

ERCOT Monthly Operational Overview (July 2014)

ERCOT Public August 15, 2014

Grid Planning & Operations

Summary – July 2014

Operations

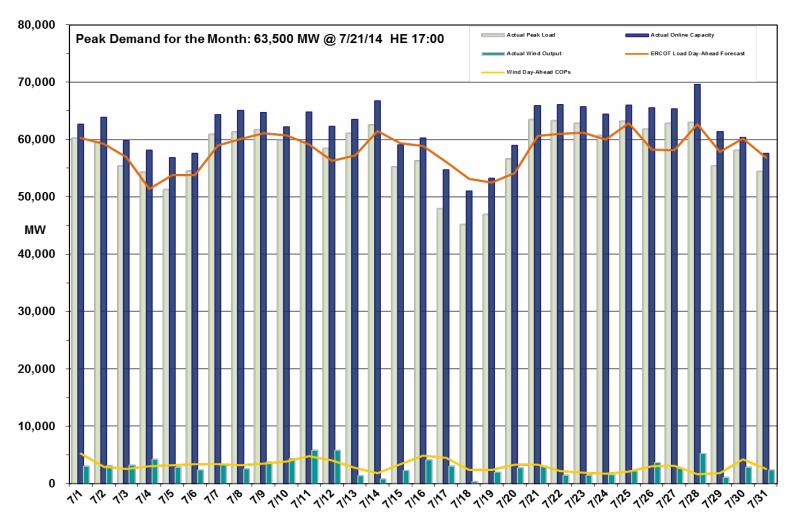
- The peak demand of 63,500 MW on July 21st was greater than the mid-term forecast peak of 60,616 MW but less than the July 2013 actual peak demand of 64,814 MW. The instantaneous peak load on July 21st was 63,692 MW.
- Day-ahead load forecast error for July was 3.27%
- ERCOT issued 2 notifications
 - A single advisory due to PRC being below 3,000 MW.
 - A single advisory due to ERCOT's Voltage Security Assessment Tool (VSAT) being unavailable.

Planning Activities

- 231 active generation interconnection requests totaling over 63,000 MW, including 25,300 MW of wind generation as of July 31, 2014. One additional request and 2600 more MW from June 30, 2014.
- 11,566 MW wind capacity in commercial operations on July 31, 2014.



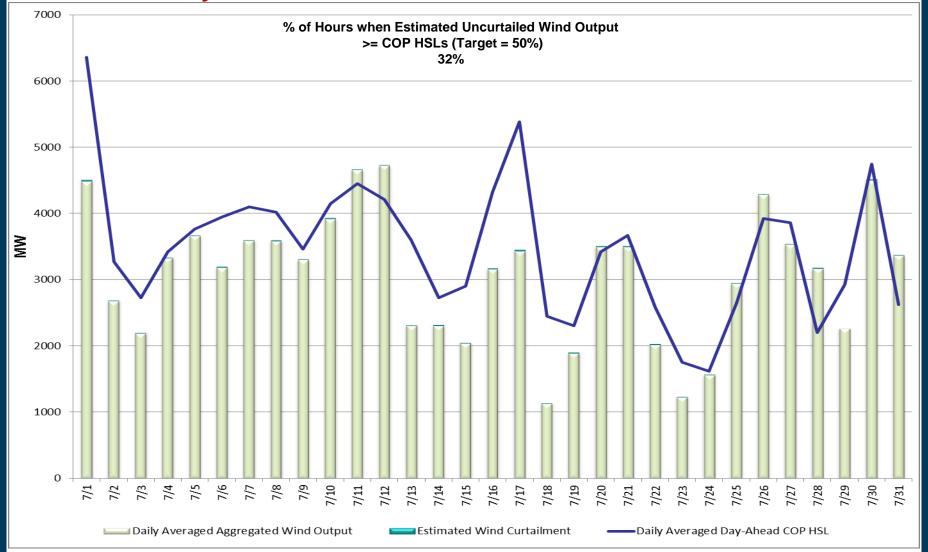
Daily Peak Demand: Hourly Average Actual vs. Forecast, Wind Day-Ahead COPs & On-line Capacity at Peak – July 2014





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

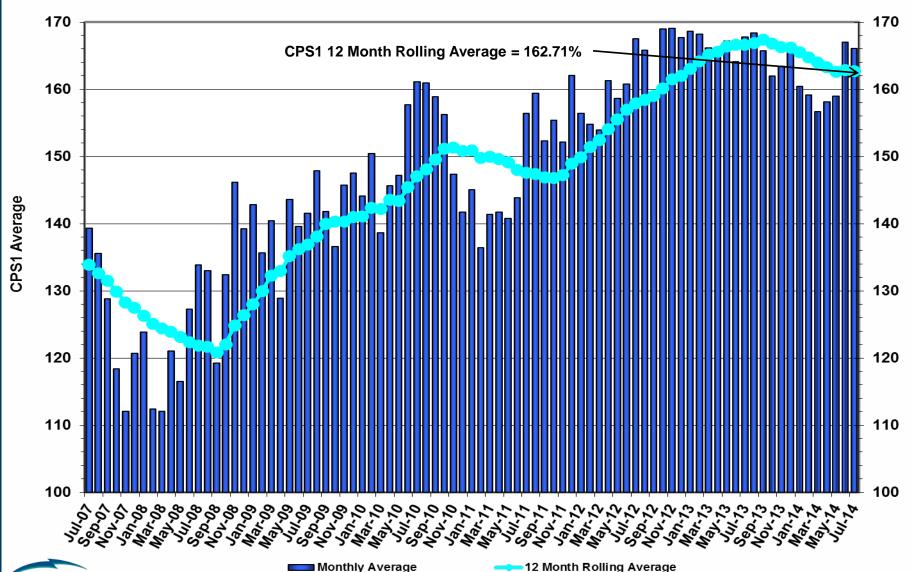
All Hours - July 2014





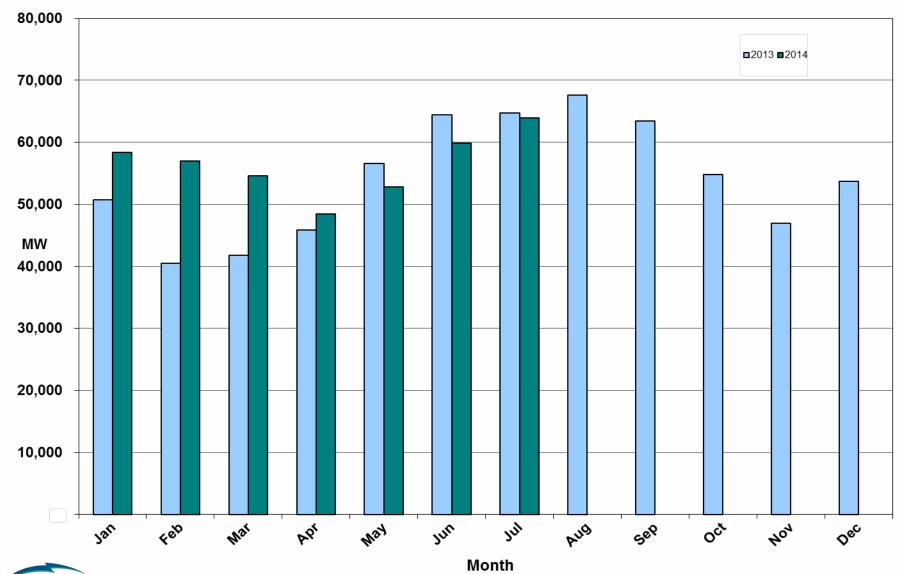
Note: QSEs must use the AWST 50% probability of exceedance forecast as the HSL in their COPs

ERCOT's CPS1 Monthly Performance – July 2014



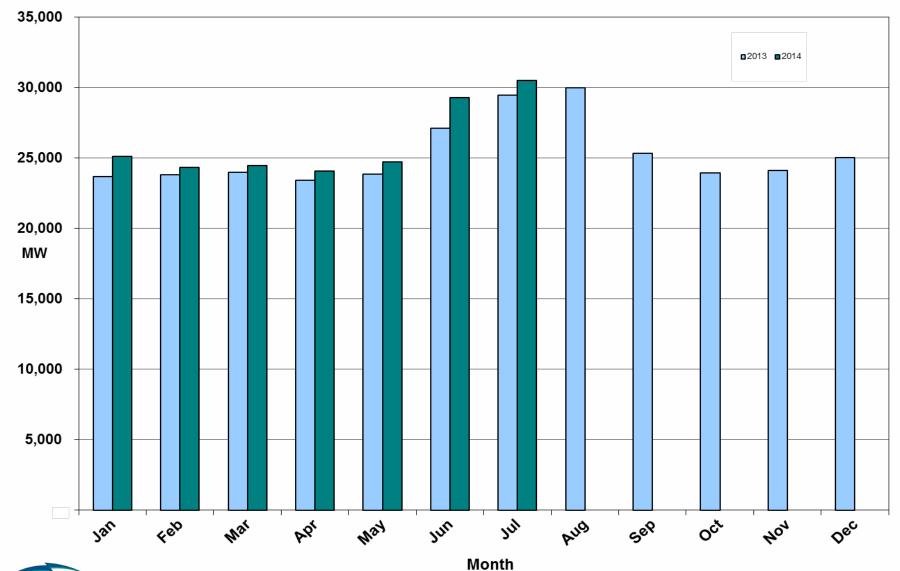


Monthly Peak Actual Demand – July 2014





Monthly Minimum Actual Demand – July 2014





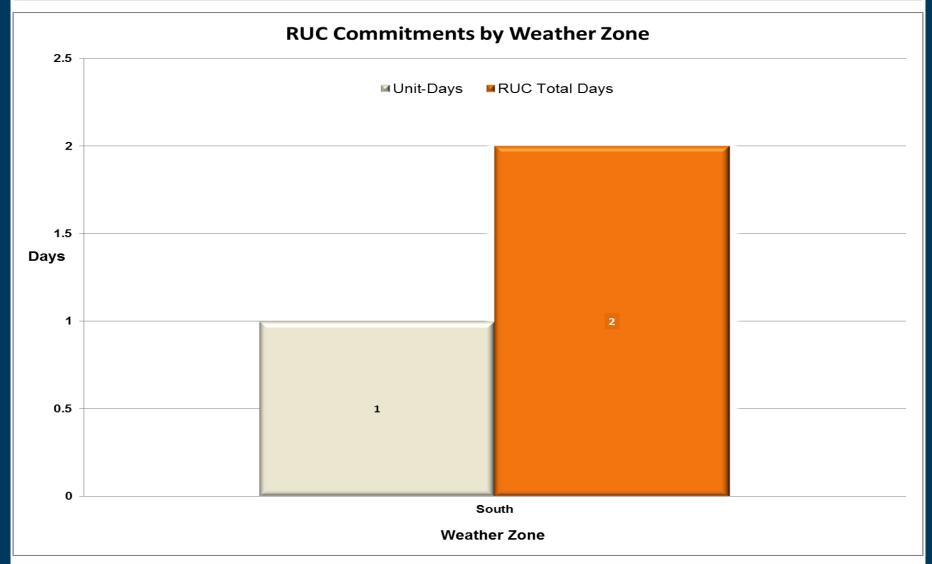
Day-Ahead Load Forecast Performance – July 2014

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

	2011 MAPE	2012 MAPE	2013 MAPE	2014 MAPE	July MA	2014 PE
Average Annual MAPE	2.83	3.02	2.86	3.13	3.2	27
Lowest Monthly MAPE	1.63	2.51	2.07	2.38	Lowest Daily MAPE	0.65 Jul – 02
Highest Monthly MAPE	3.55	3.49	3.50	3.70	Highest Daily MAPE	9.98 Jul – 18



Reliability Unit Commitment (RUC) Capacity by Weather Zone - July 2014





Generic Transmission Limits (GTLs) - July 2014

GTLs	Jul 13 Days GTLs	May 14 Days GTLs	Jun 14 Days GTLs	Jul 14 Days GTLs	Last 12 Months Total Days (Aug13 – Jul14)
North – Houston	0	0	0	0	0
West – North	0	0	0	0	12
Valley Import	0	0	0	0	7
SOP110	0	0	0	0	10

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 2014

- Advisories issued for PRC below 3,000 MW
 - Issued once on 7/21
- Watches issued for ERCOT's Voltage Security Assessment Tool (VSAT) being unavailable
 - Issued once on 7/22

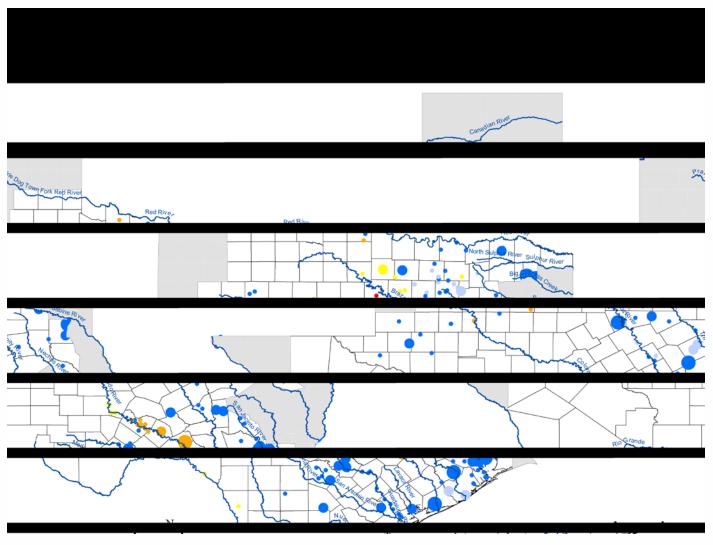


Significant Events – July 2014

• No significant events to report



Lake Levels Update – August 1, 2014



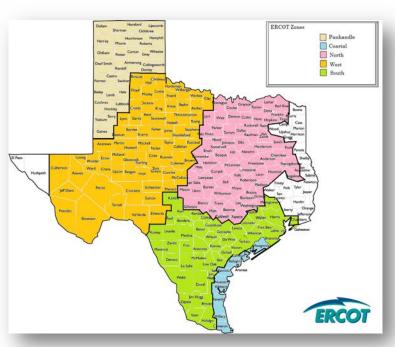


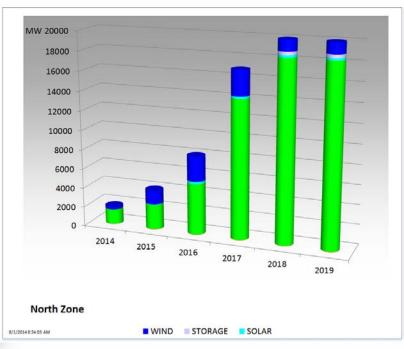
Planning Summary – July 2014

- ERCOT is currently tracking 231 active generation interconnection requests totaling over 63,000 MW. This includes over 25,300 MW of wind generation.
- ERCOT is currently reviewing proposed transmission improvements with a total cost of \$445.7 Million.
- Transmission Projects endorsed in 2014 total \$736.1 Million.
- All projects (in engineering, routing, licensing, and construction) total approximately \$4.98 Billion.
- Transmission Projects energized in 2014 total about \$438.2 Million.

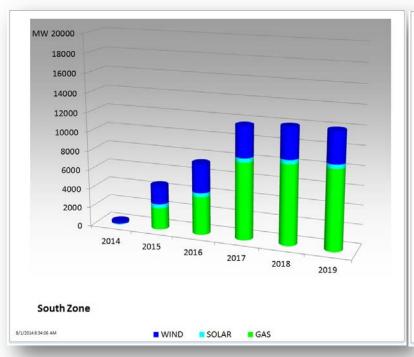


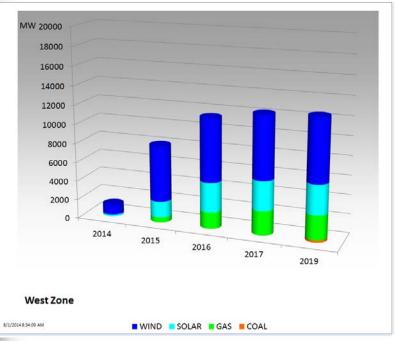
Cumulative Installed MW Capacity of Interconnection Requests by Zone – July 2014



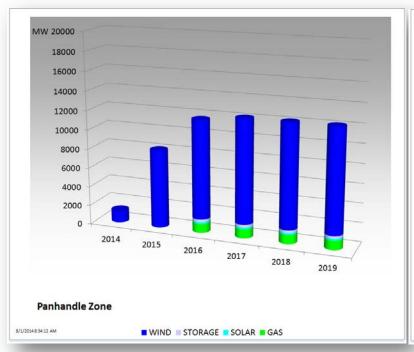


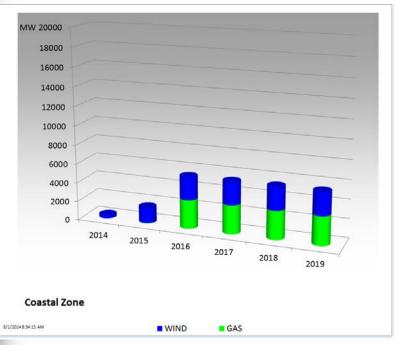
Cumulative Installed MW Capacity of Interconnection Requests by Zone – July 2014



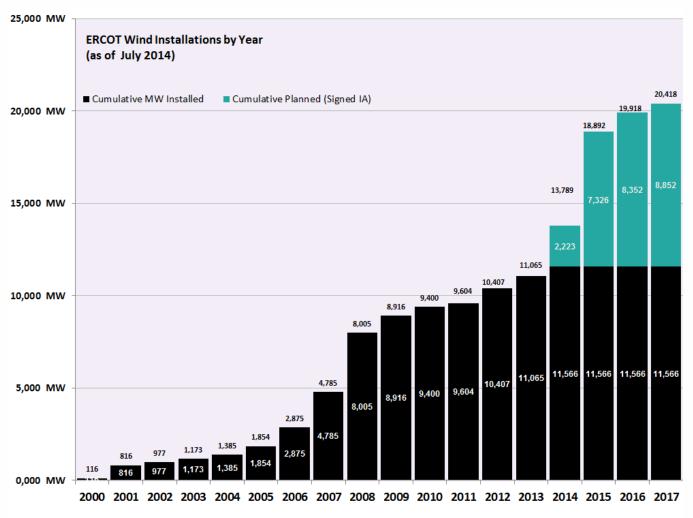


Cumulative Installed MW Capacity of Interconnection Requests by Zone – July 2014





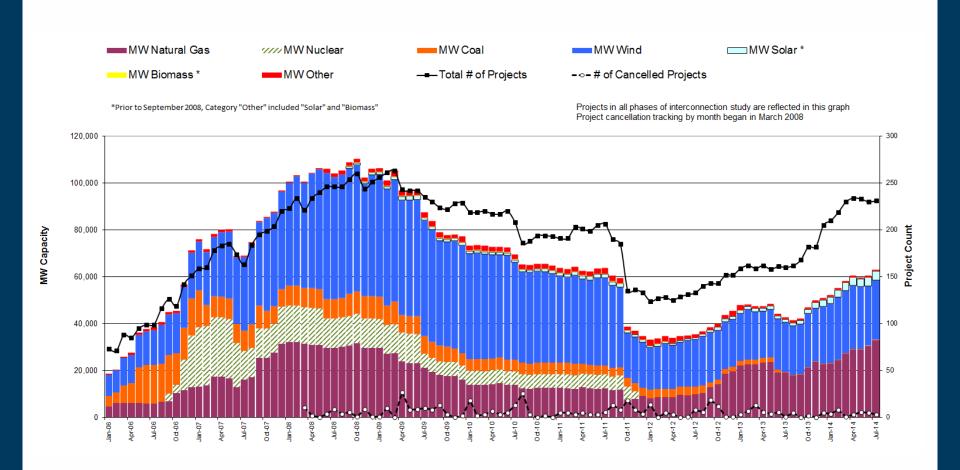
Wind Generation – July 2014



The data presented is based upon the latest registration data provided to ERCOT by the resource owners and can change without notice. For example, a difference in installed capacity from one GIS Report to the next reflects updated turbine capacity ratings reported in submissions of revised Resource Asset Registration Forms (RARFs). Planned resources are shown in the calendar of the projected completion date and any delays in the projected completion dates will be reflected as that information is received by ERCOT.

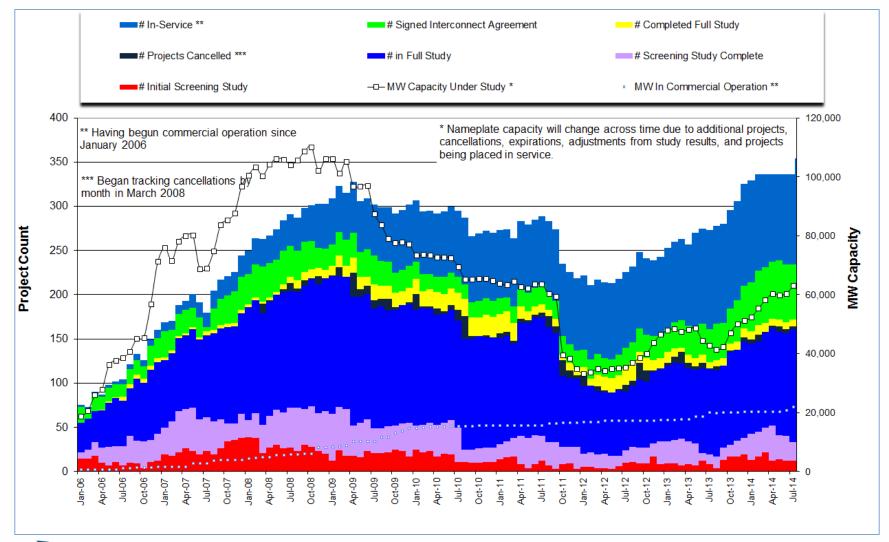


Generation Interconnection Activity by Fuel – July 2014





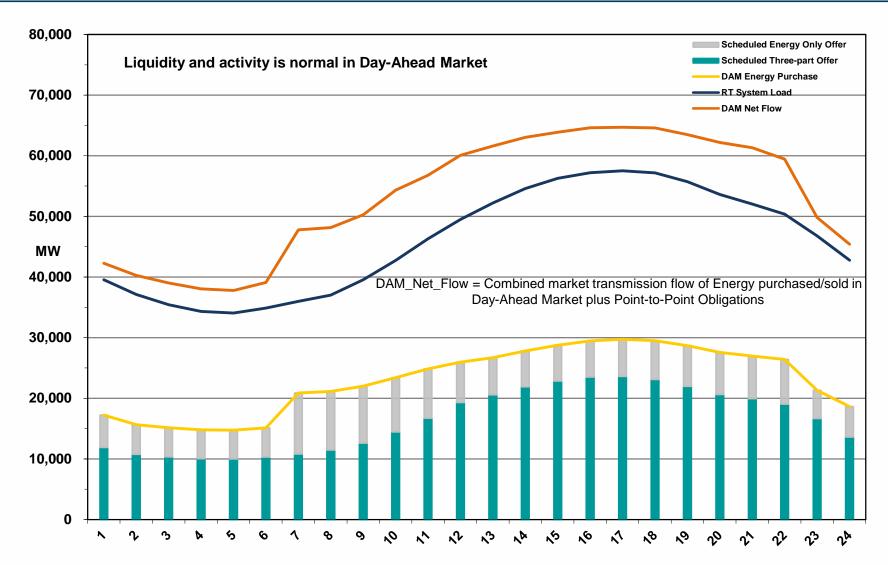
Generation Interconnection Activity by Project Phase – July 2014





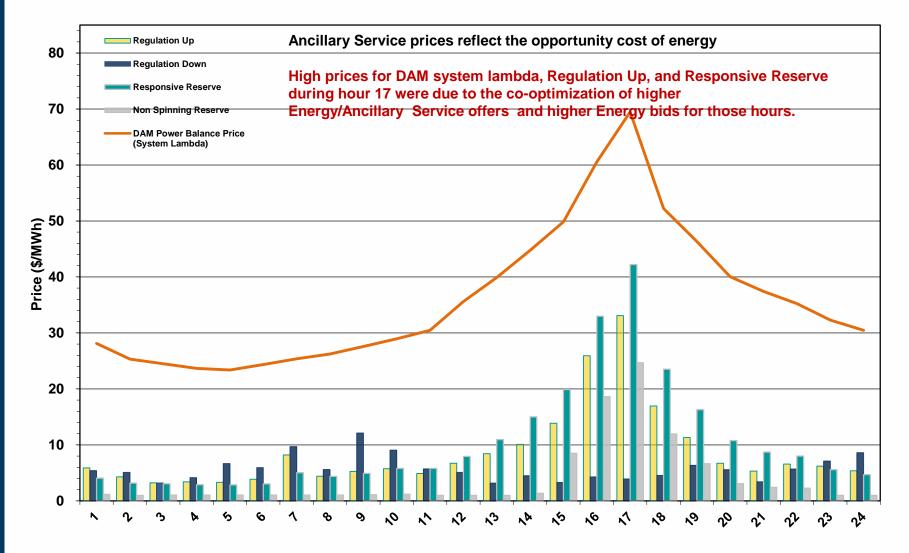
Market Operations

Day-Ahead Schedule (Hourly Average) – July 2014



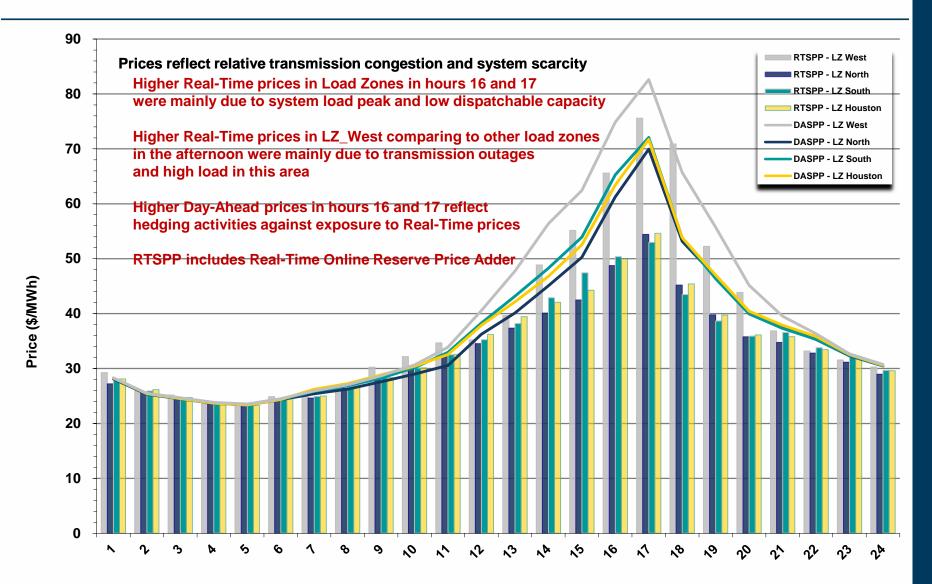


Day-Ahead Electricity And Ancillary Service Hourly Average Prices – July 2014



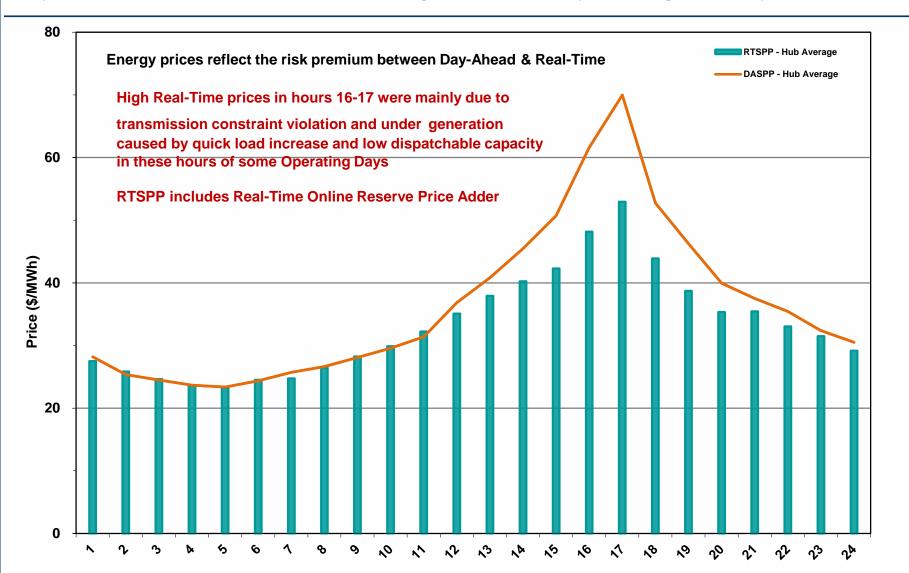


Day-Ahead Vs Real-Time Load Zone SPP (Hourly Average) – July 2014



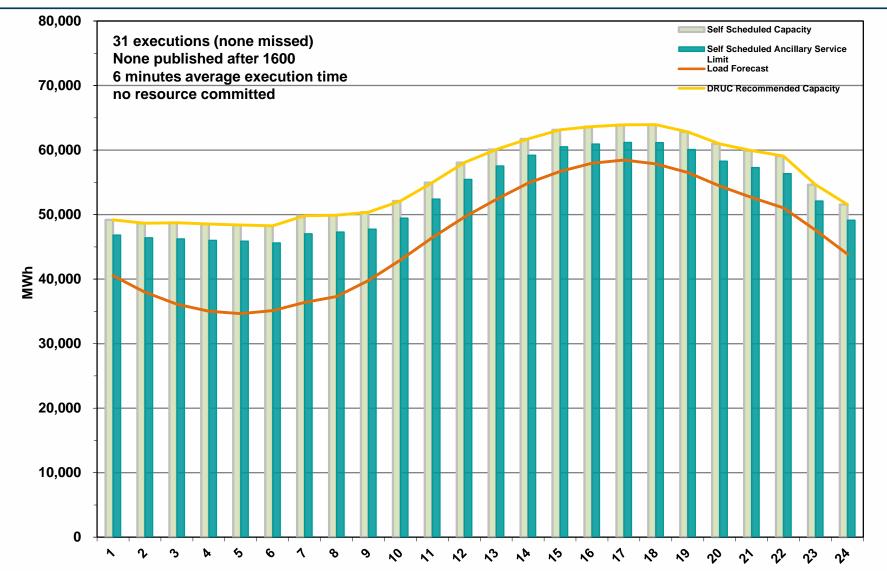


Day-Ahead Vs Real-Time Hub Average SPP (Hourly Average) – July 2014



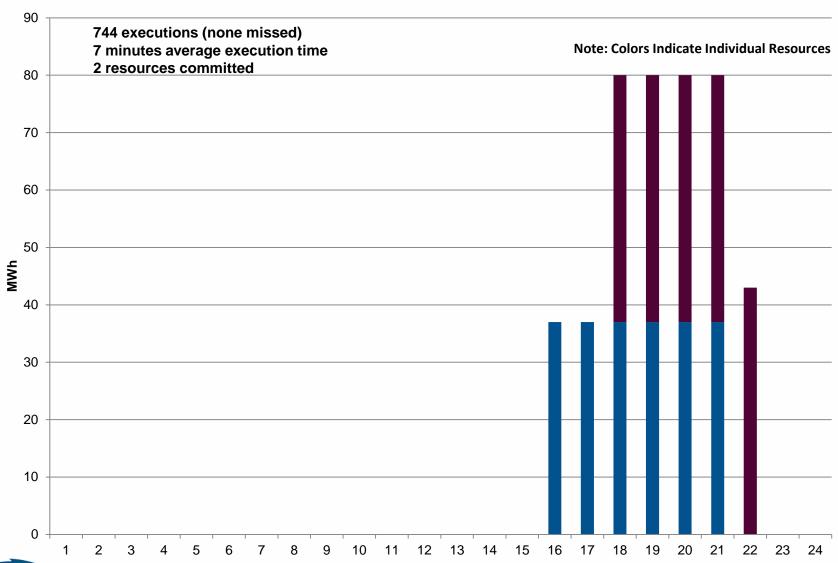


DRUC Monthly Summary (Hourly Average) – July 2014





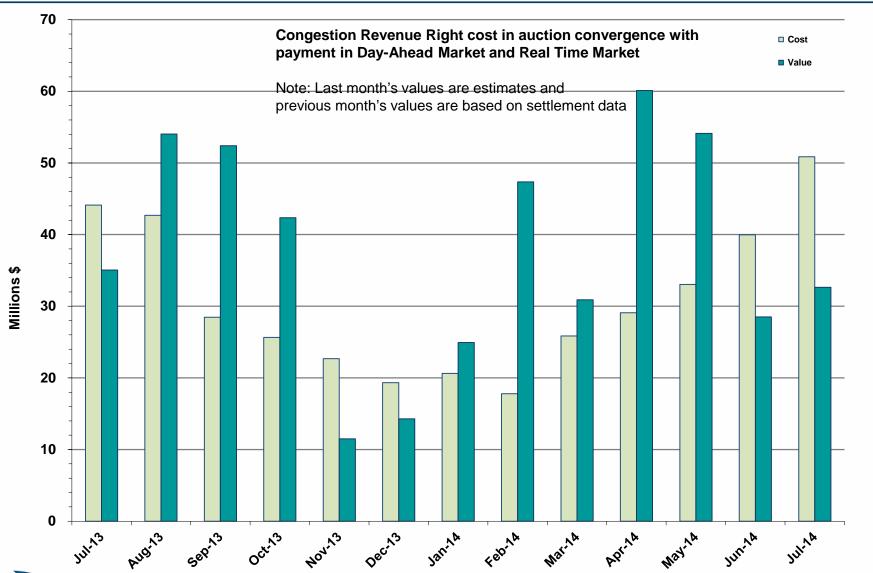
HRUC Monthly Summary – July 2014



Non-Spinning Reserve Service Deployment – July 2014

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

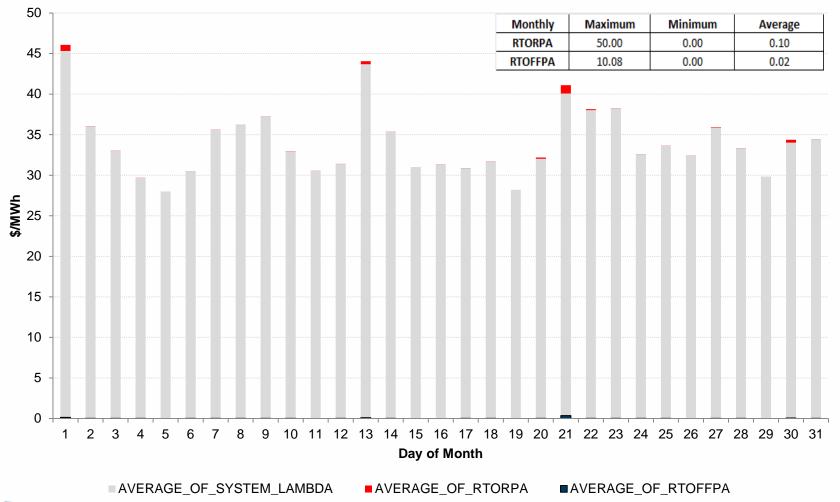
CRR Price Convergence – July 2014





ORDC Price Adder (Daily Average) – July 2014

Average Daily Real-Time System Lambda, Real-Time On-Line Reserve Price Adder (RTORPA), and Real-Time Offline Reserve Price Adder (RTOFFPA) – July 2014





ERS Procurement for June 2014 – September 2014

JunSep2014 cleared with a common Clearing Price for ERS-10, ERS-30, and ERS-WS.

	BH1	BH2	ВН3	NBH
ERS-10 MW Procured	630.614	454.03	451.533	574.559
ERS-30 MW Procured	200.874	166.954	152.467	163.905
ERS-WS MW Procured	N/A	21.6	21.6	N/A
Clearing Price (Per MW per Hour)	\$3.00	\$38.53	\$39.43	\$3.35

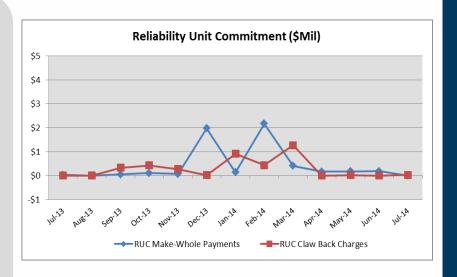
BH1 - Business Hours 1 HE 0900 through 1300, Monday thru Friday except ERCOT Holidays
BH2 - Business Hours 2 HE 1400 through 1600, Monday thru Friday except ERCOT Holidays
BH3 - Business Hours 3 HE 1700 through 2000, Monday thru Friday except ERCOT Holidays

NBH - Non-Business Hours All other hours



Reliability Services – July 2014

Reliability Unit Commitment (RUC)	\$ in Millions
RUC Make-Whole Payments	\$0.00
RUC Clawback Charges	\$0.03
RUC Commitment Settlement	\$0.03
RUC Capacity Short Charges	\$0.00
RUC Make-Whole Uplift	\$0.00
RUC Commitment Cost Allocation	\$0.00
RUC Decommitment Payments	\$0.00



RUC Make-Whole Payments decreased in July. RUC Clawback Charges were \$0.03M.

RUC settlement allocated directly to load was a credit of \$0.03M in July 2014, compared to:

- No allocation in June 2014
- \$0.02M credit in July 2013



Capacity Services – July 2014

Capacity Services	\$ in Millions
Regulation Up Service	\$2.73
Regulation Down Service	\$2.07
Responsive Reserve Service	\$18.91
Non-Spinning Reserve Service	\$4.30
Black Start Service	\$0.60
Voltage Services - Reactive Power	\$0.00
Voltage Services - Lost Opportunity	\$0.00
Total Charges	\$28.61

Capacity Services costs were down from last month and up from July 2013.

July 2014 cost was \$28.61M, compared to:

- A charge of \$29.39M in June 2014
- A charge of \$20.13M in July 2013



Energy Settlement – July 2014

Day-Ahead Market Energy Settlement	\$ in Millions
Energy Purchases	\$673.11
Point to Point Obligation Purchases	\$27.61
RMR Day-Ahead Revenue	\$0.00
Energy Sales	(\$664.41)
Day-Ahead Congestion Rent	\$36.31
Day-Ahead Market Make-Whole Payments	(\$0.11)

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

Real-Time Market Energy Settlement	\$ in Millions
Energy Imbalance at a Resource Node	(\$698.27)
Energy Imbalance at a Load Zone	\$992.92
Energy Imbalance at a Hub	(\$258.79)
Real Time Congestion from Self Schedules	(\$0.10)
Block Load Transfers and DC Ties	(\$8.77)
Impact to Revenue Neutrality	\$26.99
Emergency Energy Payments	(\$0.10)
Base Point Deviation Charges	\$0.31
Real-Time Metered Generation (MWh in millions)	34.10



Congestion Revenue Rights (CRR) – July 2014

	\$ in Millions
Annual Auction	(\$35.37)
Monthly Auction	(\$15.50)
Total Auction Revenue	(\$50.87)
Day-Ahead CRR Settlement	(\$32.65)
Day-Ahead CRR Short-Charges	\$0.17
Day-Ahead CRR Short-Charges Refunded	(\$0.17)
Real-Time CRR Settlement	\$0.00
Real-Time CRR Short-Charges	\$0.00
Real-Time CRR Short-Charges Refunded	\$0.00
Total CRR Funding	(\$32.65)
Day-Ahead Point to Point Obligations Settlement	\$27.61
Real-Time Point to Point Obligation Settlement	(\$31.38)
Net Point to Point Obligation Settlement	(\$3.77)

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

Distribution of Balancing Account funds to load for July 2014 was \$3.69M, compared to:

- \$1.98M Credit in June 2014
- \$3.24M Credit in July 2013

Point to Point Obligations settled with a net payment of \$3.77M compared to a net charge of \$9.50M last month.



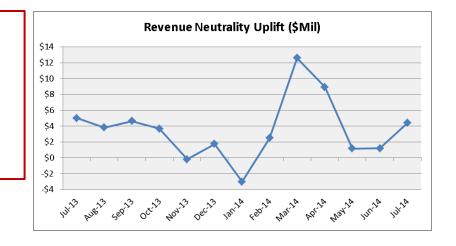
Revenue Neutrality – July 2014

Revenue Neutrality Settlement	\$ in Millions
Real-Time Point to Point Obligation Settlement	(\$31.38)
Real-Time Point to Point Options and Options with Refund Settlement	\$0.00
Real-Time Energy Imbalance Settlement	\$35.86
Real-Time Congestion from Self-Schedules Settlement	(\$0.10)
DC Tie & Block Load Transfer Settlement	(\$8.77)
Charge to Load	\$4.39

Revenue Neutrality charges to load increased compared to last month and decreased compared to July 2013.

July 2014 was a charge of \$4.39M, compared to:

- \$1.19M charge in June 2014
- \$5.00M charge in July 2013





Real Time Ancillary Service Imbalance (ORDC) – July 2014

Real Time Ancillary Service Imbalance	\$ in Thousands
Real-Time AS Imbalance Payment Amount	(\$57.50)
Load Allocated AS Imbalance Revenue Neutrality Amount	\$57.50
Total Charges	\$57.50

Real Time Ancillary Service Imbalance settlements increased from June 2014 to July 2014. Total payments for the month of July 2014 were \$57,500 compared to a payment of \$17,855 in June 2014.

8 of the 30 days in July had settlement dollars equal to \$0 for the day.

All days settled as a net credit to QSEs representing generation and as a charge to QSEs representing load.

The highest settlement occurred on July 21st. The total Real Time Ancillary Service Imbalance payments on that day were \$15,951.99.



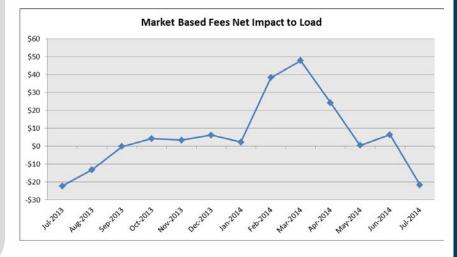
Net Allocation to Load – July 2014

Market-Based Allocation	\$ in Millions
CRR Auction Revenue Disbursement Settlement	(\$50.87)
Balancing Account Proceeds Settlement	(\$3.69)
Net Reliability Unit Commitment Settlement	(\$0.03)
Ancillary Services Settlement	\$28.61
Reliability Must Run Settlement (incl. RMR for Capacity)	\$0.00
Real-Time Revenue Neutrality Settlement	\$4.39
Emergency Energy Settlement	\$0.10
Base Point Deviation Settlement	(\$0.31)
ORDC Settlement	\$0.06
Total	(\$21.74)
Fee Allocation	
ERCOT Administrative Fee Settlement	\$16.01
Net Allocated to Load	(\$5.73)

The charge for the net allocation to Load decreased from last month and increased from July of 2013.

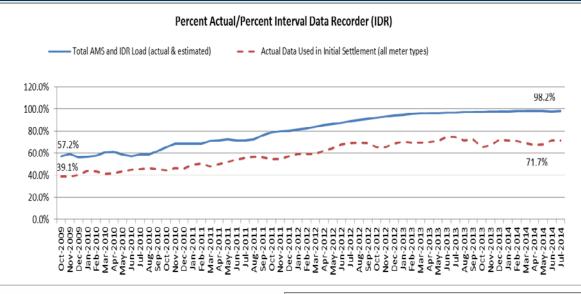
July 2014 was a credit of \$5.73M, compared to:

- A charge of \$3.29M in June 2014
- A credit of \$8.33M in July 2013



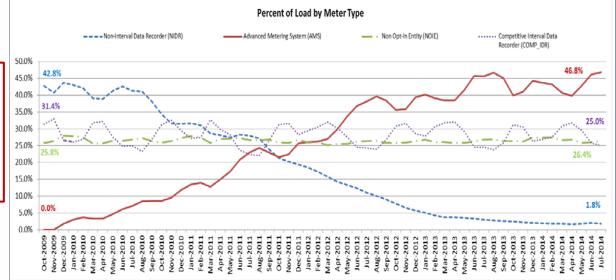


Advanced Meter Settlement Impacts – July 2014



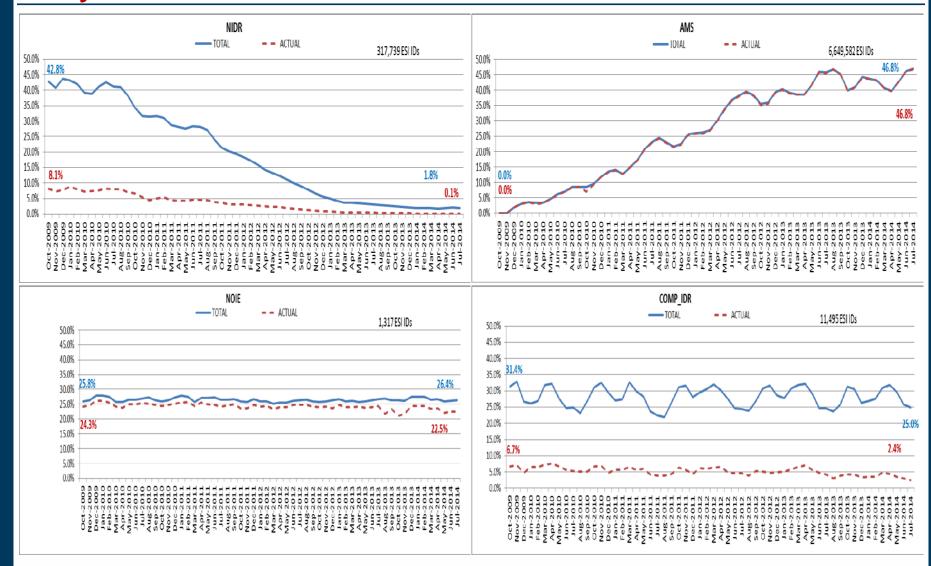
July 2014: At month end, settling 6.6M ESIIDs using Advanced Meter data.

July 2014: 98.2% of the load in ERCOT is settled with 15-min interval data (AMS, Competitive IDR, and NOIE IDR).





ERCOT Wide Load Volumes by Meter Type – INITIAL Settlement – July 2014





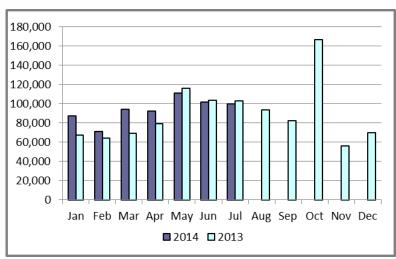
Retail Transaction Volumes – Summary – July 2014

	Year-	To-Date	Transactions Received			
Transaction Type	July 2014	July 2013	July 2014	July 2013		
Switches	656,088	601,718	99,568	102,562		
Acquisition	0	0	0	0		
Move - Ins	1,597,429	1,474,567	251,957	249,114		
Move - Outs	796,422	801,584	131,607	135,196		
Continuous Service Agreements (CSA)	413,855	330,895	57,954	50,867		
Mass Transitions	4,975	0	0	0		
Total	3,468,769	3,208,764	541,086	537,739		

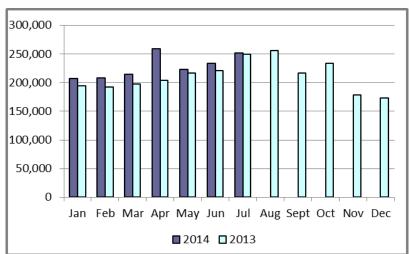


Retail Transaction Volumes – Summary – July 2014

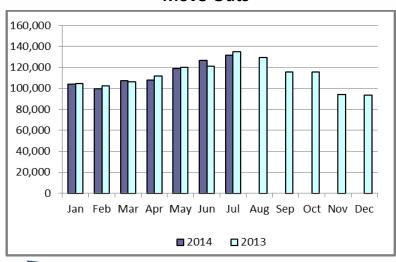
Switches/Acquisitions



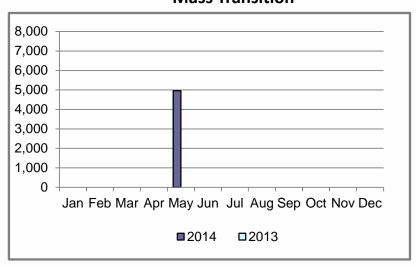
Move-Ins



Move-Outs

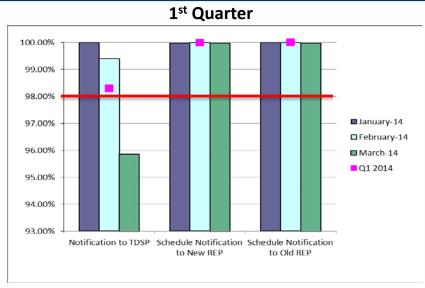


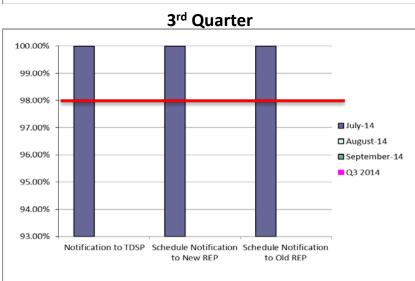
Mass Transition

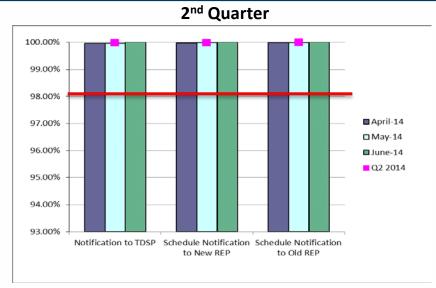


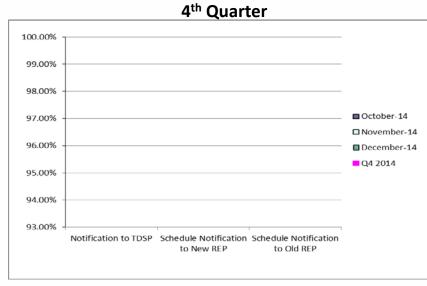


Retail Performance Measures – Switch – July 2014



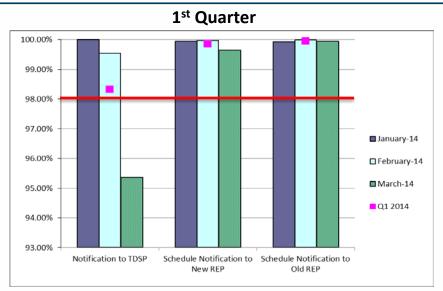


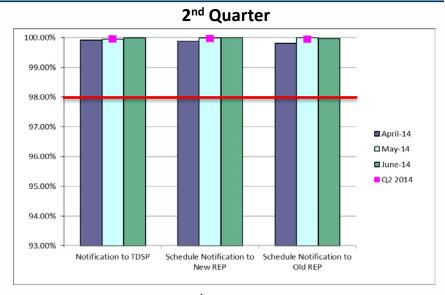


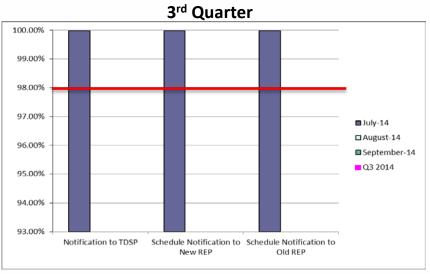


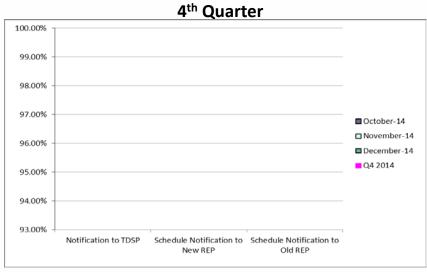


Retail Performance Measures (Same Day Move-In) - July 2014



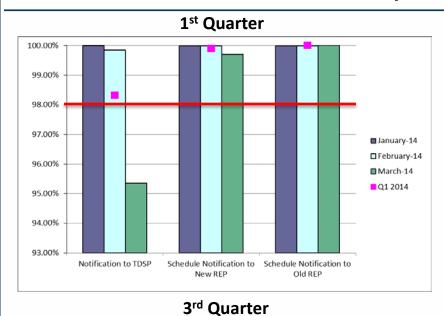


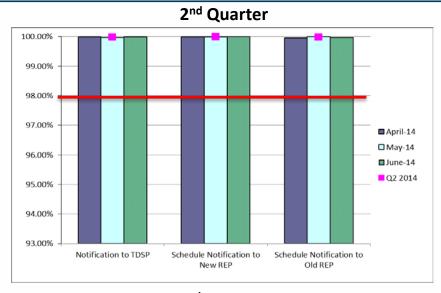


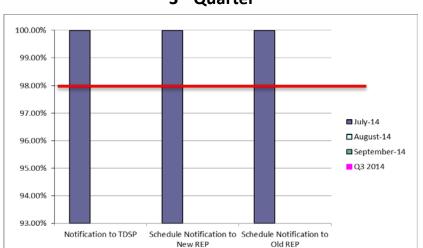




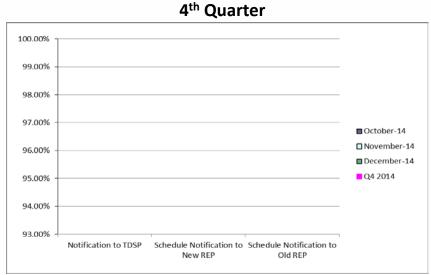
Retail Performance Measures (Standard Move-In) - July 2014







New REP





Projects Report

_		. •									
				2014 Project Fundir	ng	\$	25,000,000				
	Impact Metric Tolerances						014 Portfolio nding Estimate	То	otal Portfolio Demand		
		Projects In Fligh	t/On Hold (Count = 66))	\$	25,543,879	\$	58,388,074			
- Green = No more than 4.9% unfavorable variance - Yellow = Unfavorable variance between 4.9% and 9.9%			Projects Not Yet	Started (Count = 14)		\$	849,811	\$	5,924,936		
- Red = Un	- Red = Unfavorable variance more than 9.9%		Projects Comple	ted (Count = 12)		\$	328,612	\$	921,222		
		Spending Reduc	tions Required to Main	tain Capital Budg	\$	(1,722,303)		N/A			
			TOTAL			\$	25,000,000	\$	65,234,232		
						<u> </u>					
Project Number	Projects in Initiation Phase (Count = 14)	Phase									
133-01	Testing Environment Management	Initiation									
141-01	Production Virtualization Expansion	Initiation									
142-01	Implementation of NERC BAL-TRE-001 Regional Standard	Initiation									
143-01	OSI Pi Visualization Enhancements	Initiation									
TBD	OC-48 Replacement with DWDM	Initiation									
TBD	Move iTron LF Application to High Availability Environment	Initiation									
NPRR500	Posting of Generation that is Off but Available	Initiation									
NPRR543	Message for Confirmed E-Tags	Initiation									
NPRR559	Revisions to MCE Calculation	Initiation									
NPRR597	Utilize Initial Estimated Liability (IEL) Only During Initial Market Activity	Initiation									
NPRR601	Inclusion of Incremental Exposure in Mass Transitions to Counter- Parties that are Registered as QSEs and LSEs and Provide POLR Service	Initiation									
SCR775	Posting Results of Real-Time Data in a Display Format	Initiation									
SCR777	Bilateral CRR Interface Enhancement	Initiation									
SCR778	Credit Exposure Calculations for NOIE Options Linked to RTM PTP Obligations	Initiation									
Project Number	Projects in Planning Phase (Count = 13)	Phase	Baseline Phase Start	Baseline Phase Finish	Scheduled Go-Live Date		eduled Phase Finish	Sch	edule Impact	Bu	dget Impact
052-01	EMS Upgrade	Planning Ph2	8/7/2013	10/30/2014	TBD		10/31/2014		0%		1%
065-01	NMMS Upgrade	Planning Ph2	8/1/2013	11/21/2014	TBD		11/21/2014		0%		1%
074-02	Cyber Security Project #9	Planning	12/17/2013	8/6/2014	TBD		8/6/2014		0%		0%
089-01	Information Technology Change Management	Planning	4/10/2013	4/2/2014	TBD		10/16/2014	1	-55%	1	-20%
097-01	ABB MMS OS Technology Refresh	Planning	5/29/2013	7/3/2014	TBD		8/11/2014	2	-9%		7%
104-01	Disaster Recovery: S&B, RTL, MDT	Planning	5/15/2013	11/15/2013	TBD	.1	8/29/2014		-155%	1	-9%
106-01	MP Online Data Entry - Ph 1	Planning	10/9/2013	3/5/2014	TBD		12/31/2014	4	-204%		-1%
120-01	IT Production Hardening	Planning	2/12/2014	9/24/2014	TBD	.1	9/24/2014		0%		0%
127-01	SQL Server 2012 Upgrade / Cluster Consolidation	Planning	3/6/2014	8/27/2014	TBD	.1	8/27/2014		0%		44%
129-01	Access and Roles Management	Planning	7/1/2014	10/1/2014	TBD		10/1/2014		0%		-2%
134-01	Privileged Account Management	Planning	6/5/2014	11/19/2014	TBD	1	11/19/2014		0%		5%
137-01	EIS Reporting and Control Systems Upgrade	Planning	6/4/2014	8/13/2014	TBD		8/13/2014		0%		0%
SCR779	Increase to the CRR Auction Transaction Limit	Planning	7/9/2014	8/29/2014	TBD		8/29/2014		0%		6%



ule Impact	Bud	lget Impact
1%	Impact Budget	
170	2	-5%
-1%		0%
-274%	2	-175%
0%		11%
-39%		-4%
0%		0%
-34%	2	-30%
0%		9%
0%		14%
0%		15%
2%		1%
0%		0%
0%		14%
0%		59%
0%	NA	See #128-01
0%		23%
0%		7%
0%	NA	See #10052
0%	NA	See #128-01
0%	NA	See #128-01
0%	NA	See #128-01
0%	NA	See #10052
4%		0%
-14%		-4%
0%		13%
0%	NA	See #128-01
	-1% -274% 0% -39% 0% -34% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	-1% -274% 2 0% -39% 0% -34% 2 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% NA



		<u> </u>									
Project Number	Projects in Stabilization (Count = 11)	Phase	Baseline Execution Phase Start	Baseline Go-Live Target	Actual Go-Live Date	Scheduled Execution Phase Finish	Schedule Impact		Budget Impact		
NPRR240	Proxy Energy Offer Curve	Execution	1/8/2014	2/7/2014	2/7/2014	8/15/2014		0%	NA	See #117-01	
NPRR532	Performance Measurement and Verification and Telemetry Requirements for Load Resources Providing Non-Spin	Execution	1/8/2014	6/1/2014	6/1/2014	8/15/2014		0%	NA	See #117-01	
NPRR555	Load Resource Participation in Security-Constrained Economic Dispatch	Execution	1/8/2014	6/1/2014	6/1/2014	8/15/2014		0%	NA	See #117-01	
NPRR564	Thirty-Minute Emergency Response Service (ERS) and Other ERS Services	Execution	1/8/2014	4/27/2014	4/18/2014	8/15/2014		8%	NA	See #117-01	
NPRR568	Real-Time Reserve Price Adder Based on Operating Reserve Demand Curve	Execution	1/8/2014	6/1/2014	6/1/2014	8/15/2014		0%	NA	See #117-01	
047-01	CMSDK/MIR Replacement	Execution	4/24/2013	12/8/2013	4/15/2014	10/2/2014	2	-56%	2	-56%	
083-01	Centralized Application Log Management	Execution	8/28/2013	5/7/2014	3/27/2014	8/13/2014		16%		0%	
107-01	IBM AIX Operating System Upgrades	Execution	1/29/2014	5/2/2014	5/2/2014	12/10/2014		0%		0%	
110-01	Taylor Control Room Upgrade	Execution	2/19/2014	7/7/2014	6/4/2014	8/13/2014		23%		3%	
117-01	2014 Market System Enhancements	Execution	1/8/2014	6/1/2014	6/1/2014	9/30/2014		0%	5	-22%	
119-01	CREZ Voltage Control and Coordination	Execution	3/6/2014	4/18/2014	4/18/2014	10/1/2014		0%		37%	
Project Number	Projects On Hold (Count = 2)	Phase	Forecast Start Date	Baseline Phase Finish	Scheduled Go-Live Date	Scheduled Phase Finish	Sche	dule Impact	ct Budget Impact		
PROJECT	S ON HOLD (Count = 2) Sorted by Project Nu	ımber									
NPRR327	State Estimator Data Redaction Methodology	On Hold	12/5/2012	2/12/2013	TBD	TBD	3		3		
SCR772	New Extract for Five Minute Interval Settlement Data	On Hold	2/12/2014	4/19/2014	TBD	TBD	3		3		
	<u> </u>		•	· .					k		
Project Number	Projects Completed in the Current Year (Count =12)	Phase	Baseline Execution Phase Start Baseline Go-Live Target Date Control Phase Finish Schedule Start Date Date Control Phase Finish Schedule Start Date Control Phase Finish Schedule Schedule Start Date Control Phase Finish Schedule				dule Status	Total Variance			
PROJECT	S COMPLETED IN 2014 (Count = 12) Sorted by Projection	ct Number								16%	
NPRR425	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation	Complete	8/21/2013	3/26/2014	3/3/2014	3/31/2014		10%		46%	
NPRR509	Shortened RTM Settlement Timeline	Complete	12/11/2013	2/23/2014	2/23/2014	2/23/2014		0%	NA	See #128-01	
NPRR570	Reduce RTM Settlement Timeline to Operating Day Plus Five	Complete	2/16/2014	4/27/2014	4/18/2014	4/27/2014		12%	NA	See #128-01	
NPRR575	Clarification of the RUC Resource Buy-Back Provision for Ancillary Services	Complete	12/10/2013	1/7/2014	1/7/2014	1/31/2014		0%	NA	See #78-01	
NOGRR105	Generation Resource Frequency Response Test Procedure	Complete	12/4/2013	2/7/2014	2/7/2014	3/26/2014		0%		31%	
016-01	ADP-IDM Interface	Complete	11/6/2013	3/26/2014	3/26/2014	5/6/2014		0%		16%	
101-01	Emergency Notification System Hardware Refresh	Complete	11/13/2013	1/24/2014	12/20/2013	1/24/2014		48%		-2%	
108-01	Alstom Load Forecasting Upgrade	Complete	11/20/2013	4/23/2014	4/16/2014	5/14/2014		4%		4%	
113-01	Dev Hardware Refresh and Virtualization Expansion	Complete	11/13/2013	1/24/2014	1/9/2014	2/28/2014		20%		-2%	
114-01	Lawson Security	Complete	1/29/2014	2/17/2014	2/17/2014	3/5/2014		0%		-36%	
118-01	Mitigation Plan RTCA Enhancements	Complete	2/5/2014	4/18/2014	4/17/2014	5/8/2014		1%		0%	
125-01	VSAT/TSAT Upgrade	Complete	3/27/2014	7/16/2014	6/10/2014	7/2/2014		32%		31%	
				Footnotes							
				Current phase took longer than expected, resulting in additional funding and/or time required							
			2 - Current phase requiring more labor than expected, resulting in additional funding and/or time required								
			3 - Project placed on hold								
			4 - Resource constraints resulted in delay to current phase								
					5 - Project was on an urgent timeline to meet a pre-defined target implementation date. Compressed project planning						
										-	
				required budget estimation b	pefore full requirement					-	
				required budget estimation b	pefore full requirement	s were known. Additiona				-	



Project Number	Projects Not Yet Started (Count = 14)	Phase	Forecast Start Date
PROJECT	S NOT YET STARTED (Count = 14) Sorted b	y Start Date	
TBD	Replace N2N System	Not Started	Aug-2014
NPRR495	Changes to Ancillary Services Capacity Monitor	Not Started	Aug-2014
NPRR519	Exemption of ERS-Only QSEs from Collateral and Capitalization Requirements	Not Started	Aug-2014
NPRR524	Resource Limits in Providing Ancillary Service	Not Started	Aug-2014
NPRR556	Resource Adequacy During Transmission Equipment Outage	Not Started	Aug-2014
NPRR573	Alignment of PRC Calculation	Aug-2014	
NPRR581	Add Fast Responding Regulation Service as a Subset of Regulation Service	Not Started	Aug-2014
NPRR589	Ancillary Service Offers in the Supplemental Ancillary Services Market	Not Started	Aug-2014
OBD	Setting the Shadow Price Caps and Power Balance Penalties in Security-Constrained Economic Dispatch	Not Started	Aug-2014
SCR771	ERCOT System Change Allowing Independent Master QSE to Represent Split Generation Resources	Not Started	Aug-2014
NOGRR084	Daily Grid Operations Summary Report	Not Started	Sep-2014
TBD	EDW Platform Transition Phase 2	Not Started	Sep-2014
NPRR272	Definition and Participation of Quick Start Generation Resources	Oct-2014	
TBD	CREZ Voltage Control and Coordination - Phase 2	Not Started	Oct-2014

