

TEXAS CITY ATTORNEYS ASSOCIATION

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**A TEXAS NODAL
MARKET:
FUNNY NAME, SERIOUS
PROBLEM**

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**“EXCUSE ME, CAN SOMEONE
PLEASE TELL ME WHAT THIS GUY
IS SPEAKING ABOUT?”**

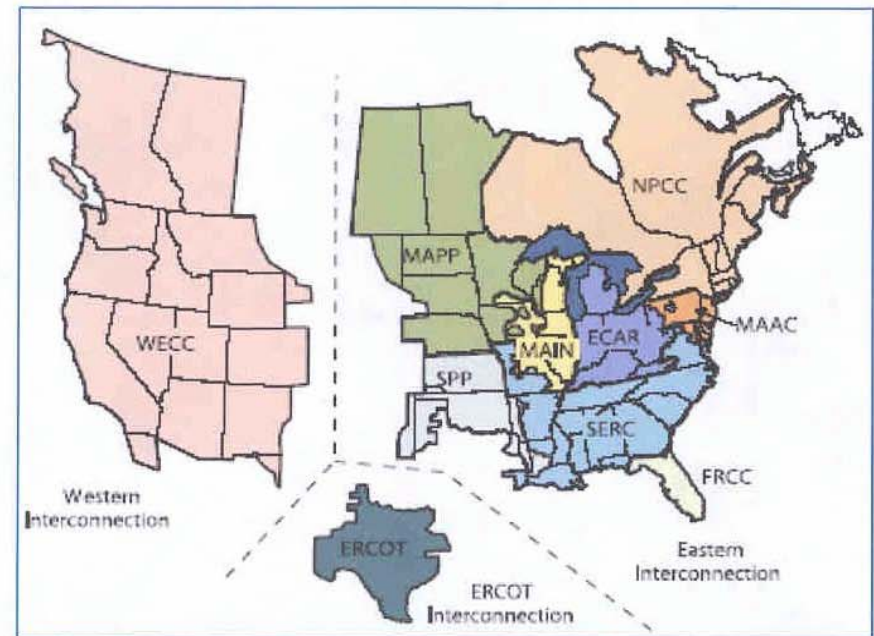
As A Reminder...

- 👉 1995-96 -- Texas legislation and FERC rules introduced competition at wholesale level
- 👉 September 1999 -- Retail competition law enacted
- 👉 2001 -- Pilot project for retail competition
- 👉 January 2002 - Retail Competition within ERCOT
- 👉 Retail competition outside of ERCOT delayed

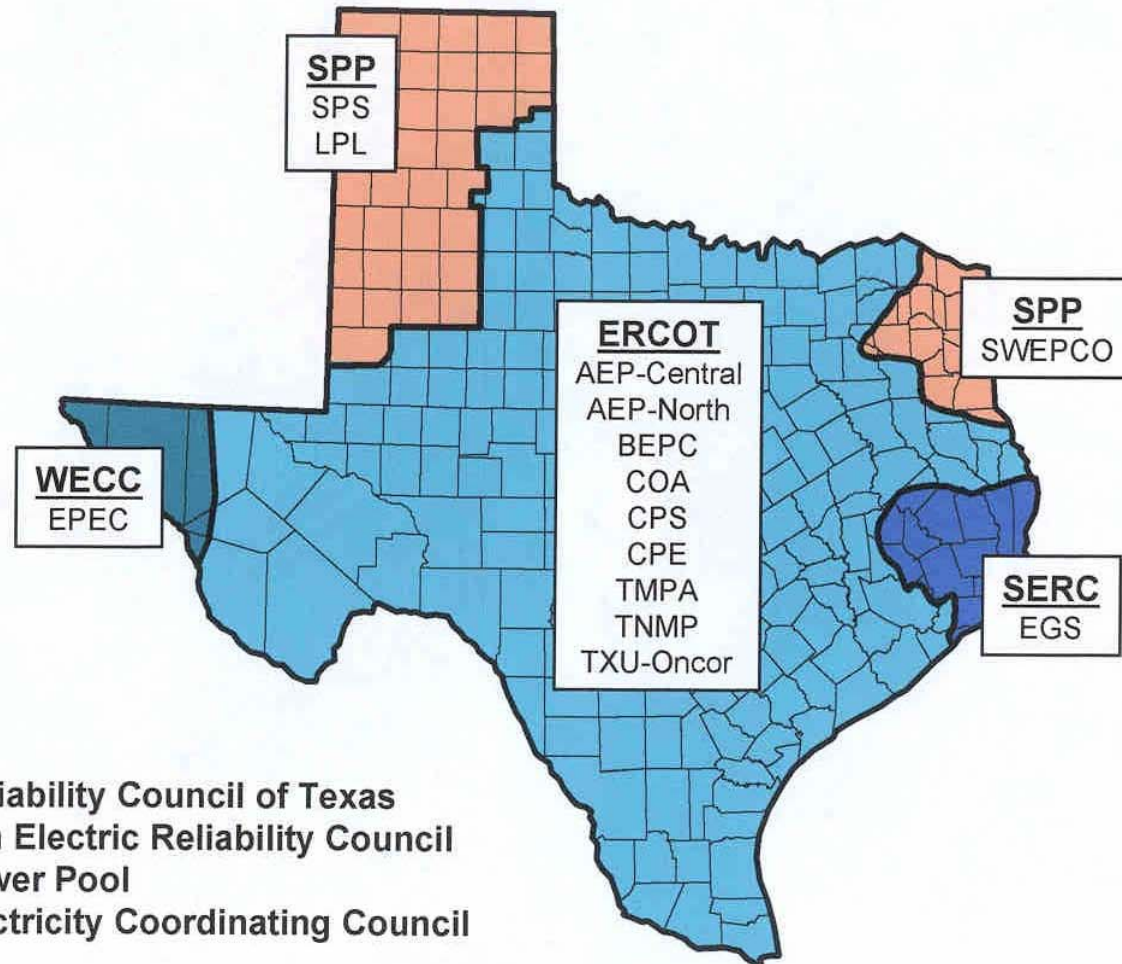
“AND ERCOT IS?”

ERCOT is One of 10 Electricity Reliability Regions Nationally

- **Founded in 1970, ERCOT is responsible for overseeing the reliable and safe transmission of electricity over Texas' main electricity power grid.**
- **ERCOT is one of 10 electricity reliability regions in North America operating under the reliability and safety standards set by the National Electricity Reliability Council (NERC).**



Texas Electric Area Map



ERCOT - Electric Reliability Council of Texas
SERC - Southeastern Electric Reliability Council
SPP - Southwest Power Pool
WECC - Western Electricity Coordinating Council

Current ERCOT Wholesale Market

Structure of Current Wholesale Market in ERCOT

The real-time market is primarily bilateral

- Companies enter into contracts for power on mutually agreeable terms.
- No liquid spot market.

Companies also submit “portfolio” bids to ERCOT for balancing energy service

- ERCOT uses balancing energy to balance supply and demand in real-time, and to relieve congestion on the transmission grid.
- Bids are not required to be by individual generating unit.
- ERCOT deploys balancing energy based on bids (lowest bids chosen first).

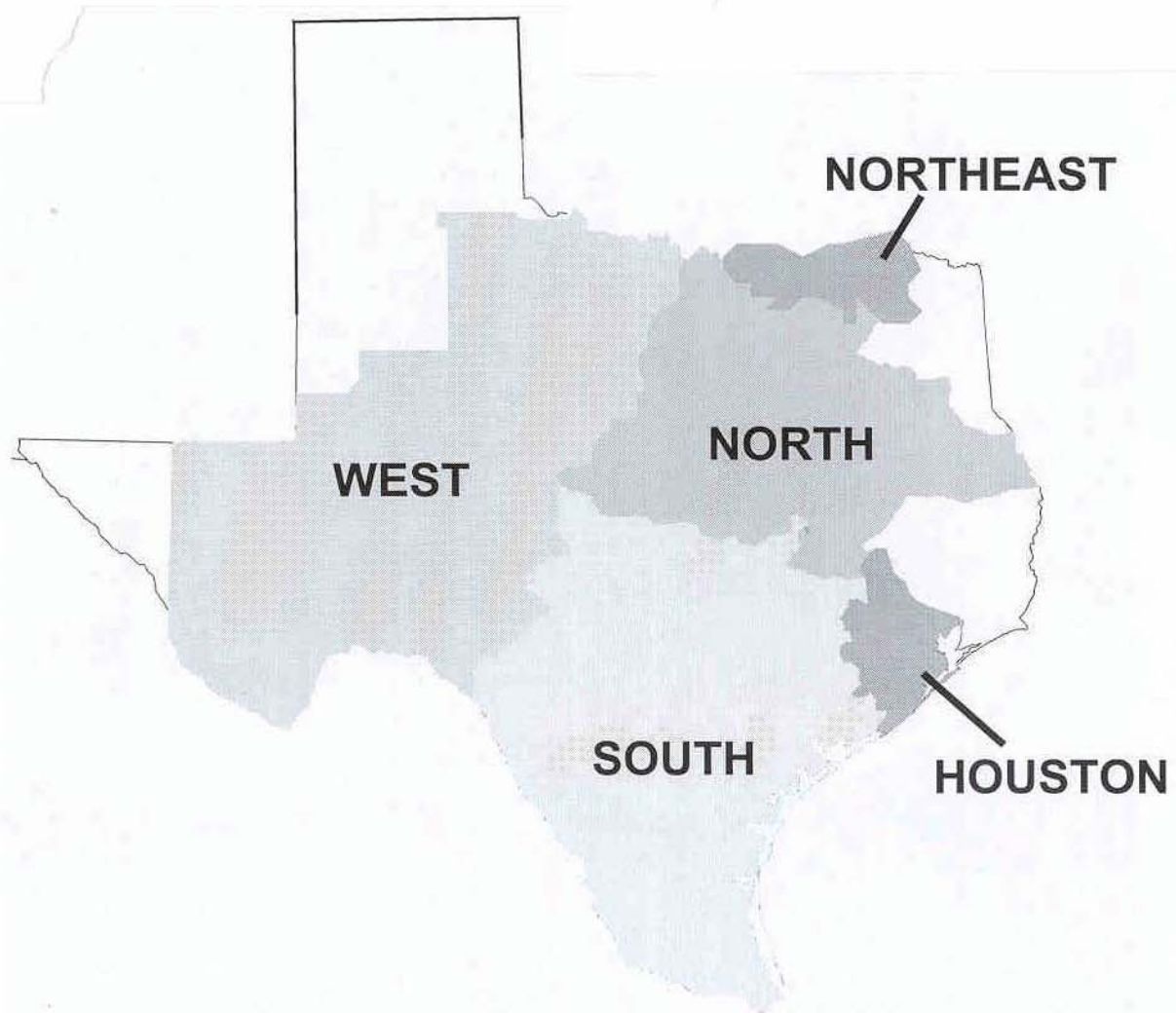
**“WHY SHOULD I CARE
ABOUT ANY OF THIS?”**

Congestion

- ☐ Congestion is a key issue in competitive markets, from design and oversight perspectives.
 - Congestion effectively creates smaller markets.

BUT...
WHAT IS CONGESTION?

2004 ERCOT Congestion Zones



**“SO, WHAT IS THE CURE
FOR CONGESTION?”**

CURRENT APPROACH:

Zonal Congestion Management

- The cost incurred by ERCOT to relieve congestion between zones is charged to those companies scheduling power between zones (direct assignment).
- The cost incurred to relieve congestion within zones is shared by all companies on the basis of their total load (uplift).

Why did ERCOT implement Zonal Congestion Management?

- Presumed that major congestion would occur between the major zones.
 - Initially uplifted - significant costs in August 2001 led PUC to order direct assignment of those costs.
 - Direct assignment of costs encourages companies to manage transactions across congested lines.
- Congestion within zones was presumed to be minor.
 - Costs have been more significant than originally thought; local congestion cost \$170 million in 2002 and \$223 million in 2003.
 - To reduce local congestion costs, the PUC asked the market participants to develop direct assignment methodology that would work within the zonal market construct.
 - No local congestion solution was developed.

The view of PUC Chairman Hudson: Problems with Current “Zonal” Market Design

👉 Wholesale Market is currently functioning well, but:

- 👉 Significant congestion costs
- 👉 Inefficient congestion management
- 👉 Inadequate price signals
- 👉 Opportunities for limited gaming by suppliers
- 👉 No liquid spot market

Actions Taken by PUC:

- ☞ PUC began a series of workshops designed to determine if changes in congestion management were necessary.
- ☞ PUC believes that current zonal model is not optimal.
- ☞ PUC in August 2003 adopted a rule that requires a nodal model for the wholesale market.
 - ☞ Based on the information gathered in these workshops.

**“THIS IS WHERE NODAL
COMES IN, RIGHT?”**

Design Change

- ⌚ Move from zonal to nodal market design
- ⌚ When?
 - ⌚ October 2006
- ⌚ How?
 - ⌚ Adopt approach used in or planned for other competitive markets (New England, New York, Mid-Atlantic, Midwest, and California).

Congestion Management Design Change

- ✎ Nodal pricing for generators
 - ✎ Each power plant impacts transmission system differently.
 - ✎ Each plant should be a separate “node,” rather than lumping plants into “zones.”

Texas Nodal

👉 The new Texas nodal market is currently being designed by the Texas Nodal Team (TNT). TNT is a stakeholder process at ERCOT that will develop the details of the Texas nodal market

👉 Timeline:

- ⌚ **August 2003 - April 2004:** TNT meets and gathers stakeholder input for a detailed design process
- ⌚ **May - October 2004:** TNT develops protocols to implement the new design and conducts an extensive cost-benefit analysis
- ⌚ **November 2004 - April 2005:** PUC review
- ⌚ **May 2005 - April 2006:** Software development
- ⌚ **Jan. - Sept. 2006:** Market participant testing
- ⌚ **Oct. 1, 2006:** Full implementation

Nodal In A Nutshell

- ☞ Texas Nodal as Mandated by P26376 is an Attempt to Have the Market Regulate Itself instead of Being Regulated by PUC.
- ☞ Texas Nodal is an Effort to Shift Cost Responsibility in ERCOT for Transmission Related Issues.
- ☞ Nodal Market Designs Creates Need for PUC to Develop Market Mitigation Measures and Monitor Market for Abuse.
- ☞ Cost of Implementation can be Significant.

Thank you!