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PROJECT NO. 37897
40000

PROCEEDING RELATING TO §
RESOURCE AND RESERVE §
ADEQUACY AND SHORTAGE §
PRICING

PUBLIC UTILITY COMMISSION
OF TEXAS

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CALPINE CORPORATION COMMENTS ON FACTORS AFFECTING PRICING DURING RELIABILITY DEPLOYMENTS BY ERCOT

Calpine Corporation ("Calpine") files these comments in response to the Public Utility Commission of Texas ("Commission") request for comments in this Project regarding factors that may affect ERCOT market resource and reserve adequacy pricing. Calpine welcomes the opportunity to provide its perspective on the issues highlighted by the questions to be discussed during the Commission's workshop on August 22, 2011.

Calpine provided written comments for and participated in the Commission's June 29-30, 2011 workshop in connection with this docket.¹ ERCOT has a number of market responsibilities, but its core function is to ensure the reliability of the transmission grid. As Calpine noted in July, and as recognized by the Commission, care must be taken to ensure that reliability actions taken by ERCOT do not produce wholesale market prices inconsistent with an energy-only market. Finding a solution to the non-spinning reserve issue will have two benefits: (i) ensure competitive wholesale power market prices reflective of market conditions, including shortage conditions and (ii) better reflect pricing that will incent and support the investment necessary to ensure ERCOT can meet its resource adequacy needs in the very near future.

At the direction of the Commission, stakeholders have been working diligently to craft a proposal to address the impact of ERCOT's deployment of non-spinning resources

¹ Calpine Presentation to the Commission of Texas in Project 37897 (Item 26) dated June 29, 2011.

on real-time energy prices during periods of shortage conditions. Calpine, as does the Commission, supports reaching an appropriate solution in a timely matter, which should include an immediate-term solution while stakeholders fashion a longer-term solution that can be implemented as soon as possible this year.

Responses to Questions presented by the Commission:

1. *Please provide proposals to address non-spinning reserve deployment procedures and describe in detail the market incentives that are derived from your proposal?*
2. *How does your proposal enable the most competitive and efficient prices when non-spinning reserves are deployed?*

The ERCOT stakeholder process has considered a number of proposals to address the issue of non-spinning resources and shortage pricing. Calpine has been an active participant in the stakeholder debates. In response to the Commission's questions, Calpine would like to take this opportunity to highlight several key principles that it supports as a path to finding a workable solution.

The ERCOT stakeholder process created a task force to address the questions presented above. In Calpine's view, the ultimate goal of the task force and any long term solution must be to ensure that reliability deployments are not permitted to impact price formation by skewing the clearing price in real time due to volumetric impacts. And in the case of non-spinning offline reserves, which receive reservation payments, an additional concern is the resulting energy offer price formation when another source of revenue is available for the same product definition.

Calpine's June 29 presentation to the Commission included a proposal to allow ex post re-pricing of reliability deployments in order to eliminate either volumetric impacts

or offline non-spinning energy price ambivalence. Calpine still believes the task force should consider the merits of creating a mechanism that meets these goals.

In addition to the work of the task force, stakeholders are also working this issue through the Wholesale Market Subcommittee (“WMS”). The WMS recently agreed to the following set of concepts:²

1. No change needed to address zero to Low Sustainable Limit (“LSL”) impact at this time but continue to monitor
2. Energy Offer Curve (EOC”) for Responsive Reserves (“RRS”) and Up Reg should be at system-wide offer cap
3. Revise Reliability Unit Commitment (“RUC”) policy to allow for delay of RUC for capacity insufficiency by using portion of non-spin reserves (“NSRS”) capacity
4. Review NSRS deployment and recall process
5. Deploy online NSRS and Quick Start units (“QS”) in SCED subject to a determined offer floor and deploy prior to offline NSRS
6. Treat offline NSRS similar to today subject to a determined offer floor for the EOC from LSL-HSL

Calpine supports these high level concepts arising from the WMS process.

On the key issue of pricing during shortage conditions, Calpine believes that any pricing mechanism must reflect system resource shortage conditions while making a meaningful contribution to the Peaker Net Margin (“PNM”). The Peaker Net Margin is a key indicator of how well the current energy-only market is working. Historically, ERCOT has not reached the PNM and any action taken by ERCOT that results in suppressed real-time power prices can have significant impact on the PNM.³ Power prices over the last several weeks have responded to market conditions and produced significant contributions to the PNM.⁴ While it is important to note the upward impact on the PNM, the long-term reliability and resource adequacy of ERCOT cannot simply rely

² WMS Meeting, August 10, 2011

³ 2009 State of the Market Report for the ERCOT Wholesale Electricity Markets, July 2009, pp. 66-67 and ERCOT Presentation to the Commission dated June 30, 2011 in Project No. 37897 (Item 27) slide 2.

⁴ PNM on July 20, 2011 was \$40,210.00 and on August 12, 2011 \$85,646.00. Source: ERCOT website.

on extraordinary weather conditions or uncharacteristically higher levels of unit outages to historically produce prices necessary to incent new generation.

Market participants need prices that are intrinsic to an energy-only market and historically produce consistent price formation. In addition to modifying behavioral actions by ERCOT in reaction to market shortage conditions, a price floor is a key element to ensure appropriate price formation occurs. In Calpine's view, market participants have come to accept the importance of a price floor to craft a solution.

Stakeholders are considering a number of price floor proposals that rely on heat rates, adders to marginal costs or MWh dollar values up to or at the cap. Each of these has its own merits, but Calpine does not support any proposal that simply works around the edges of the price problem. A price floor based on low heat rate values, modest adders or low \$/MWh that do not reflect the true value of generation will not adequately address shortage pricing or long-term resource adequacy.

A floor should not just consider capital, operation and market costs for resource owners. It must account for potential costs to the ISO. For example, the use of non-spin energy offers to cover adequacy should reflect the opportunity cost of not having non-spin available to replenish responsive reserve service to avoid potential NERC violation.⁵

One of the "compromise proposals" offered through the Stakeholder process includes a floor mechanism worthy of consideration. Based on Calpine's understanding, the proposal has a linear floor mechanism that ranges from \$1,000 to \$3,000/MWh when non-spinning reserves are deployed. The linear curve mechanism represents a measured approach to assigning reliability value in the market for the ISO's actions. Calpine also

⁵ NERC Reliability Standard BAL-002-1 Disturbance Control Performance (Purpose is to ensure the Balancing Authority is able to utilize its Contingency Reserve to balance resources and demand and return Interconnection frequency within defined limits following a Reportable Disturbance).

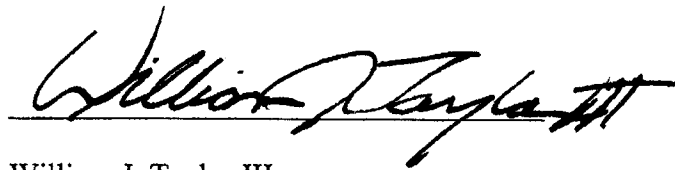
supports separate floors for on-line and off-line non-spin resources because it is important to differentiate those resource prices from other energy products in SCED in a manner that reflects true value of reliability actions taken by ERCOT.⁶

Calpine believes there are a number of specific operational and implementation issues that must be resolved as part of any final floor proposal Calpine can support. However, Calpine believes it represents a good compromise among the competing proposals as currently understood by Calpine.

Summary

Calpine appreciates the Commission's commitment to ensure ERCOT's non-spinning reserve deployment procedures do not harm ERCOT's energy-only market by artificially suppressing real-time energy prices during shortage conditions. Calpine is similarly committed to working through the ERCOT stakeholder process to develop a timely and meaningful solution to this problem.

Respectfully submitted,



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⁶ Calpine notes there is a question whether separate floors are within the scope of this Project.