

ERCOT Monthly Operational Overview (May 2014)

ERCOT Public June 15, 2014

Grid Operations & Planning

Summary – May 2014

Operations

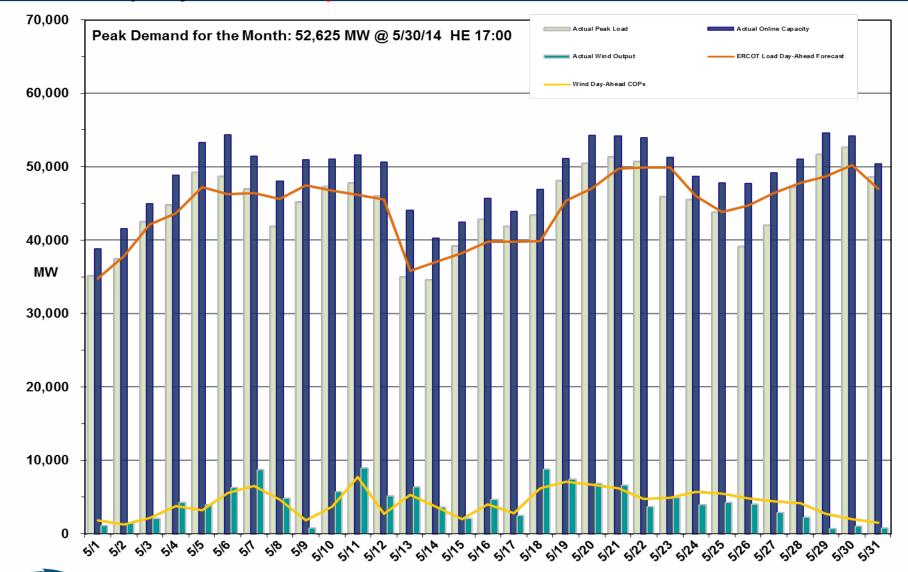
- The peak demand of 52,625 MW on May 30th was greater than the mid-term forecast peak of 50,260 MW but less than the May 2013 actual peak demand of 56,209 MW. The instantaneous load on May 30th was 52,825 MW.
- Day-ahead load forecast error for May was 3.02%
- ERCOT issued two notifications
 - A single advisory for PRC below 3000 MW
 - A single watch due to market system being unavailable for one hour (due to a scheduled maintenance outage related to the EMS Oracle 11g Upgrade)

Planning Activities

- 233 active generation interconnection requests totaling over 59,700 MW, including 26,400 MW of wind generation as of May 31, 2014. One less request and 700 fewer MW from April 30, 2014.
- 11,049 MW wind capacity in commercial operations May 31, 2014.



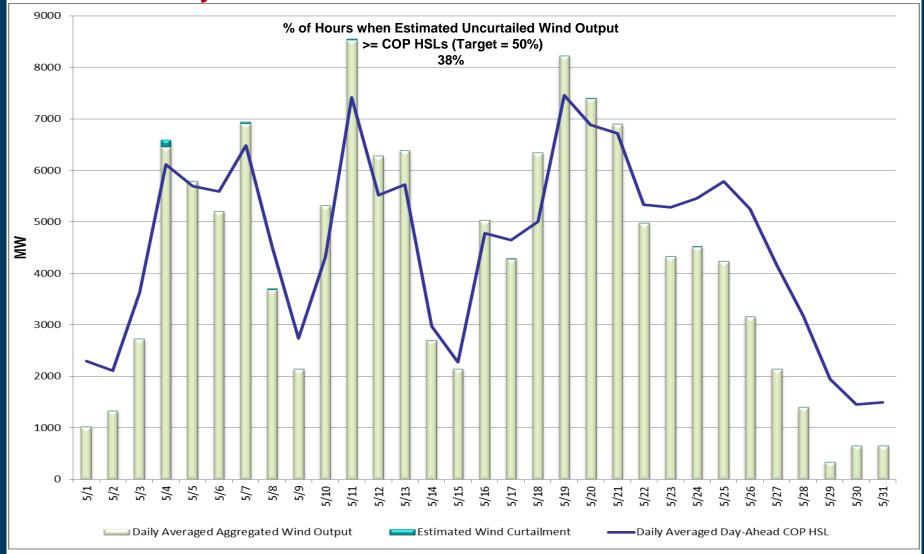
Daily Peak Demand: Hourly Average Actual vs. Forecast, Wind Day-Ahead COPs & On-line Capacity at Peak – May 2014





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

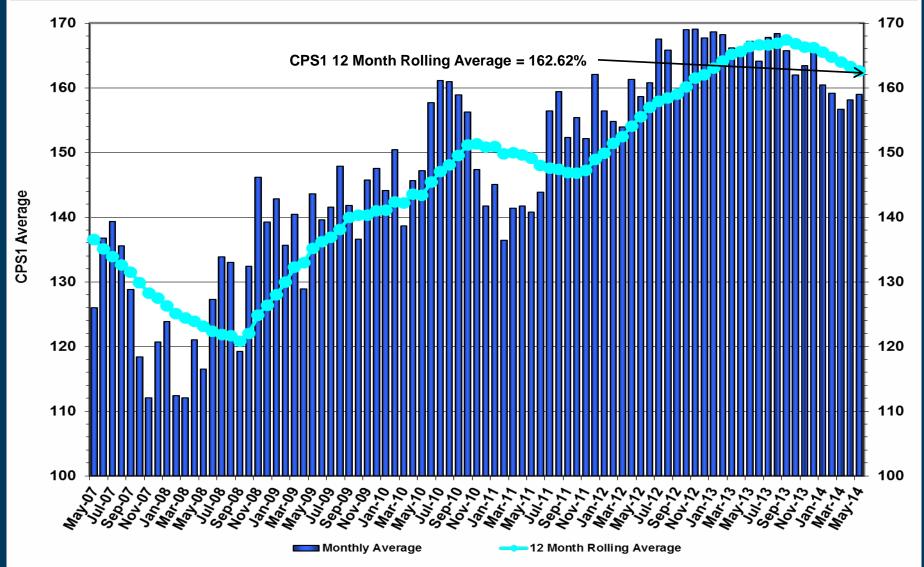
All Hours - May 2014





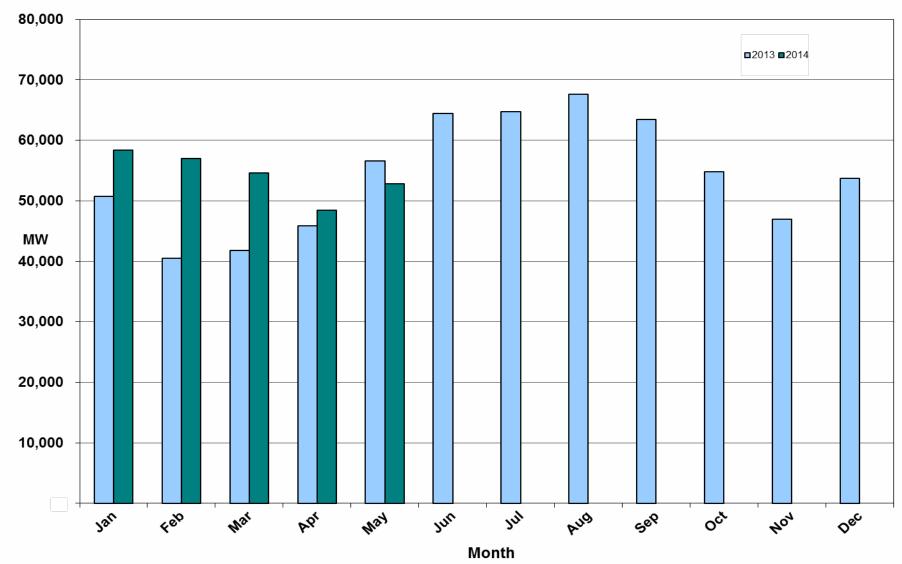
Note: QSEs must use the AWST 50% probability of exceedance forecast as the HSL in their COPs

ERCOT's CPS1 Monthly Performance – May 2014



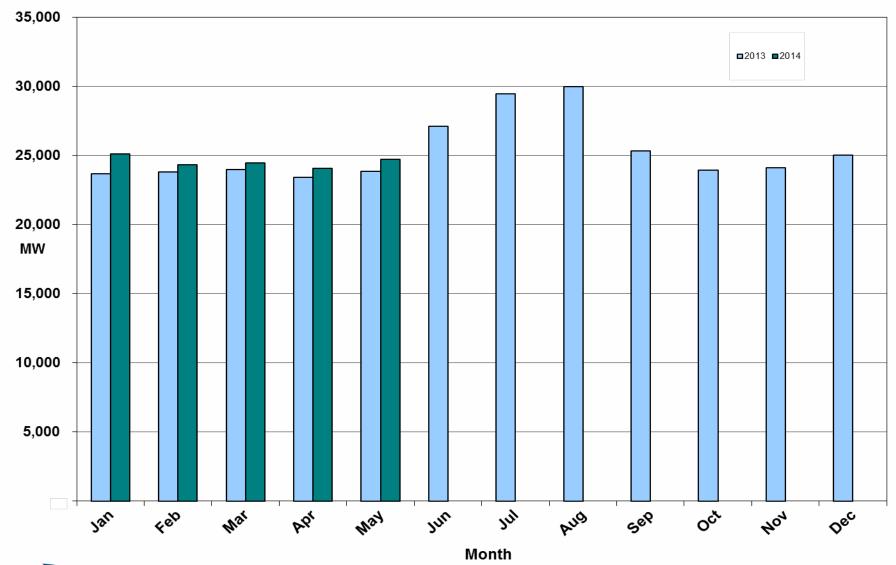


Monthly Peak Actual Demand – May 2014





Monthly Minimum Actual Demand – May 2014





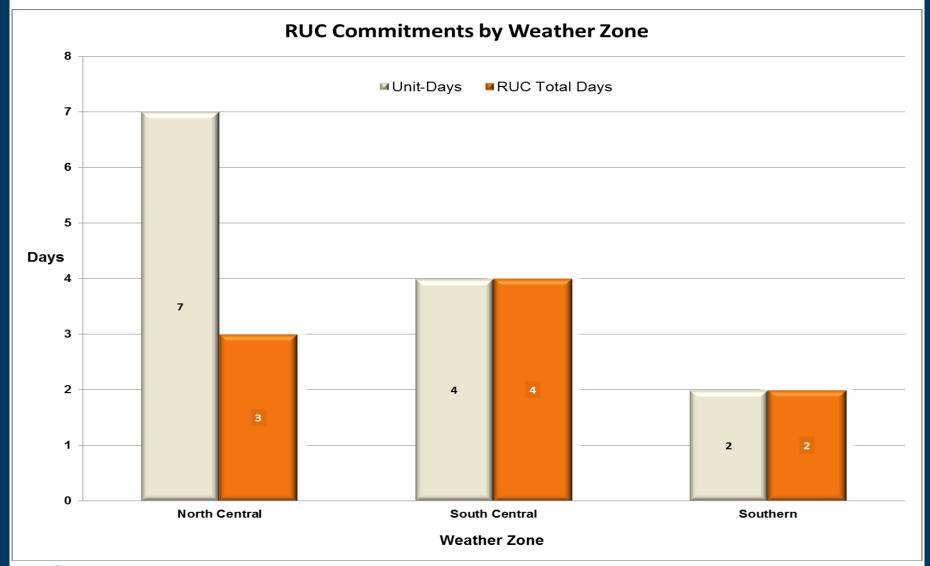
Day-Ahead Load Forecast Performance – May 2014

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	May MA	
Average Annual MAPE	2.83	3.02	2.86	3.13	3.0)2
Lowest Monthly MAPE	1.63	2.51	2.07	2.38	Lowest Daily MAPE	0.87 May – 02
Highest Monthly MAPE	3.55	3.49	3.50	3.70	Highest Daily MAPE	6.77 May – 26



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





Generic Transmission Limits (GTLs) – May 2014

GTLs	May 13 Days GTLs	Mar 14 Days GTLs	Apr 14 Days GTLs	May 14 Days GTLs	Last 12 Months Total Days (Jun13 - May14)
North – Houston	0	0	0	0	0
West – North	3	5	1	0	16
Valley Import	0	4	0	0	7
SOP110	0	0	9	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 - May 2014

- Advisories issued for PRC below 3000 MW.
 - Issued once on 5/17
- Watches issued due to the market system being unavailable
 - Issued 5/8 for event lasting one hour (due to a scheduled maintenance outage related to the EMS Oracle 11g Upgrade)

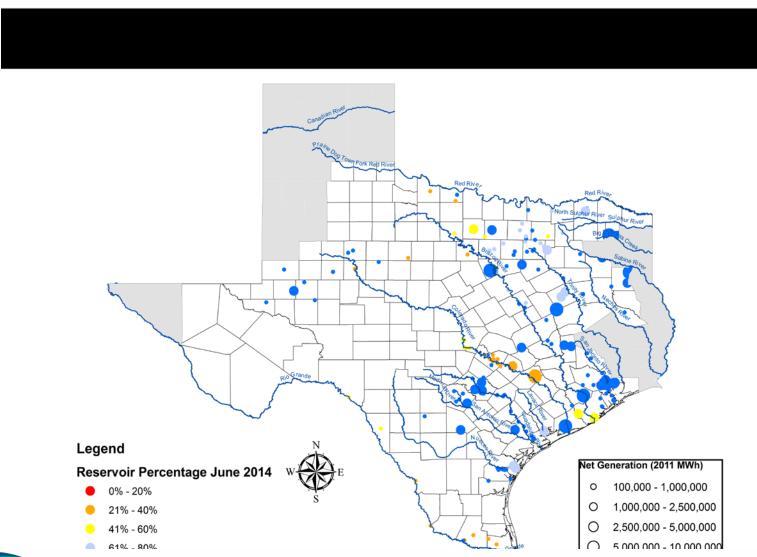


Significant Events – May 2014

• No significant events to report



Lake Levels Update – June 1, 2014





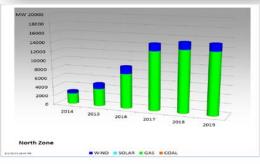
Planning Summary – May 2014

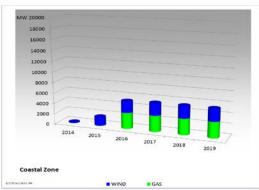
- ERCOT is currently tracking 233 active generation interconnection requests totaling over 59,700 MW. This includes over 26,400 MW of wind generation.
- ERCOT is currently reviewing proposed transmission improvements with a total cost of \$224.5 Million.
- Transmission Projects endorsed in 2014 total \$640.2 Million.
- All projects (in engineering, routing, licensing and construction) total approximately \$4.4 Billion.
- Transmission Projects energized in 2014 total about \$123.3 Million.

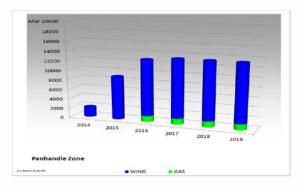


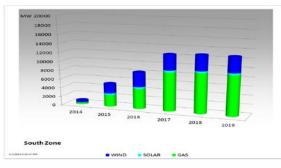
Cumulative Installed MW Capacity of Interconnection Requests by Zone – May 2014

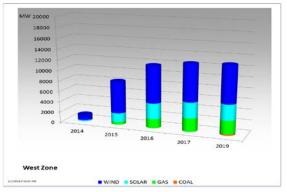






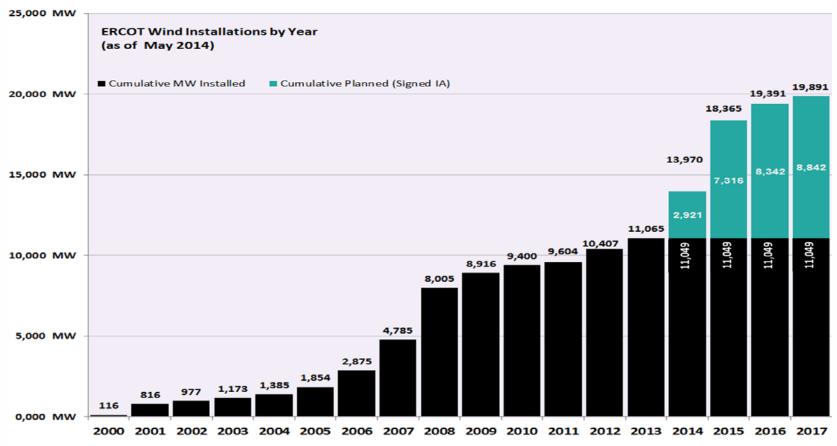








Wind Generation - May 2014

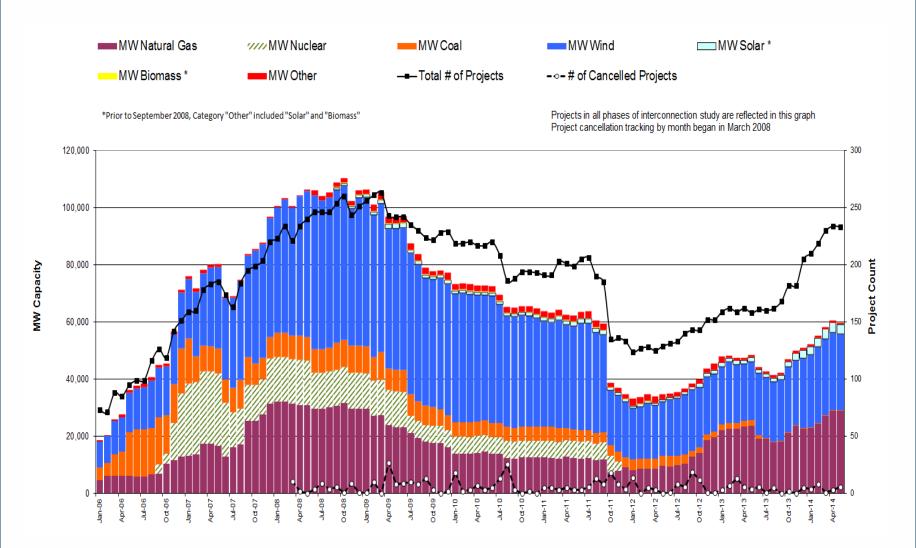


The data presented here is based upon the latest registration data provided to ERCOT by the resource owners and can change without notice. Any capacity changes will be reflected in current and subsequent years' totals. Scheduling delays will also be reflected in the planned projects as that information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

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

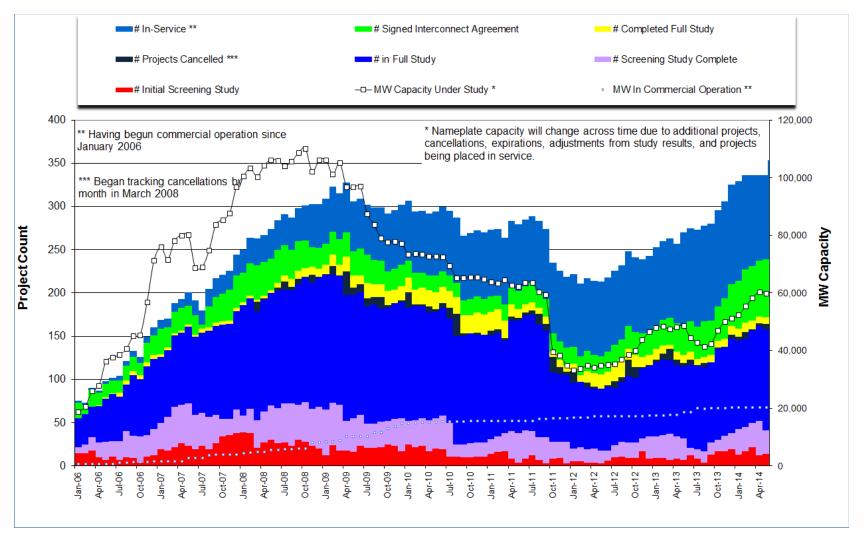


Generation Interconnection Activity by Fuel – May 2014





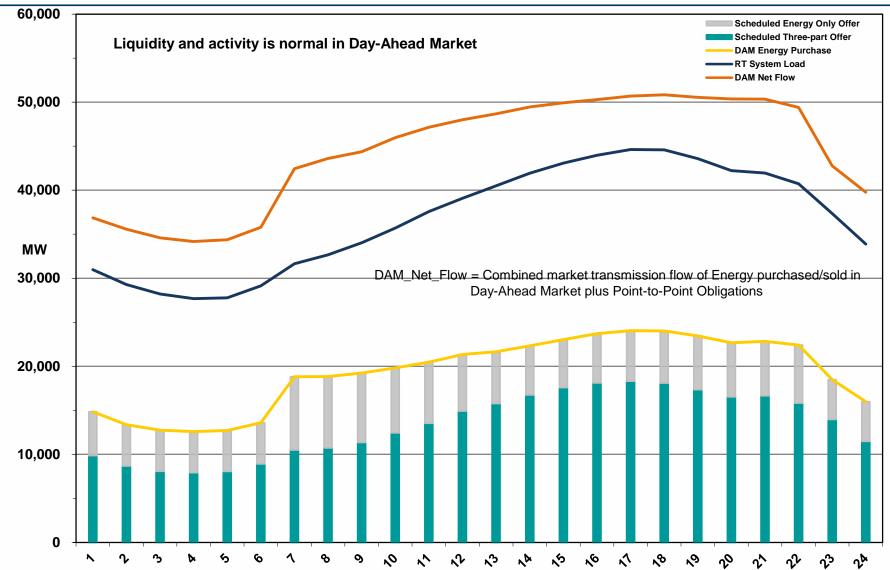
Generation Interconnection Activity by Project Phase – May 2014





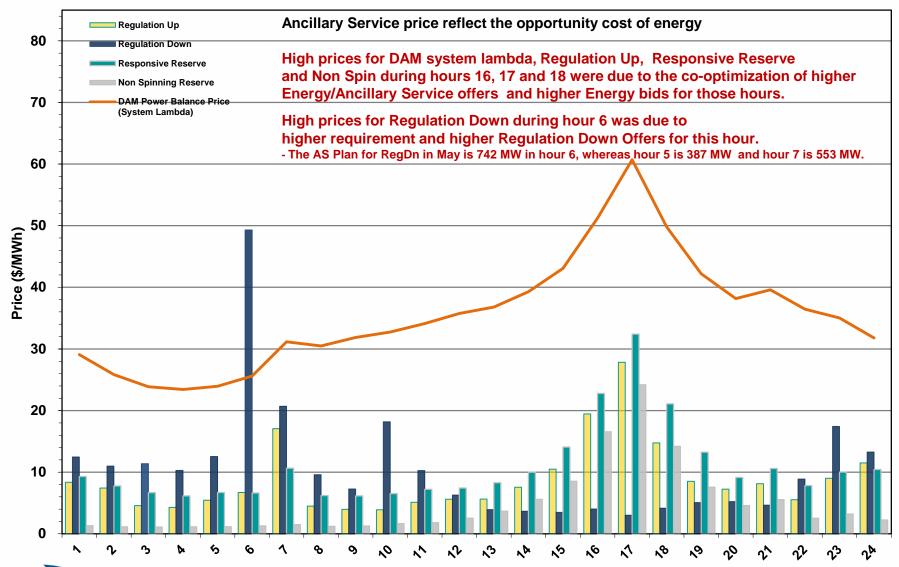
Market Operations

Day-Ahead Schedule (Hourly Average) – May 2014



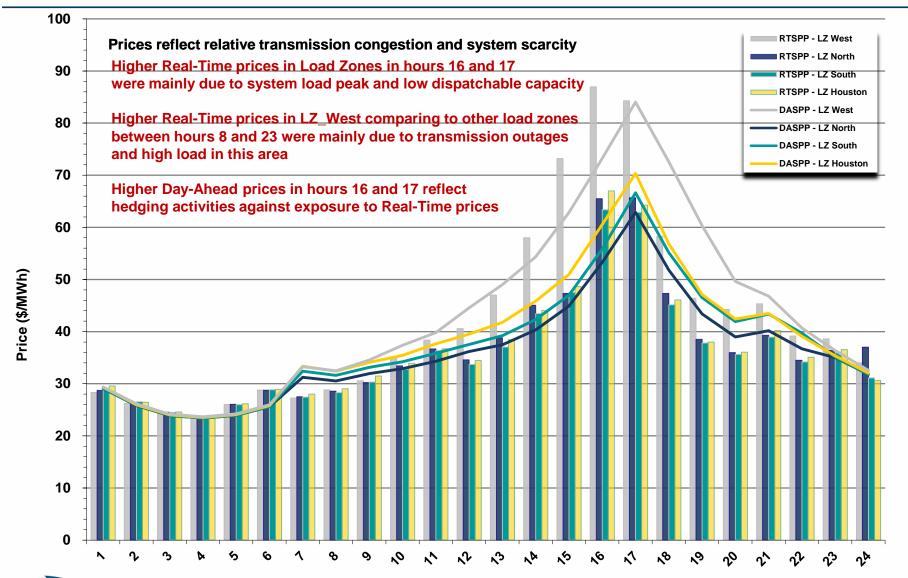


Day-Ahead Electricity And Ancillary Service Hourly Average Prices – May 2014



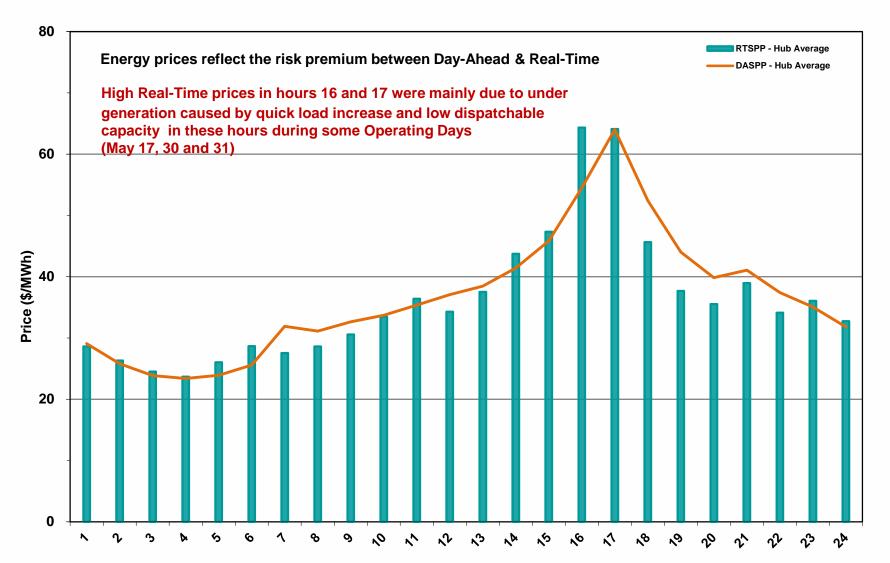


Day-Ahead Vs Real-Time Load Zone SPP (Hourly Average) – May 2014



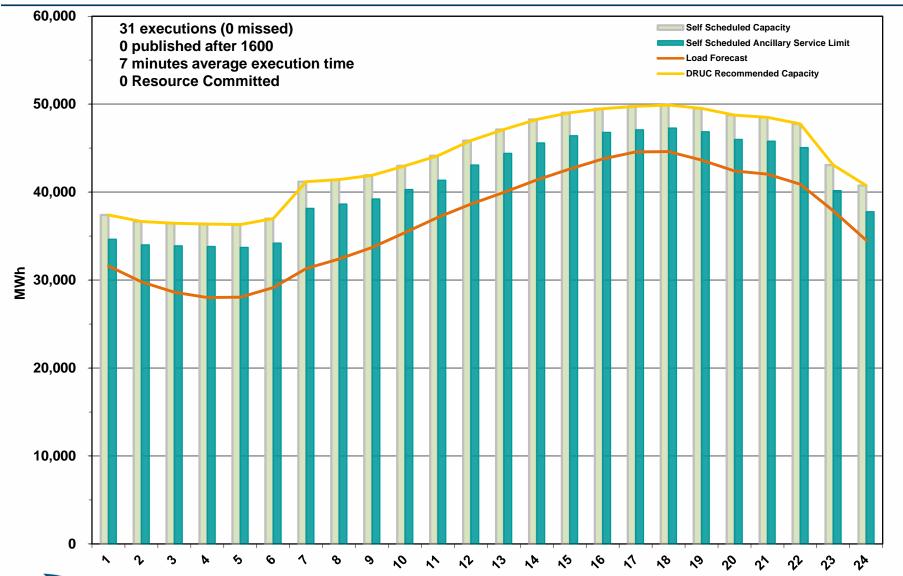


Day-Ahead Vs Real-Time Hub Average SPP (Hourly Average) – May 2014



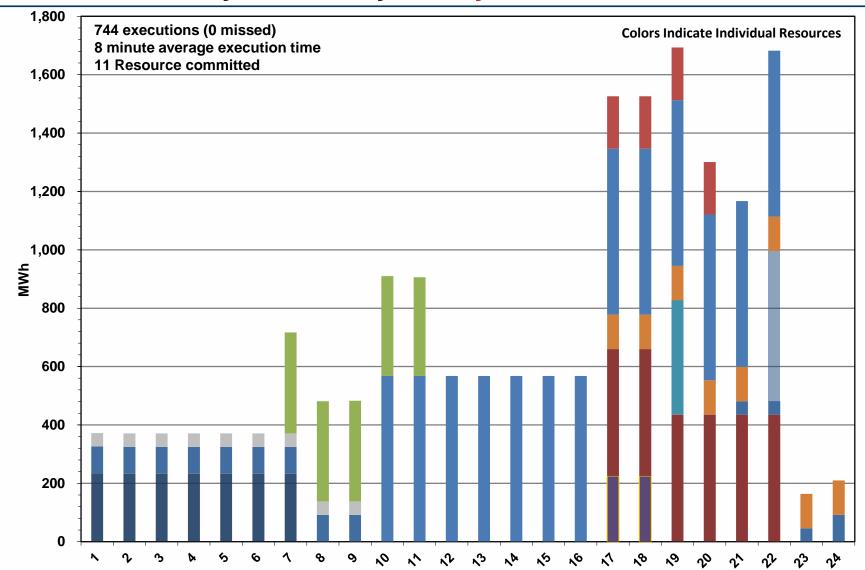


DRUC Monthly Summary (Hourly Average) – May 2014





HRUC Monthly Summary – May 2014



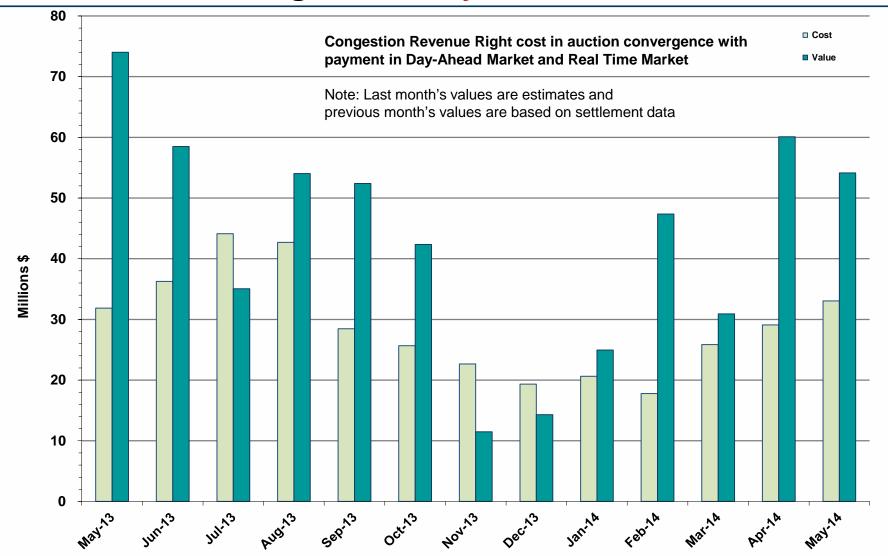


Non-Spinning Reserve Service Deployment – May 2014

Deployment Start Time	Deployment End Time	Deployment Duration (Hours)	Max Deployment (MW)	Reason
5/7/2014 4:37 PM	5/7/2014 5:33 PM	0.93	64	Transmission constraint



CRR Price Convergence – May 2014





ERS Procurement for February 2014 – May 2014

FebMay2014 is the first Standard Contract Term with a common Clearing Price for both ERS-10 and ERS-30.

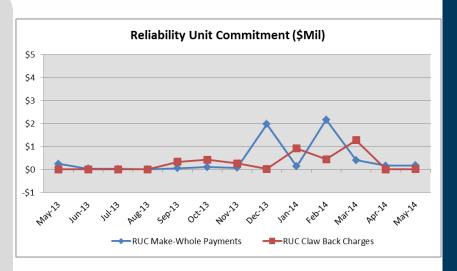
	ВН1	BH2	ВН3	NBH
ERS-10 MW Procured	622.92	607.035	598.36	518.14
ERS-30 MW Procured	149.31	125.935	118.27	97.295
Clearing Price (Per MW per Hour)	\$16.70	\$10.71	\$10.71	\$3.90

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 – May 2014

Reliability Unit Commitment (RUC)	\$ in Millions
RUC Make-Whole Payments	(\$0.17)
RUC Clawback Charges	\$0.01
RUC Commitment Settlement	(\$0.16)
RUC Capacity Short Charges	\$0.17
RUC Make-Whole Uplift	\$0.00
RUC Commitment Cost Allocation	\$0.17
RUC Decommitment Payments	\$0.00



RUC Make-Whole Payments continues at a more typical level in May. RUC Clawback Charges where \$0.01M.

RUC settlement allocated directly to load was a credit of \$0.01M in May 2014, compared to:

- No allocation in April 2014
- No allocation in May 2013



Capacity Services – May 2014

Capacity Services	\$ in Millions
Regulation Up Service	\$3.12
Regulation Down Service	\$4.32
Responsive Reserve Service	\$19.29
Non-Spinning Reserve Service	\$5.04
Black Start Service	\$0.63
Voltage Services - Reactive Power	\$0.00
Voltage Services - Lost Opportunity	\$0.00
Total Charges	\$32.40

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

May 2014 cost was \$32.40M, compared to:

- A charge of \$44.12M in April 2014
- A charge of \$28.71M in May 2013



Energy Settlement – May 2014

Day-Ahead Market Energy Settlement	\$ in Millions
Energy Purchases	\$567.95
Point to Point Obligation Purchases	\$39.01
RMR Day-Ahead Revenue	\$0.00
Energy Sales	(\$552.74)
Day-Ahead Congestion Rent	\$54.22
Day-Ahead Market Make-Whole Payments	(\$0.26)

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

Real-Time Market Energy Settlement	\$ in Millions
Energy Imbalance at a Resource Node	(\$588.11)
Energy Imbalance at a Load Zone	\$845.96
Energy Imbalance at a Hub	(\$225.00)
Real Time Congestion from Self Schedules	(\$0.38)
Block Load Transfers and DC Ties	(\$4.54)
Impact to Revenue Neutrality	\$27.93
Emergency Energy Payments	(\$0.19)
Base Point Deviation Charges	\$0.37
Real-Time Metered Generation (MWh in millions)	27.28



Congestion Revenue Rights (CRR) - May 2014

	\$ in Millions
Annual Auction	(\$24.14)
Monthly Auction	(\$8.91)
Total Auction Revenue	(\$33.05)
Day-Ahead CRR Settlement	(\$54.13)
Day-Ahead CRR Short-Charges	\$2.83
Day-Ahead CRR Short-Charges Refunded	(\$2.83)
Real-Time CRR Settlement	(\$0.00)
Real-Time CRR Short-Charges	\$0.00
Real-Time CRR Short-Charges Refunded	(\$0.00)
Total CRR Funding	(\$54.13)
Day-Ahead Point to Point Obligations Settlement	\$39.01
Real-Time Point to Point Obligation Settlement	(\$29.09)
Net Point to Point Obligation Settlement	\$9.92

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

Distribution of Balancing Account funds to load for May 2014 was \$0.13M, compared to:

- \$11.15M Short Fall in April 2014
- \$9.11M Short Fall in May 2013

Point to Point Obligations settled with a net charge of \$9.92M compared to a net payment of \$19.76M last month.



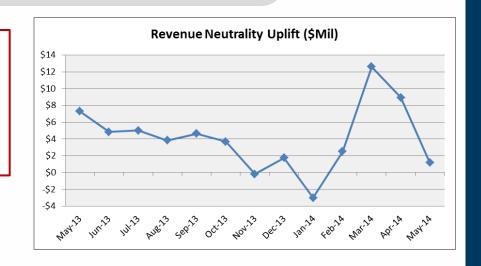
Revenue Neutrality – May 2014

Revenue Neutrality Settlement	\$ in Millions
Real-Time Point to Point Obligation Settlement	(\$29.09)
Real-Time Point to Point Options and Options with Refund Settlement	\$0.00
Real-Time Energy Imbalance Settlement	\$32.85
Real-Time Congestion from Self-Schedules Settlement	(\$0.38)
DC Tie & Block Load Transfer Settlement	(\$4.54)
Charge to Load	\$1.16

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

May 2014 was a charge of \$1.16M, compared to:

- \$8.92M charge in April 2014
- \$7.28M charge in May 2013





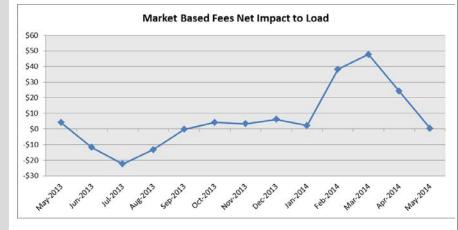
Net Allocation to Load – May 2014

Market-Based Allocation	\$ in Millions
CRR Auction Revenue Disbursement Settlement	(\$33.05)
Balancing Account Proceeds Settlement	(\$0.13)
Net Reliability Unit Commitment Settlement	\$0.16
Ancillary Services Settlement	\$32.41
Reliability Must Run Services Settlement	\$0.00
Reliability Must Run for Capacity	\$0.00
Real-Time Revenue Neutrality Settlement	\$1.15
Emergency Energy Settlement	\$0.19
Base Point Deviation Settlement	(\$0.37)
Total	\$0.36
Fee Allocation	
ERCOT Administrative Fee Settlement	\$12.77
Net Allocated to Load	\$13.13

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

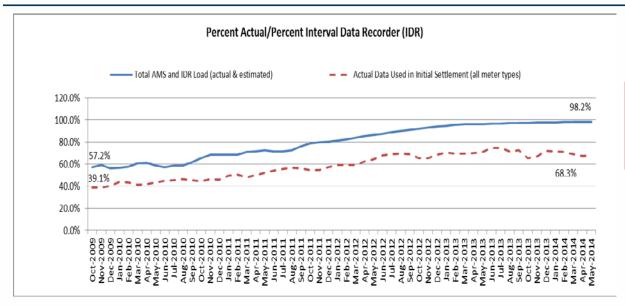
May 2014 was a charge of \$13.13M, compared to:

- A charge of \$35.38M in April 2014
- A charge of \$15.60M in May 2013



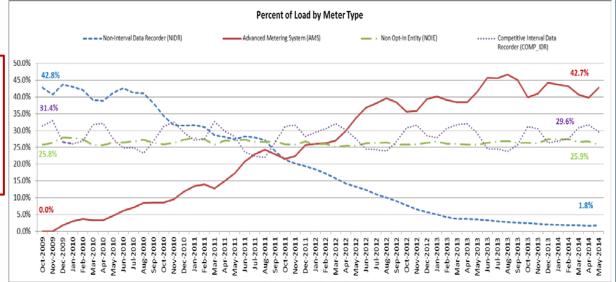


Advanced Meter Settlement Impacts – May 2014



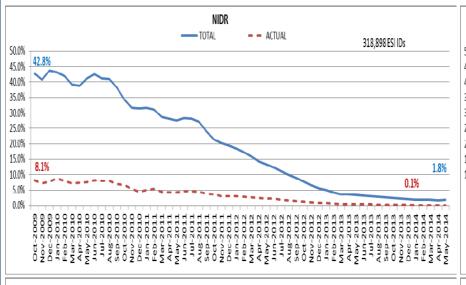
May 2014: At month end, settling 6.6M ESIIDs using Advanced Meter data.

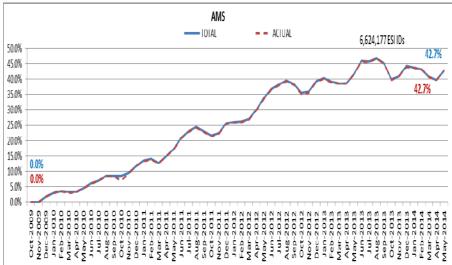
May 2014: 98.2% of the load in ERCOT is settled with 15-min interval data (AMS, Competitive IDR, and NOIE IDR).

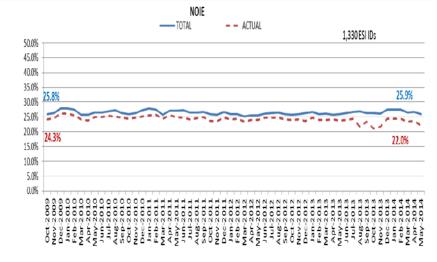


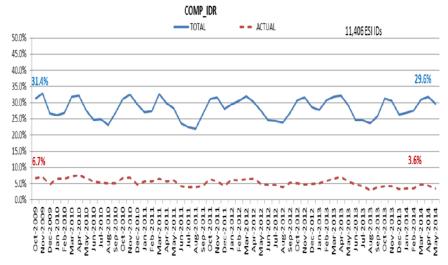


ERCOT Wide Load Volumes by Meter Type – INITIAL Settlement – May 2014











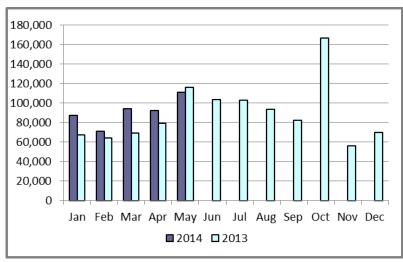
Retail Transaction Volumes – Summary – May 2014

	Year-To-Date		Transactions Received	
Transaction Type	May 2014	May 2013	May 2014	May 2013
Switches	455,030	395,400	111,077	116,086
Acquisition	0	0	0	0
Move - Ins	1,111,793	1,005,056	223,201	216,982
Move - Outs	538,030	544,942	119,107	120,049
Continuous Service Agreements (CSA)	291,493	217,281	65,032	59,763
Mass Transitions	4,975	0	4,975	0
Total	2,401,310	2,162,679	523,381	512,880

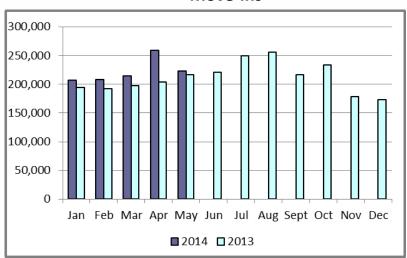


Retail Transaction Volumes – Summary – May 2014

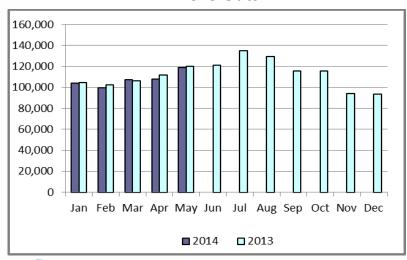
Switches/Acquisitions



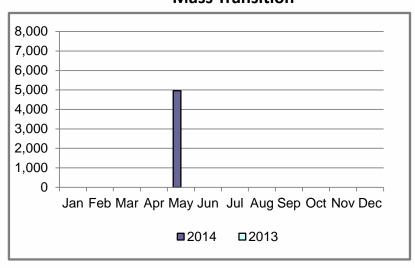
Move-Ins



Move-Outs

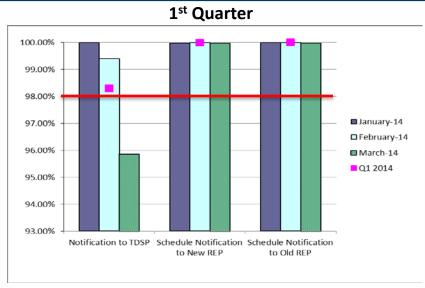


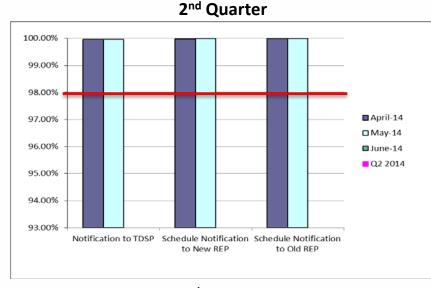
Mass Transition

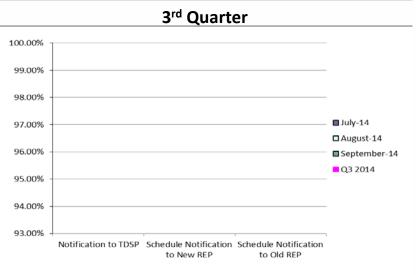


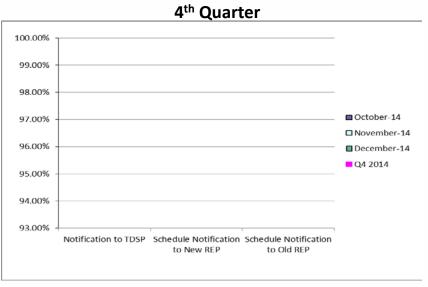


Retail Performance Measures – Switch – May 2014



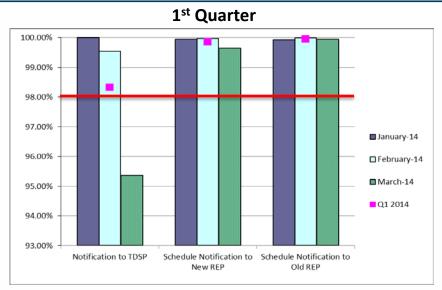


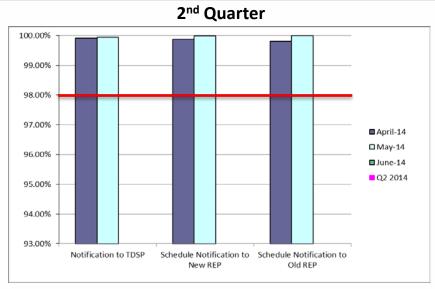


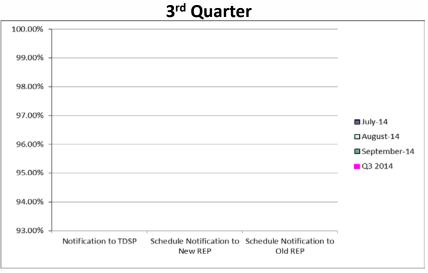


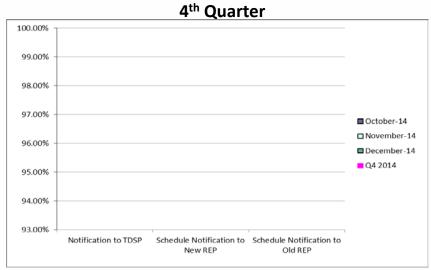


Retail Performance Measures (Same Day Move-In) - May 2014



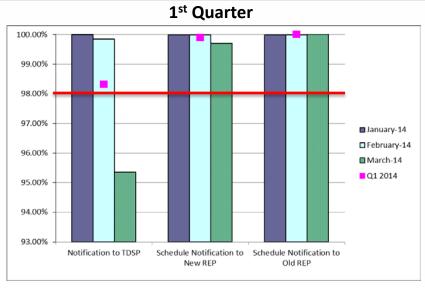


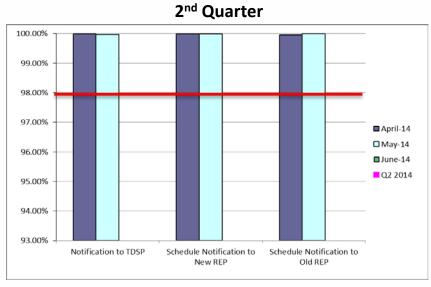




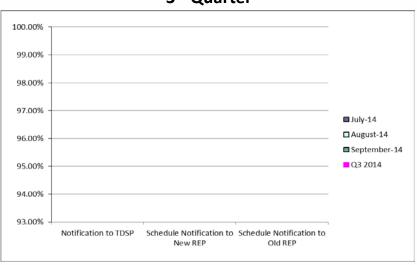


Retail Performance Measures (Standard Move-In) - May 2014

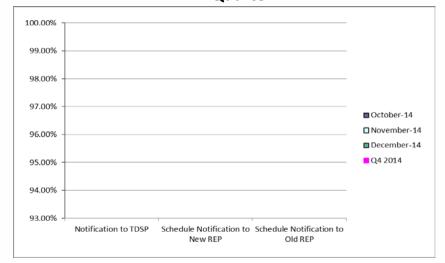








4th Quarter





Projects Report

ERCO	T Project Portfolio Stoplight Repor	t - June 20:	14								
		2014 Project F	unding	\$			25,000,000				
	Impact Metric Tolerances			2	2014 Portfolio Demand		2014 Portfolio naged to Project Funding	To	otal Portfolio Demand		
	le variances are represented as negative numbers within	Projects In Fligh	t/On Hold (Count = 55)	\$	23,607,027	\$	26,516,919	\$	53,862,777		
the report. - Green = No more than 4.9% unfavorable variance		Projects Not Yet	Started (Count = 38)	\$	4,115,040	\$	(1,755,791)	\$	16,237,716		
 Yellow = Unfavorable variance between 4.9% and 9.9% Red = Unfavorable variance more than 9.9% 		Projects Comple	ted (Count = 8)	\$	275,212	\$	238,872	\$	813,060		
- Neu - Oi	inavorable variance more than 5.5%	TOTAL		\$	27,997,279	\$	25,000,000	\$	70,913,553		
Project Number	Projects in Initiation Phase (Count = 4)										
137-01 129-01	EIS Reporting and Control Systems Upgrade Access and Roles Management										
133-01	Testing Environment Management										
134-01	Privileged Account Management	_									
Project Number	Projects in Planning Phase (Count = 14)	Baseline Phase Start	Baseline Phase Finish		Scheduled Go-Live Date	Sc	heduled Phase Finish	Scl	nedule Impact	Budg	get Impact
052-01	EMS Upgrade	8/7/2013	10/30/2014	1 1	TBD		10/30/2014		0%		1%
065-01	INMMS Upgrade	5/1/2013	3/1/2014	ī	TBD		7/16/2014	1	-45%	1	-22%
074-02	Cyber Security Project #9	12/17/2013	3/26/2014		TBD		6/11/2014	2	-77%		32%
089-01	Information Technology Change Management	4/10/2013	4/2/2014	I	TBD		10/17/2014	1	-55%	1	-62%
097-01	ABB MMS OS Technology Refresh	5/29/2013	5/30/2014	. – 1 –	TBD	ĽĪ	7/1/2014	2	-8%		12%
104-01	Disaster Recovery: S&B, RTL, MDT	5/15/2013	11/15/2013		TBD		8/29/2014	1	-155%	1	-9%
106-01	IMP Online Data Entry - Ph 1	10/9/2013	3/5/2014		TBD		8/8/2014	4	-106%		1%
115-01	Cyber Security Project #14	11/13/2013	3/26/2014	ľ	TBD	Ľ	6/25/2014	4	-68%		1%
120-01	IT Production Hardening	2/12/2014	9/24/2014	 	TBD	ĹĹ	9/24/2014		0%		-1%
127-01	SQL Server 2012 Upgrade / Cluster Consolidation	3/6/2014	8/27/2014	<u> </u>	TBD	·	8/27/2014		0%		-1%
130-01	Electronic Crisis Communications Enhancements	4/30/2014	5/21/2014	<u> </u>	TBD		6/2/2014	4	-57%		1%
131-01	Email Gateway Refresh	4/2/2014	6/16/2014	ا آ ــــــــــــــــــــــــــــــــــــ	TBD	L _	7/30/2014	2	-58%		1%
132-01	Client Digital Certificate Upgrade	5/14/2014	6/11/2014	I _	TBD		6/11/2014		0%		20%
	Align Credit Lock for CRR Auctions with Transaction Submission Deadline	5/7/2014	7/2/2014	 	TBD	 	6/25/2014		12%		0%

Project Number	Projects in Execution Phase (Count = 25)	Baseline Phase Start	Baseline Go-Live Target	Scheduled Go-Live Date	Scheduled Phase Finish	Sche	dule Impact	Bud	get Impact
10052_01	Settlement System Upgrade	1/25/2012	12/23/2014	12/6/2014	3/13/2015		1%	2	-5%
017-01	Oracle 11g Upgrade	10/10/2012	7/16/2014	7/16/2014	7/16/2014		0%		1%
057-01	EPS Metering DB Redesign	4/17/2013	9/6/2013	8/6/2014	9/3/2014	2	-235%	2	-139%
077-01	Contract Lifecycle Management	9/11/2013	5/5/2014	8/5/2014	10/9/2014	2	-38%		5%
107-01	IBM AIX Operating System Upgrades	1/29/2014	5/2/2014	5/2/2014	7/16/2014		0%		37%
110-01	Taylor Control Room Upgrade	2/19/2014	ı7/7/2014ı	7/8/2014	ı 8/14/2014		0%		0%
116-01	Collage Replacement	2/6/2014	9/22/2014	9/2/2014	10/3/2014		8%		5%
117-01	2014 Market System Enhancements	1/8/2014	6/1/2014	6/1/2014	6/30/2014		0%	2	-6%
121-01	2013/2014 Network Refresh	5/14/2014	9/12/2014	9/12/2014	10/17/2014		0%		-1%
122-01	Infoblox DNS/DHCP	5/21/2014	10/31/2014	10/31/2014	ı 11/5/2014		0%		40%
125-01	VSAT/TSAT Upgrade	3/27/2014	7/16/2014	6/13/2014	9/26/2014		29%	2	-5%
128-01	Capital Efficiencies and Enhancements - 2014	1/1/2014	12/31/2014	12/31/2014	12/31/2014		0%		0%
135-01	Common Infrastructure - 2014	1/1/2014	12/31/2014	12/31/2014	12/31/2014		0%		0%
TBD	Reactive Test Forms Revision	5/19/2014	8/1/2014	8/1/2014	8/31/2014		0%		
99914	Minor Cap - 2014	1/1/2014	12/31/2014	12/31/2014	12/31/2014	NA	0%		0%
2014 PC	Program Control - 2014	1/1/2014	12/31/2014	12/31/2014	12/31/2014	NA	0%	NA	1%
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 L		0%	NA	See #117- 01
INDEREST	Performance Measurement and Verification and Telemetry Requirements for Load Resources Providing Non-Spin	1/8/2014	6/1/2014	6/1/2014	7/1/2014		0%	NA	See #117- 01
INPRRASS	Load Resource Participation in Security-Constrained Economic Dispatch	1/8/2014	6/1/2014	6/1/2014	7/1/2014		0%	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	7/1/2014		0%	NA	See #117- 01
NPRR571	ERS Weather-Sensitive Loads Requirements	4/8/2014	7/27/2014	7/27/2014	7/27/2014		0%	NA	See #128- 01
SCR756	MarkeTrak Enhancements - Remaining SCR756 Items	2/5/2014	7/23/2014	7/27/2014	9/12/2014		-2%		26%
SCR769	CRRAH Digital Certificate New Role for Read Only Access	3/20/2014	8/1/2014	8/1/2014	9/10/2014		0%		3%
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 = 8)	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	1/8/2014	2/7/2014	2/7/2014	7/1/2014		0%	NA	See #117- 01
NPRR509	Shortened RTM Settlement Timeline	12/11/2013	2/23/2014	2/23/2014	2/23/2014		0%	NA	See #128- 01
NPRR564	Thirty-Minute Emergency Response Service (ERS) and Other ERS Services	1/8/2014	4/27/2014	4/18/2014	7/1/2014		8%	NA	See #117- 01
NPRR570	Reduce RTM Settlement Timeline to Operating Day Plus Five	2/16/2014	4/27/2014	4/18/2014	4/27/2014		12%	NA	See #128- 01
047-01	CMSDK/MIR Replacement	4/24/2013	12/8/2013	4/15/2014	10/2/2014	2	-56%	2	-54%
083-01	Centralized Application Log Management	8/28/2013	5/7/2014	3/27/2014	8/13/2014		16%		3%
118-01	Mitigation Plan RTCA Enhancements	2/5/2014	4/18/2014	4/17/2014	5/8/2014		1%		13%
119-01	CREZ Voltage Control and Coordination	3/6/2014	4/18/2014	4/18/2014	8/20/2014		0%		10%
Project Number	Projects On Hold (Count = 4)	Forecast Start Date	Baseline Phase Finish	Scheduled Go-Live Date	Scheduled Phase Finish	Sche	dule Impact	Bud	get Impact
PROJECT	TS ON HOLD (Count = 4) Sorted by Project N	lumber							
NPRR327	State Estimator Data Redaction Methodology	12/5/2012	2/12/2013	TBD	TBD	3		3	
OBD	Setting the Shadow Price Caps and Power Balance Penalties in Security-Constrained Economic Dispatch	1/8/2014	6/1/2014	TBD	TBD	3		3	
SCR772	New Extract for Five Minute Interval Settlement Data	2/12/2014	4/19/2014	TBD	TBD	3		3	
066-01	Planning Site Transition to MIS	10/16/2013	5/2/2014	TBD	TBD	3		3	
Project Number	Projects Completed in the Current Year (Count =8)	Baseline Execution Phase Start	Baseline Go-Live Target	Actual Go-Live Date	Actual Execution Phase Finish	Sche	dule Status	Tota	Il Variance
Number	•	Execution Phase Start	Baseline Go-Live Target			Sche	dule Status	Tota	16%
Number	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation	Execution Phase Start	Baseline Go-Live Target 3/26/2014			Sche	dule Status	Tota	
Number PROJECT	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation	Execution Phase Start		Date	Phase Finish	Sche		Tota	16%
Number PROJECT NPRR425 NPRR575	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Clarification of the RUC Resource Buy-Back Provision for Ancillary	8/21/2013 12/10/2013 12/4/2013	3/26/2014 1/7/2014 2/7/2014	3/3/2014 1/7/2014 2/7/2014	3/31/2014 1/31/2014 3/26/2014	Sche	10% 0% 0%		16% 46% See #78-01 31%
Number PROJECT NPRR425 NPRR575	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Clarification of the RUC Resource Buy-Back Provision for Ancillary Services	8/21/2013 12/10/2013	3/26/2014 1/7/2014	3/3/2014 1/7/2014 2/7/2014 3/26/2014	3/31/2014 1/31/2014 3/26/2014 5/6/2014	Sche	10% 0% 0% 0%		16% 46% See #78-01 31% 14%
Number PROJECT NPRR425 NPRR575 NOGRR105	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure	8/21/2013 12/10/2013 12/4/2013 11/6/2013 11/13/2013	3/26/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014	3/3/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013	3/31/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014	Sche	10% 0% 0% 0% 48%		16% 46% See #78-01 31% 14% -2%
Number PROJECT NPRR425 NPRR575 NOGRR105 016-01	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation Clarification of the RUC Resource Buy-Back Provision for Ancillary Services Generation Resource Frequency Response Test Procedure ADP-IDM Interface	8/21/2013 12/10/2013 12/4/2013 11/6/2013	3/26/2014 1/7/2014 2/7/2014 3/26/2014	3/3/2014 1/7/2014 2/7/2014 3/26/2014	3/31/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014	Sche	10% 0% 0% 0% 48% 496		16% 46% See #78-01 31% 14% -2% 5%
Number PROJECT NPRR425 NPRR575 NOGRR105 016-01 101-01	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation 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	8/21/2013 12/10/2013 12/4/2013 11/6/2013 11/13/2013 11/20/2013 11/13/2013	3/26/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014	3/3/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014	3/31/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014	Sche	10% 0% 0% 0% 48% 4% 20%	NA	16% 46% See #78-01 31% 14% -2% 5% 0%
Number PROJECT NPRR425 NPRR575 NOGRR105 016-01 101-01 108-01	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation 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	8/21/2013 12/10/2013 12/4/2013 11/6/2013 11/13/2013 11/20/2013	3/26/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014	3/3/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014	3/31/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014	Schei	10% 0% 0% 0% 48% 496		16% 46% See #78-01 31% 14% -2% 5%
Number PROJECT NPRR425 NPRR575 NOGRR105 016-01 101-01 108-01 113-01	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation 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	8/21/2013 12/10/2013 12/4/2013 11/6/2013 11/13/2013 11/20/2013 11/13/2013	3/26/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014	3/3/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014	3/31/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014	Schei	10% 0% 0% 0% 48% 4% 20%	NA	16% 46% See #78-01 31% 14% -2% 5% 0%
Number PROJECT NPRR425 NPRR575 NOGRR105 016-01 101-01 108-01 113-01	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation 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	8/21/2013 12/10/2013 12/4/2013 11/6/2013 11/13/2013 11/20/2013 11/13/2013	3/26/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014	3/3/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014	3/31/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014	Sche	10% 0% 0% 0% 48% 4% 20%	NA	16% 46% See #78-01 31% 14% -2% 5% 0%
Number PROJECT NPRR425 NPRR575 NOGRR105 016-01 101-01 108-01 113-01	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation 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	8/21/2013 12/10/2013 12/4/2013 11/6/2013 11/13/2013 11/20/2013 11/13/2013	3/26/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014	3/3/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014	3/31/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014	Sche	10% 0% 0% 0% 48% 4% 20%	NA	16% 46% See #78-01 31% 14% -2% 5% 0%
Number PROJECT NPRR425 NPRR575 NOGRR105 016-01 101-01 108-01 113-01	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation 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	8/21/2013 12/10/2013 12/4/2013 11/6/2013 11/13/2013 11/20/2013 11/13/2013	3/26/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014 2/17/2014	3/3/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014 2/17/2014	3/31/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014 3/5/2014		10% 0% 0% 0% 48% 4% 20% 0%	NA	16% 46% See #78-01 31% 14% -2% 5% 0%
Number PROJECT NPRR425 NPRR575 NOGRR105 016-01 101-01 108-01 113-01	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation 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	8/21/2013 12/10/2013 12/4/2013 11/6/2013 11/13/2013 11/20/2013 11/13/2013	3/26/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014 2/17/2014	3/3/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014 2/17/2014	3/31/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014 3/5/2014	nd/or tim	10% 0% 0% 0% 48% 4% 20% 0%	NA 2	16% 46% See #78-01 31% 14% -2% 5% 0%
Number PROJECT NPRR425 NPRR575 NOGRR105 016-01 101-01 108-01 113-01	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation 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	8/21/2013 12/10/2013 12/4/2013 11/6/2013 11/13/2013 11/20/2013 11/13/2013	3/26/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014 2/17/2014 Footnotes 1 - Current phase took longe 2 - Current phase requiring n 3 - Project placed on hold	3/3/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014 2/17/2014	3/31/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 5/14/2014 2/28/2014 3/5/2014	nd/or tim	10% 0% 0% 0% 48% 4% 20% 0%	NA 2	16% 46% See #78-01 31% 14% -2% 5% 0%
Number PROJECT NPRR425 NPRR575 NOGRR105 016-01 101-01 108-01 113-01	(Count =8) TS COMPLETED IN 2014 (Count = 8) Sorted by Proje Creation of a WGR Group for GREDP and Base Point Deviation Evaluation 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	8/21/2013 12/10/2013 12/4/2013 11/6/2013 11/13/2013 11/20/2013 11/13/2013	3/26/2014 1/7/2014 2/7/2014 3/26/2014 1/24/2014 4/23/2014 1/24/2014 2/17/2014 Footnotes 1 - Current phase took longe 2 - Current phase requiring n 3 - Project placed on hold 4 - Resource constraints res NA - Metric not calculated be	3/3/2014 1/7/2014 2/7/2014 3/26/2014 12/20/2013 4/16/2014 1/9/2014 2/17/2014 r than expected, resultance labor than expected in delay to curre-scause: parent project level, or	3/31/2014 1/31/2014 3/26/2014 5/6/2014 1/24/2014 2/28/2014 3/5/2014 alting in additional funding a sted, resulting in additional nt phase	nd/or tim	10% 0% 0% 0% 48% 4% 20% 0%	NA 2	16% 46% See #78-01 31% 14% -2% 5% 0%



Project Number	Projects Not Yet Started (Count = 38)	Forecast Start Date						
PROJECTS NOT YET STARTED (Count = 38) Sorted by Start Date								
TBD	EIF Database Utilization	Jun 2014						
NPRR495	Changes to Ancillary Services Capacity Monitor	Jun 2014						
NPRR500	Posting of Generation that is Off but Available	Jun 2014						
NPRR527	Required Combined Cycle Telemetry for Operational Awareness and PDCWG Analysis	Jun 2014						
NPRR543	Message for Confirmed E-Tags	Jun 2014						
TBD	Cyber Security Project #10	Jun 2014						
TBD	Move iTron LF Application to High Availability Environment	Jun 2014						
TBD	Production Virtualization Expansion	Jun 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						
	Revisions to MCE Calculation	Jul 2014						
TBD	Cyber Security Project #11	Jul 2014						
TBD	Enterprise Vault Upgrade	Jul 2014						
TBD	MP Communications Tool	Jul 2014						
TBD	Red Hat Jboss Operations Network	Jul 2014						
TBD	SOTE/MOTE Upgrade	Jul 2014						
RRs	Revision Request Funding - 2014	Jul 2014						
NPRR256	Sync with PRR787, Add Non-Compliance Language to QSE Performance Standards	Aug 2014						
NPRR519	Exemption of ERS-Only QSEs from Collateral and Capitalization Requirements	Aug 2014						
NPRR524	Resource Limits in Providing Ancillary Service	Aug 2014						
SCR771	IERCOT System Change Allowing Independent Master QSE to Represent Split Generation Resources	Aug 2014						
TBD	ERCOT Business Continuity Facility Enhancements	Aug 2014						
NOGRR084	Daily Grid Operations Summary Report	Sep 2014						
TBD	EDW Platform Transition Phase 2	Sep 2014						
TBD	REC Rewrite & Refresh	Sep 2014						
TBD	IVSAT/TSAT Upgrade Phase 2	Sep 2014						
NPRR272	Definition and Participation of Quick Start Generation Resources	Oct 2014						
NPRR487	QSGR Dispatch Adjustment	Oct 2014						
TBD	Appworx Replaces TIBCO Code in CSI Framework	Oct 2014						
TBD	AV Upgrades to TCC1 Conference Rooms	Oct 2014						
TBD	ICREZ Voltage Control and Coordination - Phase 2	Oct 2014						
	MP Online Data Entry - Ph 2	Oct 2014						
TBD	On-Site Storage	Oct 2014						
TBD	Replace Actional Policy Manager	Oct 2014						
	IReplace N2N System	Oct 2014						
	Replace Paperfree	Oct 2014						
TBD	Voice Over IP (VOIP) Replacement for PBX	Oct 2014						
	CRR Shift Factors Report	Nov 2014						
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