

# “The State of Things: Resource Adequacy in ERCOT”

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# Introduction

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- My assignment is to discuss the current Commission initiatives and dialogue relating to resource adequacy in ERCOT.
- With my assignment in mind, I'm going to:
  - Briefly describe the Commission's resource adequacy efforts through August 1, 2012,
  - Describe the Commission's most recent decisions and current dialogues/activities, and
  - Lastly, give you my views regarding certain points that should be considered as we evaluate our options.

# What We Did Earlier This Year...

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- Since December 2011, the Commission, working diligently with ERCOT and Stakeholders, has undertaken and completed a number of initiatives that have resulted in increased generation capacity.
- Before May 1, 2012 the Commission:
  - Established price floors for certain ancillary services that when deployed historically caused incorrect price reversals;
  - Incorporated online non-spin and quick start units into SCED so that these services can be dispatched properly;
  - Established a process for the recall of mothballed generation; and
  - Increased responsive reserves by 500 MW (scarcity pricing should begin earlier and last longer).
- Effective Aug. 1, 2012 the Commission:
  - Raised the System-Wide Offer Cap (SWOC) to \$4,500.

# The Results?

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- During the Summer of 2012...
- The ERCOT grid:
  - Performed well,
  - Did not hit its all-time peak demand record 68,379 MW, set on August 3, 2011.
- **But** it hit three new monthly records:
  - June 25, 2012 - 65,047 MW
  - June 26, 2012 - 65,583 MW
  - July 23, 2012 - 66,626 MW.
- The ERCOT grid met all Summer 2012 demand without beginning emergency procedures.
- Stated another way, the ERCOT grid did not drop below 2,300 MW of physical responsive capability (PRC) during the Summer of 2012. **The reason:.....**

# Generation Status

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- **Before May 1, 2012:**
  - Nearly 2,000 MW of mothballed capacity returned to service by their owner operators for the summer of 2012.
  
- **Since May 1, 2012:**
  - 3,606 MW of new generation has been announced or discussed as moving forward in the trade press.
    - ✦ 1,497 MW which were in the May 2012 Capacity, Demand and Reserves in the ERCOT Region (CDR), and
    - ✦ 2,109 MW which were not in the May 2012 CDR.

# Current Discussions/Initiatives - PNM & SWOC

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- Project No. 40268, a/k/a the “Long-Term” Rulemaking proposes:
  - Peaker Net Margin:
    - ✦ \$262,500 in 2012-2013
    - ✦ 2014 and forward – based on the Cost of New Entry
  - Low System Offer Cap:
    - ✦ \$2,000
  - System-Wide Offer Cap (SWOC):
    - ✦ \$5,000 on June 1, 2013
    - ✦ \$7,000 on June 1, 2014
    - ✦ \$9,000 on June 1, 2015
- At the September 28, 2012 Open Meeting, the Commission elected to defer a final decision on the Long-Term rule until we have more certainty about market design issues.

# Current Discussions/Initiatives - PNM & SWOC Con't

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- I filed a memo on September 27, 2012 in both the Long-Term Rulemaking and Project No. 40000, the Commission's Omnibus Resource Adequacy project, that suggests changes to the proposed Long-Term rule:
  - Peaker Net Margin:
    - ✦ \$300,000 in 2012-2013
    - ✦ 2014 and forward – based on 3X the Cost of New Entry
  - Low System Offer Cap:
    - ✦ No change
  - System-Wide Offer Cap (SWOC):
    - ✦ \$6,000 on June 1, 2013, and
    - ✦ \$7,500 on June 1, 2014, and
    - ✦ Stop there – until market design decisions finalized, but be prepared to make additional adjustments no later than fall of 2013.

# Current Discussions/Initiatives - Other Issues

- My September 27, 2012 memo also addressed other resource adequacy steps that I believe need to be taken regardless of major changes to market design:
  - Increase Demand Response:
    - ✦ I believe we need a project to consider fully all aspects of the steps necessary to further encourage the development of price responsive loads that operate to assist with price formation, not price suppression.
  - Potential Price Reversal Issues Related to the Deployment of Emergency Response Service (ERS) and TDU Load Management Programs:
    - ✦ Increasingly important as:
      - ERCOT's programs expand, and
      - If we grant waivers or otherwise encourage TDU Load Programs beyond 2011 levels.
  - Credit Implications of Clearing and Settlement:
    - ✦ Reducing settlement timelines decreases credit and collateral risk for the ERCOT market.
    - ✦ I want to see the ERCOT market settle in a time frame that is similar to other financial markets.
  - Integrated Proxy Demand Curve:
    - ✦ The adoption of such a proxy demand curve is needed to integrate Demand Response into the Energy market without price reversal,
    - ✦ Starts with prices above a certain point – say \$500, \$700, or \$1,000 to the SWOC,
    - ✦ Can be used in conjunction with the Power Balance Penalty Curve, and
    - ✦ Help to smooth out sharp price spikes of short duration (trading height of spikes for duration).



# Current Discussions/Initiatives Con't – the Roadmap

- In Project No. 40000, the Commission's Omnibus Resource Adequacy project:
  - At the September 28, 2012 Open Meeting, the Commission approved a suggested course of action, a “**road map**,” for the next actions to be taken by the Commission, ERCOT and stakeholders to analyze and resolve resource adequacy concerns in the ERCOT region.
  - Pursuant to the road map, Brattle will prepare and deliver on October 15, 2012:
    - ✦ An assessment of how much and over what time frame Demand Response could be achieved in the ERCOT market, and
    - ✦ A refinement of policy options presented in the Brattle Report and further development of stakeholder comments filed in this project.
  - The Commission also scheduled yet another workshop on October 25, 2012.

# Current Discussions/Initiatives – Reserve Margins and Load Forecast

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- **Why is ERCOT's reserve margin important?**
  - If ERCOT remains an Energy-Only market, the accuracy of its load forecasts and uncertainty around reserve margin fluctuations are less important because the result is only a target and signal to generation investors of when to build.
  - If ERCOT adopts a “mandatory” minimum reserve margin, it becomes very important because it drives the amount of generation procured either in forward capacity auctions or some other process and translates into dollars imposed on consumers.
- **Forecasting and ERCOT's Reserve Margin:**
  - The May 2012 CDR shows ERCOT dropping below its target reserve margin of 13.75% in 2014,
  - Yet, if all mothballed generation and reliably anticipated new generation is included in “expected resources,” ERCOT does not dip below its 13.75% target reserve margin until 2015, and
  - In 2014, 2015 and 2016 the reserve margin is based on expected load growth of 4.2%, 4.8% and 3.2% respectively.
  - If this forecast is overstated in any given year, a load forecast correction will directly impact ERCOT's reserve margin in that year and following years.

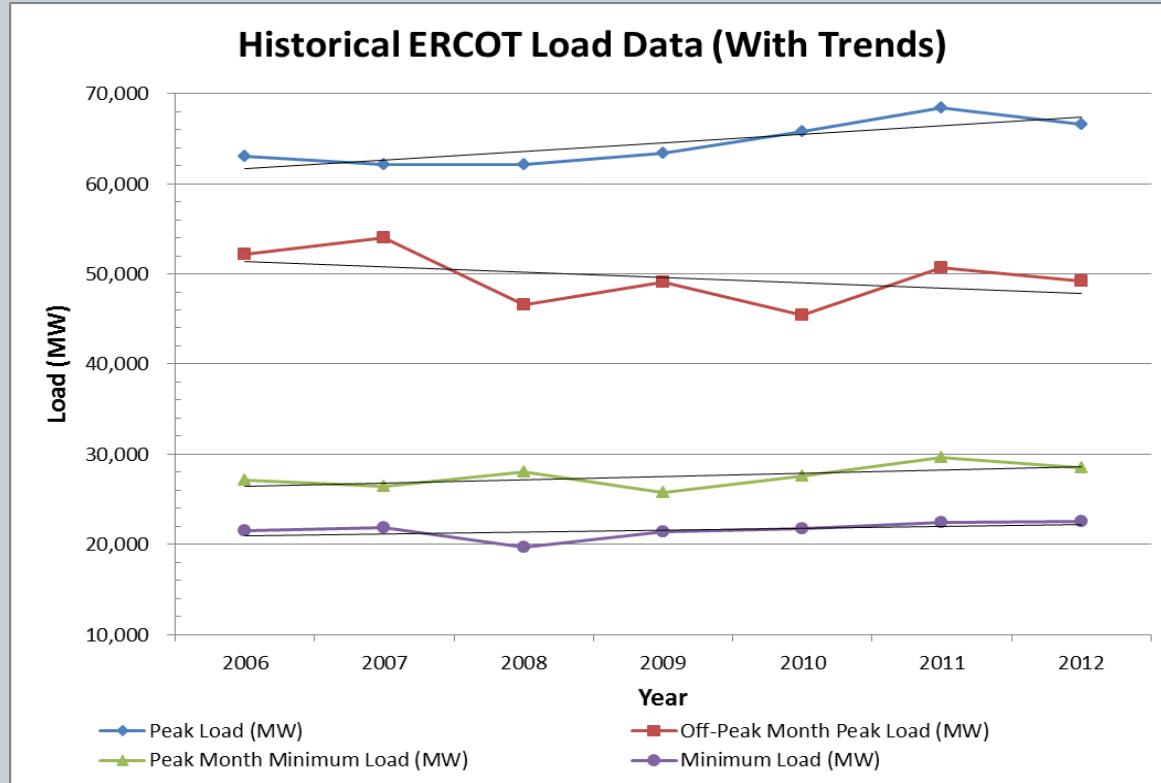
# Points to Consider

- Tight reserve Margins are to be expected in an efficient Energy-Only market that exists in a state or region that is experiencing continued economic growth and increased electric consumption.
- It is VERY important to remember that normal system planning and the resulting installed capacity reserve margins do not avoid the risk of rolling blackouts from ‘black swan’ events – events that occur outside of reasonable planning criteria.
- If we adopt a mandatory reserve margin there is the danger of creating unrealistic expectations; particularly if we go to a Centralized Forward Capacity Market (CFCM) construct.

# ERCOT Has Sufficient Base Load, the Problem is Peaks

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- ERCOT's high low trend is relatively flat, so ERCOT has sufficient base load.



# My Conclusions

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- If avoiding rolling blackouts is the primary objective, then our focus should be on options that provide actual improvements to reliability, such as:
  - ERCOT acquiring backstop generation (to be used only to avoid load shed while preserving scarcity pricing), and/or
  - ERCOT procuring additional reserves on a daily basis with the deployment of part of these reserves along an integrated proxy demand curve, and.
  - Expansion of demand response that sets, not reverses, prices.
- I believe ERCOT needs more flexible and peaking units.
  - ERCOT has sufficient base load.
  - ERCOT was only in very tight conditions 1/3 of 1% of the time in 2011, an extraordinary weather-stressed year.
  - If ERCOT needed to procure additional backstop generation, I estimate that it could be had for a one-time payment at a substantially lower cost than any annual CFCM auction.
- We have time to evaluate ERCOT market design issues.
  - Realistically, ERCOT's target reserve margin doesn't fall below 13.75% until 2015.
  - And, if CDR load forecasting is corrected downward, it may not fall below 13.75% until 2016 or later.
  - Rather than rush and fundamentally change the highly successful ERCOT market design, I would focus on solutions that are less costly, less complex, can be implemented more quickly and that provide real reliability.

# Contact Information

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