



September 2008 Grid Operations

ERCOT Board of Directors
17 November 2008

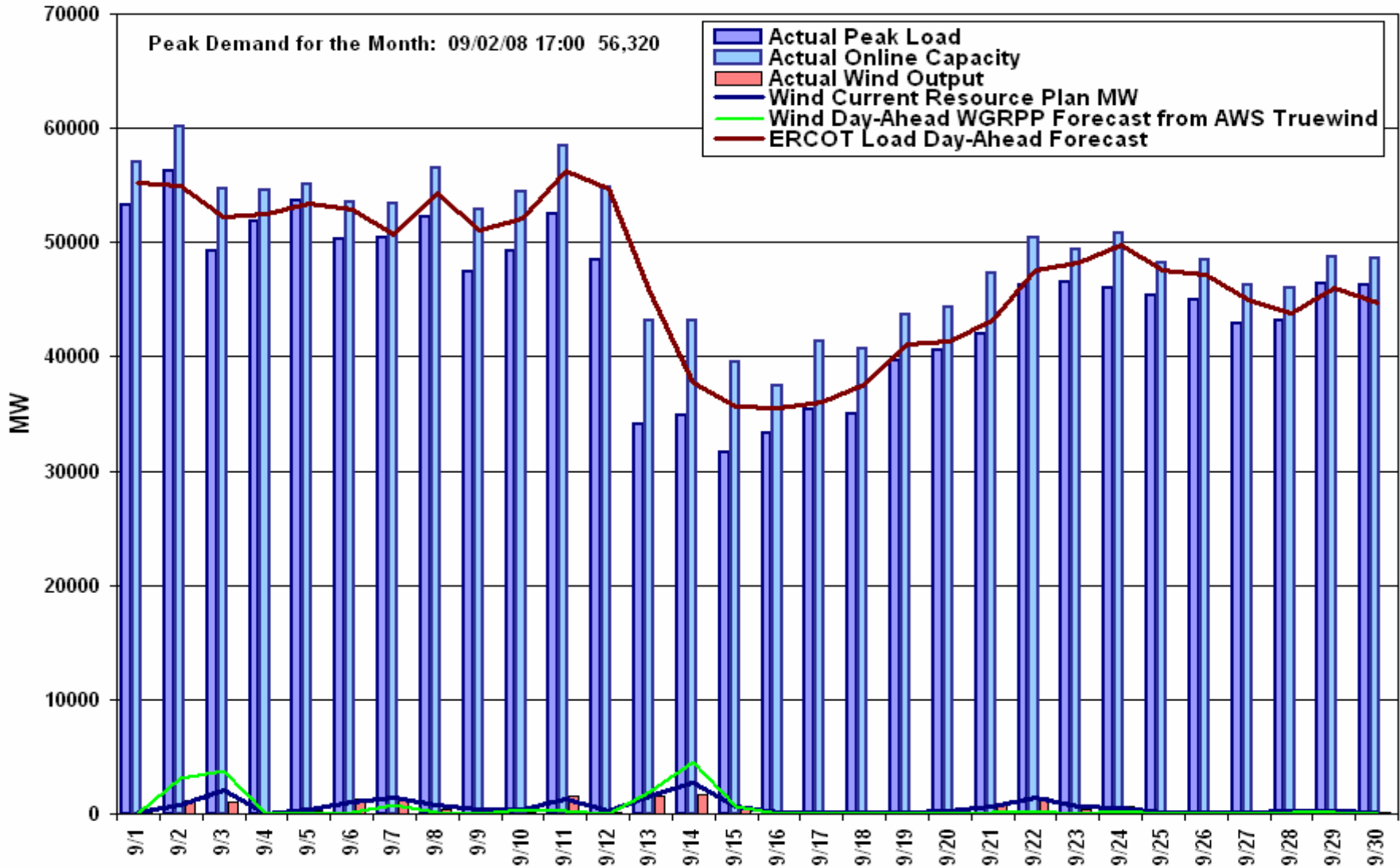
Kent Saathoff

- **Summary**
- **Peak Demand: Actual vs. Forecast**
On-line Resources: Total at Peak and Wind
- **Day-Ahead Load Forecast Performance**
- **Out of Merit Capacity Order (OOMC) &**
Reliability Must Run (RMR) Purchases
- **Zonal Congestion**
- **Significant System Incidents**
- **Hurricane Ike**
- **Advisories, Alerts and EECs**
- **Other Items**

- **The peak demand of 56,320 MW on September 2nd was higher than the forecast of 51,256 MW for September**
- **Day-ahead load forecast error for September was 4.99%. This relatively high error was due to forecast temperature error at peak caused by tropical and other storms and outages caused by Hurricane Ike that could not be modeled.**
- **Some increase in Zonal congestion due to hurricane related forced outages and start of planned outage (fall) season**
- **Hurricane Ike on September 13th caused substantial damage in Houston and Eastern regions of Texas. Approximately 2.5 million customers were without service at the peak.**
- **No EECF events**

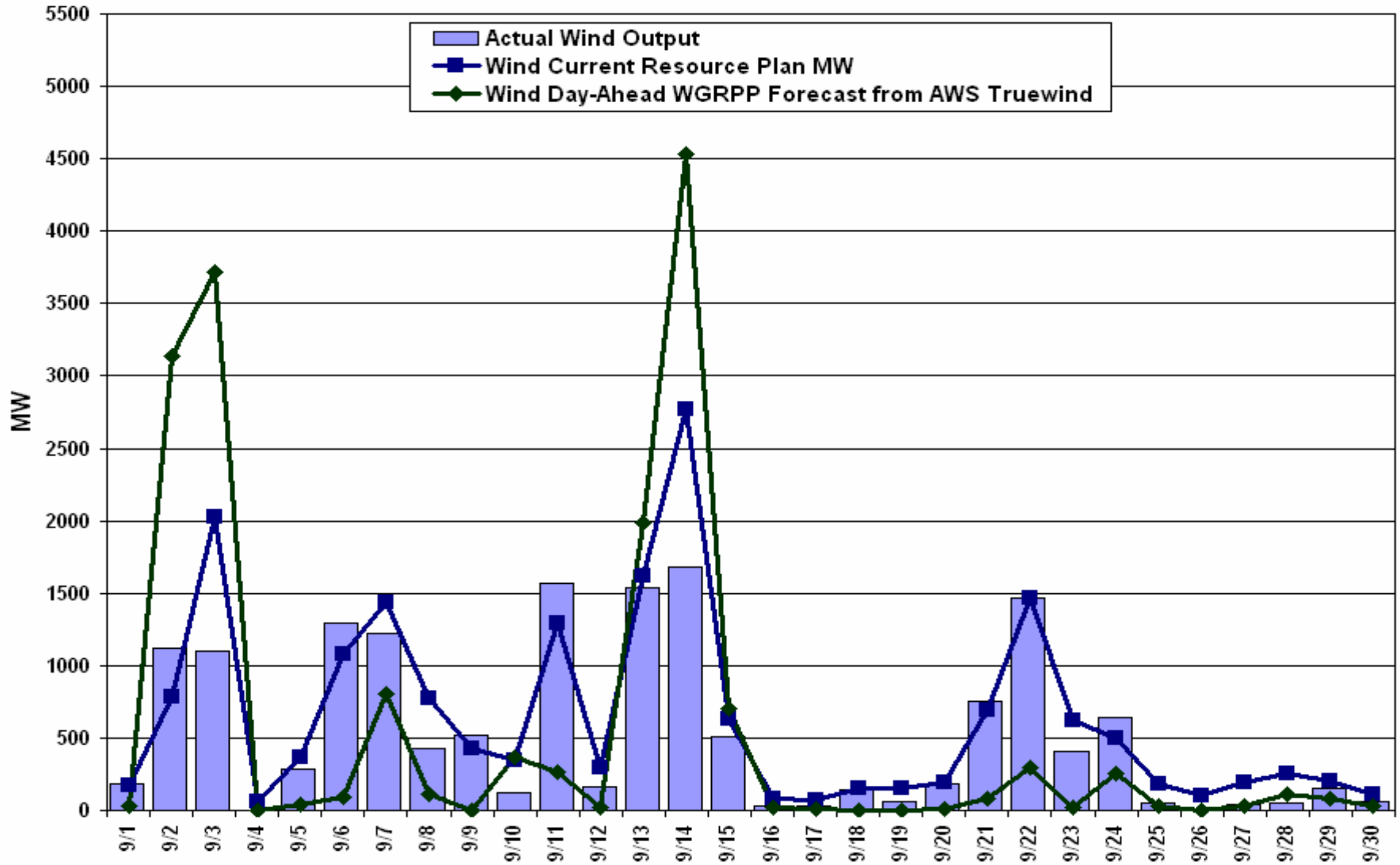
Daily Peak Demand: Hourly Average Actual vs Forecast

Resource Plan: On-line Capacity at Peak

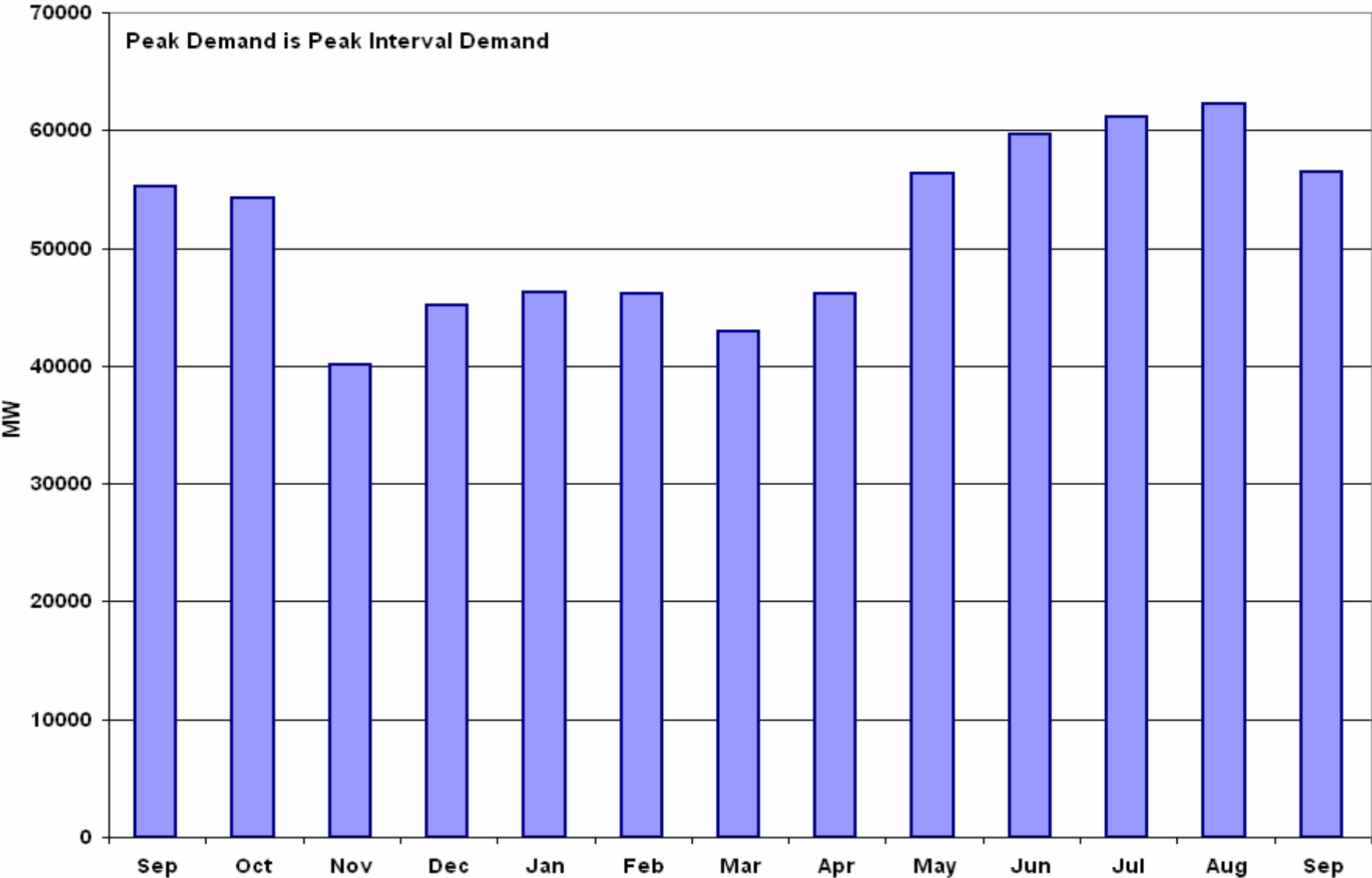


Note: All data are hourly averages during the peak load hour obtained from Resource Plans, EMMS, and AWS Truewind Wind Forecast.

Actual Wind Output Vs Wind Current Resource Plan & Wind Day-Ahead AWS Forecast at Peak Load



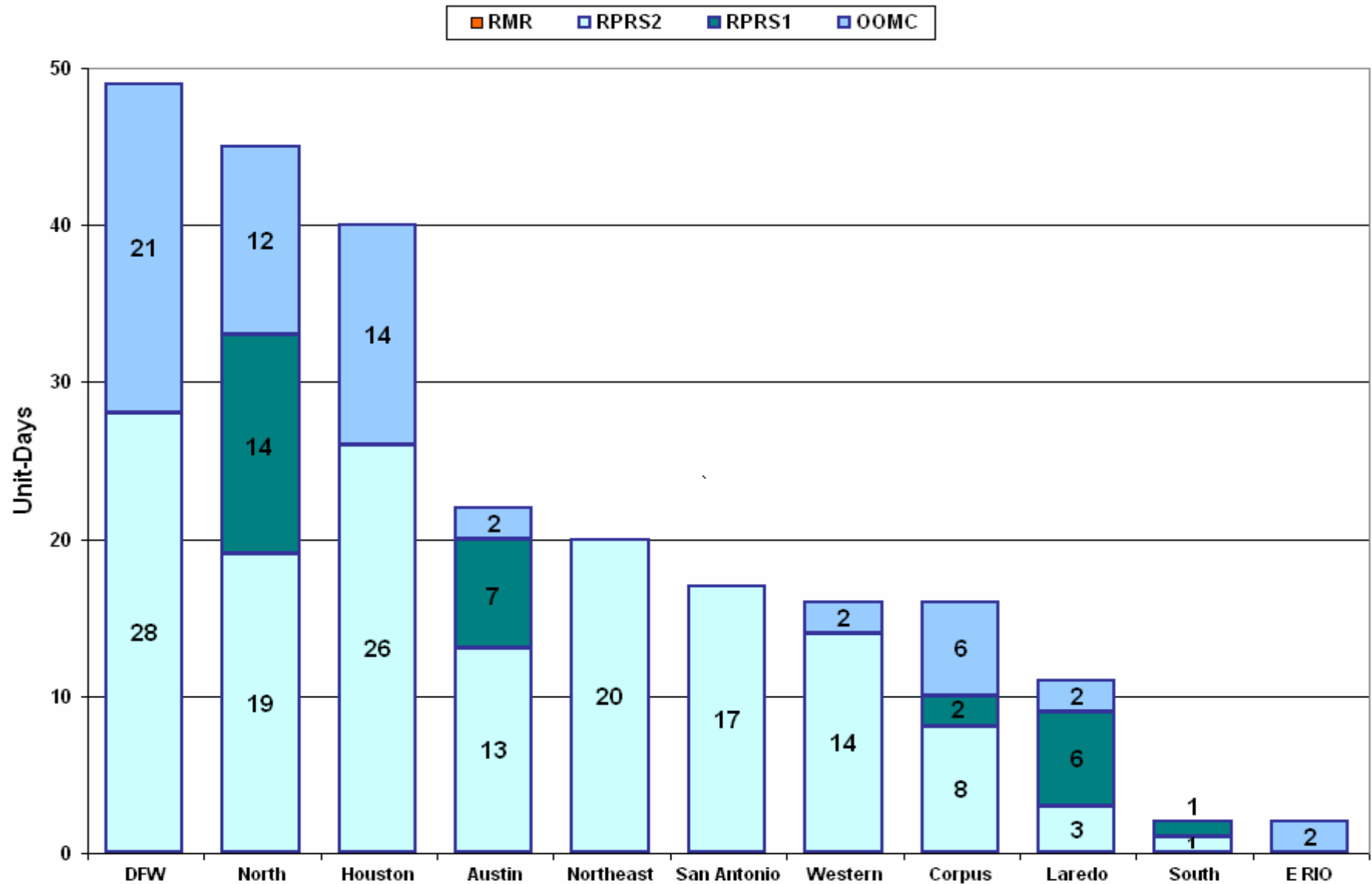
Monthly Peak Demand: Actual



Day-Ahead Load Forecast Performance in September 2008

	Mean Absolute Percent Error (MAPE) for ERCOT Mid-Term Load Forecast (MTLF) Run at 16:00 Day Ahead				
	2005 MAPE	2006 MAPE	2007 MAPE	2008 MAPE (YTD)	September 2008 MAPE
Average Annual MAPE	4.56	3.79	3.55	3.29	4.99

Capacity Purchases of RMR, OOMC & RPRS to Manage Local Congestion in September 2008



Zonal Congestion

CSC	Sept 07 Days	July 08 Days	Aug 08 Days	September 08 Days	Last 12 Months Total Days
North – Houston	6	0	1	6 Sept – 3,5,8,9,10,12	81
North – West	1	1	1	1 Sept – 13	48
West – North	1	11	2	0	154
South – North	0	0	0	1 Sept – 13	37
North - South	N/A	5	3	7 Sept – 2,3,9,10,11,21,22	110

- **September 14th at 18:44**
 - Emergency Notice issued for the Laredo Area due to forced outages. Received 70 MW of emergency energy from CFE across the Laredo Variable Frequency Transformer (VFT).

- **September 13th**

- Hurricane Ike affected 2,504,366 customers. All customers (with a few isolated outages) were restored within 18 days of the event, October 1st.
- Hurricane Ike caused many transmission and generation outages with 126 transmission lines out at one point.
 - CenterPoint Energy experienced a loss of load for over 90% of its customers in the greater Houston area.
 - Approximately 25 counties in Eastern Region of ERCOT service area were affected. Counties of Angelina (89% out), Houston (87% out), Nacogdoches (84% out), Rusk (70% out) and Cherokee (67%) were the most impacted.
 - Approximately 16,000 mutual assistance crew members arrived into the ERCOT region, in addition to the approximately 4,700 workers that are employed on a normal basis
 - ERCOT facilitated a Block Load Transfer (BLT) from Entergy in the Houston area 9/15 to 9/19.
ERCOT facilitated a BLT from Entergy in the College Station area 9/16 to 9/18 and 9/24 to 9/25.

- **Advisories issued for Adjusted Responsive Reserve (ARR) below 3000 MW.**
 - Issued 15 Days.
- **No alerts issued for ARR below 2500 MW**
- **Transmission Emergency (operation above single contingency limits):**
 - 9/03 Emergency notice issued due to a potential voltage collapse in the Houston area with the loss of double circuit Jewett - TH Wharton and Tomball 345KV.
 - 9/8 Transmission Alert issued due to a forced outage in the Presidio area.
 - 9/11 – 9/12 Alert issued due to loss of Presidio - Alamito Creek 69KV, implemented a BLT transferring 4 MW of ERCOT load to CFE.
- **No EECs in September 2008**

- **September 12th**
 - Held interval ending 23:45 real-time balancing deployments for interval ending 2400 due to difficulties getting a QSE's schedules into the system.
- **September 13th**
 - ERCOT held interval ending 02:00 real-time balancing deployments for interval ending 02:15 due to short term load forecast not being able to forecast loss of load in Houston area due to Ike. Manual adjustment was not able to be completed before the Real-Time Balancing Market (RTBM) cleared.
- **September Weather**
 - 9/01 Advisory issued due to Hurricane Gustav in the Gulf of Mexico.
 - 9/09 – 9/11 Advisory issued for Hurricane Ike entering the Gulf of Mexico. Currently a reasonable expectation is Ike will make landfall on the Texas coast impacting the ERCOT region.
 - 9/11 – 9/12 Alert issued for Hurricane Ike expected to make landfall on the Texas Coast, impacting the ERCOT Region.

Questions ?