

Actions Resulting from April 17, 2006 EECP Event

ERCOT Board of Directors

September 19, 2006



- ERCOT Load Forecast Accuracy
- Need for Changes to EECP Procedures
- Sufficiency of Operating Reserve Requirements
- Should there be incentives for more Interruptible Load
- Transmission Operator Firm Load shedding Procedures
- Need for improved communication procedures with PUCT, Legislature and Public



Load Forecast Actions

- Replaced "new" model in use 4/17 with "old" model in May
 - Day ahead forecast error improved from ~5% January April to ~3% May-July
 - Temporarily added 1standard deviation (1500-1800 MW) to forecast May – July until confidence gained in forecast
- Conducted Load Forecast Forum with Market participants May 31
- Determined main issue with "new" model was corrupted historical data on wind chill
- Started project to make additional enhancements to model
- Contracted with an independent load forecasting service to have another forecast for comparison going forward



EECP Procedure Changes

- Worked with ROS to develop OGRR and PRR up for Board approval today
 - Bases Notices, Advisories, Alerts and initiation of Steps 1 and 2 of EECP on discounted real-time reserves based on past experience
 - Moves public appeal for conservation up to Step 1 of EECP from Step 3
- New Procedures already in place for purposes of external communications



External Communications

ERCOT Event Stage	ERCOT action/ communication	Triggering event
1. Alert*	Tight capacity; conditions are being watched closely	Adjusted physical responsive reserves below 2500 MW
2. EECP Step 1	All available generation dispatched; DC Ties enabled; Media appeal for public conservation	Adjusted physical responsive reserves below 2300 MW
3. EECP Step 2	Interruptible loads (LaaRs) deployed	Adjusted physical responsive reserves below 1750 MW
4. EECP Step 3	Rotating firm load shed	Frequency below 59.8 Hz
5. Cancellation of EECP Step 3	All firm load restored	Frequency restoration
6. Cancellation of EECP		Grid conditions normal

* Alerts issued on 6 days between April 17 and Sept. 10



Operating Reserve Requirement

- EECP revision changes how reserves are monitored in real time and base notices and EECP implementation on discounted value
- ERCOT did study in 2004 that confirmed 2,300 MW Responsive Reserve was still reasonable
- Reviewing criteria for Non-Spinning Reserve procurement
- While higher reserves might have helped on 4/17
 - Events of that day were multiple contingency
 - Load exceeded day ahead forecast by ~10%
 - Multiple units tripped within 10 minutes during peak
 - Annual maintenance greatly reduced amount of available capacity
 - Not prudent to increase reserves at all times to protect against low probability multiple events



Interruptible Load Incentives

- Being considered at the PUCT
- Workshop held on September 15



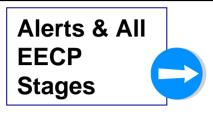
- ERCOT sets the amount (MW) of load shed for each Transmission Operator (TO)
- Protocols only have general requirement for TOs to keep in mind "the need to protect the safety and health of the community and the essential human needs of the citizens."
- ERCOT Staff is conducting a survey of specific load shed procedures used by TOs
- Will summarize and report for Subcommittee/TAC consideration



- New procedures developed with PUCT and State Operations Center (SOC)
- Twice daily reports (1100 and 1500) on grid conditions widely distributed to PUCT and ROS and Others
- If Alert or EECP is declared, in addition to above, notice sent to SOC and other state officials



Communications: Pre-EECP and EECP



PUC --Commissioners --Exec. Director

--Media relations

- --Infrastructure/Reliability
- --Govt. Relations

Legislative Leadership

Governor's Office

SOC Hotline

ERCOT Officers, Board, & Client Services

Market Participants

-- Subscriber list screened by ERCOT



All of the above PLUS.....

- News media
- All legislators
- All market participants & other interested parties
- Activate ERCOT.com web page for public updates