



---

# ERCOT Monthly Operational Overview (**July 2013**)

ERCOT Public  
August 15, 2013

---

# **Grid Operations & Planning**

---

# Summary – July 2013

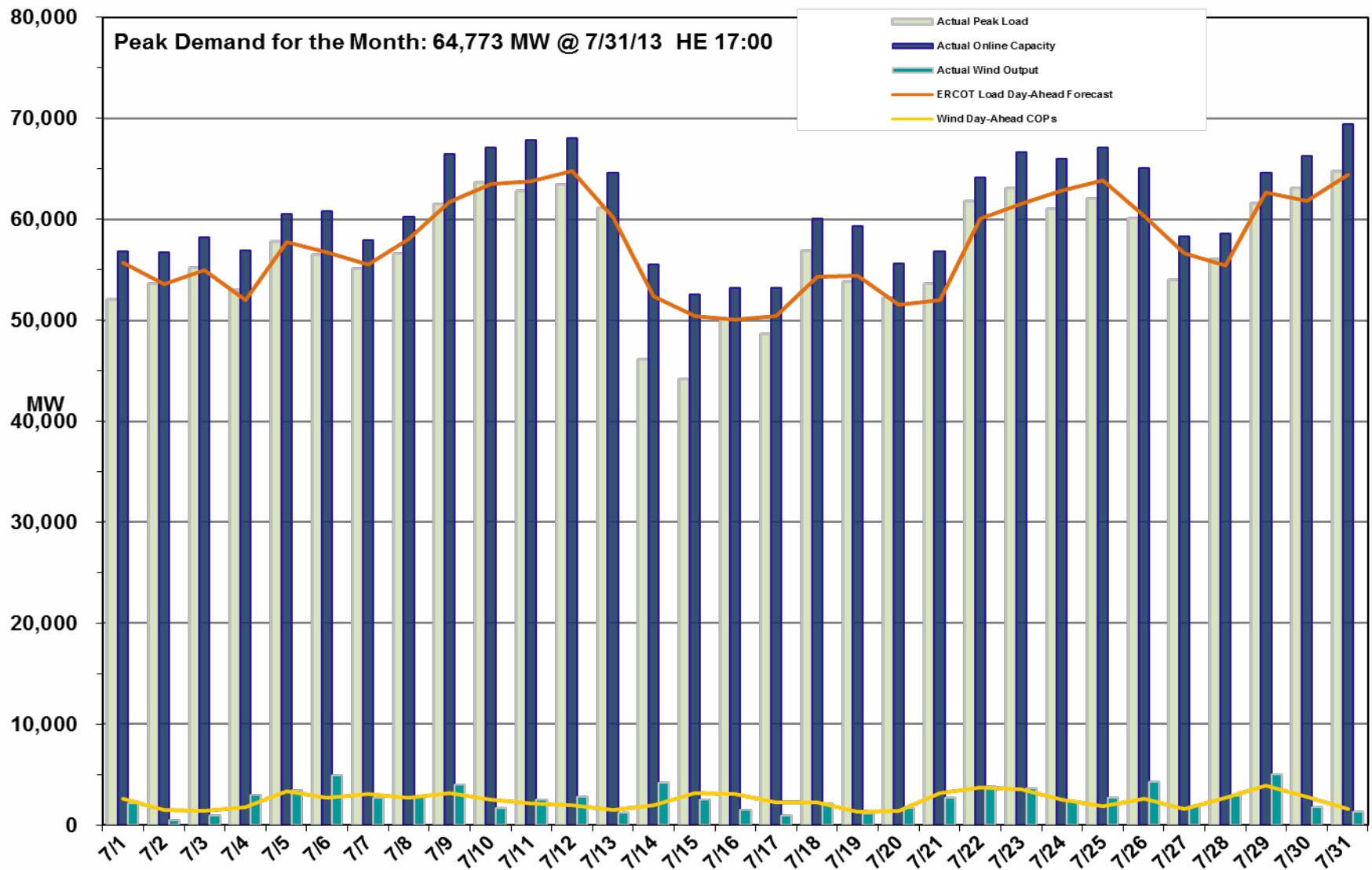
- **Operations**

- The peak demand of 64,773 MW on July 31<sup>st</sup> was greater than the mid-term forecast peak of 64,393 MW but less than the July 2012 actual peak demand of 65,787 MW. The instantaneous load on July 31<sup>st</sup> was 65,004 MW.
- Day-ahead load forecast error for July was 2.70%
- ERCOT issued two Advisories.
  - Two separate advisories for Voltage Security Assessment Tool (VSAT) not solving for 30 minutes.
- No Watches were issued
- No Energy Emergency Alert (EEA) events

- **Planning Activities**

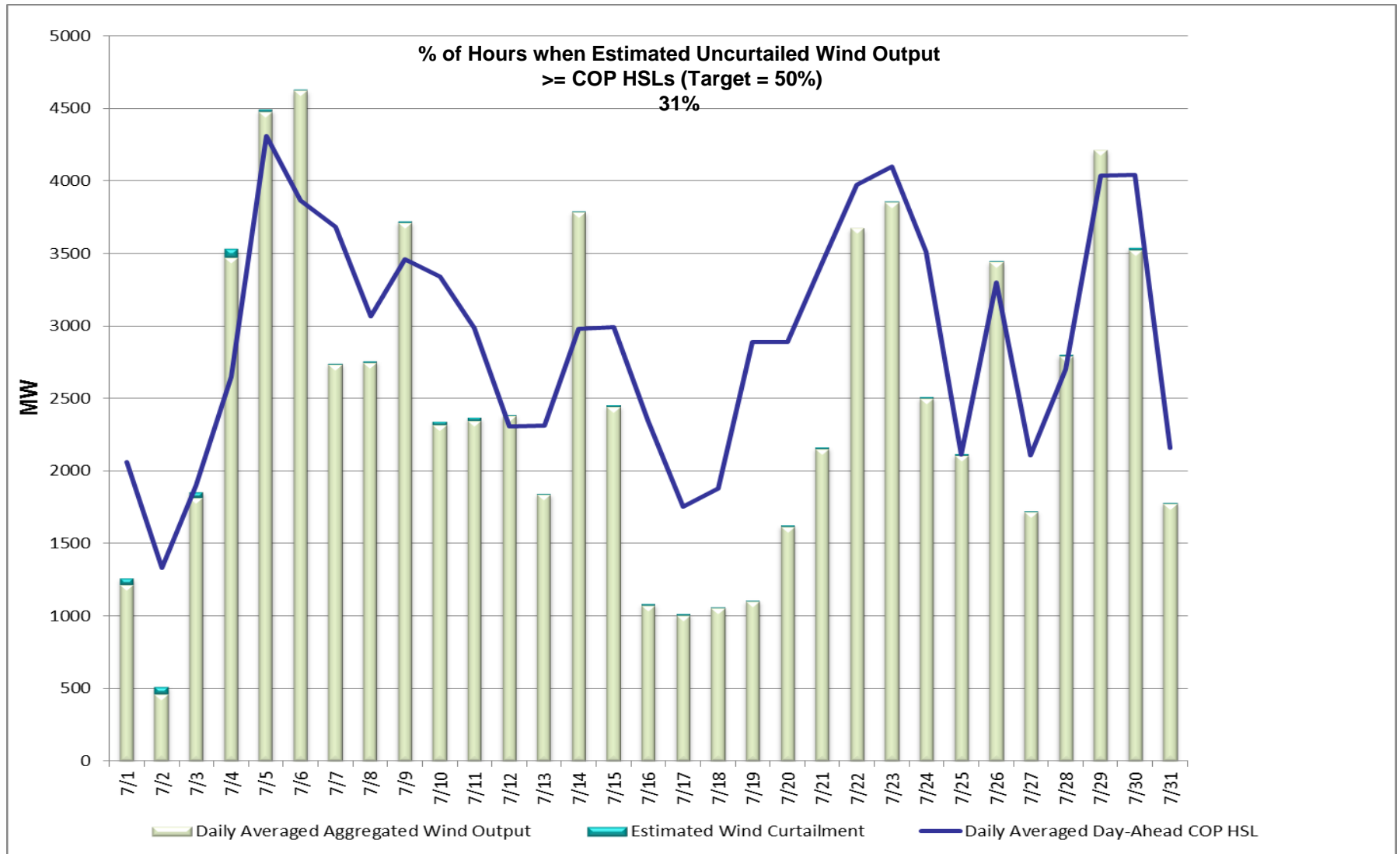
- 163 active generation interconnection requests totaling over 42,800 MW, including 21,000 MW of wind generation as of July 31, 2013. Two more requests and 1,800 more MW from June 30, 2013.
- 10,570 MW wind capacity in commercial operation July 31, 2013; no change from June 30, 2013

# Daily Peak Demand: Hourly Average Actual vs. Forecast, Wind Day-Ahead COPs & On-line Capacity at Peak – July 2013



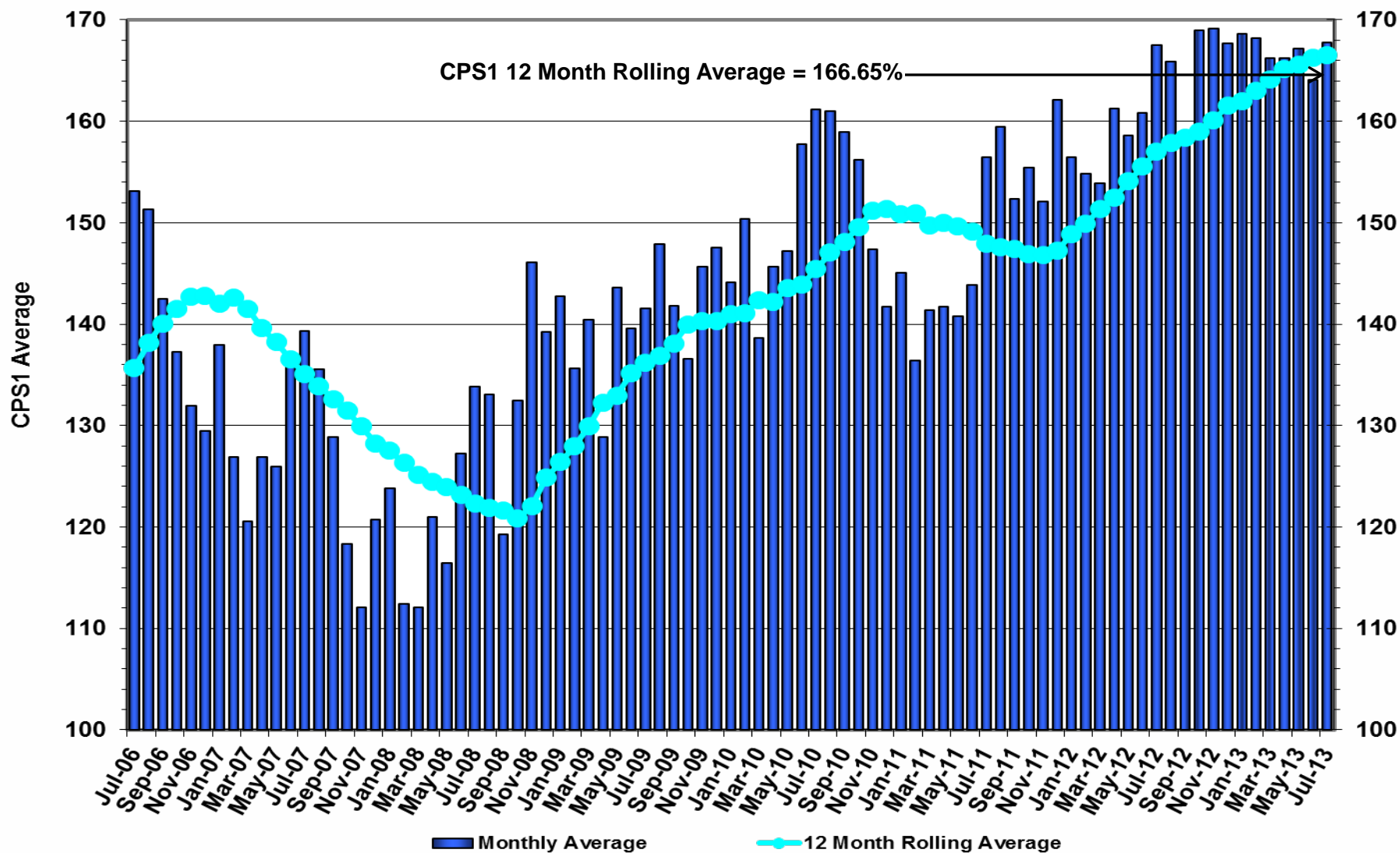
# Actual Wind Output plus Curtailments vs. Wind Day-Ahead COPs for All Hours

## – July 2013

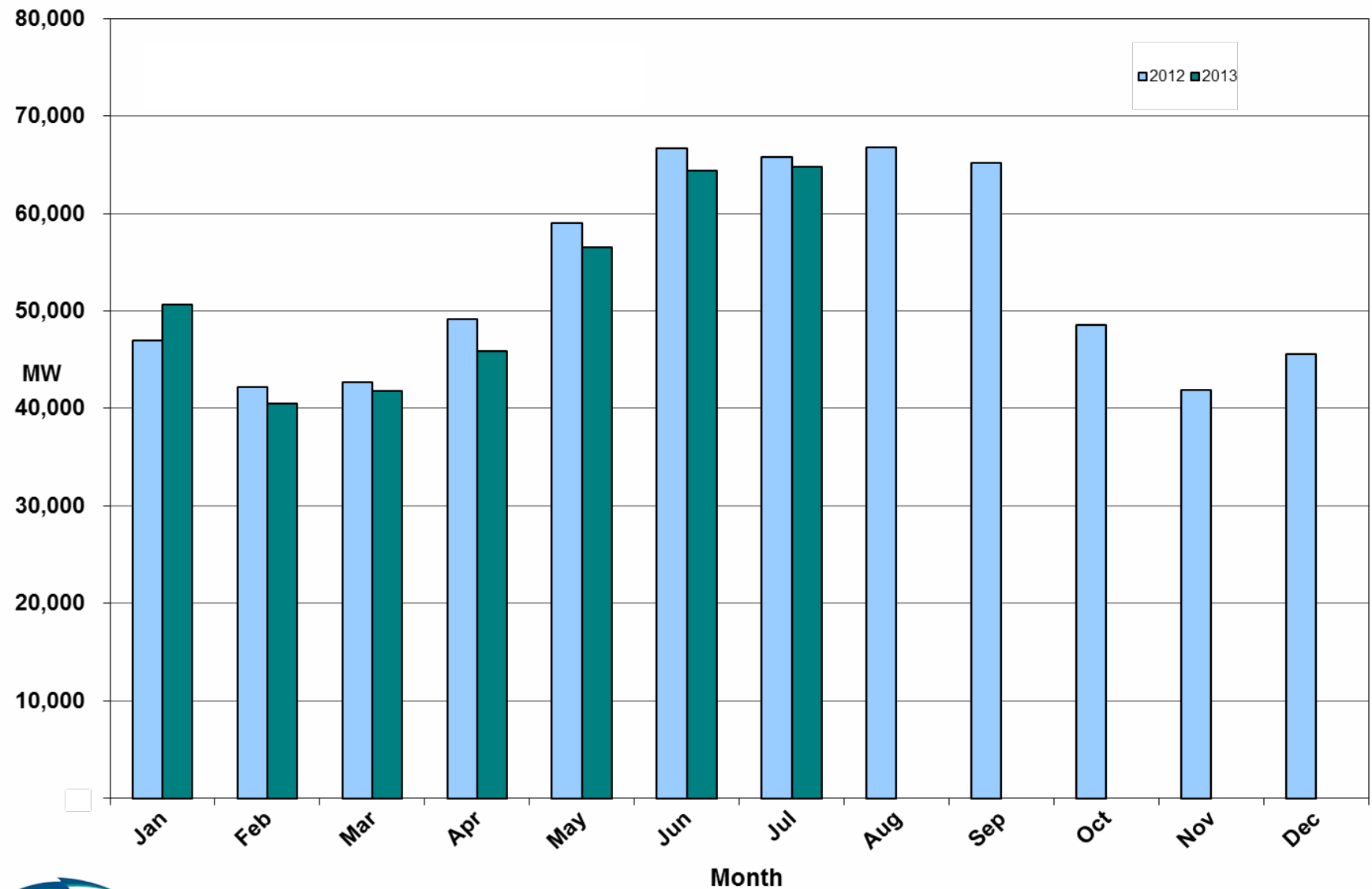


**Note: QSEs must use the AWST 50% probability of exceedance forecast as the HSL in their COPs**

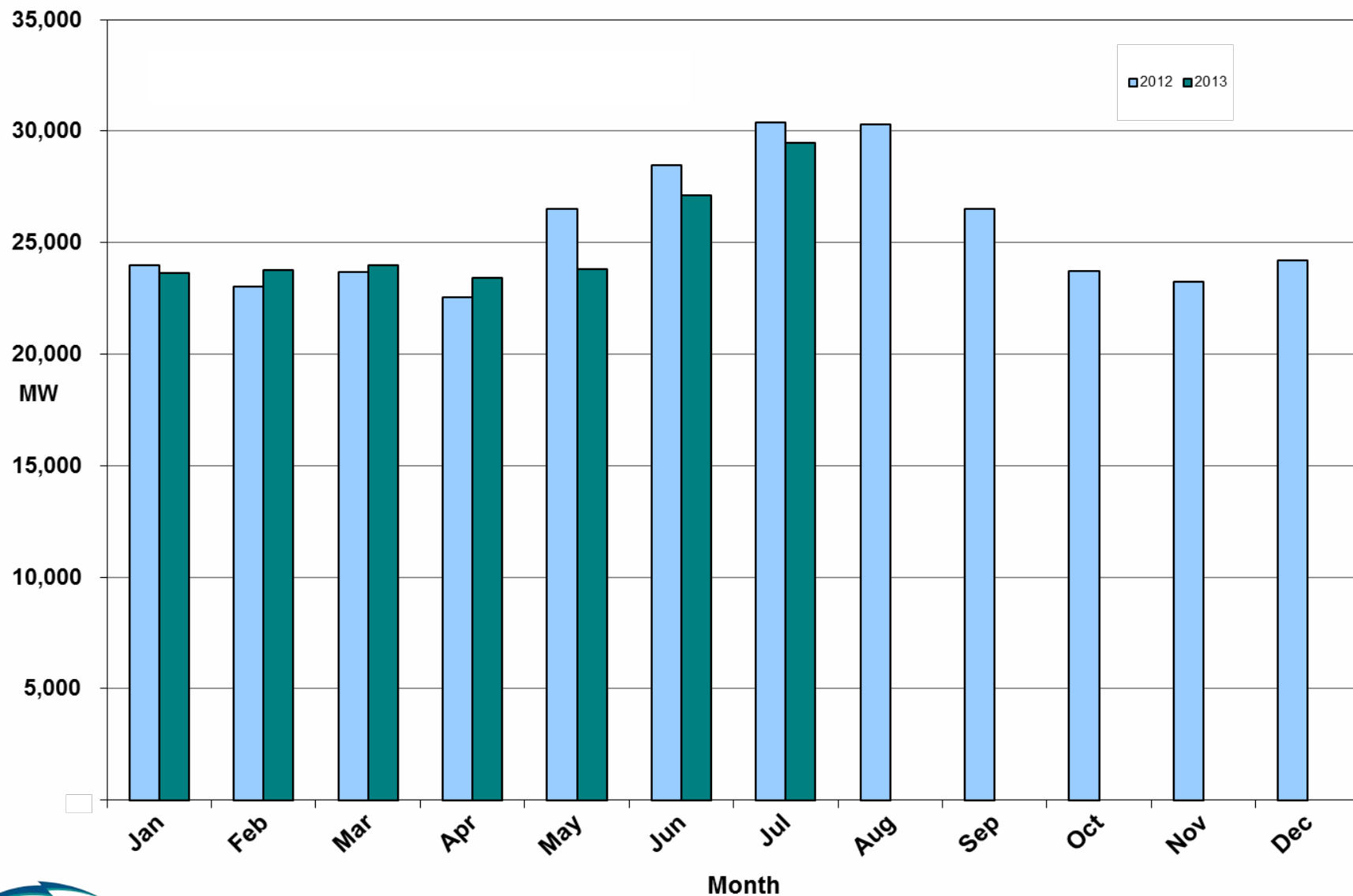
# ERCOT's CPS1 Monthly Performance – July 2013



## Monthly Peak Actual Demand – July 2013



## Monthly Minimum Actual Demand – July 2013





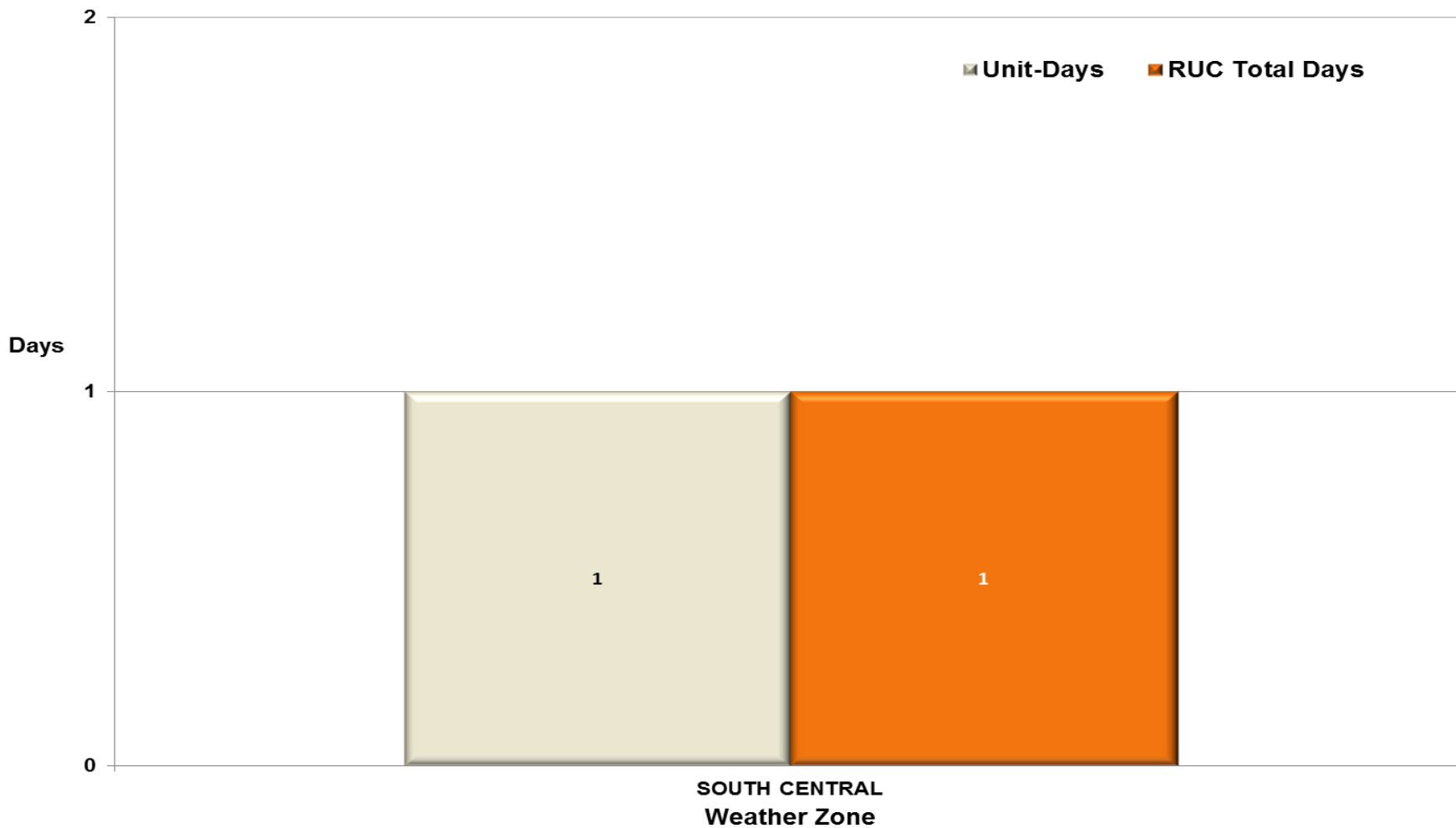
## Day-Ahead Load Forecast Performance – July 2013

**Mean Absolute Percent Error (MAPE) for ERCOT Mid-Term Load Forecast (MTLF)  
Run at 14:00 Day Ahead**

	<b>2010 MAPE</b>	<b>2011 MAPE</b>	<b>2012 MAPE</b>	<b>2013 MAPE</b>	<b>July 2013 MAPE</b>	
<b>Average Annual MAPE</b>	<b>2.83</b>	<b>2.83</b>	<b>3.02</b>	<b>2.88</b>	<b>2.70</b>	
<b>Lowest Monthly MAPE</b>	<b>2.24</b>	<b>1.63</b>	<b>2.51</b>	<b>2.51</b>	<b>Lowest Daily MAPE</b>	<b>0.60</b> July – 7
<b>Highest Monthly MAPE</b>	<b>3.79</b>	<b>3.55</b>	<b>3.49</b>	<b>3.50</b>	<b>Highest Daily MAPE</b>	<b>8.31</b> July – 15

## Reliability Unit Commitment (RUC) Capacity by Weather Zone – July 2013

RUC Commitments by Weather Zone



## Generic Transmission Limits (GTLs) – July 2013

GTLs	Jul 12 Days GTLs	May 13 Days GTLs	Jun 13 Days GTLs	Jul 13 Days GTLs	Last 12 Months Total Days (Jul 12 – Jul 13)
North – Houston	0	0	0	0	0
West – North	2	3	4	0	83
Valley Import	0	0	0	0	0

**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 – July 2013

---

- Advisories issued for Physical Responsive Capability (PRC) below 3000 MW.
  - None
- Advisories issued for Voltage Security Assessment Tool (VSAT) & State Estimator not solving for 30 minutes.
  - Issued two days (07/24; 07/29)
- Advisories issued for geomagnetic disturbance storm of K-7 or higher.
  - None
- Watches issued for Physical Responsive Capability (PRC) below 2500 MW.
  - None
- Transmission Watches
  - None
- Emergency Notice
  - None
- Energy Emergency Alerts
  - None

## Significant Events – July 2013

---

- No significant events to report

## Lake Levels Update – August 1, 2013

Surface Water & (MW)	*Level @ Full Conservation Pool	*Level on Jan 1, 2011	*Level on Oct 7, 2011	*Level on Aug 1, 2013
Lake Texana (56)	44.50	41.00	32.81	41.20
Bardwell Lake (312)	421.00	420.71	416.23	417.26
Lake Colorado City (407)	2,070.20	2057.33	2052.4	2051.17
Lake Ray Hubbard (916)	435.50	432.37	429.22	431.29
Lake Granbury (983)	693.00	691.90	686.27	685.88
Lake Houston (1016)	41.73	42.10	36.76	41.97
Twin Oaks Reservoir (1616)	400	398.87	398.27	400.12
Lake Limestone (1689)	363	359.03	354	357.23
Martin Lake (2425)	306	300.48	295.06	302.70

\* In Feet above Mean Sea Level

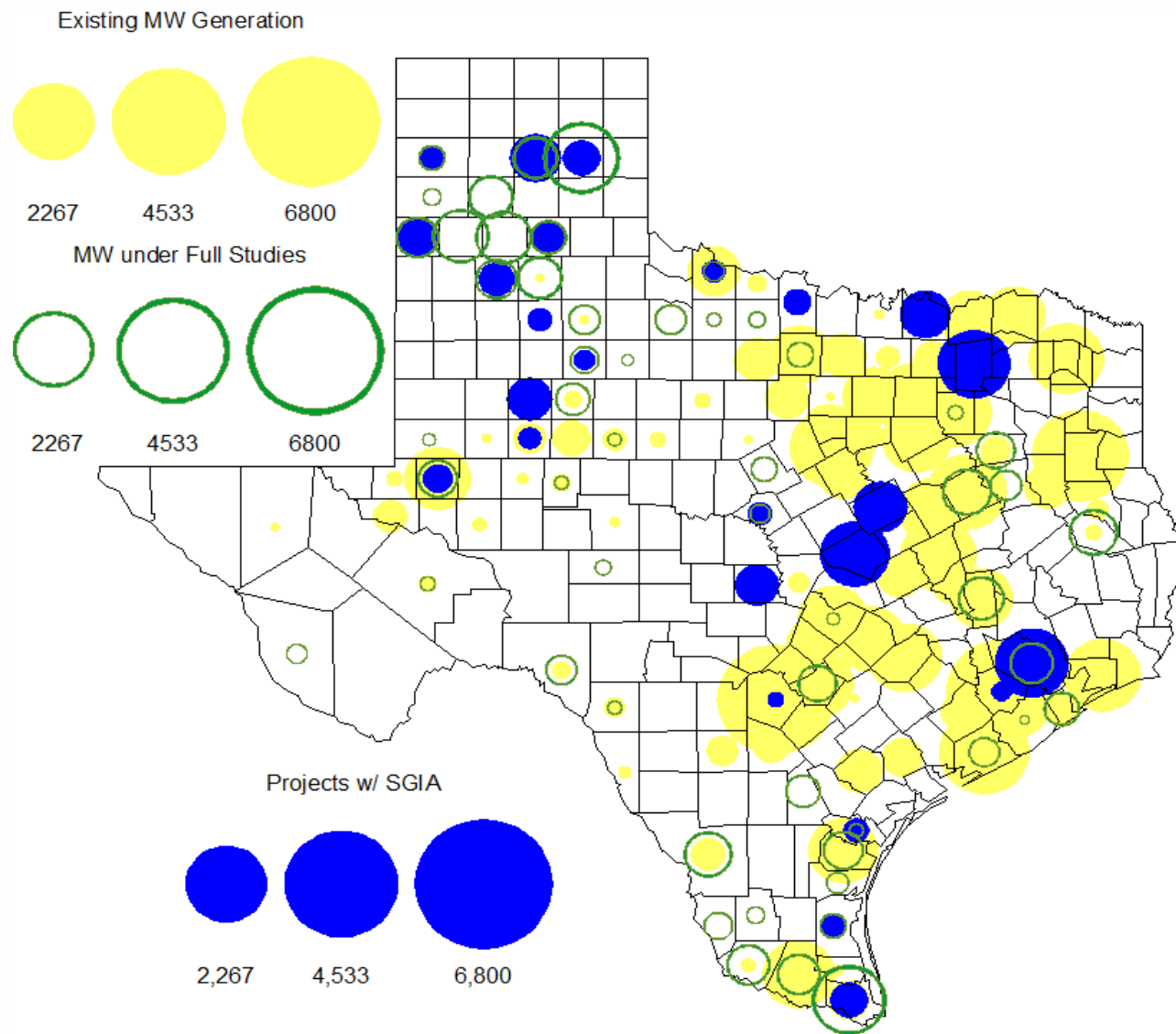


## Planning Summary – July 2013

---

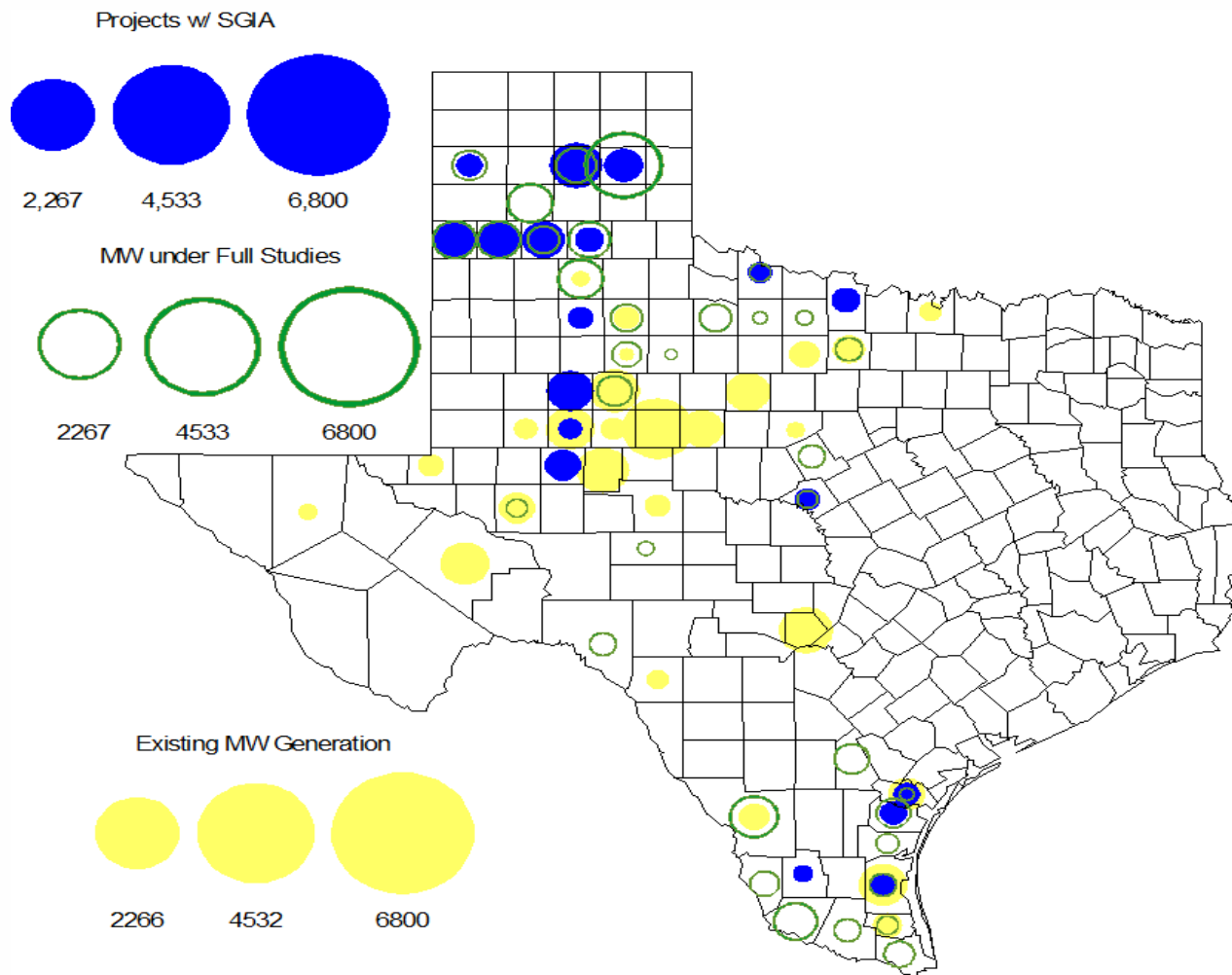
- **ERCOT is currently tracking 163 active generation interconnection requests totaling over 42,800 MW. This includes over 21,000 MW of wind generation.**
- **ERCOT is currently reviewing proposed transmission improvements with a total cost of \$607 Million**
- **Transmission Projects endorsed in 2013 total \$349.8 Million**
- **All projects (in engineering, routing, licensing and construction) total approximately \$8.82 Billion.**
- **Transmission Projects energized in 2013 total about \$1.29 Billion.**
- **SCR 760 Changes Needed for Information Model Manager and Topology Processor for Planning Models completed with migration of final items to ERCOT production systems on 7/31/2013.**

# County Location of Installed Generation with Interconnection Requests (all fuels) – July 2013

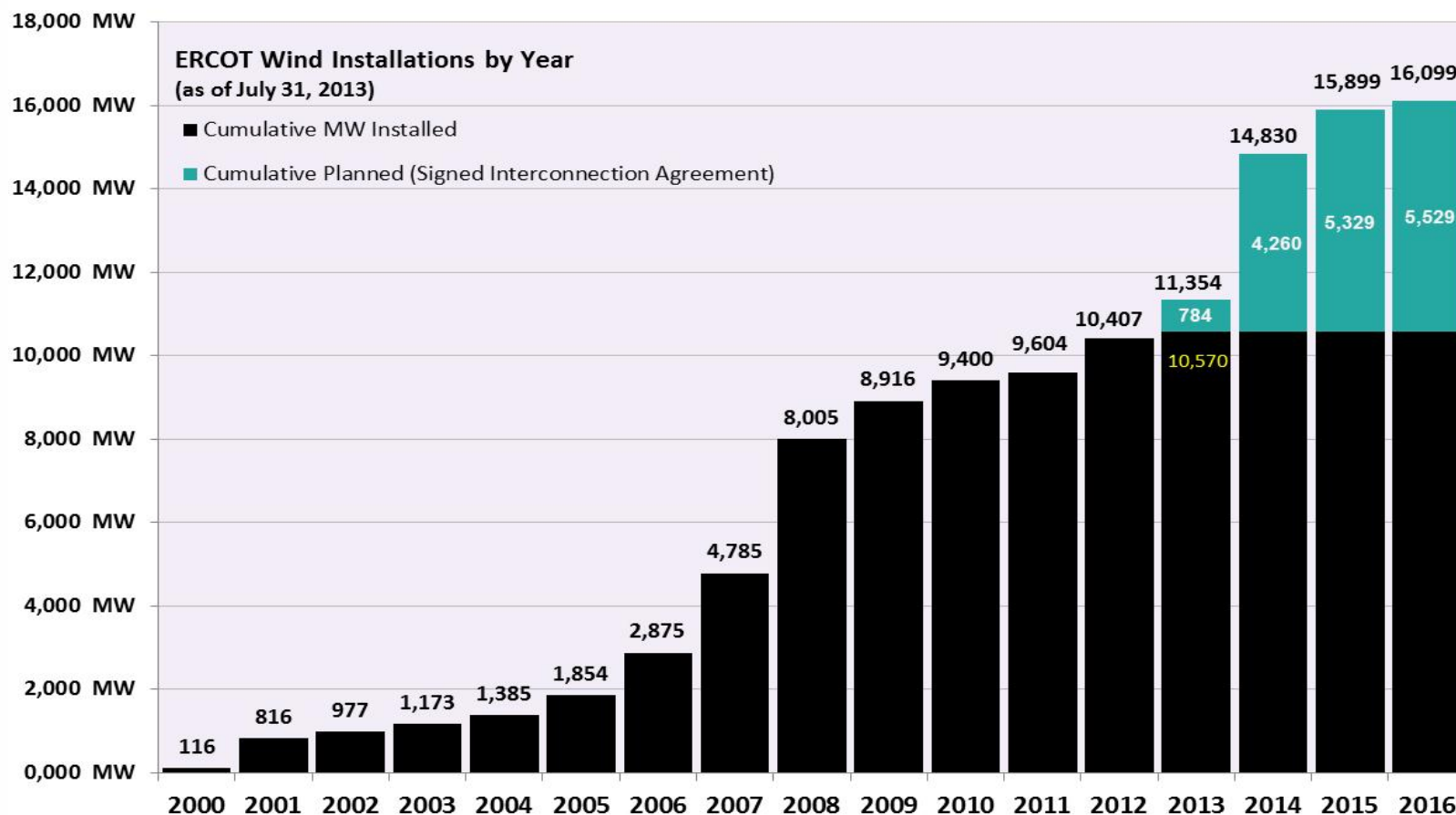




# County Location of Wind Generation – July 2013



# Wind Generation – July 2013



The data presented here is based upon the latest registration data provided to ERCOT by the resource owners and can change without notice. Any capacity changes will be reflected in current and subsequent years' totals. Scheduling delays will also be reflected in the planned projects as that information is received.

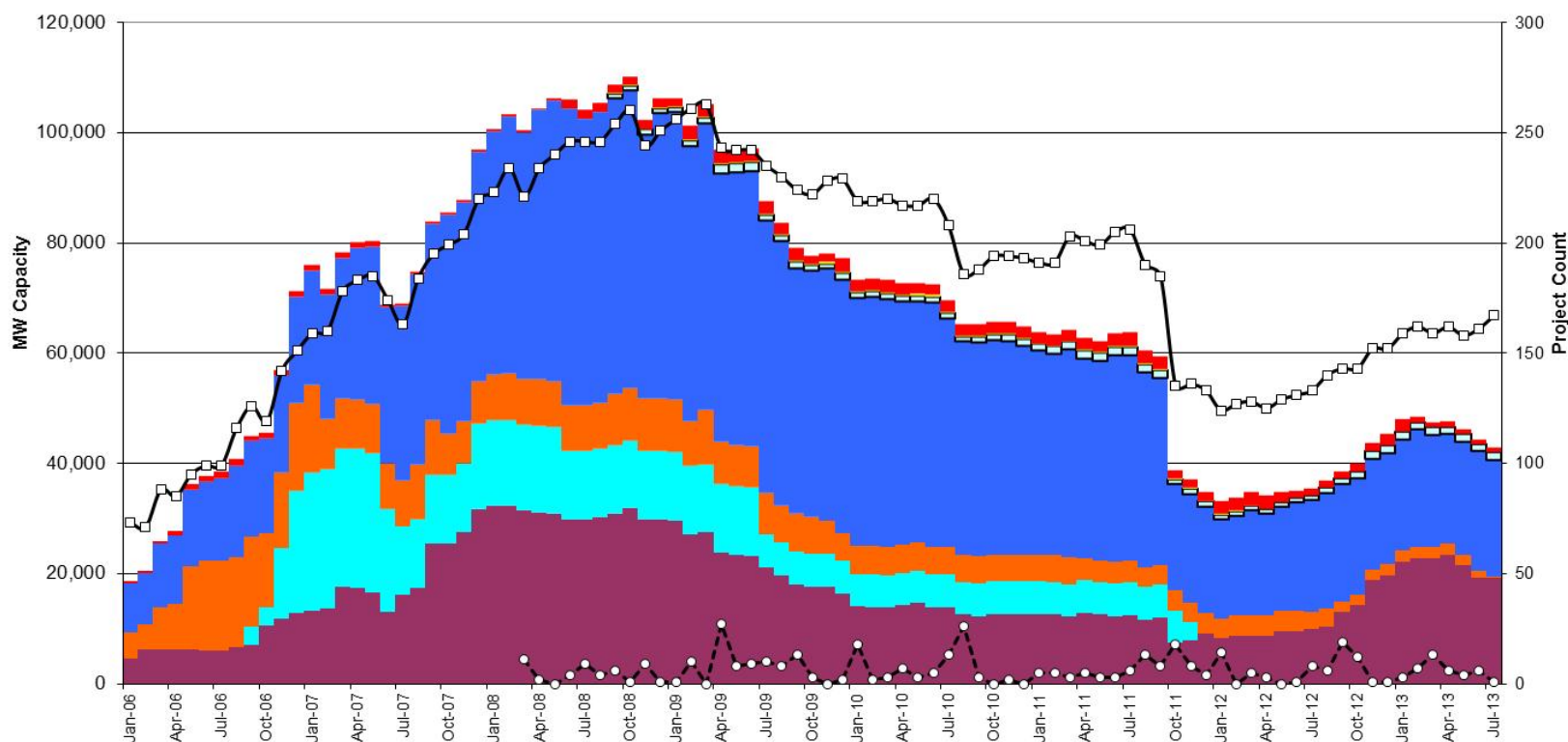
This chart reflects planned units in the calendar year of submission rather than installations by peak of year shown.

# Generation Interconnection Activity by Fuel – July 2013

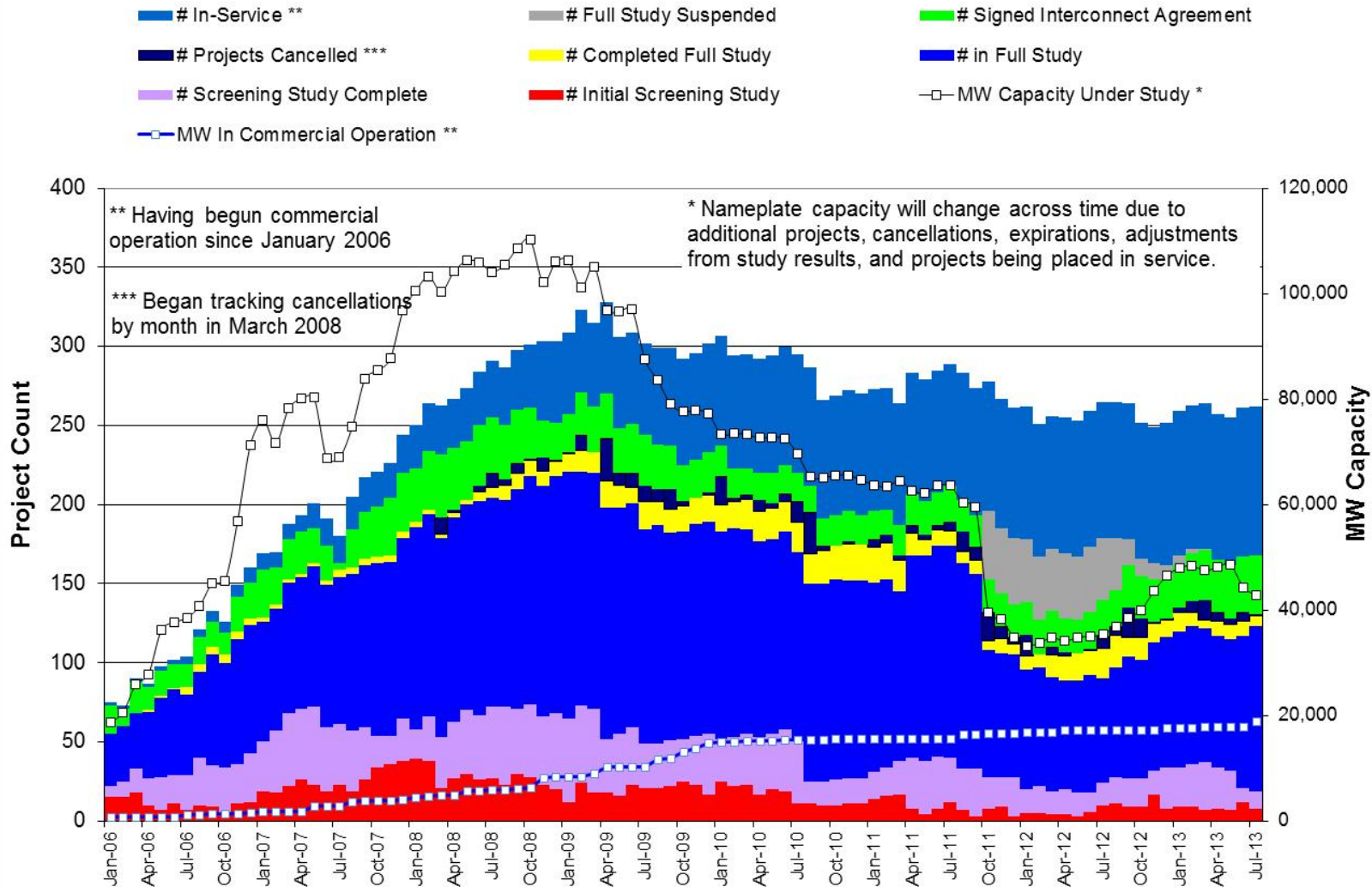
MW Natural Gas    MW Nuclear    MW Coal    MW Wind    MW Solar \*  
 MW Biomass \*    MW Other    Total # Projects    # Projects Cancelled

\* Prior to September 2008, Category "Other" included "Solar" and "Biomass"  
 Projects in all phases of interconnection study are reflected in this graph  
 Project cancellation tracking by month began in March 2008

Note: Suspended Projects are not included in this chart



# Generation Interconnection Activity by Project Phase – July 2013

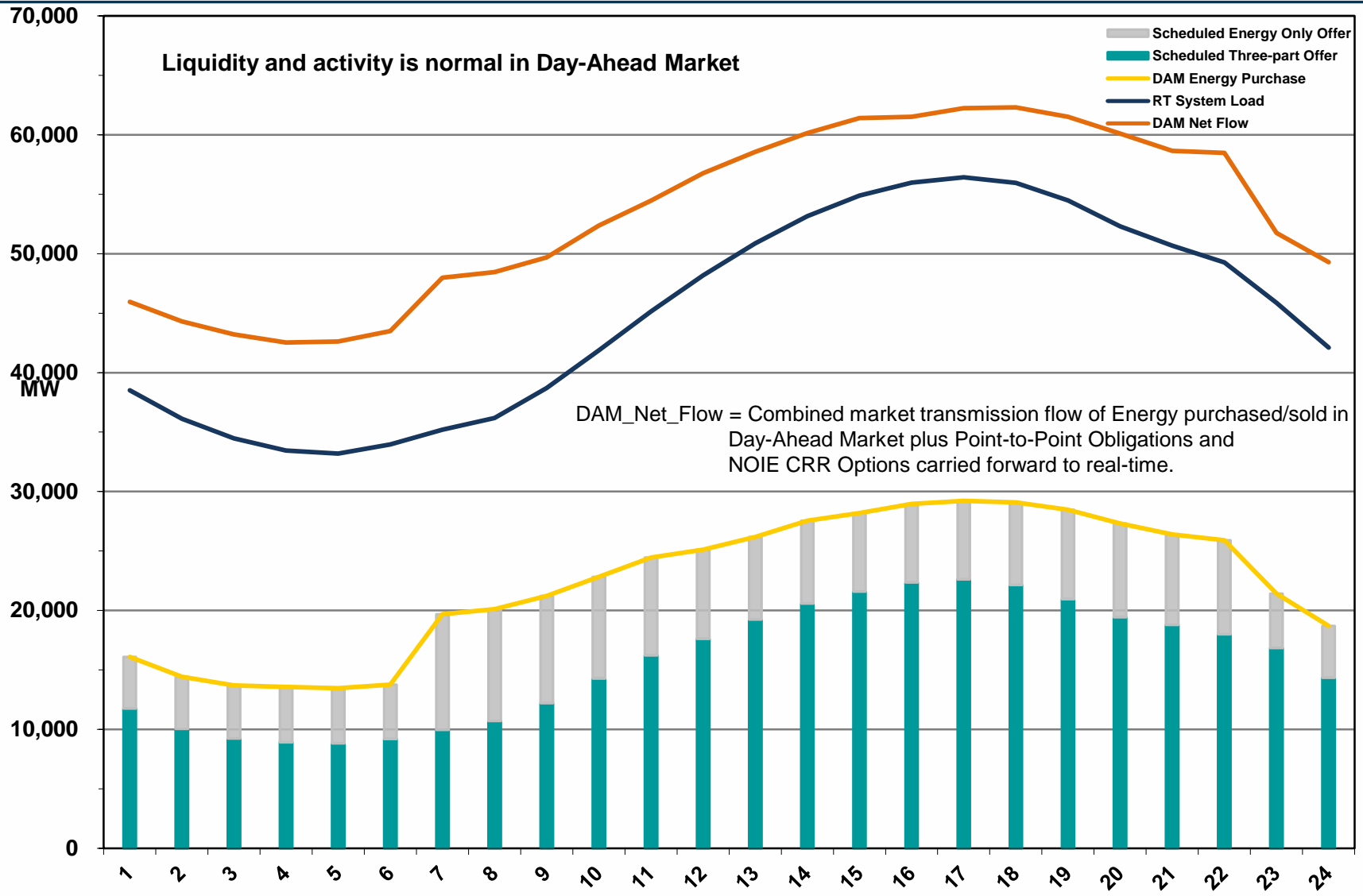


---

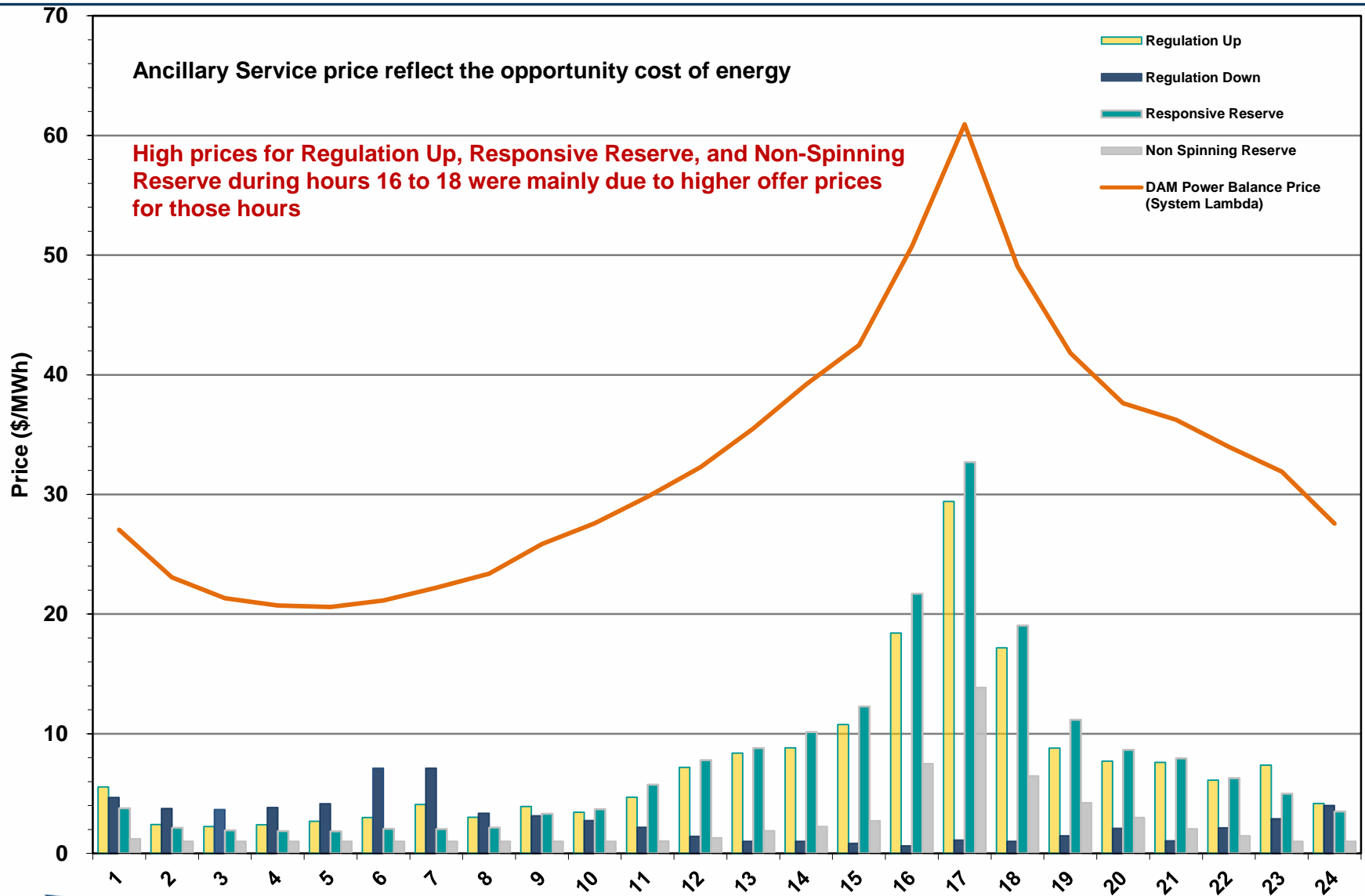
# **Market Operations**

---

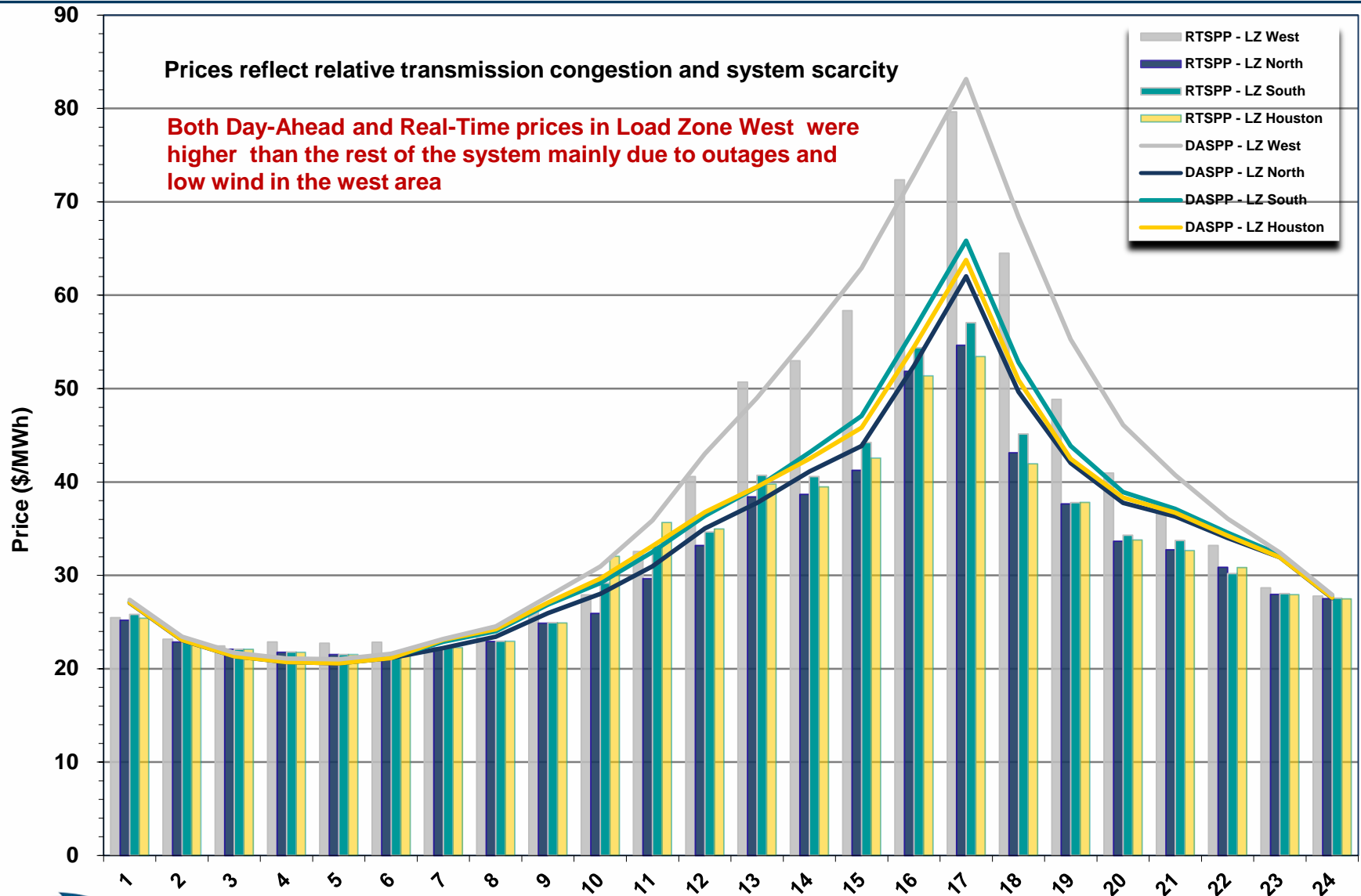
# Day-Ahead Schedule (Hourly Average) – July 2013



# Day-Ahead Electricity And Ancillary Service Hourly Average Prices – July 2013

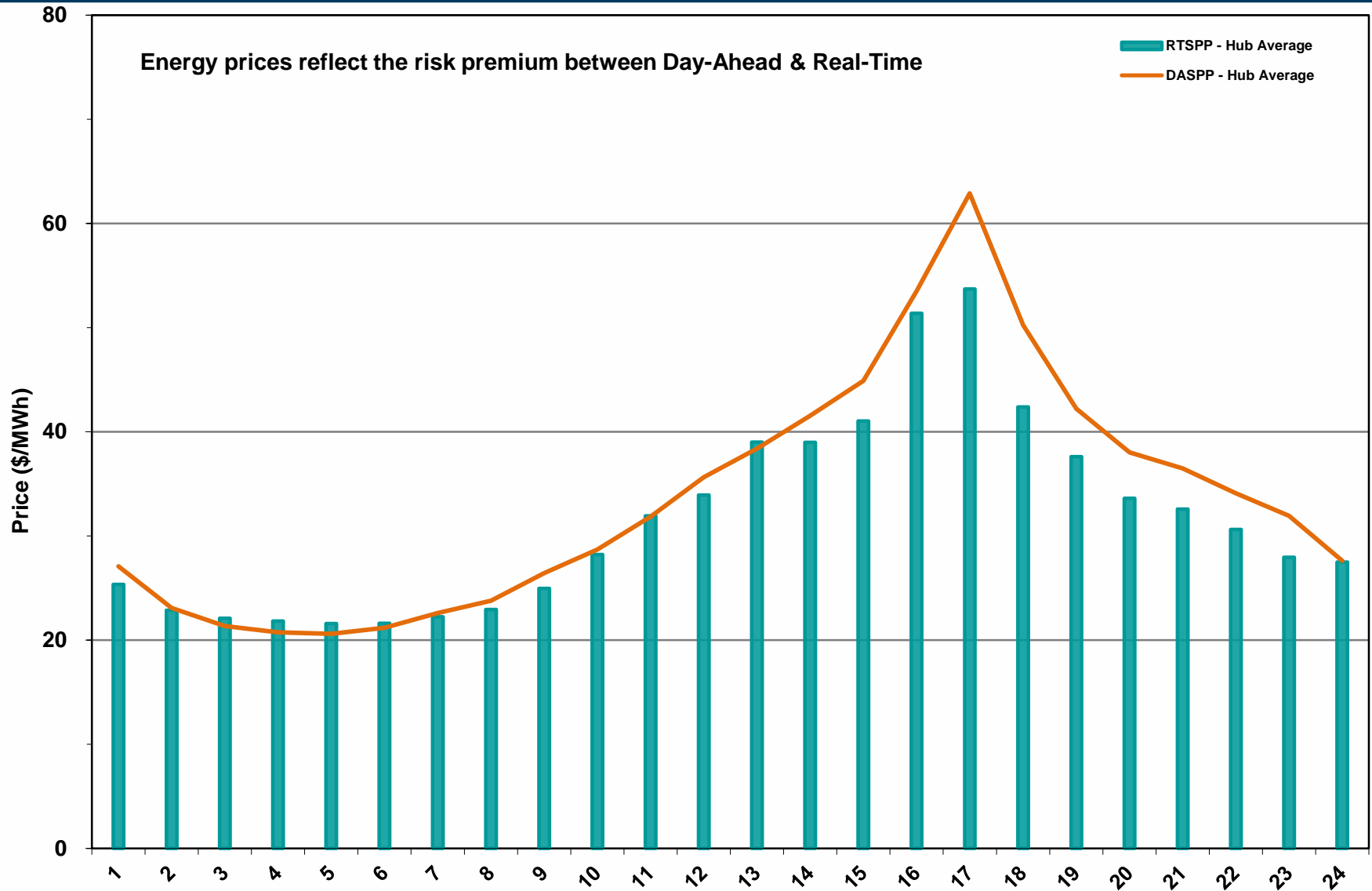


# Day-Ahead Vs Real-Time Load Zone SPP (Hourly Average) – July 2013

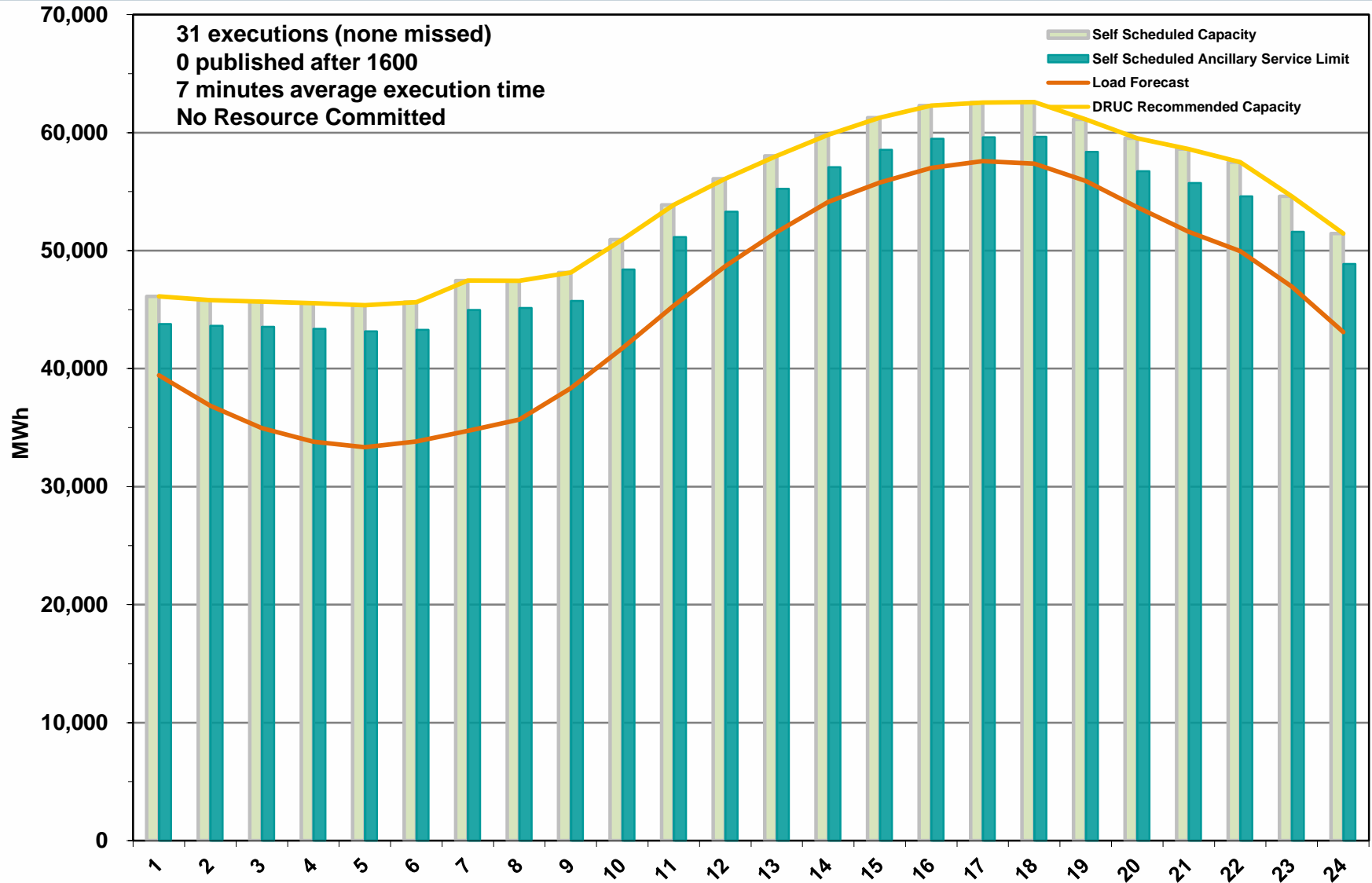




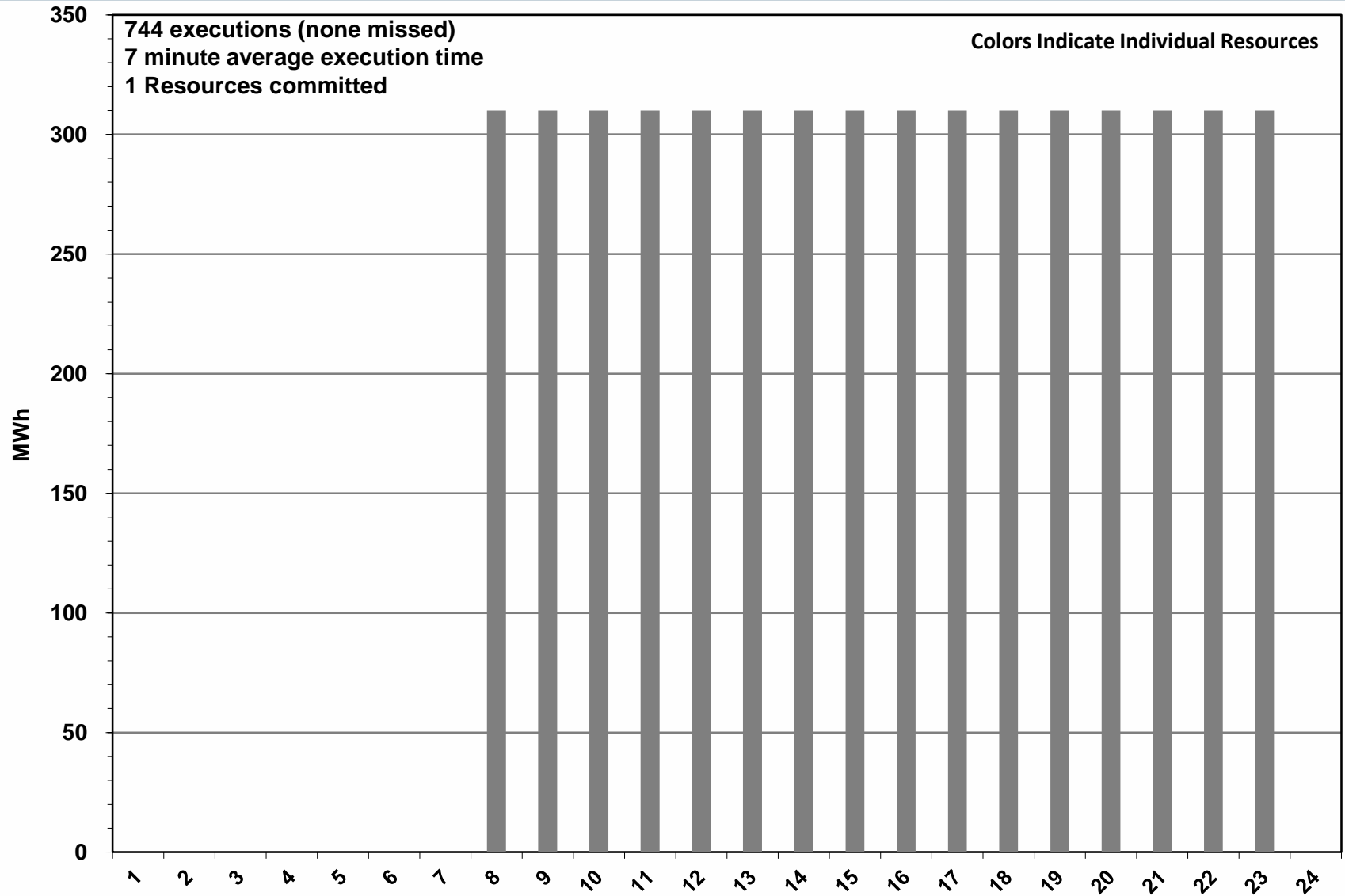
# Day-Ahead Vs Real-Time Hub Average SPP (Hourly Average) – July 2013



# DRUC Monthly Summary (Hourly Average) – July 2013



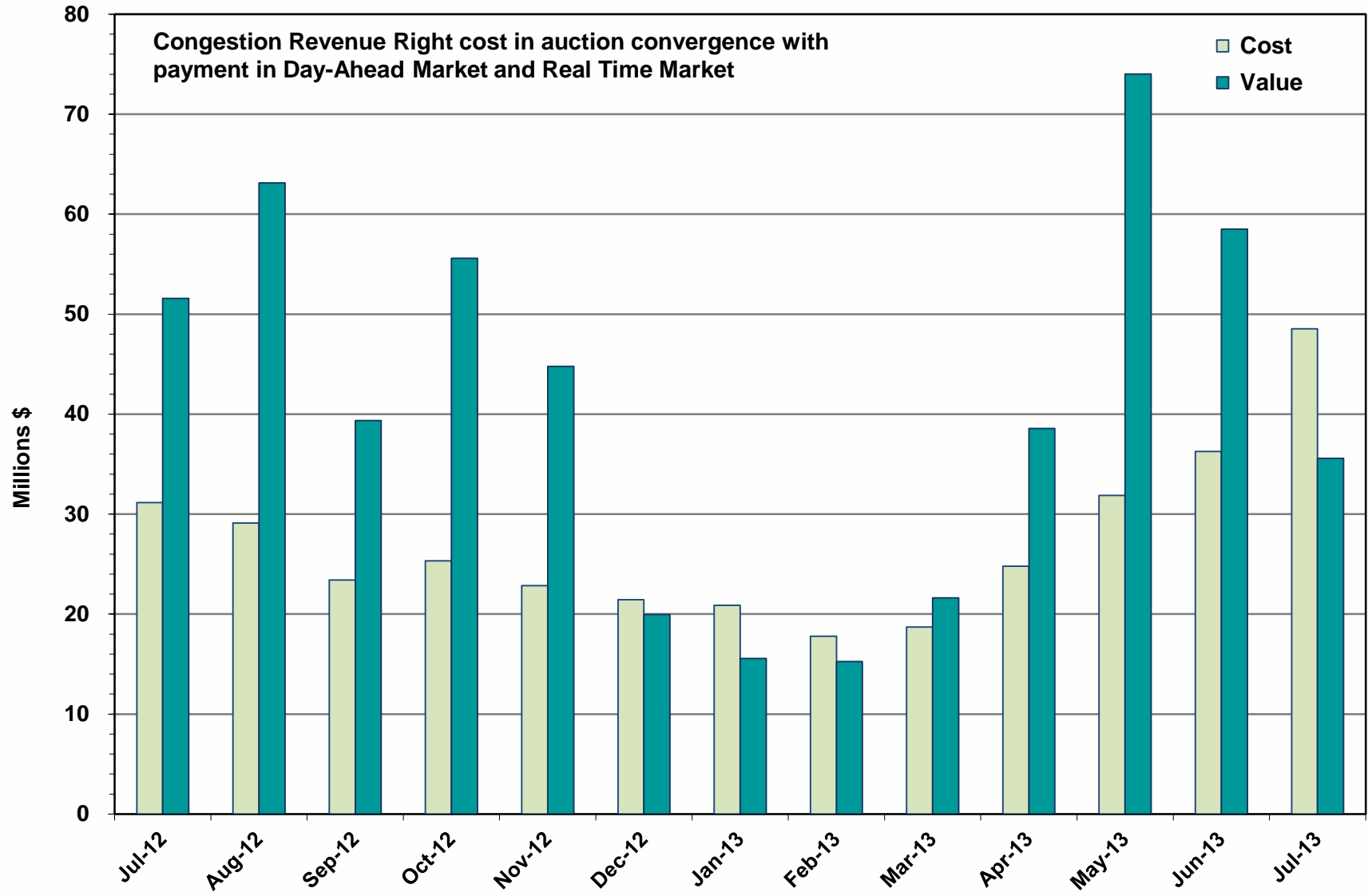
# HRUC Monthly Summary – July 2013



## Non-Spinning Reserve Service Deployment – July 2013

Deployment Start Time	Deployment End Time	Deployment Duration (Hours)	Max Deployment (MW)	Reason
None				

## CRR Price Convergence – July 2013



# ERS Procurement for **June 2013 – September 2013**

## 10-Minute ERS

	BH1	BH2	BH3	NBH
MW Procured	472.125	351.550	345.500	384.875
Average Price Per MW per Hour <sup>1</sup>	\$10.21	\$12.07	\$12.60	\$10.13

Note: Four Generators procured with an average of 11.7 MW across all 4 time periods

## 30-Minute ERS Pilot

MW Procured	126.970	87.645	76.190	100.940
Clearing Price <sup>2</sup>	\$11.00	\$12.00	\$14.00	\$11.00

BH1 - Business Hours 1

HE 0900 through 1300, Monday thru Friday except ERCOT Holidays

BH2 - Business Hours 2

HE 1400 through 1600, Monday thru Friday except ERCOT Holidays

BH3 - Business Hours 3

HE 1700 through 2000, Monday thru Friday except ERCOT Holidays

NBH - Non-Business Hours

All other hours

## Weather Sensitive ERS Pilot

	BH2	BH3	WEH
MW Procured	2.60	2.60	2.60
Clearing Price <sup>2</sup>	\$50.00	\$50.00	\$50.00

BH2 - Business Hours 2

HE 1400 through 1600, Monday thru Friday except ERCOT Holidays

BH3 - Business Hours 3

HE 1700 through 2000, Monday thru Friday except ERCOT Holidays

WEH- WeekEnd & Holidays

HE 1400-2000, Saturday, Sundays & Holidays

<sup>1</sup> Procured on a Pay-As-Offer basis

<sup>2</sup> Procured using a Clearing Price Mechanism

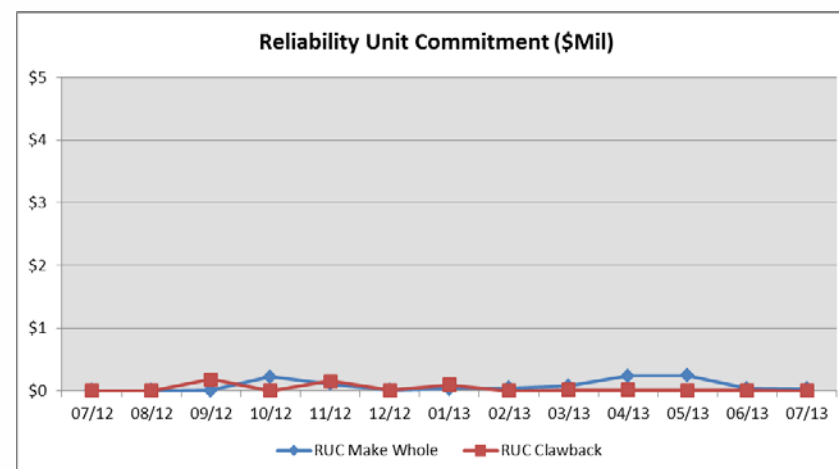


## Market Enhancements to Address IMM Recommendations – July 2013

Enhancement	Further Information
Adequate scarcity pricing in SCED using Operating Reserve Demand Curve: Hogan solution	<ul style="list-style-type: none"><li>• This was discussed at the PUCT Project 40000 Workshop conducted on 6-27-13</li><li>• Additional analysis by ERCOT and Brattle was filed on 7-23-13</li><li>• ERCOT is developing impact analysis to implement co-optimization of Ancillary Service and Energy in Real-Time market</li></ul>
Potential solutions to prevent price reversals due to deployment of existing load resources	<ul style="list-style-type: none"><li>• NPRR 508 – Setting of Real-Time LMPs during EEA ERS/Load Resource Deployment</li><li>• At the 6-6-13 TAC meeting, the NPRR failed to get sufficient votes for approval (14 yes/13 no/2 abstain)</li><li>• NPRR 508 has a status of “rejected”</li><li>• TAC produced a report for July Board of Director meeting on pricing during Reserve Deployments</li></ul>
“Over-mitigation” in SCED	<ul style="list-style-type: none"><li>• NPRR 520 – Real-Time Mitigation Rules and Creation of a Real-Time Constraint Competitiveness was approved by BOD on 3-19-13</li><li>• The NPRR was partially (MMS functionality) implemented on 6-12-13</li><li>• The last remaining part of the NPRR which provides additional informational telemetry to QSEs was implemented on 7-31-13</li></ul>

# Reliability Services – July 2013

Reliability Unit Commitment (RUC)	\$ in Millions
RUC Make-Whole Payments	(\$0.02)
RUC Clawback Charges	\$0.00
<b>RUC Commitment Settlement</b>	<b>(\$0.02)</b>
RUC Capacity Short Charges	\$0.02
RUC Make-Whole Uplift	\$0.00
<b>RUC Commitment Cost Allocation</b>	<b>\$0.02</b>
RUC Decommitment Payments	\$0.00



RUC Cost continues to trend low.

RUC Costs for July 2013 were a charge of \$0.02M, compared to:

- A charge of \$0.03 in June 2013
- A charge of \$0.00 in July 2012



# Ancillary Services – July 2013

Capacity Services	\$ in Millions
Regulation Up Service	\$2.66
Regulation Down Service	\$0.91
Responsive Reserve Service	\$13.3
Non-Spinning Reserve Service	\$2.72
Black Start Service	\$0.53
Voltage Services - Reactive Power	\$0.0
Voltage Services - Lost Opportunity	\$0.0
<b>Total Capacity Service</b>	<b>\$20.13</b>

Capacity Services costs were down from last month and are less than July 2012.

July 2013 cost was \$20.13M, compared to:

- A charge of \$26.99M in June 2013
- A charge of \$24.25M in July 2012

# Energy Settlement – July 2013

Day-Ahead Market Energy Settlement	\$ in Millions
Energy Purchases	\$605.28
Point to Point Obligation Purchases	\$31.83
RMR Day-Ahead Revenue	\$0.00
Energy Sales	(\$598.85)
<b>Day-Ahead Congestion Rent</b>	\$38.26
Day-Ahead Market Make-Whole Payments	(\$0.12)

Real-Time Market Energy Settlement	\$ in Millions
Energy Imbalance at a Resource Node	(\$661.52)
Energy Imbalance at a Load Zone	\$941.92
Energy Imbalance at a Hub	(\$235.06)
Real Time Congestion from Self Schedules	\$0.41
Block Load Transfers and DC Ties	(\$10.36)
<b>Impact to Revenue Neutrality</b>	\$35.40
Emergency Energy Payments	(\$0.20)
Base Point Deviation Charges	\$0.36
Real-Time Metered Generation (MWh in millions)	33.30

Day-Ahead energy settlement decreased from last month and Real-Time energy settlement increased.

Day-Ahead Market and Real-Time Market settlements are higher than July 2012.

# Congestion Revenue Rights (CRR) – July 2013

<b>Auction Disbursements</b>	<b>\$ in Millions</b>
Annual Auction	(\$32.09)
Monthly Auction	(\$12.03)
<b>Total Auction Revenue</b>	<b>(\$44.12)</b>
Day-Ahead CRR Settlement	(\$35.06)
Day-Ahead CRR Short-Charges	\$0.28
Day-Ahead CRR Short-Charges Refunded	(\$0.28)
Real-Time CRR Settlement	(\$0.00)
Real-Time CRR Short-Charges	\$0.00
Real-Time CRR Short-Charges Refunded	(\$0.00)
<b>Total CRR Proceeds</b>	<b>(\$35.06)</b>
Day-Ahead Point to Point Obligations Settlement	\$31.83
Real-Time Point to Point Obligation Settlement	(\$40.39)
<b>Net Point to Point Obligation Settlement</b>	<b>(\$8.56)</b>

Congestion Revenue Rights were fully funded and excess funds were available for distribution to load.

Distribution of Balancing Account funds to load for July 2013 was \$3.24M, compared to:

- \$7.22M in June 2013
- \$20.14M in July 2012

Point to Point Obligations settled with a net gain of \$8.56M compared to a net loss of \$7.28M last month.

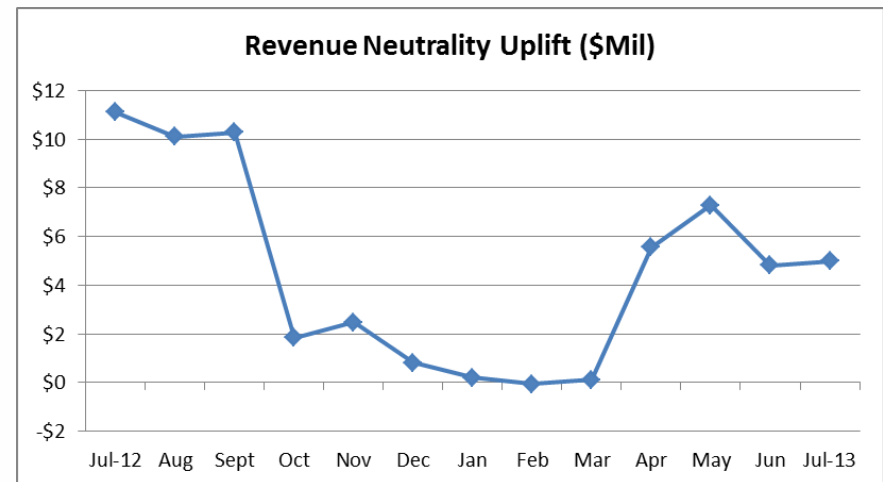
# Revenue Neutrality – July 2013

Revenue Neutrality Settlement	\$ in Millions
Real-Time Point to Point Obligation Settlement	(\$40.39)
Real-Time Point to Point Options and Options with Refund Settlement	(\$0.00)
Real-Time Energy Imbalance Settlement	\$45.34
Real-Time Congestion from Self-Schedules Settlement	\$0.41
DC Tie & Block Load Transfer Settlement	(\$10.36)
<b>Charge to Load</b>	<b>\$5.00</b>

Revenue Neutrality charges to load increased slightly compared to last month and decreased to July 2012.

July 2013 was a charge of \$5.00M, compared to:

- \$4.82M charge in June 2013
- \$11.12M charge in July 2012



# Net Uplift to Load – July 2013

## Market-Based Uplifts

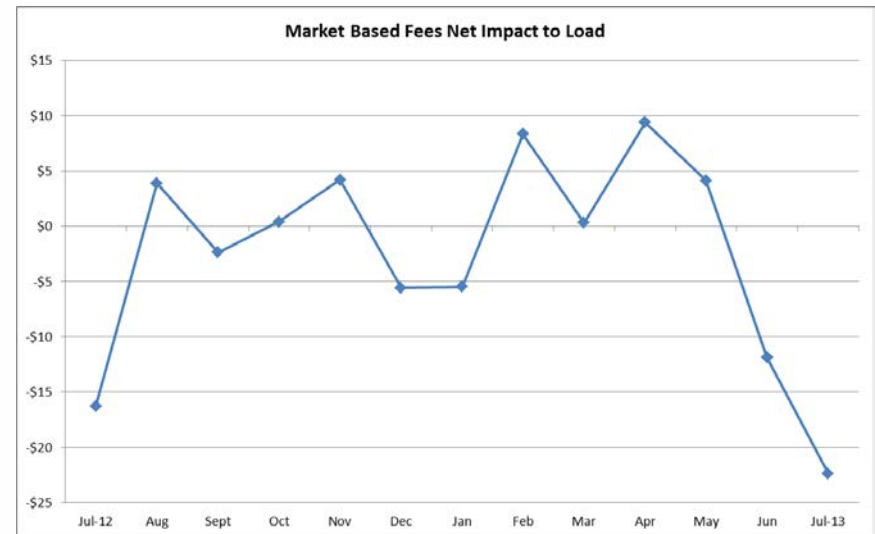
\$ in Millions

CRR Auction Revenue Disbursement Settlement	(\$44.12)
Balancing Account Proceeds Settlement	(\$3.24)
Net Reliability Unit Commitment Settlement	\$0.02
Ancillary Services Settlement	\$20.13
Reliability Must Run Services Settlement	\$0.0
Reliability Must Run for Capacity	\$0.0
Real-Time Revenue Neutrality Settlement	\$5.00
Emergency Energy Settlement	\$0.20
Base Point Deviation Settlement	(\$0.36)
<b>Total</b>	<b>(\$22.37)</b>
<b>Fee Uplifts</b>	
ERCOT Administrative Fee Settlement	\$14.04
<b>Net Uplift Charge to Load</b>	<b>( \$8.33)</b>

Net uplift to Load decreased significantly from last month and from July 2012

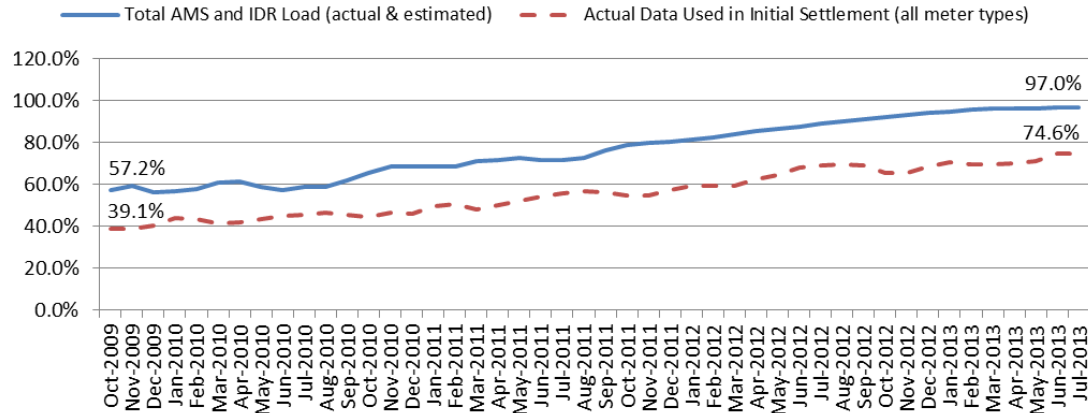
July 2013 was a credit of \$8.33M, compared to:

- A charge of \$1.59 M in June 2013
- A credit of \$2.08M in July 2012



# Advanced Meter Settlement Impacts – July 2013

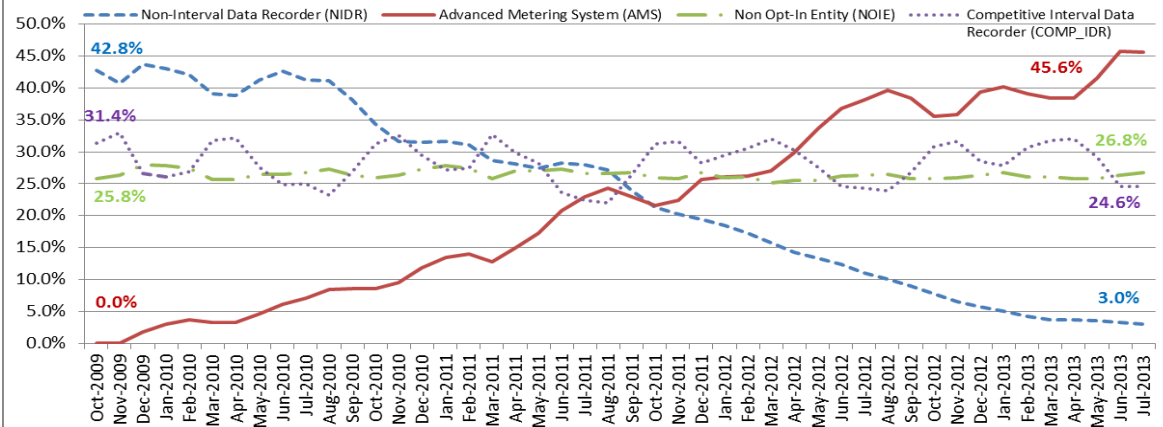
Percent Actual/Percent Interval Data Recorder (IDR)



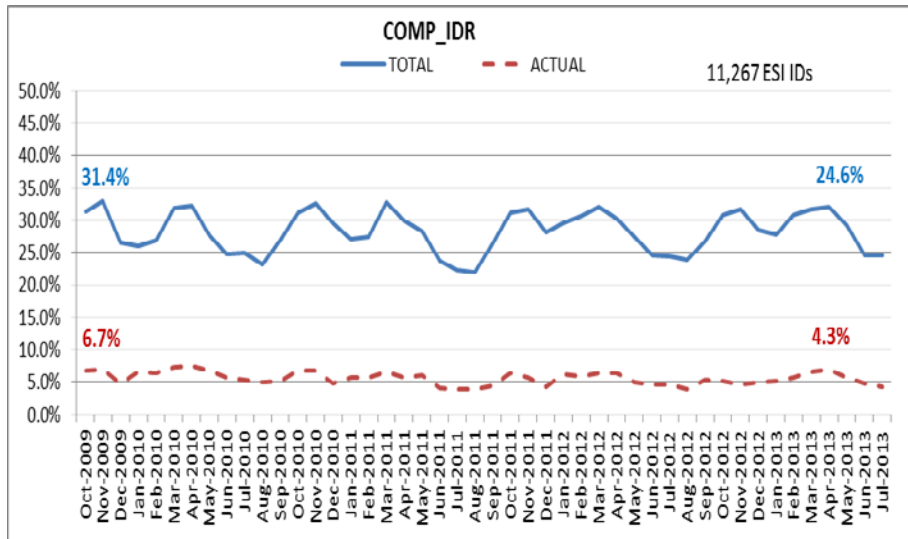
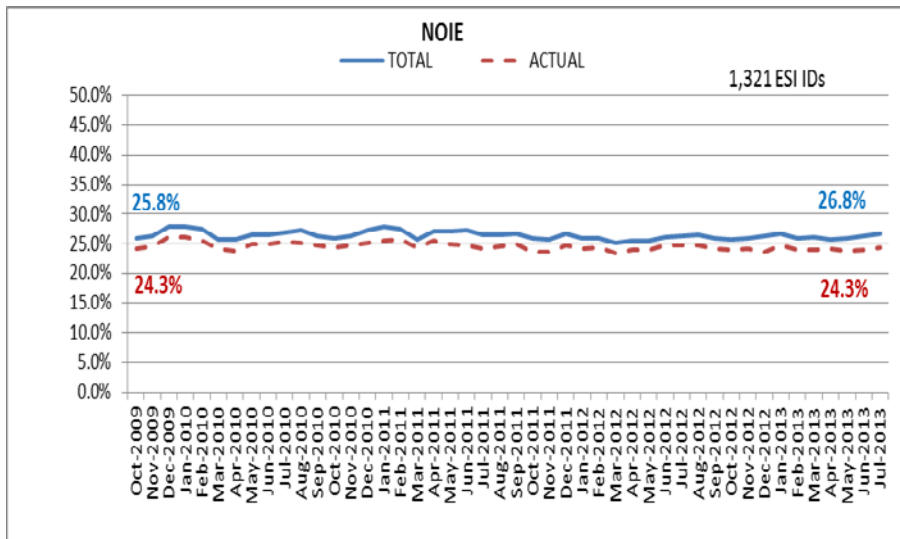
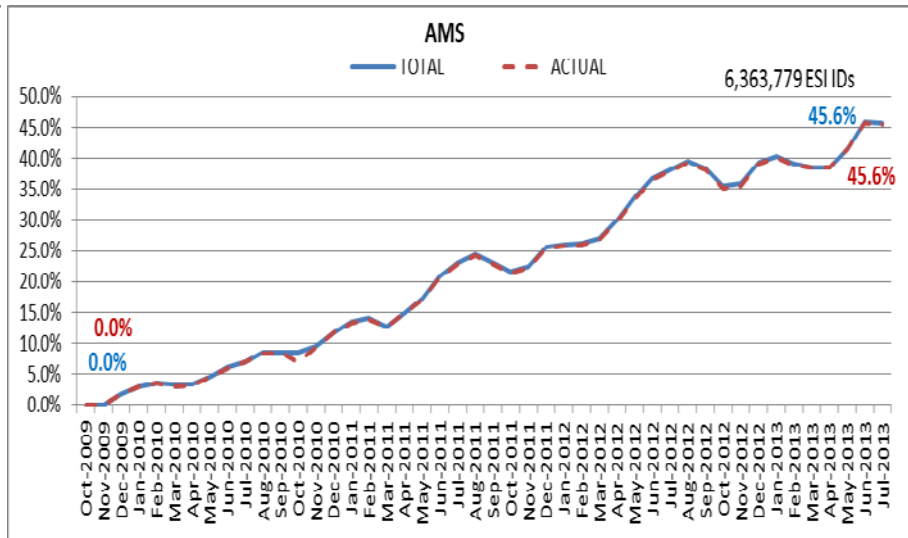
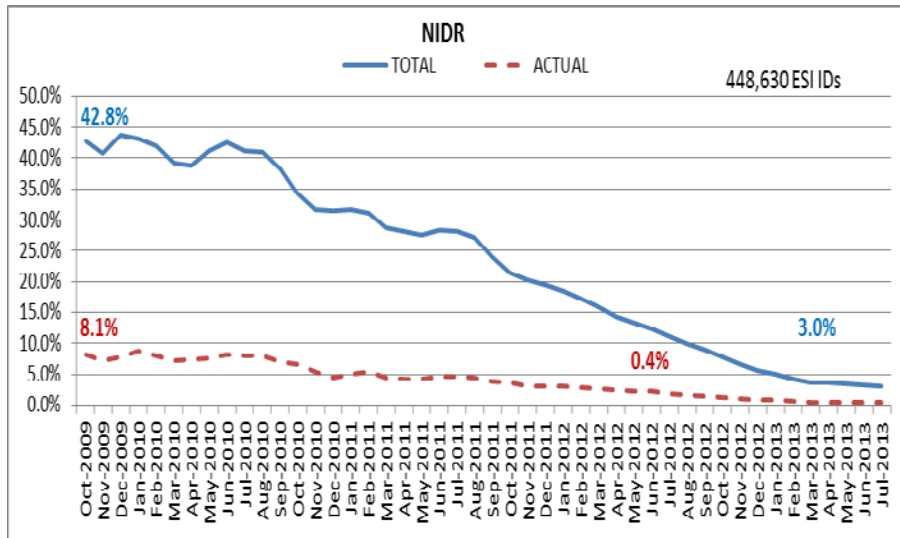
July 2013: At month end, settling 6.3M ESIIDs using Advanced Meter data.

July 2013: 97.0% of the load in ERCOT is settled with 15-min interval data (AMS, Competitive IDR, and NOIE IDR).

Percent of Load by Meter Type



# ERCOT Wide Load Volumes by Meter Type – INITIAL Settlement – July 2013



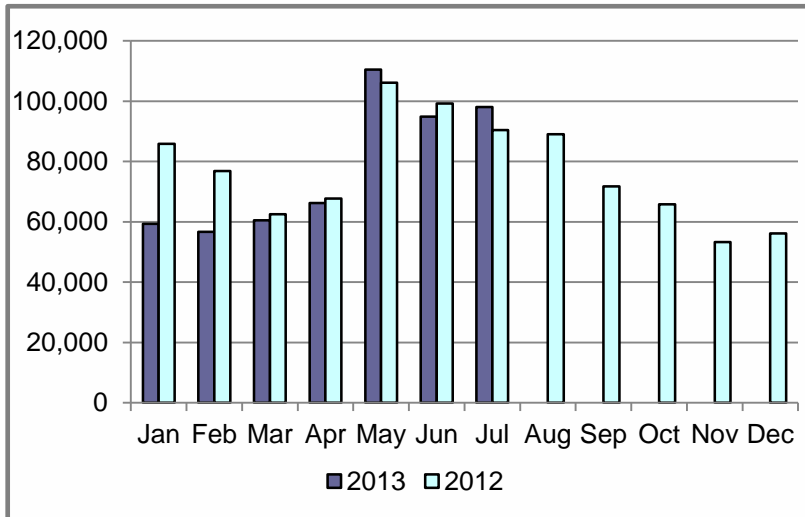
# Retail Transaction Volumes – Summary – July 2013

Transaction Type	Year-To-Date		Transactions Completed	
	July 2013	July 2012	July 2013	July 2013
Switches	546,192	588,755	98,081	90,425
Acquisition	134	0	0	0
Move - Ins	1,342,782	1,290,306	235,748	212,373
Move - Outs	659,029	636,806	113,756	109,055
Continuous Service Agreements (CSA)	299,956	315,868	46,224	65,838
Mass Transitions	0	5,518	0	5,517
<b>Total</b>	<b>2,848,093</b>	<b>2,837,253</b>	<b>493,809</b>	<b>483,208</b>
<b>Total since June 1, 2001</b>	<b>52,739,619</b>			

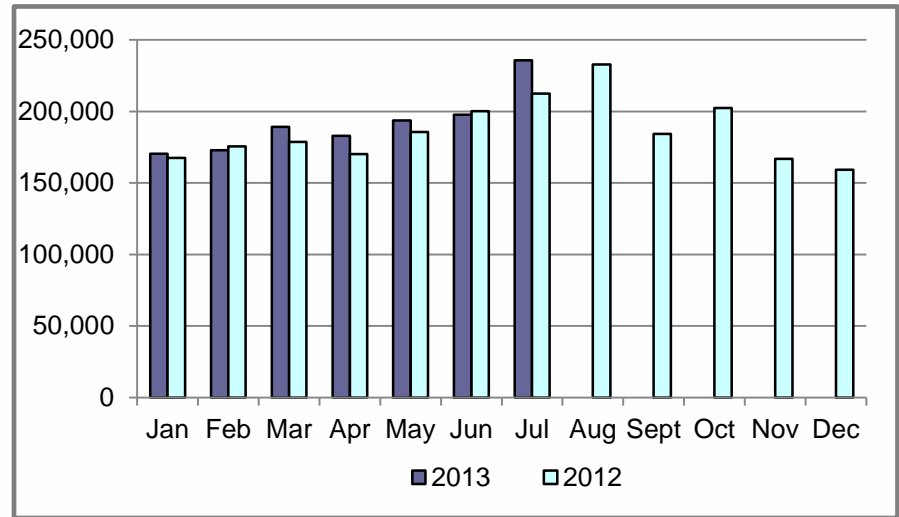


# Retail Transaction Volumes – Summary – July 2013

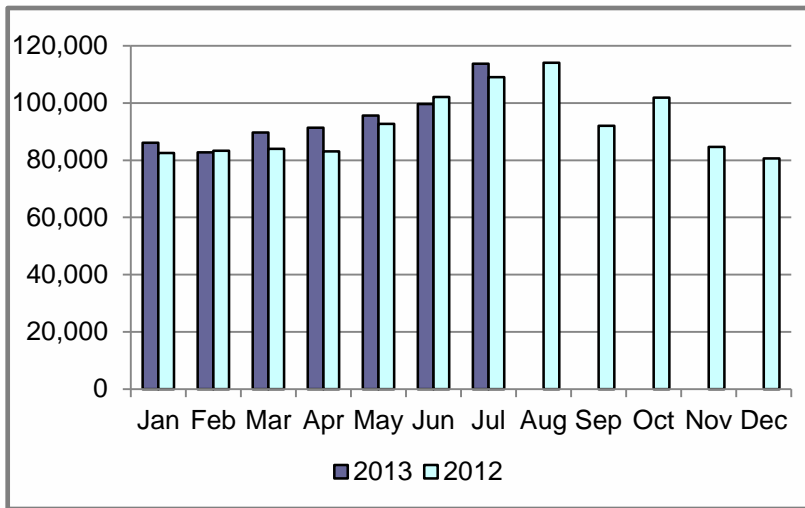
## Switches/Acquisitions



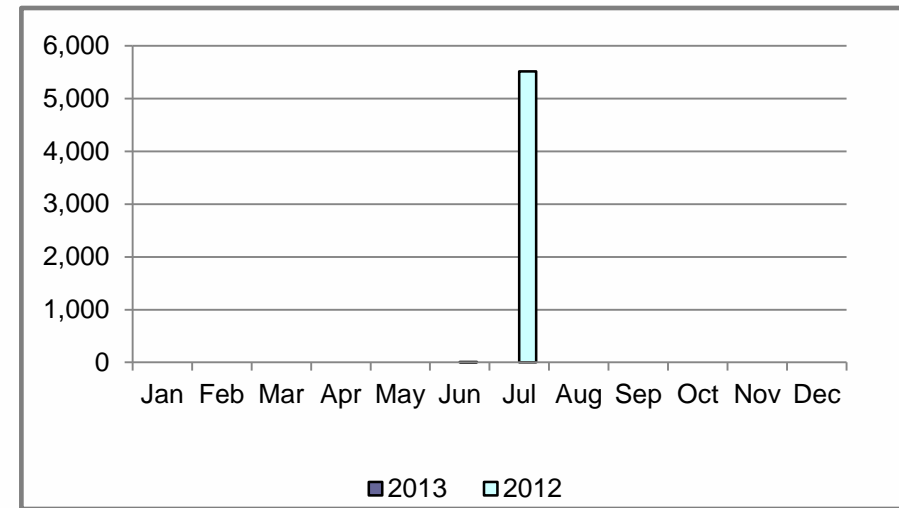
## Move-Ins



## Move-Outs

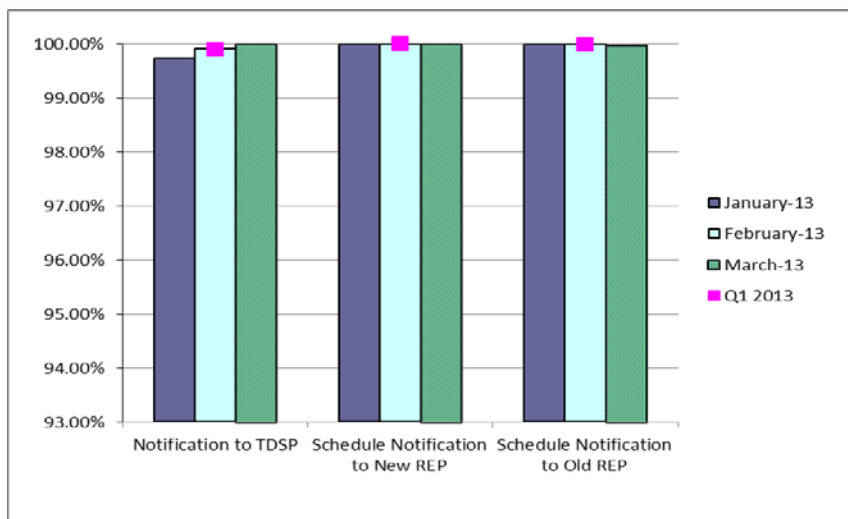


## Mass Transition

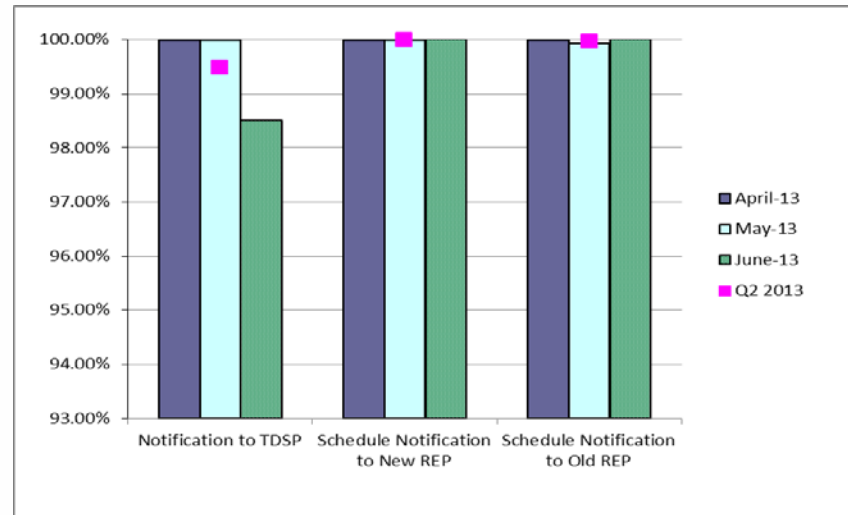


# Retail Performance Measures – Switch – July 2013

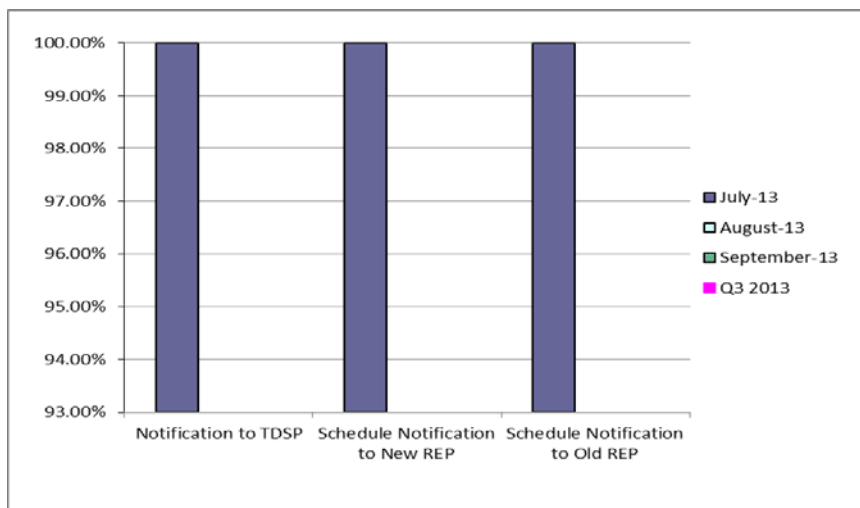
## 1<sup>st</sup> Quarter



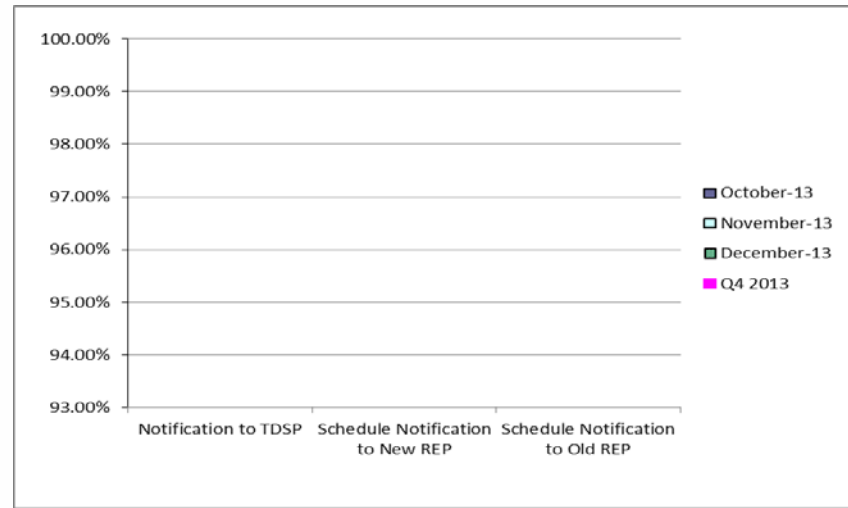
## 2<sup>nd</sup> Quarter



## 3<sup>rd</sup> Quarter

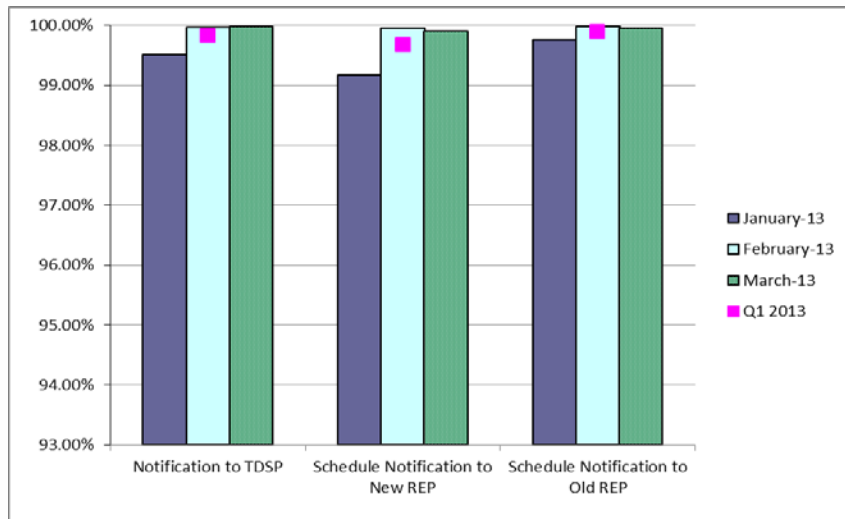


## 4<sup>th</sup> Quarter

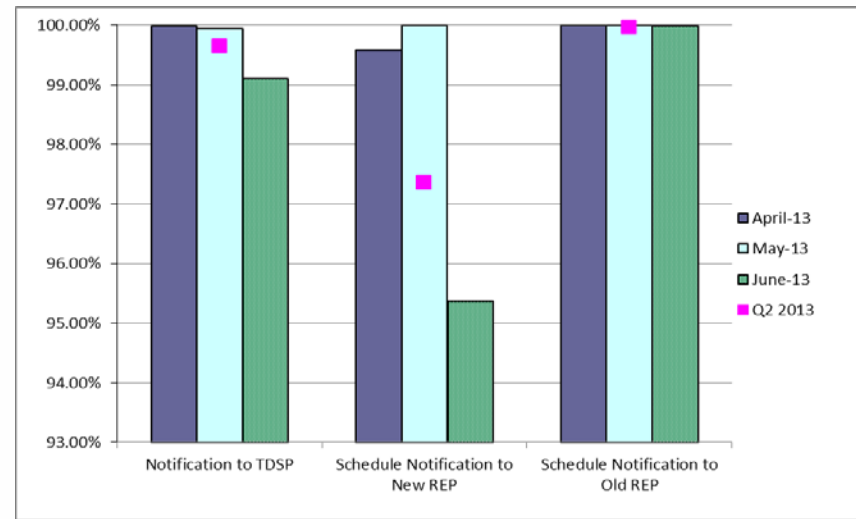


# Retail Performance Measures (Same Day Move-In) – July 2013

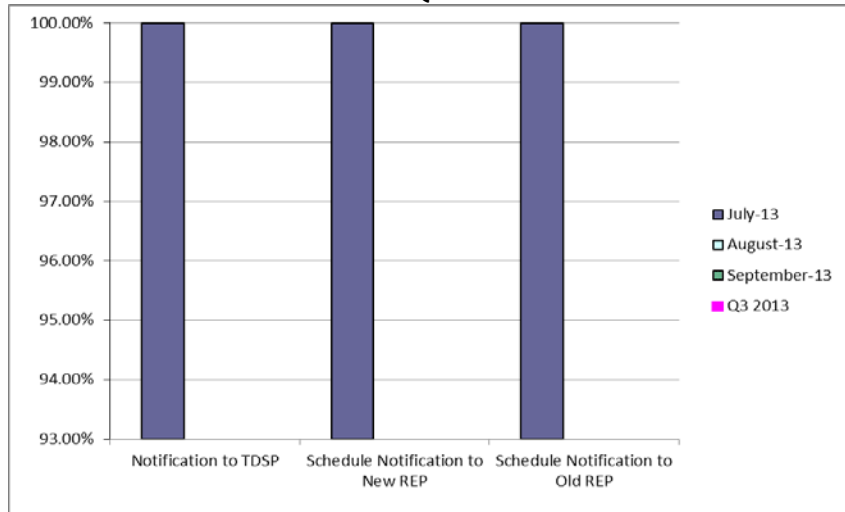
## 1<sup>st</sup> Quarter



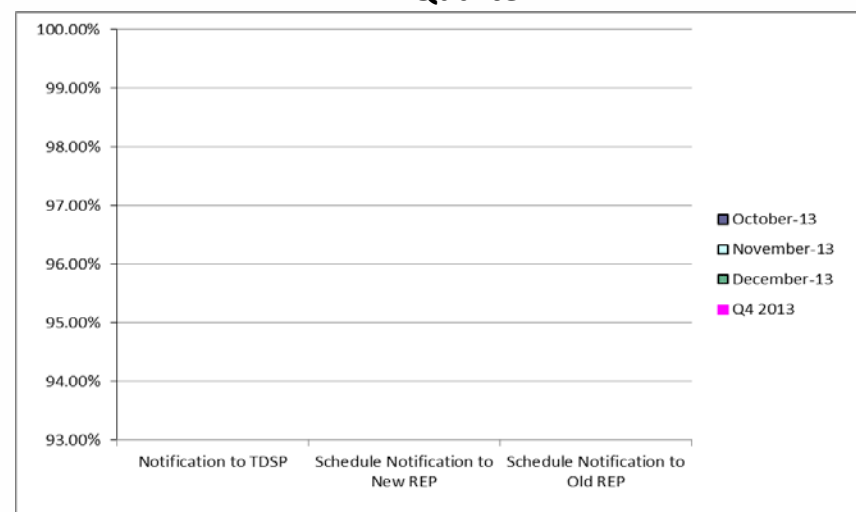
## 2<sup>nd</sup> Quarter



## 3<sup>rd</sup> Quarter

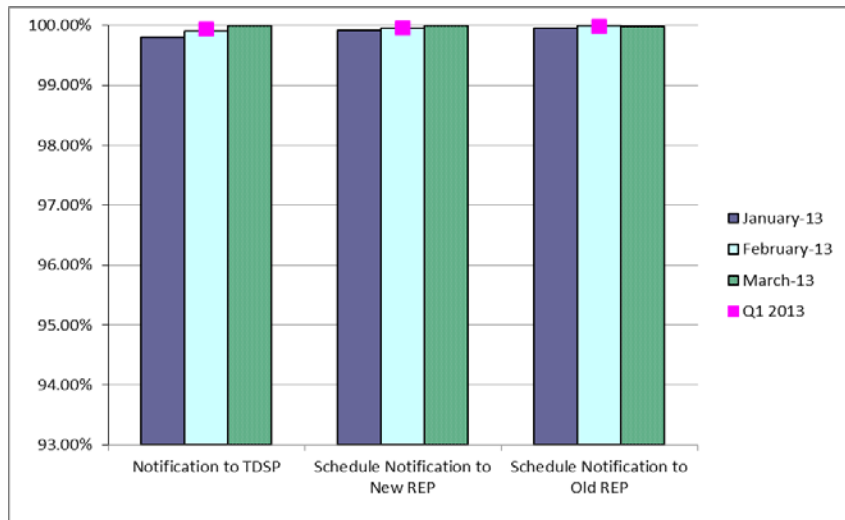


## 4<sup>th</sup> Quarter

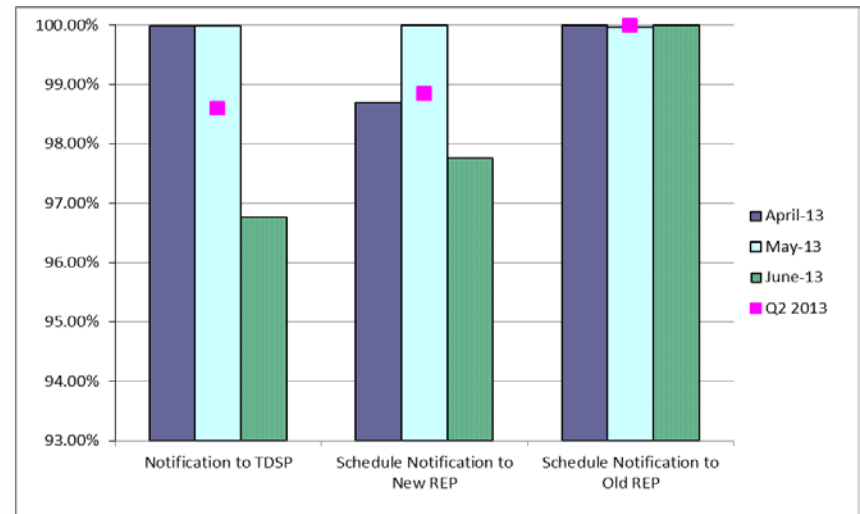


# Retail Performance Measures (Standard Move-In) – July 2013

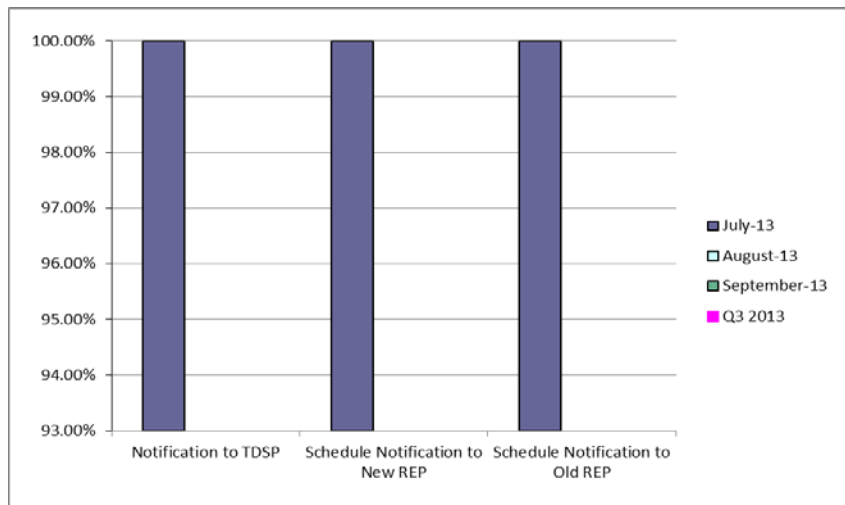
## 1<sup>st</sup> Quarter



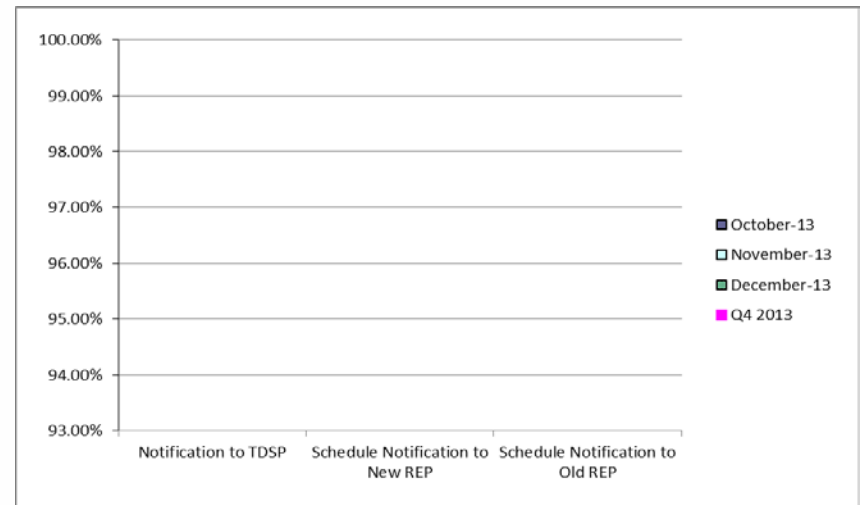
## 2<sup>nd</sup> Quarter



## 3<sup>rd</sup> Quarter



## 4<sup>th</sup> Quarter



---

# Projects Report

---

# ERCOT Portfolio Stoplight Report (as of 8/12/2013)

PROJECTS IN FLIGHT (Count = 57) Sorted by Phase / Project Num								\$ 17,960,745	\$ 15,356,422	14%	\$ 34,775,132	\$ 33,682,281	3%
Project Number	Projects in Initiation Phase	Phase						Sum of 2013 Budgets	2013 Forecast Spend	2013 Variance	Sum of Total Budgets	Total Forecast Spend	Total Variance
106-01	MP Online Data Entry - Ph 1	Initiation								62%			9%
107-01	IBM AIX Operating System Upgrades	Initiation								100%			99%
108-01	Alstom Load Forecasting Upgrade	Initiation								10%			9%
TBD	Quality Center Upgrade	Initiation								0%			0%
NPRR272	Definition and Participation of Quick Start Generation Resources	Initiation								13%			-1%
NOGRR105	Generation Resource Frequency Response Test Procedure	Initiation								0%			0%
Project Number	Projects in Planning Phase	Phase	Baseline Phase Start	Baseline Phase Finish	Scheduled Go-Live Date	Scheduled Phase Finish	Schedule Status	Sum of 2013 Budgets	2013 Forecast Spend	2013 Variance	Sum of Total Budgets	Total Forecast Spend	Total Variance
052-01	EMS Upgrade	Planning Ph2	8/7/2013	6/30/2014	TBD	6/30/2014	0%			1%			0%
065-01	NMMS Upgrade	Planning	5/1/2013	7/31/2013	TBD	8/21/2013	1 -23%			0%			0%
066-01	Planning Site Transition to MIS	Planning	1/9/2013	3/25/2013	TBD	8/14/2013	3 -189%			0%			0%
070-01	Linux Configuration Management Tool	On Hold	1/24/2013	6/26/2013	TBD		4			87%			28%
071-01	Windows Server Systems Management	On Hold	1/23/2013	6/26/2013	TBD		4			1%			2%
077-01	Contract Lifecycle Management	Planning	2/13/2013	7/10/2013	TBD	9/11/2013	1 -42%			1%			1%
083-01	Centralized Application Log Management	Planning	3/6/2013	5/15/2013	TBD	8/26/2013	7 -147%			5%			0%
089-01	Information Technology Change Management	Planning	4/10/2013	5/29/2013	TBD	9/23/2013	3 -238%			9%			9%
097-01	ABB MMS OS Technology Refresh	Planning	5/29/2013	11/20/2013	TBD	11/20/2013	0%			31%			0%
099-01	Moody's Analytics	Planning	5/15/2013	8/14/2013	TBD	8/14/2013	0%			16%			16%
104-01	Disaster Recovery: S&B, RTL, MDT	Planning	5/15/2013	9/25/2013	TBD	9/25/2013	0%			3 -7%		3	-7%
109-01	OTS Forum Hotline	Planning	7/31/2013	10/2/2013	TBD	10/2/2013	0%			0%			0%
NPRR153	Generation Resource Fixed Quantity Block Offer	On Hold	4/10/2013	5/24/2013	TBD		4			85%			85%
NPRR327	State Estimator Data Redaction Methodology	On Hold	12/5/2012	2/12/2013	TBD		4			0%			9%
NPRR425	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation	Planning	3/13/2013	7/10/2013	TBD	8/21/2013	3 -35%			36%			0%
NPRR476	Market Submitted Energy Offer Curves Disclosures	Planning	4/10/2013	6/12/2013	TBD	8/28/2013	7 -122%			35%			35%



# ERCOT Portfolio Stoplight Report (as of 8/12/2013)

Project Number	Projects in Execution Phase	Phase	Baseline Phase Start	Baseline Go-Live Target	Scheduled Go-Live Date	Scheduled Phase Finish	Schedule Status	Sum of 2013 Budgets	2013 Forecast Spend	2013 Variance	Sum of Total Budgets	Total Forecast Spend	Total Variance
016-01	ADP-IDM Interface	On Hold	5/23/2012				4						14%
017-01	Oracle 11g Upgrade	Execution	10/10/2012	4/2/2014	4/2/2014	4/2/2014	0%			0%			3%
038-01	Macomber Map NERC SA/Compliance Enhancements	Execution	9/19/2012	12/7/2012	7/11/2013	9/3/2013	1 -273%			1 -6%			-3%
047-01	CMSDK/MIR Replacement	Execution	4/24/2013	12/8/2013	11/26/2013	12/16/2013	5%			52%			37%
055-01	Siebel Upgrade 8.x	Execution	3/13/2013	7/28/2013	9/29/2013	10/30/2013	3 -45%			3 -29%		3 -20%	
057-01	EPS Metering DB Redesign	Execution	4/17/2013	9/6/2013	9/6/2013	10/9/2013	0%			1%			1%
059-01	Security Information and Event Management (SIEM) Upgrade	Execution	5/8/2013	11/15/2013	11/15/2013	1/29/2014	0%			12%			25%
072-01	OSI PI Upgrades - EMS Production	Execution	4/17/2013	9/9/2013	9/9/2013	10/11/2013	0%			27%			27%
074-01	Mobile Device Management - POC	Execution	3/13/2013	8/14/2013	8/14/2013	8/14/2013	0%			0%			0%
075-01	Operator Data Display	Execution	4/10/2013	12/8/2013	12/8/2013	12/12/2013	0%			24%			26%
081-01	Additional Resource Data for Outage Scheduler	Execution	5/29/2013	9/26/2013	9/26/2013	11/6/2013	0%			28%			28%
088-0x	Capital Efficiencies and Enhancements - 2013	Execution	8/16/2012	12/31/2013	12/31/2013	12/31/2013	0%			0%			0%
095-01	Mobile Application Enhancement	Execution	5/8/2013	9/5/2013	9/13/2013	10/11/2013	3 -6%			6%			5%
098-01	EPG Synchrophasor Upgrade	Execution	5/8/2013	9/16/2013	9/16/2013	10/2/2013	0%			53%			52%
101-01	Emergency Notification System Hardware Refresh	Execution	5/8/2013	8/22/2013	8/22/2013	9/11/2013	0%			6%			5%
103-01	NAS Data Storage / File Synchronization - EMMS System and Applications	Execution	5/8/2013	9/6/2013	9/9/2013	9/11/2013	-2%			39%			38%
10052_01	Settlement System Upgrade	Execution	1/25/2012	10/10/2014	10/10/2014	3/3/2015	0%			9%			-3%
2013 PC	Program Control - 2013	Execution	8/16/2012	12/31/2013	12/31/2013	12/31/2013	0%			-1%			-1%
99913	Minor Cap - 2013	Execution	1/1/2013	12/31/2013	12/31/2013	12/31/2013	0%			6 -15%		6 -15%	
NPRR207	Unit Deselection	Execution	5/22/2013	9/26/2013	9/26/2013	10/16/2013	0%			56%			56%
NPRR385	Negative Price Floor	Execution	5/22/2013	9/26/2013	9/26/2013	10/25/2013	0%			8%			8%
NPRR416	Removal of the RUC Clawback Charge for Resources Other than RMR Units	Execution	4/10/2013	9/27/2013	9/26/2013	10/24/2013	0%			2%			2%
NPRR457	Daily Update of New ESI IDs and AMS Meter and Switch Hold Indicators Changes	Execution	4/10/2013	9/29/2013	9/29/2013	10/30/2013	0%			50%			49%
NPRR479	Daily Net Outage MW	Execution	4/10/2013	9/29/2013	9/30/2013	10/25/2013	0%			9%			9%
NPRR484	Revisions to Congestion Revenue Rights Credit Calculations and Payments	Execution	7/17/2013	10/21/2013	10/21/2013	12/31/2013	0%			19%			7%
NPRR492	Addition of System Lambda Information	Execution	7/24/2013	12/13/2013	12/13/2013	12/20/2013	0%			0%			
NPRR514	Seasonal Generation Resource	Execution	6/5/2013	9/29/2013	9/29/2013	10/29/2013	0%			22%			22%
NOGRR101	Market Notice for DC-TIE Outage Information	Execution	7/24/2013	9/27/2013	9/27/2013	10/30/2013	0%			0%			
SCR770	Revision to Outage Scheduling Entry for Resource Maintenance Outage Level Designation	Execution	3/14/2013	9/27/2013	9/27/2013	11/16/2013	0%			61%			62%



# ERCOT Portfolio Stoplight Report (as of 8/12/2013)

Project Number	Projects in Stabilization	Phase	Baseline Execution Phase Start	Baseline Go-Live Target	Actual Go-Live Date	Scheduled Execution Phase Finish	Schedule Status	Sum of 2013 Budgets	2013 Forecast Spend	2013 Variance	Sum of Total Budgets	Total Forecast Spend	Total Variance
NPRR393	SCED Constraint Management Transparency	Execution	3/13/2013	8/8/2013	8/8/2013	10/7/2013	0%			7%			7%
NPRR461	Energy Storage Settlements Consistent with PUCT Project 39917	Execution	3/13/2013	7/30/2013	7/30/2013	8/20/2013	0%			0%			1%
NPRR520	Real-Time Mitigation Rules and Creation of a Real-Time Constraint Competitiveness Test	Execution	5/1/2013	8/1/2013	8/1/2013	8/22/2013	0%			23%			22%
010-02	MarkeTrak Upgrade	Execution	12/12/2012	6/22/2013	6/22/2013	8/28/2013	0%			3%			4%
042-01	CRR Upgrade to v12.3	Execution	5/16/2012	4/1/2013	4/1/2013	8/21/2013	0%			59%			32%
096-01	Backup Software Strategy and Proposed License Cost Reduction	Execution	5/22/2013	7/12/2013	7/12/2013	8/14/2013	0%			12%			12%
Project Number	Projects Not Yet Started	Phase	Forecast Start Date					Sum of 2013 Budgets	2013 Forecast Spend	2013 Variance	Sum of Total Budgets	Total Forecast Spend	Total Variance
<b>PROJECTS NOT YET STARTED (Count = 25) Sorted by Rank</b>								<b>\$ 1,922,396</b>	<b>\$ 1,667,061</b>		<b>\$ 7,121,864</b>	<b>\$ 6,866,529</b>	
OBD	Setting the Shadow Price Caps and Power Balance Penalties in Security-Constrained Economic Dispatch	Not Started	Aug 2013										
NPRR210	Wind Forecasting Change to P50, Sync with PRR841	Not Started	Aug 2013										
NPRR240	Proxy Energy Offer Curve	Not Started	Aug 2013										
SCR756	MarkeTrak Enhancements - Remaining SCR756 Items	Not Started	Aug 2013										
TBD	Dev Hardware Refresh and Virtualization Expansion	Not Started	Aug 2013										
TBD	ERCOT Native Load Calculation	Not Started	Aug 2013										
TBD	Lawson Security	Not Started	Aug 2013										
TBD	Mobile Device Management	Not Started	Aug 2013										
TBD	Taylor Control Room Upgrade	Not Started	Aug 2013										
NOGRR084	Daily Grid Operations Summary Report	Not Started	Sep 2013										
SCR771	ERCOT System Change Allowing Independent Master QSE to Represent Split Generation Resources	Not Started	Sep 2013										
TBD	Enterprise Vault Upgrade	Not Started	Sep 2013										
TBD	Intrusion Prevention System	Not Started	Sep 2013										
TBD	SQL Server 2012 Upgrade / Cluster Consolidation	Not Started	Sep 2013										
NPRR256	Sync with PRR787, Add Non-Compliance Language to QSE Performance Standards	Not Started	Oct 2013										
TBD	Email Redundancy	Not Started	Oct 2013										
TBD	Net Backup Architecture Redesign	Not Started	Oct 2013										
TBD	Voice Over IP (VOIP) Replacement for PBX	Not Started	Oct 2013										
NPRR407	Credit Monitoring Posting Requirements - CRR Portion	Not Started	Nov 2013										
NPRR500	Posting of Generation that is Off but Available	Not Started	Nov 2013										
SCR769	CRR4H Digital Certificate New Role for Read Only Access	Not Started	Nov 2013										
SCR772	New Extract for Five Minute Interval Settlement Data	Not Started	Nov 2013										
NPRR495	Changes to Ancillary Services Capacity Monitor	Not Started	TBD										
TBD	OTS Enhancements	Not Started	TBD										
TBD	Secure File Transfer	Not Started	TBD										





# ERCOT Portfolio Stoplight Report (as of 8/12/2013)

[illegible]

## SUMMARY

[illegible]

### Stoplight Calculation Definitions

Schedule: Count of Execution and Completed Projects with Variance >= 10%	
/ Count of Execution and Completed Projects	

Budget:	(Total Budget of Execution and Completed Projects - Total Forecast Spend of Execution and Completed Projects) / Total Budget of Execution and Completed Projects
---------	--

## Footnotes

- |   |  |
|---|--|
| 1 | Current phase took longer than expected, resulting in additional funding and/or time required          |
| 2 | Labor hours planned for 2012 occurred in 2013  |
| 3 | Current phase requiring more labor than expected, resulting in additional funding and/or time required |
| 4 | Project temporarily placed on hold   |
| 5 | Delay in vendor payment shifted cost from 2012 to 2013   |
| 6 | Current demand exceeds budget  |
| 7 | Loss of resource and transition to replacement resulted in phase delay                                 |