Review of STEC's analysis of the TAC approved Holistic Shadow Price Cap Methodology

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Current TAC Approved Methodology

- Current Generic Max Shadow Price until trigger condition is met
  - Generic shadow price - $5000
  - 345Kv shadow price - $4500
  - 138Kv shadow price - $3500
  - 69Kv shadow price - $2800
- Trigger condition to re-calculate Max Shadow Price
  - Exceeding flow limit for two consecutive hours on four or more days OR
  - 20 hours of exceedance in a rolling 30 day period

    Test to determine if current Generic Shadow Price should be reduced to greater than or equal to $2,000
  - If the irresolvable constraint running Net Margin calculation becomes > $95,000 then the Shadow Price can be reduced to within the range of $500 to $2000.
- At the beginning of each year, the Constraint Net Margin is reset to $0 and the Max Shadow Price Cap is re-calculated.
  - STEC opposes a reset in cases where solutions for irresolvable constraints have been identified. This is the core issue.

STEC's Results

- **ERCOT Agrees with STEC's calculations based on the assumptions they have presented.**
- **ERCOT notes the following:**
  - STEC assumed 50.5hrs of VALIMP constraint violation for each year in their study
  - One could argue the hours of violation are large
    - To date in 2011, the VALIMP constraint was violated 50.5 hrs due to the extended generation maintenance outage events and the extreme weather event during the first week of February. Removing the violated intervals on Feb 2nd , 3rd and 4th reduces the hours of violation to 17.7 hrs.
    - The IMM notes that the violated hours were 7.5 in 2009 and 16.75 in 2010.

ERCOT's Updated Results

The tables below show the annual costs of the VALIMP Constraint in the South Load Zone for the proposals that are before the Board updated for triggering criteria and hours of violation.

Table 1 – Updated Irresolvable Constraint Triggering Condition to 20 hrs

	TAC approved - Annual net margin Reset	STEC Proposal - No net margin Reset	Current Board Approved Methodology	VALIMP HRS
Year 1	$242,832,808.89	$242,832,808.89	$232,298,785.14	50.5
Year 2	$446,294,430.72	$280,250,728.75	$252,275,124.68	50.5
Year 3	$649,756,052.55	$317,668,648.60	$272,251,464.22	50.5
Year 4	$853,217,674.38	$355,086,568.46	$292,227,803.76	50.5

The Table below calculates the reduction to the dollars if the number of hours of violation are less than the STEC assumed 50.5 hours

Table 2 Updated Number of Hours of Violation & Irresolvable Constraint Triggering Condition to 20 hrs

	TAC approved - Annual net margin Reset	STEC Proposal - No net margin Reset	Current Board Approved Methodology	VALIMP HRS
Year 1	$242,832,808.89	$242,832,808.89	$232,298,785.14	50.5
Year 2	$330,704,400.17	$258,466,830.85	$240,645,334.93	21.1
Year 3	$436,150,309.69	$277,227,657.20	$250,661,194.67	25.32
Year 4	~~$458,663,301.31~~ $562,685,401	$299,740,648.82	$262,680,226.37	30.384

Summary

- STEC opposes a reset in cases where solutions for irresolvable constraints have been identified. This is the core issue.

- ERCOT Agrees with STEC's calculations based on the assumptions they have presented.
- The hours of violation can change the assumed impact
- One would assume that any anticipated increase to load prices will be baked into the forward market prices