

ERCOT Monthly Operational Overview (June 2014)

ERCOT Public July 15, 2014

Grid Operations & Planning

Summary – June 2014

Operations

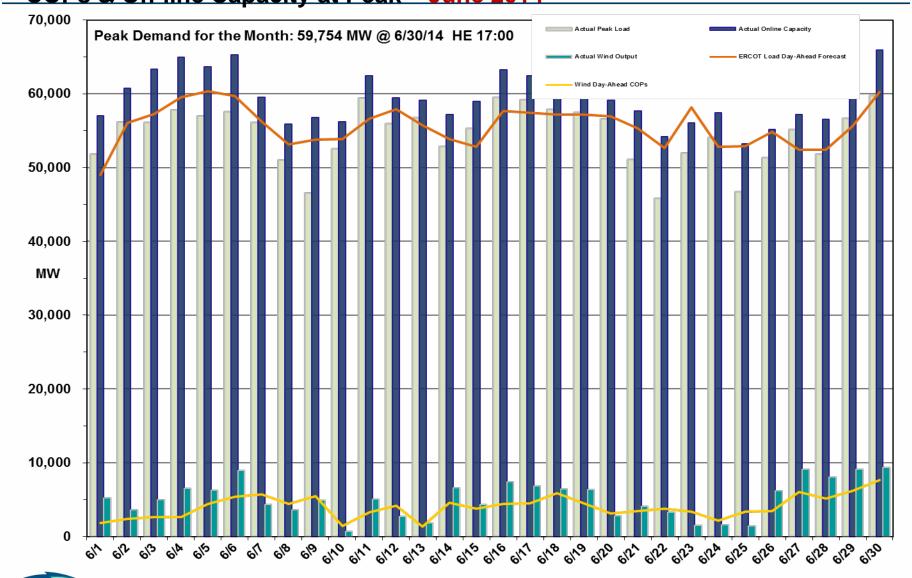
- The peak demand of 59,754 MW on June 30th was less than the mid-term forecast peak of 60,253 MW as well as the June 2013 actual peak demand of 64,418 MW. The instantaneous load on June 30th was 59,870 MW.
- Day-ahead load forecast error for June was 3.56%
- ERCOT issued 2 notifications
 - A single advisory for GMD at level K7.
 - A single transmission watch for congestion.

Planning Activities

- 230 active generation interconnection requests totaling over 60,400 MW, including 25,400 MW of wind generation as of June 30, 2014. Three fewer requests and 700 more MW from May 31, 2014.
- 11,575 MW wind capacity in commercial operations on June 30, 2014.



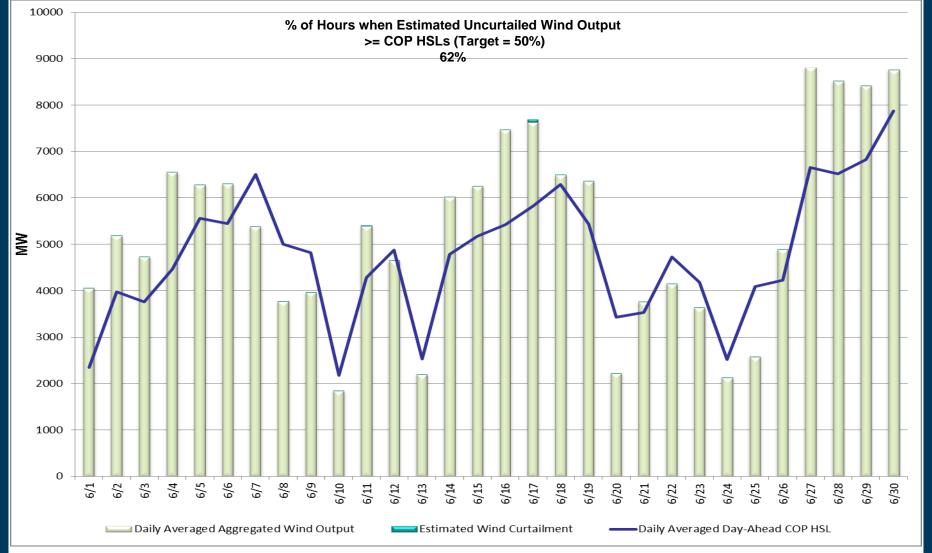
Daily Peak Demand: Hourly Average Actual vs. Forecast, Wind Day-Ahead COPs & On-line Capacity at Peak – June 2014





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

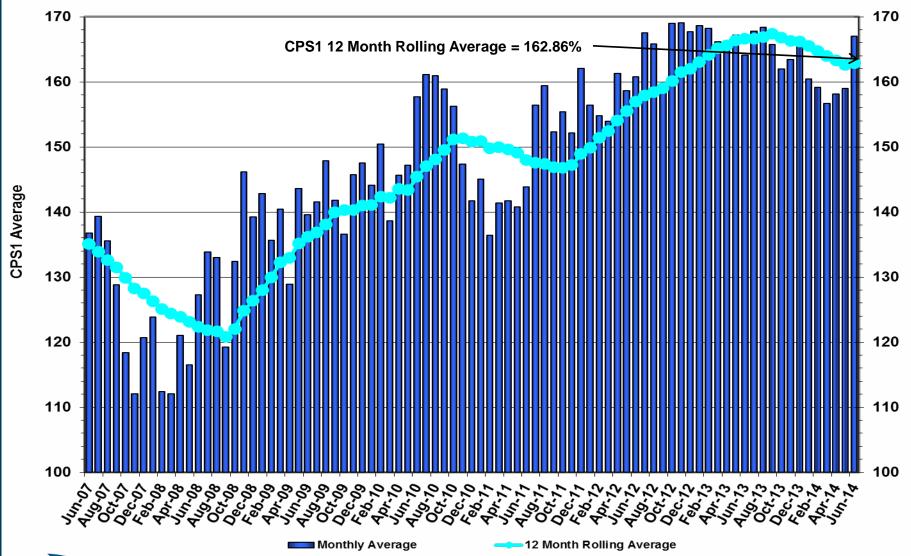
All Hours - June 2014





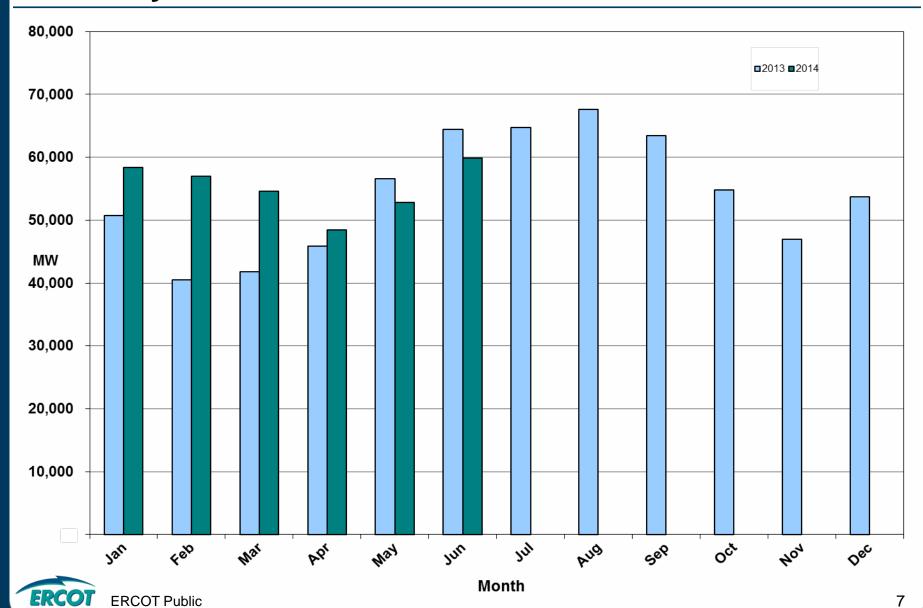
Note: QSEs must use the AWST 50% probability of exceedance forecast as the HSL in their COPs

ERCOT's CPS1 Monthly Performance – June 2014

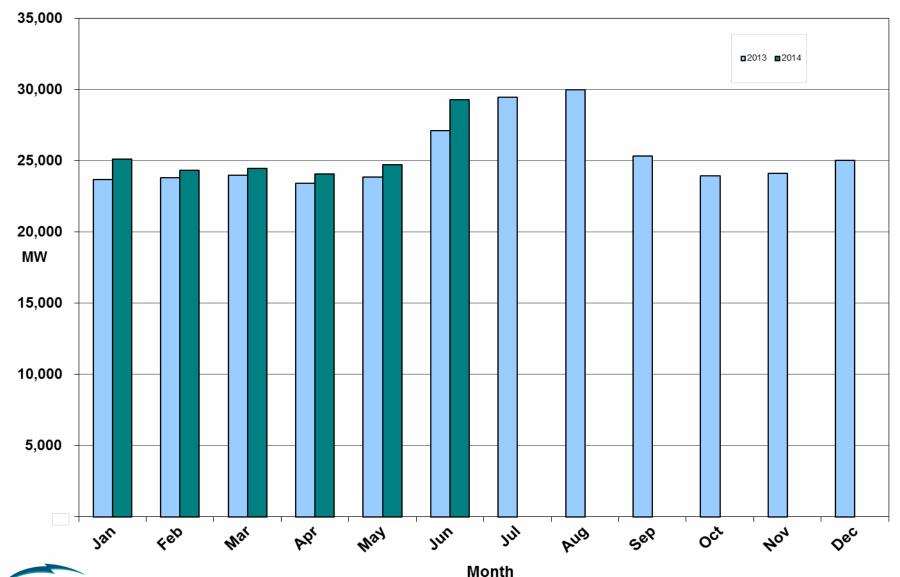




Monthly Peak Actual Demand – June 2014



Monthly Minimum Actual Demand – June 2014





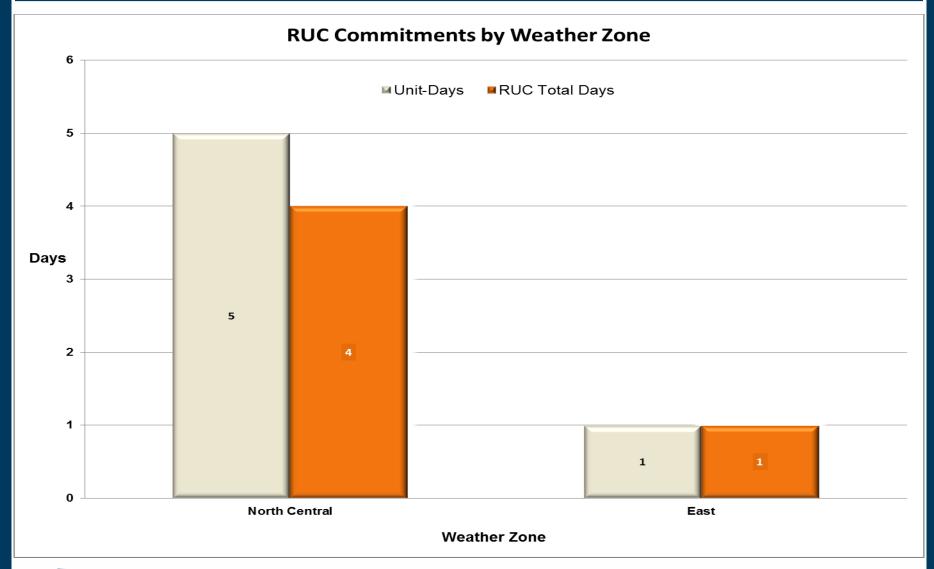
Day-Ahead Load Forecast Performance – June 2014

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	June MA	
Average Annual MAPE	2.83	3.02	2.86	3.20	3.9	56
Lowest Monthly MAPE	1.63	2.51	2.07	2.38	Lowest Daily MAPE	0.77 Jun – 20
Highest Monthly MAPE	3.55	3.49	3.50	3.70	Highest Daily MAPE	11.41 Jun – 25



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





Generic Transmission Limits (GTLs) – June 2014

GTLs	Jun 13 Days GTLs	Apr 14 Days GTLs	May 14 Days GTLs	Jun 14 Days GTLs	Last 12 Months Total Days (Jul13 – Jun14)
North – Houston	0	0	0	0	0
West – North	4	1	0	0	12
Valley Import	0	0	0	0	7
SOP110	0	9	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 - June 2014

- Advisories issued for GMD at level K7
 - Issued once on 6/8
- Watches issued due to congestion
 - Issued once on 6/12

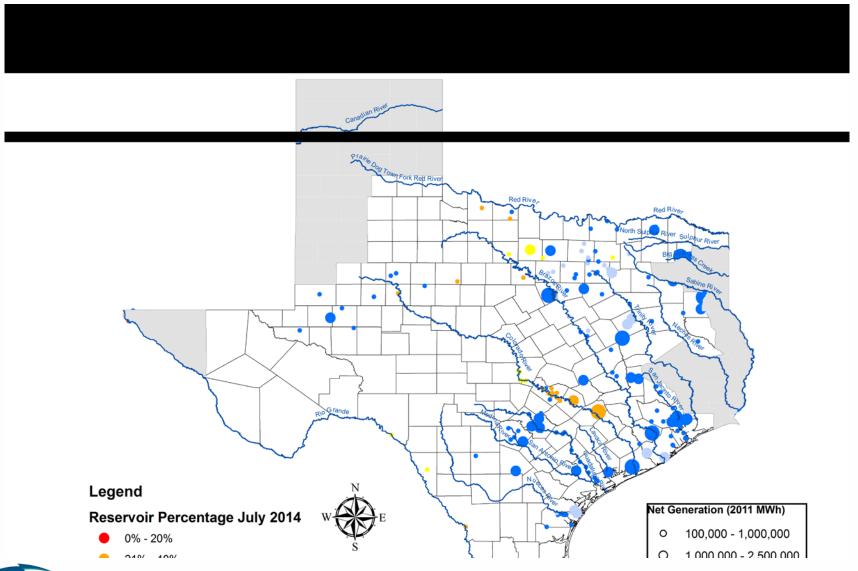


Significant Events – June 2014

No significant events to report



Lake Levels Update – July 1, 2014





Planning Summary – June 2014

- ERCOT is currently tracking 230 active generation interconnection requests totaling over 60,400 MW. This includes over 25,400 MW of wind generation.
- ERCOT is currently reviewing proposed transmission improvements with a total cost of \$490.4 Million.
- Transmission Projects endorsed in 2014 total \$691.1 Million.
- All projects (in engineering, routing, licensing and construction) total approximately \$4.98 Billion.
- Transmission Projects energized in 2014 total about \$438.2 Million.

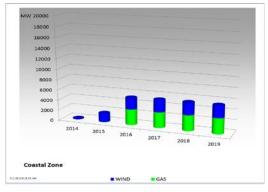


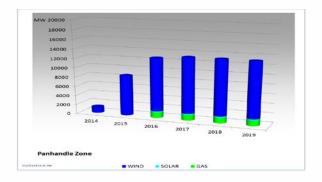
Cumulative Installed MW Capacity of Interconnection Requests

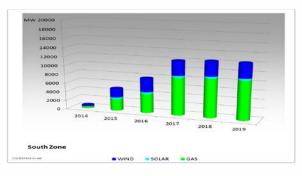
by Zone - June 2014

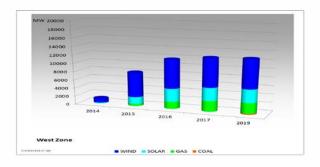






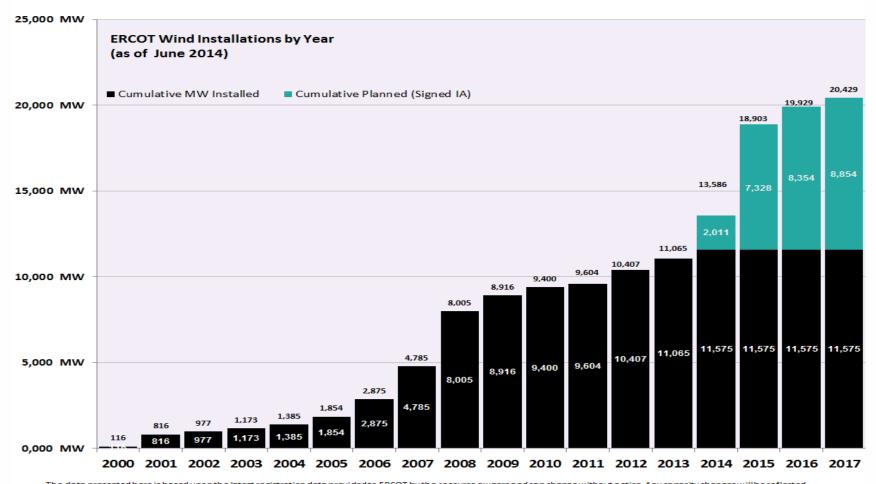








Wind Generation – June 2014

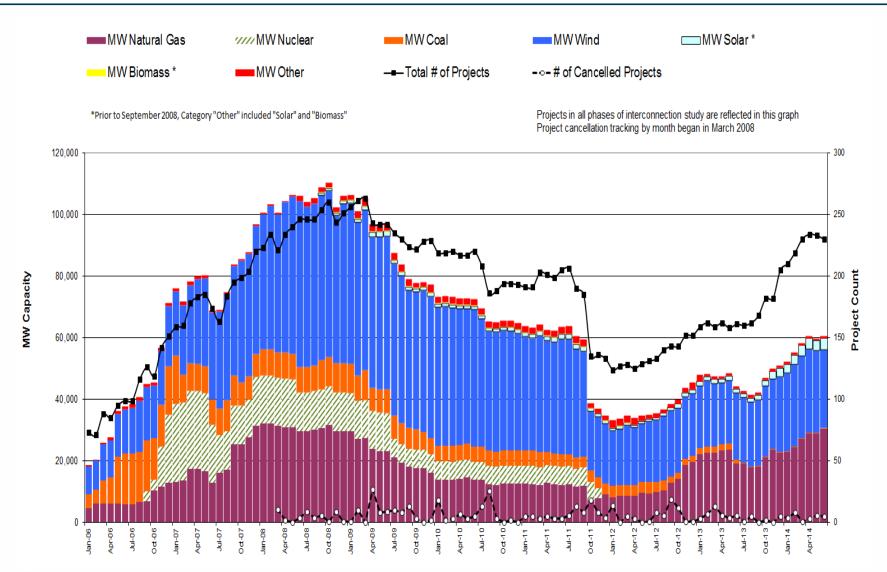


The data presented here is based upon the latest registration data provided to ERCOT by the resource owners and can change without notice. Any capacity changes will be reflected in current and subsequent years' totals. Scheduling delays will also be reflected in the planned projects as that information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

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

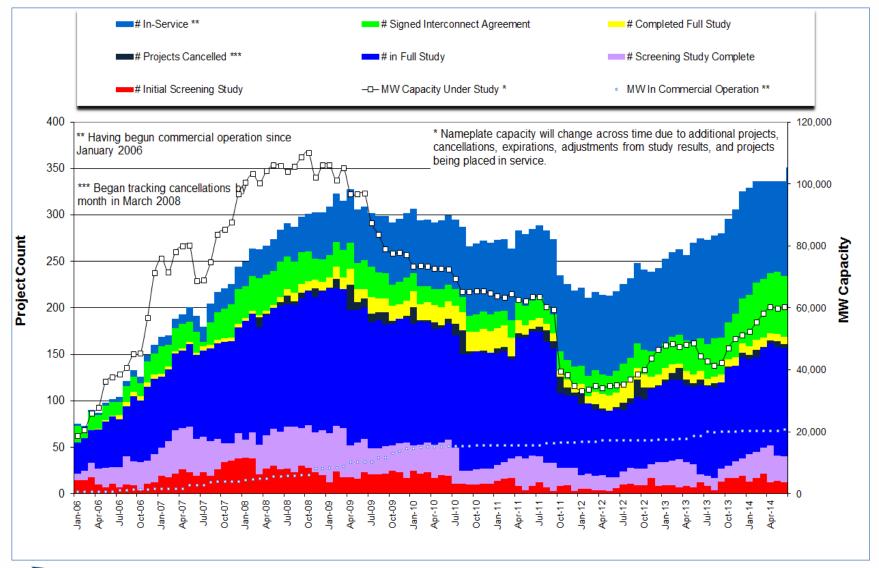


Generation Interconnection Activity by Fuel – June 2014





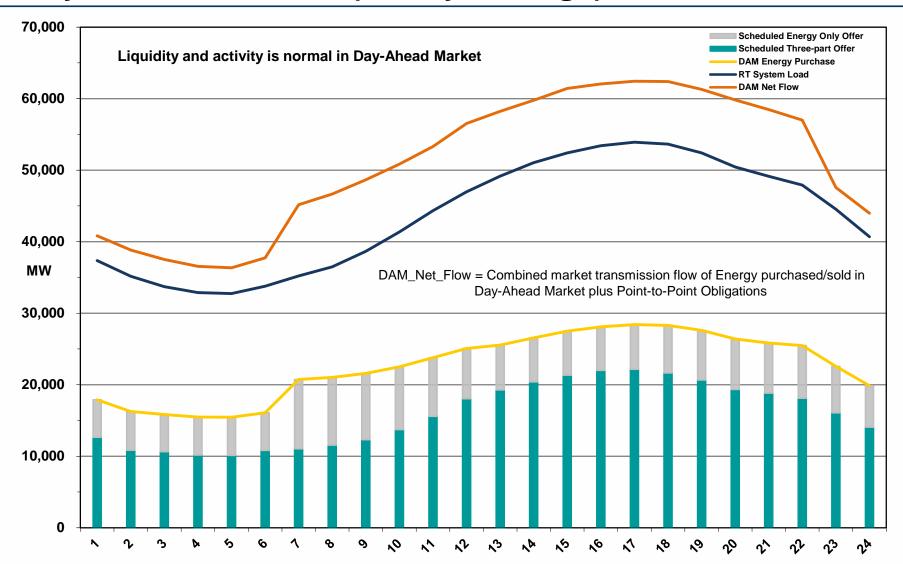
Generation Interconnection Activity by Project Phase – June 2014





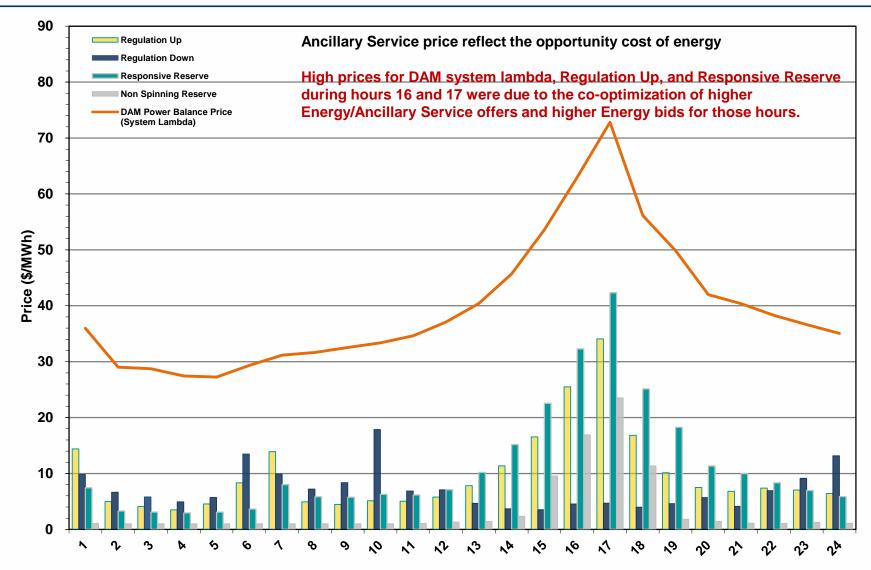
Market Operations

Day-Ahead Schedule (Hourly Average) – June 2014



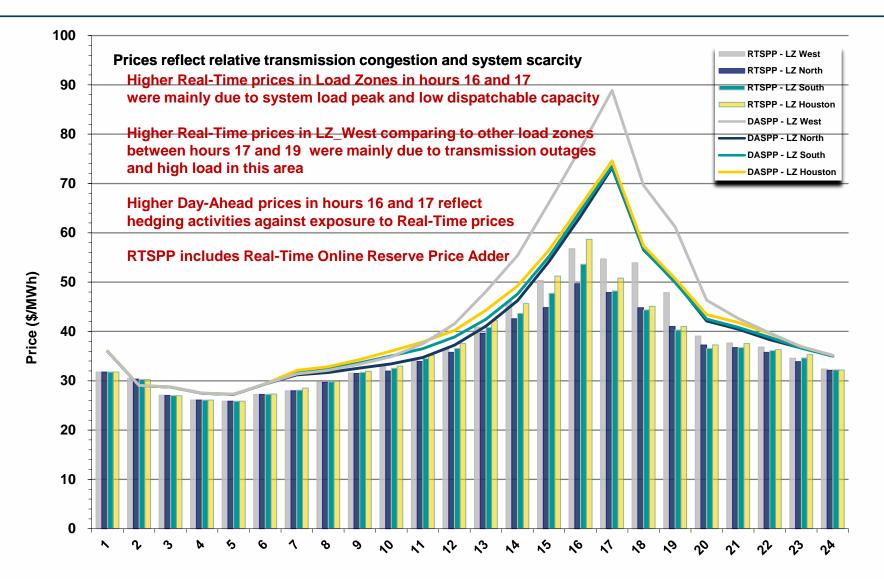


Day-Ahead Electricity And Ancillary Service Hourly Average Prices – June 2014



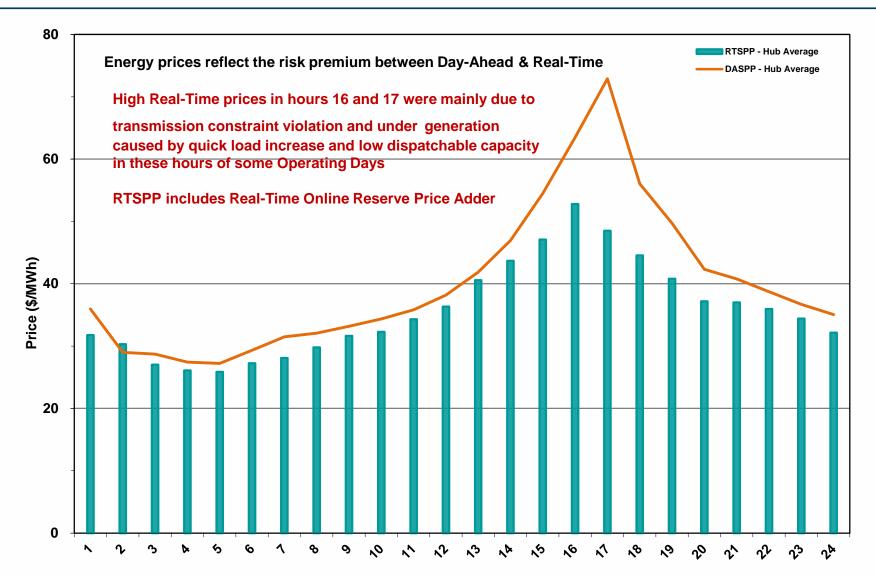


Day-Ahead Vs Real-Time Load Zone SPP (Hourly Average) - June 2014



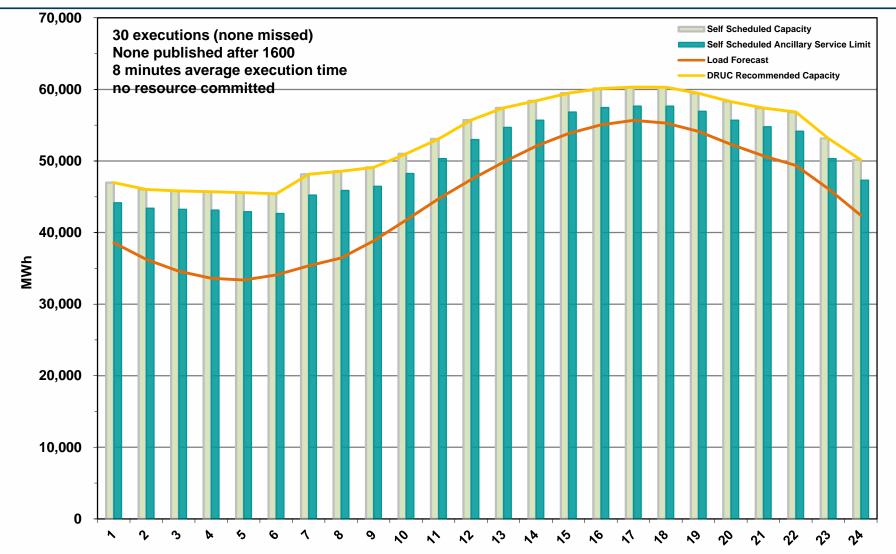


Day-Ahead Vs Real-Time Hub Average SPP (Hourly Average) - June 2014



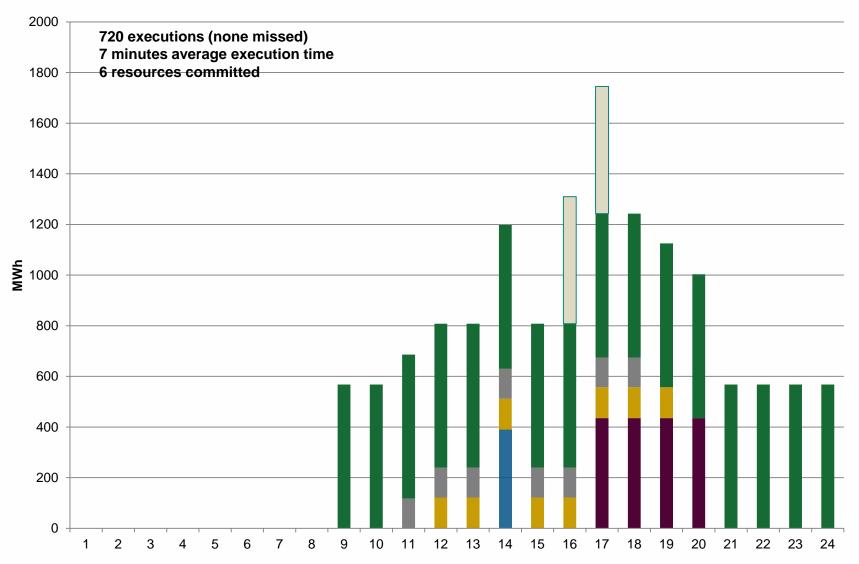


DRUC Monthly Summary (Hourly Average) – June 2014





HRUC Monthly Summary – June 2014

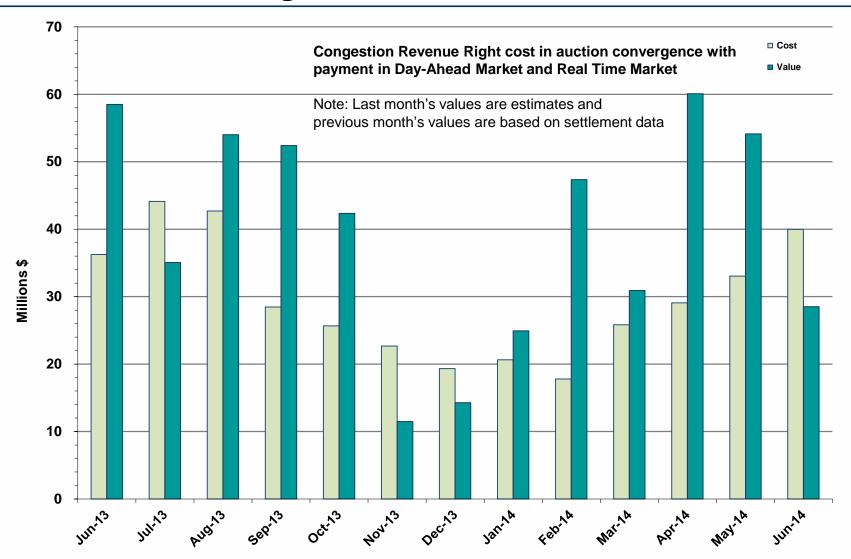




Non-Spinning Reserve Service Deployment – June 2014

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

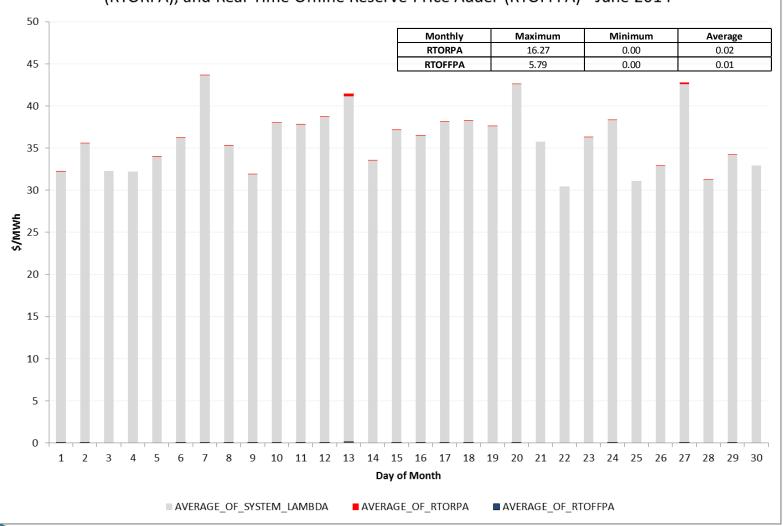
CRR Price Convergence – June 2014





ORDC Price Adder (Daily Average) – June 2014

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





ERS Procurement for June 2014 – September 2014

JunSep2014 has 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

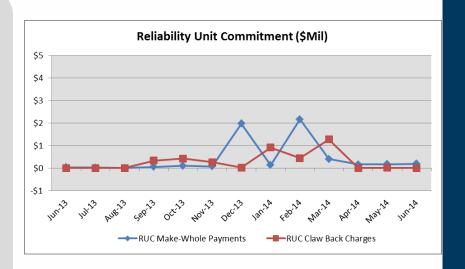
BH1 - Business Hours 1 HE 0900 through 1300, Monday thru Friday except ERCOT Holidays BH2 - Business Hours 2 HE 1400 through 1600, Monday thru Friday except ERCOT Holidays BH3 - Business Hours 3 HE 1700 through 2000, Monday thru Friday except ERCOT Holidays

NBH - Non-Business Hours All other hours



Reliability Services – June 2014

Reliability Unit Commitment (RUC)	\$ in Millions
RUC Make-Whole Payments	(\$0.19)
RUC Clawback Charges	\$0.00
RUC Commitment Settlement	(\$0.19)
RUC Capacity Short Charges	\$0.19
RUC Make-Whole Uplift	\$0.00
RUC Commitment Cost Allocation	\$0.19
RUC Decommitment Payments	\$0.00



In June, RUC Make-Whole Payments rose slightly and RUC Clawback Charges reduced to \$0.0M.

There was no RUC settlement allocated directly to load in June 2014, compared to:

- \$0.01M in May 2014
- No allocation in June 2013



Capacity Services – June 2014

Capacity Services	\$ in Millions
Regulation Up Service	\$3.18
Regulation Down Service	\$2.61
Responsive Reserve Service	\$19.44
Non-Spinning Reserve Service	\$3.55
Black Start Service	\$0.61
Voltage Services - Reactive Power	\$0.00
Voltage Services - Lost Opportunity	\$0.00
Total Charges	\$29.39

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

June 2014 cost was \$29.39M, compared to:

- A charge of \$32.40M in May 2014
- A charge of \$26.99M in June 2013



Energy Settlement – June 2014

Day-Ahead Market Energy Settlement	\$ in Millions
Energy Purchases	\$692.04
Point to Point Obligation Purchases	\$22.73
RMR Day-Ahead Revenue	\$0.00
Energy Sales	(\$684.30)
Day-Ahead Congestion Rent	\$30.47
Day-Ahead Market Make-Whole Payments	(\$0.10)

Both Day-Ahead Market and Real-Time Market energy settlement activity increased from last month and from June 2013.

Real-Time Market Energy Settlement	\$ in Millions
Energy Imbalance at a Resource Node	(\$656.72)
Energy Imbalance at a Load Zone	\$940.94
Energy Imbalance at a Hub	(\$257.15)
Real Time Congestion from Self Schedules	(\$0.28)
Block Load Transfers and DC Ties	(\$14.76)
Impact to Revenue Neutrality	\$12.03
Emergency Energy Payments	(\$0.04)
Base Point Deviation Charges	\$0.39
Real-Time Metered Generation (MWh in millions)	31.35



Congestion Revenue Rights (CRR) – June 2014

	\$ in Millions
Annual Auction	(\$26.76)
Monthly Auction	(\$13.21)
Total Auction Revenue	(\$39.97)
Day-Ahead CRR Settlement	(\$28.52)
Day-Ahead CRR Short-Charges	\$1.15
Day-Ahead CRR Short-Charges Refunded	(\$1.15)
Real-Time CRR Settlement	(\$0.00)
Real-Time CRR Short-Charges	\$0.00
Real-Time CRR Short-Charges Refunded	(\$0.00)
Total CRR Funding	(\$28.52)
Day-Ahead Point to Point Obligations Settlement	\$22.73
Real-Time Point to Point Obligation Settlement	(\$13.23)
Net Point to Point Obligation Settlement	\$9.50

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

Distribution of Balancing Account funds to load for June 2014 was \$1.98M, compared to:

- \$0.13M Credit in May 2014
- \$7.22M Credit in June 2013

Point to Point Obligations settled with a net charge of \$9.50M compared to a net charge of \$9.92M last month.



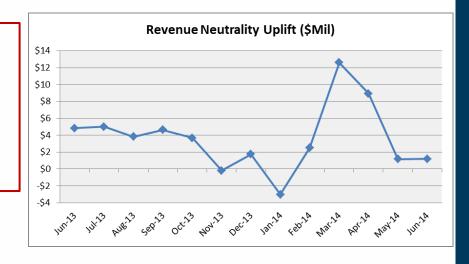
Revenue Neutrality – June 2014

Revenue Neutrality Settlement	\$ in Millions
Real-Time Point to Point Obligation Settlement	(\$13.23)
Real-Time Point to Point Options and Options with Refund Settlement	\$0.00
Real-Time Energy Imbalance Settlement	\$27.08
Real-Time Congestion from Self-Schedules Settlement	(\$0.28)
DC Tie & Block Load Transfer Settlement	(\$14.76)
Charge to Load	\$1.19

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

June 2014 was a charge of \$1.19M, compared to:

- \$1.16M charge in May 2014
- \$4.82M charge in June 2013





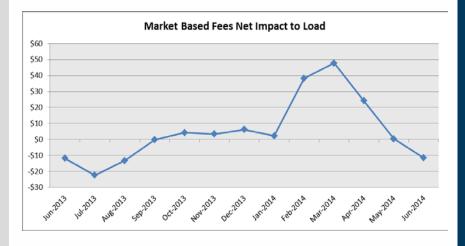
Net Allocation to Load – June 2014

Market-Based Allocation	\$ in Millions
CRR Auction Revenue Disbursement Settlement	(\$39.97)
Balancing Account Proceeds Settlement	(\$1.98)
Net Reliability Unit Commitment Settlement	\$0.19
Ancillary Services Settlement	\$29.39
Reliability Must Run Services Settlement	\$0.00
Reliability Must Run for Capacity	\$0.00
Real-Time Revenue Neutrality Settlement	\$1.19
Emergency Energy Settlement	\$0.04
Base Point Deviation Settlement	(\$0.39)
Total	(\$11.52)
Fee Allocation	
ERCOT Administrative Fee Settlement	\$14.80
Net Allocated to Load	\$3.28

The charge for the net allocation to Load decreased significantly from last month and increased slightly from June of 2013

June 2014 was a charge of \$3.28M, compared to:

- A charge of \$13.13M in May 2014
- A charge of \$1.59M in June 2013





Real Time Ancillary Service Imbalance (ORDC)

	\$ in Thousands
Real-Time AS Imbalance Payment Amount	(\$17.86)
Load Allocated AS Imbalance Revenue Neutrality Amount	\$17.86

Real Time Ancillary Service Imbalance settlements were low for the month of June 2014. Total payments for the month were \$17,855.

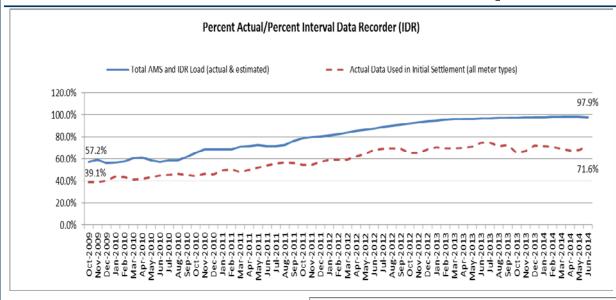
12 of the 30 days in June had settlement dollars equal to \$0 for the day.

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

The highest settlement occurred on June 13th. The total Real Time Ancillary Service Imbalance payments on that day were \$9,967.22.

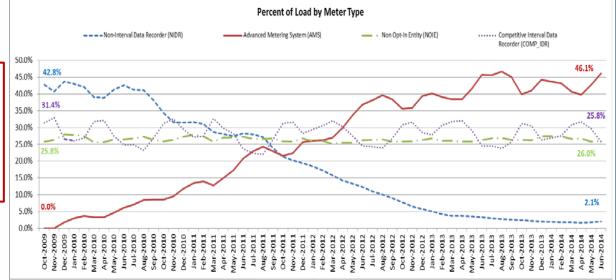


Advanced Meter Settlement Impacts – June 2014



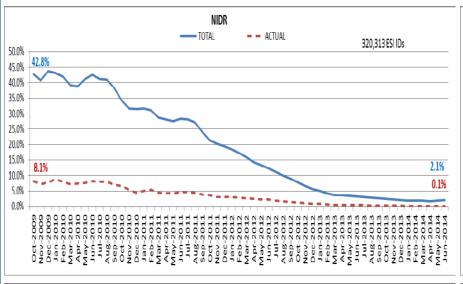
June 2014: At month end, settling 6.6M ESIIDs using Advanced Meter data.

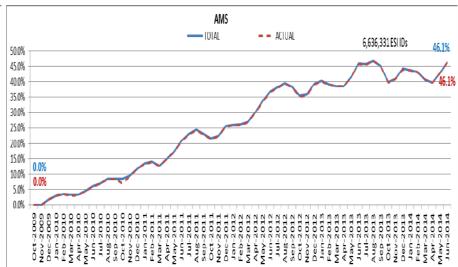
June 2014: 97.9% of the load in ERCOT is settled with 15-min interval data (AMS, Competitive IDR, and NOIE IDR).

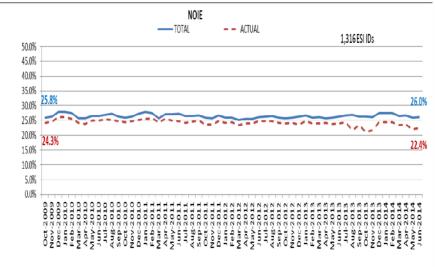


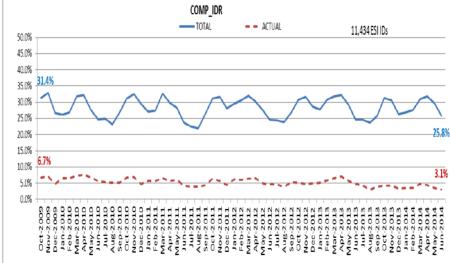


ERCOT Wide Load Volumes by Meter Type – INITIAL Settlement – June 2014











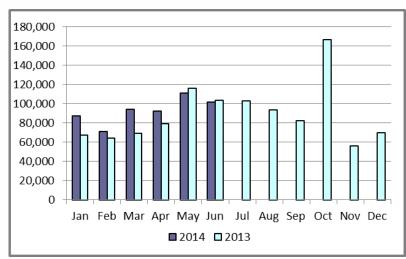
Retail Transaction Volumes – Summary – June 2014

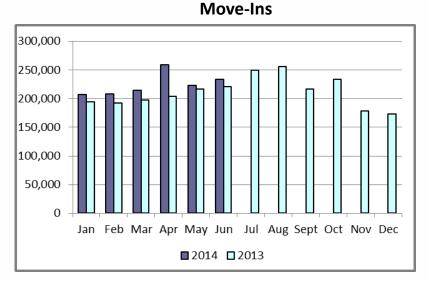
	Year-	To-Date	Transactions Received			
Transaction Type	June 2014	June 2013	June 2014	June 2013		
Switches	556,520	499,156	101,490	103,756		
Acquisition	0	0	0	0		
Move - Ins	1,345,472	1,225,453	233,679	220,397		
Move - Outs	664,815	666,388	126,785	121,446		
Continuous Service Agreements (CSA)	355,901	280,028	64,408	62,747		
Mass Transitions	4,975	0	0	0		
Total	2,927,672	2,671,025	526,362	508,346		



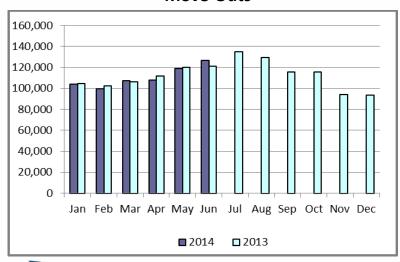
Retail Transaction Volumes – Summary – June 2014

Switches/Acquisitions

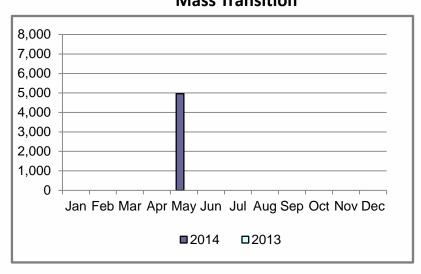




Move-Outs

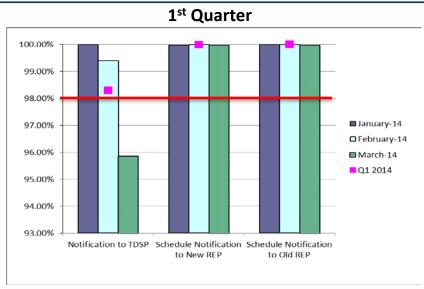


Mass Transition

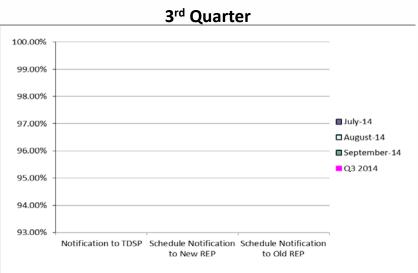


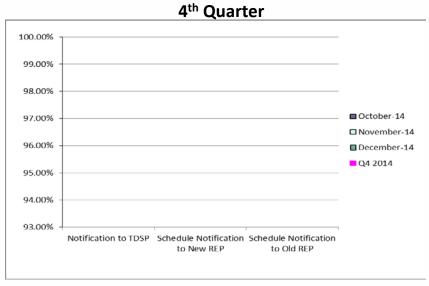


Retail Performance Measures – Switch – June 2014



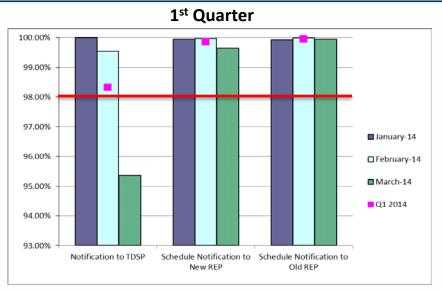


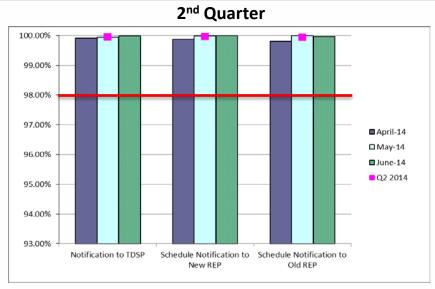


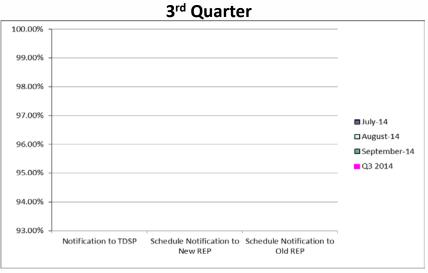


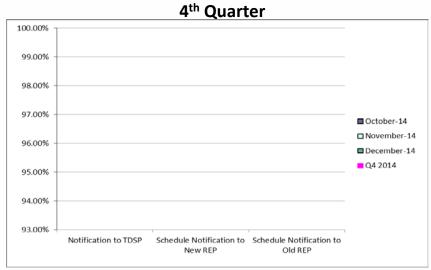


Retail Performance Measures (Same Day Move-In) - June 2014



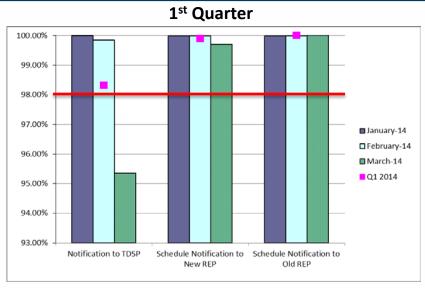






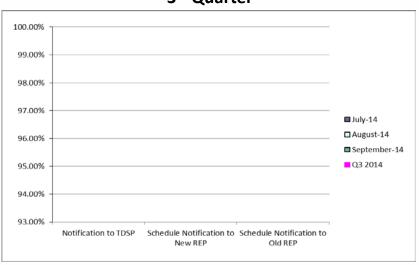


Retail Performance Measures (Standard Move-In) - June 2014

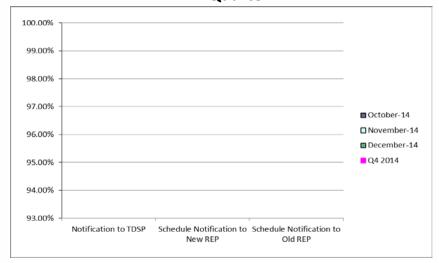








4th Quarter





Projects Report

			2014 Project Fundin	e	\$ 25,000,000				
	2014 Froject Fanding		-	*,,					
	Impact Metric Tolerances				2014 Portfolio Spending Estimate		tal Portfolio Demand		
	le variances are represented as negative numbers within	Projects In Flight/On Hold (Count = 55)			\$ 24,542,236	\$	52,737,085		
the report. - Green =	No more than 4.9% unfavorable variance	Projects Not Yet	\$ 1,800,000 \$ 11,4		11,447,085				
	- Yellow = Unfavorable variance between 4.9% and 9.9% - Red = Unfavorable variance more than 9.9%		Projects Completed (Count = 12)			\$ 901,977			
- Red - Of			Spending Reductions Required to Maintain Capital Budget			N/A			
		TOTAL			\$ 25,000,000	\$	65,086,147		
Project Number	Projects in Initiation Phase (Count = 5)								
129-01	Access and Roles Management								
133-01	Testing Environment Management								
TBD	OSI Pi Visualization Enhancements								
NPRR527	Required Combined Cycle Telemetry for Operational Awareness and PDCWG Analysis								
SCR779	Increase to the CRR Auction Transaction Limit								
Project Number	Projects in Planning Phase (Count = 13)	Baseline Phase Start	Baseline Phase Finish	Scheduled Go-Live Date	Scheduled Phase Finish	Sch	edule Impact	Budg	get Impact
052-01	EMS Upgrade	8/7/2013	10/30/2014	TBD	10/30/2014		-4%		0%
065-01	NMMS Upgrade	5/1/2013	3/1/2014	TBD	7/16/2014	1	-45%	1	-31%
074-02	Cyber Security Project #9	12/17/2013	3/26/2014	TBD	6/11/2014	2	-77%		33%
089-01	Information Technology Change Management	4/10/2013	4/2/2014	TBD	10/17/2014	1	-55%	1	-30%
097-01	ABB MMS OS Technology Refresh	5/29/2013	5/30/2014	TBD	7/1/2014	2	-8%		15%
104-01	Disaster Recovery: S&B, RTL, MDT	5/15/2013	11/15/2013	TBD	8/29/2014	1	-155%	1	-8%
106-01	MP Online Data Entry - Ph 1	10/9/2013	3/5/2014	TBD	9/22/2014	4	-136%		42%
120-01	IT Production Hardening	2/12/2014	9/24/2014	TBD	9/24/2014		0%		3%
127-01	SQL Server 2012 Upgrade / Cluster Consolidation	3/6/2014	8/27/2014	TBD	8/27/2014		0%		21%
131-01	Email Gateway Refresh	4/2/2014	6/16/2014	TBD	7/30/2014	2	-58%		3%
134-01	Privileged Account Management	6/5/2014	11/19/2014	TBD	11/19/2014		0%		1%
137-01	EIS Reporting and Control Systems Upgrade	6/4/2014	8/13/2014	TBD	8/13/2014		0%		-3%
NPRR586	Align Credit Lock for CRR Auctions with Transaction Submission Deadline	5/7/2014	7/2/2014	TBD	6/25/2014		12%		5%



Project Number	Projects in Execution Phase (Count = 24)	Baseline Phase Start	Baseline Go-Live Target	Scheduled Go-Live Date	Scheduled Phase Finish	Schedule Impact		et Budget Impa	
10052_01	Settlement System Upgrade	1/25/2012	12/23/2014	12/6/2014	4/8/2015		1%	2	-5%
017-01	Oracle 11g Upgrade	10/10/2012	7/16/2014	7/16/2014	7/17/2014		0%		-1%
057-01	EPS Metering DB Redesign	4/17/2013	9/6/2013	8/6/2014	9/3/2014	2	-235%	2	-145%
066-01	Planning Site Transition to MIS	7/2/2014	10/16/2014	10/16/2014	12/3/2014		0%		0%
077-01	Contract Lifecycle Management	9/11/2013	5/5/2014	9/4/2014	10/2/2014	2	-51%		5%
115-01	Cyber Security Project #14	6/30/2014	1/15/2015	1/15/2015	2/26/2015		0%		0%
116-01	Collage Replacement	2/6/2014	9/22/2014	11/4/2014	12/5/2014	4	-18%		25%
121-01	2013/2014 Network Refresh	5/14/2014	10/17/2014	10/17/2014	12/13/2014		0%		-2%
122-01	Infoblox DNS/DHCP	5/21/2014	11/5/2014	11/5/2014	11/5/2014		0%		1%
128-0x	Capital Efficiencies and Enhancements - 2014	1/1/2014	12/31/2014	12/31/2014	12/31/2014		0%		23%
130-01	Electronic Crisis Communications Enhancements	6/19/2014	12/12/2014	12/8/2014	1/16/2015		2%		28%
132-01	Client Digital Certificate Upgrade	6/12/2014	8/17/2014	8/17/2014	9/17/2014		0%		4%
135-01	Common Infrastructure - 2014	1/1/2014	12/31/2014	12/31/2014	12/31/2014		0%		80%
128-04	Reactive Test Forms Revision	5/19/2014	8/1/2014	8/1/2014	8/31/2014		0%	NA	See #128- 01
99914	Minor Cap - 2014	1/1/2014	12/31/2014	12/31/2014	12/31/2014	NA	0%		25%
2014 PC	Program Control - 2014	1/1/2014	12/31/2014	12/31/2014	12/31/2014	NA	0%		5%
NPRR467	Balancing Account Resettlement Due to DAM Resettlement	7/1/2014	12/6/2014	12/6/2014	4/8/2015		0%	NA	See #10052
NPRR485	Clarification for Fuel Adder Provisions	10/23/2013	9/30/2014	9/30/2014	10/31/2014		0%	NA	See #128- 01
NPRR491	Updated Distribution Generation and Demand Response Information for ERCOT	2/26/2014	8/1/2014	8/1/2014	8/31/2014		0%	NA	See #128- 01
NPRR571	ERS Weather-Sensitive Loads Requirements	4/8/2014	9/30/2014	9/30/2014	10/31/2014		0%	NA	See #128- 01
NPRR580	Establishment of a Rolling CRR Balancing Account Fund	7/1/2014	12/6/2014	12/6/2014	4/8/2015		0%	NA	See #10052
SCR756	MarkeTrak Enhancements - Remaining SCR756 Items	2/5/2014	7/23/2014	7/27/2014	9/12/2014		-2%		1%
SCR769	CRRAH Digital Certificate New Role for Read Only Access	3/20/2014	8/1/2014	8/1/2014	9/10/2014		0%		9%
SCR774	Enhancement to Outage Scheduler and Reports	2/26/2014	8/1/2014	8/1/2014	8/31/2014		0%	NA	See #128- 01

Project Number	Projects in Stabilization (Count = 11)	Baseline Execution Phase Start	Baseline Go-Live Target	Actual Go-Live Date	Scheduled Execution Phase Finish	Schedule	e Impact	Bud	get Impact
NPRR240	Proxy Energy Offer Curve	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	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	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	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	1/8/2014	6/1/2014	6/1/2014	8/15/2014		0%	NA	See #117- 01
047-01	CMSDK/MIR Replacement	4/24/2013	12/8/2013	4/15/2014	10/2/2014	2	-56%	2	-51%
083-01	Centralized Application Log Management	8/28/2013	5/7/2014	3/27/2014	8/13/2014		16%		5%
107-01	IBM AIX Operating System Upgrades	1/29/2014	5/2/2014	5/2/2014	7/16/2014		0%		42%
110-01	Taylor Control Room Upgrade	2/19/2014	7/7/2014	6/4/2014	8/13/2014		23%		0%
		1/8/2014	6/1/2014					5	
117-01	2014 Market System Enhancements		r	6/1/2014	8/15/2014	_	0%	Э	-20%
119-01	ICREZ Voltage Control and Coordination	3/6/2014	4/18/2014	4/18/2014	10/1/2014		_0% _		22%
Project Number	Projects On Hold (Count = 2)	Forecast Start Date	Baseline Phase Finish	Scheduled Go-Live Date	Scheduled Phase Finish	Schedule	e Impact	Bud	get Impact
PROJECT	TS ON HOLD (Count = 2) Sorted by Project N	lumber							
NPRR327	State Estimator Data Redaction Methodology	12/5/2012	2/12/2013	TBD	TBD	3		3	
SCR772	New Extract for Five Minute Interval Settlement Data	2/12/2014	4/19/2014	тво	TBD	3		3	
Project Number	Projects Completed in the Current Year (Count =12)	Baseline Execution Phase Start	Baseline Go-Live Target	Actual Go-Live Date	Actual Execution Phase Finish	Schedule	e Status	Total Variance	
PROJECT	ΓS COMPLETED IN 2014 (Count = 12) Sorted by Proj								17%
PROJECT	COMPLETED IN 2014 (Count = 12) Sorted by Projection of a WGR Group for GREDP and Base Point Deviation Evaluation	8/21/2013	3/26/2014	3/3/2014	3/31/2014		10%		46%
NPRR425	Creation of a WGR Group for GREDP and Base Point Deviation	8/21/2013 12/11/2013	3/26/2014 2/23/2014	3/3/2014 2/23/2014	3/31/2014 2/23/2014		10%	NA	46% See #128- 01
NPRR425 NPRR509	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five		f		+			NA NA	46% See #128-
NPRR425 NPRR509	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary	12/11/2013	2/23/2014	2/23/2014	2/23/2014		0%		46% See #128- 01_ See #128-
NPRR425 	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five	12/11/2013 2/16/2014	2/23/2014 	2/23/2014 	2/23/2014 		0%	NA	46% See #12801 See #12801 See #78-01 See #78-01
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services	12/11/2013 2/16/2014 12/10/2013	2/23/2014 4/27/2014 1/7/2014	2/23/2014 4/18/2014 1/7/2014	2/23/2014 4/27/2014 1/31/2014		0% 	NA	46% See #128- 01 See #128- 01 See #78-01
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Senvices Generation Resource Frequency Response Test Procedure ADP-IDM Interface	12/11/2013 2/16/2014 12/10/2013 12/4/2013 11/6/2013	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014		0% 12% 	NA	46% See #12801 See #12801_ See #78-0131%23%
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure JADP-IDM Interface Emergency Notification System Hardware Refresh	12/11/2013 2/16/2014 12/10/2013 12/4/2013 11/6/2013	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014		0% 12% 0% 0% 0%	NA	46% See #12801 See #12801_ See #78-0131%23%2%
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01 101-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure ADP-IDM Interface Emergency Notification System Hardware Refresh Alstom Load Forecasting Upgrade	12/11/2013 2/16/2014 12/10/2013 12/4/2013 11/6/2013 11/13/2013	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014		0% 12% 0% 0% 0% 0% 48%	NA	46% See #12801 See #12801 See #78-0131%23%22%
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01 101-01 108-01 113-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure IADP-IDM Interface Emergency Notification System Hardware Refresh Alstom Load Forecasting Upgrade Dev Hardware Refresh and Virtualization Expansion	12/11/2013 2/16/2014 12/10/2013 12/4/2013 11/6/2013 11/13/2013 11/20/2013 11/13/2013	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014		0%	NA	46% See #128
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01 101-01 108-01 113-01 114-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure ADP-IDM Interface Emergency Notification System Hardware Refresh Alstom Load Forecasting Upgrade Dev Hardware Refresh and Virtualization Expansion Lawson Security	12/11/2013 2/16/2014 12/10/2013 12/4/2013 11/6/2013 11/13/2013 11/20/2013 11/13/2013 11/29/2014	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014 2/17/2014	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014 2/17/2014	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014 3/5/2014		0% 12% 0% 0% 0% 48% 4% 20% 0%	NA	46% See #128- 01
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01 101-01 108-01 113-01 114-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure IADP-IDM Interface Emergency Notification System Hardware Refresh Alstom Load Forecasting Upgrade Dev Hardware Refresh and Virtualization Expansion	12/11/2013 2/16/2014 12/10/2013 12/4/2013 11/6/2013 11/13/2013 11/20/2013 11/13/2013	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014		0%	NA	46% See #128
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01 101-01 108-01 113-01 114-01 118-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure ADP-IDM Interface Emergency Notification System Hardware Refresh Alstom Load Forecasting Upgrade Dev Hardware Refresh and Virtualization Expansion Lawson Security Mittigation Plan RTCA Enhancements	12/11/2013 2/16/2014 12/10/2013 11/6/2013 11/6/2013 11/13/2013 11/20/2013 11/20/2013 11/29/2014	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014 2/17/2014 4/18/2014	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014 2/17/2014 4/17/2014	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014 3/5/2014 5/8/2014		0% 12% 0% 0% 0% 48% 4% 20% 0% 1%	NA	46% See #12801 See #128011 = 31%31%23%2%2%2%36%6%
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01 101-01 108-01 113-01 114-01 118-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure ADP-IDM Interface Emergency Notification System Hardware Refresh Alstom Load Forecasting Upgrade Dev Hardware Refresh and Virtualization Expansion Lawson Security Mittigation Plan RTCA Enhancements	12/11/2013 2/16/2014 12/10/2013 11/6/2013 11/6/2013 11/13/2013 11/20/2013 11/20/2013 11/29/2014	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014 2/17/2014 4/18/2014	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014 2/17/2014 4/17/2014	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014 3/5/2014 5/8/2014		0% 12% 0% 0% 0% 48% 4% 20% 0% 1%	NA	46% See #12801 See #128011 = 31%31%23%2%2%2%36%6%
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01 101-01 108-01 113-01 114-01 118-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure ADP-IDM Interface Emergency Notification System Hardware Refresh Alstom Load Forecasting Upgrade Dev Hardware Refresh and Virtualization Expansion Lawson Security Mittigation Plan RTCA Enhancements	12/11/2013 2/16/2014 12/10/2013 11/6/2013 11/6/2013 11/13/2013 11/20/2013 11/20/2013 11/29/2014	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014 2/17/2014 4/18/2014 7/16/2014	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014 2/17/2014 4/17/2014 6/10/2014	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014 3/5/2014 5/8/2014 7/2/2014	and/or time re	0%	NA	46% See #12801_ See #12801
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01 101-01 108-01 113-01 114-01 118-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure ADP-IDM Interface Emergency Notification System Hardware Refresh Alstom Load Forecasting Upgrade Dev Hardware Refresh and Virtualization Expansion Lawson Security Mittigation Plan RTCA Enhancements	12/11/2013 2/16/2014 12/10/2013 11/6/2013 11/6/2013 11/13/2013 11/20/2013 11/20/2013 11/29/2014	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 2/17/2014 2/17/2014 4/18/2014 7/16/2014 Footnotes	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 1/2/20/2013 4/16/2014 1/9/2014 2/17/2014 4/17/2014 6/10/2014	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014 3/5/2014 7/2/2014		0% 12% 0% 0% 0% 48% 4% 29% 0% 1% 32%	NA NA	46% See #12801 See #128011 = 1280131\%31\%23\% -2\% _2\%2\%36\%6\%
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01 101-01 108-01 113-01 114-01 118-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure ADP-IDM Interface Emergency Notification System Hardware Refresh Alstom Load Forecasting Upgrade Dev Hardware Refresh and Virtualization Expansion Lawson Security Mittigation Plan RTCA Enhancements	12/11/2013 2/16/2014 12/10/2013 11/6/2013 11/6/2013 11/13/2013 11/20/2013 11/20/2013 11/29/2014	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 2/17/2014 4/18/2014 7/16/2014 Footnotes 1 - Current phase took longer	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 1/2/20/2013 4/16/2014 1/9/2014 2/17/2014 4/17/2014 6/10/2014	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014 3/5/2014 7/2/2014		0% 12% 0% 0% 0% 48% 4% 29% 0% 1% 32%	NA NA	46% See #12801 See #128011 = 1280131\%31\%23\% -2\% _2\%2\%36\%6\%
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01 101-01 108-01 113-01 114-01 118-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure ADP-IDM Interface Emergency Notification System Hardware Refresh Alstom Load Forecasting Upgrade Dev Hardware Refresh and Virtualization Expansion Lawson Security Mittigation Plan RTCA Enhancements	12/11/2013 2/16/2014 12/10/2013 11/6/2013 11/6/2013 11/13/2013 11/20/2013 11/20/2013 11/29/2014	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 1/24/2014 2/17/2014 4/18/2014 7/16/2014 7/16/2014 Footnotes 1 - Current phase took longe 2 - Current phase requiring r 3 - Froject placed on hold	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014 2/17/2014 4/17/2014 6/10/2014 r than expected, resulmore labor than expect	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014 3/5/2014 5/8/2014 7/2/2014 ting in additional funding a ed, resulting in additional		0% 12% 0% 0% 0% 48% 4% 29% 0% 1% 32%	NA NA	46% See #12801 See #128011 = 1280131\%31\%23\% -2\% _2\%2\%36\%6\%
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01 101-01 108-01 113-01 114-01 118-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure ADP-IDM Interface Emergency Notification System Hardware Refresh Alstom Load Forecasting Upgrade Dev Hardware Refresh and Virtualization Expansion Lawson Security Mittigation Plan RTCA Enhancements	12/11/2013 2/16/2014 12/10/2013 11/6/2013 11/6/2013 11/13/2013 11/20/2013 11/20/2013 11/29/2014	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 2/17/2014 4/18/2014 7/16/2014 Footnotes 1 - Current phase took longe 2 - Current phase requiring r 3 - Project placed on hold 4 - Resource constraints res 5 - 2014 Market System Enh.	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014 2/17/2014 4/17/2014 6/10/2014 r than expected, result more labor than expected, result more labor than expected sulted in delay to curre ancements w as Planne ancement	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014 3/5/2014 5/8/2014 7/2/2014 ting in additional funding a ed, resulting in additional	funding and/	0%	NA NA	46% See #12801 See #12801See #1280131%31%23%2%2%36%6%31%
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01 101-01 108-01 113-01 114-01 118-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure ADP-IDM Interface Emergency Notification System Hardware Refresh Alstom Load Forecasting Upgrade Dev Hardware Refresh and Virtualization Expansion Lawson Security Mittigation Plan RTCA Enhancements	12/11/2013 2/16/2014 12/10/2013 11/6/2013 11/6/2013 11/13/2013 11/20/2013 11/20/2013 11/29/2014	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014 2/17/2014 4/18/2014 7/16/2014 Footnotes 1 - Current phase took longe 2 - Current phase requiring r 3 - Project placed on hold 4 - Resource constraints res 5 - 2014 Market System Enhimplementation date resulting	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 2/17/2014 4/17/2014 6/10/2014 r than expected, resulting reliabor than expected relia	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014 3/5/2014 5/8/2014 7/2/2014 ting in additional funding a ed, resulting in additional	funding and/	0%	NA NA	46% See #128
NPRR425 NPRR509 NPRR570 NPRR575 NOGRR105 016-01 101-01 108-01 113-01 114-01 118-01	Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Shortened RTM Settlement Timeline Reduce RTM Settlement Timeline to Operating Day Plus Five Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure ADP-IDM Interface Emergency Notification System Hardware Refresh Alstom Load Forecasting Upgrade Dev Hardware Refresh and Virtualization Expansion Lawson Security Mittigation Plan RTCA Enhancements	12/11/2013 2/16/2014 12/10/2013 11/6/2013 11/6/2013 11/13/2013 11/20/2013 11/20/2013 11/29/2014	2/23/2014 4/27/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014 2/17/2014 4/18/2014 7/16/2014 Footnotes 1 - Current phase took longe 2 - Current phase requiring rate of the control of the co	2/23/2014 4/18/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 2/17/2014 4/17/2014 6/10/2014 r than expected, resulting reliabor than expected relia	2/23/2014 4/27/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014 3/5/2014 5/8/2014 7/2/2014 ting in additional funding a ed, resulting in additional	funding and/	0%	NA NA	46% See #128



Project Number	Projects Not Yet Started (Count = 27)	Forecast Start Date	
PROJECT	y Start Date		
TBD	OC-48 Replacement with DWDM	Jul-2014	
TBD	Move iTron LF Application to High Availability Environment	Jul-2014 ı	
TBD	Production Virtualization Expansion	Jul-2014	
TBD	Replace N2N System	Jul-2014	
NPRR439	Updating a Counter-Party's Available Credit Limit for Current Day DAM	Jul-2014	
	Revisions to Congestion Revenue Rights Credit Calculations and Payments - Phase 1b	Jul-2014 ^I	
NPRR495	Changes to Ancillary Services Capacity Monitor	Jul-2014 I	
NPRR500	Posting of Generation that is Off but Available	Jul-2014	
NPRR543	Message for Confirmed E-Tags	Jul-2014	
NPRR559	Revisions to MCE Calculation	Jul-2014	
NPRR597	IUtilize Initial Estimated Liability (IEL) Only During Initial Market IActivity	Jul-2014	
NPRR601	Inclusion of Incremental Exposure in Mass Transitions to Counter- Parties that are Registered as QSEs and LSEs and Provide POLR Service	Jul-2014 I	
SCR777	Bilateral CRR Interface Enhancement	Jul-2014	
SCR778	Credit Exposure Calculations for NOIE Options Linked to RTM .PTP Obligations	Jul-2014 i	
NPRR519	Exemption of ERS-Only QSEs from Collateral and Capitalization Requirements	Aug-2014	
NPRR524	Resource Limits in Providing Ancillary Service	Aug-2014	
NPRR556	Resource Adequacy During Transmission Equipment Outage	Aug-2014	
NPRR573	Alignment of PRC Calculation	Aug-2014	
NPRR581	Add Fast Responding Regulation Service as a Subset of Regulation Service	Aug-2014	
NPRR589	Ancillary Service Offers in the Supplemental Ancillary Services Market	Aug-2014	
OBD	Setting the Shadow Price Caps and Power Balance Penalties in Security-Constrained Economic Dispatch	Aug-2014	
	IERCOT System Change Allowing Independent Master QSE to IRepresent Split Generation Resources	Aug-2014	
SCR775	Posting Results of Real-Time Data in a Display Format	Aug-2014 I	
NOGRR084	Daily Grid Operations Summary Report	Sep-2014	
TBD	EDW Platform Transition Phase 2	Sep-2014	
NPRR272	Definition and Participation of Quick Start Generation Resources	Oct-2014	
TBD	CREZ Voltage Control and Coordination - Phase 2	Oct-2014	

