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PROCEEDING TO
ENSURE RESOURCE
ADEQUACY IN TEXAS

§ PUBLIC UTILITY COMMISSION OF TEXAS
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COMMENTS OF CPS ENERGY and AUSTIN ENERGY

Austin Energy¹ and CPS Energy² (“the Parties”) file these comments in *Proceeding to Ensure Resource Adequacy in Texas*, Project No. 40000 in response to the Public Utility Commission’s (“Commission”) October 25, 2013 invitation to submit comments. The Parties appreciate the opportunity to offer their perspectives on the October 18, 2013 GDF SUEZ Energy North America, Inc. (“GDF SUEZ”) filing relating to the parameters of the Operating Reserve Demand Curve (“ORDC”) B+ and the additional back cast scenarios analyzed by the Electric Reliability Council of Texas (“ERCOT”) in its October 28, 2013 filing.

I. Procedural Issues

The Parties are concerned with the manner in which GDF SUEZ’s proposal³ is being considered. The Commission spent almost a year debating the merits of Interim Solution B+ and provided market participants ample opportunity to file comments and make recommendations on the most effective and efficient ways to proceed with designing this market construct. The culmination of these deliberations was a decision, informal as it may have been, that was based on the totality of the record in these proceedings. GDF SUEZ’s issues should have been raised during the preceding six months in which Interim Solution B+ was considered, not after the fact.

Similarly, market participants have actively participated in discussions on Interim Solution B+ with myriad stakeholders working in good faith to find the optimal outcome for the ERCOT market. They have engaged in multiple workshops, filed numerous sets of comments,

¹ Austin Energy refers to the City of Austin d/b/a Austin Energy.

² CPS Energy™ is the registered trademark of the City Public Service of San Antonio, acting by and through the City Public Service Board.

³ Comments of GDF SUEZ Regarding Adjustment to the Value of Lost Load in the Operating Reserve Demand Curve, Project No. 40000, (October 18, 2013).

and debated vigorously the merits of the ORDC for nearly a year.⁴ Since the Commission made its informal decision at the September 12, 2013 Open Meeting, ERCOT stakeholders have worked assiduously and expeditiously to develop the best implementation path for Nodal Protocol Revision Request (“NPRR”) 568. Stakeholders have participated in tens of hours of discussions at meetings of the Resource Adequacy Task Force, Wholesale Market Subcommittee, and the Protocol Revision Subcommittee, all in an effort to meet a go-live deadline of June 1, 2014. One market participant should not be afforded the opportunity to redirect a dynamic and lengthy decision-making process simply because it is dissatisfied with the outcome of the Commission’s decision.

Finally, the Parties remark on the specter of continued regulatory uncertainty contained in GDF SUEZ’s October 18th filing. In it, the company states, “GDF SUEZ also recommends that overall ORDC prices (i.e., both the ORDC adder and LMP together) be capped *at this time* so prices cannot exceed \$9,000/MWh.”⁵ The implication of this statement supposes a possible future request to change the ORDC price cap, presumably if the construct does not proffer the filer’s desired level of revenues. Yet, market participants are already establishing new risk mitigation procedures with the ORDC parameters currently in place. Should the Commission choose to act favorably on the GDF SUEZ proposal, it keeps this issue open for perennial debate and adjustment, resulting in an unacceptable level of regulatory uncertainty for other market participants and running the risk of imposing economic harm on entities that take a financial position on significant parameters that could change with little notice. Had the Commission used a formal rulemaking process to develop the parameters of the Interim Solution B+, these near-term risks and market uncertainties would not exist. On the procedural basis alone, the Parties recommend that the Commission reject GDF SUEZ’s October 18, 2013 proposal.

II. Proposal Concerns

In addition to the procedural concerns noted above, the Parties take issue with several points previously decided by the Commission but re-raised by GDF SUEZ in its October 18,

⁴ GDF SUEZ first filed comments on the ORDC in Supplemental Comments of IPR-GDF SUEZ Energy North America, Inc., Project No. 40000, (November 14, 2012).

⁵ GDF SUEZ (2013) at 3. Emphasis added.

2013 comments. GDF SUEZ claims that a “critical issue arose”⁶ and that “it has been discovered in the stakeholder process that the change from a piecewise linear curve to the ‘real’ curve has resulted in unintended consequences that mitigate much of the intended benefits of the ORDC.”⁷ GDF SUEZ claims this discovery in the stakeholder process led to the filing of their October 18th comments. This assertion is simply inaccurate. The record in Project No. 40000 is replete with commentary on the tradeoffs between the “real” curve (the cumulative distribution function) and the “inaccurate” curve (sometimes referred to as the “piecewise linear curve”).⁸

Most notably, the Independent Market Monitor (“IMM”) filed comments describing the problems with using an inaccurate curve like the piecewise linear curve in its comments filed on May 31, 2013.⁹ It is useful to quote, verbatim, the IMM’s filing on this matter to demonstrate how clearly the tradeoffs were described.¹⁰

The second concern with the ORDC B+ formulation is the shape of the ORDC at reserve values greater than “X.” Although there has been a fair amount of discussion regarding the parameters applied to determine the shape of the ORDCs used in the back cast analyses, and future discussions may allow for additional study of the curves, for the purpose of these comments, the derivation of the curves is accepted as the current baseline. Whatever the outcome of any future discussions, any ORDC will have a shape that is similar to the curves used in the back cast analyses – that is, an exponentially-shaped curve that is concave and upward sloping from right to left.

Overall, the use of the piecewise linear approximation for the ORDC significantly overstates the true values of the actual curve between each of the break points. This represents a departure from the fundamental principles of the ORDC B+ approach, and an unnecessary departure at that. It is a straightforward matter to either apply a function to represent the actual shape of the ORDC or to significantly increase the number of break points to provide a much more accurate piecewise linear representation of the actual curve.

⁶ *Id.*, at 1.

⁷ *Id.*, at 2.

⁸ The specific issues raised by the GDF SUEZ proposal, those of the level of the Value of Lost Load and the shape of the ORDC have been discussed by the Commission at several junctures throughout the process. See, for example, the discussion during the June 27, 2013 Commission Workshop on Project No. 40000; the discussion during the July 3, 2013 Open Meeting; Memorandum of Commissioner Kenneth Anderson, Project No. 40000 at 2 and 3 (July 25, 2013); and discussion during the August 9, 2013 Open Meeting.

⁹ The full discussion on the issue can be found in Comments of Potomac Economics, Project No. 40000 at 4-7, (May 31, 2013).

¹⁰ Potomac Economics (2013) at 4.

The IMM filing went so far as to provide a rerun of ERCOT's back cast analysis comparing the differences in the adder and the Peaker Net Margin.¹¹ It should be noted that this issue was also discussed extensively at the stakeholder workshops leading up to the May 31, 2013 filings and was not something the IMM introduced for the first time in its May 31st comments. CPS Energy certainly recognized the differences between the two approaches by advocating for the real curve:¹²

The LOLP in reality is an exponential curve. As a system depletes its reserves, the probability of involuntarily shedding load should grow at an increasing rate. As the system increases its reserves the probability of losing load should decrease exponentially. The Interim B+ approach does not recognize the exponential relationship between reserves and the involuntary loss of load probability. Instead, B+ uses a linear approximation, resulting in the inaccurate and overstatement of the LOLP. The linear method will be particularly inaccurate where there is rapid growth in LOLP. Further, the proposal appears to pick only 5 break points this is significant because the fewer the breakpoints in a linear approximation of a curve the greater the inaccuracy.

If the reality of an exaggerated contingency reserve with the possibility of an inflated VOLL and an LOLP is combined, it is hard to imagine how the Interim B+ solution meets any of the beneficial features of ORDCs. B+ will provide more revenue to generation resources compared to an optimally designed ORDC. However, the cost will be significant because: a) administrative pricing will signal scarcity conditions significantly before system conditions actually match the price signal; b) load will curtail before it should; and c) the efficiencies of SCED will be abandoned.

Clearly, by May 31st, the issue had been described by the IMM and parties had taken positions on the subject so much so that the Commission made the shape of the curve one of their policy decisions when directing ERCOT to write NPRR 568. This is not something that came up recently, and GDF SUEZ's argument that the Commission should reconsider its decision on a "the market was unaware" basis should be rejected.

¹¹ *Id.*, at 11-15.

¹² Comments of CPS Energy on "Back Cast Interim Solution B+ to Improve Real-Time Scarcity Pricing," Project No. 40000 at 5 (May 31, 2013).

GDF SUEZ describes the primary purpose of ORDC is to “appropriately increase overall scarcity value that results in a positive contribution to the missing money issue in ERCOT.”¹³ The Parties have consistently opposed this basis for an ORDC.¹⁴ Instead, the Parties have supported a “first principles” ORDC where the deployment of reserves would create market prices that reflect the market conditions of deploying ERCOT’s reserves. The Parties reject the GDF SUEZ argument on the basis that the ORDC pricing should reflect the Value of Lost Load (“VOLL”) and the probability of loss of load, and any departure from that baseline injects so many inefficiencies into the market that the SCED dispatch is completely undermined. The VOLL, in a first principles ORDC, must be the average value for VOLL applied to the loads that would be curtailed in a firm load shedding event and not some number put together simply to inject more money into the market. Such actions will not solve the resource adequacy problem efficiently.

As an example of these inefficiencies, the Parties calculated the number of hours in 2011 and 2012 that would have had ORDC adders at three different levels of VOLL using GDF SUEZ’s methodology. Table 1 summarizes that analysis:

Table 1. Number of Hours with ORDC Adders

P_S Adder	VOLL \$9,000		VOLL \$18,000		VOLL \$25,000	
	2011	2012	2011	2012	2011	2012
\$10	5,700	3,310	7,114	4,493	7,819	5,120
\$50	2,944	1,247	4,046	1,971	4,609	2,400
\$100	2,135	738	2,944	1,247	3,406	1,565
\$1,000	592	35	916	142	1,123	226

As compared with the back cast analysis of current parameters in NPRR 568, GDF SUEZ’s proposal to increase VOLL to \$25,000 would result in more than six times the number of hours with an adder of \$1,000 or more in 2012. Similarly, the GDF SUEZ proposal would expect that

¹³ GDF SUEZ (2013) at 2.

¹⁴ See CPS Energy (2013); Comments of the City of Austin d/b/a Austin Energy, Project No. 40000 (May 31, 2013); Supplemental Comments of CPS Energy, Direct Energy and Austin Energy on “Back Cast Interim Solution B+ to Improve Real-Time Scarcity Pricing,” Project No. 40000 (July 18, 2013); Supplemental Comments of Austin Energy and CPS Energy, Project No. 40000 (July 29, 2013).

nearly every single hour of 2011 would have had an adder of \$10 or more.¹⁵ These are inefficient outcomes and serve solely to uncover revenues by imposing a regulated, non market-based cost to the price of energy.

Additionally, the way the ORDC currently is structured, the ORDC adder is only applicable in the real-time market (“RTM”), and the impact on day-ahead market (“DAM”) prices is completely left out, making it less likely for the two markets to converge. With all the available upside limited to the RTM, the DAM would become illiquid, as fewer market participants can use the DAM to hedge or can use the DAM to maximize profits. These issues are magnified with an increase of the VOLL to \$25,000 (or even \$18,000) as the curve is moved upward. GDF SUEZ’s proposal takes an already inefficient market construct and deviates it even further away from the first principles espoused by the Parties, the IMM, and many other market participants.

GDF SUEZ argues that the Commission should view changes in the ERCOT North Summer Spark Spreads to drive decisions on the ORDC inputs.¹⁶ Such arguments make a terrible platform for public policy decisions. First, no one can accurately attribute the movement in that market to a particular cause. As participants’ expectations about weather, plant construction, and other factors change, so do the forward markets. Second, the upward and downward movements of the market are driven by the positions taken by market participants and are based on their expectations of future conditions. For the commission to intervene to push up those prices simply based on one market participant’s request would undermine the positions taken by at least half the market. A generator that sold forward at the peak would suffer an opportunity cost if further changes pushed prices higher. The Commission should not make public policy decisions with an eye to moving a forward market in one direction or another. Instead, the Parties support the Commission making public policy decision based on sound principles.

GDF SUEZ argues for a VOLL of \$25,000 with the goal of effective scarcity pricing and a “smoother” curve.¹⁷ The Parties reject this proposal. At the October 8, 2013 workshop, Dr.

¹⁵ The Parties recognize, and have previously commented on the fact that these and similar back cast analyses of the ORDC fail to recognize changes in market behavior. The Parties include this information merely to show the magnitude of change a switch in the VOLL would bring, not to predict any given outcome.

¹⁶ GDF SUEZ (2013) at 2-3.

¹⁷ *Id.*, at 3.

David Patton, representing the IMM, stated that the implied VOLL under the current ORDC design was between \$20,000 and \$25,000 because the contingency reserve had been set in excess of the actual reserve level where ERCOT sheds firm load. Therefore, with the changes proposed by GDF SUEZ and maintaining the 2,000 MW minimum contingency reserve level, the realized VOLL would be far in excess of \$25,000. Inserting a VOLL of \$18,000 suffers from the same problem when paired with contingency reserves of 2,000 MW. The Parties would support a smoother curve, but through a very different mechanism than proposed by GDF SUEZ. The curve would be smoother if the contingency reserves are reduced. A contingency reserve of 1,000 MW would result in a smoother curve with the added benefit of more accurately reflecting ERCOT's firm load shed decisions.

Finally, the Parties restate the policy rationale that ORDC B+ is an interim solution to achieving an ORDC with full, real-time co-optimization for the ERCOT market. The Parties recommend that the Commission and ERCOT continue work implementing real-time co-optimization, a concept that is rooted in making the RTM as economically efficient as possible. With the Commission's recent discussion that moves ERCOT closer to implementing a mandatory reserve margin, the most market-oriented action the Commission could take with respect to the ORDC would be to roll the input values back to the first principle parameters once the market mechanism for achieving a mandatory reserve margin is chosen.

III. Conclusion

The Parties are concerned with the informality under which the October 18, 2013 GDF SUEZ proposal is being considered. Should the Commission desire to reconsider its decisions on ORDC B+, the Parties recommend that a formal rulemaking process be initiated. Barring that, the Parties believe that the proposal is flawed in concept and in practice, and believe it would apply additional economic inefficiencies to the real-time market. The Parties recommend that the Commission reject the October 18th GDF SUEZ proposal outright.

Respectfully submitted,

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