

Public Utility Commission of Texas

Memorandum

TO: Chairman Donna L. Nelson
Commissioner Rolando Pablos

FROM: Commissioner Kenneth W. Anderson, Jr.

DATE: December 7, 2011

RE: **December 8, 2011 Open Meeting, Item No. 25, Project No. 37897** – PUC
Proceeding Relating to Resource and Reserve Adequacy and Shortage Pricing
(Discussion and possible action).

Again, I want to commend my fellow Commissioners for resolving the issue of a price floor for non-spinning reserves (NSRS or non-spin) at the October 27, 2011 open meeting. At that open meeting we took the first step to address resource and reserve adequacy by setting energy bid-offer floors on NSRS to mitigate price reversals that have occurred when non-spin has been deployed. It is, however, only the first step in a series of actions that I believe must be taken by this Commission, ERCOT and the ERCOT stakeholders to ensure that ERCOT's energy-only market sends the correct price signals, particularly when shortage conditions occur. There is more to be done, and it must be done sooner rather than later.

As I noted in previous open meetings I believe that it would have been a mistake to try to solve resource adequacy through tinkering with only one component of the ERCOT market structure. Ultimately, implementing Nodal 2.0, otherwise referred to as "look-ahead SCED" (Security Constrained Economic Dispatch), will eliminate some of the market structure issues that currently cause price signal distortions. But, until look-ahead SCED is implemented, I believe the Commission must employ a comprehensive and holistic approach to resolving the resource adequacy and shortage pricing issues in the ERCOT market. As the Commission, ERCOT and the stakeholders work together to improve price signals, we must avoid creating unnecessary and economically inefficient distortions in the complex interactions among pricing mechanisms in the ERCOT market and must remain mindful of unintended consequences (such as creating perverse economic incentives).

As I outlined briefly and preliminarily during the October 27, 2011 open meeting, I believe there are four additional issues that must be evaluated and addressed in the next several months, certainly before next summer, so that the ERCOT energy-only market is in a better position to signal generation scarcity properly. This memorandum summarizes where we are today and outlines the decisions that remain to be made. I want to identify clearly where we have reached consensus and set out in one document those open items that remain to be tackled in the hope that we can make decisions on those as well.

Generally, I group the issues into three (3) categories: In the first category are items upon which the Commission has reached consensus and merely await implementation through changes to ERCOT protocols or processes and in one instance Commission Staff practice. Second, are proposals that I believe should be implemented, but merit additional, yet expeditious, study by ERCOT, Commission Staff, the Independent Market Monitor (IMM) and the stakeholders. The final category is made up of other proposals that deserve consideration, but require further study, and are not as time-sensitive because they cannot be implemented before next summer. Some of the proposals in the last category may be determined to be unnecessary, not cost-effective, or overly disruptive to the market.

CATEGORY ONE: This group contains issues upon which the Commission has either reached a decision or otherwise achieved consensus and which ERCOT and Commission Staff, as applicable, should implement as quickly as practicable.

- NSRS: On-line non-spin and quick-start unit energy bids will have a price floor of \$120/MWh and will be included in SCED. Energy bids for off-line non-spin units will have a price floor of \$180/MWh. These price floors will continue only until Nodal 2.0 is implemented. Periodically, the IMM and ERCOT should review these price floors to take into consideration then prevailing natural gas prices. Upon full implementation of look-ahead SCED, ERCOT should consider whether NSRS remains necessary.
- Responsive Reserves and Up Regulation Service: Subject to the Power Balance Penalty Curve (PBPC), responsive reserve energy is to be priced at the system-wide offer cap (SWOC). Up Regulation Service energy also is to be priced at the SWOC.

- Substantive Rule 25.504(c): Public Utility Commission Substantive Rule subsection 25.504(c), the “small fish swim free exemption”, deems entities that control less than 5% of the installed generation capacity in ERCOT, excluding uncontrollable renewable resources, not to have ERCOT-wide market power. Historically, there was uncertainty around the denominator used by Commission Staff in determining this 5% threshold. On October 28, 2011, Staff filed in Project No. 39870 its calculation of installed generation capacity in ERCOT for purposes of this rule and Section 39.154 of the Public Utility Regulatory Act (PURA) which clarifies this issue. Periodically, Commission Staff will update this calculation and file it in Project No. 39870. Accordingly, unless ERCOT stakeholders or the IMM have additional issues or concerns, we can mark this issue as DONE.

- Mothballed Units: ERCOT should move quickly to institutionalize a process for the involuntary recall of mothballed units for capacity (Seasonal Reliability Unit Commitments or SRUC) on terms similar to the use of Reliability Must Run (RMR) contracts during the summer of 2011. A recalled unit’s energy above the unit’s low sustained limit (LSL) should be submitted to SCED at the SWOC and SRUC units should not be deployed to relieve local congestion. Furthermore, the protocol should provide that this tool is only to be used in extraordinary conditions to deal with clearly foreseeable and imminently forecasted seasonal capacity shortages.

CATEGORY TWO: These are market structure proposals that I believe should be implemented, but merit additional, yet expeditious, study by ERCOT, Commission Staff, the IMM and the stakeholders. Specifically, as described in more detail below, I believe that the Commission should direct ERCOT to study and recommend (1) the proper levels for expansion of responsive reserves (with a corresponding reduction in NSRS), (2) the proper magnitude and slope of the PBPC and (3) the proper price floor for energy from units called by ERCOT through the Reliability Unit Commitment (RUC) process to meet capacity insufficiency. The combined effect of these additional actions should result in more accurate scarcity signals. I believe that issues related to LSL may be resolved through the processes I am outlining and if not, should be addressed in the third category of issues.

- Amount of Responsive Reserves: I believe the Commission should direct ERCOT to evaluate the appropriate amount of capacity and then move that amount from NSRS to responsive reserves, and further that, subject to the PBPC, these additional responsive reserves should be offered into SCED at the SWOC. This change can be accomplished quickly because it does not require a rule change and it will have the benefit of signaling scarcity more quickly, ideally before ERCOT begins to release Emergency Alerts. Additionally, because responsive reserves are only deployed when there is system-wide scarcity, it would limit scarcity signals to true scarcity conditions. This proposal has the double benefit of improving reliability and sending more efficient price signals.

- PBPC: The Commission should ask ERCOT and the stakeholders to study, and report back to the Commission, as soon as possible the merits of changes to the magnitude and shape of the PBPC. The Commission should be informed, and ultimately opine, about (1) where on the offer curve the PBPC should start, (2) how quickly prices should rise as the energy supply is depleted, and (3) the magnitude of the highest price on the PBPC (the PBPC cap). If the PBPC is properly shaped, I believe raising the PBPC cap will send stronger scarcity price signals to resources and load, particularly with the advent of Nodal 2.0. City Public Service of San Antonio d/b/a CPS Energy (CPS) has proposed raising the PBPC cap from \$3,000 to \$4,000. CPS states that calculations by the IMM show that simply raising the PBPC cap to \$4,000 would have raised the Peaker Net Margin by \$26,000 in 2011. Like the expansion of responsive reserves, changing the PBPC can be accomplished quickly because it does not require a rule or system change. It is important to remember that the \$3,000 price used in the current PBPC cap was chosen because the Commission had already accepted prices up to \$3,000 by setting the SWOC at that amount. I would like ERCOT, the IMM (and the stakeholders) to study and determine whether and how the PBPC should be reshaped and whether and how much the PBPC cap should be raised.

While I believe that raising the PBPC cap is probably necessary, I recognize that this action will also increase the risk to which generators are exposed in the ERCOT market. If generators do not hedge their risk properly and a scarcity event occurs such that prices

go to the PBPC cap, generators stand to lose a great deal of money very quickly if they are unable to meet their schedule. This exact scenario occurred in February 2011. There is also the risk that generators might refrain from full participation in the Day Ahead Market in order to self-hedge their contractual obligations to load. Therefore, if it is determined that raising the PBPC cap is necessary or desirable, I would ask ERCOT and the Stakeholders also to address when such changes to the PBPC should become effective, so that generators and other parties have ample opportunity to evaluate and establish adequate hedging and other risk management safeguards.

- RUC for Capacity: Finally, I would like for ERCOT (and the IMM and stakeholders) to study and recommend a price floor for units that are RUCed for capacity. Similar to the price reversal that has occurred in the past with the deployment of non-spin, energy produced by RUCed units below their LSL is priced as a price taker, which can temporarily drive the price curve down. ERCOT does not RUC a unit unless it is needed for local reliability or general capacity sufficiency. I believe the price floor for these units should be higher than for non-spin because these units are not standing by ready to run, or already running. While initially the market participants believed RUC capacity should be priced at the SWOC, some concerns have been expressed about the creation of possible inefficient market outcomes or even perverse incentives. I would ask ERCOT to evaluate whether a \$500 or some higher price floor for these units is appropriate. As part of the evaluation, ERCOT, the IMM and the stakeholders should address the issue of whether and how the RUC clawback should be adjusted.

CATEGORY THREE: There are a number of other proposals for structural adjustments to the ERCOT market, including (1) raising the SWOC, (2) the LSL problem noted above under the RUC for capacity issue, (3) the adequacy of compensation for RUCs made to provide local reliability and transmission relief, (4) eliminating the “cap” on Peaker Net Margin (PNM) (actually an automatic reduction in the SWOC if the PNM reaches \$175,000), and (5) whether ERCOT can substantially reduce or even eliminate NSRS after fully implementing Nodal 2.0, look-ahead SCED. I believe each of these proposals deserve further study by ERCOT and the stakeholders, but I doubt that a consensus recommendation can be made to the Commission in time for any proposal to be implemented before next summer. I do not have a strong feeling

about any of these proposals, except the LSL issue and the significant reduction or elimination of NSRS. With regard to raising the SWOC, generators are not bidding at the SWOC now, so I do not see any real immediate positive benefit on forward prices from such a change, but it is worth continuing the dialog and may be needed to mesh seamlessly the SWOC and PBPC pricing during scarcity conditions. With respect to the LSL issue, this is a problem that must be addressed long-term, not only because price suppression occurs when a large number of units are RUCed for capacity, but also to deal with the effect on prices that may come from deploying a significant amount of SRUCed generation in the future. After the Category TWO issues are addressed, this issue deserves immediate attention by ERCOT, the IMM and the stakeholders.

It may be that ERCOT and the stakeholders recommend some changes but not others. It remains my belief that if we do not evaluate and potentially address all of these issues more or less together we may not send the proper scarcity pricing signals in the ERCOT market.

I look forward to discussing these issues with you at the open meeting.