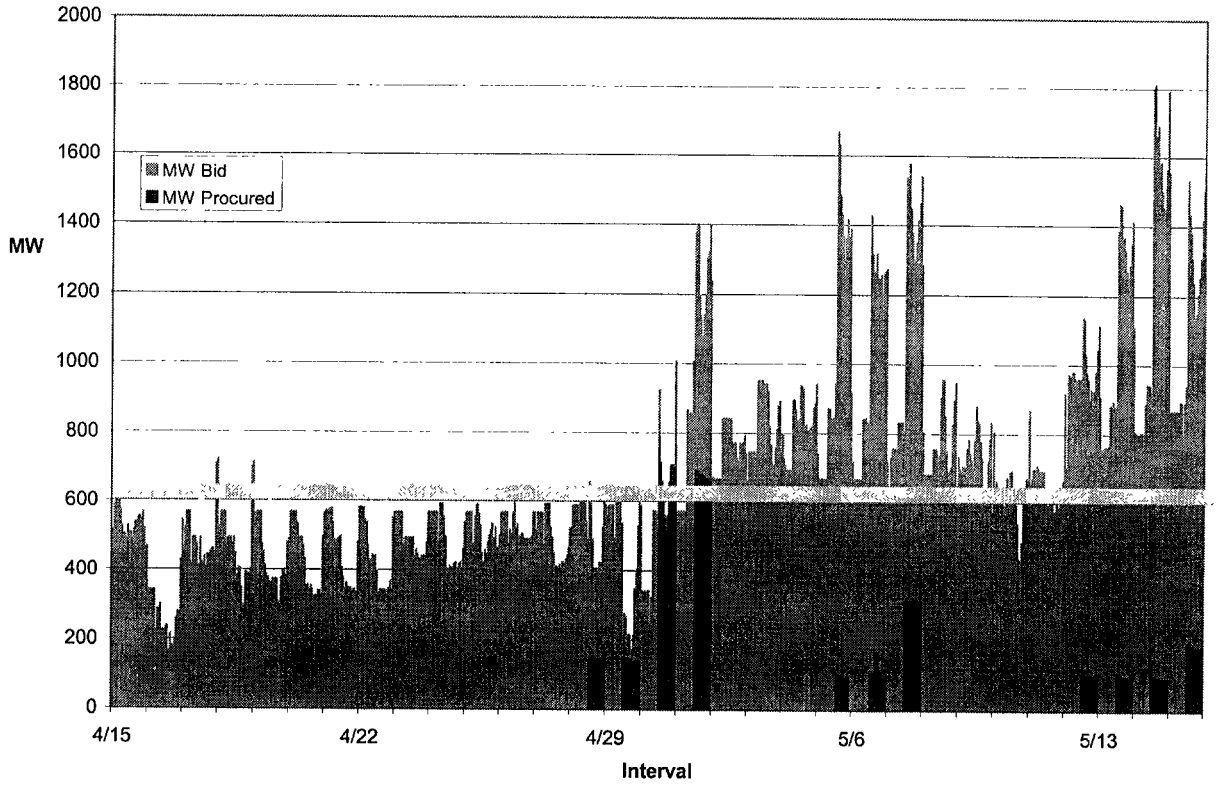

Figure 1: Change in MWs Offered Before and After Initial Price Spike (from Staff)

The Staff's approach would substitute regulatory mitigation for a competitive market response when the available data suggest that a timely market response is in fact occurring. Would that strike the correct balance between relying on regulation vs. the market to resolve price excursions? It is important to note that the CSM price mitigation

method would have failed in every interval on April 30th, so the price would have defaulted to what is presumably the much lower OOM price. Just a casual observation of the figure shows that there was a *sustained* supply response to the high prices that occurred on the 29th and 30th. If instead, the CSM had imposed OOM pricing on the 30th, would the sustained supply response seen in the figure have occurred? Austin Energy believes that the answer to that question is no because OOM pricing would not send a sufficient signal to attract new resources. And if the answer is indeed no, then Staff's suggested CSM does not strike the proper balance between regulation and market response.

The brief assessment presented here is not conclusive, though it is a very plausible explanation for the data presented by Staff. At a minimum, this assessment calls for a detailed empirical analysis of the impact of the CSM. That analysis has not been performed. It cannot be performed by the stakeholders who do not have access to the necessary data. As the Commission has stated that it will hire outside economics consultants to assist the Market Oversight Division, this issue appears ripe for a more thorough analysis once those consultants are brought on board.

III. Impact of Simultaneous Optimization of Ancillary Services

The Staff report notes that the Commission has ordered and ERCOT will soon adopt simultaneous optimization of ancillary services. Price reversals may suggest that a market design inefficiency exists in the ancillary services markets. Simultaneous optimization of the appropriate services will eliminate price reversals. Staff notes that with simultaneous optimization, the number of instances in which applying the CSM

would lead to price mitigation should be reduced.[7] Staff should note, that on April 29th and 30th, prices for regulation up, responsive reserve, and non-spinning reserve demonstrate an example of price reversal. For example, for the April 30th operating day, while the price for non-spin was $999, regulation up ranged between $12.52 and $55, while responsive ranged between $30 and $75.

The price reversals that occurred on April 29th and 30th raise an important question. Had the simultaneous optimization method been in place, would prices for non-spin have reached $999, and would the CSM have called for mitigation of any kind? This is another question that can be clarified by more detailed empirical investigation.

IV. Does the Staff's Method Identify Market Power?

The Staff Report states that "[t]he CSM is designed to intervene in the market only if a bidder actually uses its market power position to drive up the MCPC."[8] But what is market power? And does the CSM in fact identify when a bidder actually uses its market power to drive up prices? The Staff Report presupposes that market power exists any time its somewhat arbitrary pivotal bidder test is met. Yet does that test correctly identify market power abuse? The regulatory record suggests that it does not.

Market power is already well defined, and the test underlying the CSM does not comport with that definition. The definition of market power has long been recognized in Commission policy, which is built upon the definition of market power utilized by the U.S. Department of Justice and the Federal Trade Commission: the ability of a party or

[7] Staff Report at 5.
[8] Staff Report at 1.

parties working together to raise prices and sustain the higher prices.[9] That definition has long been the working definition of market power applied by the Commission as well.[10]

Recently in Docket No. 25937, the Commission Staff suggested an alternate definition of market power, that market power exists any time that prices deviate from marginal cost.[11] A similar notion underlies the market failure test in the proposed CSM. Austin Energy finds this definition arbitrary and inconsistent with the underlying economics of markets. In competitive markets, prices may well deviate from marginal cost, but the discipline of the market prevents such price increases from being sustained.

The notion that price deviations from marginal cost must be *sustainable* is critical to the ability to exploit market power. Consider, in a very simplified example, the difference between a price spike in which the price is set by a generator in a generation-constrained zone and a price spike caused by shortages in a zone that is not constrained. In the first case, because the zone is generation constrained, the price-setting resource may be able to escalate its bid as long as the zone remains constrained. But in the second example, if there is no constraint, other resources can offer supply in the zone, undercutting the price of the price-setting unit. In the first case, market power exists, while in the second case, market power cannot exist because other resources can contest the market.

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[9] The U.S. Department of Justice and the Federal Trade Commission define market power as "the ability profitably to maintain prices above competitive levels for a significant period of time." *Horizontal Merger Guidelines*, April 2, 1992 at §0.01.

[10] See for example, Project No. 15000 Electric Industry Restructuring, *Report to the 75th Texas Legislature, Volume II The Scope of Competition in the Electric Industry in Texas: A Detailed Analysis*, January 1997, which defines market power as "the ability [of] a single firm or a group of competing firms in a market [to] profitably...raise prices above competitive levels and restrict output below competitive levels for a sustained period of time" at IV-15. This document provided guidance from the Commission to the Legislature in its consideration of electricity restructuring legislation.

[11] Project No. 25937 PUC Investigation into Possible Manipulation of the ERCOT Market, *Questions and Answers*, June 24, 2002.

Austin Energy does not believe that the data presented by Staff demonstrate that market power exists. In fully half the instances in which the CSM would have mitigated price spikes, the high prices lasted for only one interval. In most other examples, prices returned to expected levels in a few intervals. The quick resolution of price excursions does not support a conclusion of the existence of market power. Only the events of late April offer another picture. While elevated prices occurred over two days, and for one of those days the MCPC reached the price cap for 10 hours, the high prices could not be sustained because the day after ERCOT's procurement level spiked, hundreds of MW of supply contested the market. Offers in the market settled around a level double the level before ERCOT began procuring non-spin. This response does not support the conclusion that a market participant—whether or not identified as a pivotal bidder by the CSM—could use its market power position to drive up the MCPC. Market power must be evaluated dynamically; the Staff's analysis of market mitigation is a static analysis.

This review of the data underlying the application of the Staff's recommended CSM suggests that there is not evidence of market power in the ancillary services markets. Temporary deviations of the MCPC from marginal cost may well have occurred, but those instances do not demonstrate that market power exists. For example, on October 15, 2001, ERCOT increased its procurement of responsive reserve service for one interval by 10 times its normal procurement. The CSM would have identified this interval as an example of a bidder using its market power position to drive up the MCPC. But clearly, nothing of the sort occurred. Staff has not demonstrated that market power—the ability to raise and then sustain high prices—occurred in any of these instances. And

in the most telling case, late April of 2002, new resources entered the market and the high prices seen on April 30th were not sustained.

VII. Conclusions

The Staff Report has not made a case for adopting the proposed CSM. Instead, the report presents data suggesting that the market is responding to price signals appropriately. If that is so, then imposing the CSM would substitute regulation for a working competitive market response. To do so would be antithetical to the very intent of S.B.7, which is described clearly in PURA 39.001(d) as requiring "competitive rather than regulatory methods..."

The Commission need not rely on conjecture when weighing regulatory vs. competitive solutions. The market has operated for more than a full year, and is ripe with data for analysis. Market participants do not have access to the data necessary to conduct a comprehensive assessment of price spikes in the ERCOT market. Only the PUC and its consultants have access to that data. Austin Energy encourages the Commission to assess these empirical questions before acting prematurely. To date, the Staff Report shows that the impact of price spikes in the AS market has been minimal. At stake, if the Commission adopts the CSM prematurely, is stifling competition in favor or regulatory methods, to the detriment of the market and its customers.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document was served on all parties of record in this proceeding on this the 22nd day of November 2002, by facsimile, first class, U.S. Mail, postage prepaid, or by hand delivery.

Bob Kahn