

Electric and Gas Reliability Workshop

April 17, 2012

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 **E**lectric **R**eliability **C**ouncil **o**f **T**exas, 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)
- **1992** – Energy Policy Act of 1992, encouraging the Federal Energy Regulatory Commission (FERC) to foster competition in wholesale energy markets

Brief History of ERCOT (cont'd)

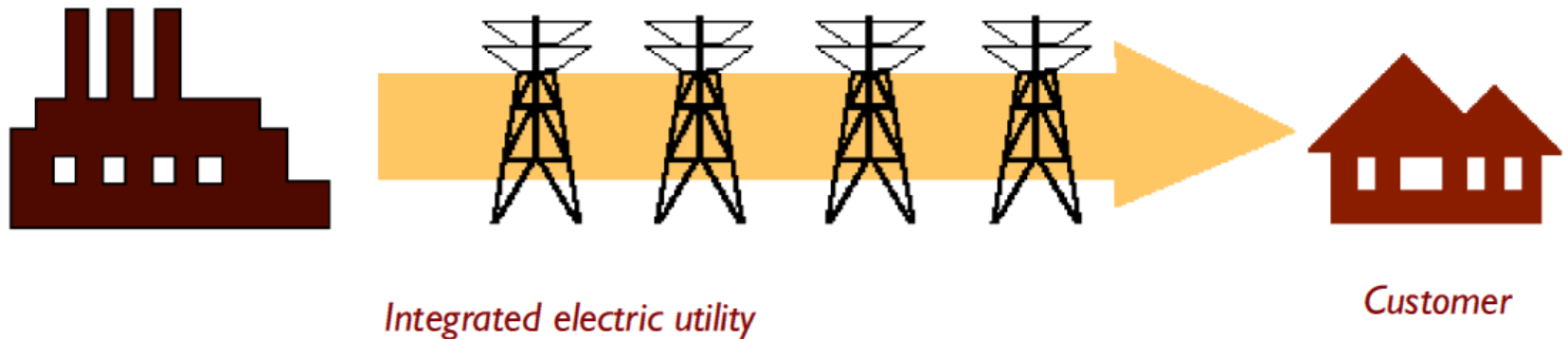
- **1995** – Texas Legislature deregulates wholesale generation market; PUC adopts rules to facilitate efficient use of electric grid by all market participants
- **1999** – Texas Legislature passes **Senate Bill 7** requiring retail electric market to be opened to competition by 2002

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 (PURA)** 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

ERCOT Designated Independent System Operator

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.

Retail Competition In ERCOT: Texas Senate Bill 7

1999: Senate Bill 7, creating retail competition in ERCOT, is passed

- 1997 competition effort failed; success in 1999.
- 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:

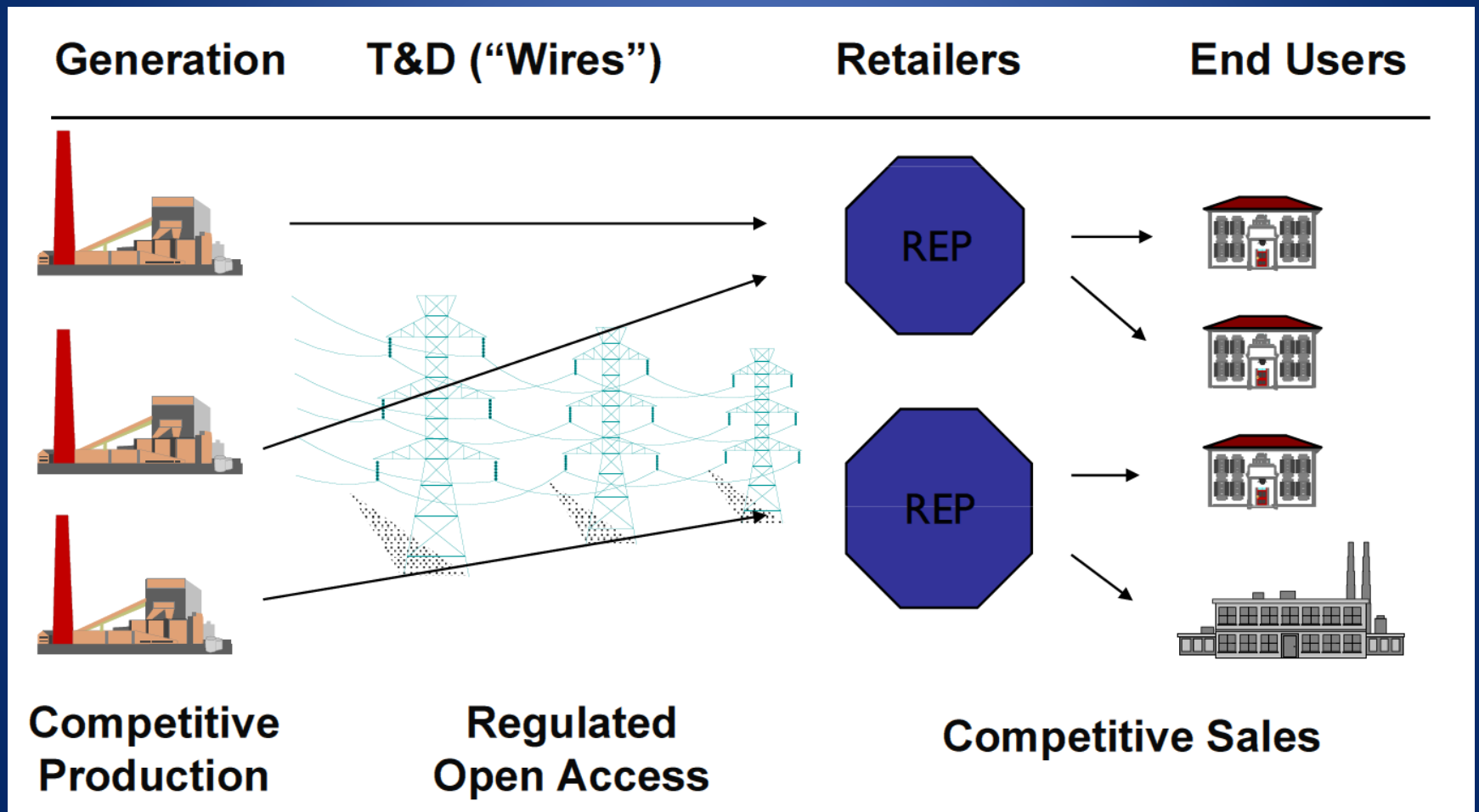
- Power generation company
- Transmission and distribution utility
- Retail electric provider (REPs)

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

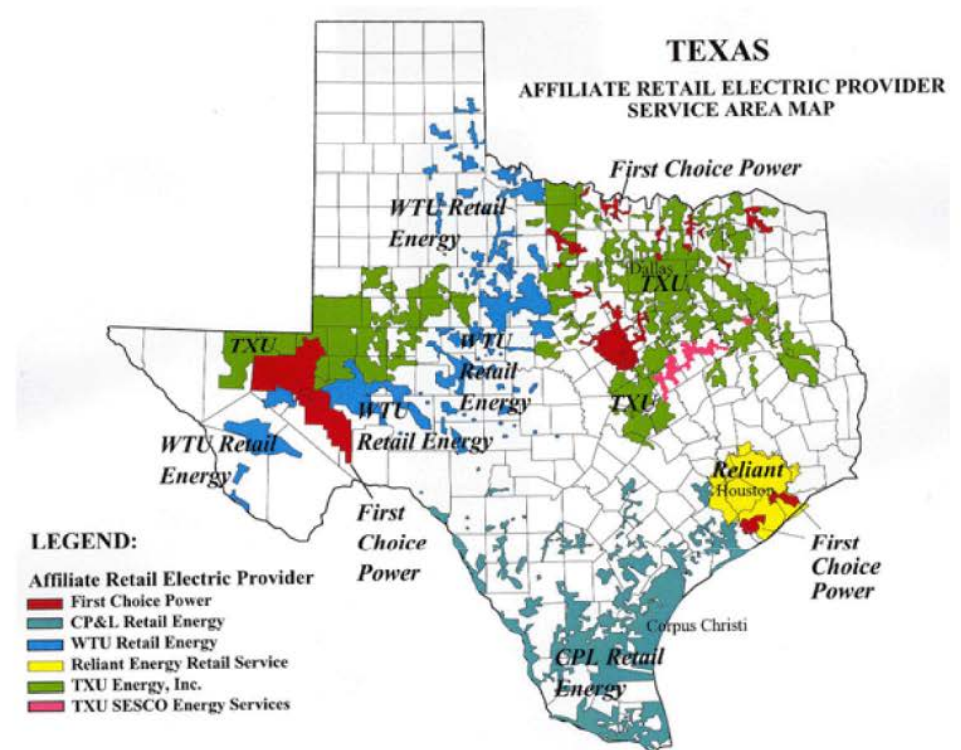


ERCOT Retail Competition Map

- 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