

ERCOT STAFF RESPONSE TO LTSTF QUESTIONS

From April 23, 2007 Meeting

LTSTF asked ERCOT staff for feedback on a modified version of the Oxy proposal for a long-term alternative solution to the Emergency Interruptible Load program. The feedback requested was:

1. High-level assessment of the technical requirements and feasibility of implementation.
2. Indication as to whether the proposal would meet ERCOT's requirements as a replacement for Emergency Interruptible Load Service (EILS), as required by Substantive Rule §25.507, subsections (a) and (h).

In answering these questions, ERCOT will strive to provide additional feedback as requested by the Task Force.

Substantive Rule §25.507

(from Subsection (a))

(6) This section will no longer be effective provided the following conditions are met:

- (A) An alternative long-term solution is approved in the form of a Protocol Revision that meets the requirements of subsection (h) of this section and ERCOT.
- (B) The Protocol Revision is implemented so that ERCOT has a solution continuously in place with no interruption of the protection offered by EILS.
- (C) If an alternative long-term solution is developed, but cannot be implemented 30 days prior to the beginning of the next contract period EILS will be extended for an additional contract period.

...and:

- (h) **Long-term solution.** Any long-term solution must offer ERCOT the ability to avoid shedding firm load by bringing more resources online or curtailing load voluntarily. In this context the commission is interested in:
 - (1) Better price signals leading up to an EECF event;
 - (2) Bringing more resources (both interruptible load and generation) online through existing ancillary services; and
 - (3) Examining the priorities set by TDSPs when shedding firm load.

Proposal

ERCOT's understanding of the modified Oxy proposal is as follows:

1. Increase procurement of Responsive Reserve Services (RRS) from 2300 MW to 2500 MW for all intervals
 - a. Maintain 50% limit on LaaR provision of RRS (increase allowable LaaR from 1150 to 1250 MW)
2. Implement administratively-set MCPES as follows:
 - a. Greater of MCPE or 50% of market-wide offer cap at Alert (<2500 MW of adjusted responsive reserve)

- b. Greater of MCPE or 75% of market-wide offer cap at EECF Step 1 (<2300 MW of adjusted responsive reserve)
- c. Greater of MCPE or 100% of market-wide offer cap at EECF Step 2 (LaaR deployment)

LTSTF agreed that notification of the administratively set prices would be accomplished through the QSE notification of the Alert/EECF Steps, and that the modified Oxy proposal would therefore not require a code change to ERCOT's Scheduling Pricing & Dispatch software.

ERCOT Response

Summary

ERCOT staff believes that implementation of the modified Oxy proposal is technically feasible without a major system change or capital project. In addition, subject to certain important conditions¹, adoption of a long-term solution similar to the modified Oxy proposal could justify a reduction in the amount of required EILS — for example, to a fixed level of 500 MW.

Additional detail is provided below.

Is the proposal technically feasible?

Yes. The amount of total RRS procured and the allowable LaaR quantity in RRS can be adjusted without a system change or capital project, as long as the LaaR percentage of RRS does not exceed 50%. However, ERCOT staff and ROS must review the proposal in more detail to confirm there is no hidden adverse impact to reliable operations.

Does the proposal meet ERCOT's requirements under the Substantive Rule?

ERCOT staff's original proposal for EILS, as presented at PUC Demand Response workshops in September and October, 2006, called for procuring up to 1,000 MW of additional interruptible load, committed to 10-minute deployment based on an ERCOT dispatch instruction. This load would provide an additional emergency operational tool for ERCOT operators to reduce the likelihood of having to order firm load shedding. Subst. Rule §25.507 and PRR 705, as approved by the ERCOT Board on April 18, both meet these criteria.

¹ These conditions include completion of the ongoing Ancillary Services study related to wind variability, completion of a new engineering study on the effect of increased LaaR participation in RRS, and a reliable assessment of price-responsive load in the ERCOT region.

ERCOT staff is not convinced that this initial proposal from the LTSTF meets these criteria in full. While the proposal would provide ERCOT with an additional 200 MW of responsive reserves, ERCOT staff has not seen sufficient evidence that administratively-set high balancing energy prices will provide enough voluntary load reduction to reliably offset the need for up to 800 MW of resources called for in the EILS program.

At the April 23 meeting of the LTSTF, ERCOT staff presented a graph showing load conditions on April 3, 2007, between the hours of 1:00 and 4:00 p.m. During that period the region-wide Market Clearing Price of Energy (MCPE) cleared at a record \$1,500 per MWh² for three intervals.³ Price response trigger points are a matter specific to individual loads, but there is little argument that many loads should find prices of \$1,500 per MWh to be sufficient incentive. As such, this period on April 3 may be viewed as a test case for price responsive load in the ERCOT region. The load curve for April 3 makes it difficult to detect much, if any, price response. System-wide load during the visible \$1,500 intervals on April 3 appears to dip slightly below that afternoon's trend line; however, the deviation does not appear to be more than 150 to 200 MW in any of the three intervals and it is not clear this represents any more than the "noise" of normal load variations.⁴

ERCOT staff acknowledges that this analysis does not constitute an empirical study, and that much remains to be learned about price responsive load in the region. Consistent with the requirements of PUC Substantive Rule §25.505 (e)(5)⁵, ERCOT will be polling load-serving entities within the next month in an attempt to better quantify and define the type and amount of load in the region that is currently capable of responding to curtailment signals, whether related to MCPE, 4CP, or other incentives or instructions.

In any case, this incident does not provide evidence to ERCOT staff that the current level of committed price responsive load is sufficient to serve as a substitute for 500-800 MW of the contractually-committed deployable load that would be available under a subscribed EILS program. ERCOT staff also makes no judgment as to the costs and benefits of the recommendation for administratively-set emergency pricing.

Regarding the proposal for additional RRS, ERCOT staff has no objection to market participants' consideration of this issue but again makes no judgment as to the potential costs and benefits. Additionally, ERCOT staff notes the following:

- As previously mentioned, the proposal needs to be reviewed in more detail by ERCOT technical staff and the ROS. Increasing the amount of LaaR on UFR could have an as-yet undetermined effect on system reliability due to the increased risk of frequency overshoot.

² The system-wide bid cap was raised to \$1,500 per MWh on March 1, 2007.

³ MCPEs during four additional intervals were later adjusted to \$1,500; however, these high prices were not visible to the market on the operating day and thus cannot be considered as a price signal for load response.

⁴ System-wide load was between 38,000 MW and 41,000 MW throughout the event.

⁵ See <http://www.puc.state.tx.us/rules/subrules/electric/25.505/25.505ei.cfm>.

- ERCOT has engaged a consultant to study and make recommendations on future system Ancillary Service requirements including the increasing amounts of wind generation on the system. Recommendations from this study could also include increased RRS requirements. Results of the study are expected by October 31, 2007. It may be more prudent to delay any increases in RRS requirements until the recommendations are known.

Conclusions

1. ERCOT could implement the modified Oxy proposal without a system change or capital project.
2. ERCOT staff has concerns about increasing LaaR participation above the current 1150 MW level without a detailed engineering study. ROS and DWG have expressed similar concerns in the past.
3. The amount of dependable price responsive load in the ERCOT system today is indeterminate.

Recommendations

1. Complete the Ancillary Services study, particularly the part focused on purchase amounts of RRS and Regulation.
2. Complete a detailed engineering study on increasing LaaR participation in RRS.
3. Complete the initial ERCOT survey on price responsive load.
4. Consider commissioning more detailed future studies on price responsiveness of load in the ERCOT system to quantify load response to MCPE.
5. Depending on the outcome of the above, ERCOT could support a reduction in EILS — for example, to a fixed level of 500 MW — in conjunction with a long-term solution similar to the modified Oxy proposal.