



# Grid Operations and Planning Report

ERCOT Board of Directors  
May 20, 2009

**Kent Saathoff**

# Content

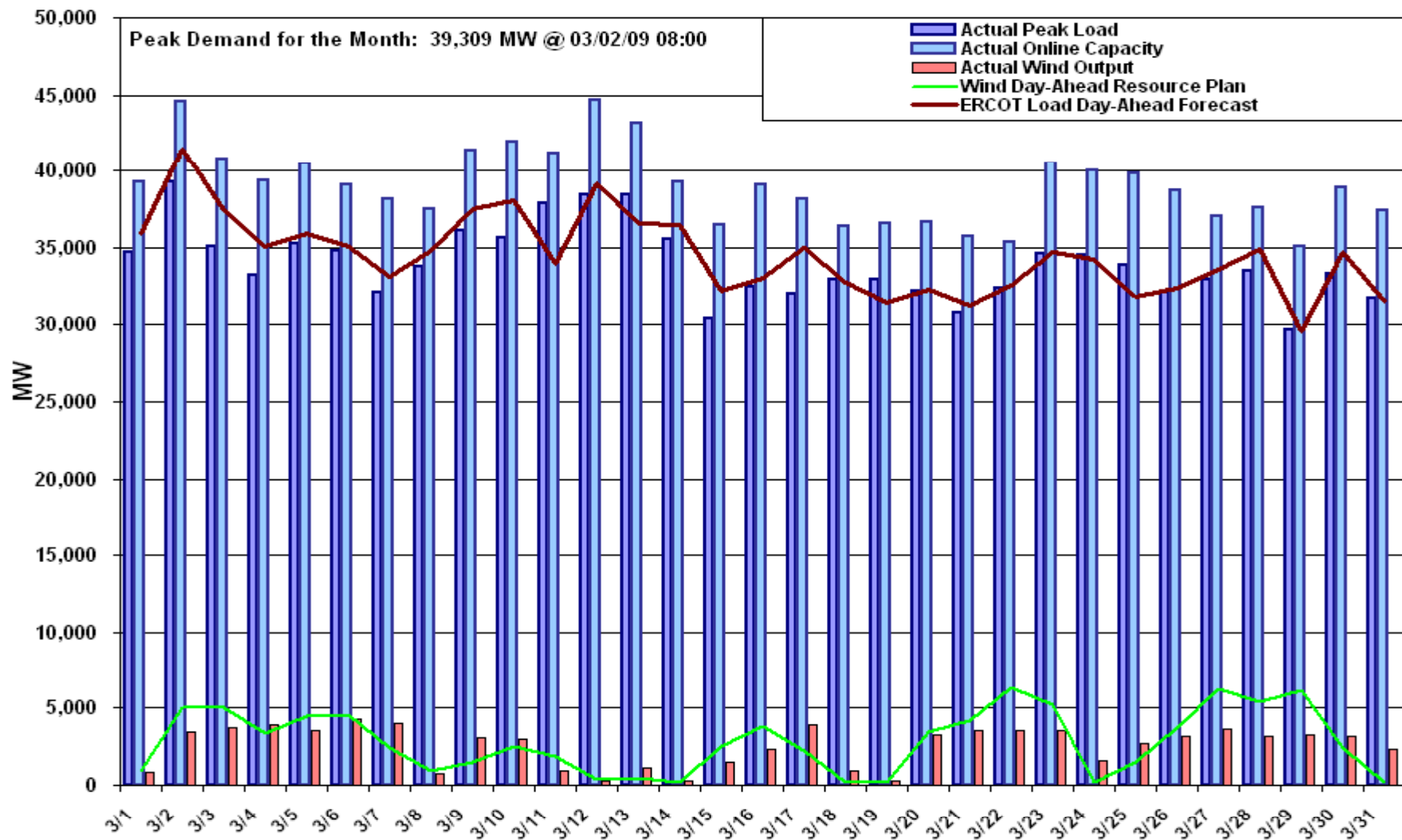
- **Summary**
- **March 2009 Operations**
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    - On-line Resources: Total at Peak and Wind
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  - Wind Capacity

- **March 2009 Operations**

- The peak demand of 39,309 MW on March 2<sup>nd</sup> was less than the long term forecast of 41,539 MW for March.
- Day-ahead load forecast error for February was 3.24%.
- Increased instances of zonal transmission congestion in March was due to significant planned transmission outages
- No Advisories, Alerts for Adjusted Responsive Reserve under 2500 MW or EECF events.
- Three transmission alerts

- **243 active generation interconnect requests totaling over 97,000 MW. Down from 262 requests with over 105,000 MW in March.**
- **Executed RMR contract for Luminant Permian 5.**
- **8,135 MW wind capacity on line April 30, 2009. Up from 8,065 MW in March.**

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

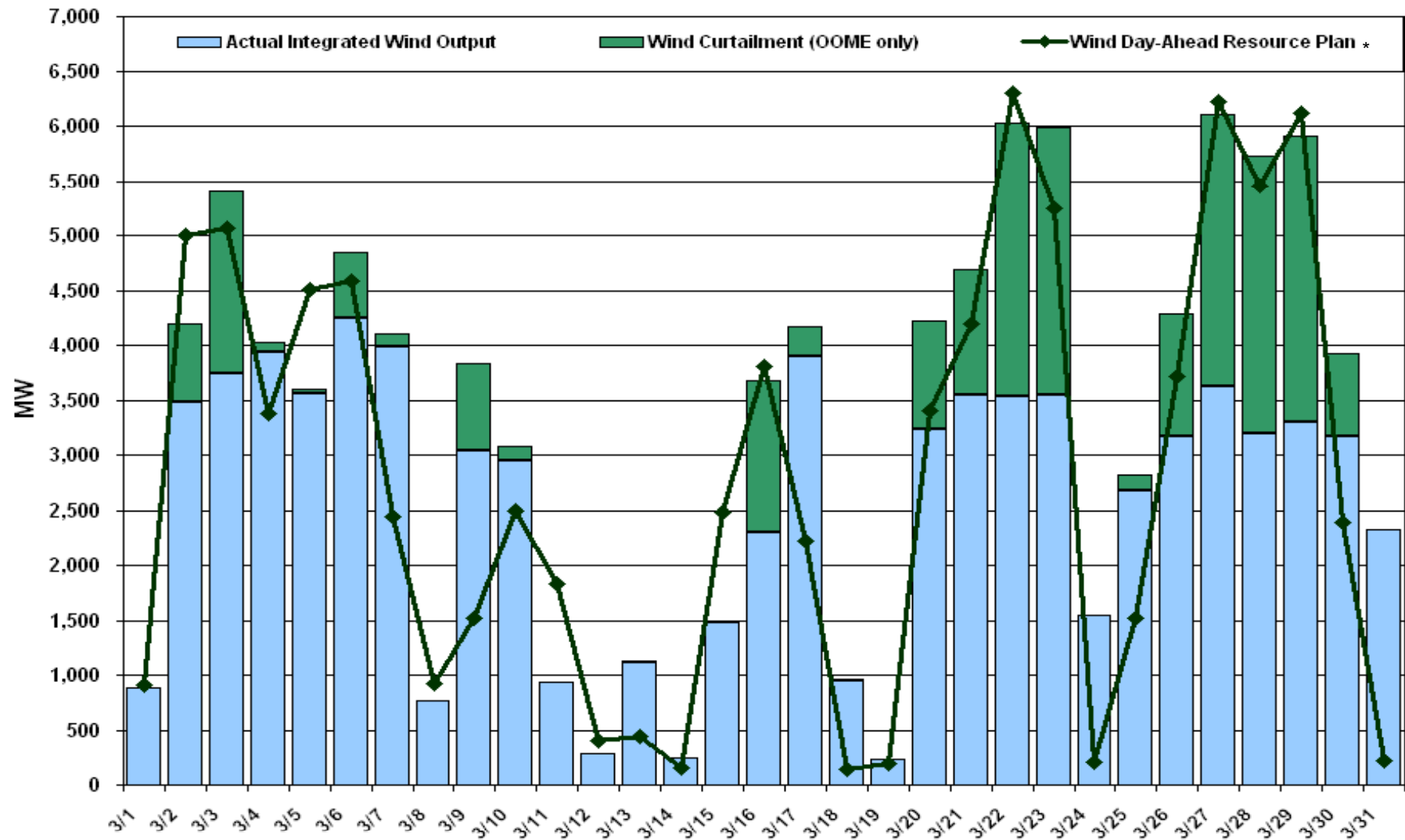


Note: All data are hourly averages during the peak load hour obtained from Resource Plans, and EMMS.



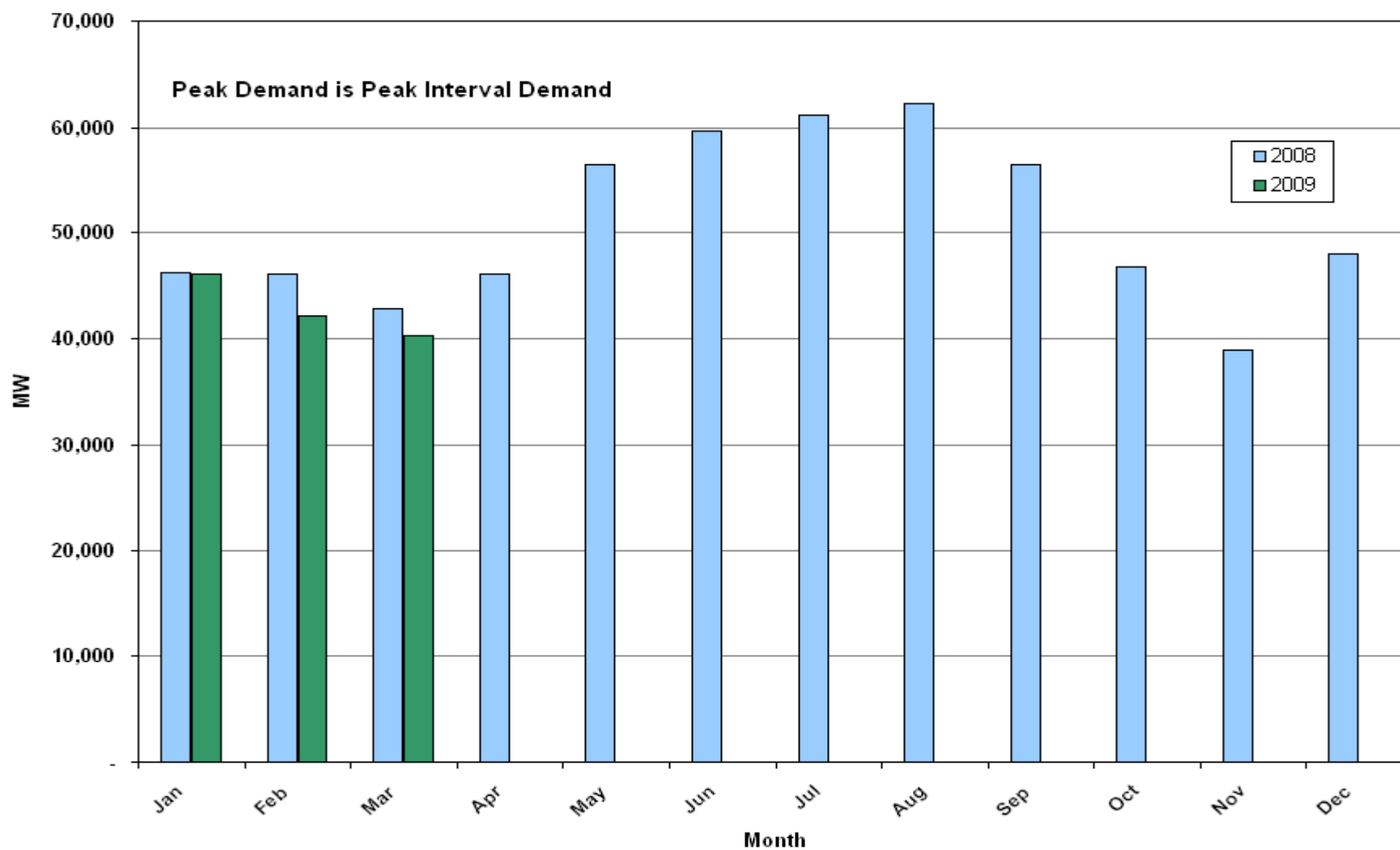
20 May 2009

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

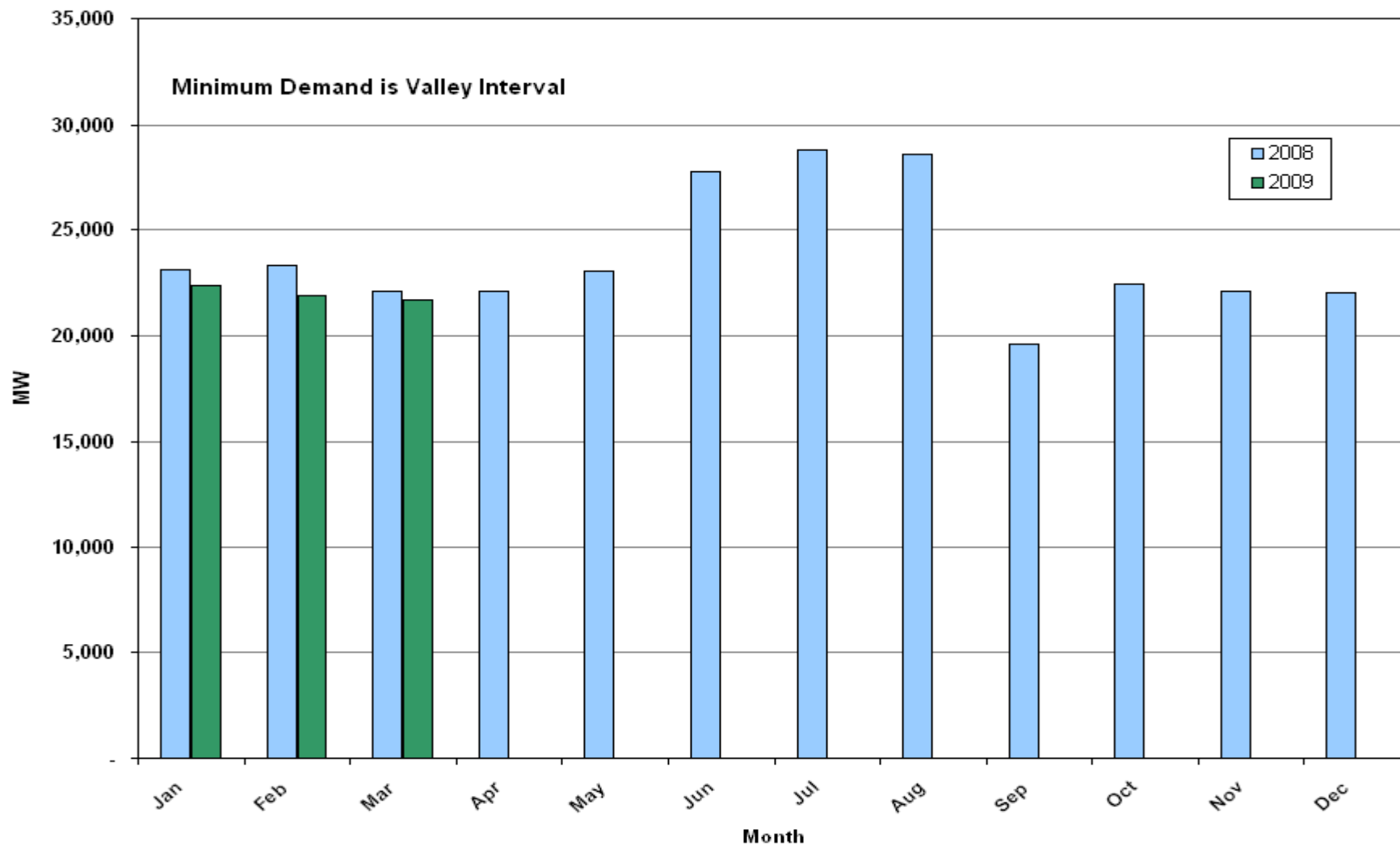


\* Wind Day-Ahead Resource Plan values based on 80% probability of exceedance forecast

# Monthly Peak Demand: Actual



# Monthly Minimum Demand: Actual

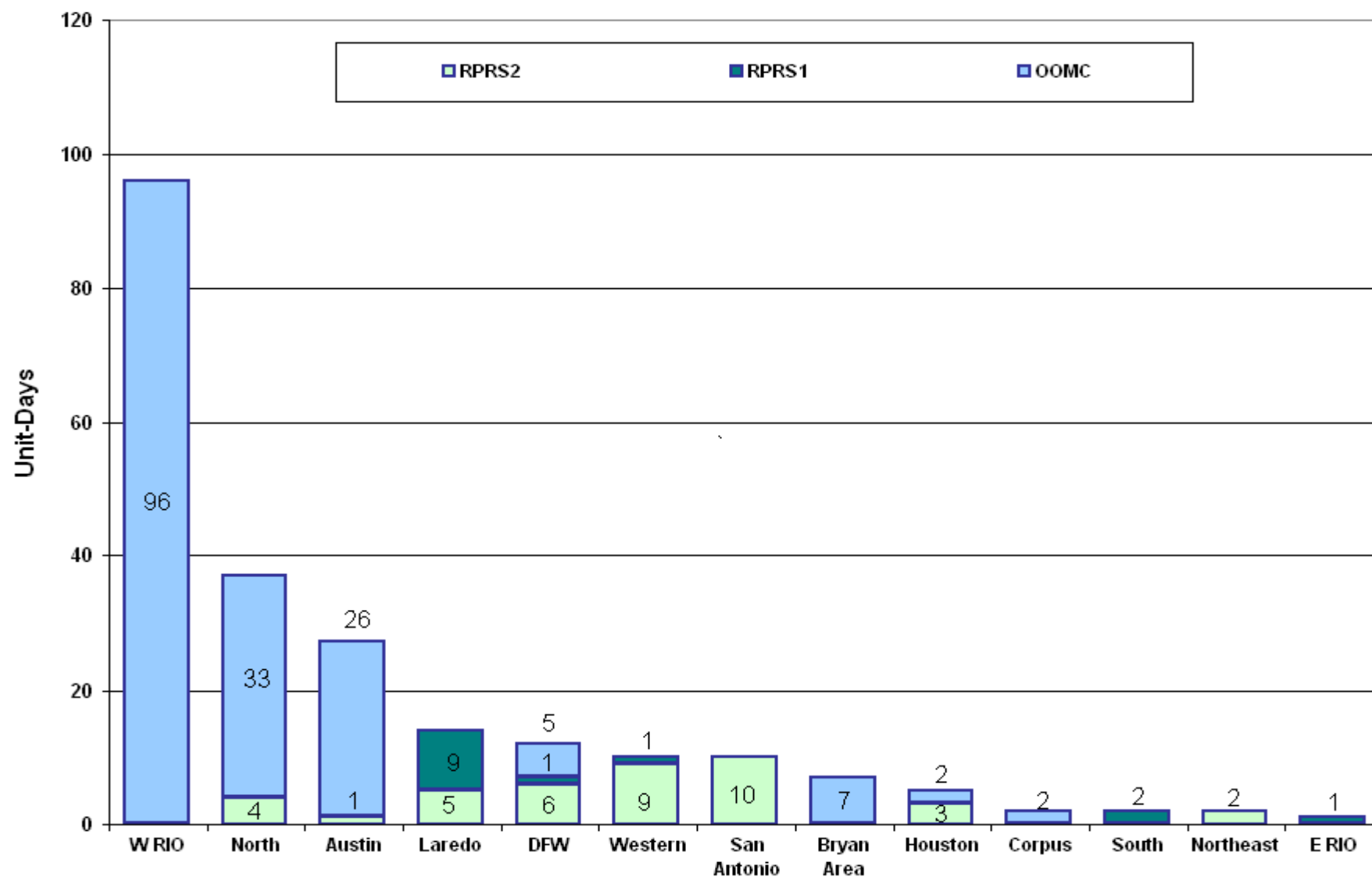


## Day-Ahead Load Forecast Performance in March 2009

	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)	March 2009 MAPE
Average Annual MAPE	3.79	3.55	3.30	3.61	3.24



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



# Zonal Congestion

<b>CSC</b>	<b>Mar 08 Days</b>	<b>Jan 09 Days</b>	<b>Feb 09 Days</b>	<b>March 09 Days</b>	<b>Last 12 Months Total Days (Feb 08 – Feb 09)</b>
<b>North – Houston</b>	4	0	0	<b>9</b> March – 18, 19, 23-25, 27, 29-31	80
<b>North – West</b>	2	0	1	<b>2</b> March – 11, 12	14
<b>West – North</b>	28	19	14	<b>13</b> March – 2- 8, 10, 11, 16-18, 28	197
<b>South – North</b>	9	1	0	<b>3</b> March – 1, 11, 12	33
<b>North - South</b>	13	2	0	<b>7</b> March – 4-9, 18	107

## Significant System Incidents in March 2009

- **March 18<sup>th</sup> at 07:14**
  - A station breaker failed resulting in two unit trips.
- **March 04<sup>th</sup> ,19<sup>th</sup> , and 21<sup>st</sup>**
  - Day-ahead Ancillary Service Market did not meet the Market time line.
- **March 04<sup>th</sup> and 8<sup>th</sup>**
  - The Day-ahead Replacement Reserve Service Market did not meet the Market time line

## Advisories and Alerts in March 2009

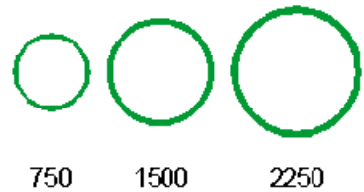
- **No Advisories issued for Adjusted Responsive Reserve (ARR) below 3000 MW.**
- **No Alerts issued for ARR below 2500 MW in March 2009.**
- **Transmission Alerts (operation beyond n-1 criteria):**
  - 03/27 04:44 Transmission Alert in Turkey area due to a forced outage in Matador area.
  - 03/27 13:47 Transmission Alert for the loss of Lon Hill - Coleta Creek 345KV overloads Warburton - Victoria 138KV
  - 03/28 13:47 Transmission Alert for the loss of Ballinger 138/69KV auto beyond first contingency criteria.
- **No EECs in March 2009**

## Planning Summary

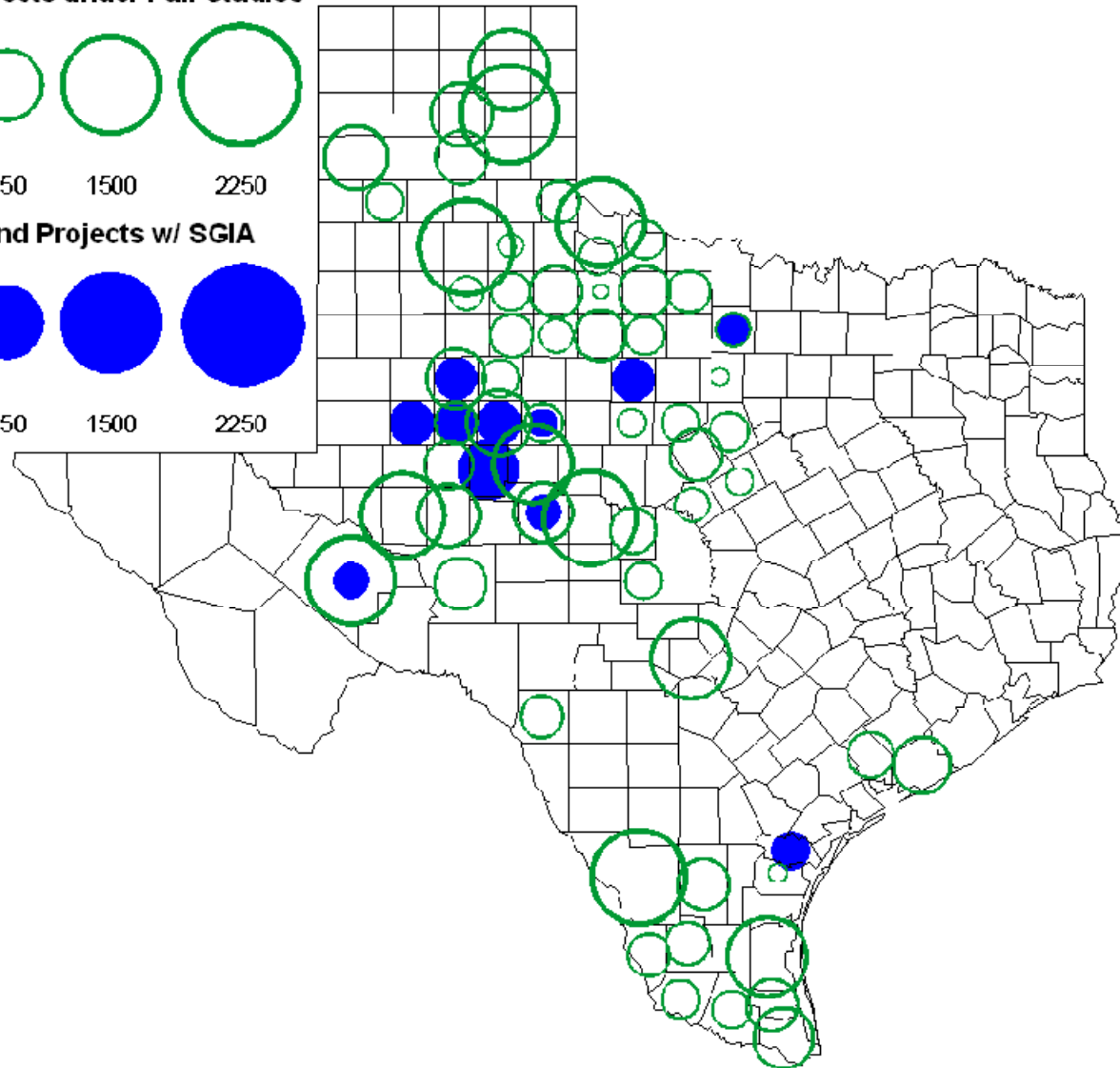
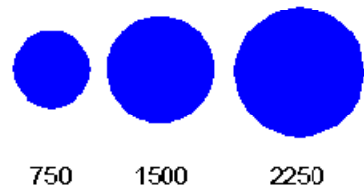
- **ERCOT is currently tracking 243 active generation interconnection requests totaling almost 97,000 MW. This includes over 48,000 MW of wind generation.**
- **Regional Planning is reviewing proposed transmission improvements with a total estimated cost of \$979.3 million**
- **All transmission projects (in engineering, routing, licensing and construction) totals approximately \$4.1 billion**
- **Transmission projects approved in 2009 totaled \$105 million**
- **Transmission projects energized in 2008 totaled \$453 million**
- **Executed RMR contract for Luminant Permian 5 through December 31, 2009.**

# County Location of Installed Capacity and Interconnection Requests (wind) April 2009

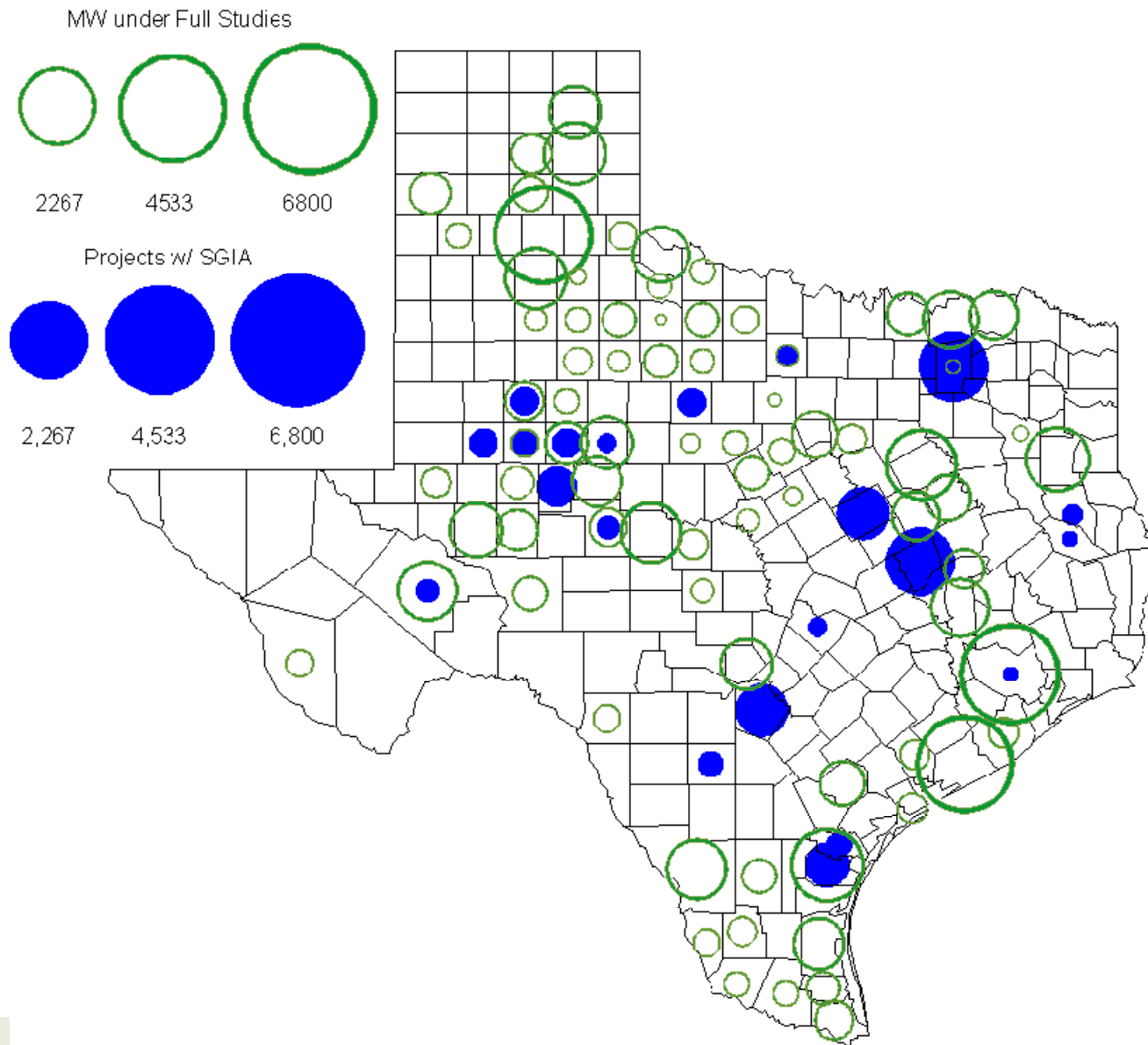
Wind Projects under Full Studies



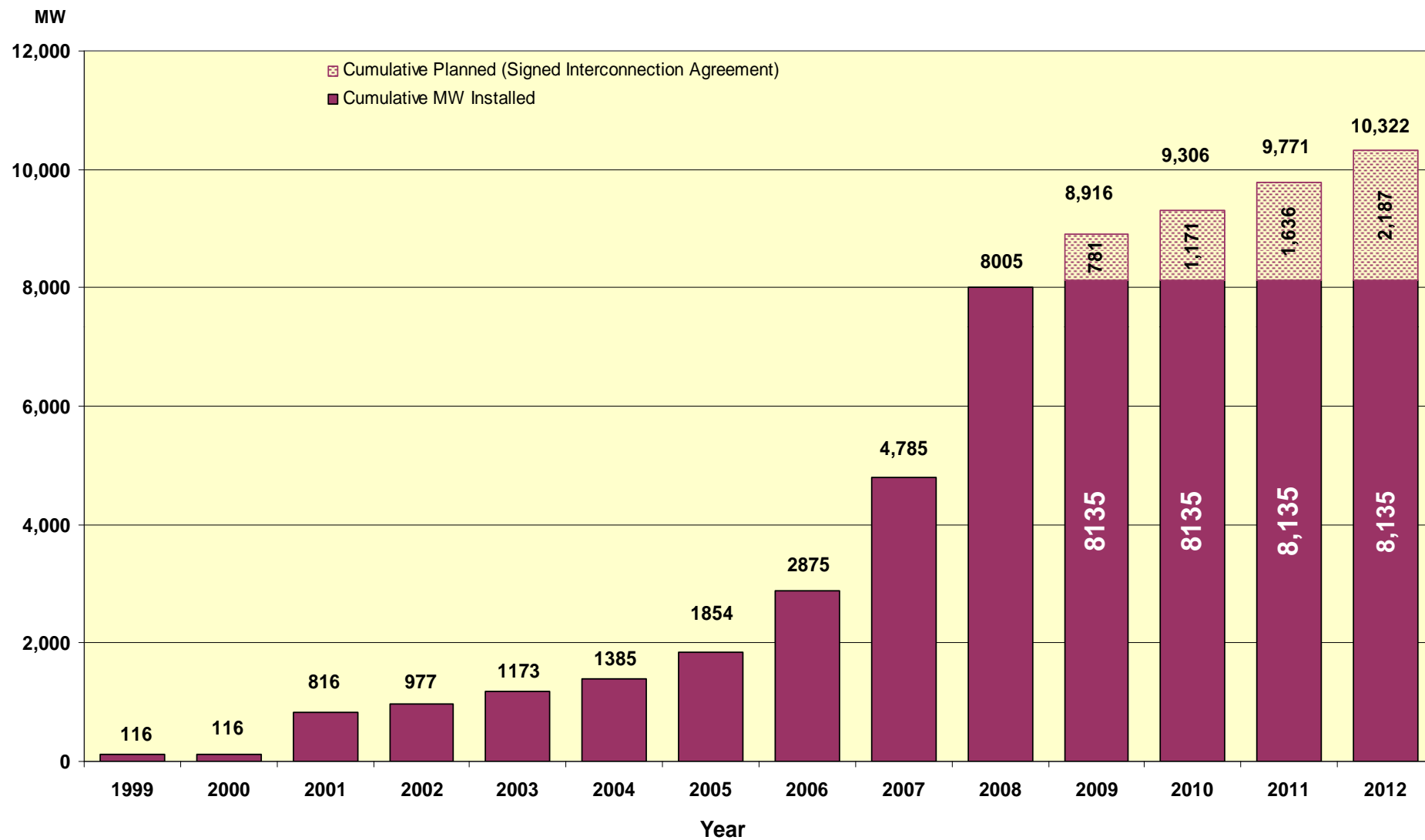
Wind Projects w/ SGIA



# County Location of Installed Generation and Interconnection Requests (all fuels) April 2009

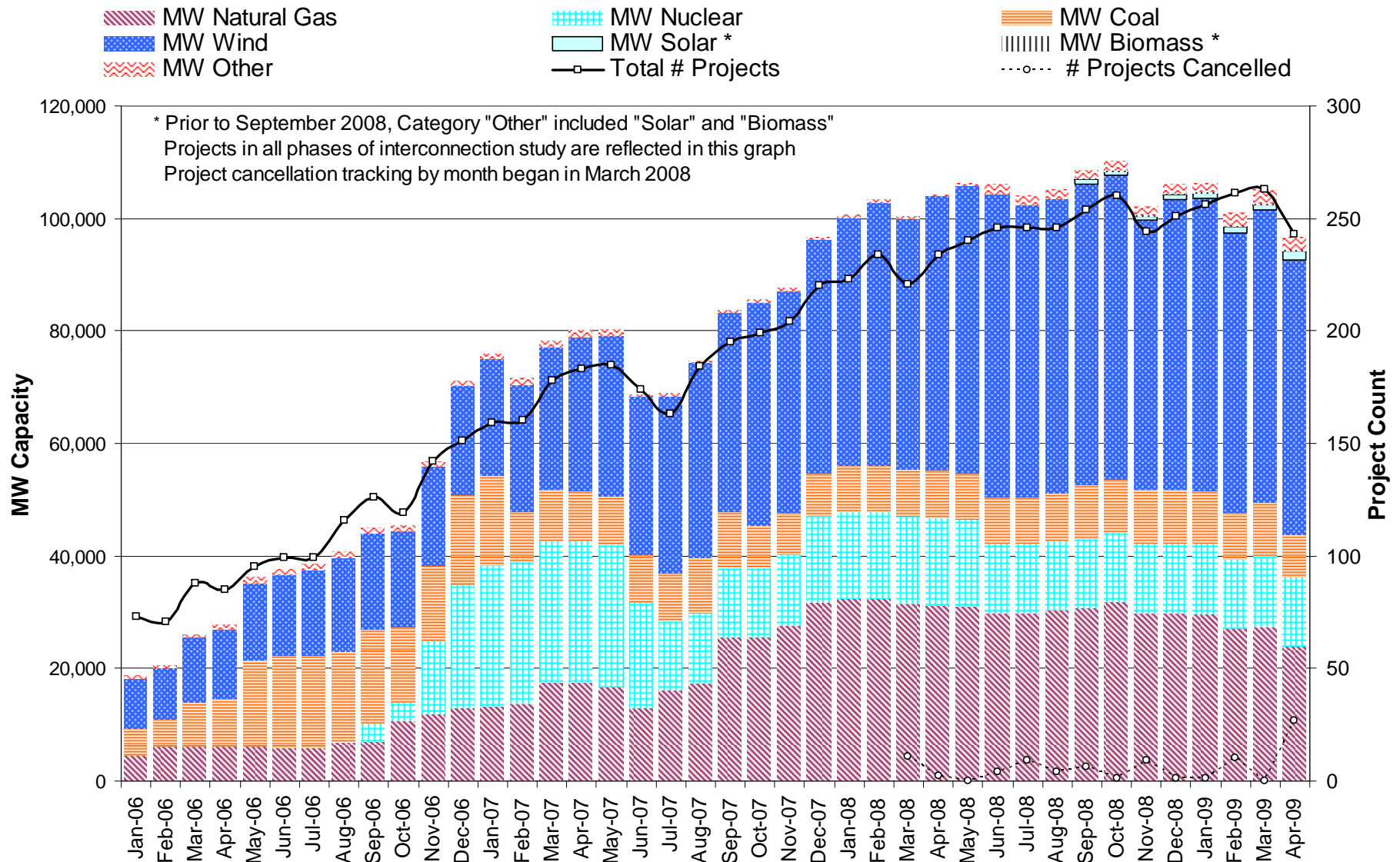


# Wind Generation





# Generation Interconnection Activity by Fuel



# Generation Interconnection Activity by Project Phase

