



Grid Operations and Planning Report

ERCOT Board of Directors
August 18, 2009

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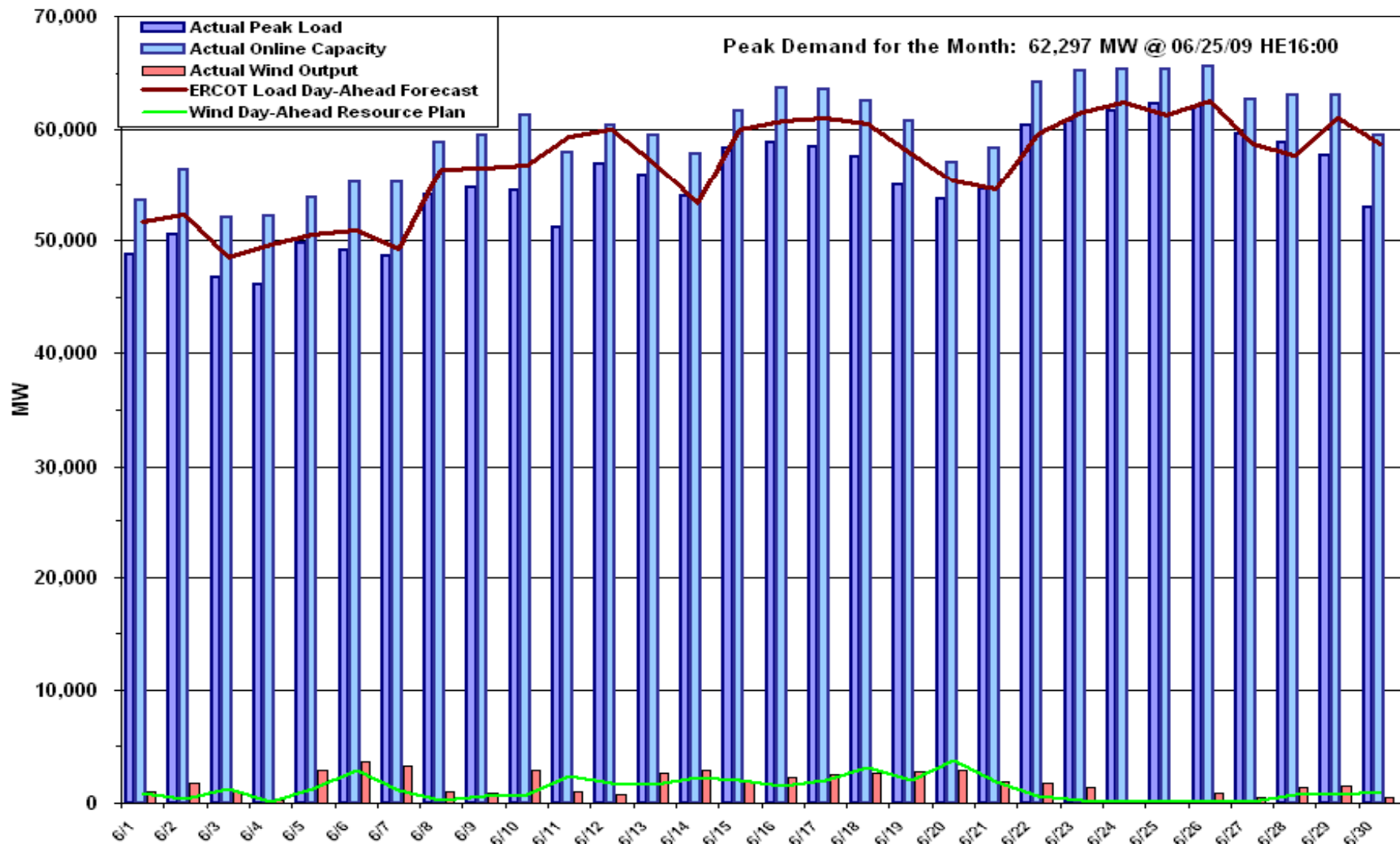
Summary

- **June 2009 Operations**

- The peak demand of 62,297 MW on June 25th was less than the most current forecasted peak of 62,597 MW.
- Day-ahead load forecast error for June was 2.89%.
- One Advisory for Adjusted Responsive Reserve (ARR) below 3000 MW. No Watches for ARR under 2500 MW or Energy Emergency Alert (EEA) events.
- Sixteen transmission watches

- **July 2009 peak demand on July 13th of 63,453 MW, 114 MW higher than all time peak demand of 62,339 MW set in August 2006.**
- **235 active generation interconnect requests totaling over 87,000 MW as of July 30, 2009. Seven requests fewer than June.**
- **8,135 MW wind capacity on line July 31, 2009. No change from June.**

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

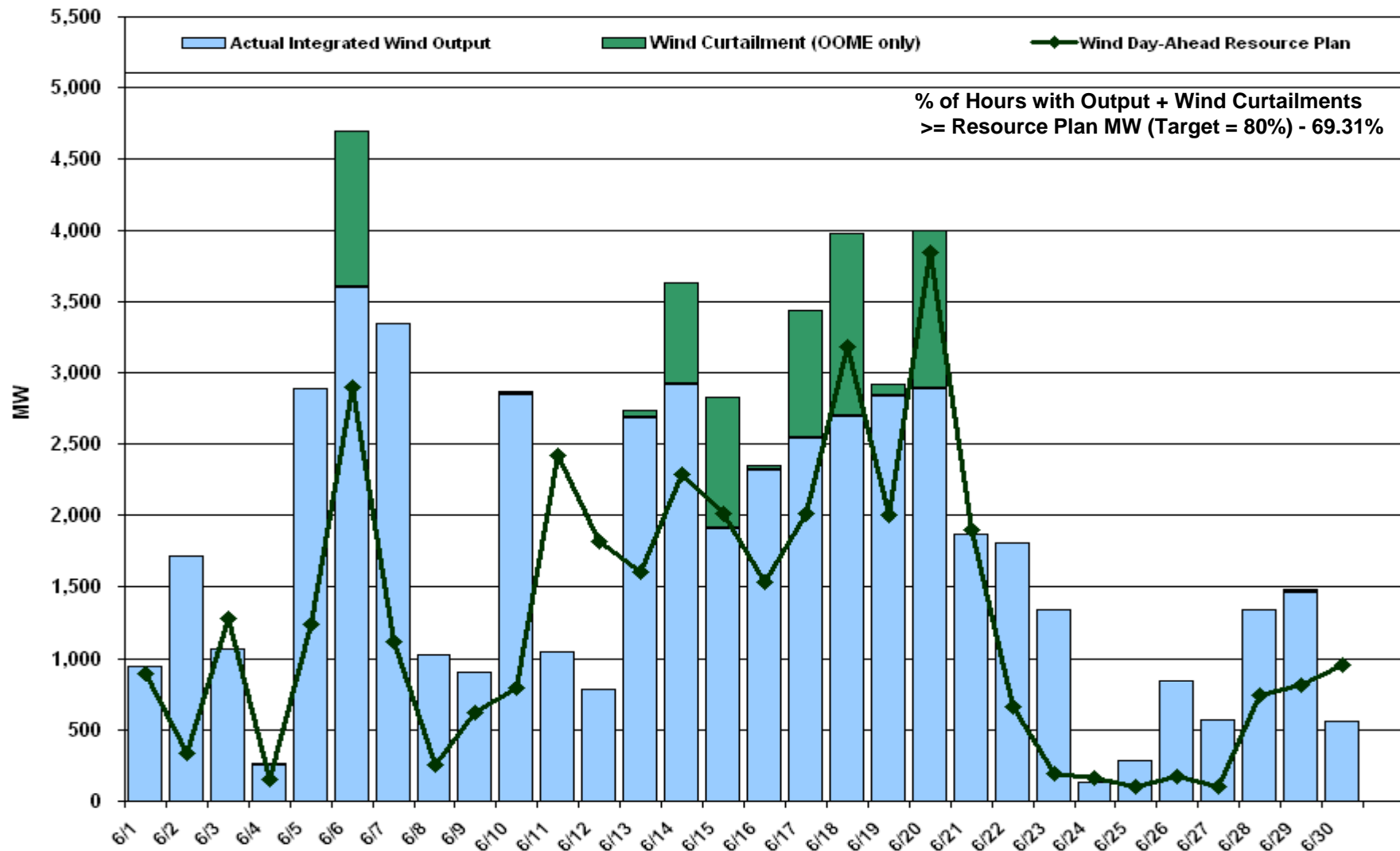


Note: All data are hourly averages during the peak load hour obtained from Resource Plans, and EMMS.



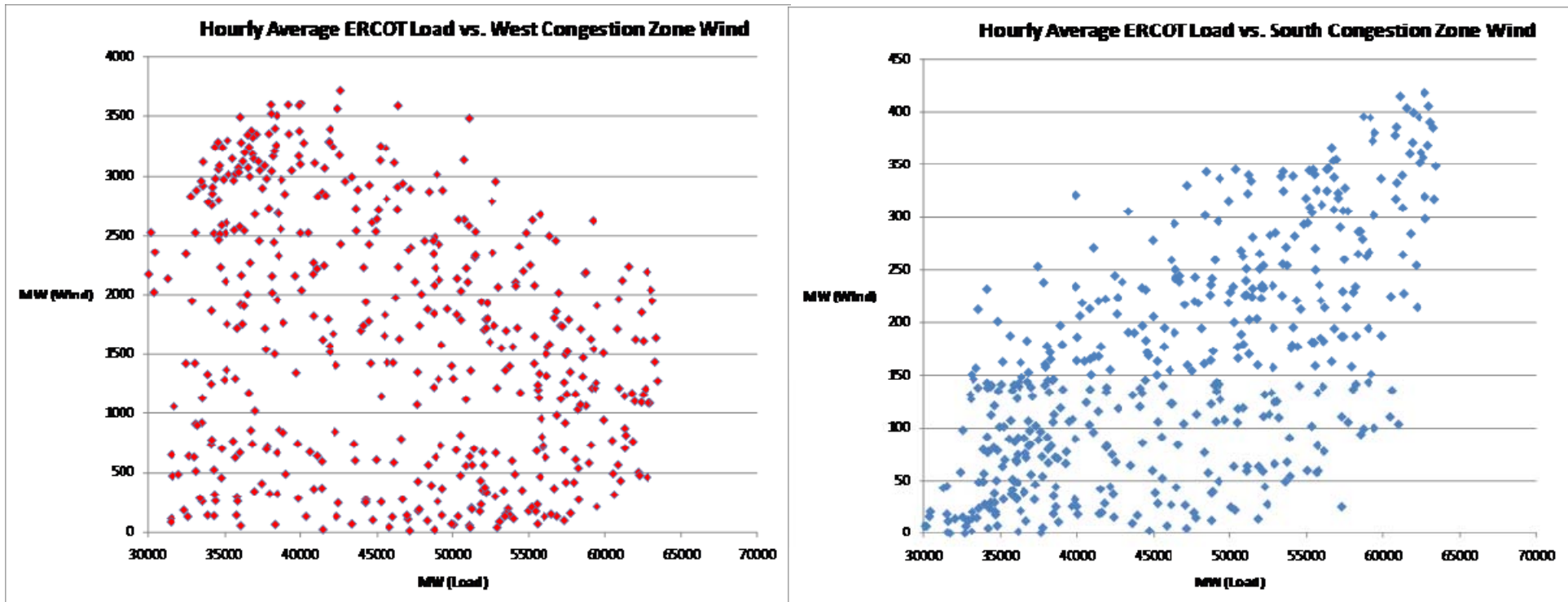
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Actual Wind Output w/ Curtailment Added Back Vs Wind Day-Ahead Resource Plan Based on AWS Forecast at Peak Load Hour



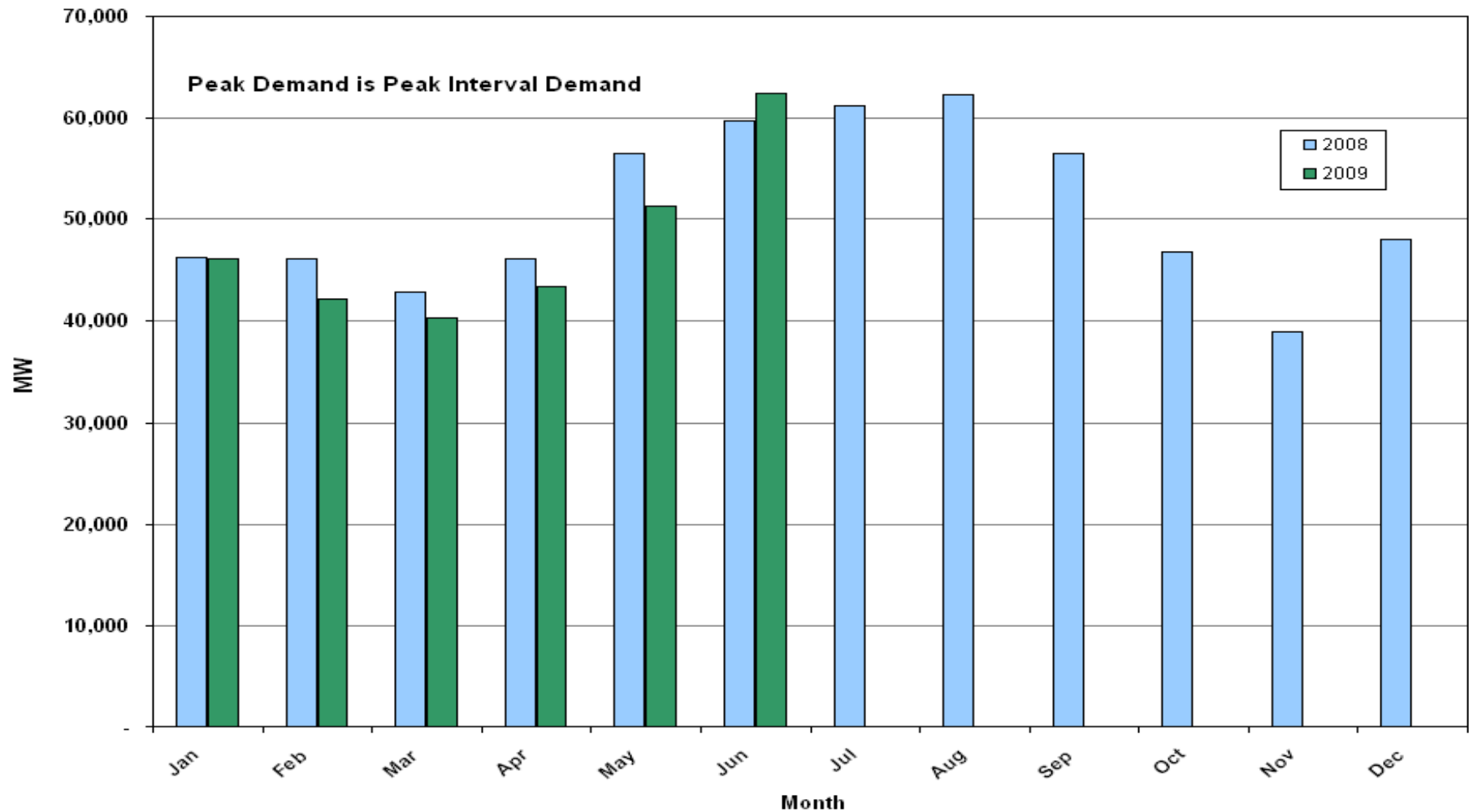
Note: QSEs must use AWST 80% probability of exceedence forecast for Day-Ahead Resource Plans

Wind Generation Correlation with Demand by Zone

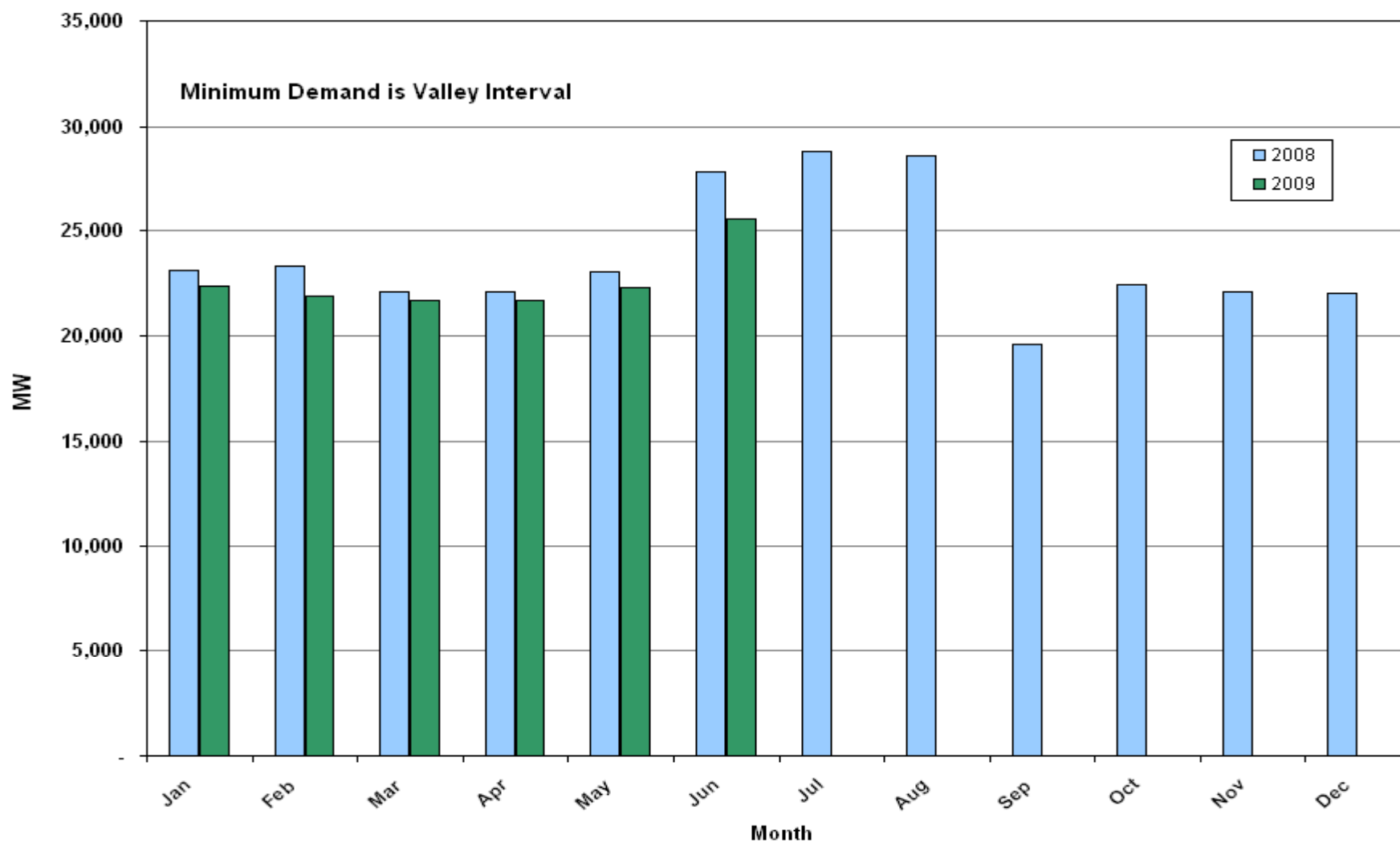


- Based on data from July 1-21, 2009
- Correlation Coefficient between ERCOT System Load and Wind Output in Zone:
 - West: -0.243
 - South: 0.656

Monthly Peak Demand: Actual



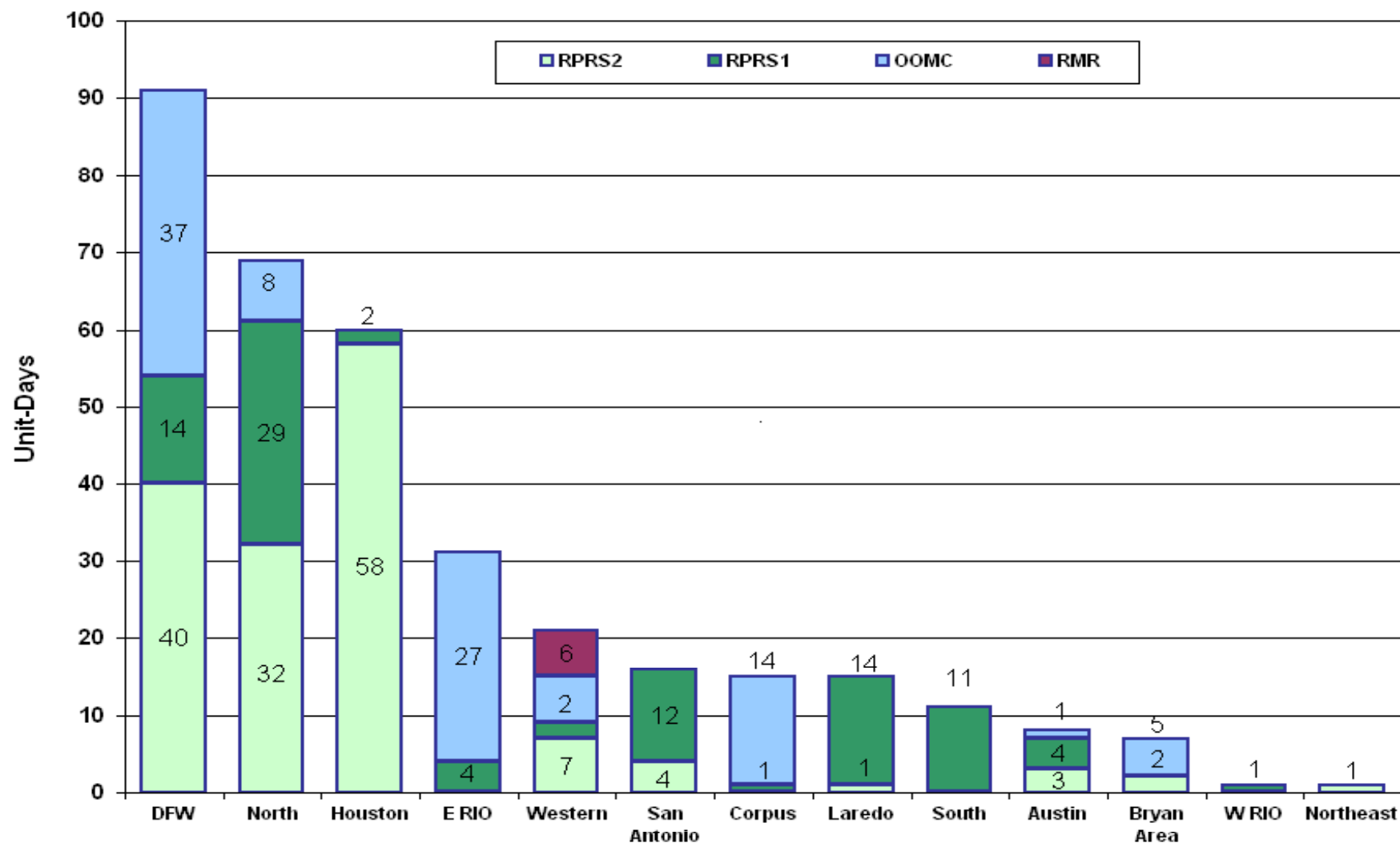
Monthly Minimum Demand: Actual



Day-Ahead Load Forecast Performance in June 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)	June 2009 MAPE
Average Annual MAPE	3.79	3.55	3.30	3.21	2.89

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



Zonal Congestion

CSC	June 08 Days	April 09 Days	May 09 Days	June 09 Days	Last 12 Months Total Days (June 08 – June 09)
North– Houston	1	6	2	7 June – 2, 9-14, 17, 30	48
North – West	0	0	0	0	7
West – North	12	20	16	14 June – 1, 2, 5, 8, 9, 11, 12, 16, 18-22, 27	173
South – North	0	2	0	0	7
North - South	26	4	4	16 June – 3-12, 16, 23- 26, 29	74

Significant System Incidents in June 2009

- **June 11th, at 16:36**
 - Loss of three 138 kV lines and 345/138 kV auto transformer at Comanche Switch substation due to breaker failure.
- **June 30th, at 13:00**
 - Market Emergency Notice issued for extending the procurement of the A/S Market due to communication issues not allowing some QSEs to submit their A/S schedules.

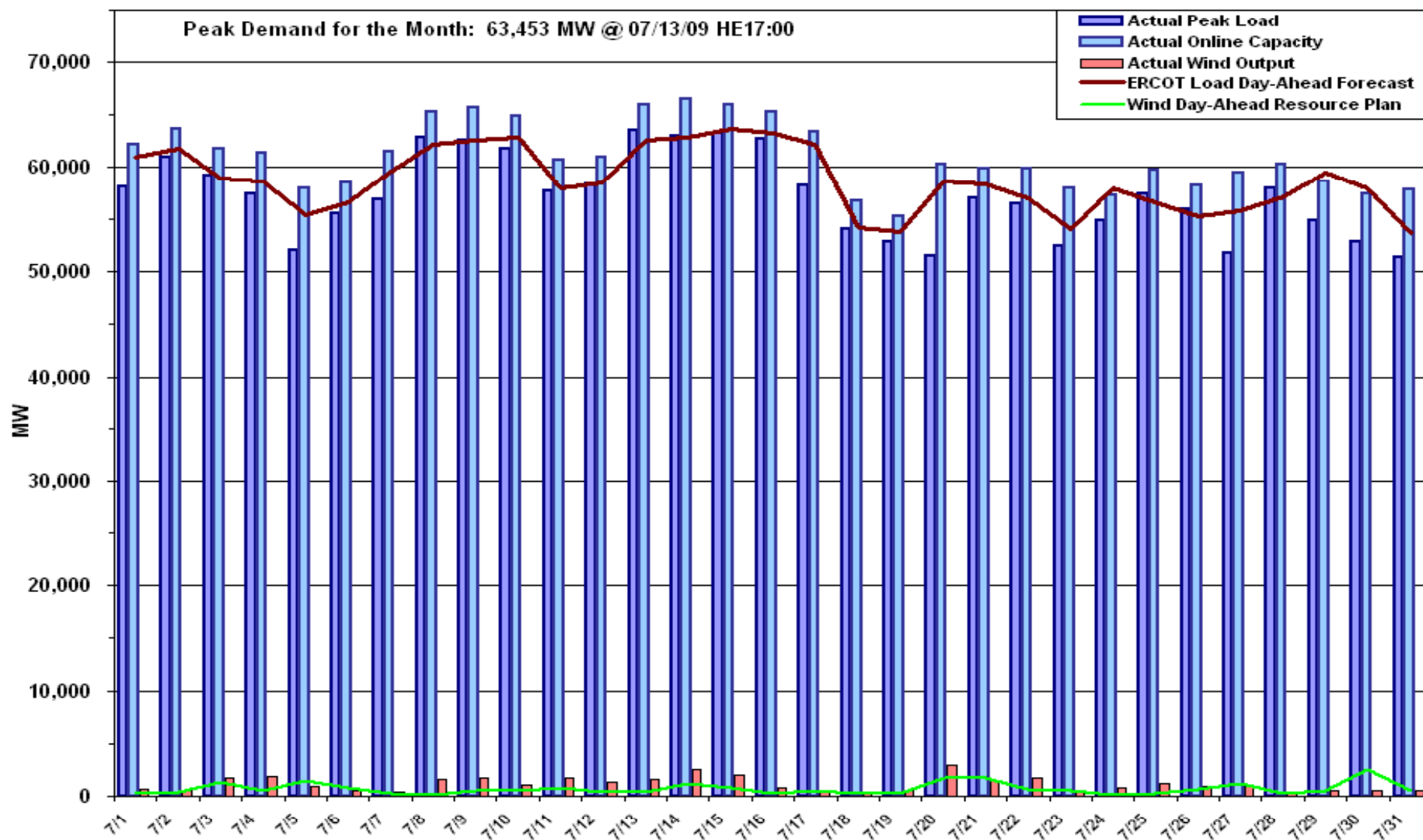
Advisories and Watches in June 2009

- **Advisories issued for Adjusted Responsive Reserve (ARR) below 3000 MW.**
 - Issued 1 Day.
- **No Watches issued for ARR below 2500 MW in June 2009.**
- **Transmission Watches**
 - June 2nd, 5th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 30th - ERCOT issued a transmission Watch issued due to a forced generation outage . The loss of Dilley Switch – San Miguel Switch overloads Pearsall Switch – Derby Sub 69KV. ERCOT received emergency energy from CFE across the Laredo VFT.
 - June 3rd ERCOT issued a transmission Watch due to a forced generation outage. Loss of San Miguel "A" 345/138KV autotransformer overloads - San Miguel "B" 345/138KV autotransformer. ERCOT received emergency energy from CFE across the Laredo VFT.
 - June 14th, 15th, 16th, 17th ERCOT issued a Transmission Watch due to the forced outage of numerous transmission lines in the Northwest area of ERCOT as a result of thunderstorms and tornado activity.
- **No EEA's in June 2009**

Other Items

- **June 12th, at 13:00**
 - Held Interval Ending (IE) 13:00 Real-time Balancing Market deployments for IE 13:15 due to incorrect offset entry. Resumed with IE 13:30.
 -
- **June 23rd, at 11:45**
 - Held IE 11:45 Real-time Balancing Market deployments for IE 12:00 due to significant changes in short term load forecast and DC tie schedule values. Resumed with IE 12:15.

July 2009 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.

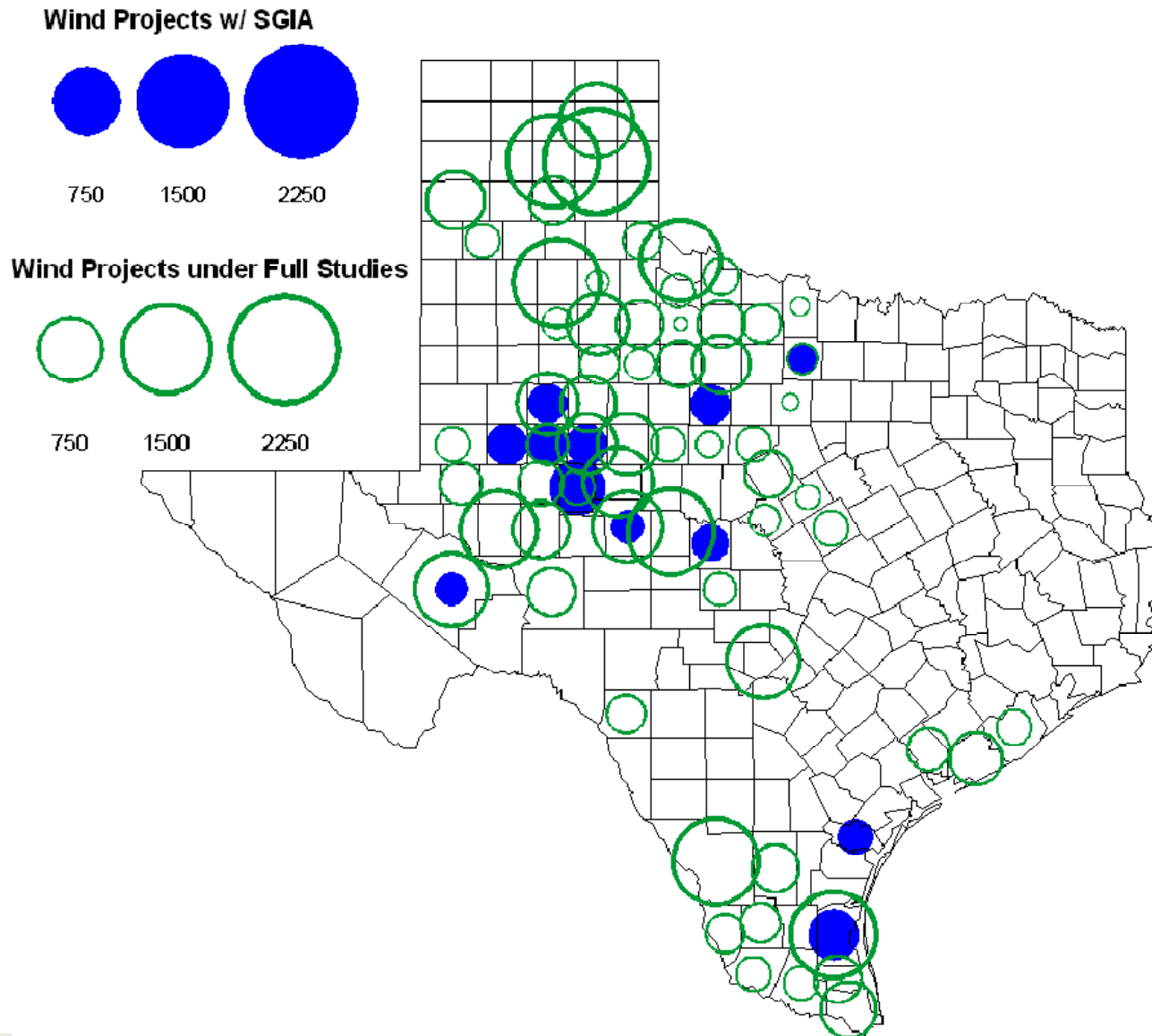


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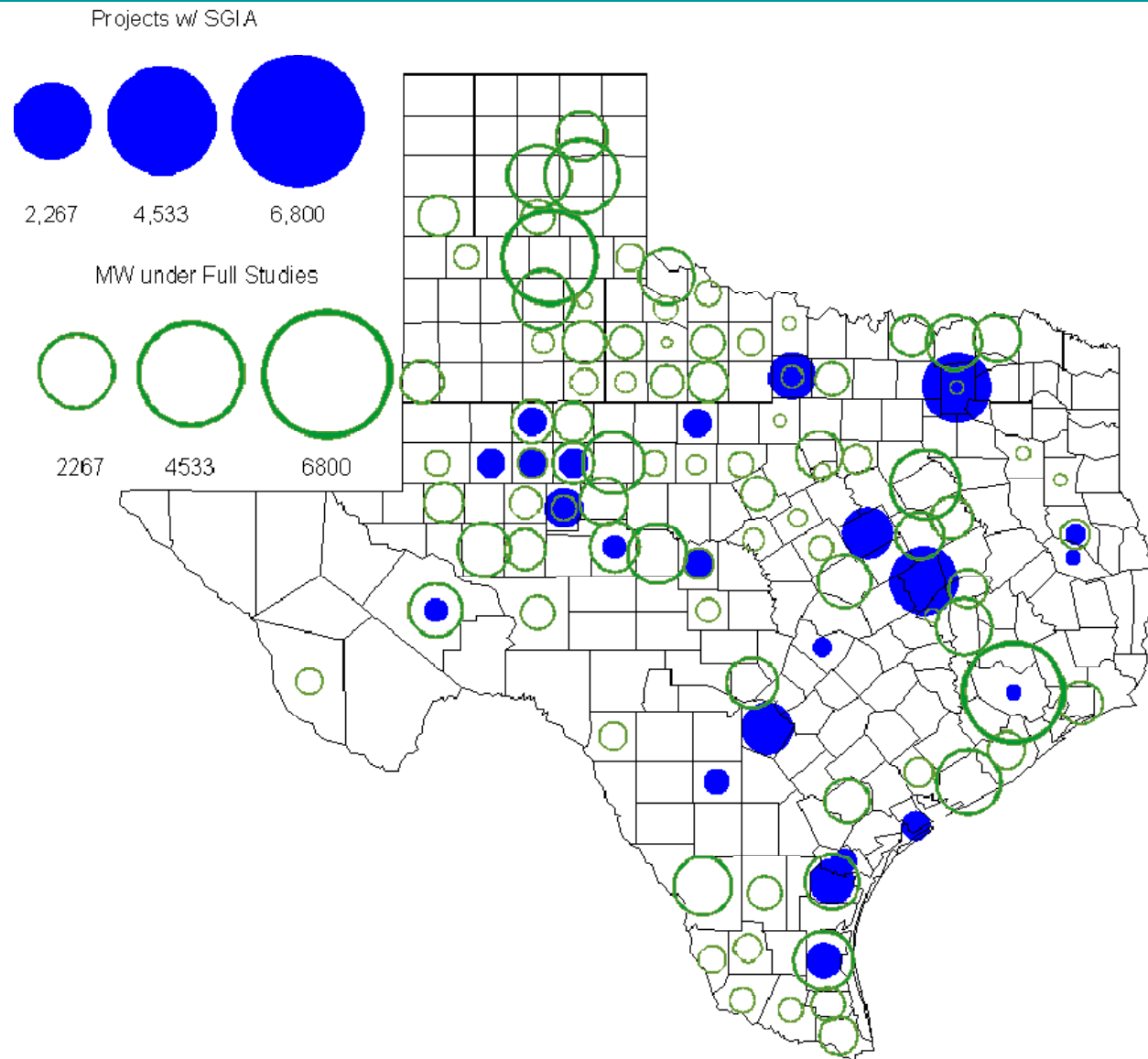
Planning Summary

- **ERCOT is currently tracking 235 active generation interconnection requests totaling over 87,000 MW. This includes over 49,000 MW of wind generation.**
- **Regional Planning is currently reviewing proposed transmission improvements with a total cost of \$1,166.64 Million**
- **Transmission Projects approved in 2009 total \$130 Million**
- **All projects (in engineering, routing, licensing and construction) total approximately \$4.1 Billion**
- **Transmission Projects energized in 2008 total about \$453 million**

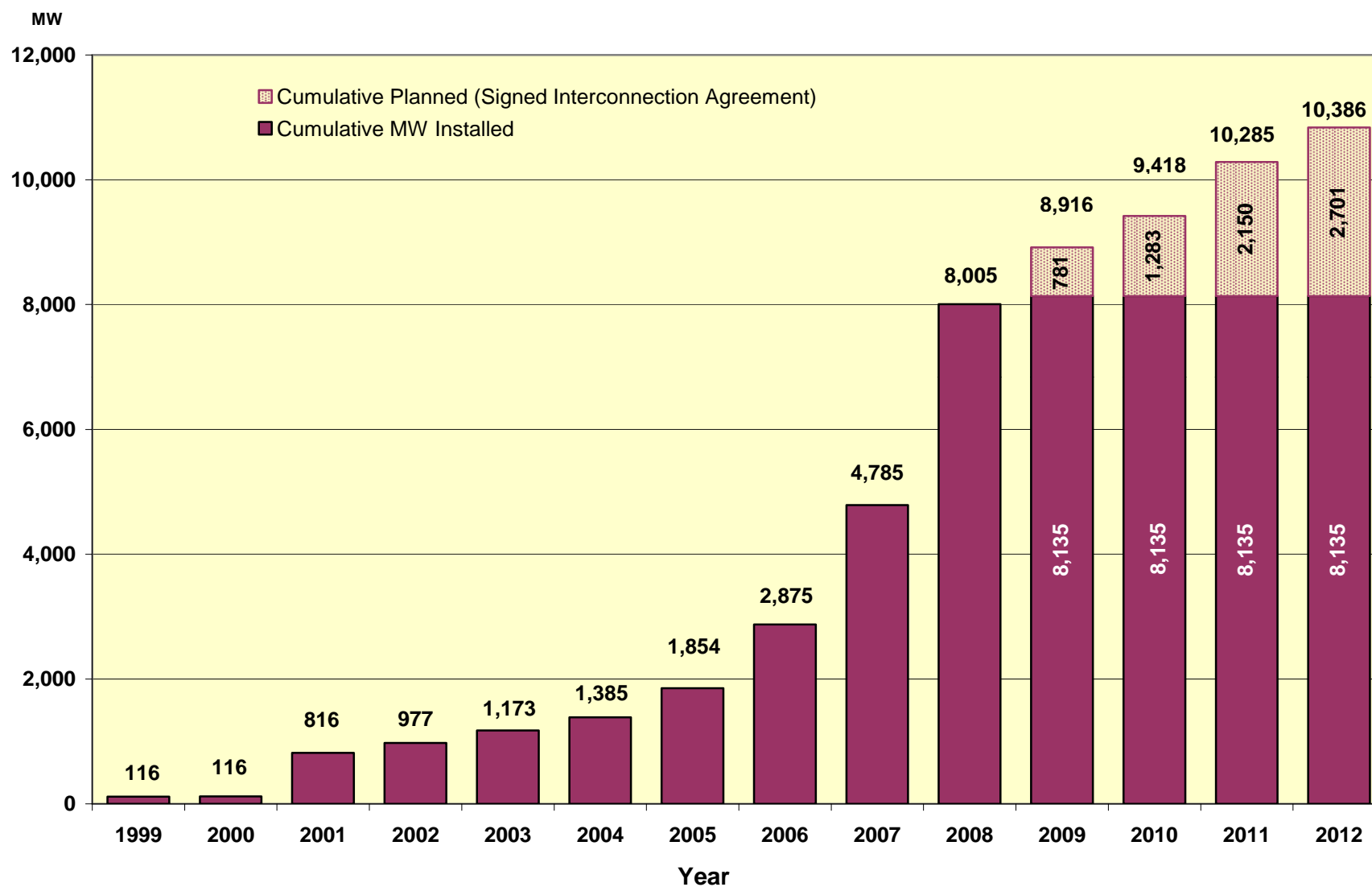
County Location of Wind Projects under Interconnection Study - July 2009



County Location of All Projects Under Interconnection Study - July 2009

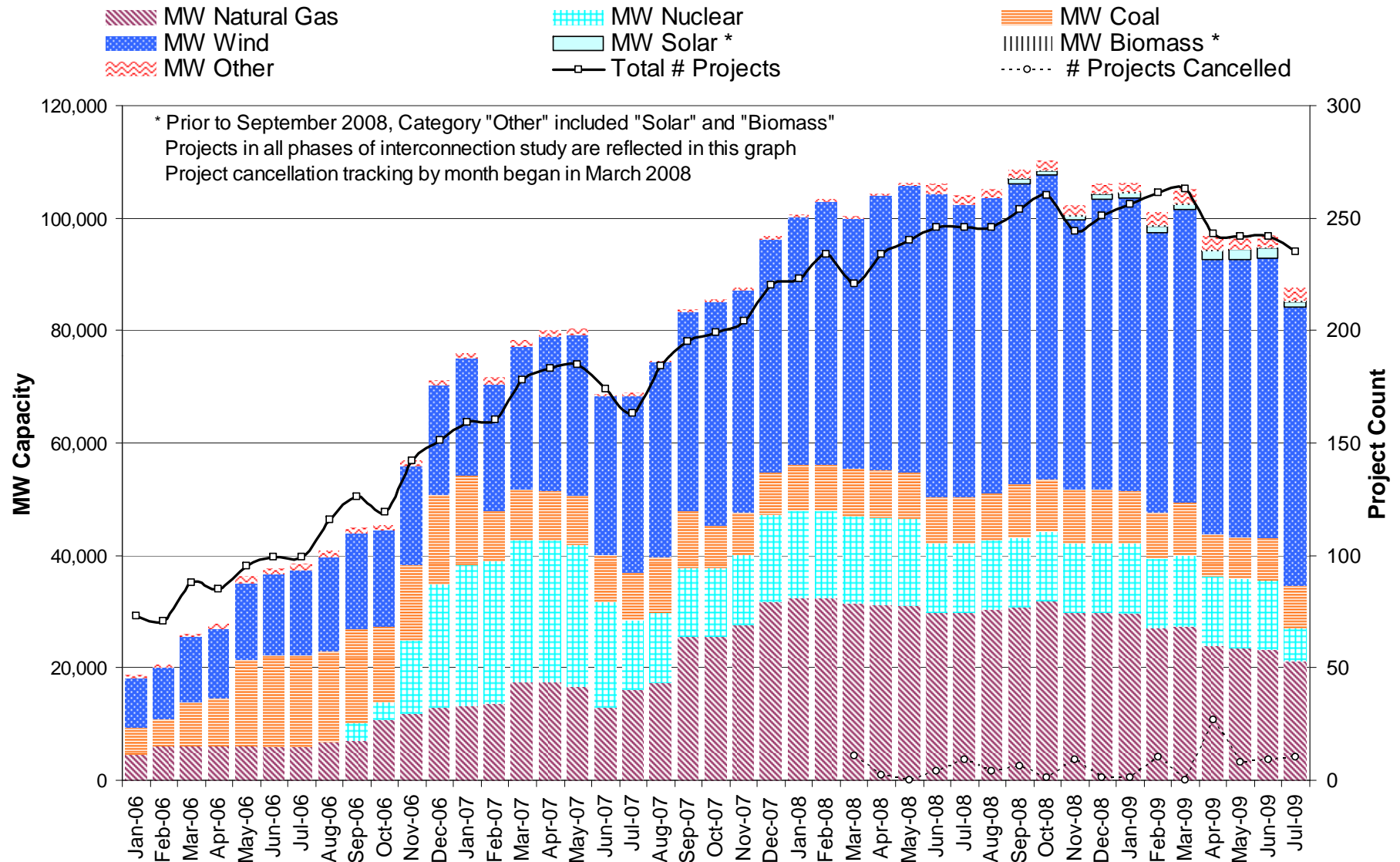


Wind Generation



(as of July 31, 2009)

Generation Interconnection Activity by Fuel



Generation Interconnection Activity by Project Phase

