History of Electric Deregulation in ERCOT

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ERCOT Facts

• Covers 75% of the land and 85% of the electric load in Texas

• Includes the cities of Houston, Dallas, Fort Worth, San Antonio, Austin, Corpus Christi, Midland & the Rio Grande Valley

• 23 million customers

• Regulated by the PUC with oversight from the Texas Legislature

• ERCOT is one of 10 North American Independent System Operators/Regional Transmission Organizations
ERCOT Boundaries
Brief History of ERCOT

- **ERCOT** stands for Electric Reliability Council of Texas, Inc.
- **1941** – Texas utilities band together to form the Texas Interconnected System (TIS) to aid war effort; several utilities interconnect to send their excess power to provide reliable power to manufacturing companies on Gulf Coast for energy intensive aluminum smelting
- **1970** – TIS forms ERCOT to comply with North American Electric Reliability Corporation (NERC)
Brief History of ERCOT (cont’d)

• **1995** – Texas Legislature deregulates wholesale generation market; PUC adopts rules to facilitate efficient use of electric grid by all market participants

• **1999** – Texas Legislature passes *Senate Bill 7* requiring retail electric market to be opened to competition by 2002
Before Competition: Pre-1975

• Before 1975, Cities regulated electric utility service and rates
  – Generally, a declining cost industry – rate applications most often filed to decrease rates

• 1975 Texas Legislature enacted the Public Utility Regulatory Act (PURPA) to implement state regulation of electric utility service and rates. Cities retain original jurisdiction over rates within their city limits
  – PUC created; opened for business in September 1976
  – Service area, transmission line and generating plants subject to certification by PUC
  – Cost of service rate regulation (utilities allowed cost of service plus reasonable return on investment)
  – Rates based on historical test year costs and original costs of infrastructure, less depreciation
  – Service quality regulation
Electric Utility Structure Before Competition

Each utility was vertically integrated, from generation to customer service.
Before Competition: 1976-1995

- **U.S. Fuel Use Act (1978)** passed by Congress in response to 1973 oil crisis and gas curtailments of mid-70s; required utilities to discontinue use of natural gas in new industrial boilers and new electric power plants; encouraged the use of coal and nuclear for fuel

- Inflation, volatile fuel costs and the need for new generating capacity continued to increase electricity rates

- **Rate proceedings at PUC became increasingly adversarial**
  - Consumer groups concerned about frequency and amount of rate increases, caused in part by new nuclear plants
  - Utilities concerned with PUC cost disallowances which utilities believed were at odds with the regulatory compact and eroded rates of return

- Larger customers (industrials primarily) concerned with subsidizing other ratepayers and sought opportunities to by-pass regulated rates and obtain choice of suppliers
  - Advocated wholesale competition and transmission open access

- Natural gas was favored again when the 1978 U.S. Fuel Use Act was repealed in 1987
Wholesale Competition: Senate Bill 373

1995: Texas Senate Bill 373, creating wholesale competition within ERCOT, enacted

- Required utilities to provide independent generators with non-discriminatory, open access to transmission to support wholesale competition in ERCOT

- Recognized new, unregulated participants in ERCOT wholesale market
  - Exempt wholesale generators
  - Power marketers

- Allowed non-utility wholesale market participants to offer market-based prices in ERCOT

- Deregulated electric cooperative distribution rates that were previously regulated by the PUC
1996: ERCOT was designated the Independent System Operator (ISO) to insure impartial, third-party organization to oversee equal access to power grid.

This change was officially implemented September 11, 1996, when the ERCOT Board of Directors restructured its organization and initiated operations as a not-for-profit ISO, making ERCOT:

- The first ISO in the U.S.
- The only ISO created under state law, not by FERC.
1999: Senate Bill 7, creating retail competition in ERCOT, is passed

- Competition in ERCOT retail market begins January 2002
- Municipally-owned utilities (i.e., Austin, San Antonio) and electric cooperatives may “opt-in” to competition, but not required to do so
  - To date, only one co-op (Nueces Electric) has opted in; no munis have opted in
- Incumbent utilities allowed to recover stranded cost
- Providers of last resort designated in all areas where choice is in effect
- PUC designates ERCOT as Independent Organization to:
  - maintain system reliability
  - insure open access to transmission system
  - facilitate competitive retail market
  - facilitate competitive wholesale market
Electric Utility Structure in Competitive Market 2002-Present

Incumbents were required to separate business activities into the following units:

– Power generation company
– Transmission and distribution utility
– Retail electric provider (REPs)

Generation and retail businesses are not traditionally regulated, but:

– Power generation companies must be registered with PUC
  • May not own and control more than 20% of installed capacity in ERCOT
  • No market power abuse
  • Follow market rules established by PUC, ERCOT
– REPs must be certified by PUC
  • Subject to customer-protection rules adopted by PUC

Transmission and distribution businesses remain regulated utilities (cost of service ratemaking)
ERCOT Competitive Market Structure

<table>
<thead>
<tr>
<th>Generation</th>
<th>T&amp;D (&quot;Wires&quot;)</th>
<th>Retailers</th>
<th>End Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive Production</td>
<td>Regulated Open Access</td>
<td>REP</td>
<td>REP</td>
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Competitive Sales
ERCOT Retail Competition Map

- This map shows the regions of Texas that are open to retail competition.

- These are the areas served by the former monopoly investor-owned utilities (IOUs).

**IOU Transmission Providers**

- AEP Texas Central and North
- CenterPoint Energy
- Oncor Electric Delivery
- Texas-New Mexico Power Company
ERCOT After Retail Competition

• Customers shop for and choose electric provider (powertochoose.com for rate comparison)

• Competitive choice customers—74% of load; 6.6 million electric service IDs (premises)

• Switches to competitive providers:
  – 56 % of residential load (Dec 2011)
  – 83% of small commercial load (Dec 2011)
  – 179 competitive REPs; were 5 in 2002