Grid Operations and Planning Report

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ERCOT Board of Directors

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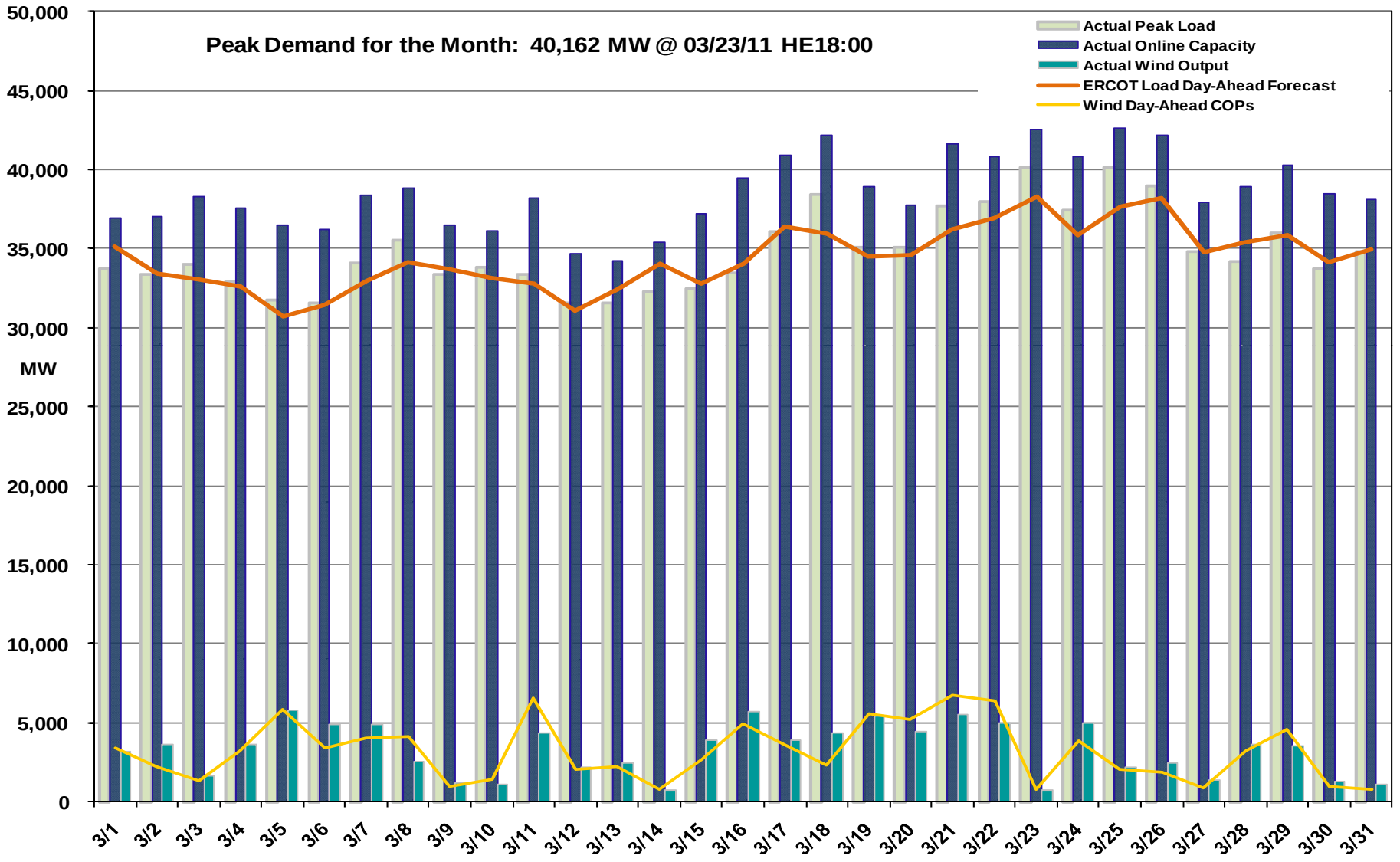
Summary

- **March 2011 Operations**
  - The peak demand of 40,162 MW on March 23 was more than the mid-term forecast peak of 38,240 MW and less than the March 2010 actual peak demand of 41,440 MW
  - Day-ahead load forecast error for February was 2.02%.
  - Advisory for Physical Responsive Capability (PRC) below 3000 MW issued 18 days
  - No Watch for PRC under 2500 MW issued
  - An Energy Emergency Alert (EEA) event Level 1 occurred March 23
  - Transmission Watch issued one day

- **203 active generation interconnect requests totaling over 64,000 MW as of March 31, 2011. Eleven more requests and 1,000 more MW than February 28, 2011.**

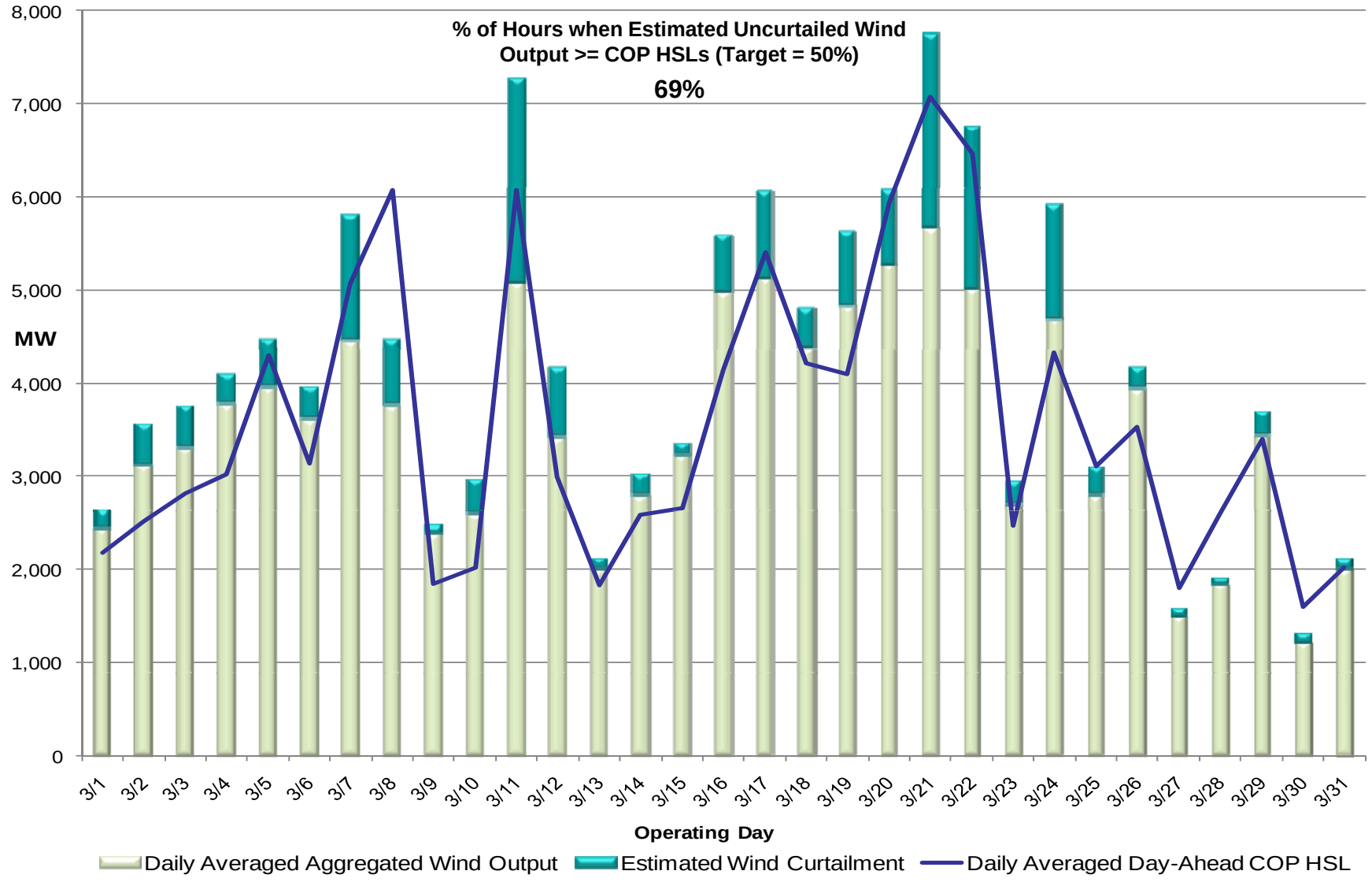
- **9,400 MW wind capacity on line March 31, 2011. No change from February 28, 2011.**

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



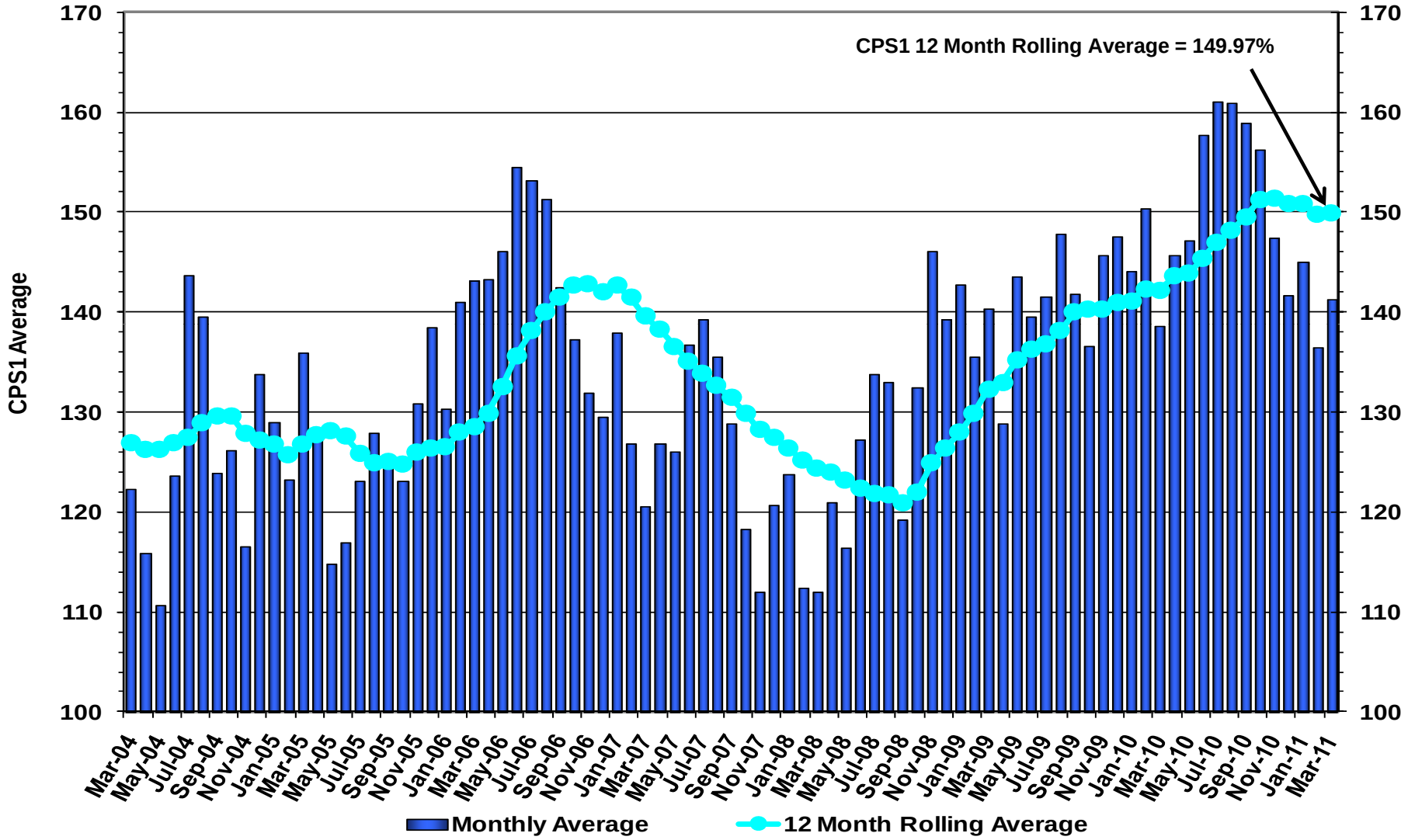
Note: All data are hourly averages during the peak load hour obtained from COPs, and EMMS.

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

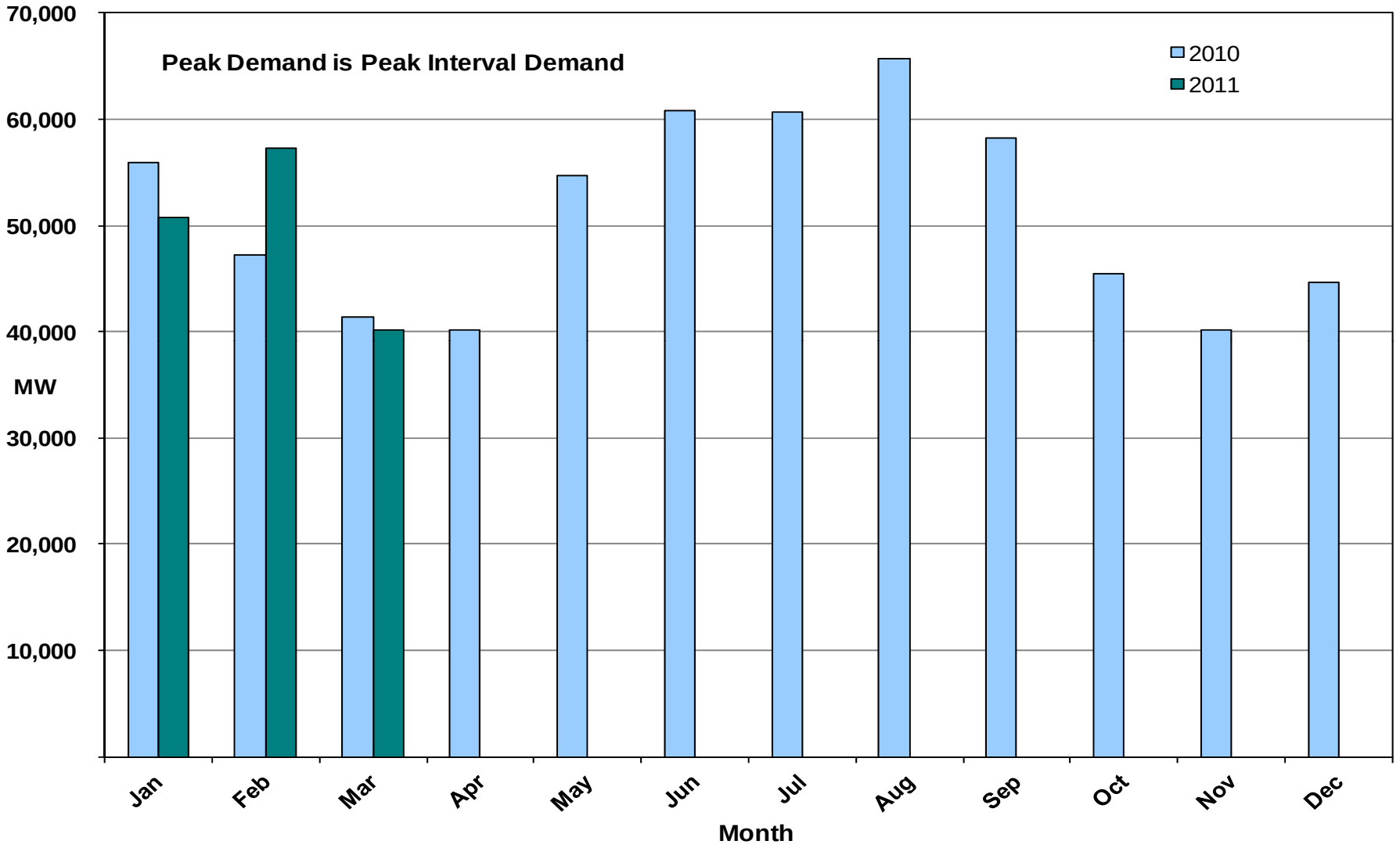


Note: QSEs must use the AWST 50% probability of exceedance forecast as the HSL in their COPs

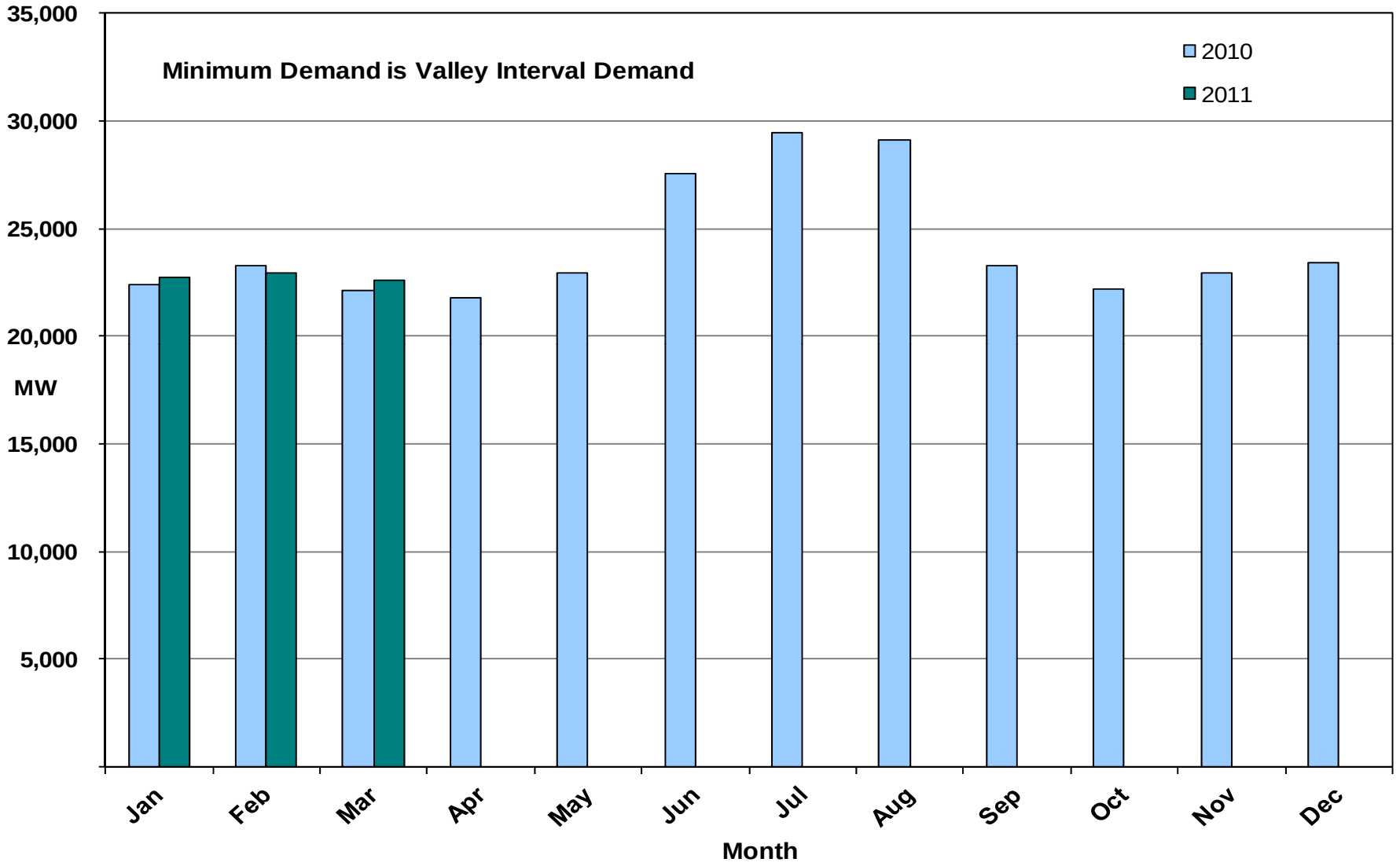
March 2011 ERCOT's CPS1 Monthly Performance



March 2011: Monthly Peak Actual Demand



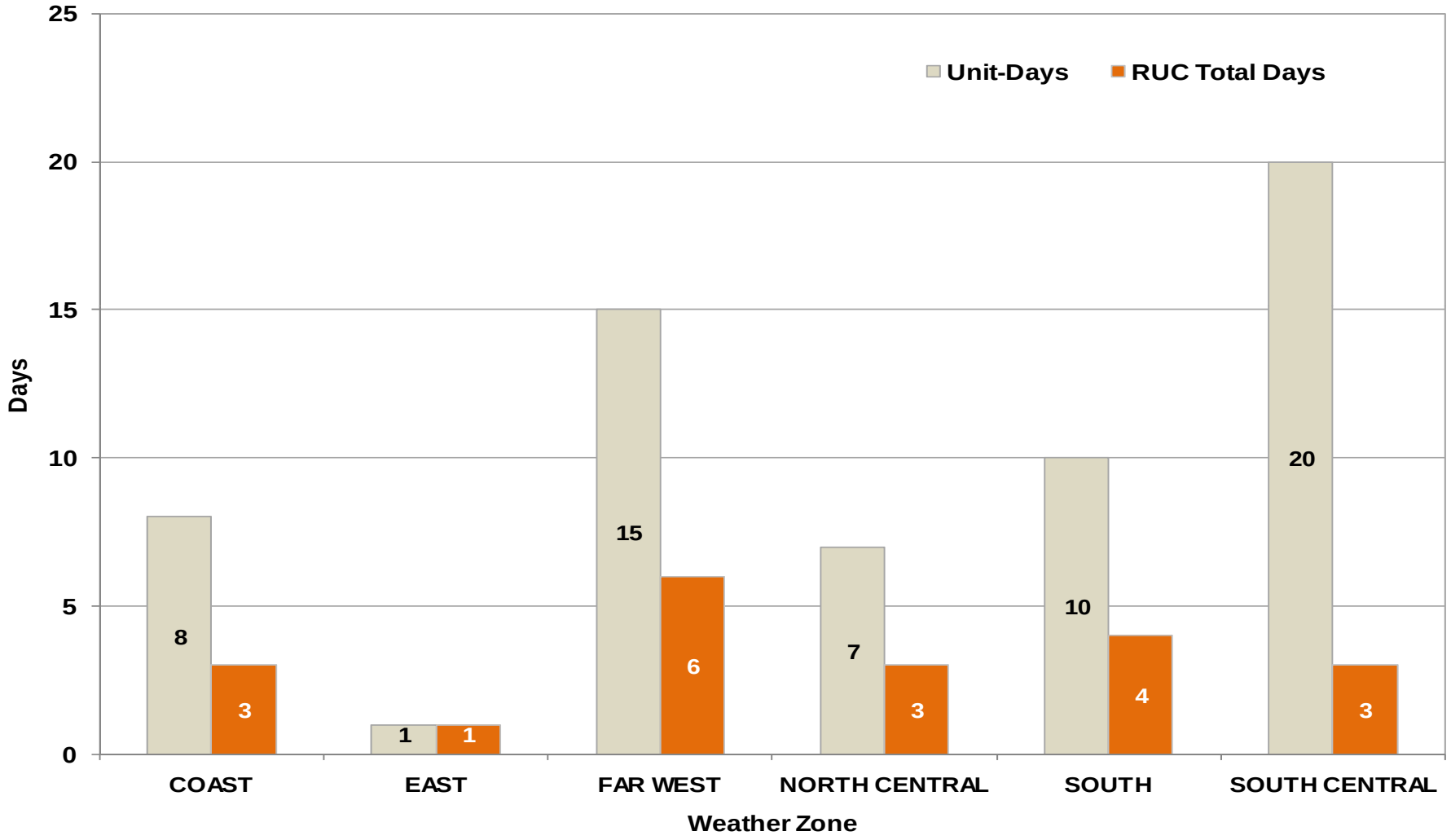
March 2011: Monthly Minimum Actual Demand



Day-Ahead Load Forecast Performance in March 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	March 2011 MAPE	
Average Annual MAPE	3.30	3.11	2.83	2.80	2.02	
Lowest Monthly MAPE	2.45	1.93	2.24	2.02	**Lowest Daily MAPE**	0.79 March– 02
Highest Monthly MAPE	4.99	4.11	3.79	3.46	**Highest Daily MAPE**	5.08 March– 01

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



March 2011: Generic Transmission Limits (GTLs)

GTLs	Mar 10 Days CSC	Jan 11 Days GTLs	Feb 11 Days GTLs	Mar 11 Days GTLs	Last 12 Months Total Days (Mar 10 – Mar 11)
North – Houston	0	0	0	0	60
West – North	24	18	25	26 Mar–(2-26, 29)	259
Valley Import		3	8	3 Mar– (16, 23, 24)	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 days a constraint has been activated to avoid exceeding a GTL limit, it does not imply the GTL was exceeded.

Advisories and Watches in March 2011

- **Advisories issued for Physical Responsive Capability (PRC) below 3000 MW.**
  - Issued 18 Days.

- **Watches issued for Physical Responsive Capability (PRC) below 2500 MW.**
  - None

- **Transmission Watches**
  - 03/04 16:30 ERCOT issued transmission watch for the contingency loss of Lobo to San Miguel 345 KV line overloads Freer to San Diego 69 KV line. ERCOT cancelled the watch at 18:12.

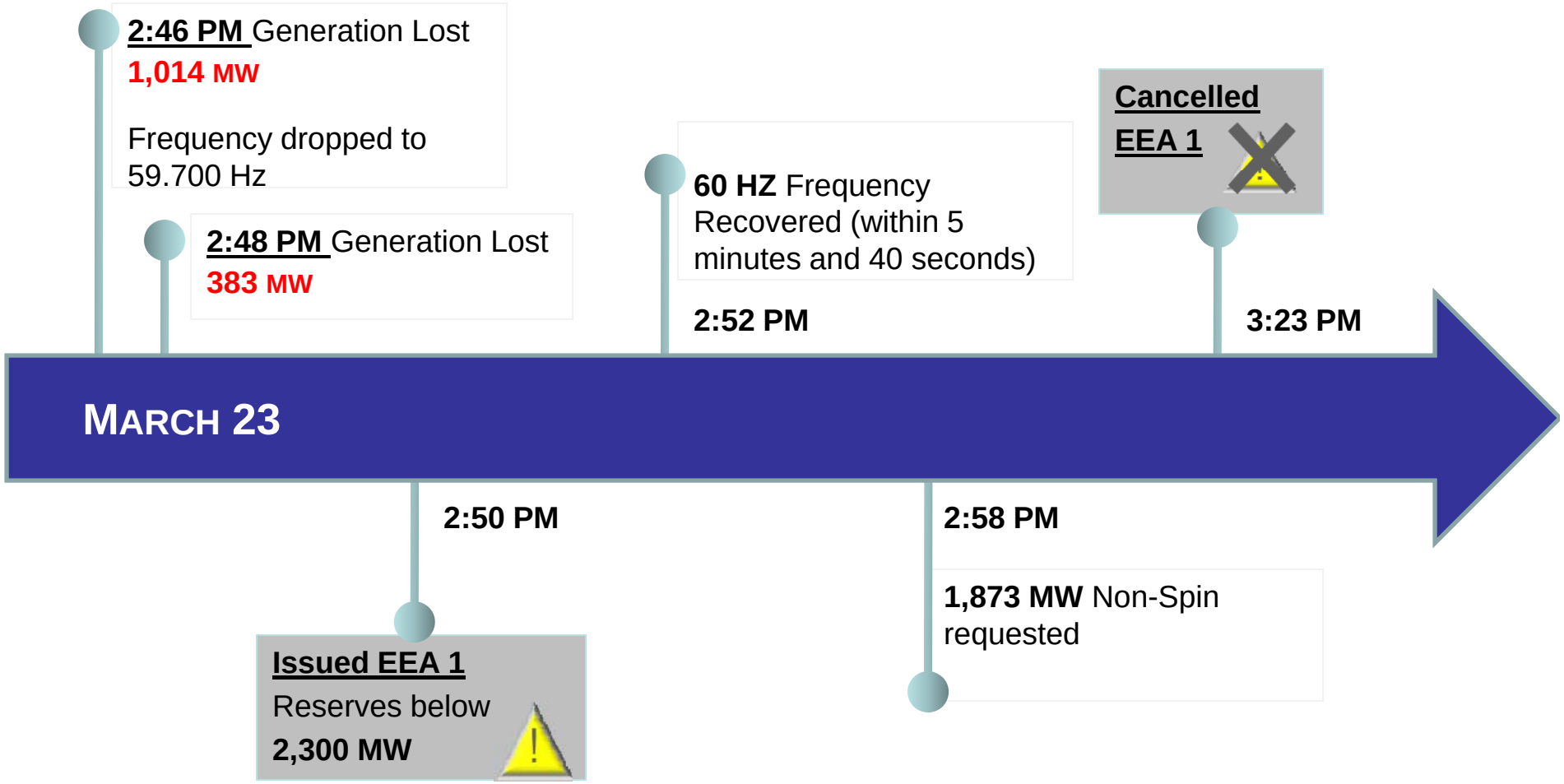
- **Energy Emergency Alerts**
  - 03/23 14:50 ERCOT issued an EEA Level 1 (Physical Responsive Capability (PRC) dropped below 2,300 MW).
  - 03/23 15:23 EEA Level 1 was cancelled.

Significant System Incidents in March 2011

- **March 14th**
  - At 06:09, ERCOT experienced a simultaneous loss of one 345 KV Bus and two generating units (resulting in the loss of approximately 922 MW within the first minute of the event) due to a thunderstorm.
- **March 14th**
  - At 07:08, ERCOT experienced a simultaneous loss of two 345 KV lines and five generating units (resulting in the loss of approximately 651 MW within the first minute of the event). A root-cause evaluation is currently on-going to determine the cause of the trip.
- **March 23rd**
  - At 14:46, ERCOT experienced a simultaneous loss of one 345 KV Bus, causing the loss of four 345 KV lines, one 345/138 KV Autotransformer and two combined cycle Resources (resulting in the loss of approximately 1,014 MW within the first minute of the event).

    At 14:50, ERCOT implemented Level 1 of its Energy Emergency Alert (EEA) as PRC dropped below 2,300 MW. ERCOT requested 1,873 MW of Non-Spin at 14:58. By 15:14 PRC was above 3,000 MW and EEA Level 1 was cancelled at 15:23. This event caused a frequency deviation of 0.3 Hz (59.700 Hz) at 14:46:50 per ERCOT ISO High-Speed Frequency Recorder Data. Frequency recovered within 5 minutes and 40 seconds to 60 Hz at 14:52:30.
- **March 25th**
  - At 16:13, ERCOT experienced a simultaneous loss of four generating units and one unit run-back (resulting in the loss of approximately 586 MW within the first minute of the event). Investigation is currently on-going.
- **March 30th**
  - At 04:02, ERCOT experienced a simultaneous loss of three 138 KV lines and one DC-Tie. Investigation is currently on-going.

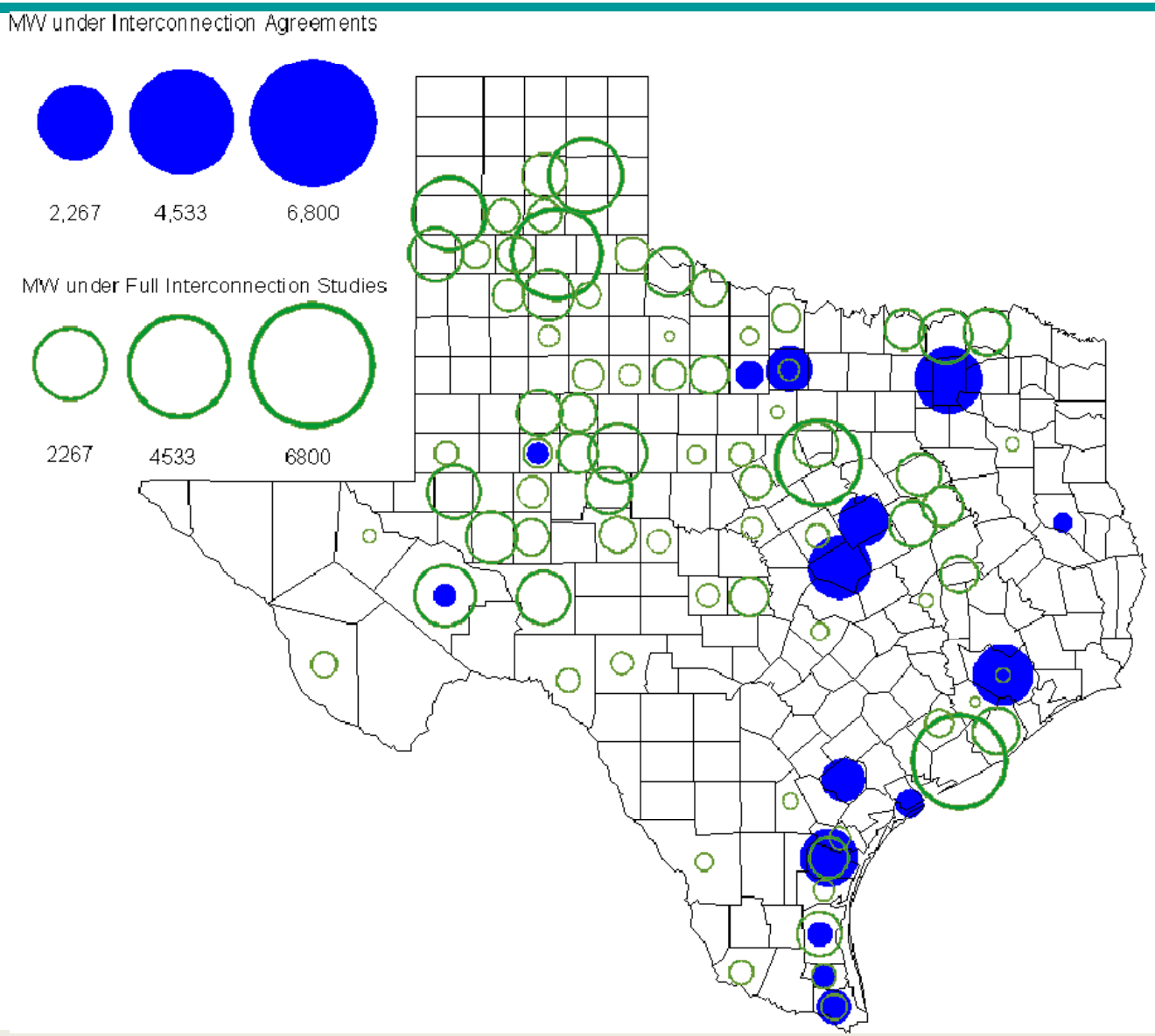
Energy Emergency Alert Level 1 – March 23, 2011



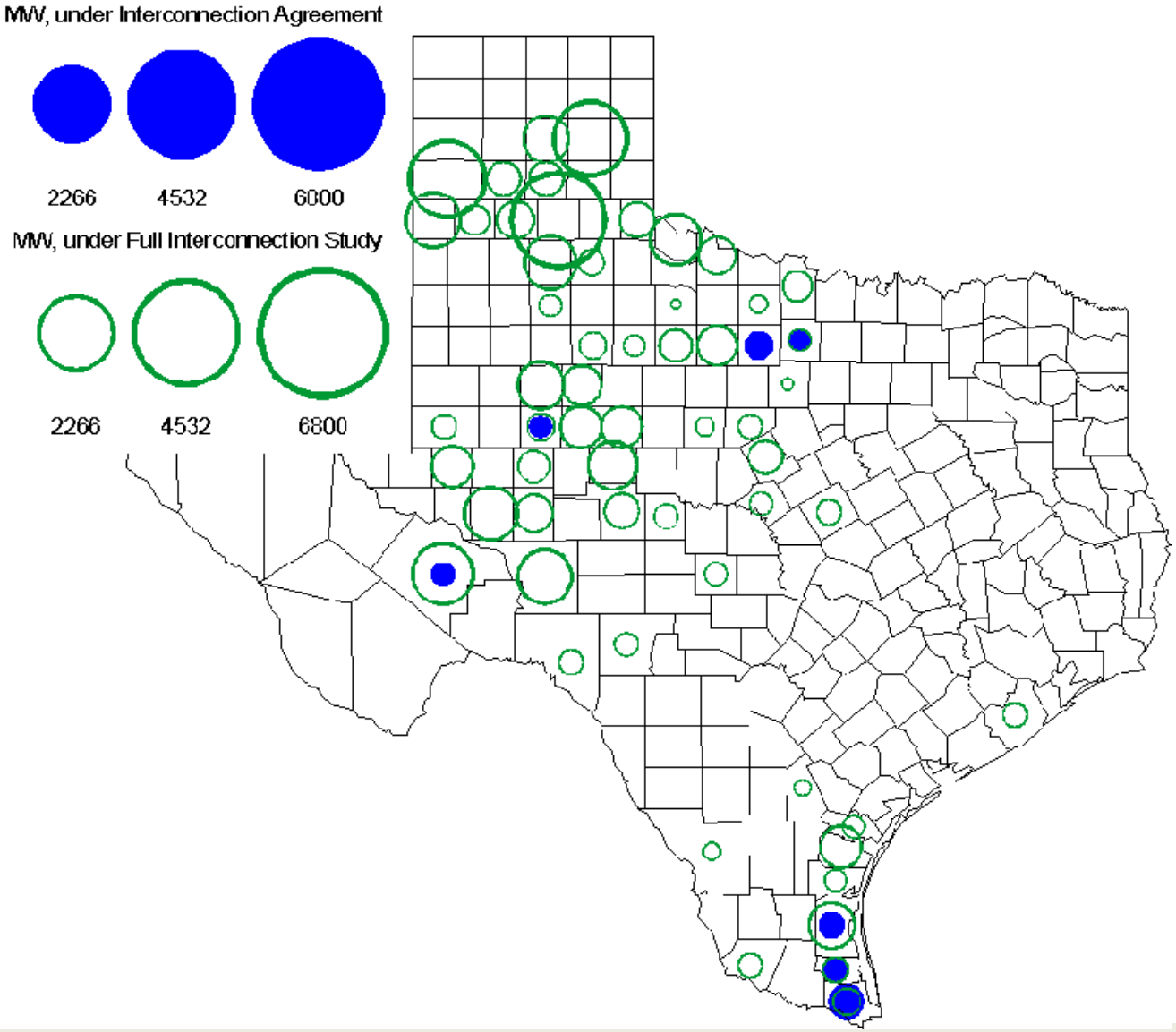
Planning Summary

- **ERCOT is currently tracking 203 active generation interconnection requests totaling over 64,000 MW. This includes over 37,000 MW of wind generation.**
- **ERCOT is currently reviewing proposed transmission improvements with a total cost of $555.6 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**

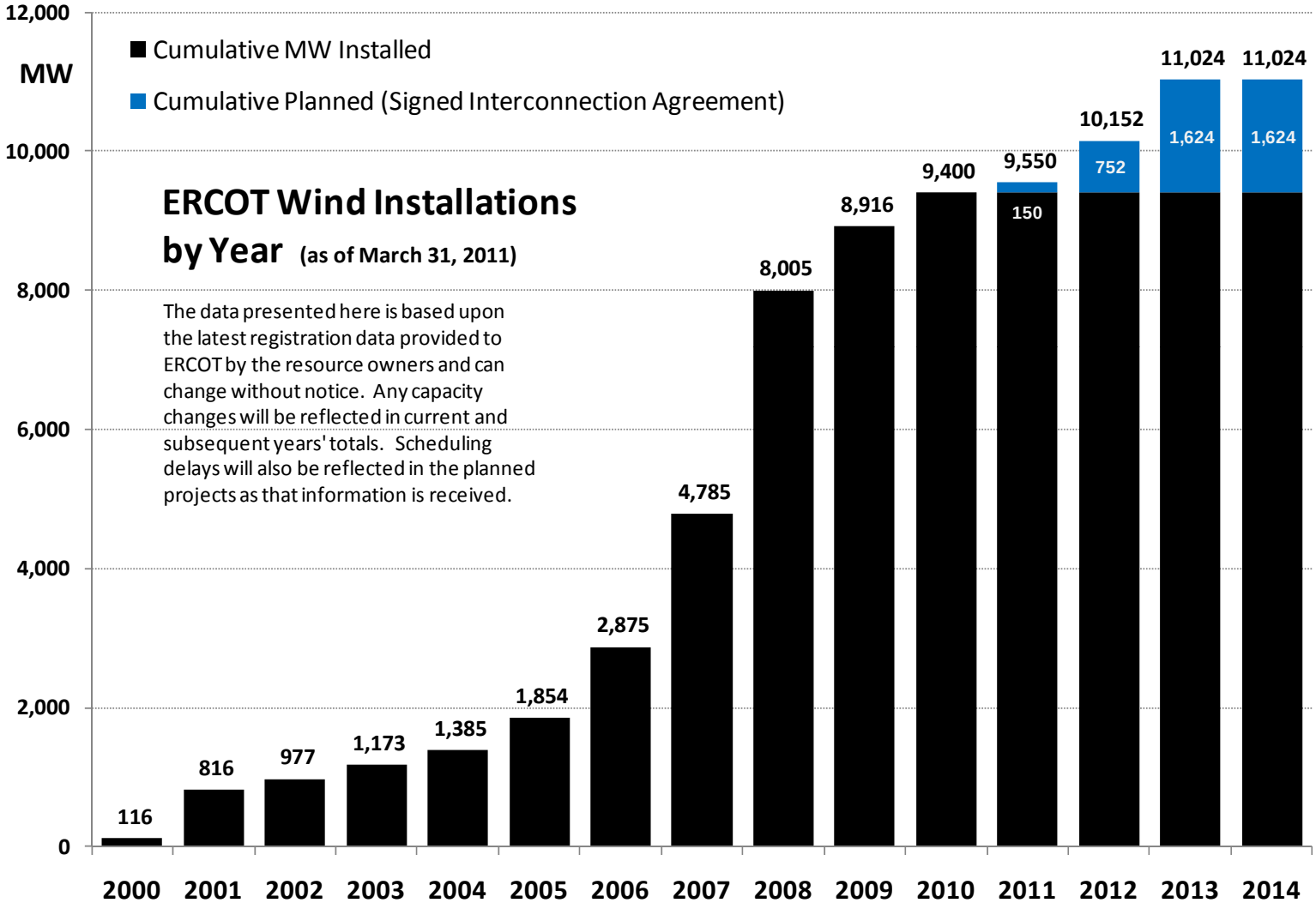
County Location of Planned Generation with Interconnection Requests (all fuels) March 2011



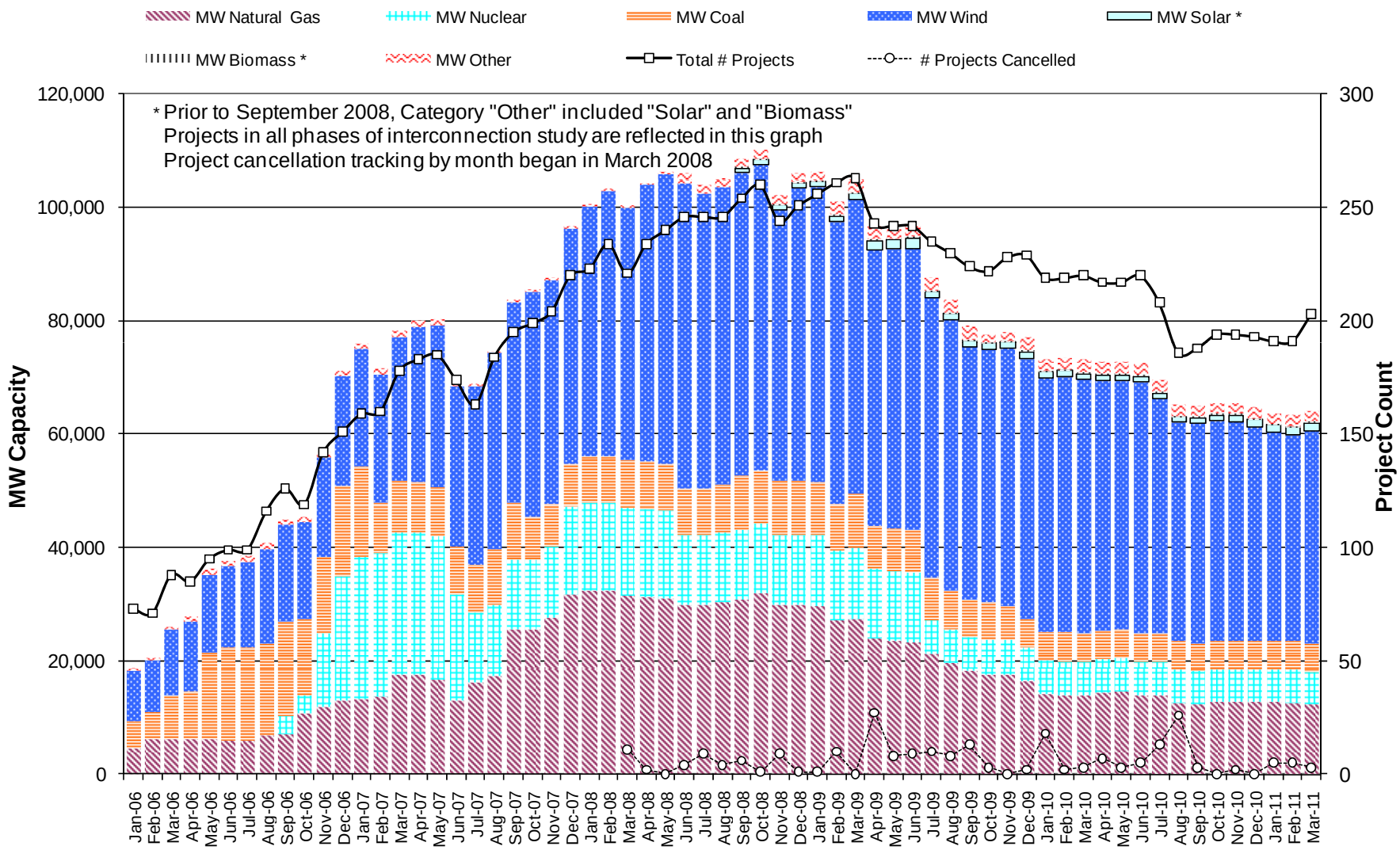
County Location of Planned Generation with Interconnection Requests (Wind) March 2011



Wind Generation



Generation Interconnection Activity by Fuel



Generation Interconnection Activity by Project Phase