



# Grid Operations and Planning Report

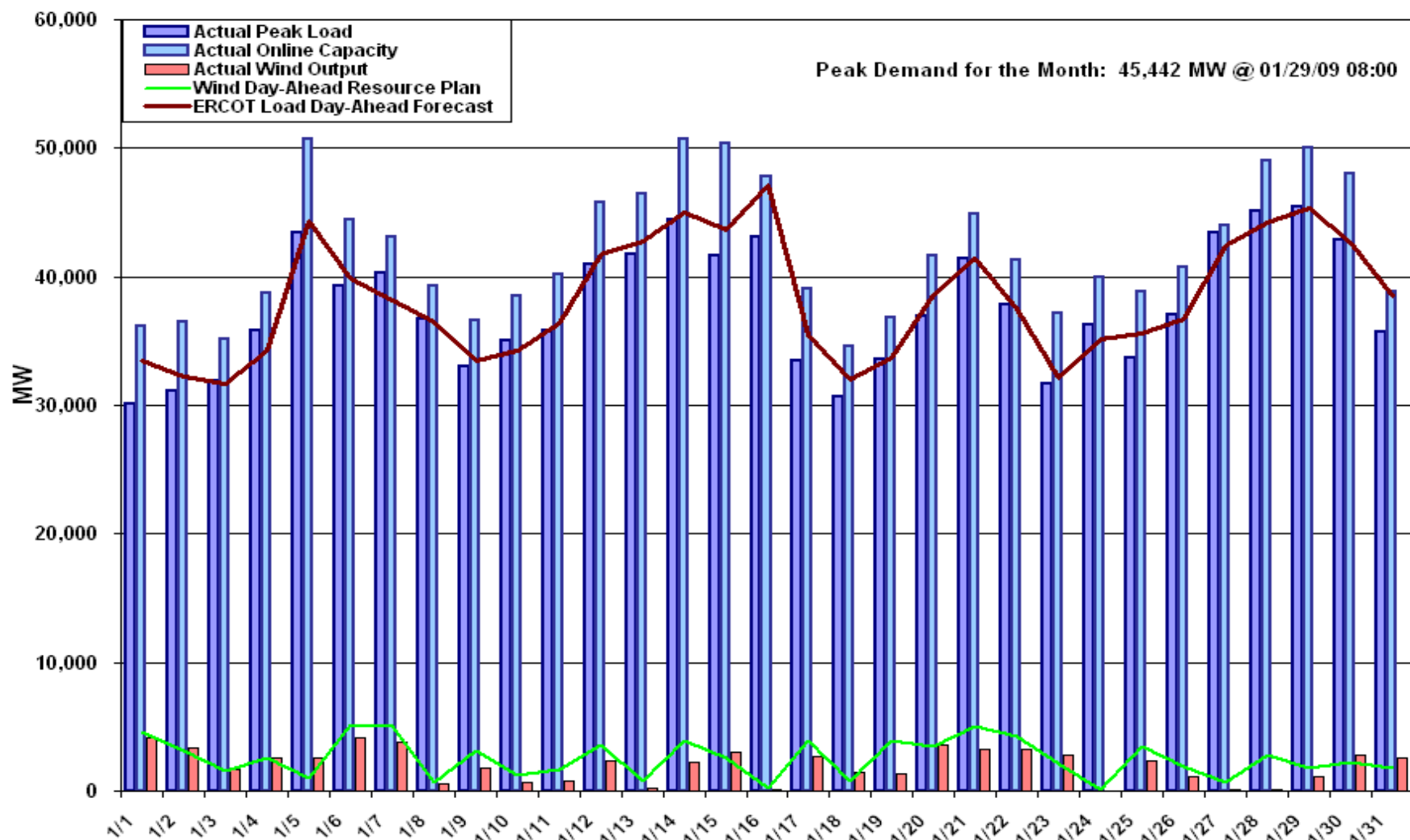
ERCOT Board of Directors  
March 17, 2009

**John Adams**

- **Summary**
- **January 2009 Operations**
  - Peak Demand: Actual vs. Forecast
    - On-line Resources: Total at Peak and Wind
  - Day-Ahead Load Forecast Performance
  - Out of Merit Capacity Order (OOMC) & Replacement Reserve (RPRS) Purchases
  - Zonal Congestion
  - Significant System Incidents
  - Advisories, Alerts and EECPS
  - Other Items
- **Planning Activities**
  - Summary
  - Generation Interconnection Requests
  - Wind Capacity

- **January 2009 Operations**
  - The peak demand of 45,442 MW on January 29<sup>th</sup> was less than the forecast of 47,131 MW for January.
  - Day-ahead load forecast error for January was 4.11%.
  - Most zonal transmission congestion in January was West to North due to wind generation
  - No Alerts for Adjusted Responsive Reserve under 2500 MW or EECPP events. One transmission alert.
- **261 active generation interconnect requests totaling over 101,000 MW.**
- **Completed initial RMR determination on Luminant Notice of Suspension of Operations (NSO) submission and released 12 units. Conducting further study before making final determination on three other units. Studies are also underway for initial determination on three units for which NSO was received from CPS Energy.**
- **8,065 MW wind capacity on line February 28, 2009. No change from January.**

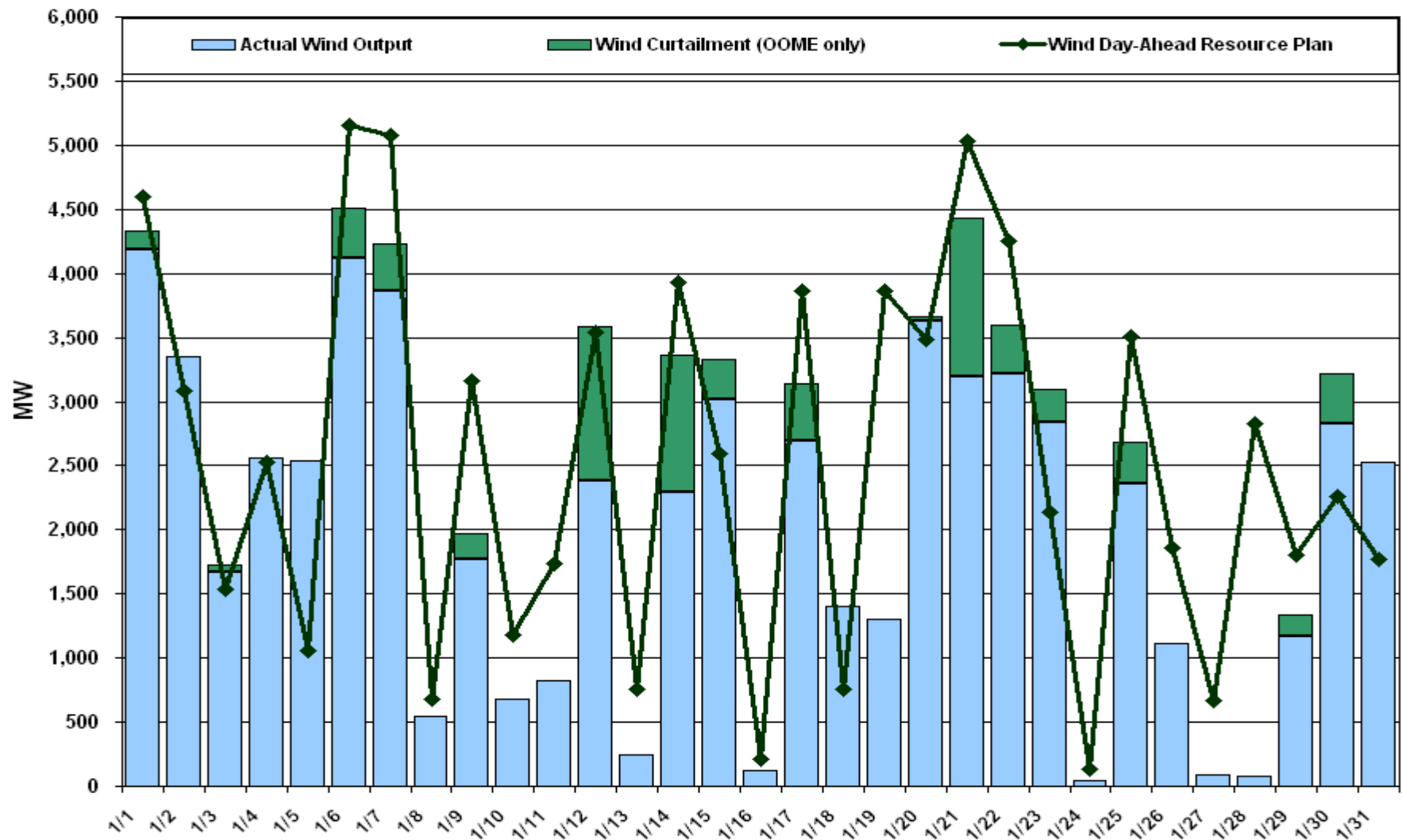
# Daily Peak Demand: Hourly Average Actual vs Forecast, Resource Plan & On-line Capacity at Peak



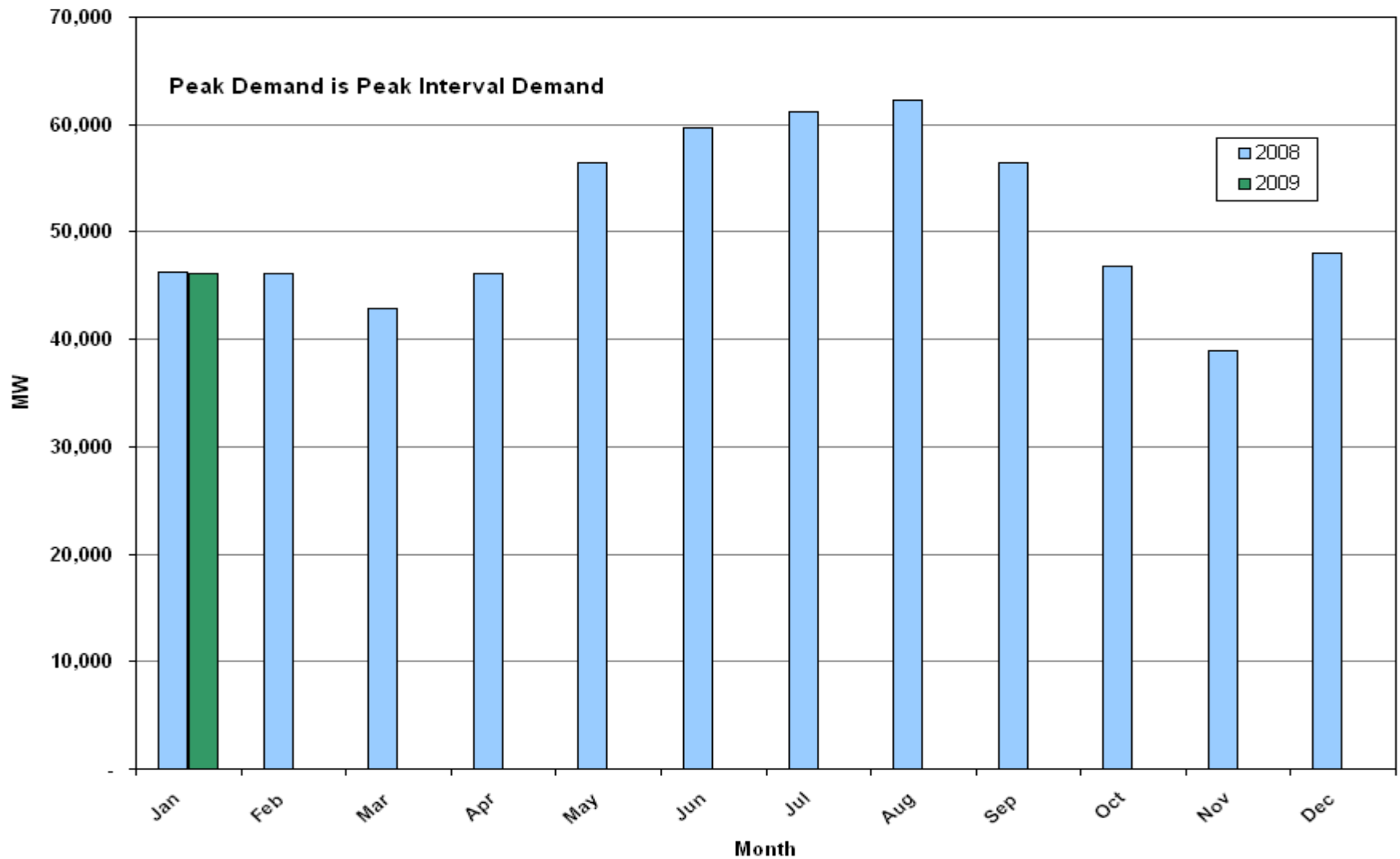
Note: All data are hourly averages during the peak load hour obtained from Resource Plans, and EMMS.

# Actual Wind Output w/ Curtailment Added Back Vs Wind Day-Ahead Resource Plan

## Resource Plan Based on AWS Forecast at Peak Load Hour



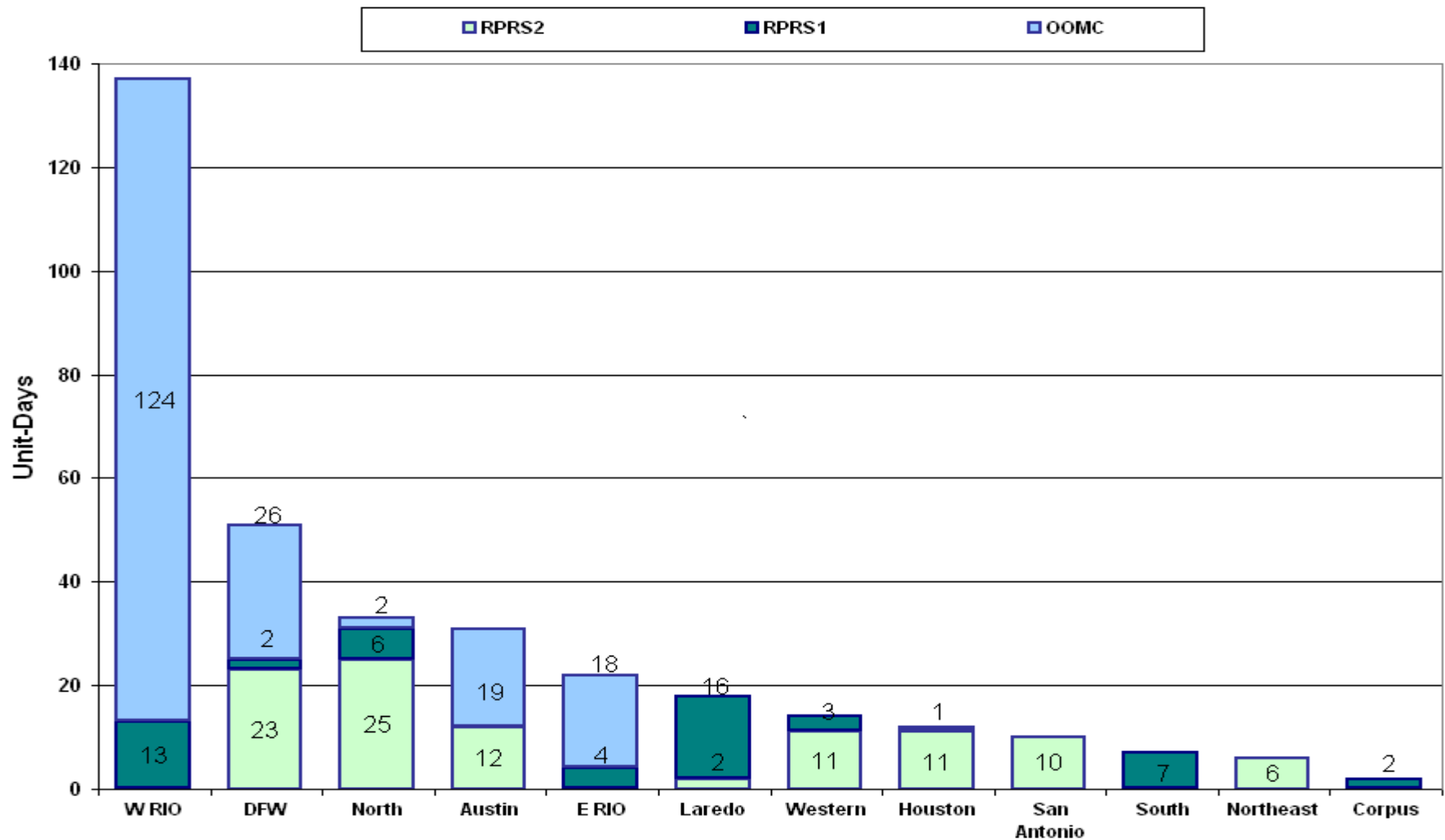
# Monthly Peak Demand: Actual



# Day-Ahead Load Forecast Performance in January 2009

	Mean Absolute Percent Error (MAPE) for ERCOT Mid-Term Load Forecast (MTLF) Run at 16:00 Day Ahead				
	2006 MAPE	2007 MAPE	2008 MAPE	2009 MAPE (YTD)	January 2009 MAPE
Average Annual MAPE	3.79	3.55	3.30	4.11	4.11

# Capacity Purchases of RMR, OOMC & RPRS to Manage Local Congestion in January 2009





# Zonal Congestion

<b>CSC</b>	<b>Jan 08 Days</b>	<b>Nov 08 Days</b>	<b>Dec 08 Days</b>	<b>January 09 Days</b>	<b>Last 12 Months Total Days</b> (Jan 08 – Jan 09)
<b>North – Houston</b>	0	1	0	<b>0</b>	71
<b>North – West</b>	10	1	0	<b>0</b>	35
<b>West – North</b>	7	17	22	<b>19</b> Jan – 1-7, 9, 10, 12-14, 19-24, 31	201
<b>South – North</b>	0	0	0	<b>1</b> Jan – 16	37
<b>North - South</b>	N/A	0	0	<b>2</b> Jan – 9, 12	112

# Significant System Incidents in January 2009

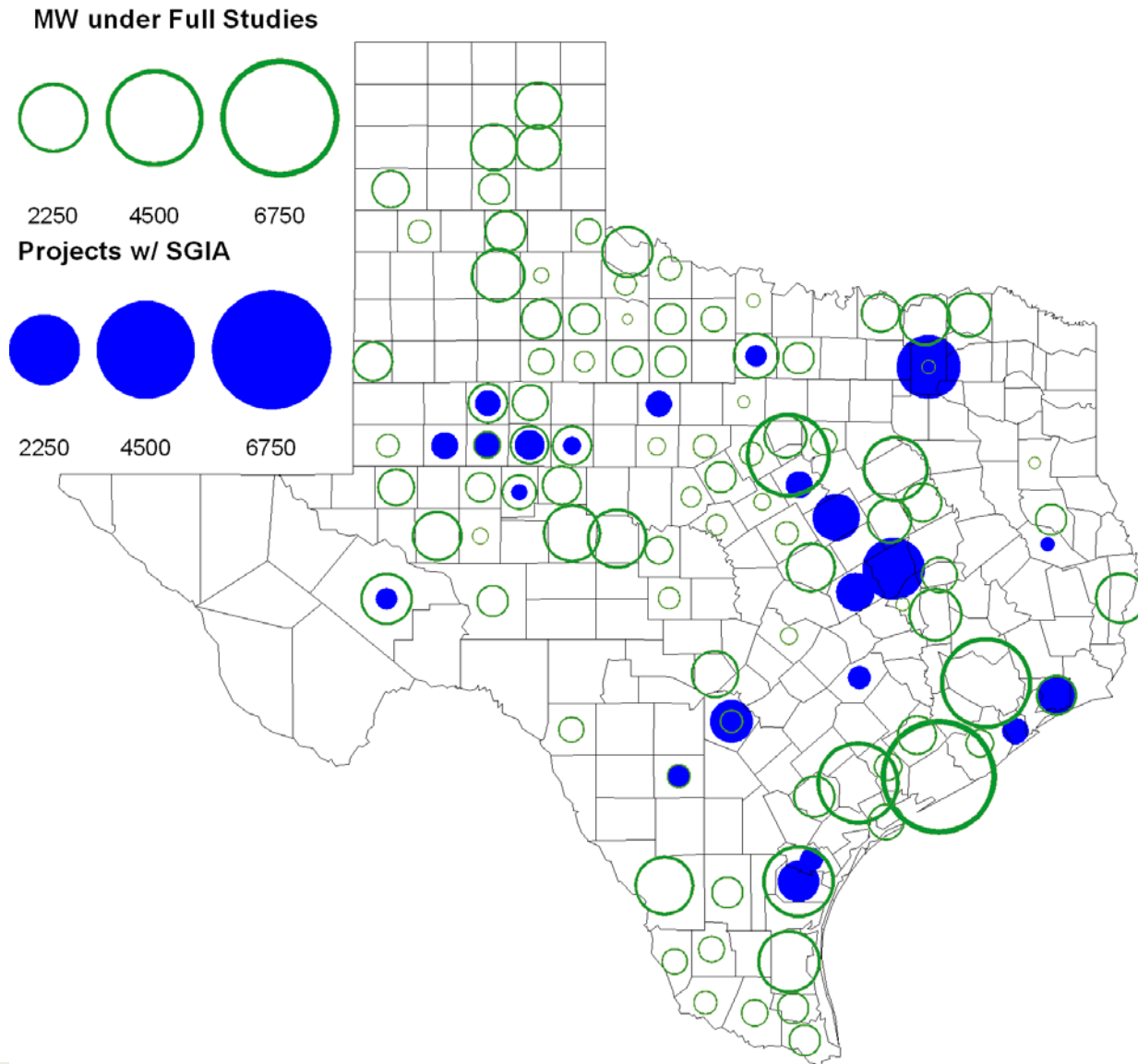
- **January 16<sup>th</sup> at 18:10**
  - Emergency notice issued due to the Replacement Reserve Service not meeting the Market time line.
- **January 23<sup>rd</sup> at 02:00**
  - Austin EMMS servers were unavailable.

- **Advisories issued for Adjusted Responsive Reserve (ARR) below 3000 MW.**
  - Issued 7 Days.
- **No Alert issued for ARR below 2500 MW in January 2009.**
- **Transmission Alerts:**
  - 01/27 08:52 Transmission Alert issued for post contingency overload of San Angelo – Big Lake 69 kV due to forced outages in that area.
- **No EECs in January 2009**

- **January 7<sup>th</sup>**
  - Held IE 06:30 balancing energy deployments for IE 06:45 due to an incorrect offset calculation. Resumed with deployments for IE 07:00.

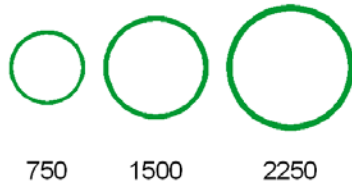
- **ERCOT is currently tracking 261 active generation interconnect requests totaling over 101,000 MW. This includes almost 50,000 MW of wind generation**
- **Regional Planning is reviewing proposed transmission improvements with a total estimated cost of \$772 million**
- **All transmission projects (in engineering, routing, licensing and construction) total \$4.1 billion**
- **Transmission projects approved in 2009 totaled \$41 million**
- **Transmission projects completed in 2008 totaled \$453 million**
- **Completed initial RMR determination on Luminant Notice of Suspension of Operations (NSO) submission and released 12 units. Conducting further study before making final determination on three other units. Studies are also underway for initial determination on three units for which NSO was received from CPS Energy**

# County Location of Interconnection Requests (all fuels)

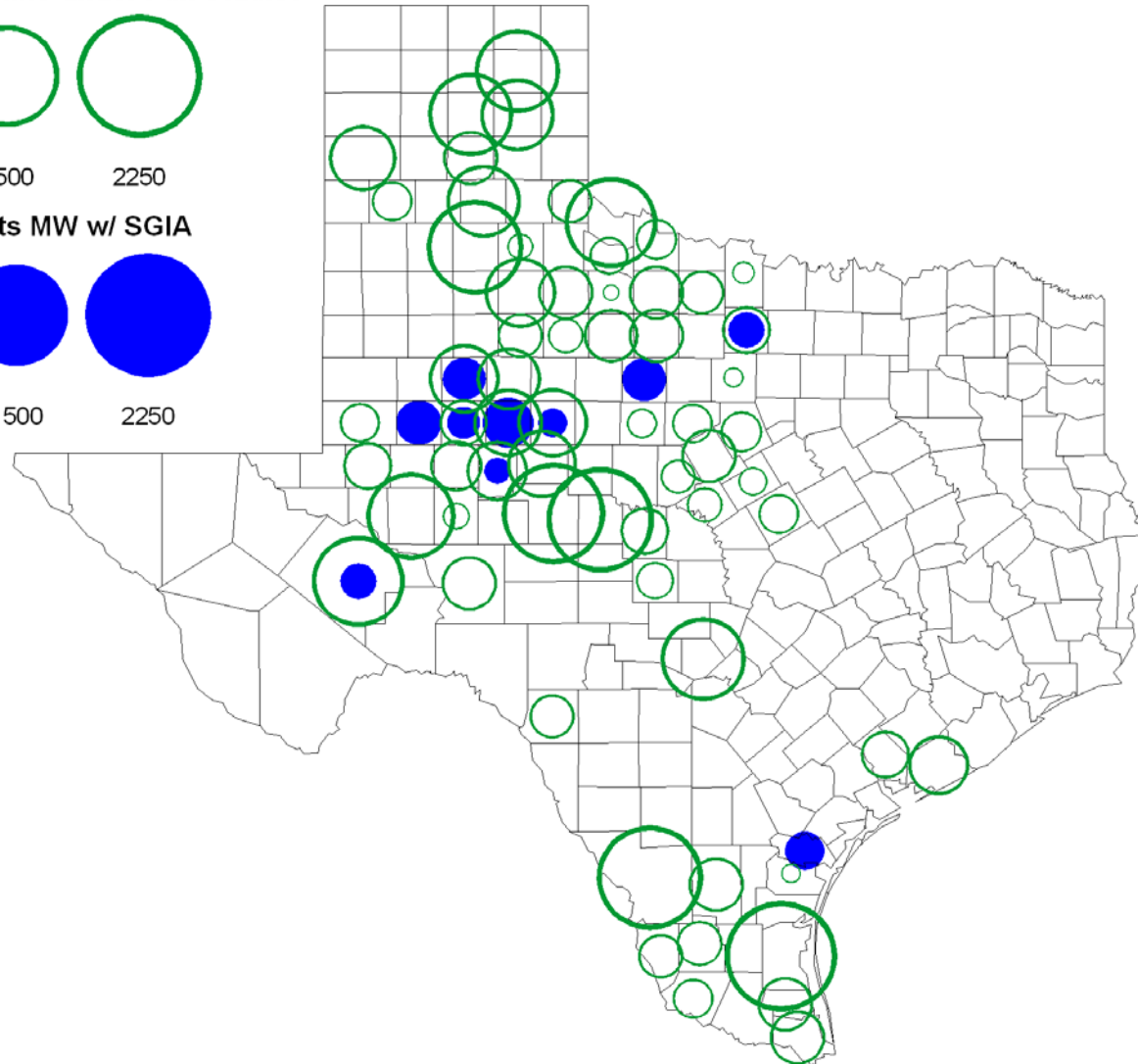
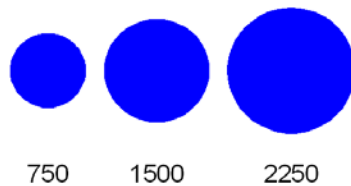


# County Location of Interconnection Requests (wind)

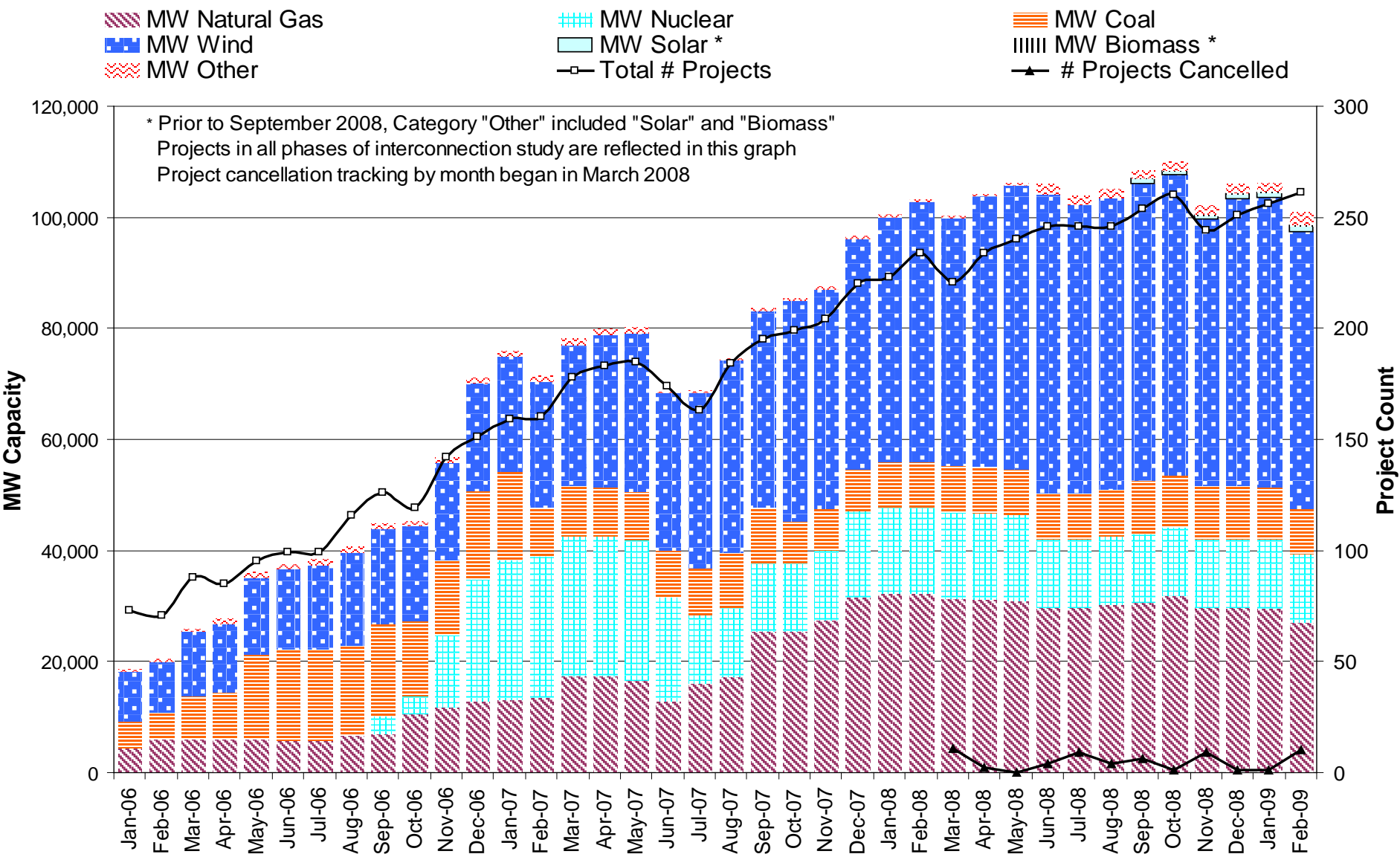
Wind Projects MW under Full Studies



Wind Projects MW w/ SGIA



# Generation Interconnection Activity





# ERCOT Wind Capacity by Year

