

## 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 2006 State of the Markets Report](#)

Market Monitors:

Dan Jones of Potomac Economics – Independent Market Monitor, ERCOT

Jess Totten, Design Oversight and Pam Whittington Enforcement Oversight, PUC of Texas

**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*

## 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.

## Supply and Demand Statistics for Texas

| <b>Supply Demand Statistics</b> |         |         |        |        |
|---------------------------------|---------|---------|--------|--------|
|                                 | 2004    | 2005    | 2006   | 2007   |
| Summer Generating Capacity MW   | 75,056  | 69,380  | 70,756 | 71,244 |
| Summer Peak Demand MW           | 58,506  | 60,214  | 62,339 | 62,500 |
| Summer Reserves MW              | 15,324  | 9,166   | 8,417  | 8,744  |
| Summer Reserve Margin:          | 26%     | 15%     | 14%    | 14%    |
| Annual Load (GWh):              | 289,113 | 299,227 | NA     | NA     |
| Annual Net Generation GWh       | NA      | NA      | NA     | NA     |

Source: Derived from FERC staff discussion with Texas Public Utility Commission

Updated October 22, 2007

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## Annual Average Bilateral Prices

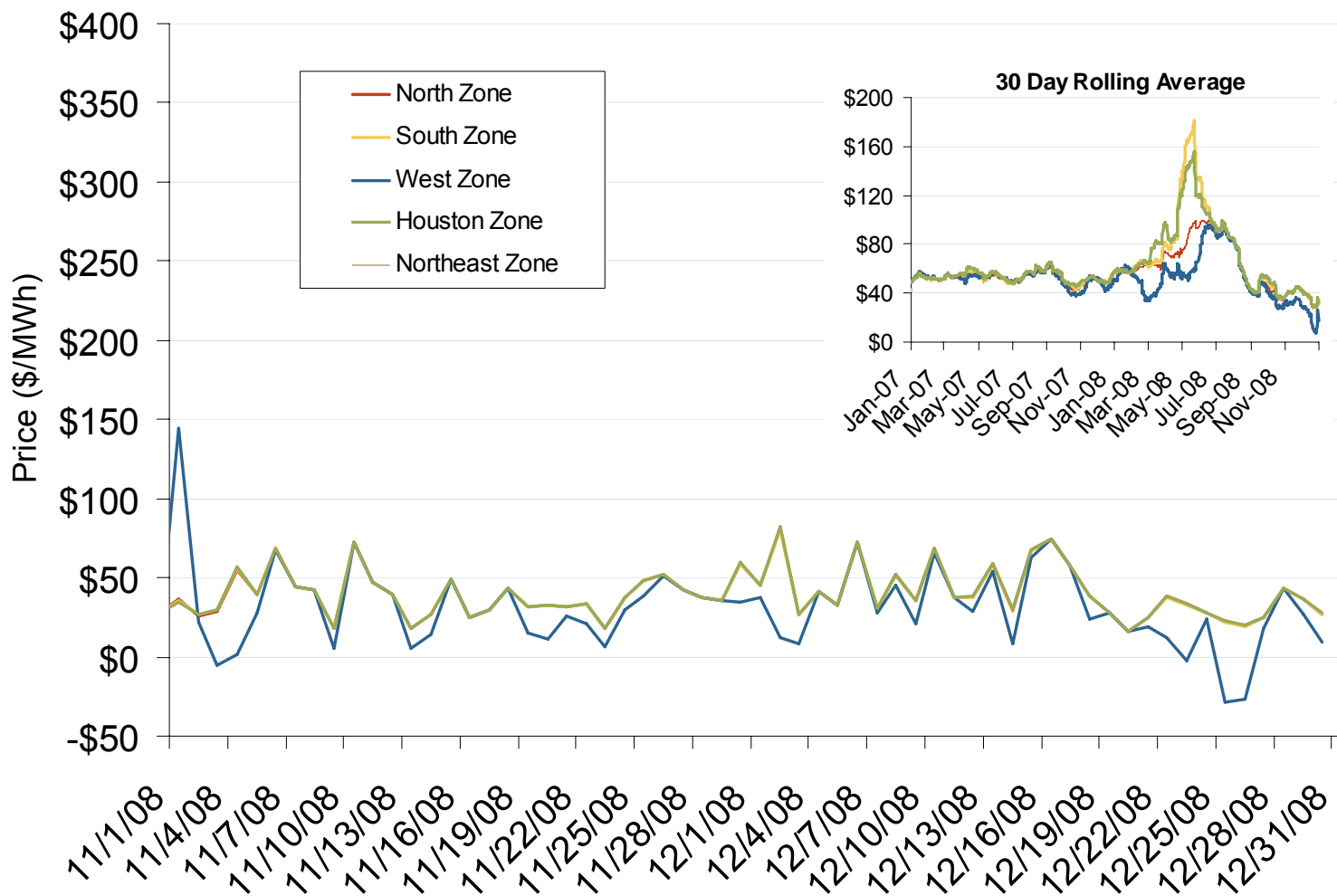
| Annual Average Day Ahead On Peak Prices (\$/MWh) |         |         |         |         |
|--|---------|---------|---------|---------|
|  | 2005    | 2006    | 2007    | 5 Years |
| SPP North  | \$67.44 | \$55.84 | \$60.21 | \$54.04 |
| ERCOT  | \$70.96 | \$57.83 | \$58.27 | \$56.16 |

Source: Derived from *Platts* data.

Updated March 7, 2008

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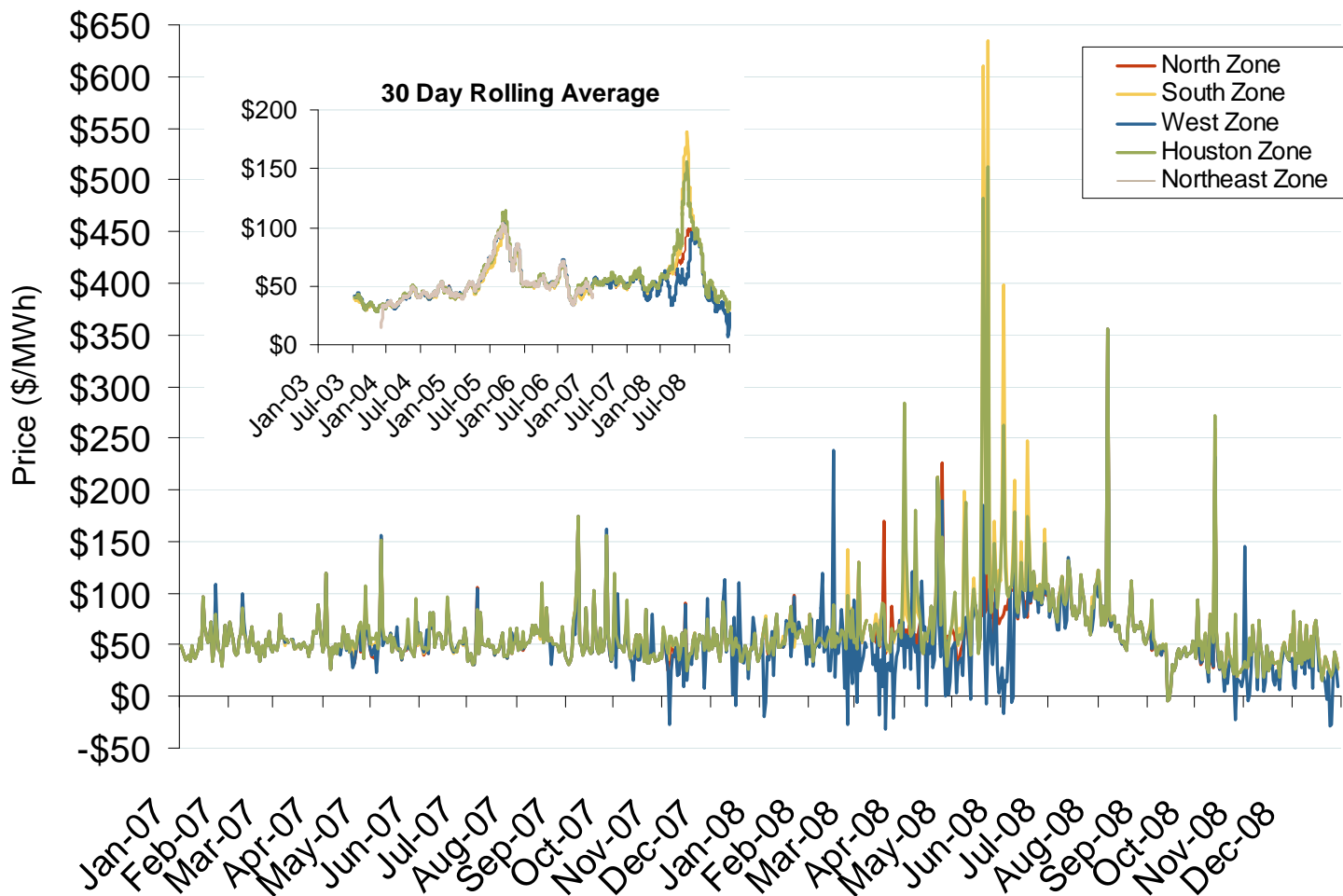
# Daily Average of ERCOT Real Time Prices - All Hours



Source: Derived by Bloomberg from ERCOT data as reported by Bloomberg.

Updated January 9, 2009

# Daily Average of ERCOT Real Time Prices - All Hours

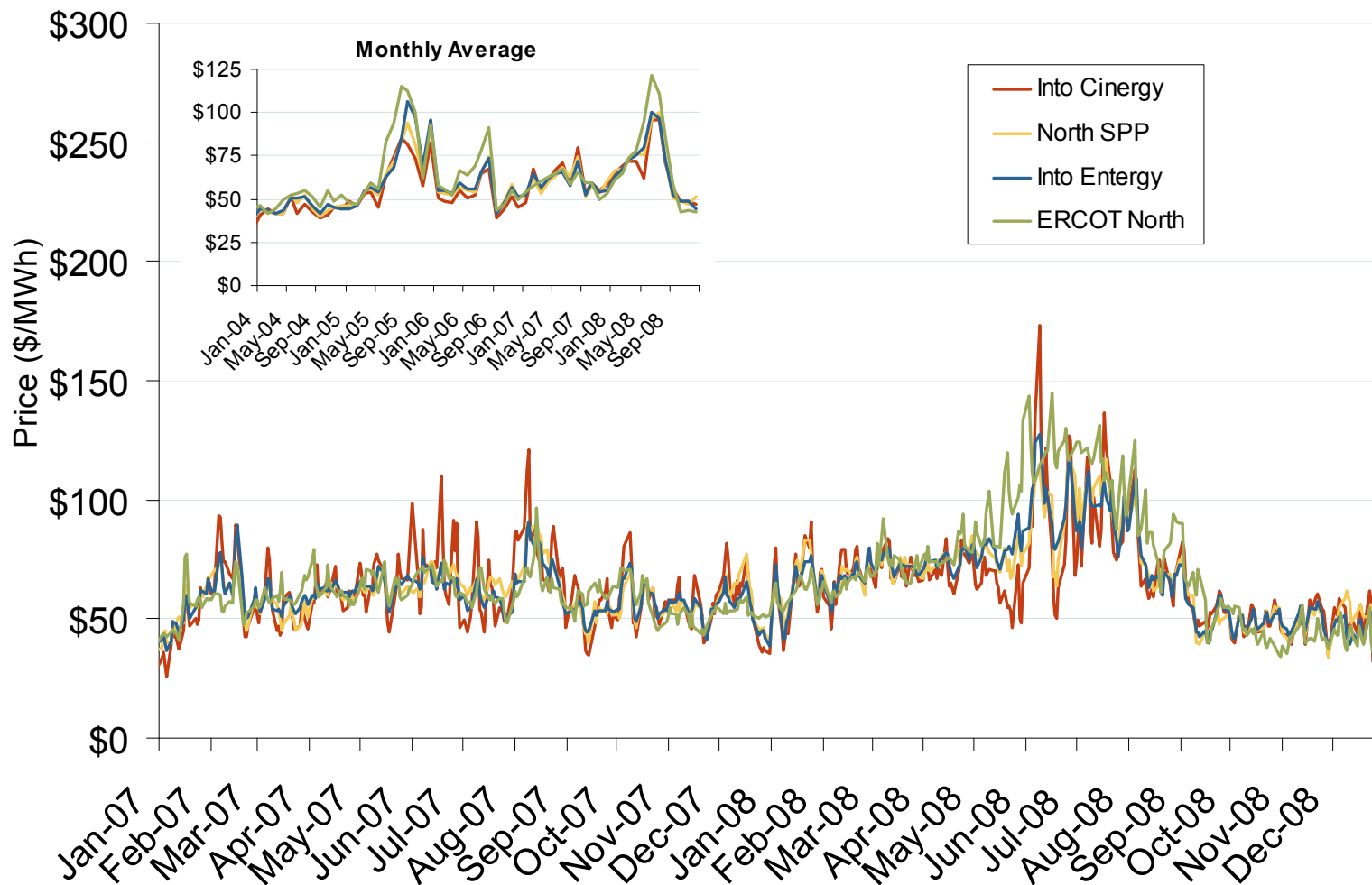


Source: Derived by *Bloomberg* from *ERCOT* data as reported by *Bloomberg*.

Updated January 9, 2009



# Midwestern Daily Bilateral Day-Ahead On-Peak Prices

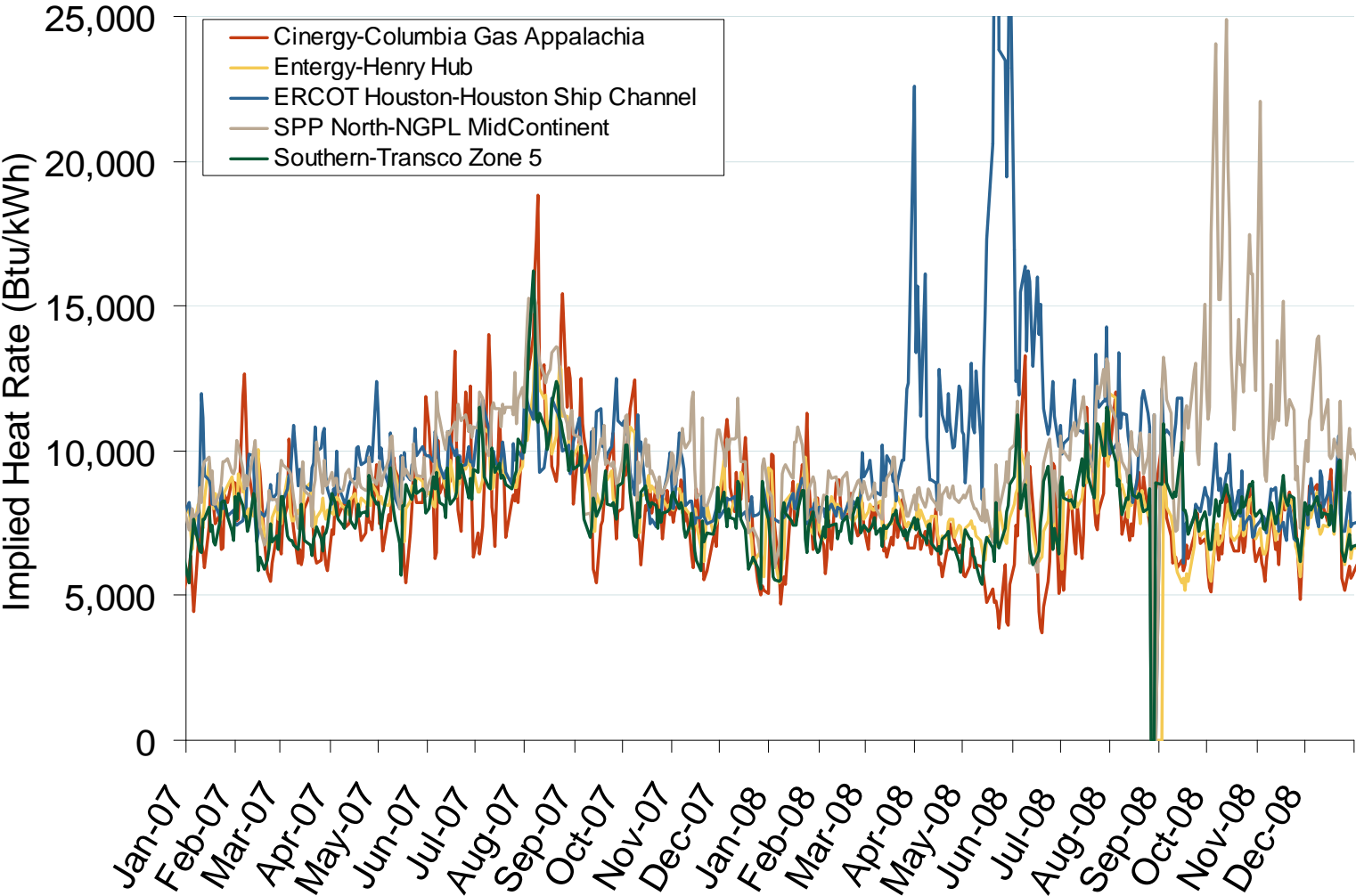


Source: Derived from *Platts* data.

Updated January 9, 2009

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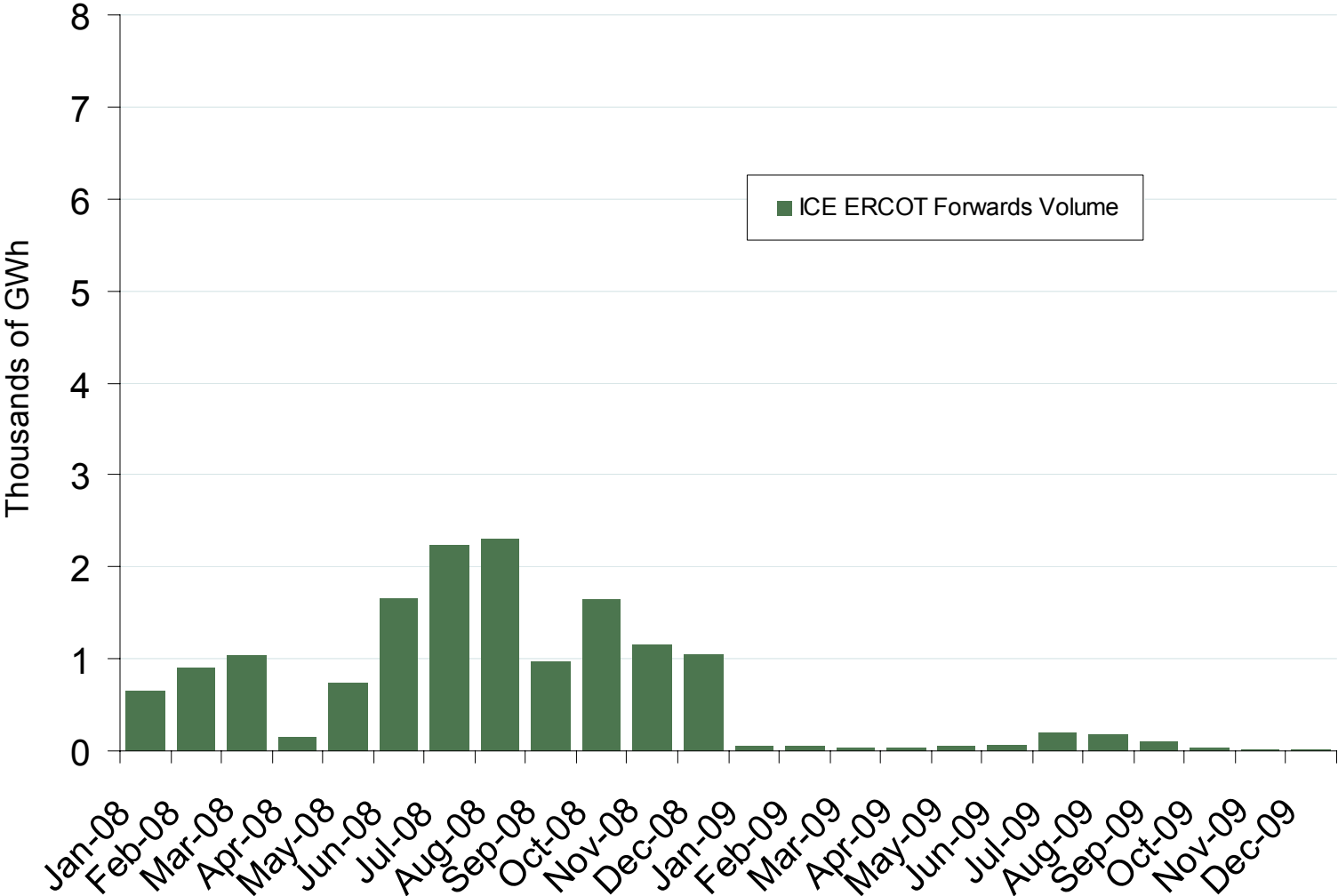
# Implied Heat Rates at South Central Trading Points



Source: Derived from Platts data

Updated January 9, 2009

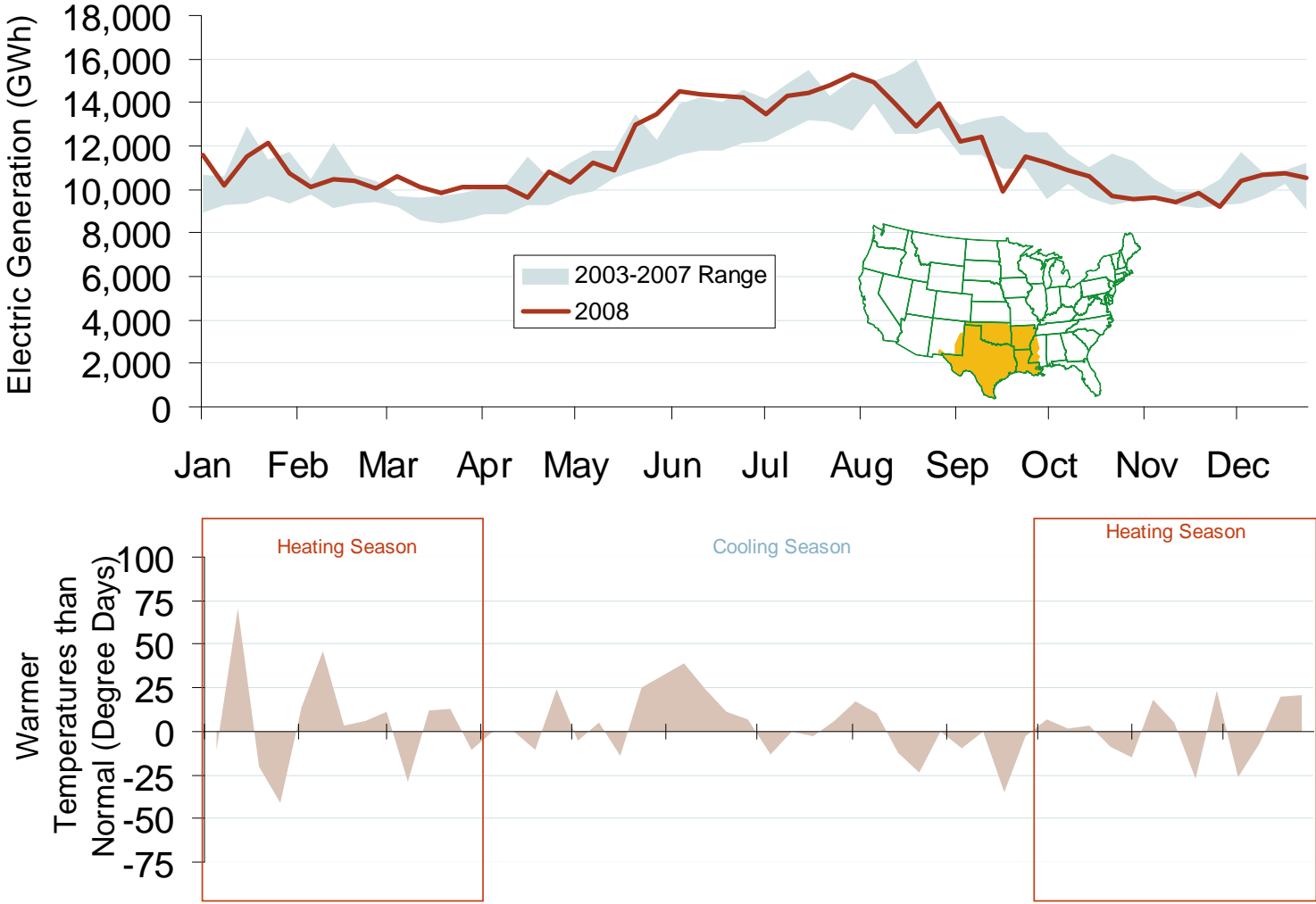
# ERCOT Forwards Volume



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

Updated January 9, 2009

# Weekly Electric Generation Output and Temperatures South Central Region



Source: Derived from *EEl* and *NOAA* data.

Updated January 9, 2009