

# **The Road to Restructuring in ERCOT: Different Path, Better Results?**

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# Summary

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- Road to Restructuring in ERCOT
- Key Signposts on the Road to Restructuring
- Bilateral Contracting in ERCOT

# Road to Restructuring: Choices, Choices, Choices

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- ERCOT restructuring: 1999 – 2006
- Implementation projected to be completed in 2009
- In restructuring, PUCT noted that a number of U.S. markets were reviewing
  - Unit commitment
  - Dispatch
  - Resource adequacy
  - Market power
  - Retail competition
  - Bilateral contracting
  - Construction of new transmission

# Debate on Design for Centralized Spot Markets

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- 2001-2004: ERCOT debated nodal market design elements
  - Proper congestion pricing
  - Unit commitment
  - Efficient RT dispatch
  - Bilateral contracting
  - Voluntary nature of day-ahead market
- Debates also took place in MISO and CAISO
- Many alternatives debated
- Nodal design highly controversial in some quarters
- PUCT looked East for the best answer: two-settlement, nodal market design

# Debate on Resource Adequacy and Market Power

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- 2001-2006: PUCT debated resource adequacy
  - “Missing money”
  - Scarcity pricing vs. market power abuse
  - Compatibility with ERCOT retail market
  - Role of demand resources

# Debate on Resource Adequacy and Market Power (cont.)

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- Capacity alternatives developed in Eastern U.S. had troubles:
  - Peaking and baseload units have two very different payment streams
  - Locational and operating characteristics not covered easily in capacity framework
  - Retailers and industrial customers had serious reservations
  - Capacity payments, once established, would be very hard to remove
  - Multi-year constrained optimization models, not markets

# Resource Adequacy Mechanism: More Critical Than Choice on Nodal

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- Fundamental choice before the PUCT
  - Increase reliance on markets (energy-only)
  - Return to integrated resource planning (capacity)
- PUCT decided to pursue Energy Only approach
- PUCT looked West, not East, for best solution
  - Very different approach than is being used in East Coast nodal markets
  - Rule based on Australian mechanism
  - Energy-only approach also used in Alberta and NZ

# Proposed Energy-Only Resource Adequacy Mechanism in ERCOT

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- Offer cap that allows for recovery of fixed costs with backstop mechanisms
- Peaker Net Margin to further enhance fixed cost recovery as well as encouraging more load resource participation
- Credit requirements for load-serving entities
- Design differentiates between scarcity pricing and market power abuse for all but the largest generation portfolios

# Proposed Energy-Only Resource Adequacy Mechanism in ERCOT (cont.)

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- Publication of offer curves in a shorter time frame than in FERC jurisdictions
- Aggressive promotion of market-based demand-side participation
- Key: Risk management by load-serving entities, which is consistent with a competitive commodities market

# Will “Day 2” Markets Destroy Bilateral Contracting in ERCOT?

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- Absolutely not!
- ERCOT has always been bilateral market
- New design intended to keep it that way
  - Not “must-offer” but “crazy not to offer”
  - Investment risk and price risk are much greater than in other U.S. electricity markets
  - Generators and load have strong incentive to make bilateral deals
- Need financial intermediaries?
  - Greater diversity in products and services
  - Transition from government-based to market-based procurement

# Current Restructuring Debate in the United States

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- Debate in the U.S. has been centered too much on
  - Alternatives developed in FERC-jurisdictional markets
  - Centralized nodal dispatch in spot markets
    - Load pockets and transmission
    - Over-reliance on spot markets
    - Pool dispatch vs. bilateral contracting
  - How to identify sufficient common ground among various regulatory authorities
- Other key market design issues were put on backburner
- As a result, current markets have had limited ability to restructure completely

# How to Get to the Promised Land of Electricity Deregulation?

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- Define endpoints
  - Transform wholesale markets into efficient commodities market
  - Proper governance and unbundling of integrated utilities
  - Retail competition with interval metering for all loads
- Facilitate regulatory co-ordination in identifying common elements needed to develop efficient wholesale and retail markets
- Examine non-FERC alternatives
  - ERCOT
  - “Commonwealth” markets (Australia, NZ, Alberta)

# Regulatory Framework for ERCOT: A Unitary Approach

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- Texas Commission jurisdiction and responsibilities established by Texas Legislature
- Texas Commission oversees wholesale and retail markets
- Investor-owned utilities unbundled into generation companies, wires companies, and retailers
- Wires companies are regulated rate of return
- Electric cooperatives and municipally-owned utilities still bundled

# Prerequisites for Successful Restructuring of the Electricity Industry

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- Easy interconnection of generation
- Aggressive investment in new transmission
- Socialized payment by all loads of new transmission
- Successful retail market
- Bilateral forward contracting without centralized pool or installed capacity markets
- Design must distinguish scarcity pricing and market power abuse
- Market-based demand-side response

# Forward Contracting in ERCOT

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- Forward, bilateral contracting as a means of ensuring resource adequacy
  - Retail competition vs. NOIEs
  - What is generated in ERCOT stays in ERCOT
  - Energy-only approach and risk management
- Profile for bilateral contracting in ERCOT
- Short-term contracts in competitive sector
  - Changes in retail market share
  - Changes in wholesale market design

# Forward Contracting in ERCOT (cont.)


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- Long-term contracts for large commercial and NOIEs
  - CPS building coal plant
  - TXU has stated that it wants to contract / turnkey with NOIEs

# Backlog of New Generation Projects in ERCOT

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- Total generation resource backlog: 68,500 MW
- Mix of generation resources
  - Coal: 14,700 MW
  - Gas-fired: 13,000 MW
  - Wind: 17,750 MW
  - Nuclear: 22,000 MW
  - Other: 1,100 MW
- ICAP markets appear to have much smaller backlog than energy-only markets do



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