



Grid Operations and Planning Report

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**Board of Directors Meeting
July 19, 2011**

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Summary

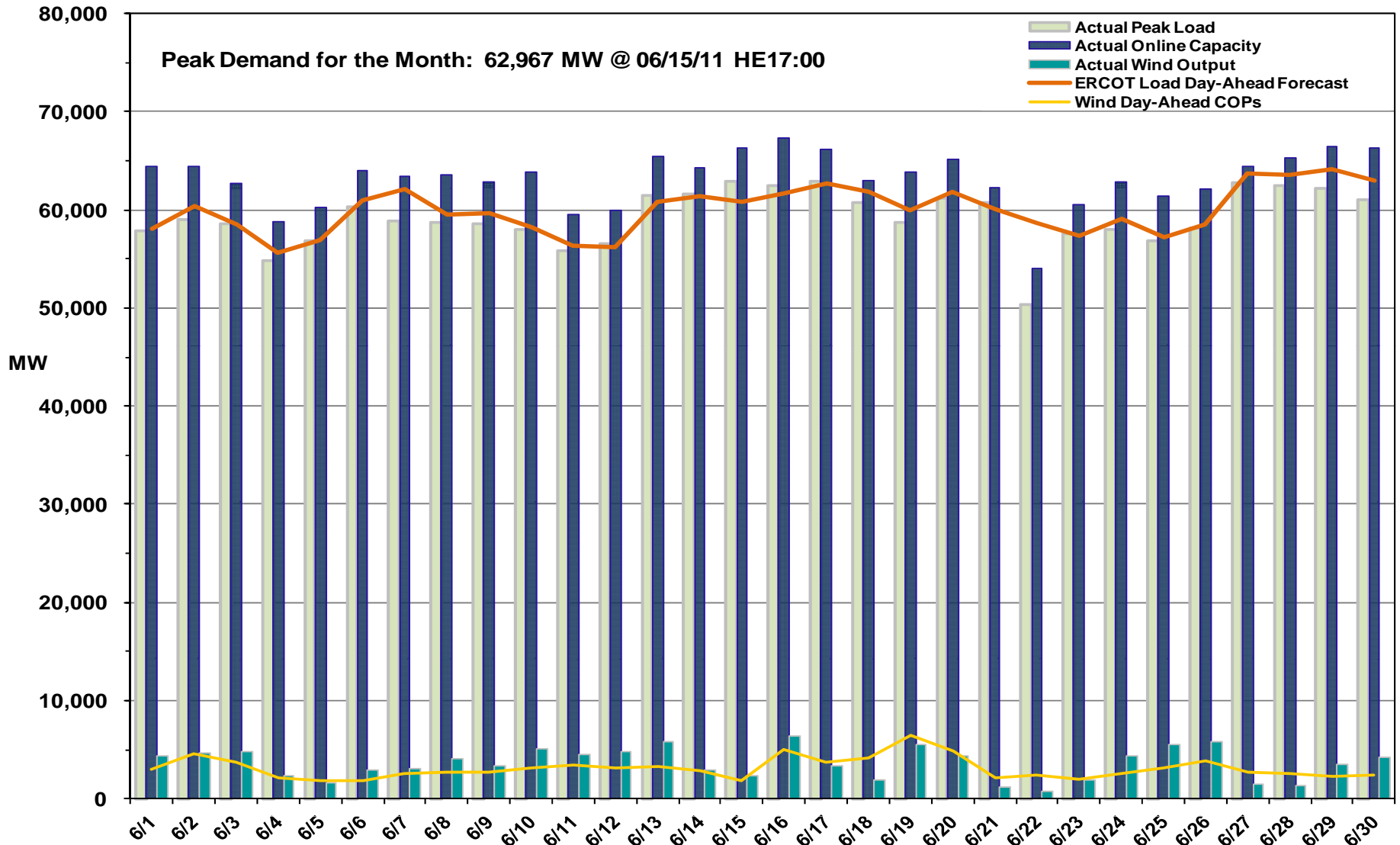
- **June 2011 Operations**

- The peak demand of 62,967 MW on June 15 was less than the mid-term forecast peak of 64,123 MW and more than the June 2010 actual peak demand of 60,789 MW.
- Day-ahead load forecast error for June was 2.28%
- Advisory for Physical Responsive Capability (PRC) below 3000 MW issued four days
- Watch for PRC under 2500 MW issued one day
- An Energy Emergency Alert (EEA) event Level 1 occurred June 27
- Transmission Watch issued one day for Laredo area

- **205 active generation interconnect requests totaling over 63,000 MW as of June 30, 2011. Six more requests and 1,000 MW more than May 31, 2011.**

- **9,400 MW wind capacity on line June 30, 2011. No change from May 31, 2011.**

June 2011 Daily Peak Demand: Hourly Average Actual vs. Forecast, Wind Day-Ahead COPs & On-line Capacity at Peak

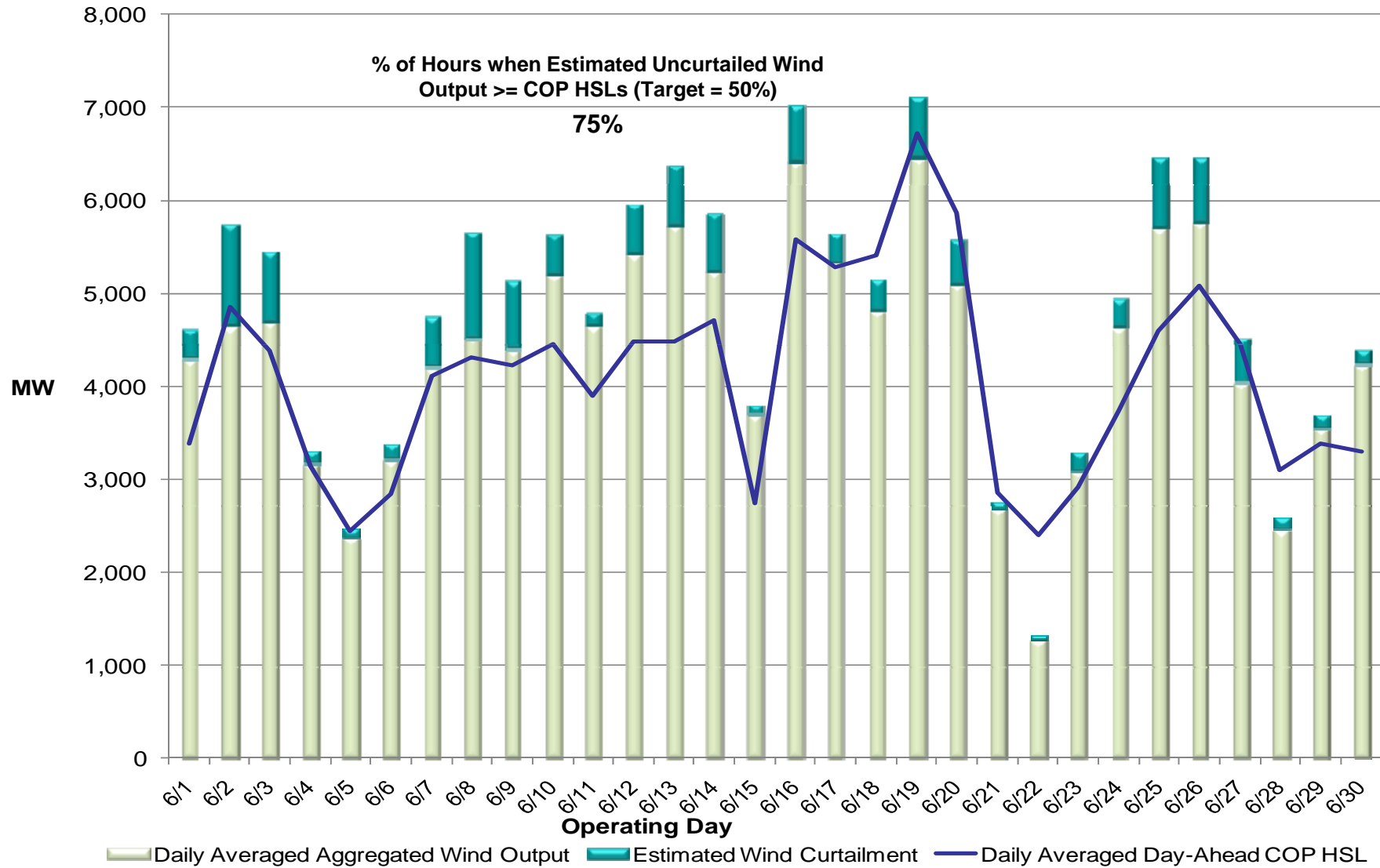


Note: All data are hourly averages during the peak load hour obtained from COPs, and EMMS.



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June 2011: Actual Wind Output plus Curtailments vs. Wind Day-Ahead COPs for All Hours



Note: QSEs must use the AWST 50% probability of exceedance forecast as the HSL in their COPs

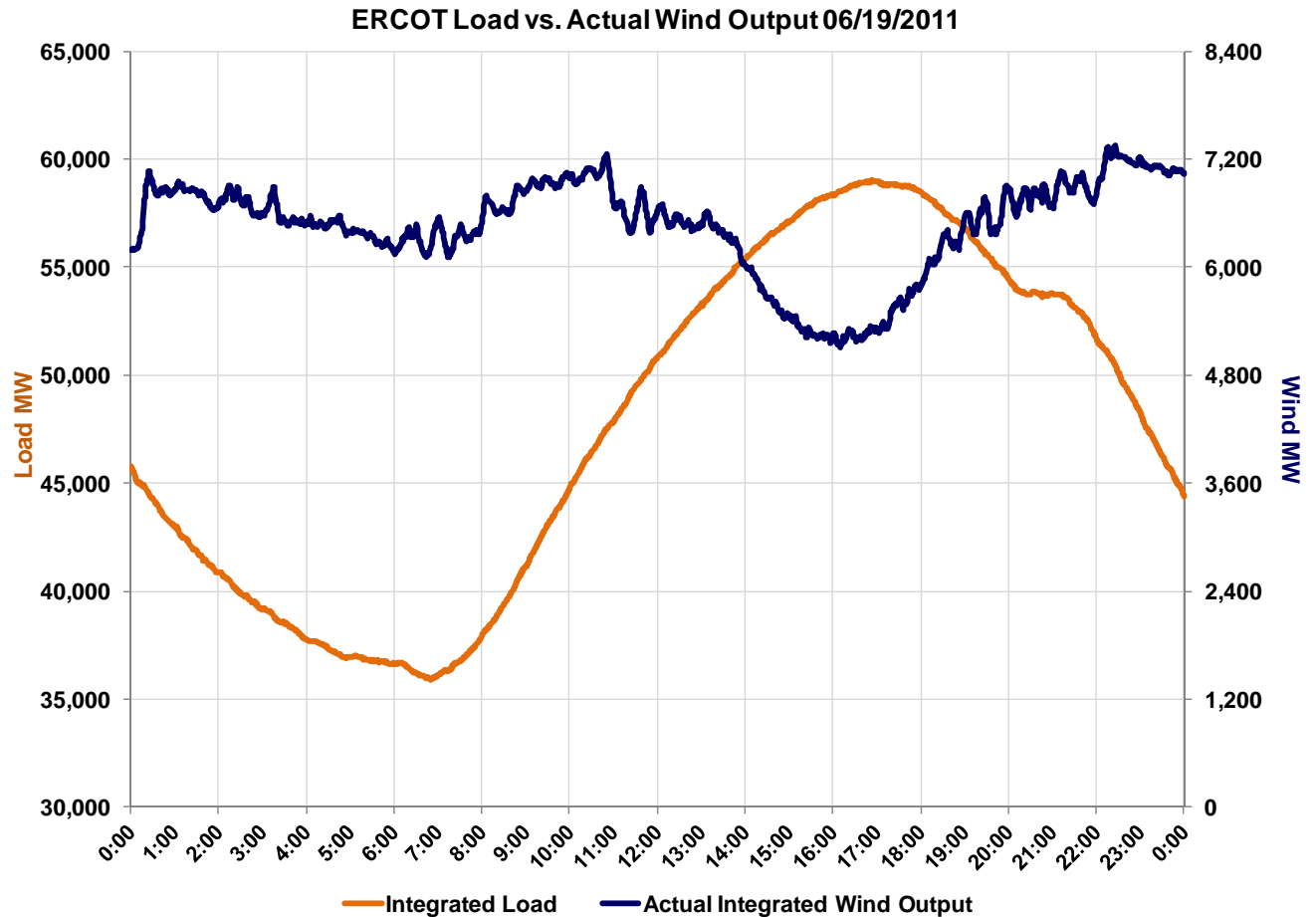


New wind peak generation record June 19, 2011

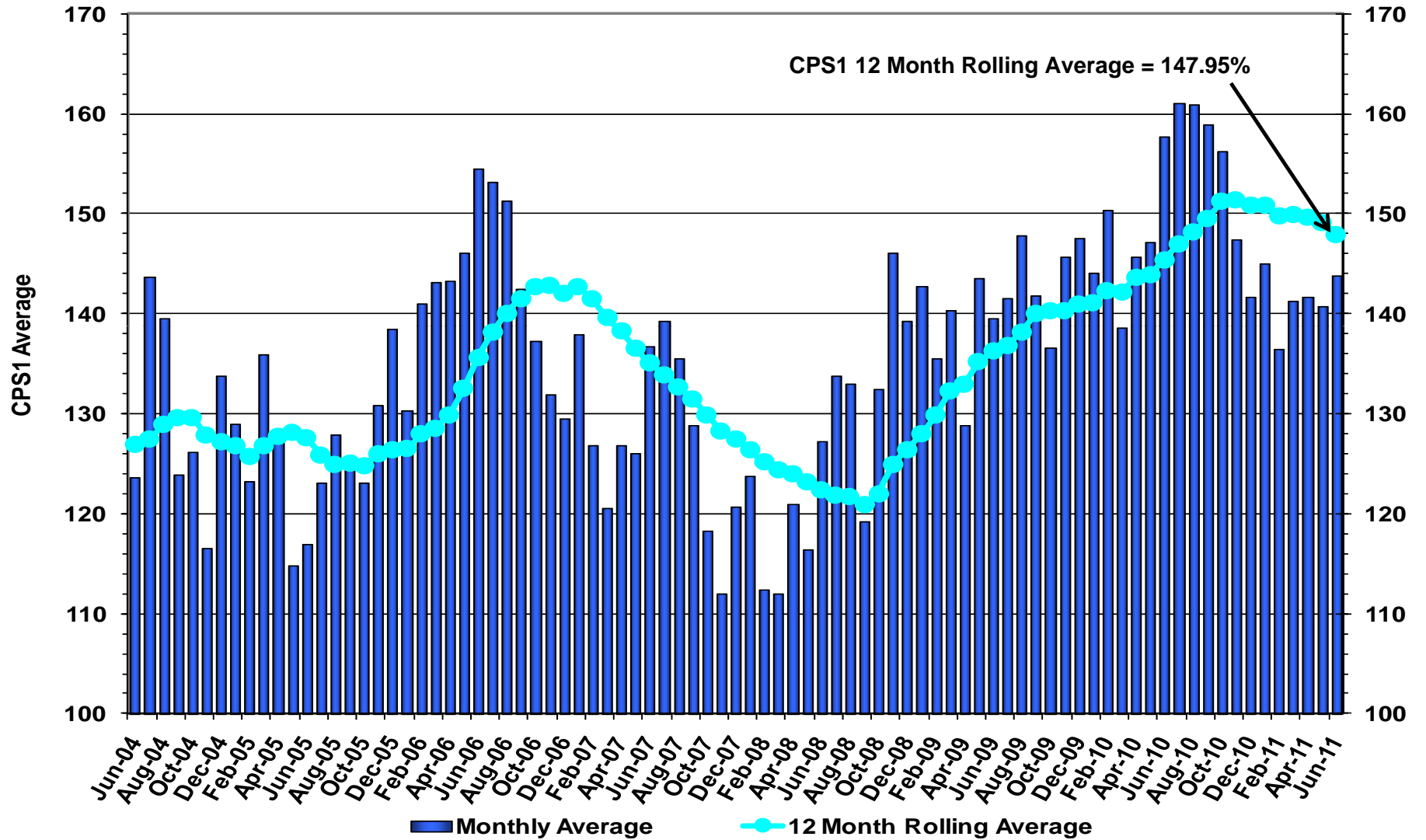
ERCOT reached a new wind generation record on Sunday, June 19, 2011.

Wind generation hit **7,355 MW** at 10:26 pm, representing 14.58 percent of the load at the time (50,447 MW).

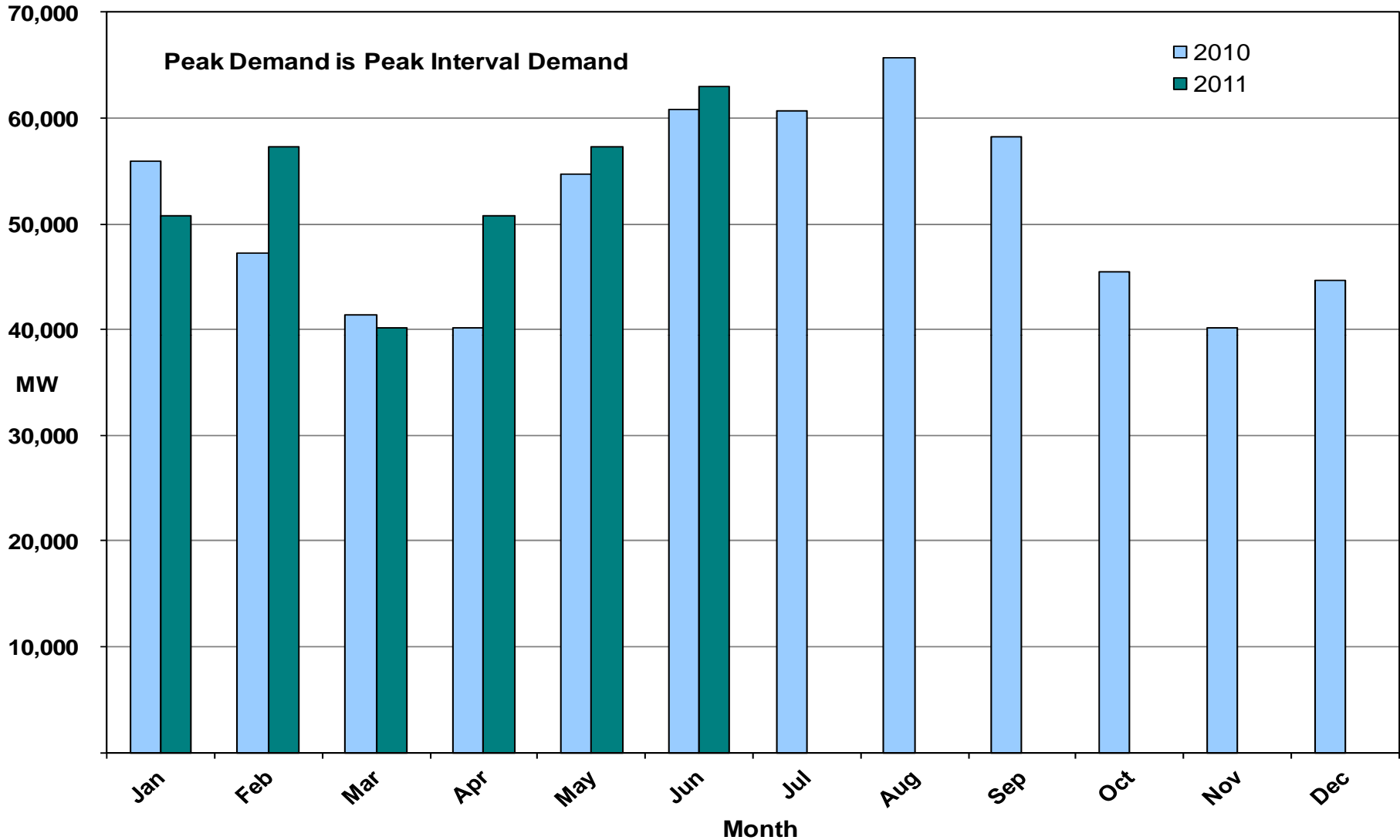
The new wind record exceeds the previous record of 7,227 MW (Dec. 11, 2010), by 128 MW.



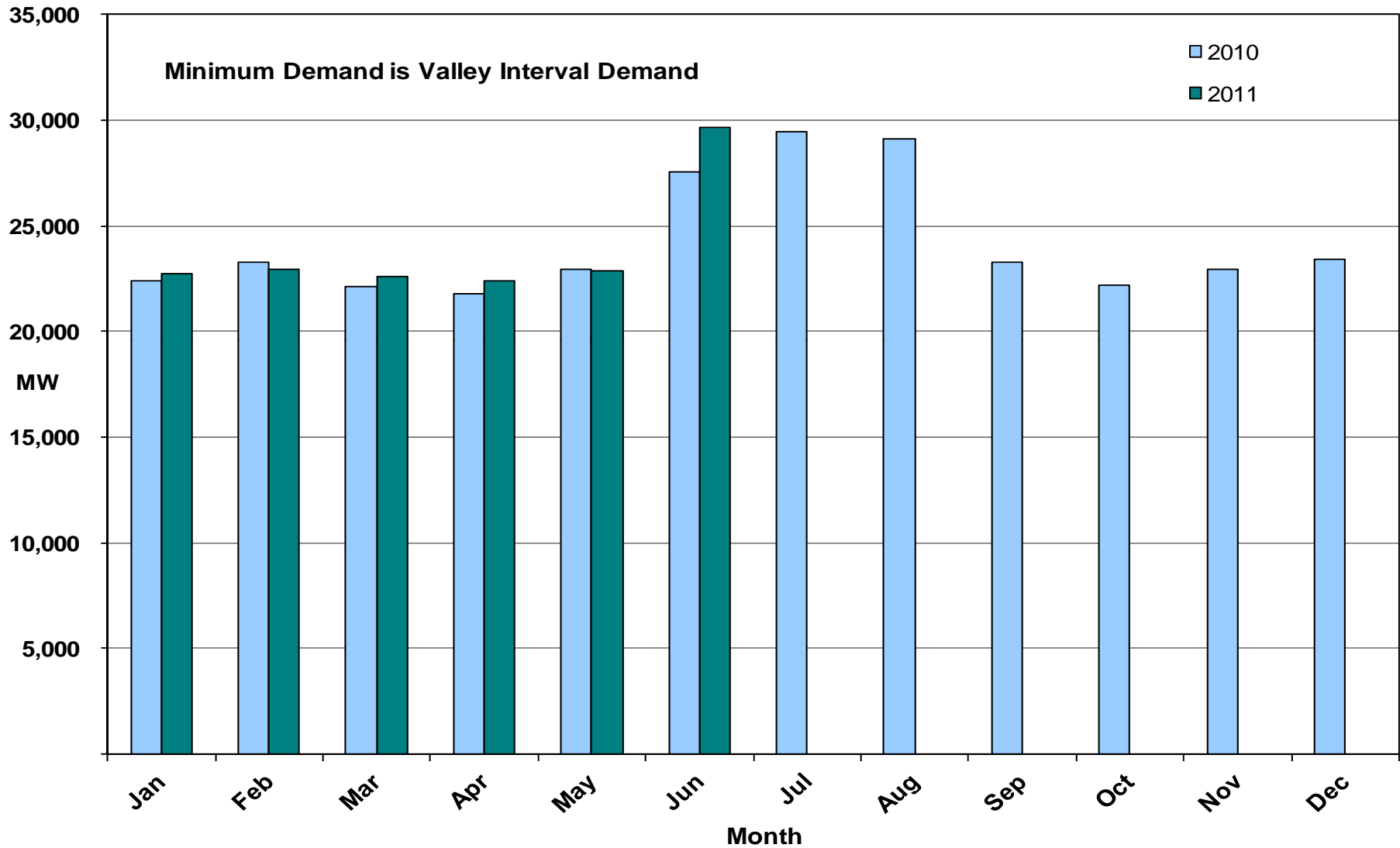
June 2011 ERCOT's CPS1 Monthly Performance



June 2011: Monthly Peak Actual Demand



June 2011: Monthly Minimum Actual Demand

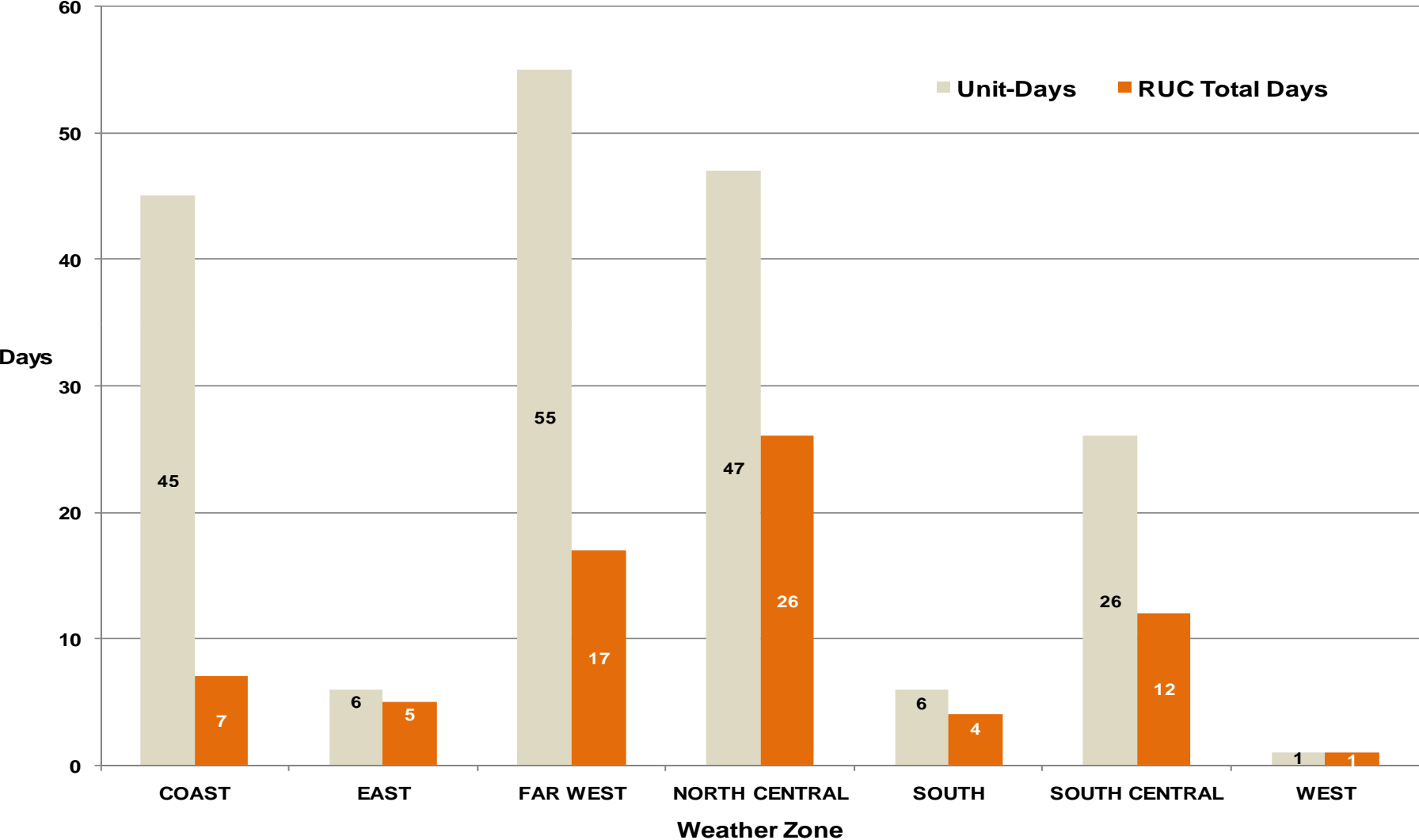


Day-Ahead Load Forecast Performance in June 2011

Mean Absolute Percent Error (MAPE) for ERCOT Mid-Term Load Forecast (MTLF)
Run at 16:00 Day Ahead

	2008 MAPE	2009 MAPE	2010 MAPE	2011 MAPE	June 2011 MAPE	
Average Annual MAPE	3.30	3.11	2.83	2.92	2.28	
Lowest Monthly MAPE	2.45	1.93	2.24	2.02	Lowest Daily MAPE	0.78 June-28
Highest Monthly MAPE	4.99	4.11	3.79	3.55	Highest Daily MAPE	12.75 June-22

Reliability Unit Commitment (RUC) Capacity by weather zone in June 2011



June 2011: Generic Transmission Limits (GTLs)

GTLs	Jun 10 Days CSC	Apr 11 Days GTLs	May 11 Days GTLs	Jun 11 Days GTLs	Last 12 Months Total Days (Jun 10 – Jun 11)
North – Houston	11	0	1	0	49
West – North	19	27	28	29 Jun-(1-20, 22-30)	283
Valley Import		0	0	0	15

GTL: A transmission flow limit more constraining than a Transmission Element's normal limit established to constrain flow between geographic areas of the ERCOT Transmission System that is used to enforce stability and voltage constraints that cannot be modeled directly in ERCOT's transmission security analysis applications.

Note: This table lists how many times a constraint has been activated to avoid exceeding a GTL limit, it does not imply an exceedance of the GTL occurred.

Advisories and Watches in June 2011

- **Advisories issued for Physical Responsive Capability (PRC) below 3000 MW.**
 - Issued 4 Days
- **Watches issued for Physical Responsive Capability (PRC) below 2500 MW.**
 - Issued 1 Day
- **Transmission Watches**
 - June 9th ERCOT issued a Transmission Watch for due to an unsolved contingency.
- **Energy Emergency Alerts**
 - 06/27 15:25 ERCOT issued an EEA Level 1 (Physical Responsive Capability (PRC) dropped below 2,300 MW).
 - 06/27 16:50 EEA Level 1 was cancelled.

Significant System Incidents in June 2011

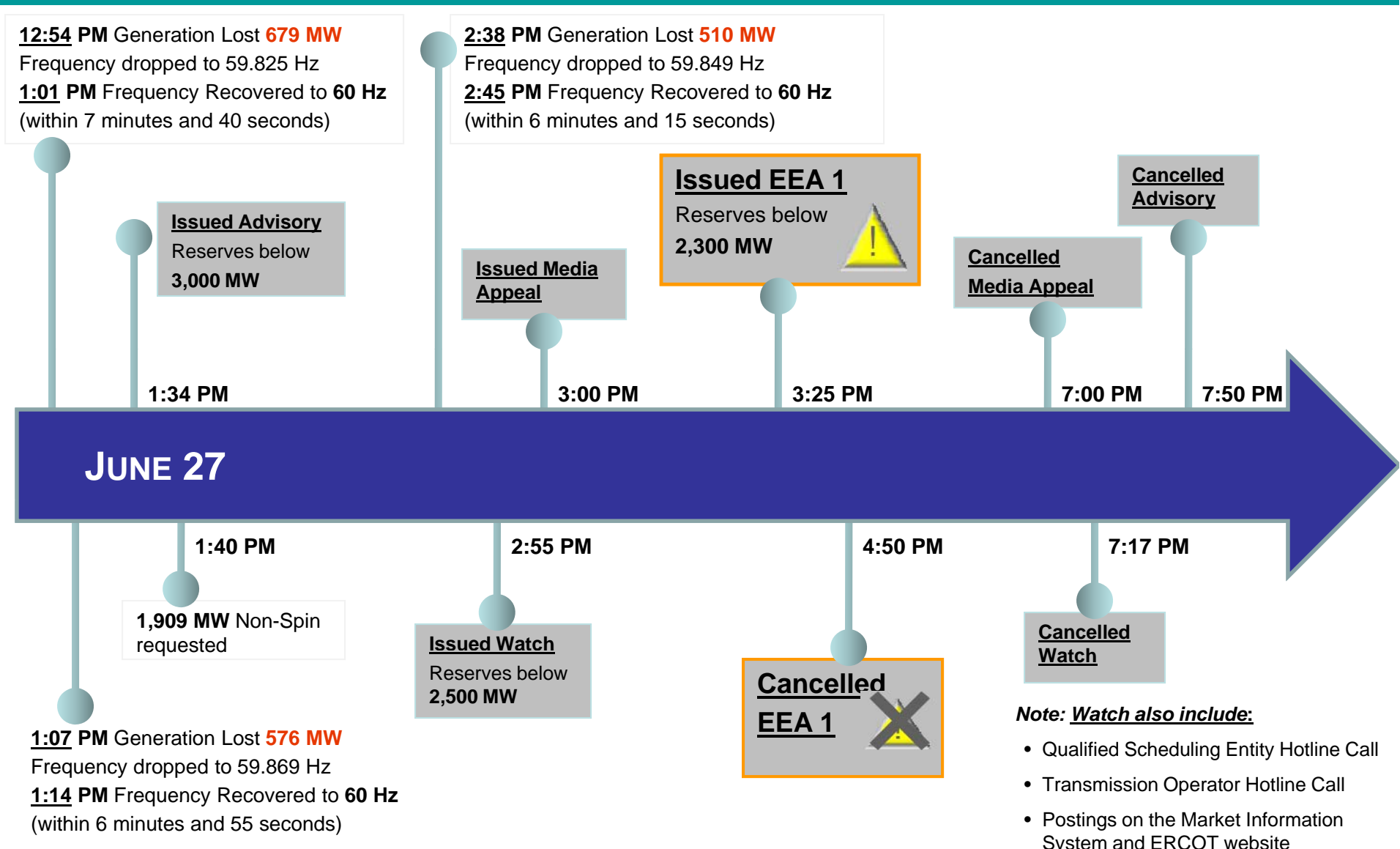
- **June 22nd**
 - From 13:23 to 14:00, ERCOT experienced multiple forced transmission outages (one 345KV Bus, two 345/138KV Autotransformers, three 345KV lines, and three 138KV lines) in the Rio Grande Valley area due to insulator flashover, likely due to contamination or lightning. Approximately 20.2 MW of firm load was shed by the Transmission Operator to address overloads on remaining lines. The load was restored at 14:25.
- **June 27th**
 - At 12:54, ERCOT experienced the loss of one resource (resulting in the loss of approximately 679 MW), this resource was tripped by the generator operator due to main steam temperature limits. Approximately 13 minutes later, the second resource at the same station tripped automatically due to loss of both feedwater pumps on low feedwater tank level, causing the loss of an additional 576 MW of generation

Frequency dropped to approximately 59.825 Hz immediately after the first trip. The system frequency recovered to 60 Hz in approximately 7 minutes and 40 seconds (~13:01:55). After the second trip the frequency dropped to approximately 59.869 Hz. The system frequency recovered to 60 Hz in approximately 6 minutes and 55 seconds (~13:14:50).

At 14:38 one combined cycle unit at another location tripped causing the loss of an additional 510 MW of generation due fuel control valve disruption that shut off fuel supply to the plant. Frequency dropped to approximately 59.849 Hz. The system frequency recovered to 60 Hz in approximately 6 minutes and 15 seconds (~14:45:05).

ERCOT requested 1,909 MW of Non-Spinning Reserve (Non-Spin) at 13:40. ERCOT ISO implemented Level 1 of its Energy Emergency Alert (EEA) at 15:25 as Physical Responsive Capability (PRC) dropped below 2,300 MW. By 16:50 the EEA Level 1 was cancelled and the Advisory was lifted due to PRC above 3,000 MW at 19:50.

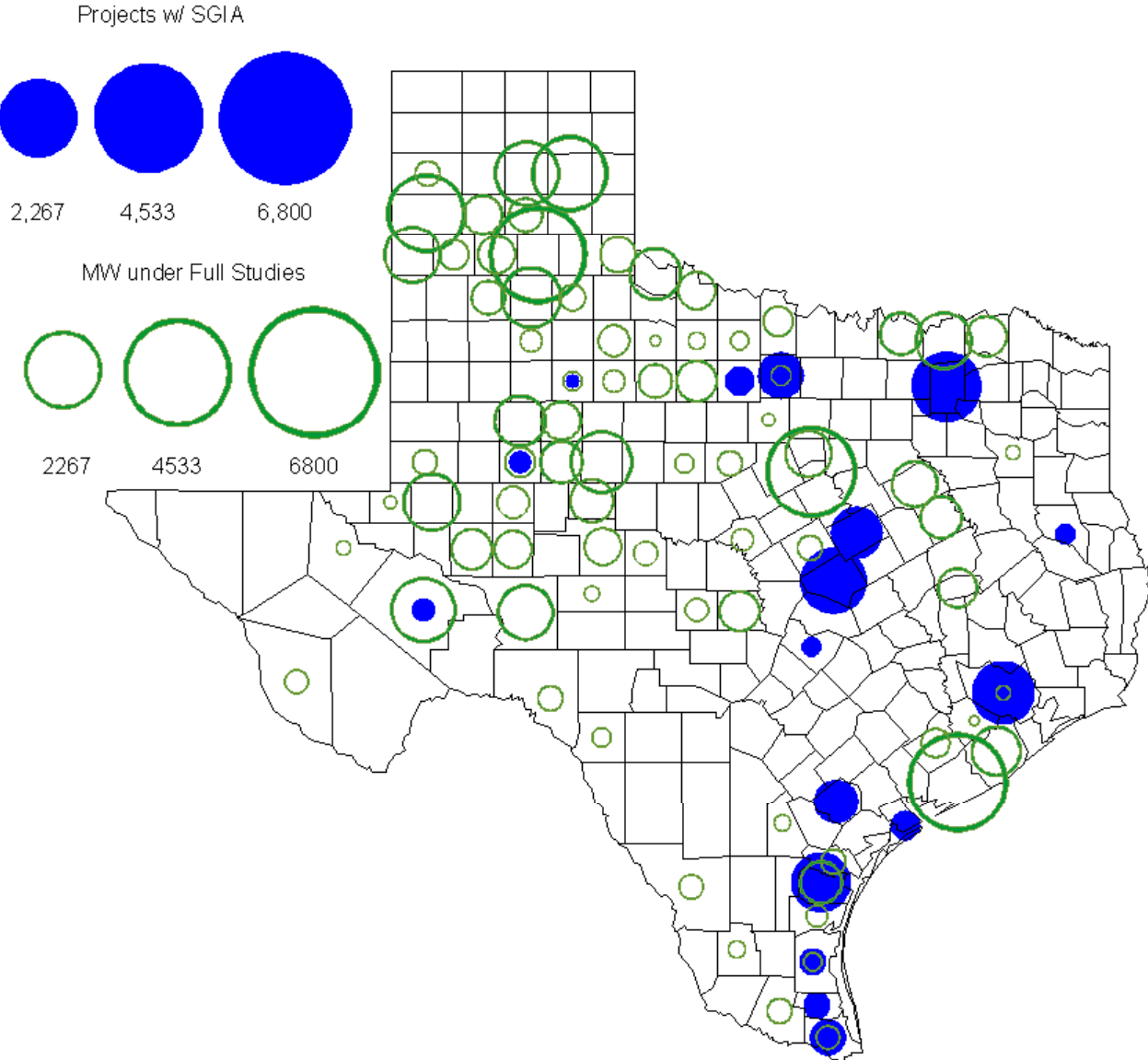
Energy Emergency Alert Level 1 – June 27, 2011



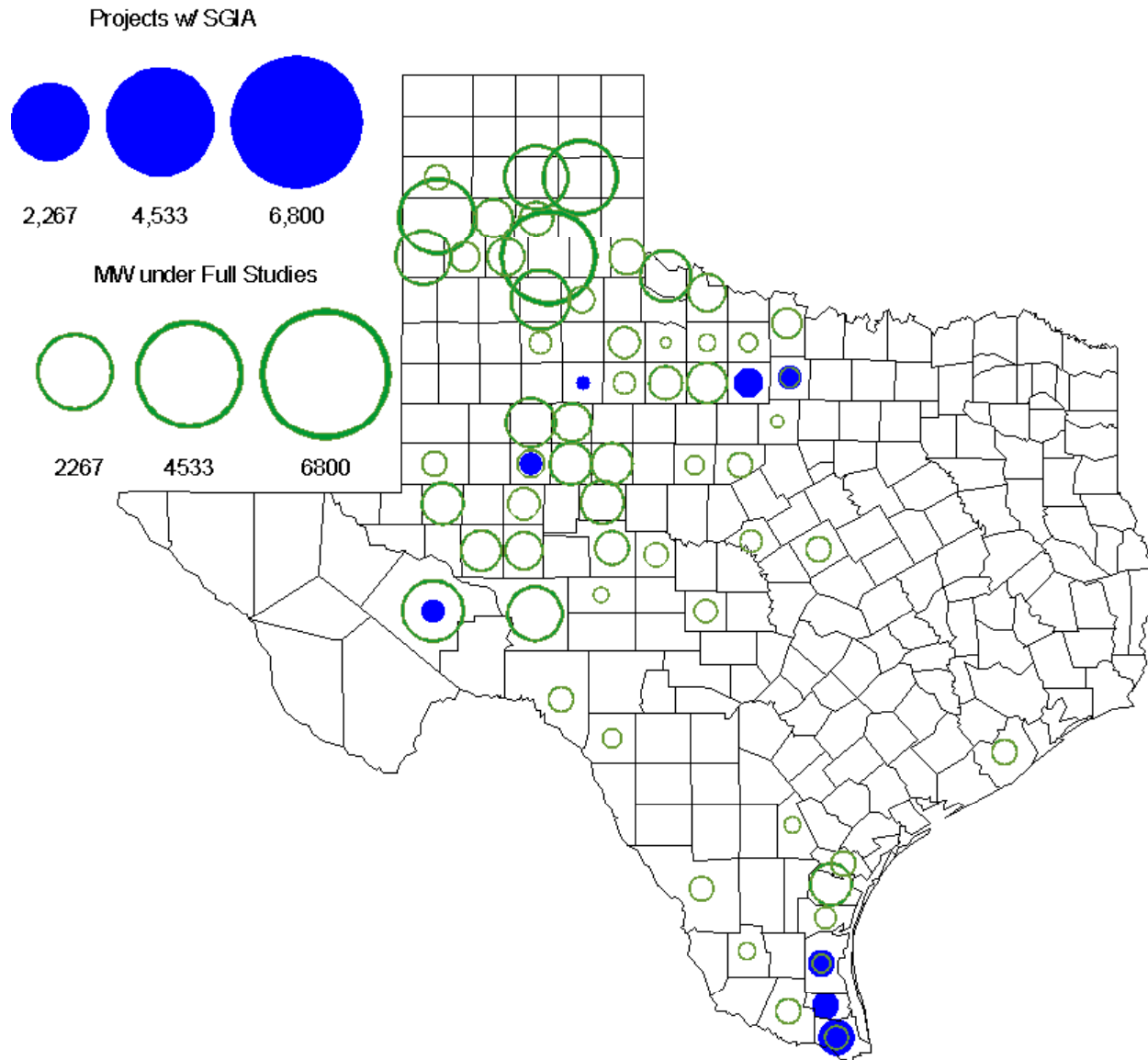
Planning Summary

- **ERCOT is currently tracking 205 active generation interconnection requests totaling over 63,000 MW. This includes over 37,000 MW of wind generation.**
- **ERCOT is currently reviewing proposed transmission improvements with a total cost of \$622.4 Million**
- **Transmission Projects endorsed in 2011 total \$23.6 Million**
- **All projects (in engineering, routing, licensing and construction) total approximately \$9.5 Billion**
- **Transmission Projects energized in 2011 total about \$174.0 million**

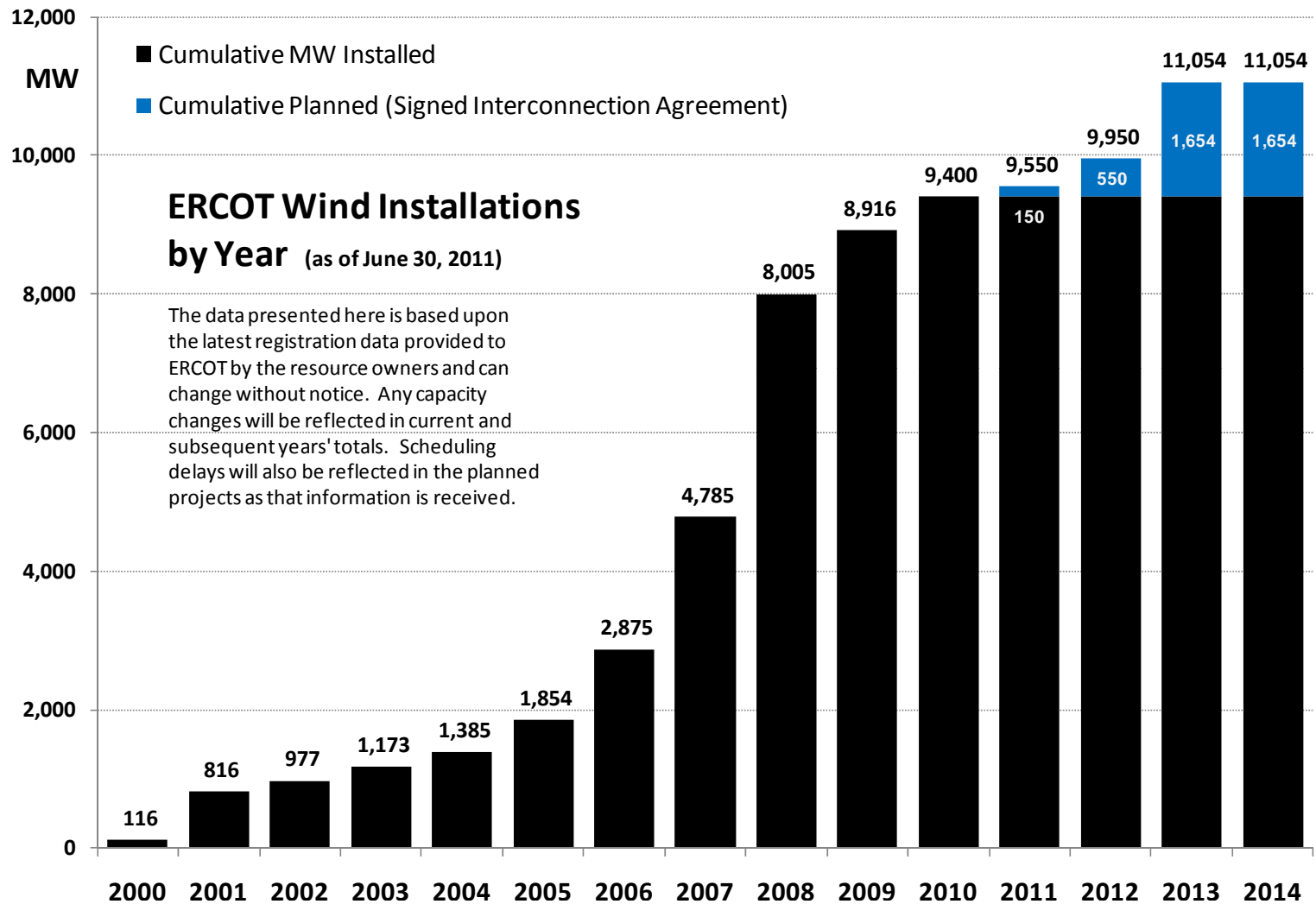
County Location of Planned Generation with Interconnection Requests (all fuels) June 2011



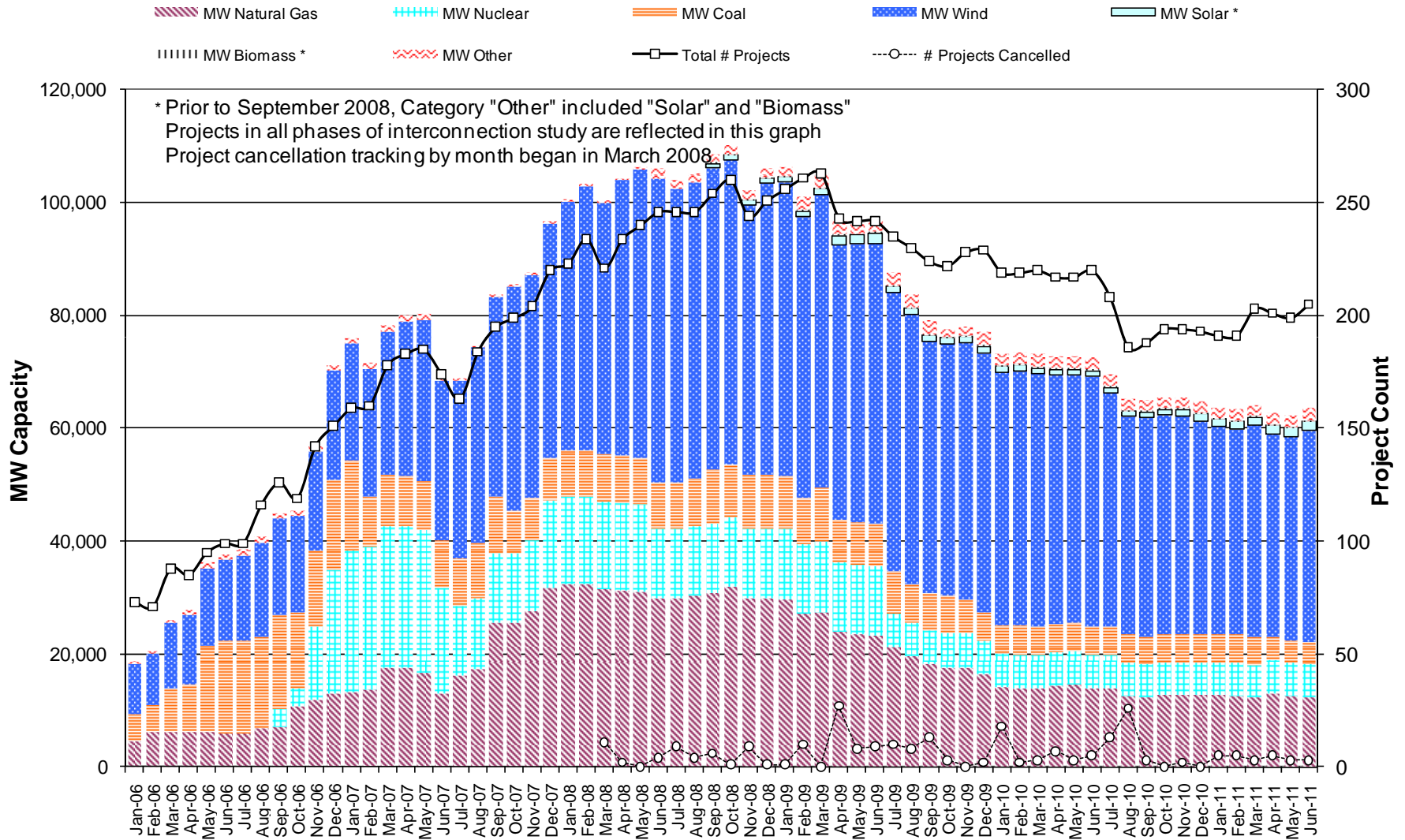
County Location of Planned Generation with Interconnection Requests (Wind) June 2011



Wind Generation



Generation Interconnection Activity by Fuel



Generation Interconnection Activity by Project Phase

