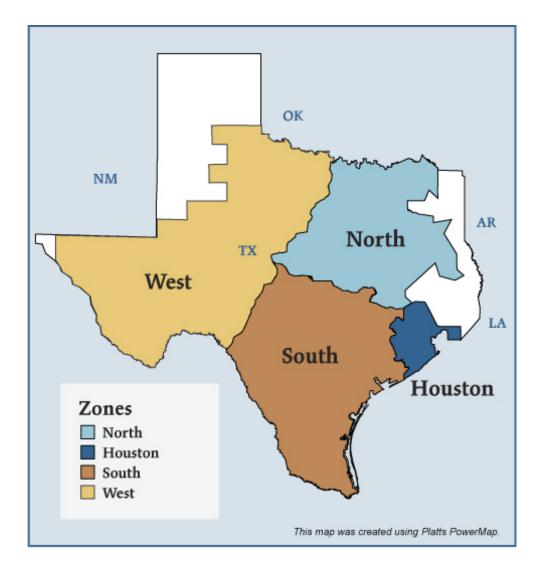
Texas (ERCOT) Electric Market Zones



Overview

Geography

States covered: Most of Texas

Reliability regions: Electric Reliability Council of Texas (ERCOT)

Balancing authority: Electric Reliability Council of Texas (ERCOT)

Zones: Houston, North, South, West.

RTO/ISO

ERCOT schedules and centrally dispatches the grid within a single control area, ensures transmission reliability and wholesale open access, and manages financial settlement in the wholesale power market. It also administers the Texas competitive retail market, including customer switching. ERCOT operates wholesale markets for:

- Balancing energy
- Ancillary service markets with zonal congestion management.

Market participants trade electricity bilaterally directly, through brokers and through the IntercontinentalExchange (ICE). Physical products predominantly use the ERCOT hub pricing point, but physical and financial products priced at the four ERCOT zones are also traded.

ERCOT 2008 State of the Markets Report

Market Monitor: Dan Jones of Potomac Economics – Independent Market Monitor, ERCOT Jess Totten, Design Oversight and Pam Whittington Enforcement Oversight, PUC of Texas

Texas Electric Market: Overview and Focal Points

Federal Energy Regulatory Commission • Market Oversight • <u>www.ferc.gov/oversight</u>

Generation/Supply

Marginal fuel type: Coal and natural gas

Generating capacity (summer 2007): 71,244 MW

Capacity reserve (summer 2007): 8,744 MW

Reserve margin (summer 2007): 14%

As of December 2007, ERCOT expects reserve margins to be 13.1% in 2008 and 12.1% in 2009.

Demand

All time peak demand: 62.5 GW (set August 13, 2007)

Peak demand growth: 0.0% (2006–2007)

Summer Peak Demand (GW): 60.2 (2005) 62.3 (2006) 62.5 (2007)

Source: PUC of Texas

Texas Electric Market: Overview and Focal Points

Federal Energy Regulatory Commission • Market Oversight • <u>www.ferc.gov/oversight</u>

Prices

Annual Average Real-Time Price at ERCOT North Hub **2004** \$42.33/MWh **2005** \$66.47/MWh **2006** \$51.39/MWh **2007** \$51.96/MWh

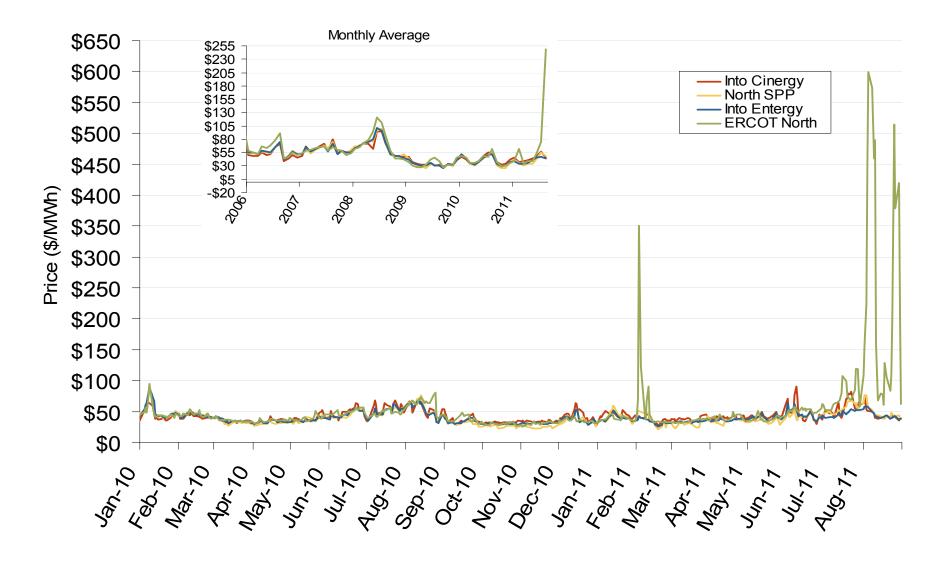
Interconnections/Seams

The ERCOT control area is not synchronously connected to the Eastern or Western Interconnection (it is a separate interconnection) but it can exchange about 1,100 MW with SPP and Mexico through DC links. An additional 250 MW of exchange capacity with Mexico came online in 2007.

Annual Average Bilateral Prices

Annual Average Day Ahead On Peak Prices (\$/MWh)						
	2006	2007	2008	2009	2010	5-Year Avg
SPP North	\$55.84	\$60.21	\$68.77	\$32.94	\$38.71	\$51.30
ERCOT North	\$61.03	\$59.53	\$73.42	\$34.89	\$41.15	\$53.98

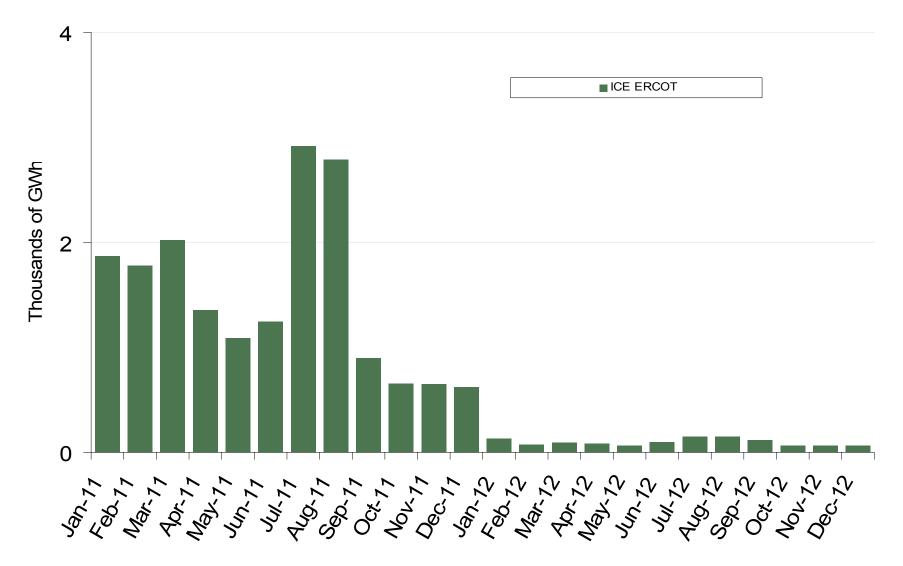
Midwestern Daily Bilateral Day-Ahead On-Peak Prices



Texas Electric Market: Physical Market Volumes

Federal Energy Regulatory Commission • Market Oversight • <u>www.ferc.gov/oversight</u>

ERCOT Forwards Volume



Notes: ICE forwards (physical) volume for ERCOT include on-peak monthly, dual month, quarterly, and calendar year contracts traded for each month

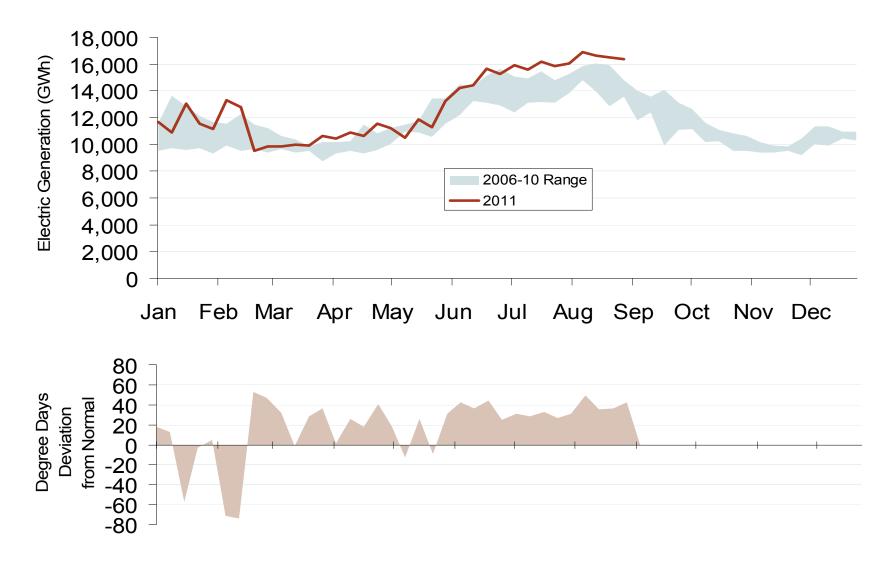
Source: Derived from ICE data

September 2011

Texas Electric Market: Generation Output and Temperatures

Federal Energy Regulatory Commission • Market Oversight • <u>www.ferc.gov/oversight</u>

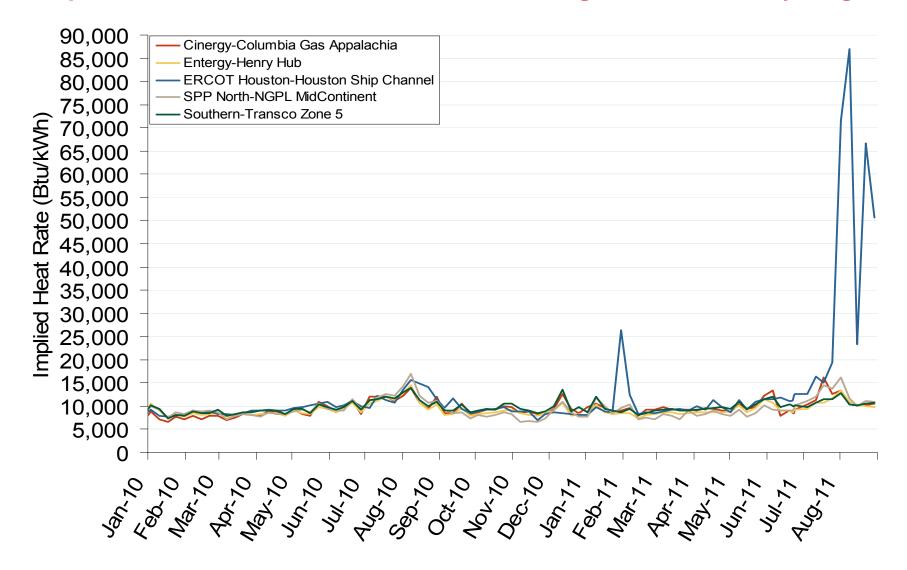
Weekly Power Generation & Temps. - South Central



Texas Electric Market: South Central Implied Heat Rates

Federal Energy Regulatory Commission • Market Oversight • www.ferc.gov/oversight

Implied Heat Rates at South Central Trading Points - Weekly Avgs.



Texas Electric Market: Last Month's Central Bilateral Prices

Federal Energy Regulatory Commission • Market Oversight • <u>www.ferc.gov/oversight</u>

Midwestern Daily Bilateral Day-Ahead On-Peak Prices

