

## Texas (ERCOT) Electric Market Zones



## Texas Electric Market: Overview and Focal Points

### Federal Energy Regulatory Commission • Market Oversight @ FERC.gov

#### 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 Intercontinental Exchange (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

Updated October 22, 2007

1075

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#### **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*

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#### 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

1076

## Annual Average Bilateral Prices

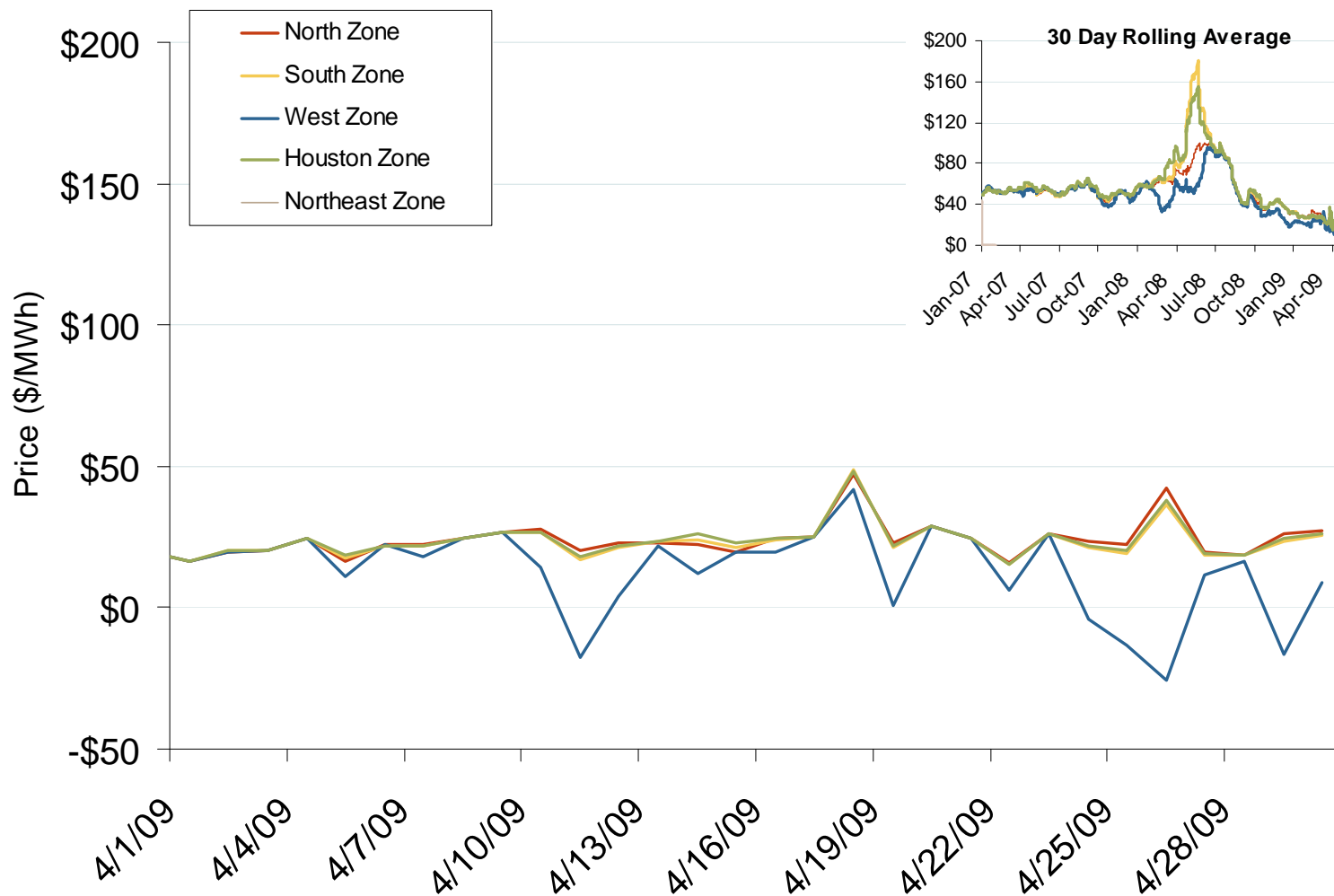
Annual Average Day Ahead On Peak Prices (\$/MWh)						
	2004	2005	2006	2007	2008	5-Year Avg
SPP North	\$45.19	\$67.44	\$55.84	\$60.21	\$68.77	\$59.48
ERCOT North	\$49.55	\$77.14	\$61.03	\$59.53	\$73.42	\$64.13

Source: Derived from *Platts* data.

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1077

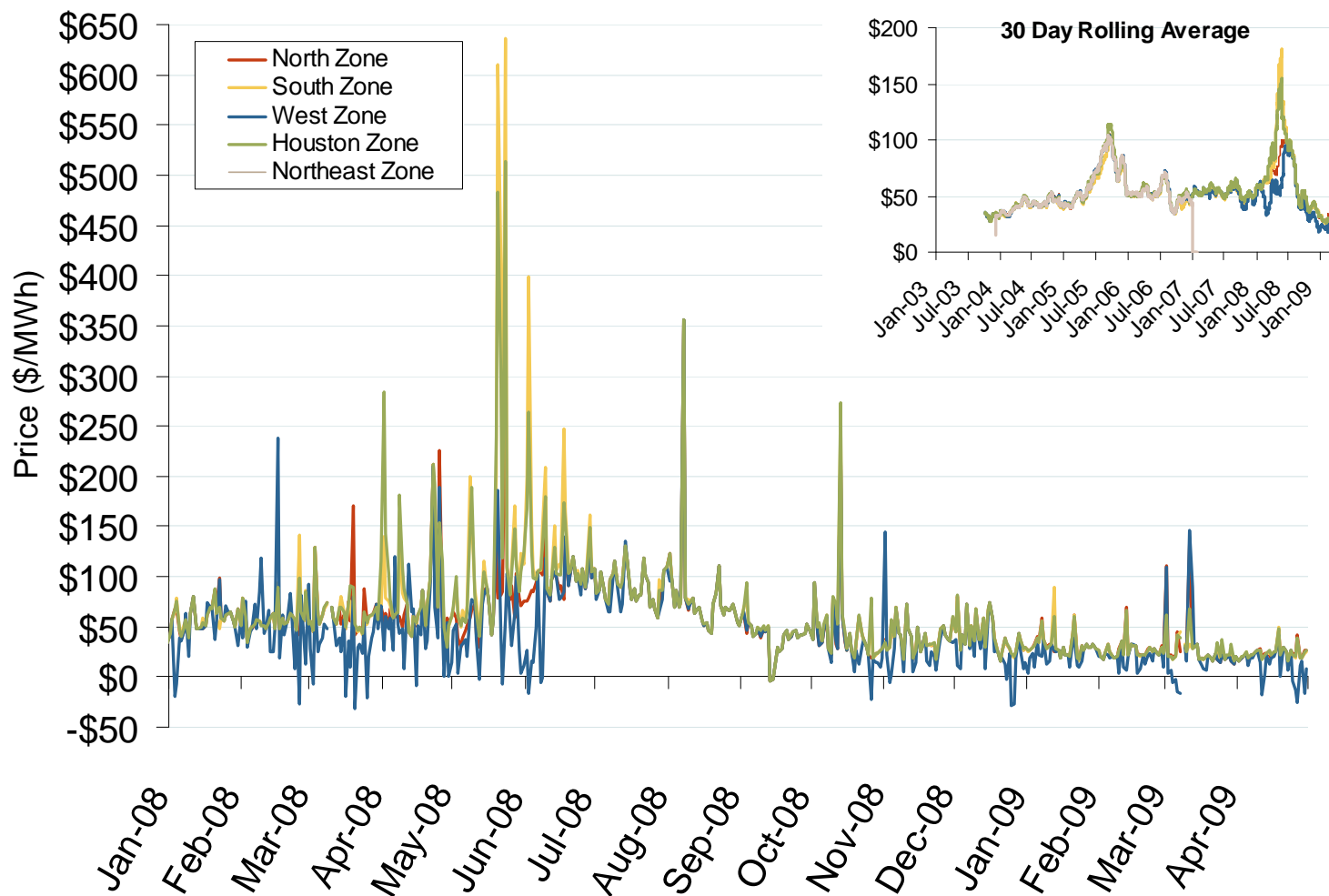
# Daily Average of ERCOT Real Time Prices - All Hours



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

Updated May 7, 2009

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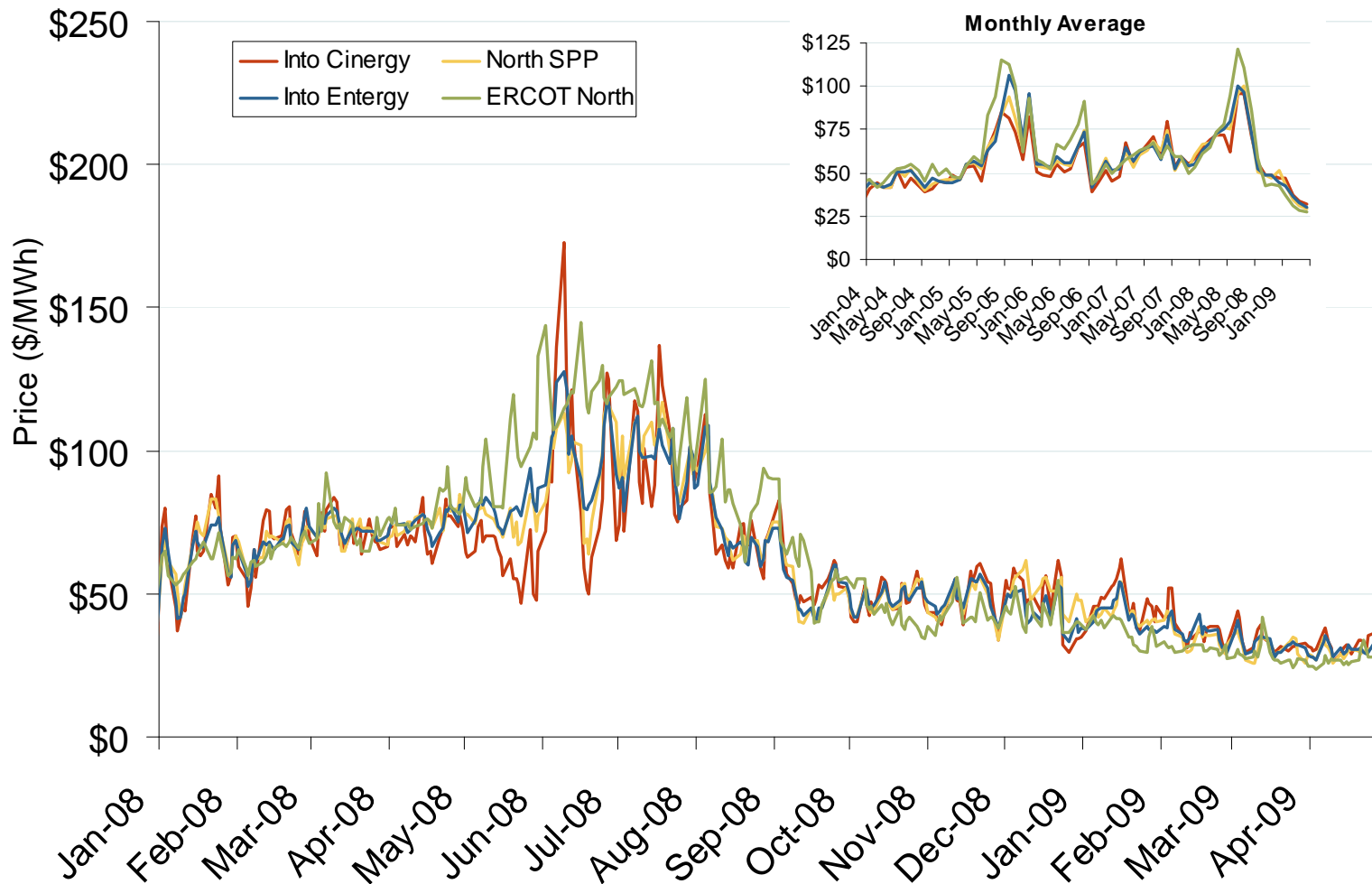


Source: Derived by *Bloomberg* from *ERCOT* data as reported by *Bloomberg*.

Updated May 7, 2009



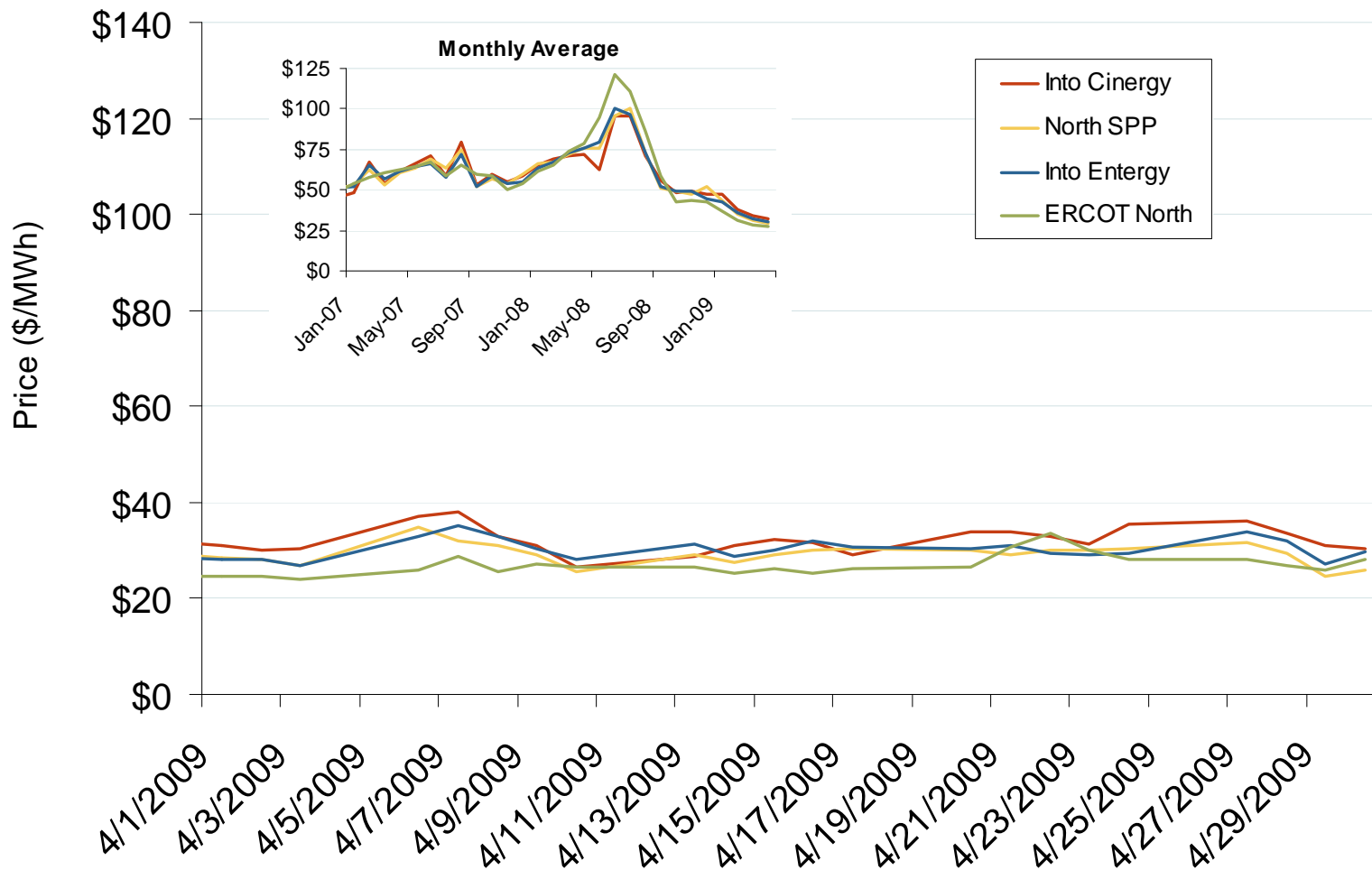
# Midwestern Daily Bilateral Day-Ahead On-Peak Prices



Source: Derived from *Platts* data.

Updated May 7, 2009

# Midwestern Daily Bilateral Day-Ahead On-Peak Prices

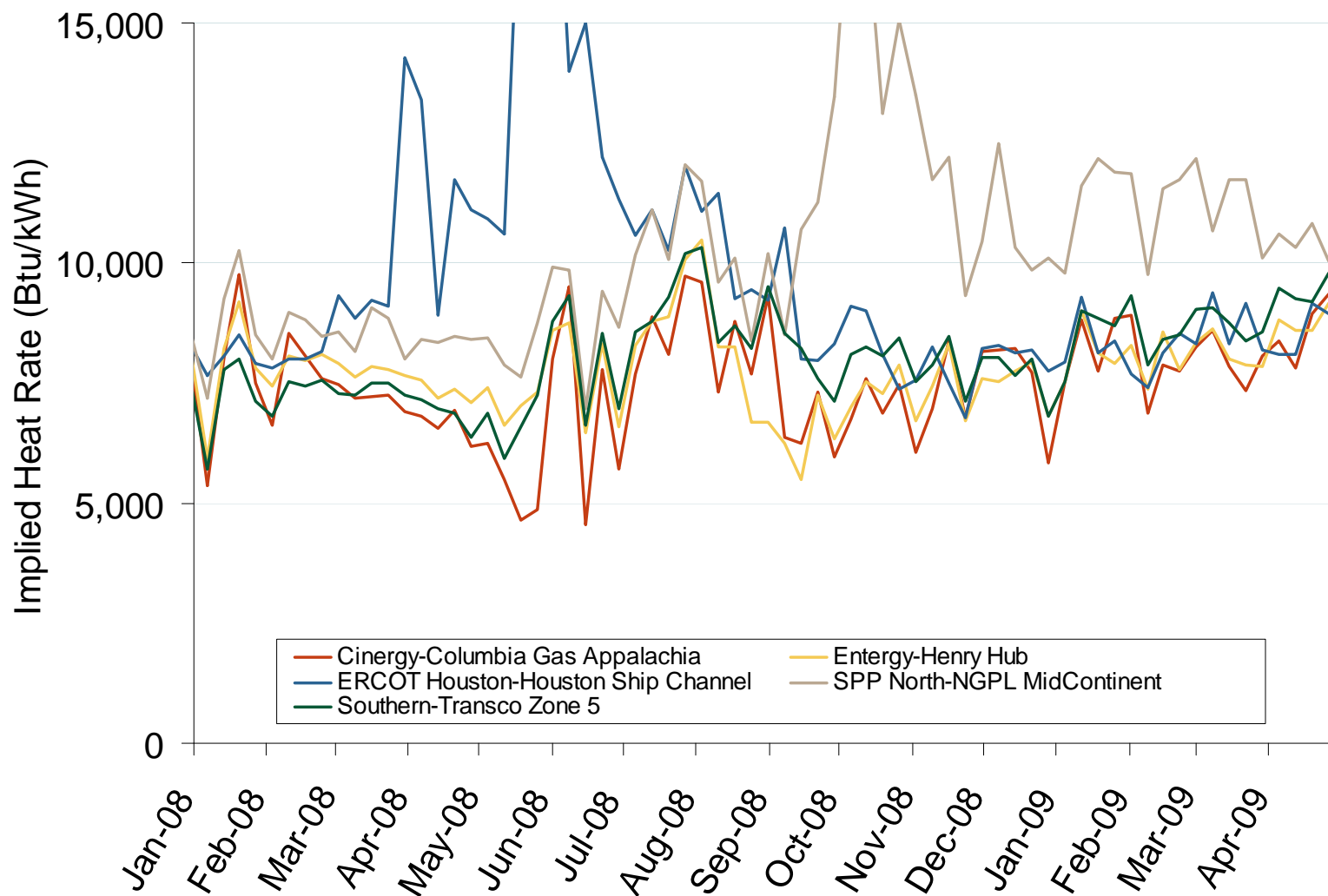


Source: Derived from *Platts* data.

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15520

## Implied Heat Rates at South Central Trading Points Weekly Averages

Source: Derived from *Platts* data

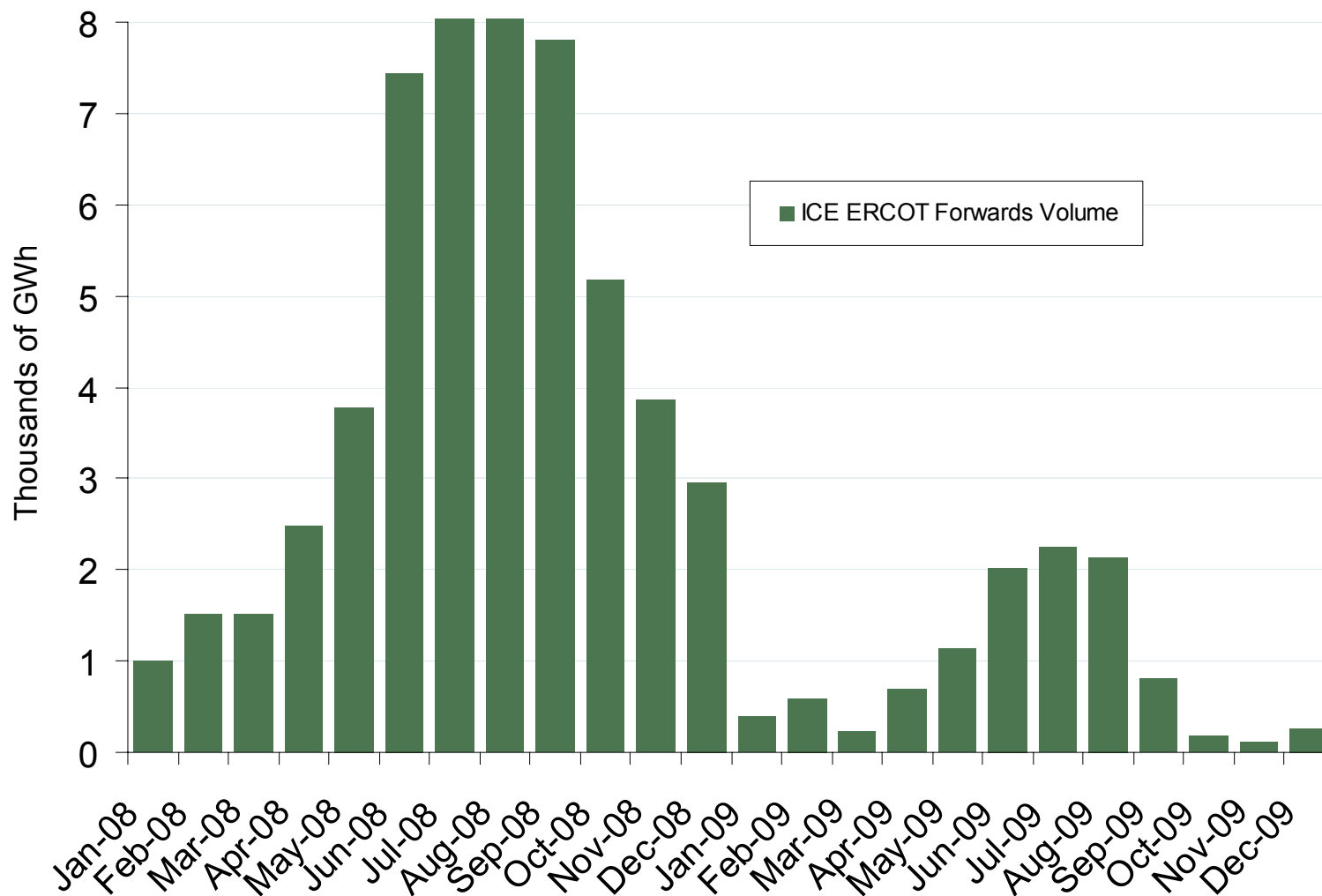
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1140

## Texas Electric Market: Physical Market Volumes

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## ERCOT Forwards Volume

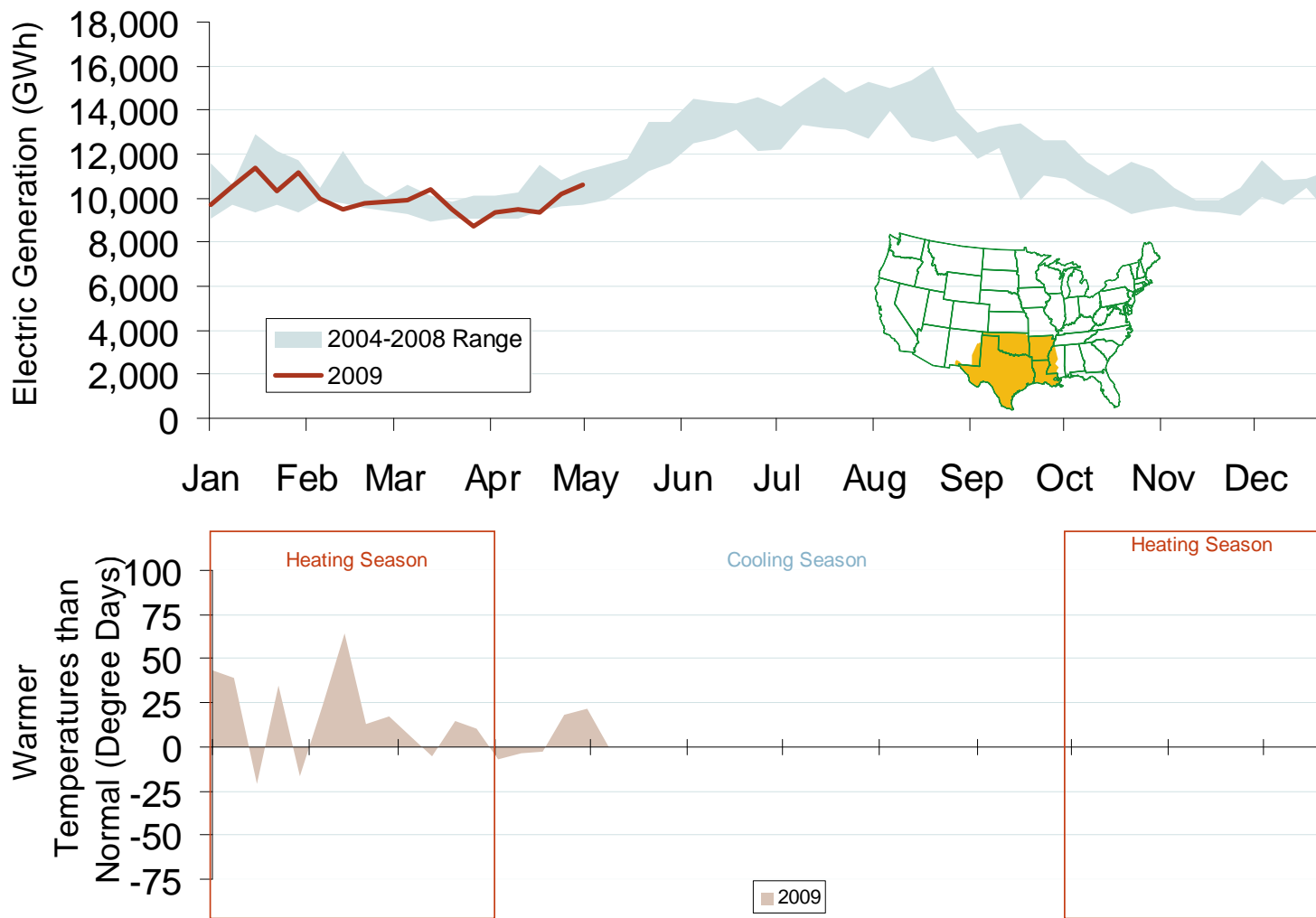


Source: Derived from ICE data. ICE forwards (physical) volume for ERCOT include on-peak monthly, dual month, quarterly, and calendar year contracts traded for each month.

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1080

# Weekly Electric Generation Output and Temperatures South Central Region



Source: Derived from *EI* and NOAA data.

Updated May 7, 2009