



Grid Operations and Planning Report

ERCOT Board of Directors
September 15, 2009

Kent Saathoff

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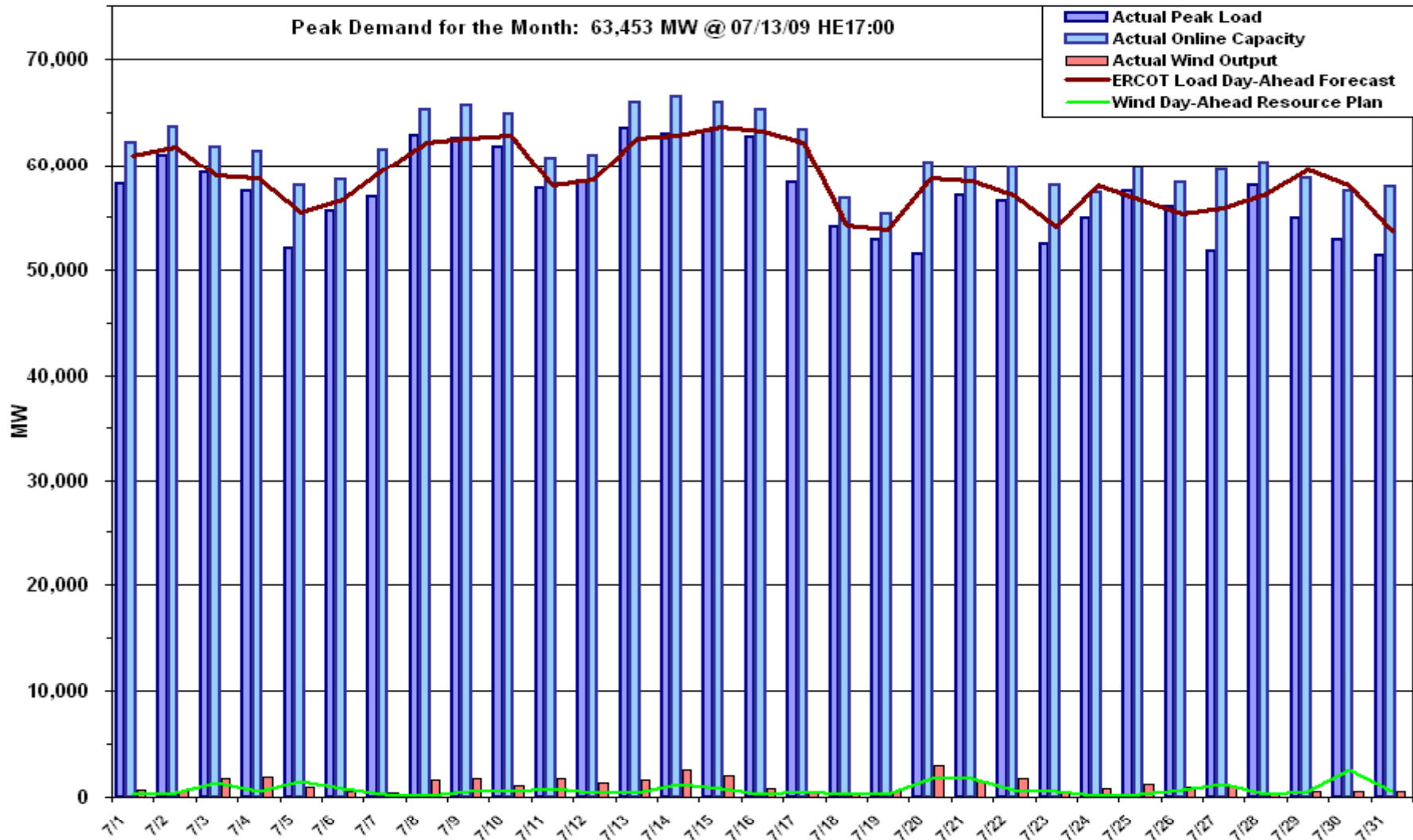
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- **July 2009 Operations**

- The peak demand of 63,453 MW on July 13th was 1,114 higher than the previous all time peak demand of 62,339 MW set in August 2006, but less than the forecasted peak of 63,688 MW.
- Day-ahead load forecast error for July was 2.83%.
- Eleven Advisories for Adjusted Responsive Reserve (ARR) below 3000 MW. No Watches for ARR under 2500 MW or Energy Emergency Alert (EEA) events.
- Five transmission watches

- **August 2009 peak demand on August 5th of 62,056 MW, 1,397 MW less than July 13th all-time peak**
- **230 active generation interconnect requests totaling over 86,000 MW as of August 31, 2009. Five requests fewer than July 31.**
- **8,335 MW wind capacity on line August 31, 2009. 200 MW increase from July**
- **ERCOT Staff proposed addition of the Waco West to Woodway Closely Related Element (CRE) for zonal congestion management. Not rejected by TAC.**

July 2009 Daily Peak Demand: Hourly Average Actual vs Forecast, ResourcePlan & On-line Capacity at Peak

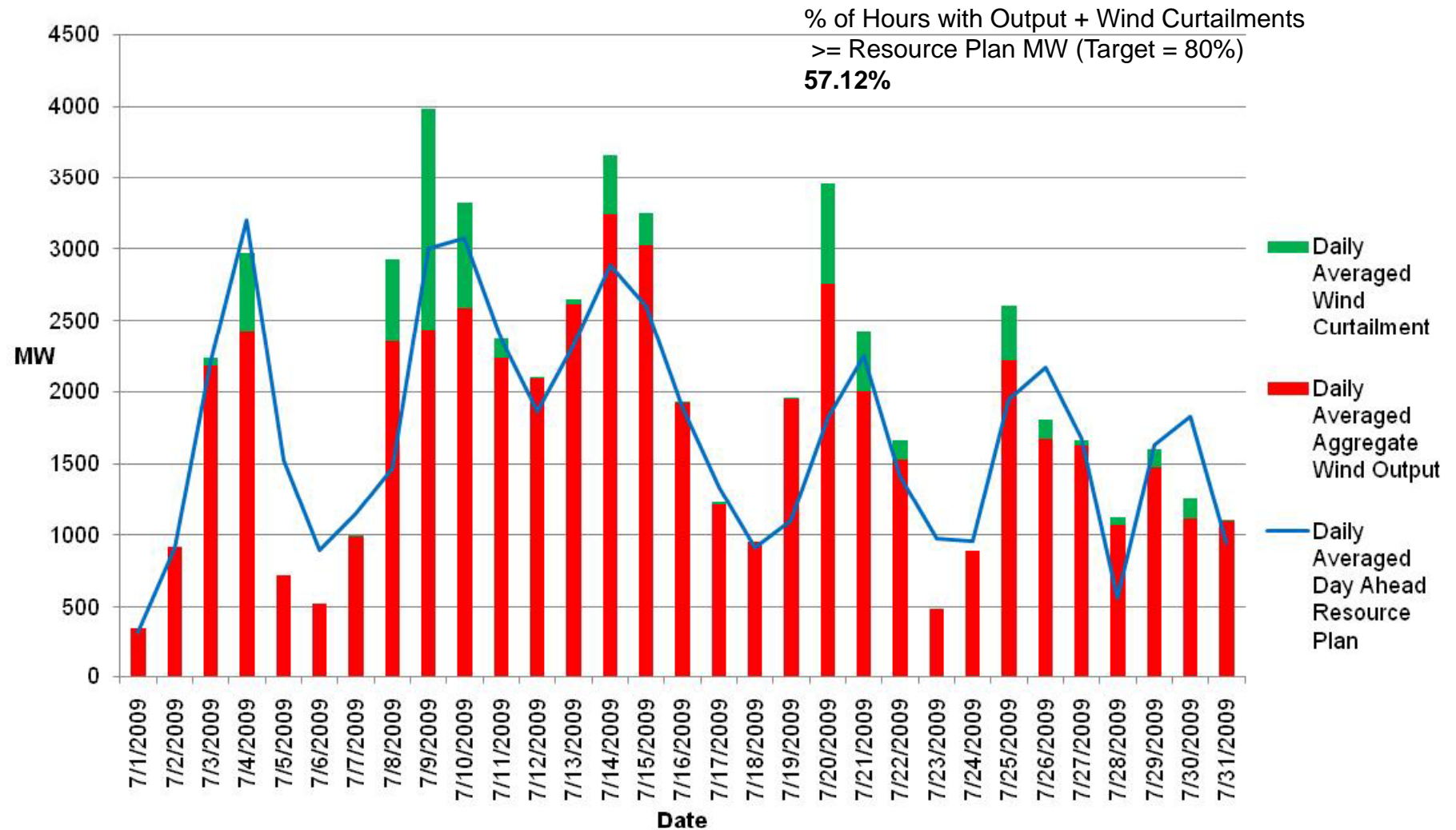


Note: All data are hourly averages during the peak load hour obtained from Resource Plans, and EMMS.



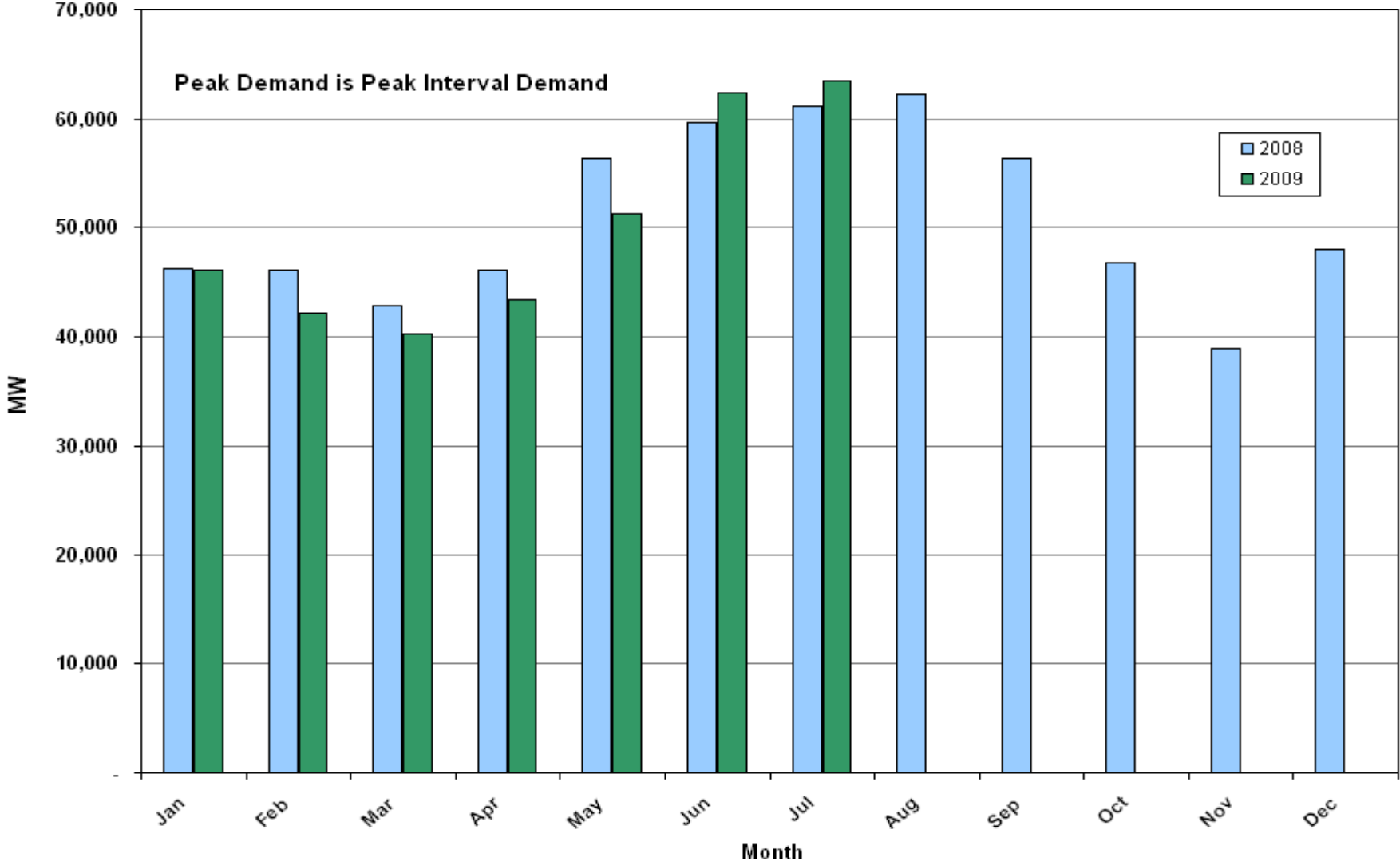
15 September 2009

Actual Wind Output w/ Curtailment Added Back Vs Wind Day-Ahead Resource Plan Based on Forecast for all Hours

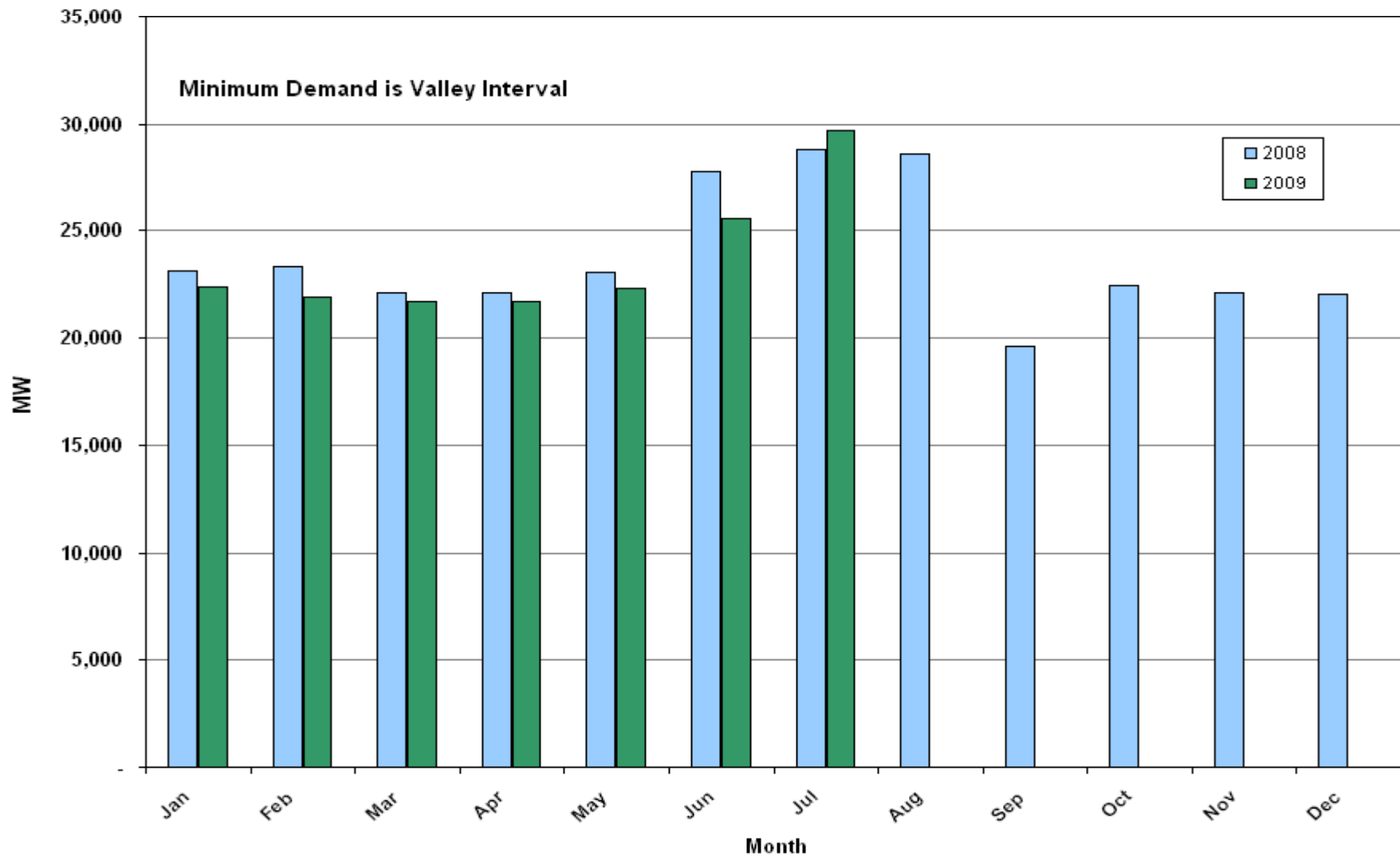


Note: QSEs must use AWST 80% probability of exceedence forecast for Day-Ahead Resource Plans

Monthly Peak Demand: Actual



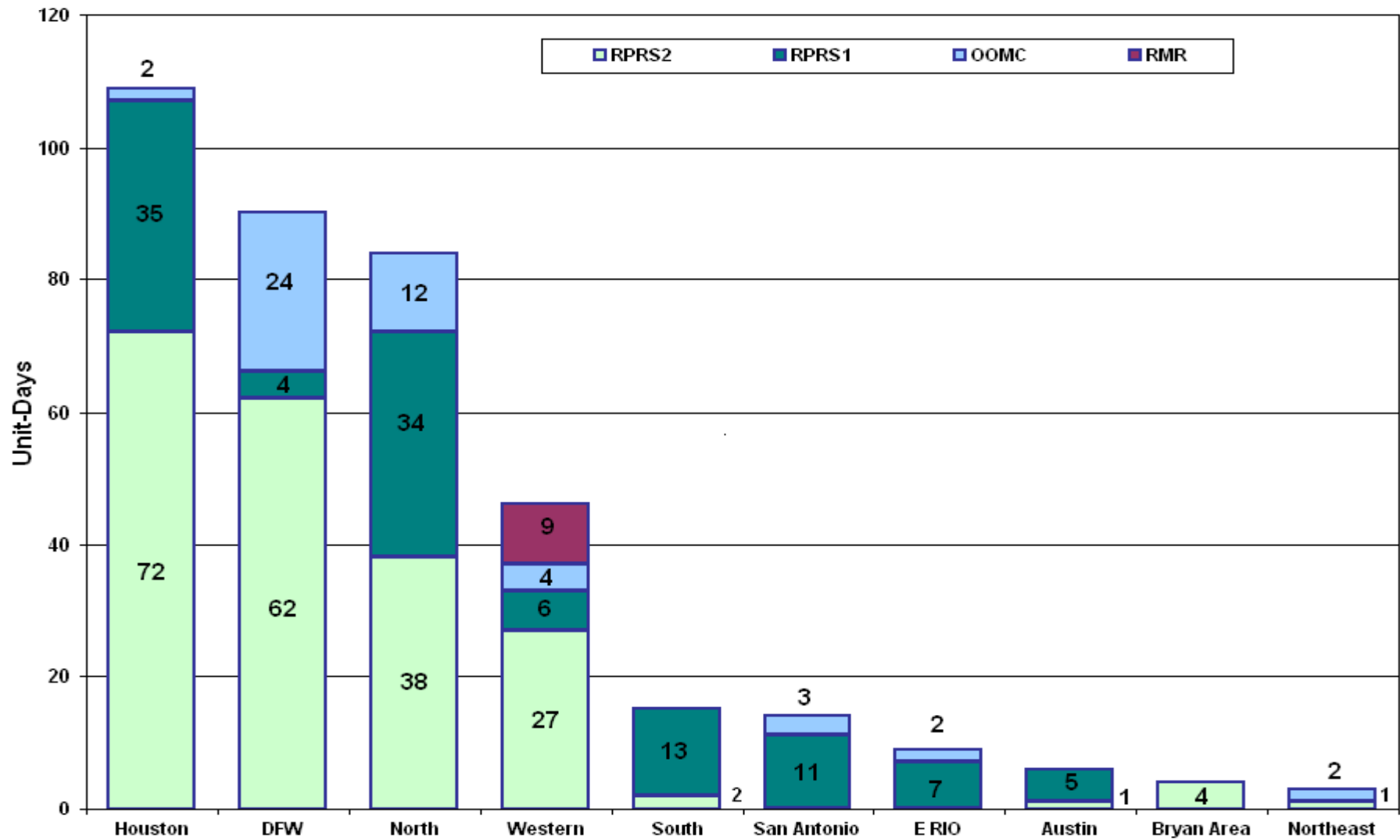
Monthly Minimum Demand: Actual



Day-Ahead Load Forecast Performance in July 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)	July 2009 MAPE
Average Annual MAPE	3.79	3.55	3.30	3.16	2.83

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



Zonal Congestion

CSC	July 08 Days	May 09 Days	Jun 09 Days	July 09 Days	Last 12 Months Total Days (July 08 – July 09)
North – Houston	0	2	7	7 July – 1, 20, 23, 27, 28, 30, 31	54
North – West	1	0	0	0	7
West – North	17	16	14	9 July – 4, 8-11, 13-15, 17	170
South – North	0	0	0	0	7
North - South	0	4	16	1 July – 27	49

Significant System Incidents in July 2009

- **July 17th**
 - Market Emergency Notice issued for A/S Market delay.
- **July 30th**
 - Evacuation of a QSE & TDSP's primary control center. QSE/TDSP moved to back-up control center without loss of data or operational control.

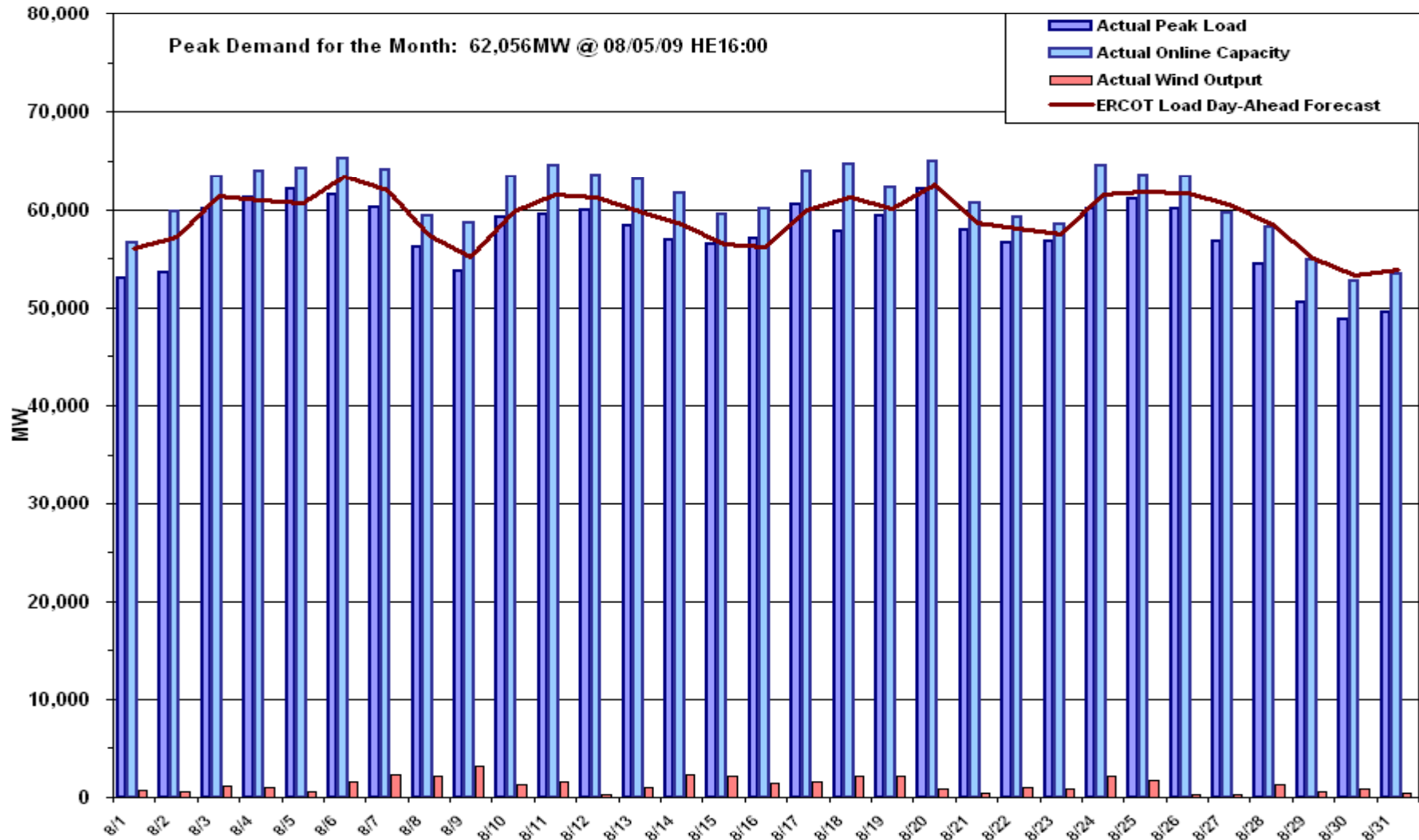
Advisories and Watches in July 2009

- **Advisories issued for Adjusted Responsive Reserve (ARR) below 3000 MW.**
 - Issued 11 Days.
- **No Watches issued for ARR below 2500 MW.**
- **Transmission Watches**
 - July 8th, 10th, 17th and 26th - ERCOT issued a transmission Watch issued due to forced outage and post contingency loss of Dilley Switch – San Miguel Switch overloads Pearsall Switch – Derby Sub. ERCOT received emergency energy from CFE across the Laredo VFT.
 - July 15th - Transmission Watch issued due to forced outage and for post contingent loss of Hill Country 345/138KV auto #3 overloads Hill Country auto #2.
- **No EEA's in July 2009**

Other Items

- **July 17th, at 07:15**
 - Held Real-time Balancing deployments for interval ending 07:15 due to 07:30 Real-time Balancing Market failed to execute. Resumed with interval ending 07:45 deployments.

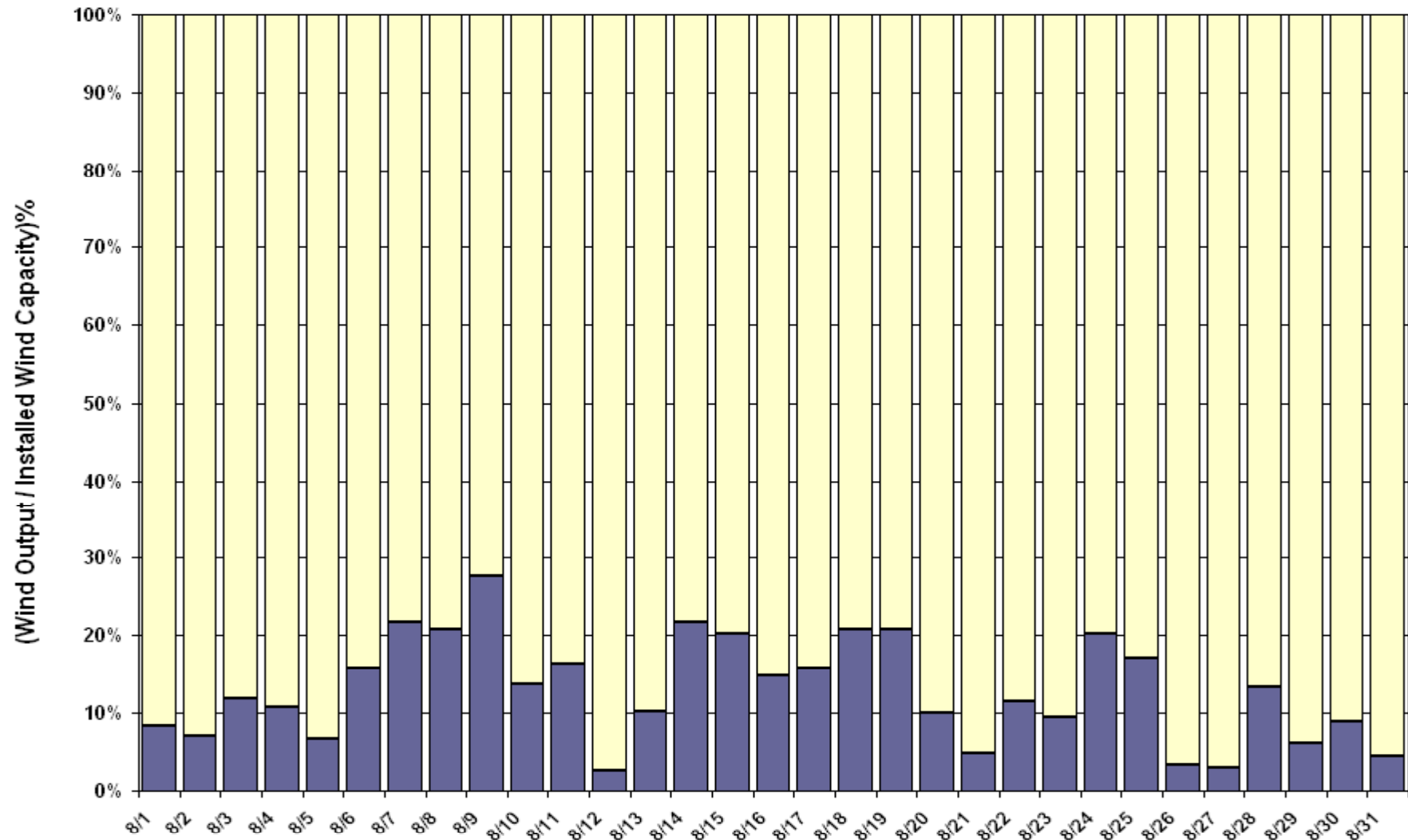
August 2009 Daily Peak Demand: Hourly Average Actual vs Forecast, Resource Plan & On-line Capacity at Peak



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



August 2009 Actual Wind Output as a Percentage of the Total Installed Wind Capacity at Peak

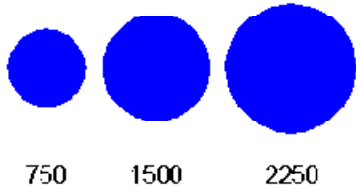


Planning Summary

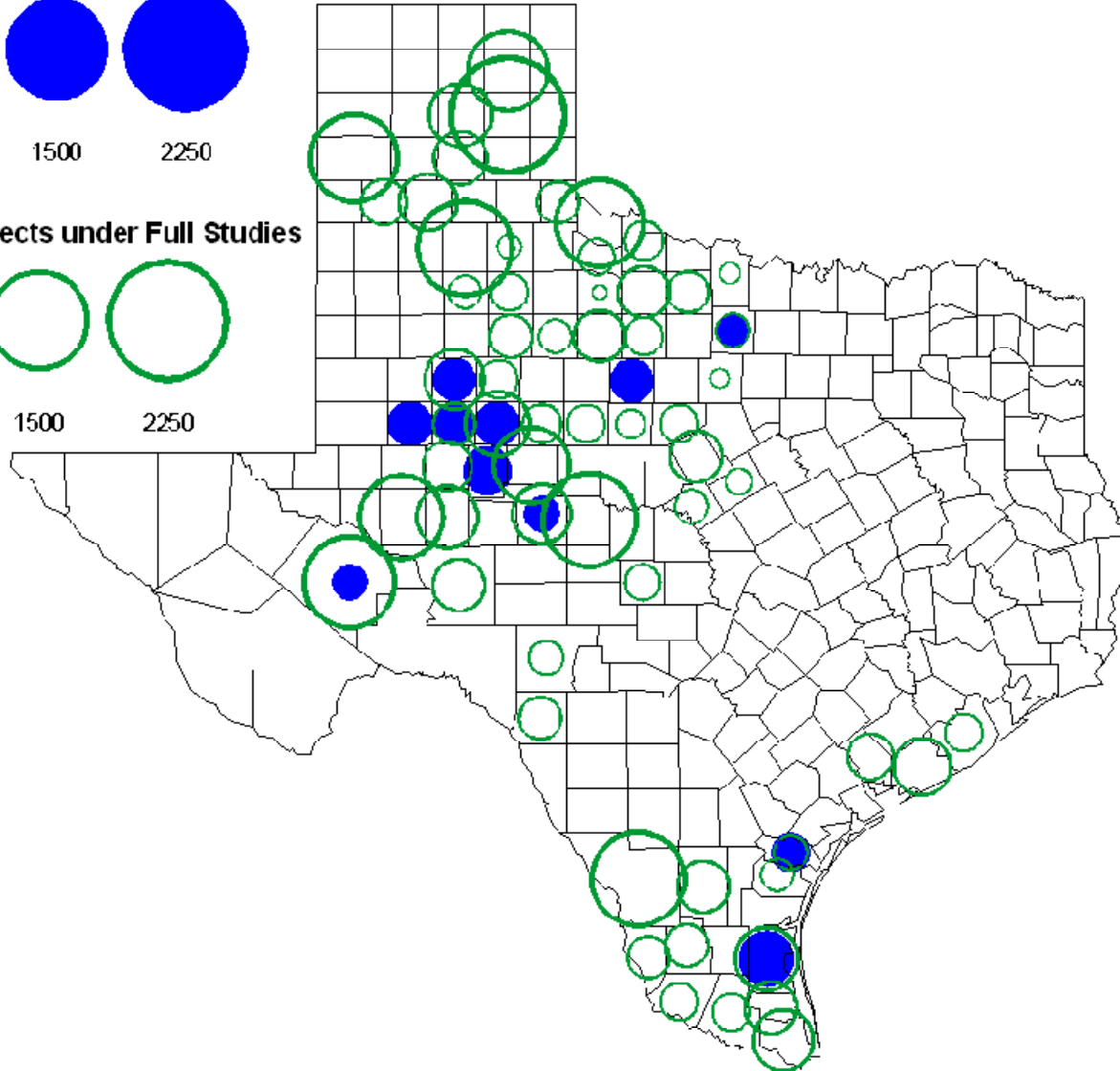
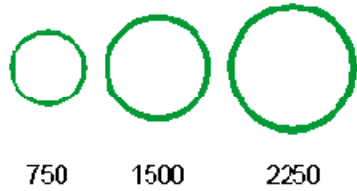
- **ERCOT is currently tracking 230 active generation interconnection requests totaling over 86,000 MW. This includes almost 48,000 MW of wind generation.**
- **Regional Planning is currently reviewing proposed transmission improvements with a total cost of \$1,162.34 Million**
- **Transmission Projects approved in 2009 total \$134 Million**
- **All projects (in engineering, routing, licensing and construction) total approximately \$9.2 Billion**
- **Transmission Projects energized in 2009 total about \$416 million**

County Location of Planned Generation with Interconnection Requests (Wind) August 2009

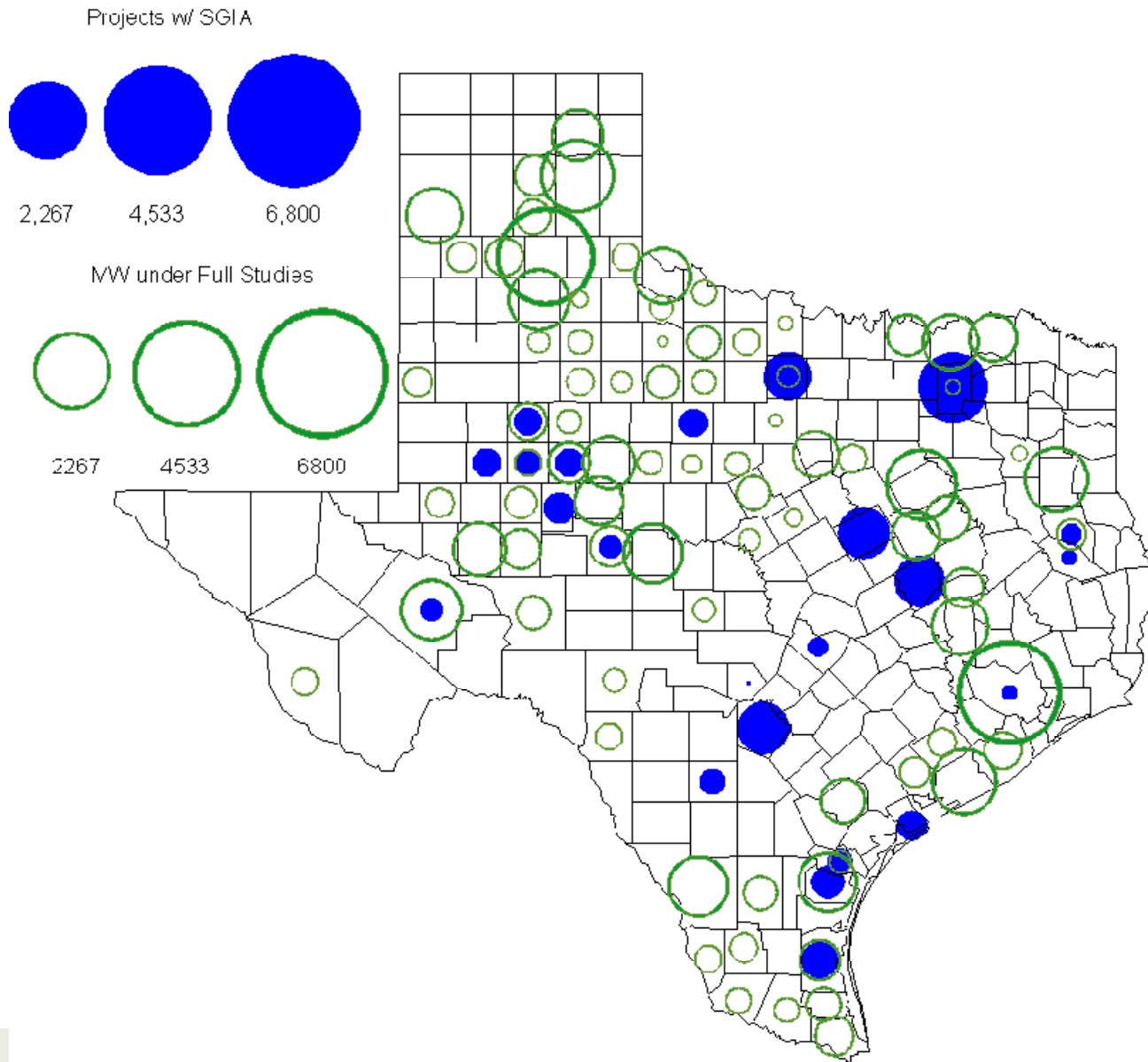
Wind Projects w/ SGIA



Wind Projects under Full Studies



County Location of Planned Generation with Interconnection Requests (all fuels) August 2009



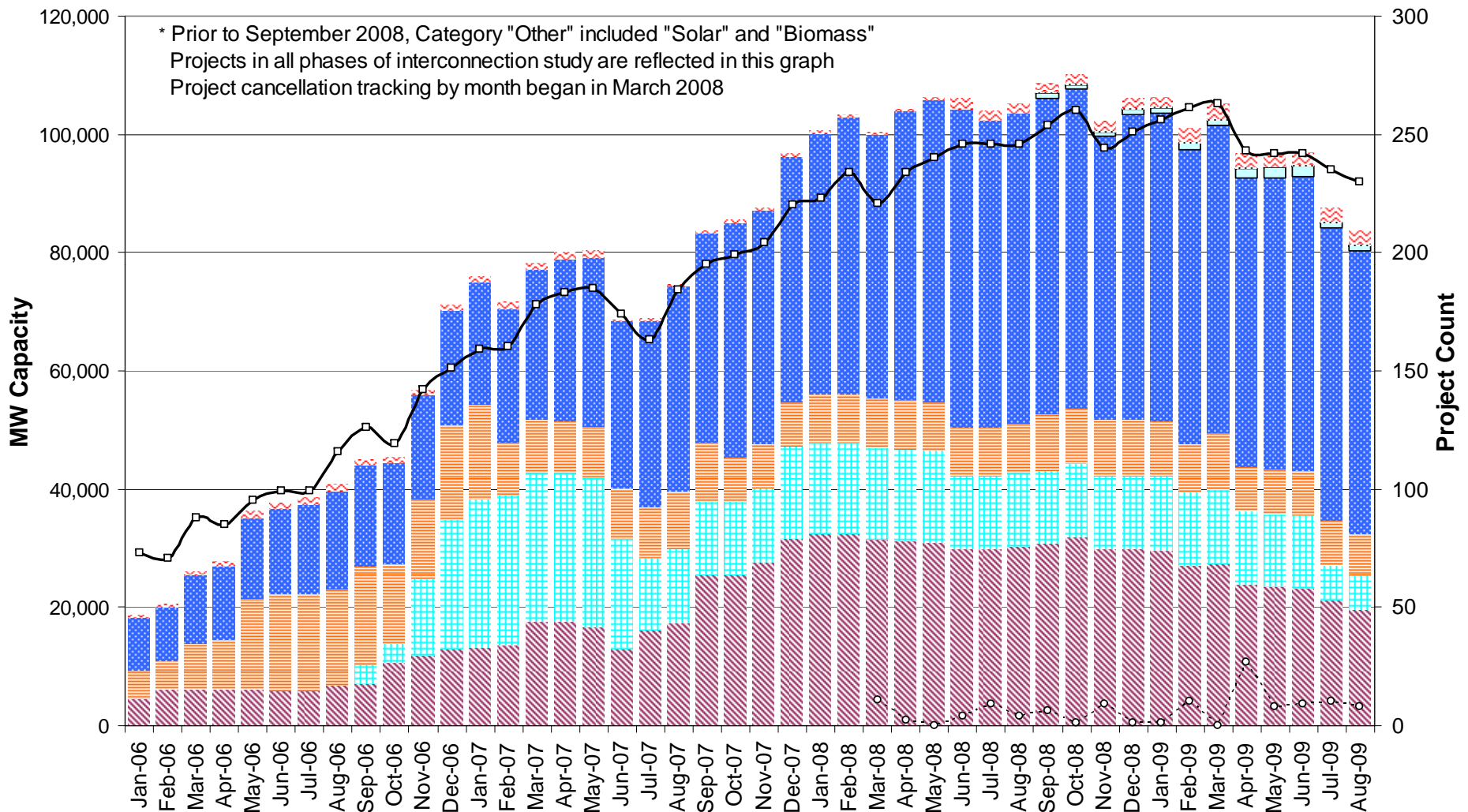
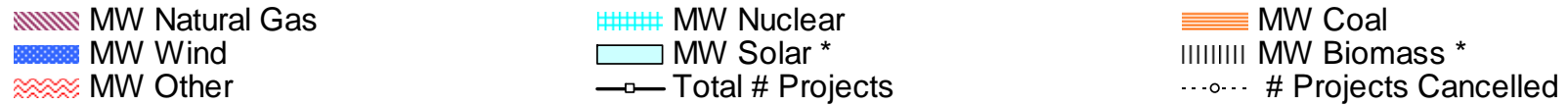
Wind Generation



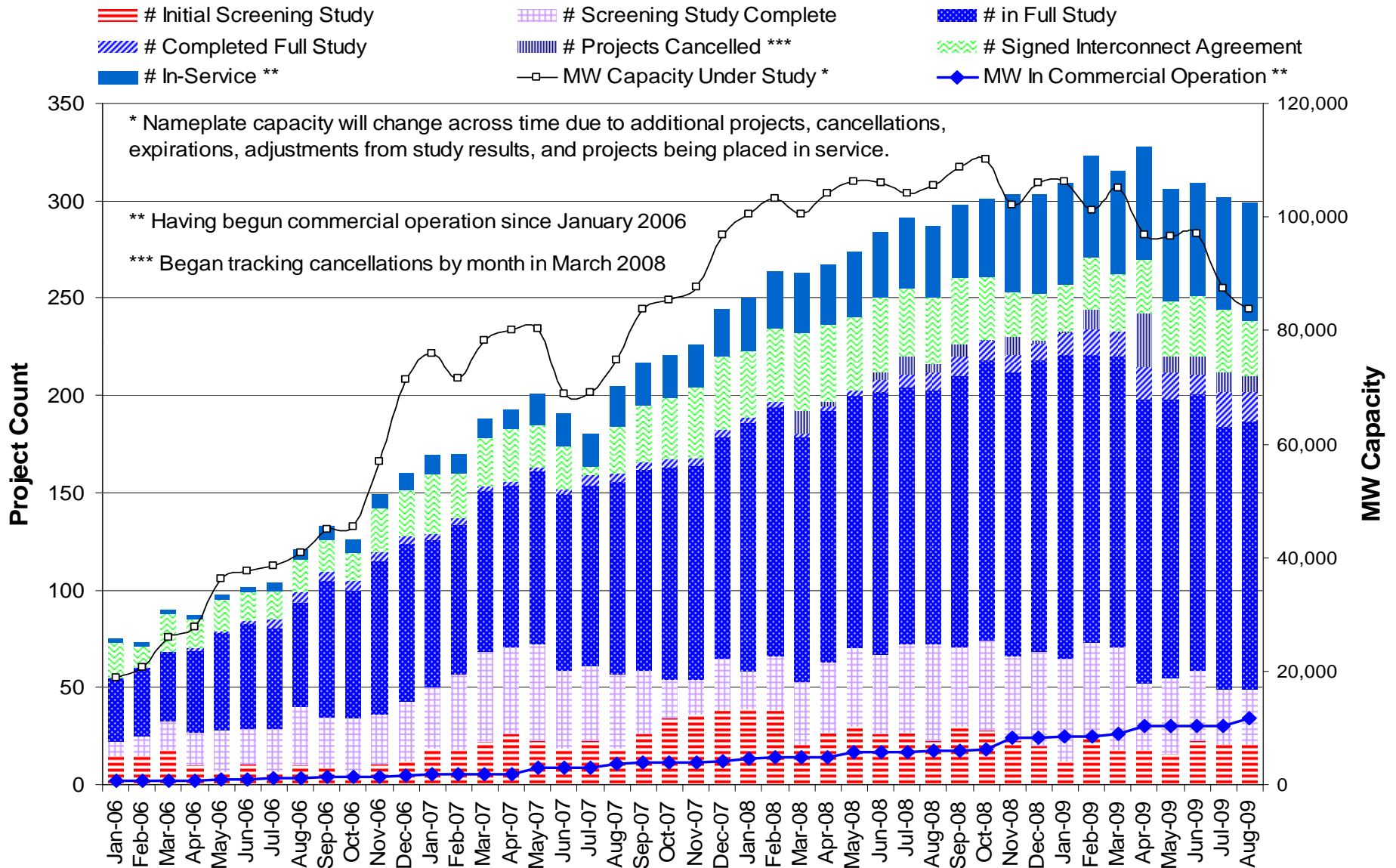
(as of August 31, 2009)



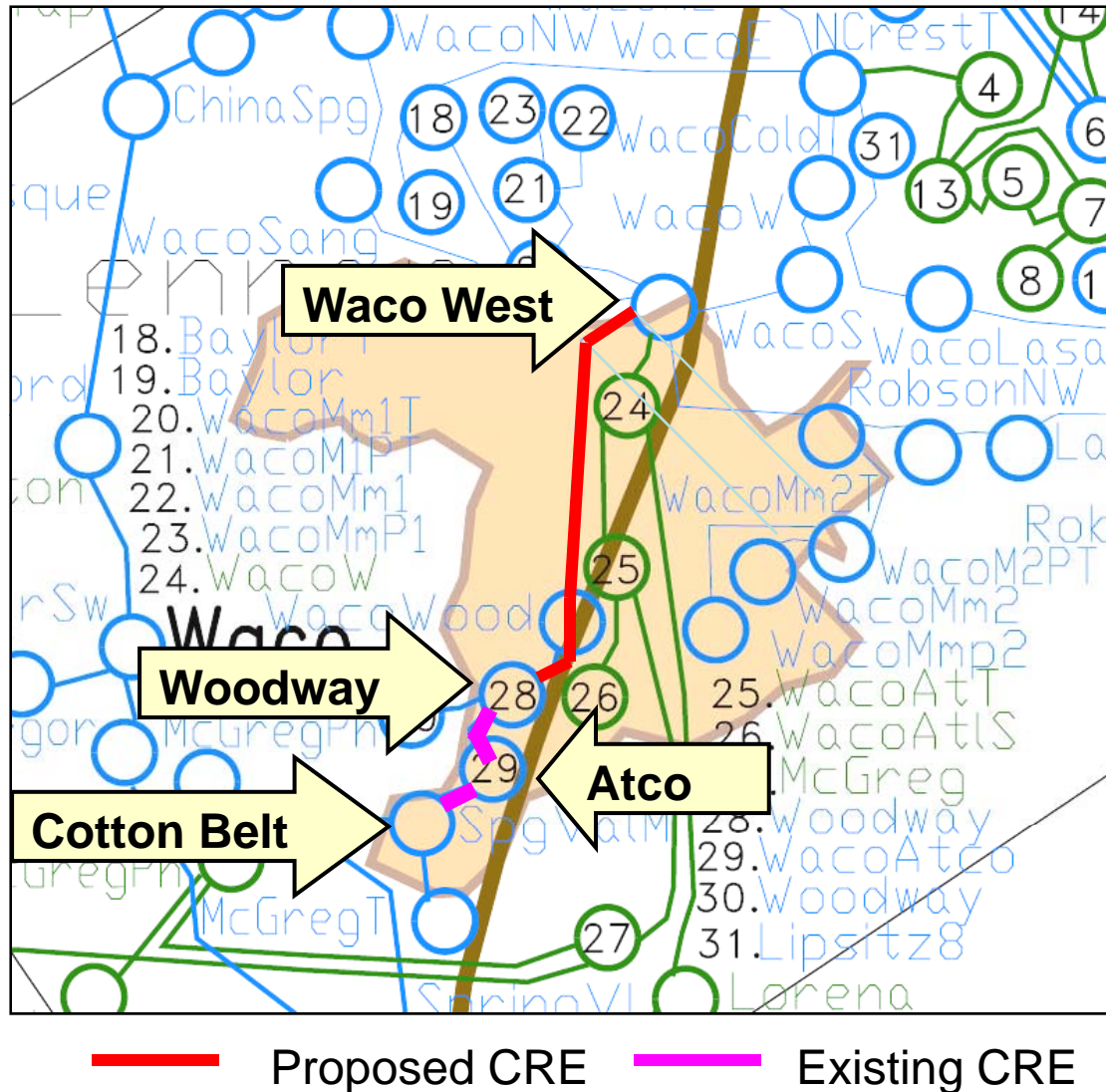
Generation Interconnection Activity by Fuel



Generation Interconnection Activity by Project Phase



New Closely Related Element (CRE): Waco West to Woodway



- New **Waco West** CRE is in series with existing CREs (**Woodway** to **Atco** to **Cotton Belt**) and has available telemetry
- Allows use of Zonal methods to manage congestion on **Waco West** to **Woodway** which is more effective than local
- Considered by TAC on September 3rd and not rejected