Grid Operations and Planning Report

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Board of Directors Meeting
May 17, 2011

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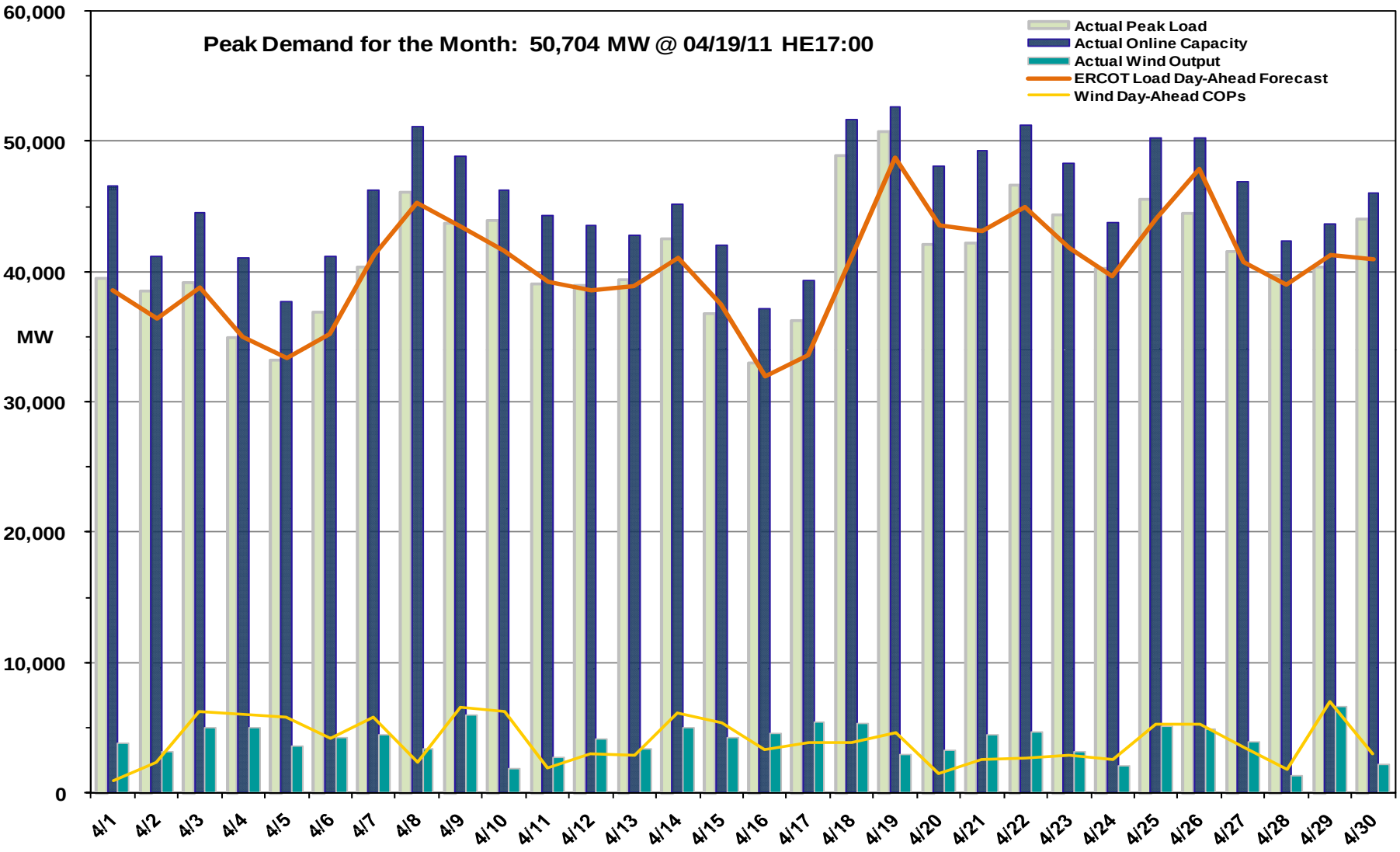
Summary

- **April 2011 Operations**
  - The peak demand of 50,704 MW on April 19 was more than the mid-term forecast peak of 48,734 MW and more than the April 2010 actual peak demand of 40,169 MW
  - Day-ahead load forecast error for April was 3.55%
  - Advisory for Physical Responsive Capability (PRC) below 3000 MW issued nine days
  - One Watch for PRC under 2500 MW issued
  - No Energy Emergency Alert (EEA) events
  - Transmission Watch issued 26 days due to a 345 KV line planned outage

- **201 active generation interconnect requests totaling over 62,000 as of April 30, 2011. Two fewer requests and 2,000 MW less than March 31, 2011.**

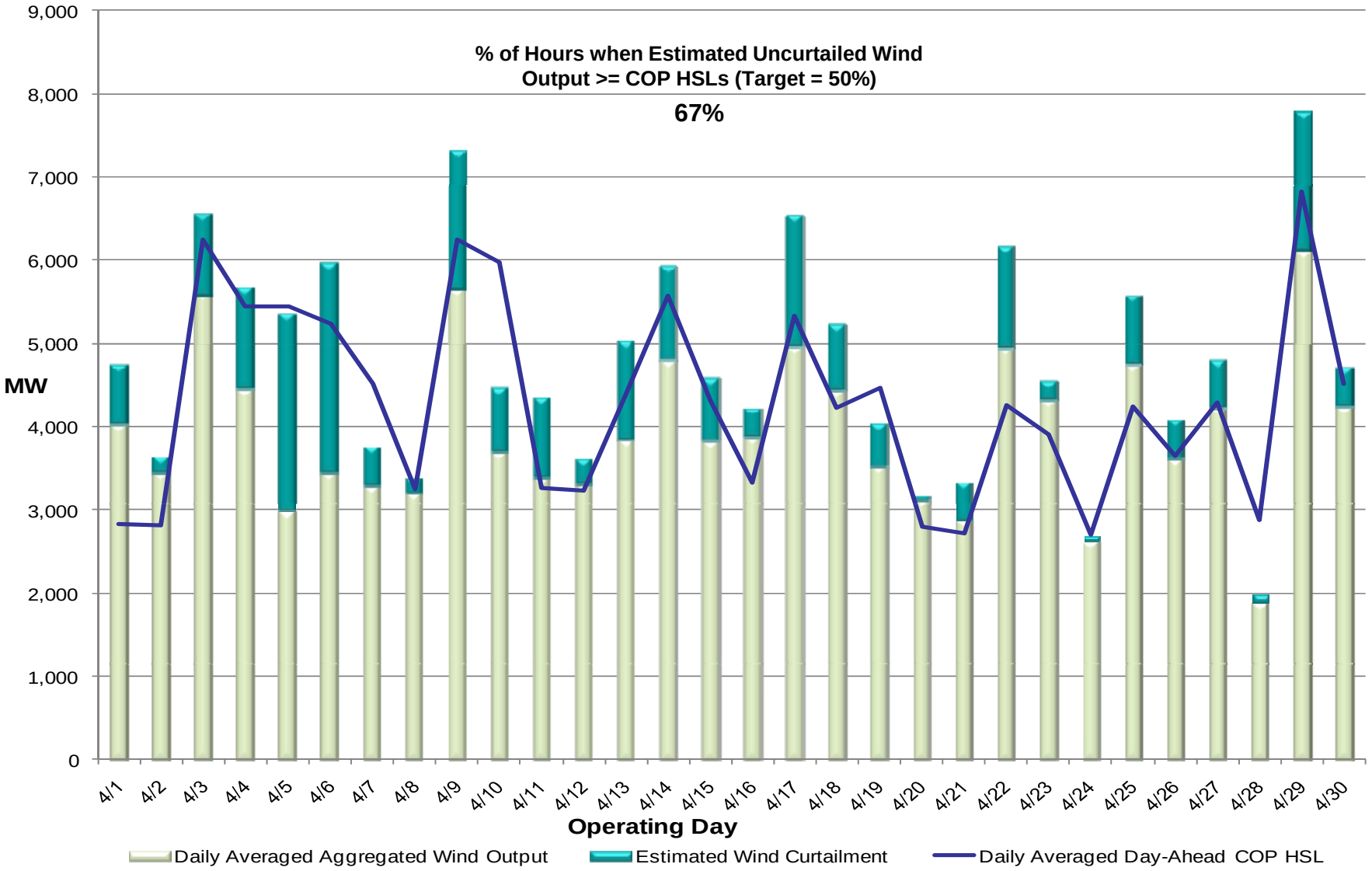
- **9,400 MW wind capacity on line April 30, 2011. No change from March 31, 2011.**

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



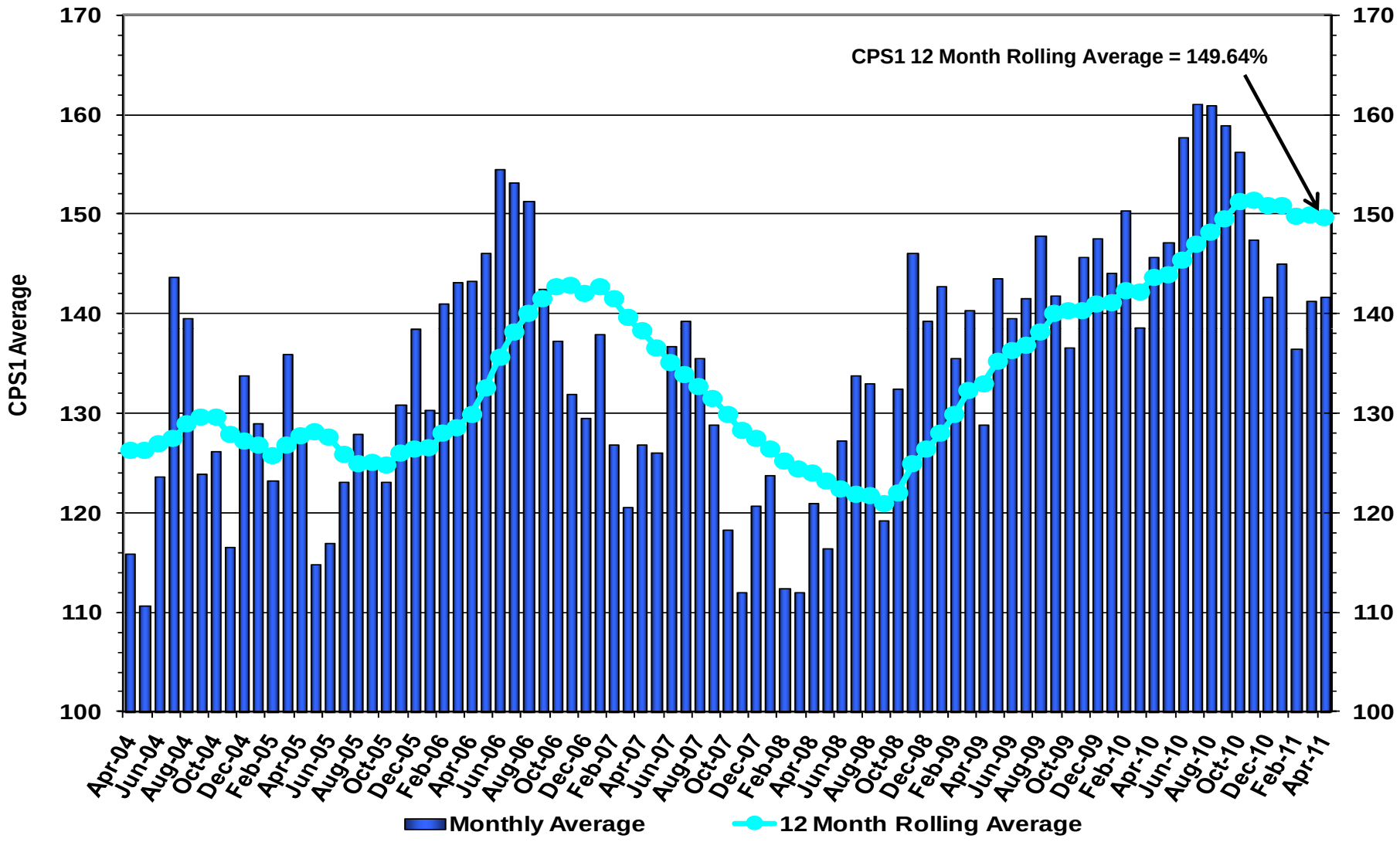
Note: All data are hourly averages during the peak load hour obtained from COPs, and EMMS.

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

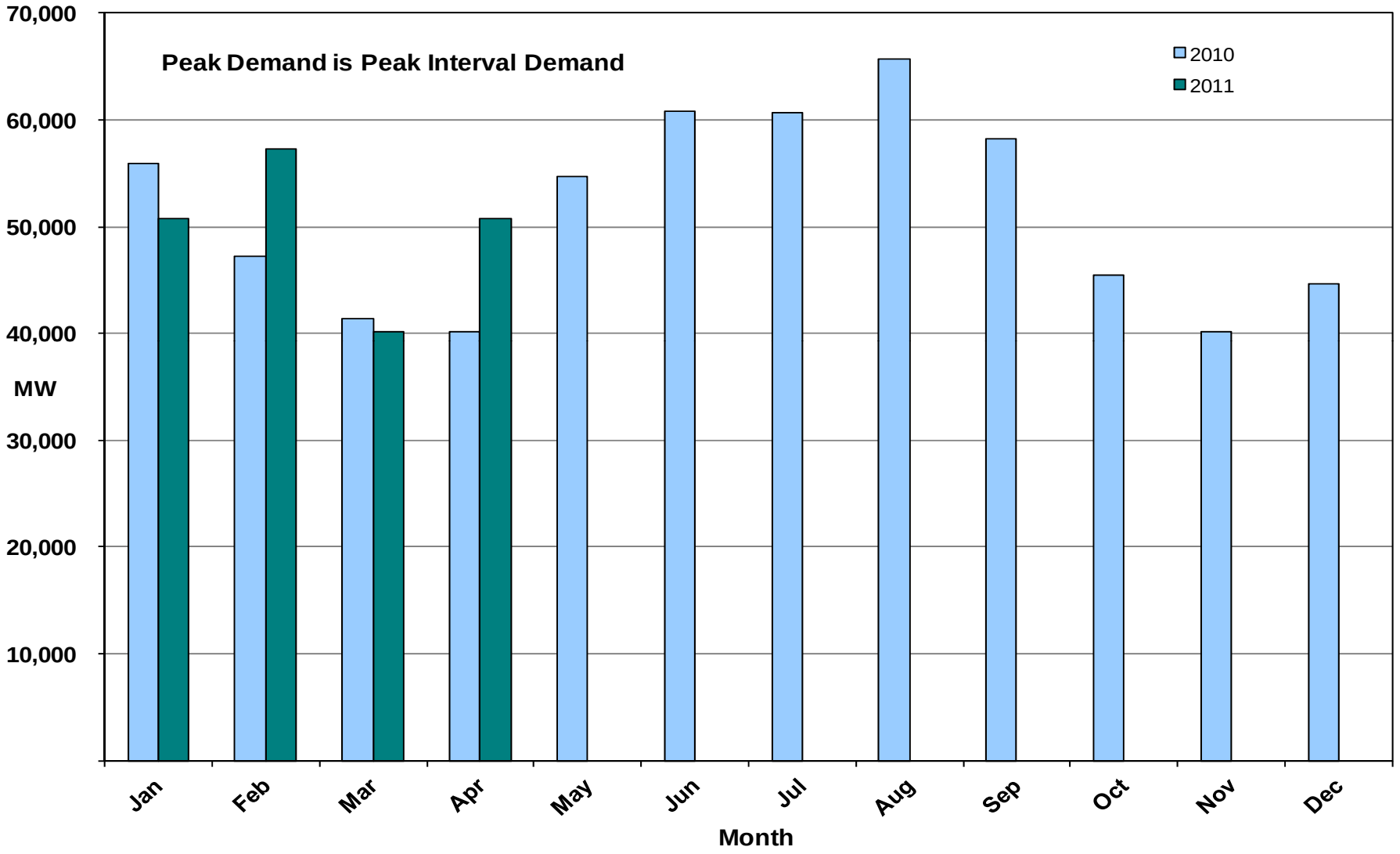


Note: QSEs must use the AWST 50% probability of exceedance forecast as the HSL in their COPs

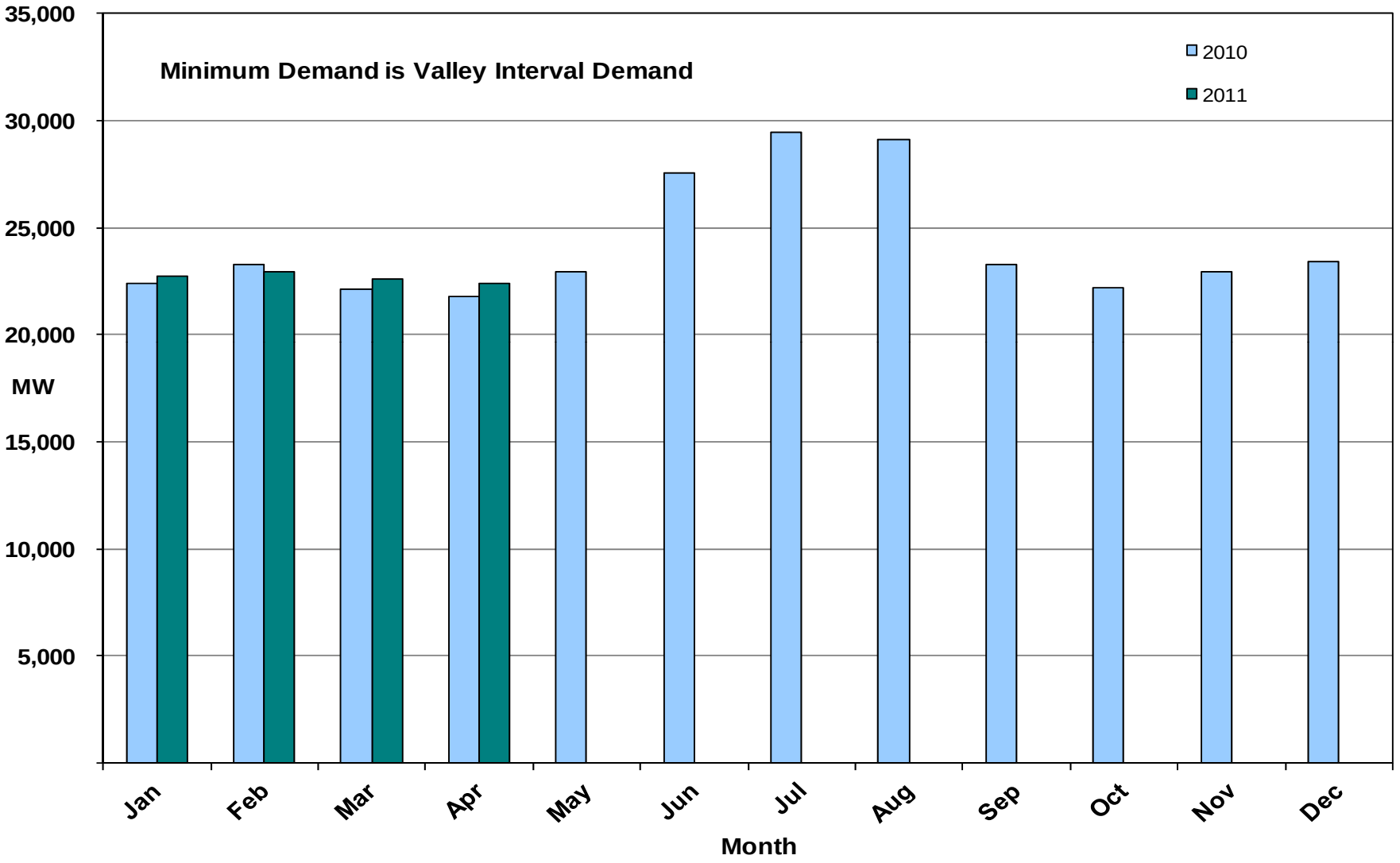
April 2011 ERCOT's CPS1 Monthly Performance



April 2011: Monthly Peak Actual Demand



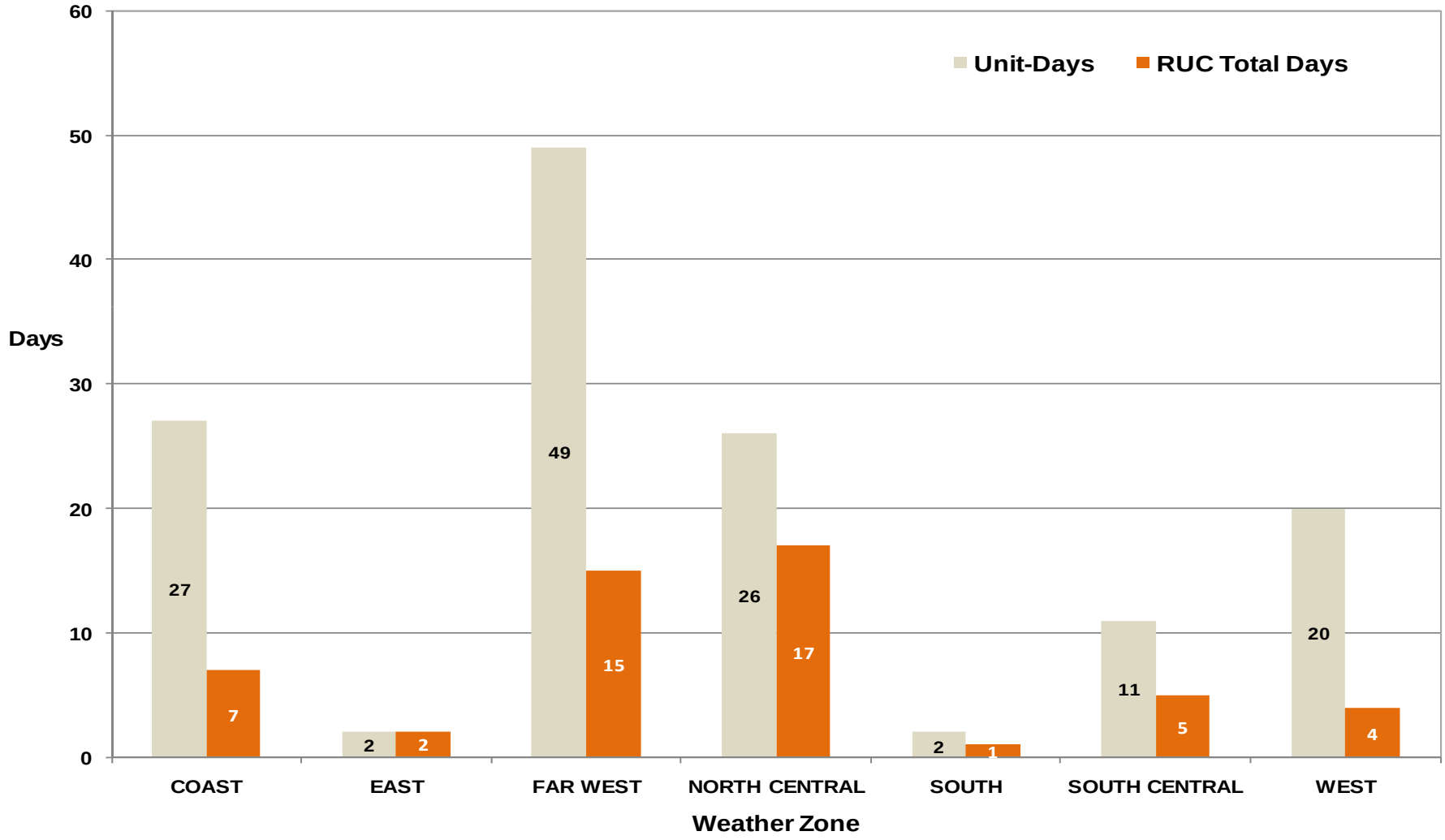
April 2011: Monthly Minimum Actual Demand



Day-Ahead Load Forecast Performance in April 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	April 2011 MAPE	
Average Annual MAPE	3.30	3.11	2.83	2.99	3.55	
Lowest Monthly MAPE	2.45	1.93	2.24	2.02	**Lowest Daily MAPE**	0.97 Apr– 09
Highest Monthly MAPE	4.99	4.11	3.79	3.55	**Highest Daily MAPE**	12.43 Apr– 18

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



April 2011: Generic Transmission Limits (GTLs)

GTLs	Apr 10 Days CSC	Feb 11 Days GTLs	Mar 11 Days GTLs	Apr 11 Days GTLs	Last 12 Months Total Days (Apr 10 – Apr 11)
North – Houston	2	0	0	0	60
West – North	17	25	26	27 Apr–(1, 2, 5-23, 25-30)	262
Valley Import		8	3	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 April 2011

- **Advisories issued for Physical Responsive Capability (PRC) below 3000 MW.**
  - Issued 9 Days

- **Watches issued for Physical Responsive Capability (PRC) below 2500 MW.**
  - Issued 1 Day

- **Transmission Watches**
  - Apr 2nd – Apr 28th ERCOT issued Transmission Watch due to a 345 KV line continuous planned outage at Oklaunion substation.

- **Energy Emergency Alerts**
  - None

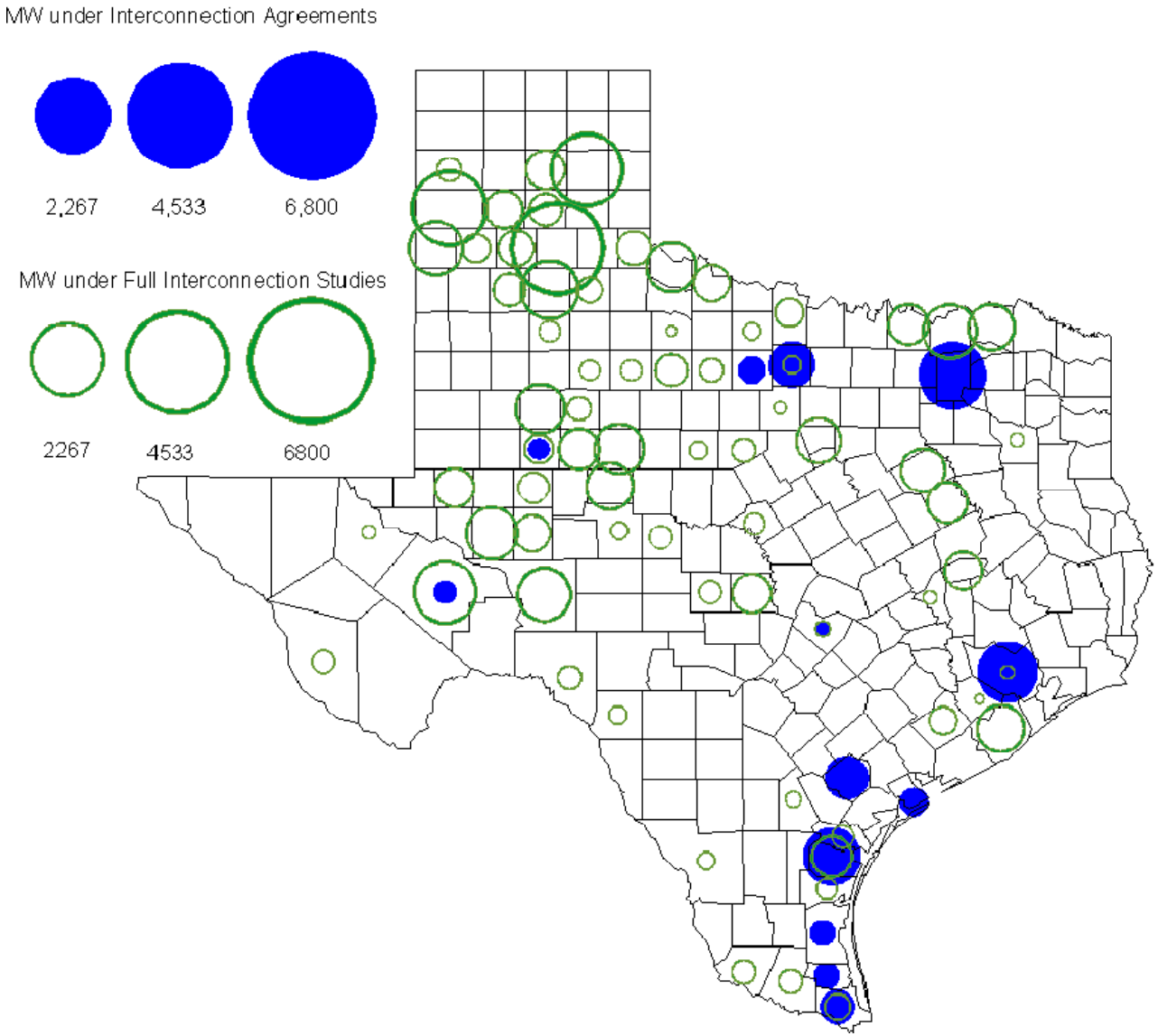
Significant System Incidents in April 2011

- **April 5th**
  - At 22:02, ERCOT experienced a simultaneous loss of one 345 KV line and five generating units (resulting in the loss of approximately 716 MW within the first minute of the event) due to software bug was found in the filter configuration of the series capacitor settings.
- **April 8th**
  - At 06:08, ERCOT experienced a simultaneous loss of three generating units and one unit run-back (resulting in the loss of approximately 289 MW within the first minute of the event), when a 345 KV line tripped due to due to salt and dirt contamination on the insulators of the overhead 345 KV bus.
- **April 9th**
  - At 00:34, ERCOT experienced a simultaneous loss of one 345 KV bus, one 138 KV bus, one 345/138 KV autotransformer, and two 345 KV lines due to a Current Transformer (CT) failure and fire.
- **April 11th**
  - From 00:35-02:19, ERCOT experienced multiple forced transmission (two 345 KV lines, and eight 138 KV lines) and three units outages (resulting in the loss of approximately 978 MW tripped within the first minute of the event) associated with a severe thunderstorms that moved into the Dallas Fort Worth area.
- **April 26th**
  - 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, but initial findings point to insulator contamination

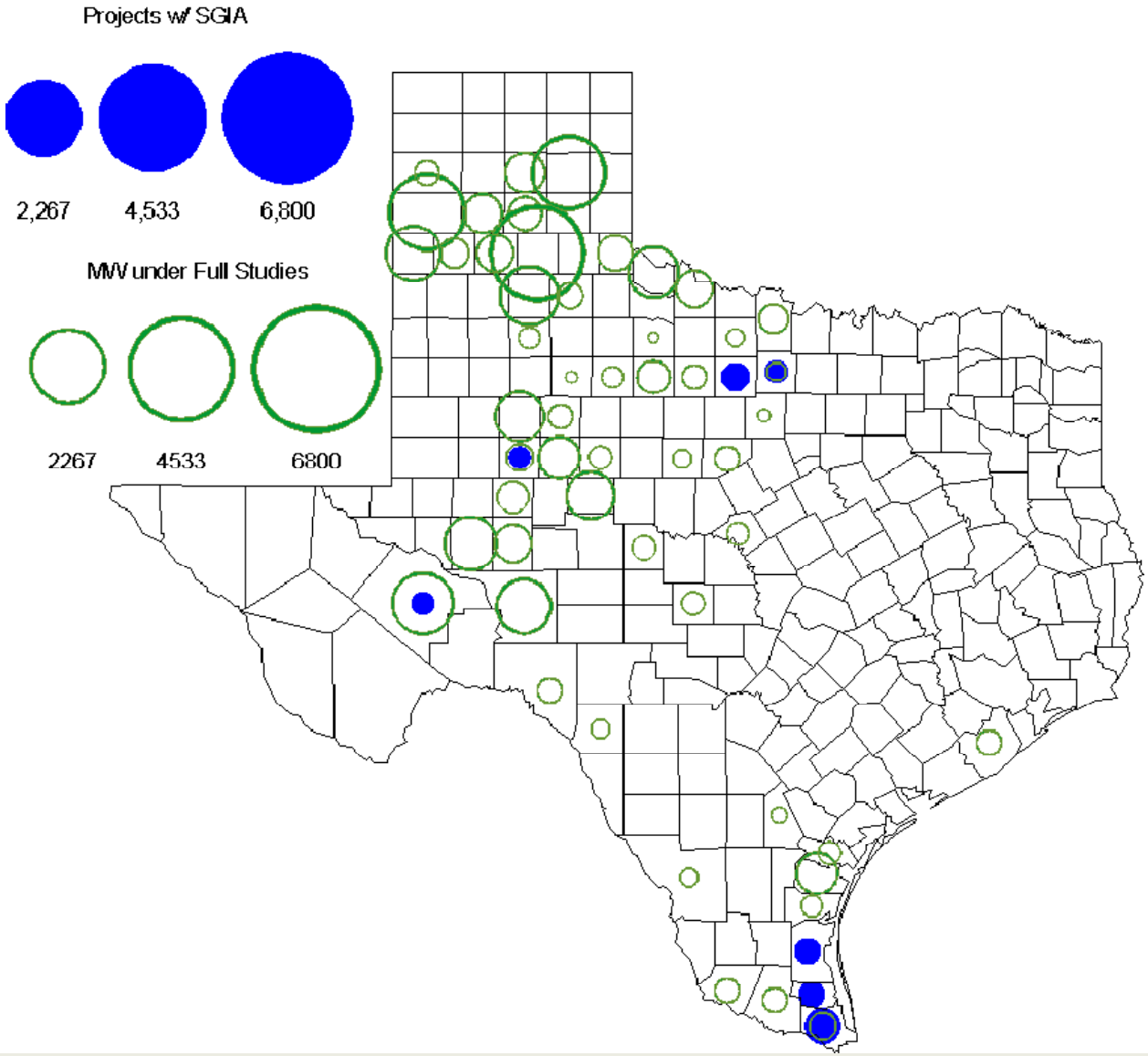
Planning Summary

- **ERCOT is currently tracking 201 active generation interconnection requests totaling over 62,000 MW. This includes over 36,000 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**

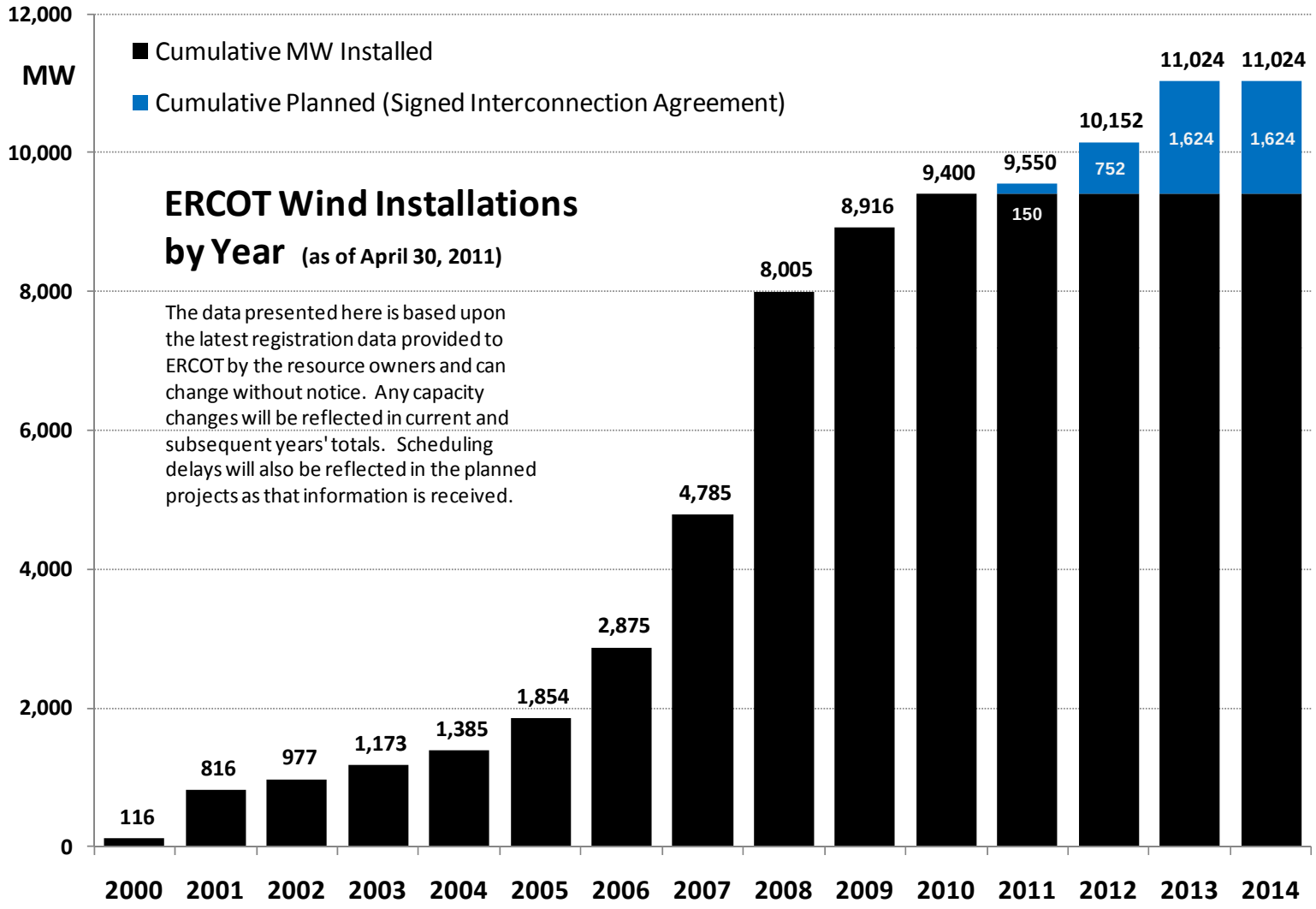
County Location of Planned Generation with Interconnection Requests (all fuels) April 2011



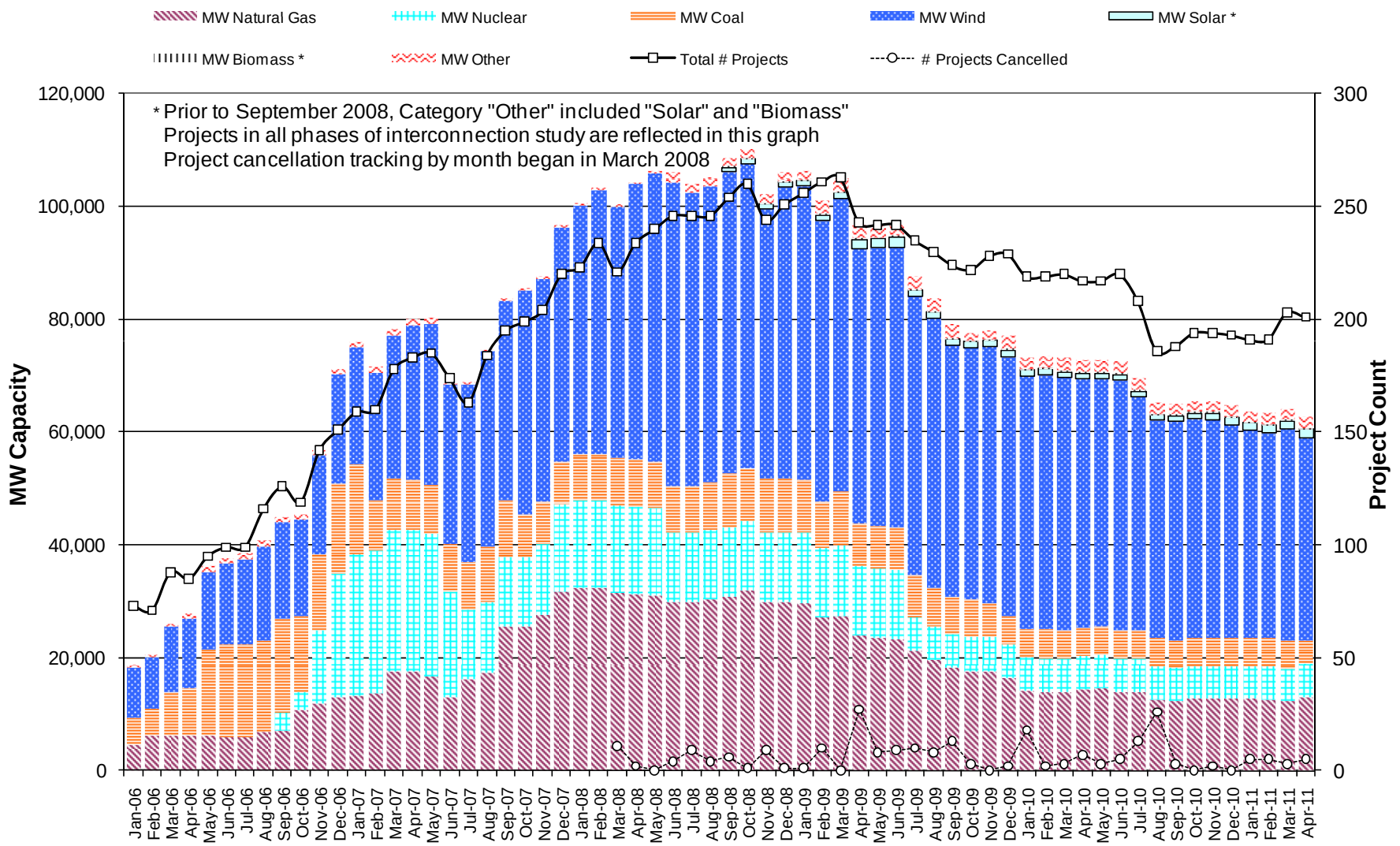
County Location of Planned Generation with Interconnection Requests (Wind) April 2011



Wind Generation



Generation Interconnection Activity by Fuel



Generation Interconnection Activity by Project Phase