**Texas Industrial Energy Consumers Comments on Target Reserve Margin**

For discussion at Thursday’s TAC meeting, TIEC would like to offer a compromise alternative target reserve margin (TRM) of 15%. These comments are consistent with issues TIEC previously raised at WMS and in comments in PUC Project No. 41060 when the study results were initially released. TIEC believes that a 15% TRM is still too high; however, TIEC offers this as a compromise until further analysis can be done. The justifications for adopting a lower reserve margin than the 16.1% recommended by WMS are the following:

1. **Recently developed or identified demand response is not properly counted.** Because the reserve margin calculation is based on historical data, more recent demand response patterns and capability are not fully captured.  This will result in a higher target reserve margin. As one example, following the summer of 2011, ERCOT recognized that its models were not fully capturing peak demand response, based in part on related observations by the Brattle Group. In the SARA from summer 2012, a line item adjustment was made to account for this. ERCOT has since changed its load forecast model to better capture this peak demand response; however, the models for the LOLE study were provided in 2011 and did not have this updated capability. Because peak demand is a significant driver for the TRM, this could be a significant factor in the LOLE study results.
2. **Forced outage rates are too high for peak periods.** The forced outage rate is also too high for summer periods, when most loss of load events would be predicted, driving a higher TRM result. The LOLE study used a single annual forced outage rate, rather than a seasonal rate. Because the market is largely driven by revenues earned during peak periods, it is expected that maintenance will be performed off peak to ensure that units are in good working condition prior to the summer peak, which reduces forced outage rates during most high demand periods. ERCOT data supports this conclusion.[[1]](#footnote-1) The LOLE study used a seasonal planned outage rate, but not seasonal forced outage rates. Using an annual forced outage rate that is higher than the summer forced outage rate will improperly increase the TRM.

The 5.47% outage rate in the study is higher than the forced outage rate used for other purposes in ERCOT. The most recent SARA assumes a forced outage rate at 3.8% based on outage scheduler data for ERCOT. The state of the market report from 2011 explained that at high load levels (above 65 GW), forced outage rates are at most 3-4%.[[2]](#footnote-2) In Calpine’s voluntary mitigation plan (VMP) filing at the PUC, Calpine advocated for a forced outage rate of 2.5% during summer months.[[3]](#footnote-3) All of these values are significantly below the 5.47% average rate used in the LOLE study, which results in an inflated TRM. TIEC understands that the higher forced outage rate was based in part on data submitted through NERC’s GADS reporting; however, the requirement for generators to submit this information is relatively new and its reliability is untested. In addition, ERCOT had limited access to unit-specific GADS information. Given these limitations, consistency with prior summer forced outage rates should be applied until better data is available. Using a more appropriate forced outage rate could have a substantial impact on the TRM calculation.

1. **High sensitivity to weather year weighting counsels for conservatism.** The report notes that the LOLE outcomes were very sensitive to weather year assumptions. While 2011 was appropriately discounted to capture its impact, the 2010 weather year was given a 15% probability in the study. In the 2010 study, actual 2010 weather was used as the “extreme” scenario. By placing this weather year in a category by itself and giving it a 15% weighting, this creates a higher than justified target reserve margin. Due to this sensitivity, a significant a TRM increase should not be based heavily on these assumptions.

TIEC has discussed the possibility of re-running the model to use different assumptions in response to these issues with ERCOT. Because an outside vendor was used, there are logistical difficulties (and cost concerns) with changing the assumptions or running sensitivity analyses. Without the ability to gain more data on the impact of these issues, TIEC is conservatively requesting that the TRM be reduced by roughly one percentage point.

There are also policy reasons supporting this recommendation. The NERC default reserve margin is 15%. Exceeding this default in Texas seems premature and could create an inaccurate perception that the current market is less reliable than it really is. In addition, the prior TRM increase was a 1.25% increase, from 12.5% to 13.75%. Increasing from 13.75% to 15% would be an equal percentage increase to the prior increase.

For these reasons, TIEC asks that TAC consider a 15% target reserve margin as a compromise to reflect the impact of the adjustments TIEC has identified until further analysis can be done. TIEC will have a representative at the meeting on Thursday to discuss this further.

1. *See* 2011 State of the Market Report at 101-102. [↑](#footnote-ref-1)
2. 2011 State of the Market Report at 101-102: [www.puc.texas.gov/industry/electric/reports/ERCOT\_annual\_reports/2011annualreport.pdf](http://www.puc.texas.gov/industry/electric/reports/ERCOT_annual_reports/2011annualreport.pdf). [↑](#footnote-ref-2)
3. PUC Docket No. 40545, Rebuttal Testimony of William Hieronymus for Calpine at 50. Dr. Hieronymus ultimately increased the overall rate he used to 4.5% include 2.0% in short-term derates. [↑](#footnote-ref-3)