Resource Adequacy and Market Signals: ERCOT Activities

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ERCOT Activities

- **ERCOT has only indirect influence over resource adequacy**
  - Reliability actions taken in current operations impact price signals
  - Communication of periodic assessments of resource adequacy inform the market and policymakers of perceived needs
  - Studies that indicate future requirements provide information to market and policymakers on resource needs and characteristics

Current Operations

- **Load Forecasting**
  - Proposed ERCOT A/S Methodology contains provision to reduce load forecast used for unit commitment by historic reliability bias and procure additional Non-Spinning (off-line) Reserve Service (NSRS) to cover the load forecast uncertainty

- **Wind Forecasting**
  - ERCOT is working to improve wind forecasting
    - Obtaining meteorological data from WGRs
    - Developing Ramp Forecast tool
  - Will consider use of 50% probability of exceedance forecast (rather than current 80% requirement) with more experience and confidence in tools

- **Operational Risk Assessment**
  - Developing tool that should provide more granular assessment of operational risk from wind, load and generating unit forced outages
    - Improvement in efficiency of procurement of NSRS quantities

- **ERCOT is working with RTWG, ERCOT Subcommittees, IMM, PUCT Staff and TRE to identify other improvements to maintain operational reliability while sending appropriate signals to achieve resource adequacy and efficiency in the longer-term**

Periodic Assessments

- **Reserve Margin target**
  - ERCOT will be updating the 2007 loss-of-load probability (LOLP) study before next summer's Capacity, Demand and Reserves report (CDR)
  - LOLP study is used to provide guidance on minimum resources to maintain reliability
  - As with last study, this will evaluate system reliability across the year (8760 hours)
  - Results used to "reflect" resources' impact on reliability into reserve margin calculation (e.g. 8.7% effective load carrying capability for wind)

- **Reserve Margin Calculation**
  - Intent of CDR reserve margin calculation is to provide periodic indication of future resource adequacy
  - Generation Adequacy Task Force (GATF) is in-process of updating assumptions that go into the reserve margin calculation

Studies of Future Requirements

- **A/S Study performed for ERCOT by General Electric in 2007**
  - Evaluated future A/S needs at various levels of wind generation as a part of CREZ study
- **Biennial Long Term System Assessment**
  - Evaluation of future transmission needs, but includes analysis of future resources to determine transmission impacts
- **Enhanced Long-Term Assessment – applied for DOE funding**
  - Broader and more inclusive evaluation of potential future resource decisions by market, including storage, solar, demand response
  - Evaluation of future operational requirements including A/S requirements

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- **PUCT is considering resource adequacy-related topics in Project 37339**

Questions?