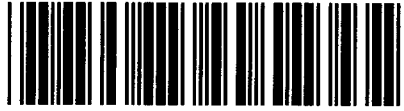


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PUC PROJECT NO. 37897

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

PUBLIC UTILITY COMMISSION  
OF TEXAS

**LOWER COLORADO RIVER AUTHORITY PROPOSAL TO ADDRESS  
NON-SPINNING RESERVE DEPLOYMENT PROCEDURES**

The Lower Colorado River Authority (LCRA) appreciates the opportunity to submit a proposal to address non-spinning reserve deployment procedures to the Public Utility Commission of Texas (PUC) for discussion at the August 22, 2011 workshop scheduled in the PUC Proceeding Relating to Resource and Reserve Adequacy and Shortage Pricing.

**Background**

In the mid-2000s the PUC and Electric Reliability Council of Texas (ERCOT) Stakeholders made a decision to have an "energy-only" market, meaning that there is no capacity payment to generation plant owners and that the market would allow for higher prices during periods of scarcity. PUC Commissioners have recently supported this decision, even during the Energy Emergency Alert (EEA) events caused by extreme weather in February 2011, saying that even if they had a capacity payment, many of the plants would still not have been available during this time regardless of receiving capacity payments. In this case, the consumers would have had to pay to have the capacity available without receiving any benefit.

At the PUC Workshops held in June 2011 to discuss Resource and Reserve Adequacy, an issue came up showing that current market design and incentives sometimes inefficiently reduce prices below the competitive level when Non-Spinning Reserve Services (NSRS or Non-Spin) and Reliability Unit Commitment (RUC) capacities are deployed. At the workshop, the PUC instructed ERCOT and its Stakeholders to find a solution to this problem.

**The Issue with Non-Spin**

ERCOT operates the energy grid such that there is sufficient generation on line to serve the load through market mechanisms and to maintain reliability reserves. Reliability reserves are

capacity that is ready to provide energy quickly if needed, but does not provide energy unless deployed by ERCOT due to the loss of a generator or higher than expected electric load conditions. Depending on ERCOT's criteria for deploying these reserves, there are impacts to the bigger energy market. An example of this is Non Spin, and when it is deployed by ERCOT, it transfers from a capacity reserve to energy. The deployment of some types of Non-Spin however has an unintended impact on market prices. Due to the Low Sustainable Limit (LSL) on some offline units providing Non-Spin and relatively low energy offers of online and offline capacity providing Non-Spin, calling on Non-Spin injects relatively low cost energy into the market. This has the effect of lowering market prices. The PUC Commissioners expressed concern about this lowering of market prices or "price reversal" due to deployment of Non-Spin.

There are some market participants who argue that energy injected for any reason by ERCOT represents some form of scarcity and thus should be priced very high. Other market participants acknowledge that it is inappropriate for these deployments to depress prices, but also feel that it is also inappropriate for them to cause prices to peak in when ERCOT runs out of reliability service capacity such as Responsive Reserves. ERCOT did run out of Responsive Reserves during the peak hours of the week of August 1, 2011. These type of deployments have an impact on the clearing price of Non Spin Capacity. Market participants are aware that in most cases the deployment of Non Spin floods the energy market reducing prices, therefore there have been times when Non Spin has a built-in premium for that associated market risk that energy prices will not allow recovery of start-up and minimum energy costs when deployed.

LCRA staff worked with other Stakeholders at ERCOT to develop a compromise proposal to solve these problems in the current market design. LCRA submits the attached compromise proposal which promotes a healthy balance of meeting the PUC desire for scarcity pricing while keeping prices reasonable when scarcity does not actually exist. The compromise proposal also attempts to protect market prices by making sure prices don't fall after NSRS is injected into the system - rather, it ensures that market prices appropriately reflect the depletion of Operating Reserves. This should improve system reliability as proper market price signals are sent when Non-Spin is deployed and avoid unnecessary temporary price spikes due to generator ramp rate limitations. Loads that can reduce energy consumption will have the incentive to do so. And likewise generators should be incentivized to maintain generation during the Non-Spin deployment.

## **Compromise Proposal**

The key features of the Compromise Proposal are as follows:

- Online NSRS and Quick Start Generation Resources (QSGR) providing NSRS are always offered into Security Constrained Economic Dispatch (SCED) and always deployed by SCED
- Online NSRS (for capacity providing NSRS), QSGR NSRS (from LSL to HSL) & RUC resources (from LSL to HSL) must offer no lower than:
  - \$250/MWh or \$500/MWh to \$1000/MWh linear curve (Note: Non-Competitive congestion deployments using these offers would be mitigated by two-step SCED). Also Note: LCRA supports the lower floor of \$250/MWh.)
- Offers for Offline non-QSGR capacity providing NSRS must be no lower than: \$1000/MWh to \$3000/MWh linear curve from LSL to High Sustainable Limit (HSL)
- Offers for Responsive Reserve Service (RRS) & Up-Regulation Service (URS) portion of capacity must be at the System Wide Offer Cap
- ERCOT shall continue to deploy Offline non-QSGR NSRS in accordance with current deployment criteria and there is no change in the handling of the LSL portion of these resources.
- If the System Wide Offer Cap is reduced to LCAP, then the offers for NSRS and RUC resources mentioned above must be no lower than 90% of LCAP.
- The requirement on Qualified Scheduling Entities (QSEs) to offer no lower than the specified levels above shall be implemented either as an offer floor or as an adder to the resources' offers in the Day-Ahead Market and monitored by ERCOT for compliance. It is envisioned that with the implementation of real-time co-optimization, offer floors or adders would be implemented by the ERCOT systems thereby not requiring QSEs to modify their offers. Real-time co-optimization would be performed using the unmodified offer curves submitted by the QSEs.

## **Conclusion**

Because Online Non-Spin and Quick Start Non-Spin are always offered into SCED in the Compromise Proposal, this eliminates price reversal when energy from that Non-Spin capacity is dispatched by SCED. With these resources always available to SCED, it reduces the likelihood of ramp-rate-constrained price spikes. The proposal also in effect implements a real-time “demand” or “penalty” curve for Operating Reserves that reflects the depletion of Operating Reserves.

LCRA supports this proposal because it protects loads from the risks of price spikes before true scarcity is realized while also providing a fair compensation mechanism for generators as reliability resources are injected into the system thereby reflecting a tighter market. LCRA looks forward to discussing this proposal with interested parties at the August 22, 2011 workshop.

Respectfully submitted,



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Leigh Sebastian  
Associate General Counsel  
Texas State Bar No. 24027843

# Compromise Proposal for Reliability Deployments

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LCRA, Luminant, IPR-GDF SUEZ North America,  
Macquaire Energy LLC, NRG/Reliant

August 22, 2011

# Background on Issue

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- **Appropriate Prices upon deployment of Non-Spin Reserve Service and Reliability Unit Commitment**
  - **ERCOT deployment and dispatch of NSRS and RUC capacity represents energy from reliability or Operating Reserves - not market based energy - and therefore results in inappropriate market prices**
  - **With reliability deployments, relatively low priced energy from operating reserves are made available to SCED from Online Non-Spin capacity, Offline Non-Spin capacity, and RUC capacity**
  - **This has a tendency to displace higher priced market based offers that were dispatched by SCED prior to the reliability deployments**

# Compromise Proposal

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- Online NSRS and QSGR always offered into SCED and always deployed by SCED
- Online NSRS (for capacity providing NSRS), QSGR NSRS (from LSL to HSL) & RUC resources (from LSL to HSL) offer no lower than:
  - \$250/MWh or \$500/MWh to \$1000/MWh linear curve (Note: Non-Competitive congestion deployments using these offers would be mitigated by two-step SCED)
- Offer for Offline non-QSGR NSRS no lower than:
  - \$1000/MWh to \$3000/MWh linear curve from LSL to HSL
- Offers for RRS & URS portion of capacity at System Wide Offer Cap (SWOC)



# Compromise Proposal (cont.)

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- ERCOT shall continue to deploy Offline non-QSGR NSRS using current deployment criteria
- No change in the handling of LSL portion of these resources
- If SWOC is reduced to LCAP, then offers for NSRS and RUC resources must be no lower than 90% of LCAP
- Requirement on QSEs to offer no lower than the specified levels shall be implemented either as an offer floor or as an adder to the resources' offers in DAM and monitored by ERCOT for compliance
- With implementation of real-time co-optimization:
  - offer floors or adders would be implemented by ERCOT systems thereby not requiring QSEs to modify their offers
  - Co-optimization would be performed using the un-modified offer curves submitted by the QSEs

# Implications of Proposal

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- Since Online NSRS and QSGR NSRS are always offered into SCED, this Proposal eliminates price reversal when energy from those NSRS capacity is dispatched by SCED
- Implements a real-time “demand” or “penalty” curve for Operating Reserves that reflects the depletion of Operating Reserves
- With Online NSRS and QSGR NSRS always available to SCED, it reduces the likelihood of ramp-rate-limited price spikes