

# Competition or Regulation? The Texas Electricity Market

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# Overview

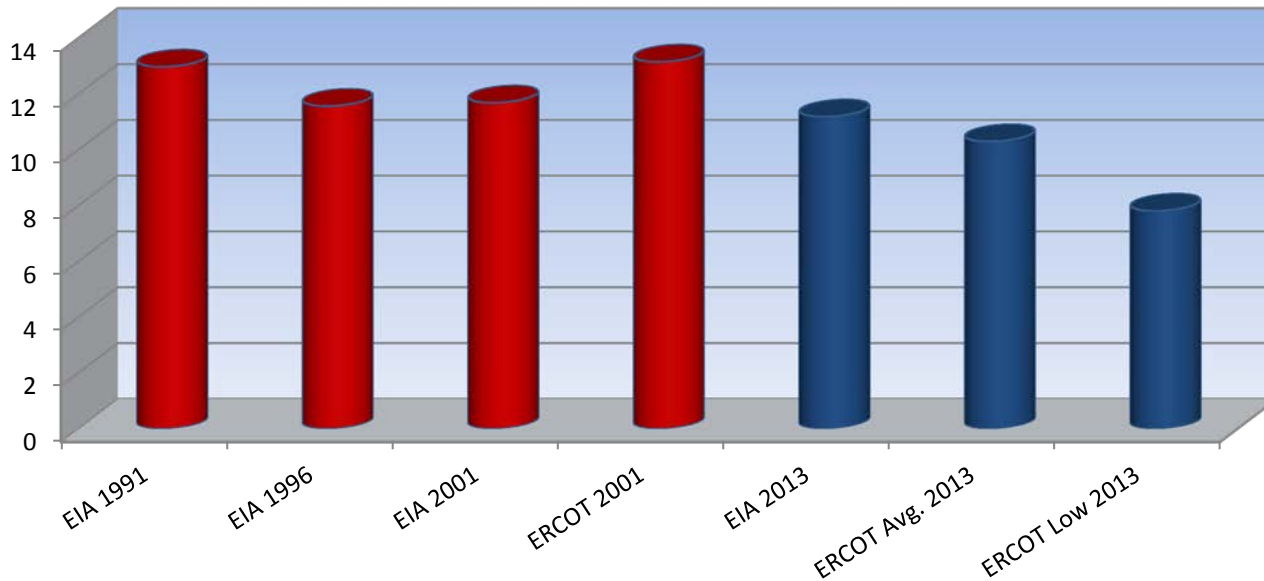
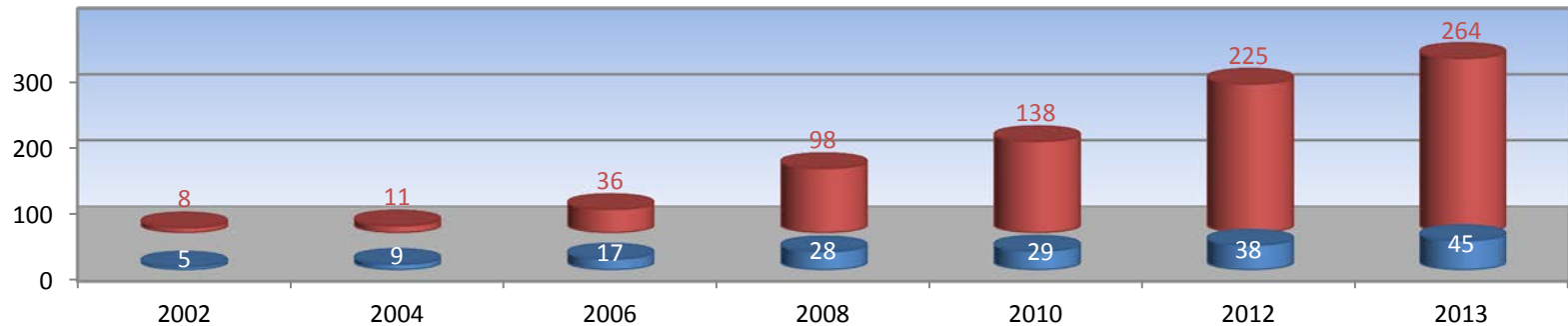
- *Texas' Competitive Electricity Market Works*
- *The PUC Lacks Authority to Re-regulate the Market*
- *Texas is not Running Low on Electricity*
- *A Capacity Market Will Harm Reliability & Consumers*
- *Improving Reliability Depends on Less, not More, Regulation*
- *The Texas Legislature, not the PUC, Should Make the Decision about the Capacity Market*

# Texas' Competitive Electricity Market Works

- “Electricity has been the last and most difficult of the great deregulations, thanks to technology, economics and politics. In contrast, Texas ... stands out among the states for the competitive performance of both its retail and wholesale markets. ... *Texas is competitive electricity's greatest success story in the United States, if not the world.* The ERCOT area has enjoyed the most successful transition toward deregulation in the U.S.” – *Professor Robert Michaels, March 2007*

# Texas' Competitive Electricity Market Works

Providers Plans





# Texas' Competitive Electricity Market Works

## *The Key to Success*

- *“Texas’ success was largely due to the willingness to let markets work and not manipulate prices or access policies.* While the transformation of American electricity has been dominated by a largely political competition to ‘design’ markets for it, Texas did not ‘design’ a retail market in any meaningful sense—it instead set general rules for retail electric providers ... and allowed them to compete as they wished within those rules. *The details of what would be sold and how it would be priced were left to the ingenuity of buyers and sellers.”* – Professor Robert Michaels, March 2007

# The PUC Lacks Authority to Re-regulate the Market

- Adopting a capacity market is re-regulating the market, reversing the course of 14 years of policy direction from the Texas Legislature and previous commissions
- Adopting a mandatory reserve margin is adopting a capacity market—it simply leaves the costly details to be worked out later
- A capacity market will require a de facto electricity tax on Texas consumers of \$3 billion to \$5 billion a year
- What the PUC is doing to the Texas electricity market is akin to what the federal government is doing to the healthcare market

# The PUC Lacks Authority to Re-regulate the Market

- A capacity market violates the intent of the Texas Utility Code:
  - “The legislature finds that the production and sale of electricity is not a monopoly warranting regulation of rates, operations, and services and that the public interest in competitive electric markets requires that ... *electric services and their prices should be determined by customer choices and the normal forces of competition.*” – Sec. 39.001(a), Texas Utility Code

# The PUC Lacks Authority to Re-regulate the Market

- A capacity market violates the intent of the Texas Utility Code:
  - *“Regulatory authorities ... shall authorize or order competitive rather than regulatory methods to achieve the goals of this chapter* to the greatest extent feasible and shall adopt rules and issue orders that are both practical and limited so as to impose the least impact on competition.” – Sec. 39.001(d), Texas Utility Code



# The PUC Lacks Authority to Re-regulate the Market

- A capacity market contradicts the implementation of the Utility Code by past commissions:
  - “I am pleased to see the Staff’s endorsement of an energy-only market design. For the reasons articulated in Staff's memo, *I agree that an energy-only market design is the right one for the ERCOT market. Capacity payments are a costly subsidy paid to generators*; like any subsidy, once given, it will be very difficult to take back. *In my opinion, capacity payments represent an attempt to re-regulate a market which the Texas Legislature has clearly determined should be deregulated.*” – Barry Smitherman, July 15, 2005

# Texas is Not Running Low on Electricity

- Three main things have promoted the idea that Texas is running low on electricity:
  - Generators' claims that they can't make enough profit in the competitive market
  - May 2012 ERCOT Capacity, Demand and Reserves Report
  - June 2012 Brattle Group ERCOT Investment Incentives and Resource Adequacy Report
- All three are flawed

# Texas is Not Running Low on Electricity

## *Generator Profitability*

- “Our calculations show that adding the option of producing non-spin to that of the balancing market can raise a peaking generator’s net margin in ERCOT into the range of economic viability.” – *Economists Andrew Kleit and Robert Michaels, February 2013*
- “We believe that ERCOT’s energy-only market may be only marginally riskier than energy-and-capacity markets.” – *The Brattle Group, June 1, 2012*
- “It is highly likely that the market itself will address any predicted future shortfall by encouraging generators to build new generation because market prices will likely increase when reserve margins decrease.” – *TXU Electric, August 10, 2001*
- “NRG Texas considered the efficiencies, capital costs to install, potential revenue sources, operating costs, and the targeted “super peak” hours before arriving at the decision to install the GE 7 turbines [that] represent the only identified generating technology which meet the ... requirements for low capital cost and economic viability.” – *NRG Texas, October 7, 2013*

# Texas is Not Running Low on Electricity

## *ERCOT Projections*

Range of ERCOT Reserve Margin Forecasts 2012-13

	2013	2014	2015	2016	2017	2018
<b>May 2012 Forecast</b>	14.3%	9.8%	6.9%	6.5%	5.8%	5.8%
<b>Oct. 2012 Forecast</b>	16.0%	12.1%	9.7%	9.9%	9.8%	10.4%
<b>Dec. 2012 Forecast</b>	13.2%	10.9%	10.5%	8.5%	8.4%	7.1%
<b>May 2013 Forecast</b>		13.8%	11.6%	10.4%	10.5%	9.4%

ERCOT CDR Missed Estimates of Peak Load

	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year
<b>Avg. w/o 2011</b>	1.14%	1.85%	2.71%	3.06%	4.28%	4.79%

ERCOT Reserve Margin Forecast  
Adjusted for Overestimation of Demand

	2014	2015	2016	2017	2018	2019
<b>May 2013 Forecast</b>	13.8%	11.6%	10.4%	10.5%	9.4%	7.4%
<b>Adjusted</b>	14.02%	12.64%	12.85%	13.81%	13.99%	12.14%
<b>Adjusted w/o 2011</b>	15.15%	13.83%	13.58%	14.14%	14.48%	13.06%

ERCOT Reserve Margin Forecast  
Adjusted for Underestimation of Supply

	2015	2016	2017	2018
<b>Oct. 2012 Forecast</b>	9.7%	9.9%	9.8%	10.4%
<b>Adjusted</b>	15.59%	16.06%	15.37%	14.29%



# Texas is Not Running Low on Electricity

## *Brattle Report Projections*

- “We **simulate** the energy margins ... We compare these energy margins as **estimated** ... We use outputs from ERCOT’s Loss of Load Expectation (LOLE) **Model** to **estimate** ... We **estimate** generators’ net revenues ... We rely on ERCOT’s LOLE **model** to **project** ... This **model estimates** ... it is similarly useful to us for **estimating** the frequency ... To support our study, ERCOT’s planning department provided **simulation results** ... The **choice** of weather-years and the probability weights assigned to each year strongly affect the **model results** ... they **assume** only the current level of demand response ... We discount **projected** scarcity margins ... we **estimate** the energy margins a combustion turbine would earn ... We also **calculate** the average energy margins that a combustion turbine would earn over each of the 15 weather years ... We **estimated** non-scarcity margins using a regression analysis ... we **assumed** a 1-in-15 chance of extreme 2011 weather occurring ...”

# Texas is Not Running Low on Electricity

## *Brattle Report Projections v. Reality*

- Brattle: “In a worst-case year with the extreme weather of 2011, 27 loss-of-load events, 92 loss-of-load hours, and 248 hours with prices at the cap are projected.”
  - Reality: Texas made it though 2011 with no loss of load due to capacity
- Brattle: “ERCOT projects that reserve margins will fall to 9.8% by 2014 [which] poses a particular challenge because it may be approaching too quickly to add some types of new capacity.”
  - Reality: The projected reserve margin for 2014 is now 13.8%
- Brattle: “An important qualification to these simulation results is that they assume only the current level of demand response”
  - Reality: Demand response is developing rapidly in ERCOT

# Texas is Not Running Low on Electricity

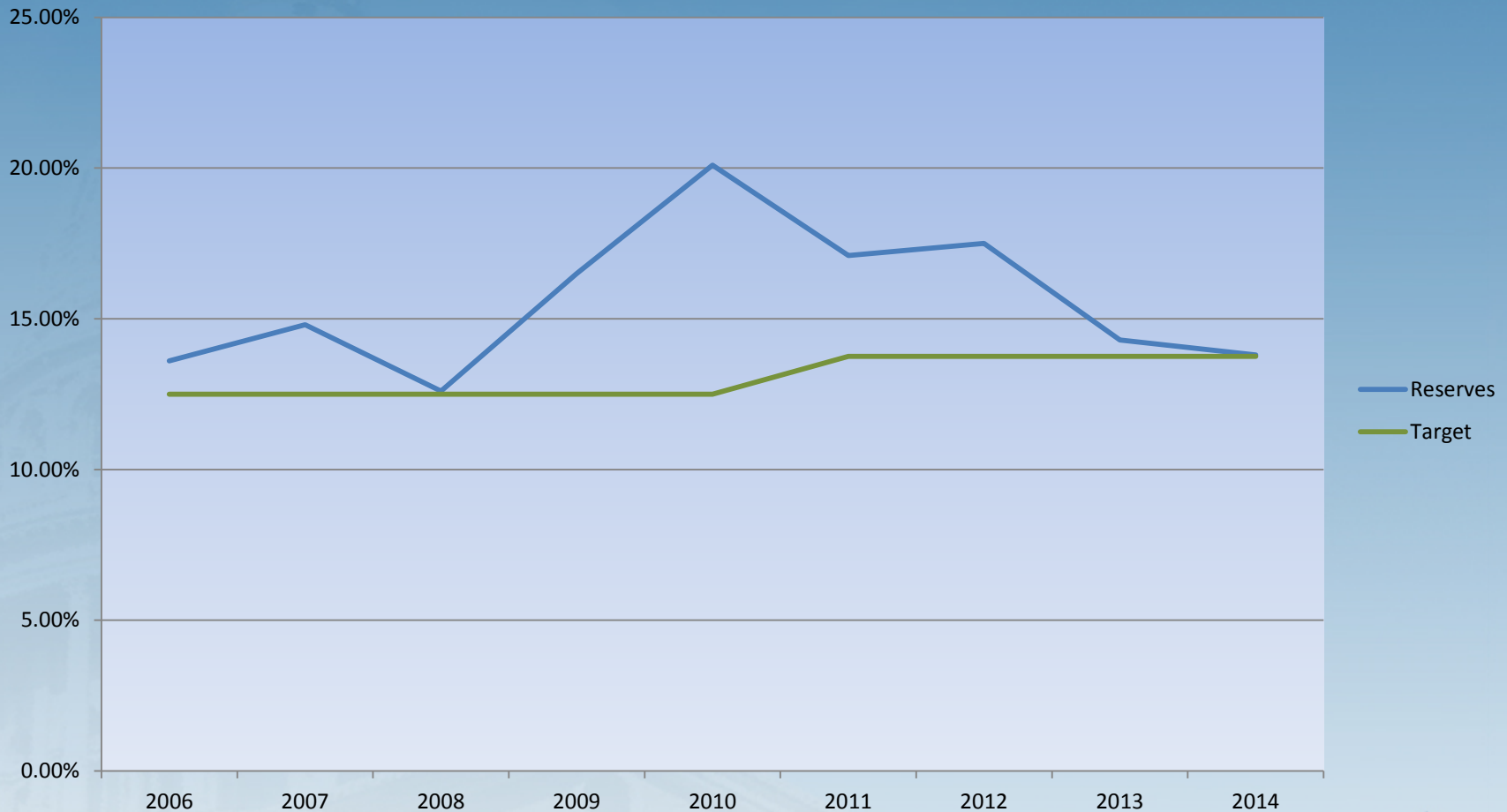
## *Brattle Report Projections v. Reality*

- Brattle: “We estimate that the current market design and the \$3,000 offer cap would achieve a reserve margin of only 6% on a long-term average basis under current market conditions.”
- Brattle: “If the offer cap is increased to \$9,000, a reserve margin of approximately 10% could be achieved.”
- **Reality:**

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014
Reserves	13.60%	14.80%	12.60%	16.50%	20.10%	17.10%	17.50%	14.30%	13.80%

# Texas is Not Running Low on Electricity

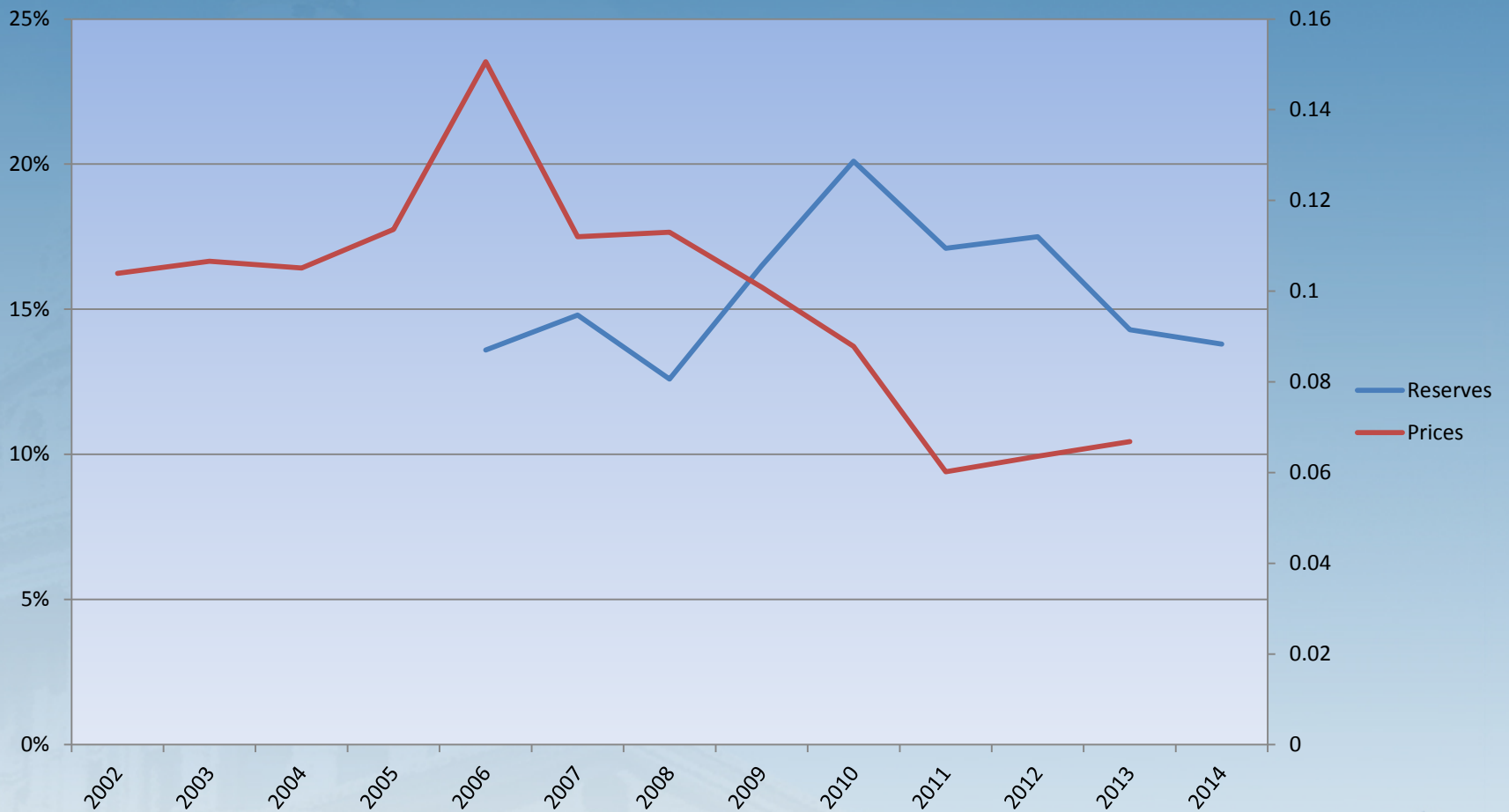
## *One Year Out Reserves*





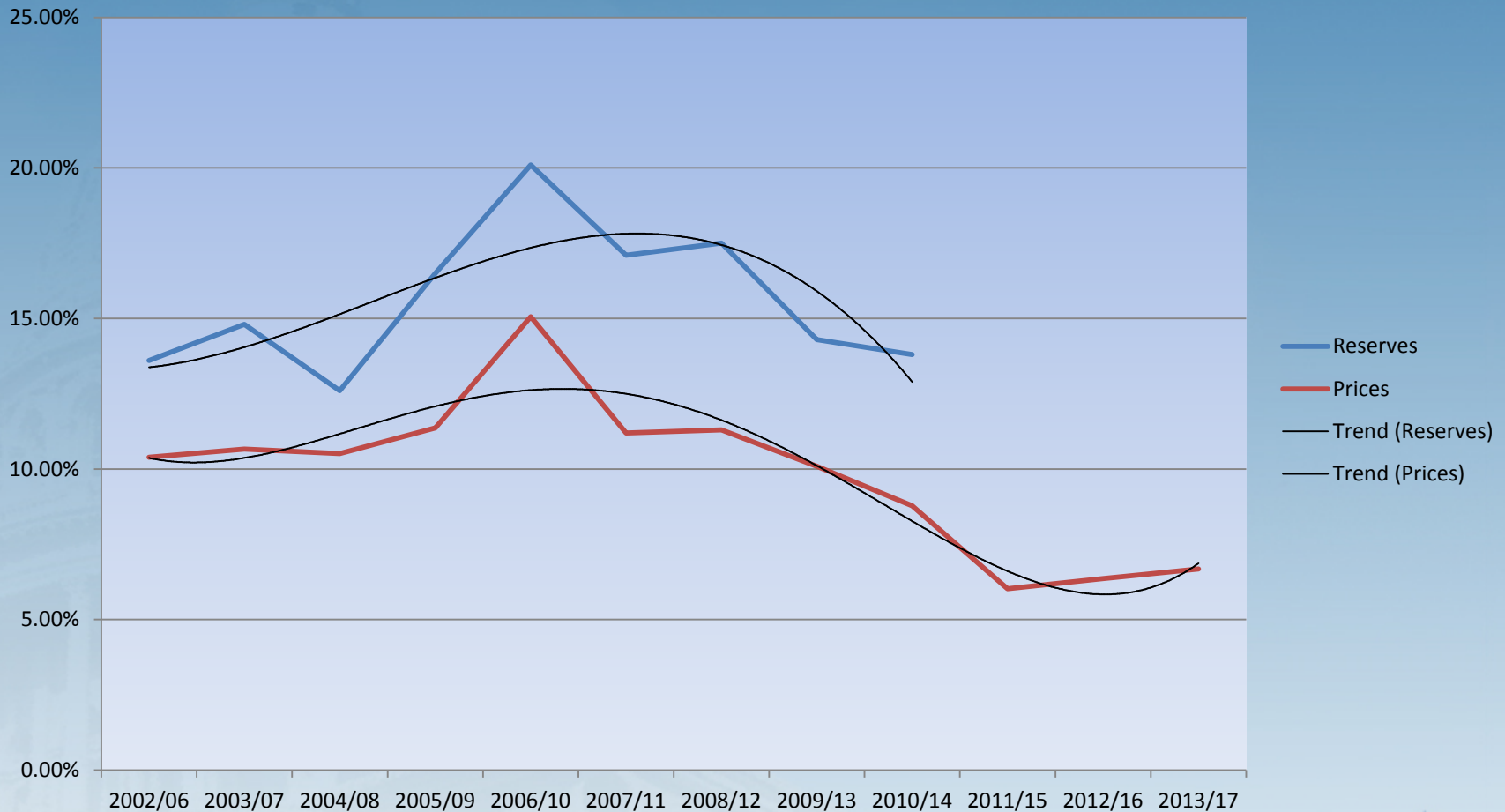
# Texas is Not Running Low on Electricity

## *Reserves & Prices*



# Texas is Not Running Low on Electricity

## *Reserves & Prices Compared*



# Texas is Not Running Low on Electricity

## *Investment in New Generation*

- ERCOT reports:
  - 47,000 MW new generation added since 1999
  - 10,852 MW generation committed for the future (with transmission contract and air permit)
  - 42,300 MW of active generation requests under review, including more than 21,100 MW of wind
- Investment in new generation is still robust, but has slowed because reserves are adequate and prices are low

# *A Capacity Market Will Harm Reliability & Consumers*

- There is no evidence that capacity markets boosts capacity
  - From 2007 – 2011, capacity payments funded only about 7,000 MW of new generation, about 4 percent of PJM's installed capacity
  - During the same period, Texas' energy-only market produced over 10,000 MW of new generating capacity, about 12 percent of ERCOT's installed capacity
- Capacity markets are just as vulnerable to operational and capacity disruptions as Texas' energy-only market, if not more so; witness PJM's September blackouts
- Capacity markets force consumers to subsidize services that they could get from an energy-only market at a cheaper, more efficient price
- Consumers in PJM have spent \$54 billion on capacity payments since 2007, or \$900 per person
- Capacity payments in 2010 added \$140 to an average residential bill and \$1,000 to a retail bill
- Texas payments are estimated to run from \$3 to \$5 billion a year; projected savings are highly speculative



# Improving Reliability Depends on Less, not More, Regulation: Main Challenges

- Regulatory Uncertainty Caused by Capacity Market Debate
- Deeply Flawed Definition and Enforcement of Market Power
- Excessive Regulatory Authority for the PUC
- Flawed Design and Implementation of some ERCOT Protocols
- Renewable Energy Subsidies – State and Federal
- System-Wide Offer Cap

# Improving Reliability Depends on Less, not More, Regulation: Already in Progress

- PUC has increased the system wide offer cap
- PUC/ERCOT are moving forward with the operating reserve demand curve (ORDC)
- ERCOT is examining a new approach to obtaining ancillary services in the future
- ERCOT is revising methodology for reserve margin forecasts
- Reserve margins are already improving

# Improving Reliability Depends on Less, not More, Regulation: Recommendations

- The market should determine the appropriate level of reserves:
  - the PUC should not mandate a hard reserve margin target/adopt a capacity market;
  - ERCOT should eliminate, not increase, the target reserve margin
- The PUC should eliminate the high system-wide offer cap
- The PUC and ERCOT should more closely evaluate the ability of current and potential market driven demand response to handle peak load strains on the system
- ERCOT should examine its protocols and system designs, including assessing whether the price distortions caused by the deployment of Non-Spinning Reserve Services could be best addressed by eliminating the service

# Improving Reliability Depends on Less, not More, Regulation: Recommendations

- The Texas Legislature should prohibit a capacity market in statute
- The Texas Legislature should reevaluate both the board structure of ERCOT and the PUC's reach into ERCOT's operations
- The Texas Legislature should eliminate/reorient the Independent Market Monitor and improve the statutory definition of market power abuse
- The Texas Legislature should reduce the PUC's excessive regulatory authority:
  - Eliminate the PUC's ability to approve mergers and acquisitions
  - Eliminate the PUC's ability to disgorge revenue
  - Eliminate the PUC's ability to issue emergency cease and desist orders
- The Texas Legislature should eliminate the Texas Renewable Portfolio Standard; Texas policymakers should oppose the extension of the federal Production Tax Credit



# The Texas Legislature, not the PUC, Should Make the Decision about the Capacity Market

- While the Texas market has some challenges, we are not running low on electricity
- The competitive market is already improving reliability, both on the supply and demand sides
- The path to improved reliability lies through increased market efficiency and decreased government intervention
- A capacity market will harm Texas consumers, harm reliability, and harm the Texas economy
- Capacity market is a perfect example of regulatory capture
- Do you trust markets or regulation to manage our electricity market?
- Whatever your answer is, the Texas Legislature, not the PUC, should make this decision

# Competition or Re-regulation? The Texas Electricity Market

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