

ERCOT Monthly Operational Overview (June 2015)

ERCOT Public July 15, 2015

Grid Planning & Operations

Summary – June 2015

Operations

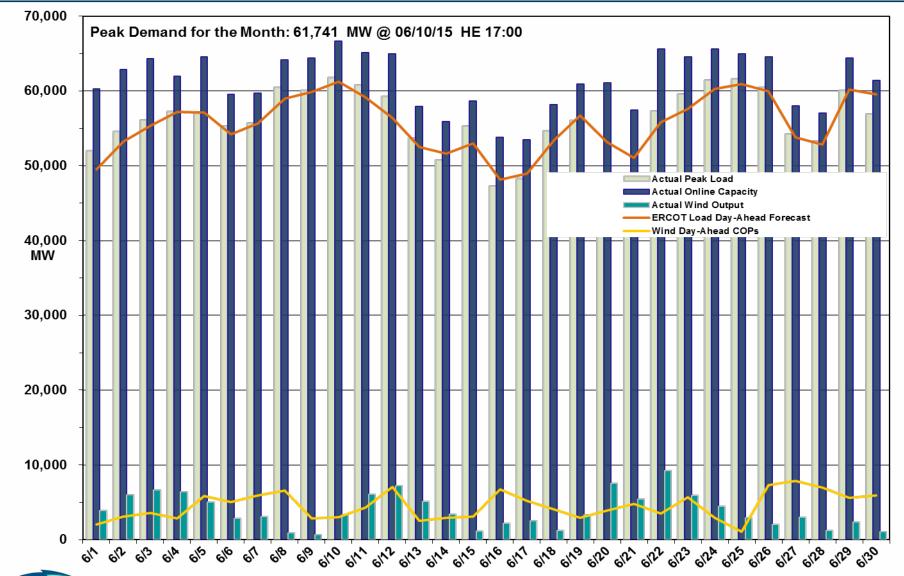
- The peak demand of 61,741 MW on June 10th was greater than the mid-term forecast peak of 61,211 MW of the same operating period. In addition, it was greater than the June 2014 actual peak demand of 59,754 MW. The instantaneous peak load on June 10th was 61,849 MW.
- Day-ahead load forecast error for June was 2.49%
- ERCOT issued three notifications
 - OCN due to the development of a new Generic Transmission Constraint (GTC) due to a local voltage stability issue (6/12)
 - OCN due to Tropical Storm Bill approaching the ERCOT service area (6/15)
 - Advisory due to a GMD Alert of K-7 and K-8 (6/22)

Planning Activities

- 266 active generation interconnection requests totaling 64,122 MW, including 25,467 MW of wind generation as of May 31, 2015. Four additional requests, yet a decrease of 87 MW, from May 31, 2015.
- 13,424 MW wind capacity in commercial operations on June 30, 2015.

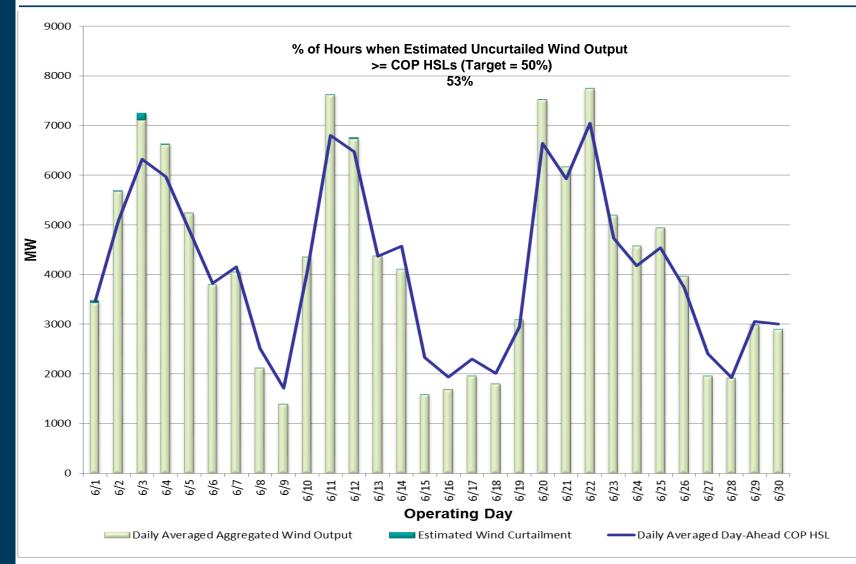


Daily Peak Demand: Hourly Average Actual vs. Forecast, Wind Day-Ahead COPs & On-line Capacity at Peak – June 2015





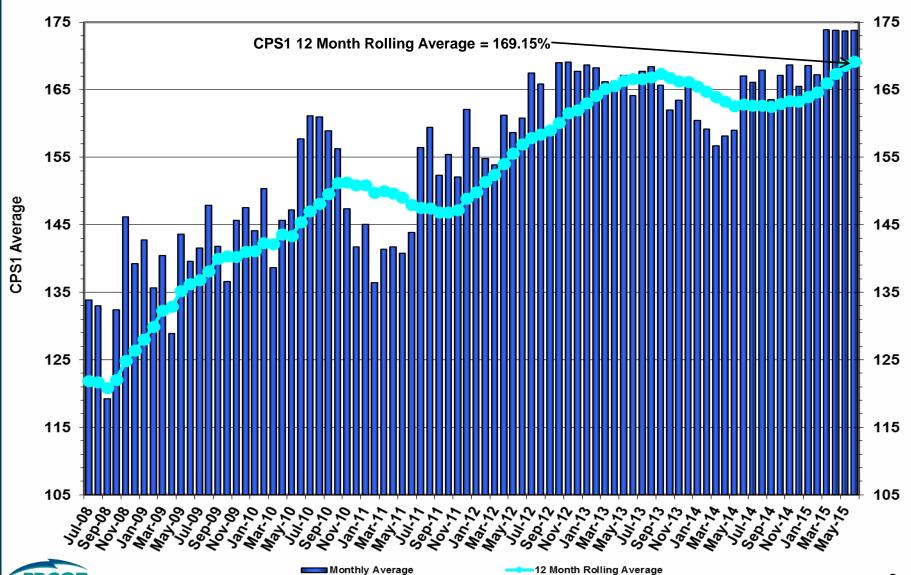
Actual Wind Output plus Curtailments vs. Wind Day-Ahead COPs for All Hours – June 2015



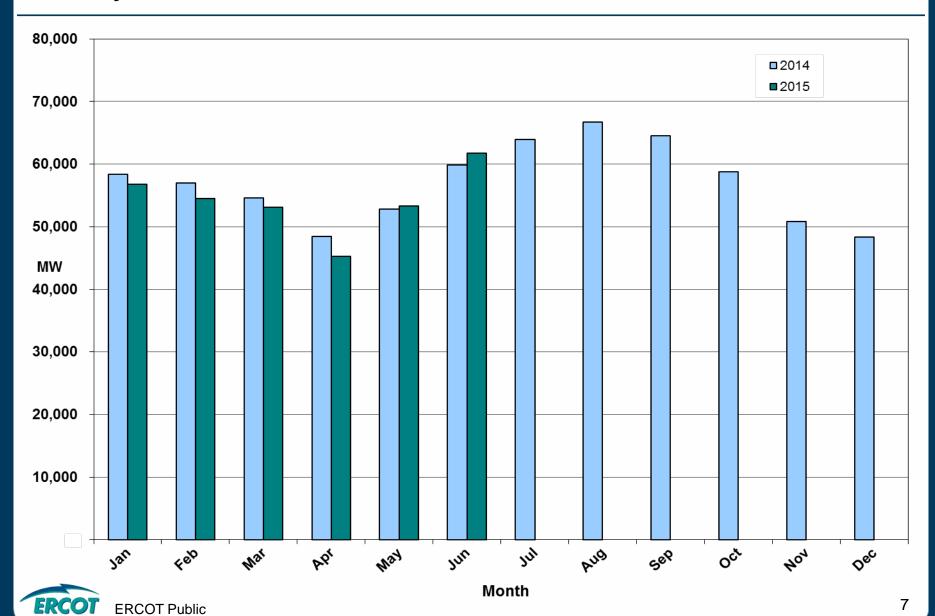


Note: QSEs must use the AWST 50% probability of exceedance forecast as the HSL in their COPs

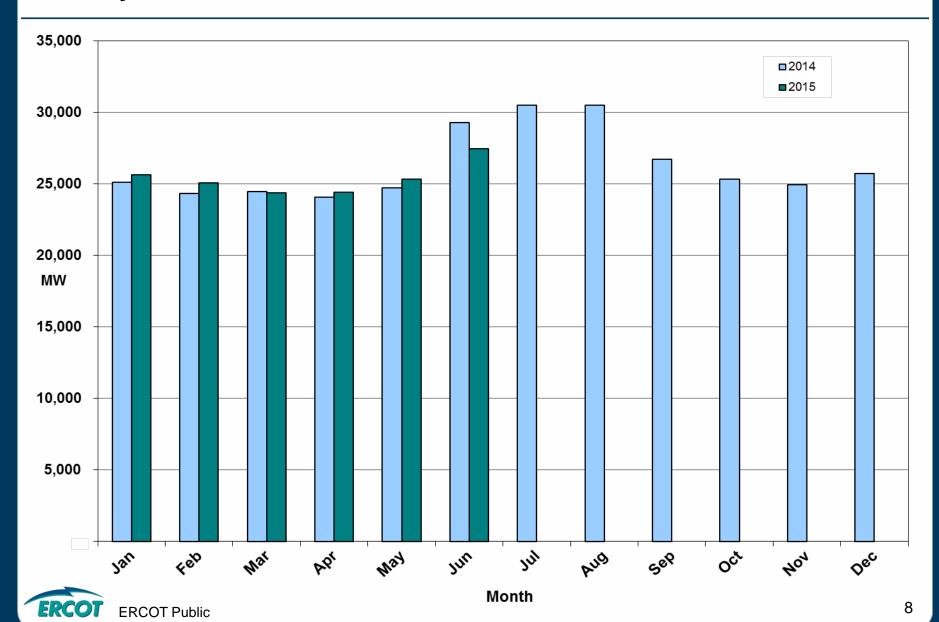
ERCOT's CPS1 Monthly Performance – June 2015



Monthly Peak Actual Demand – June 2015



Monthly Minimum Actual Demand – June 2015



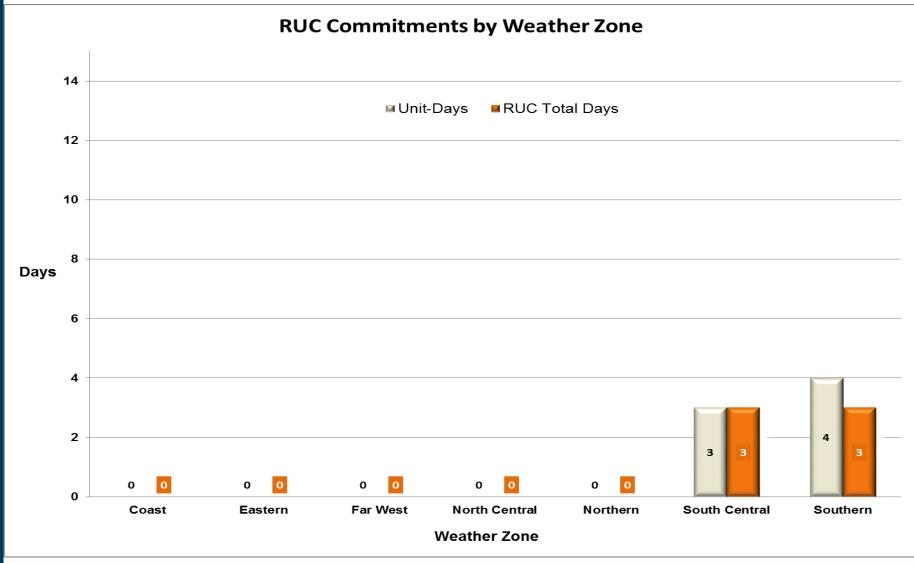
Day-Ahead Load Forecast Performance – June 2015

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

	2012 MAPE	2013 MAPE	2014 MAPE	2015 MAPE	June 2015 MAPE	
Average Annual MAPE	3.02	2.86	2.83	3.18	2.49	
Lowest Monthly MAPE	2.51	2.07	2.15	2.41	Lowest Daily MAPE	1.05 June – 4
Highest Monthly MAPE	3.49	3.50	3.70	3.81	Highest Daily MAPE	4.98 June – 12



Reliability Unit Commitment (RUC) Capacity by Weather Zone – June 2015





Generic Transmission Constraints (GTCs) – June 2015

GTCs	Mar 15 Days GTCs	Apr 15 Days GTCs	May 15 Days GTCs	Jun 15 Days GTCs	Last 12 Months Total Days (Jul 14 – Jun 15)
North – Houston	0	0	2	0	2
Valley Import	0	0	0	0	4
SOP110	0	0	0	0	1
Zorillo - Ajo	9	17	15	7	48
Gray - Tesla	-	-	4	0	4

GTC: 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 GTC limit, it does not imply an exceedance of the GTC occurred.

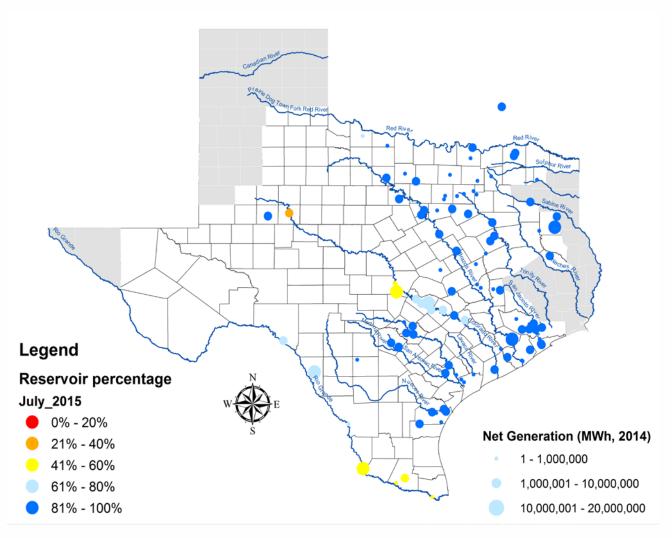


Advisories and Watches – June 2015

- One OCN due to the development of a new Generic Transmission Constraint (GTC) due to a local voltage stability issue
 - Issued on 6/12
- One OCN due to Tropical Storm Bill approaching the ERCOT service area
 - Issued on 6/15
- One advisory issued due to a GMD Alert of K-7 and K-8
 - Issued on 6/22



Lake Levels Update – July 1, 2015



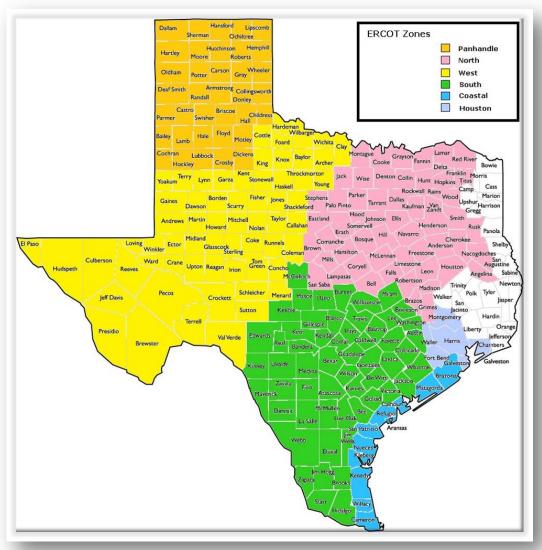


Planning Summary – June 2015

- ERCOT is currently tracking 266 active generation interconnection requests totaling 64,122 MW. This includes 25,467 MW of wind generation.
- ERCOT is currently reviewing proposed transmission improvements with a total cost of \$829.2 Million.
- Transmission Projects endorsed in 2015 total \$235.8 Million.
- All projects (in engineering, routing, licensing, and construction) total approximately \$6.66 Billion.
- Transmission Projects energized in 2015 total about \$429.7 Million.



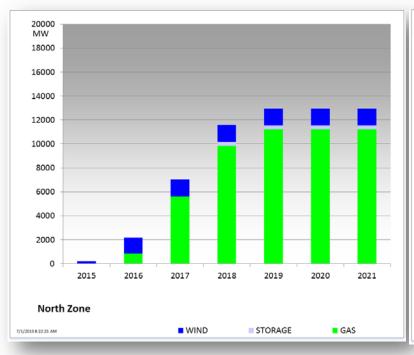
Mapping of Counties to ERCOT Zones – June 2015

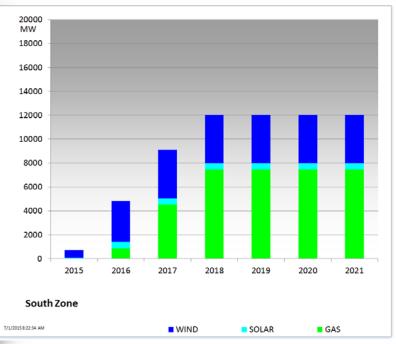




Cumulative MW Capacity of Interconnection Requests

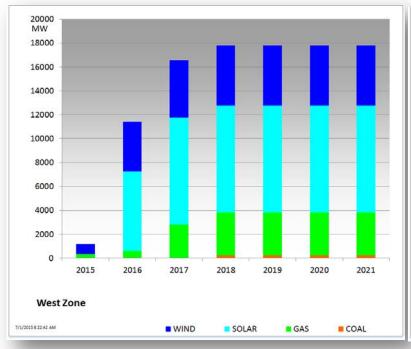
by Zone – June 2015

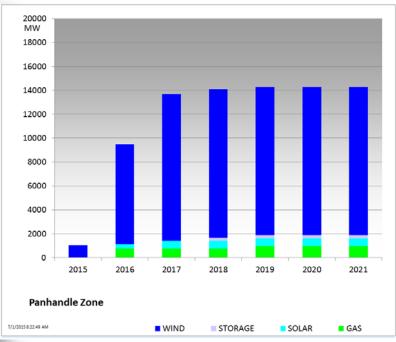






Cumulative MW Capacity of Interconnection Requests by Zone – June 2015

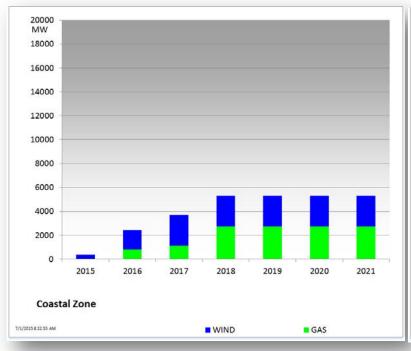


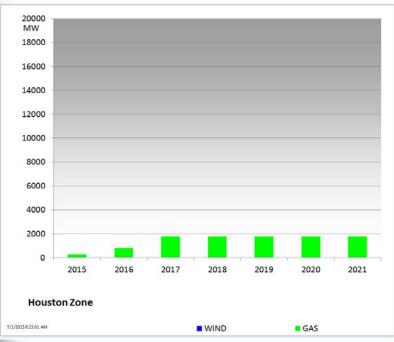




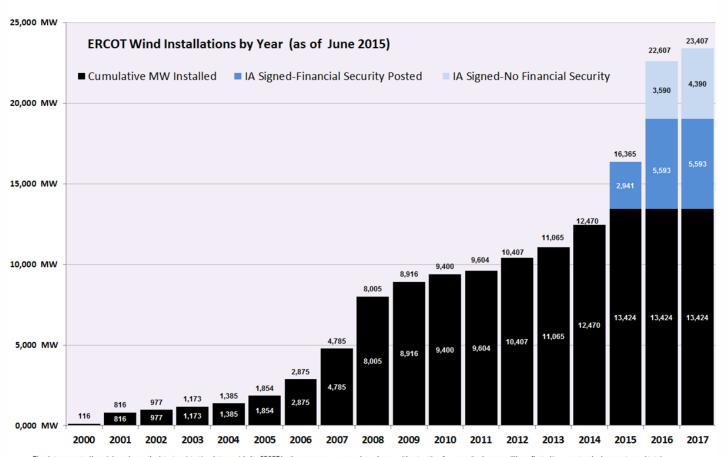
Cumulative MW Capacity of Interconnection Requests

by Zone – June 2015





Wind Generation – June 2015

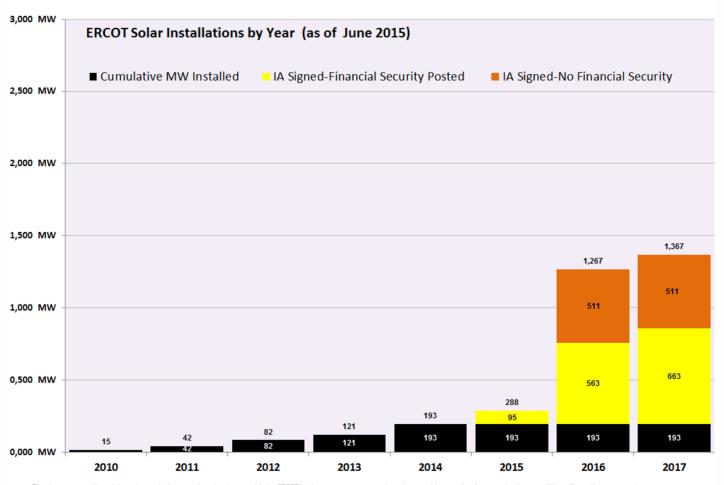


The data presented here is based upon the latest registration data provided to ERCOT by the resource owners and can change without notice. Any capacity changes will be reflected in current and subsequent years' totals. Scheduling delays will also be reflected in the planned projects as that information is received. This chart reflects planned units in the calendar year of submission rather than installations by peak of year shown.

Financial security posted for funding interconnection facilities does not include CREZ security deposits, which are refunded to the Interconnecting Entity when an IA is signed.



Solar Generation – June 2015

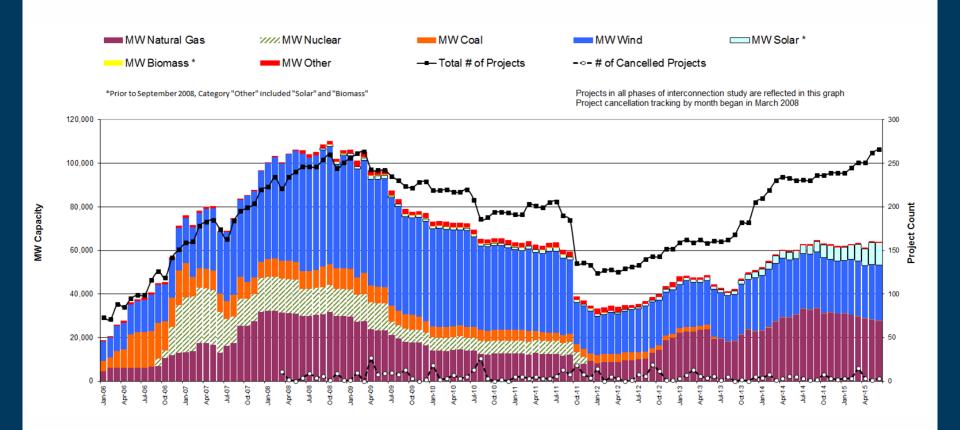


The data presented here is based upon the latest registration data provided to ERCOT by the resource owners and can change without notice. Any capacity changes will be reflected in current and subsequent years' totals. Scheduling delays will also be reflected in the planned projects as that information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

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

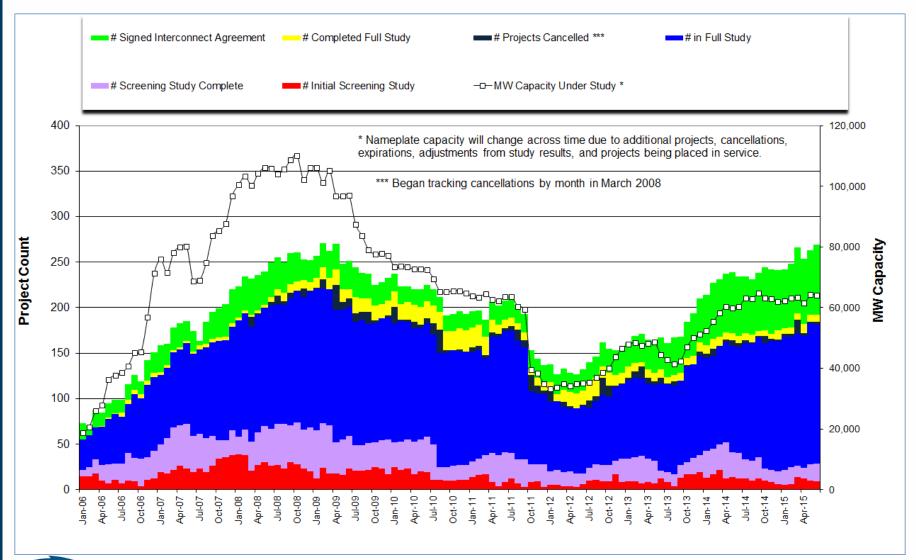


Generation Interconnection Activity by Fuel – June 2015



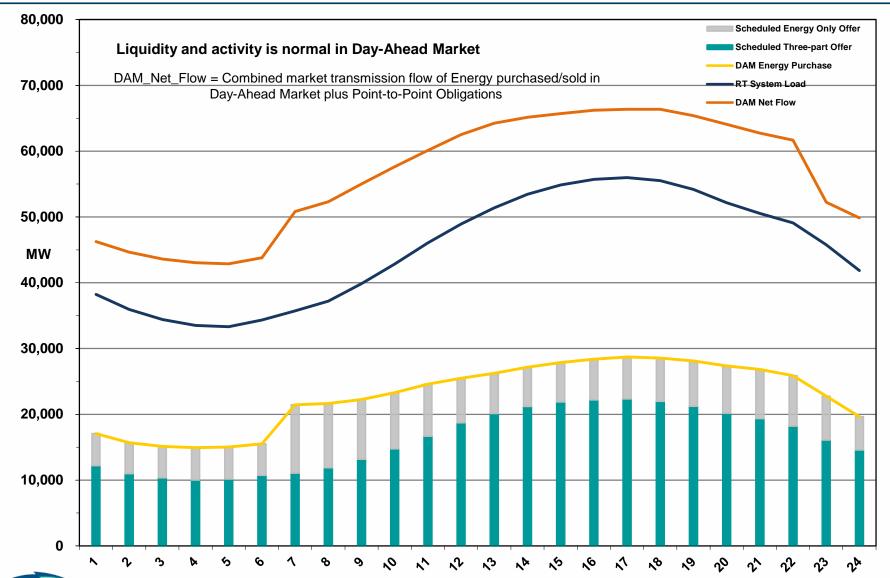


Generation Interconnection Activity by Project Phase – June 2015



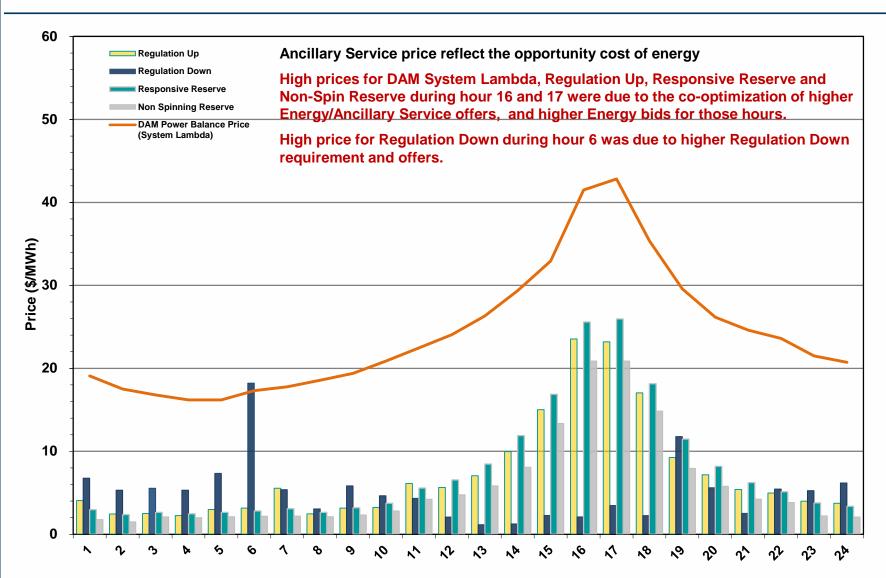
Market Operations

Day-Ahead Schedule (Hourly Average) – June 2015



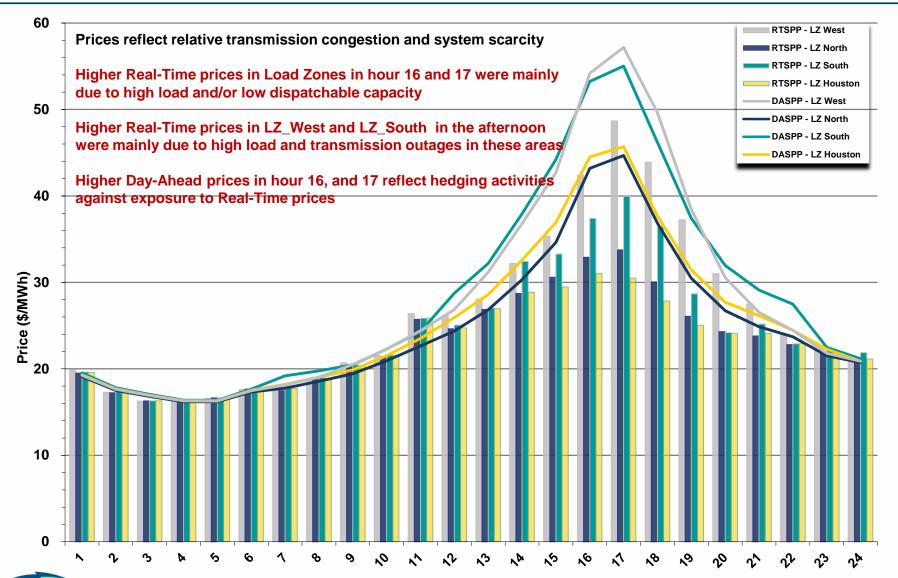


Day-Ahead Electricity And Ancillary Service Hourly Average Prices – June 2015



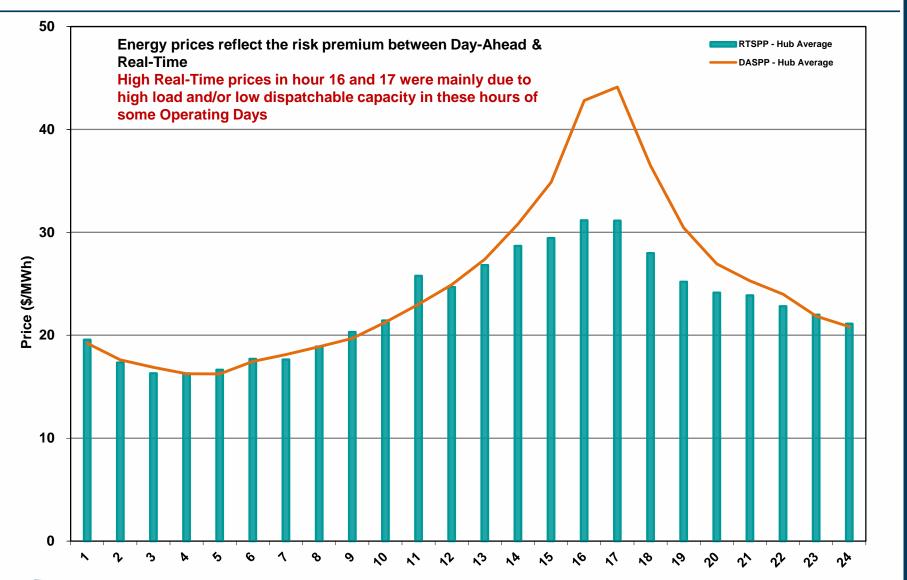


Day-Ahead Vs Real-Time Load Zone SPP (Hourly Average) – June 2015



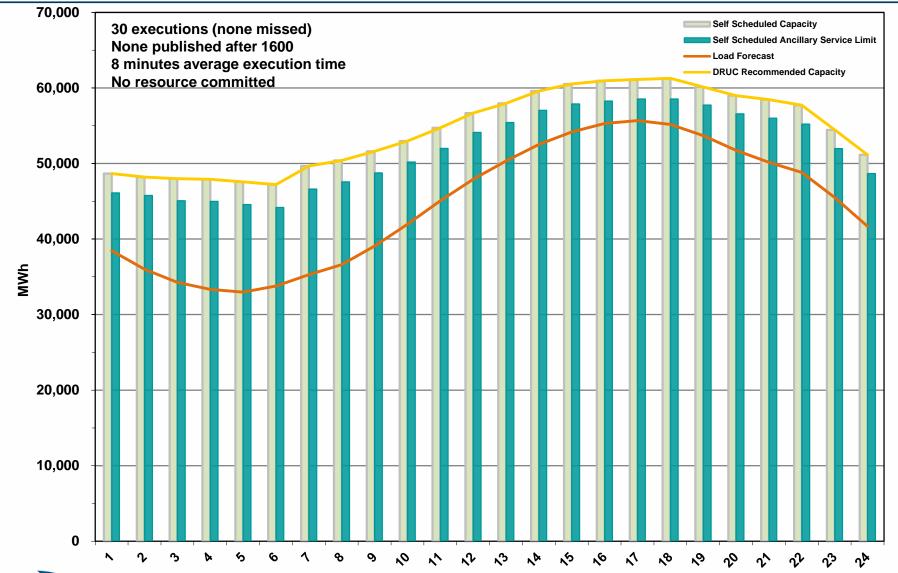


Day-Ahead Vs Real-Time Hub Average SPP (Hourly Average) – June 2015



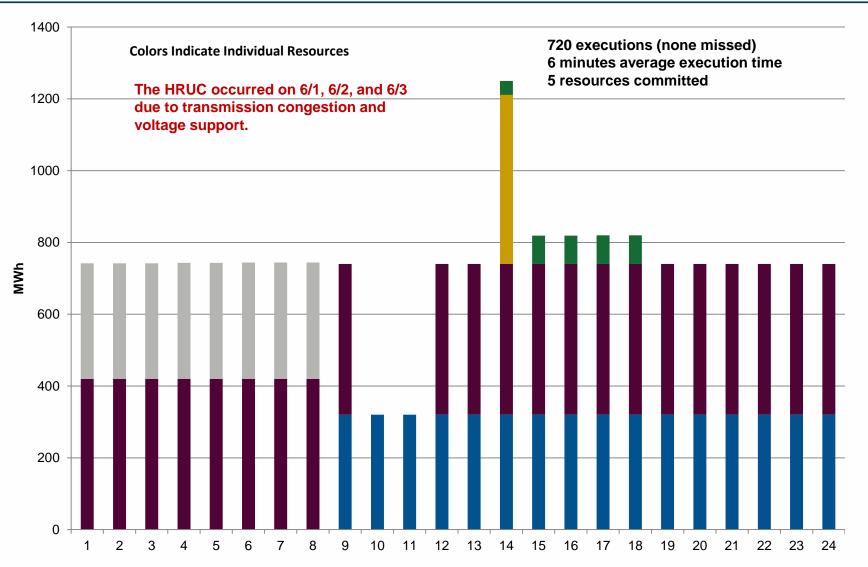


DRUC Monthly Summary (Hourly Average) – June 2015





HRUC Monthly Summary – June 2015



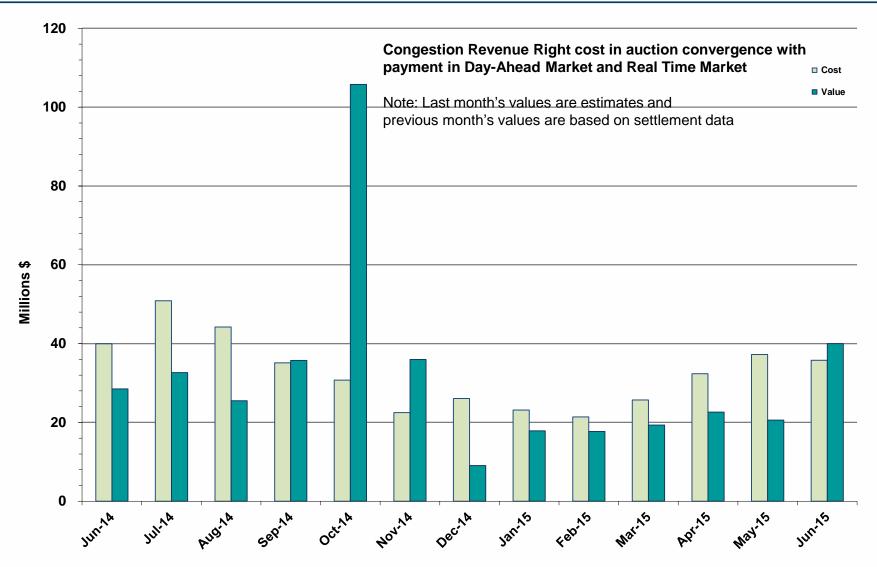


Non-Spinning Reserve Service Deployment – June 2015

Deployment Start Time	Deployment End Time	Deployment Duration (Hours)	Max Deployment (MW)	Reason
06/17/2015 14:08	06/17/2015 18:50	4.70	58	Transmission Congestion



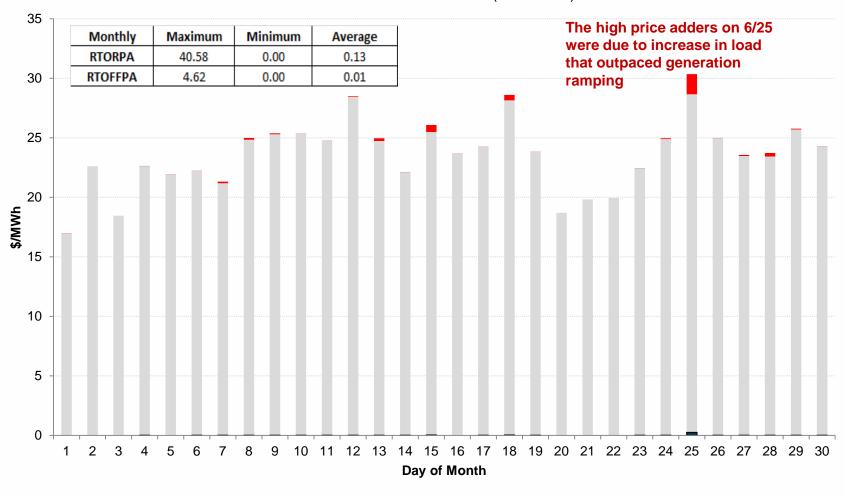
CRR Price Convergence – June 2015





ORDC Price Adder (Daily Average) – June 2015

Average Daily Real-Time System Lambda, Real-Time On-Line Reserve Price Adder (RTORPA), and Real-Time Offline Reserve Price Adder (RTOFFPA) - June 2015





ERS Procurement for June 2015 – September 2015

	BH1	BH2	ВН3	NBH
Non Weather-Sensitive ERS-10 MW	424.16	371.56	356.50	375.59
Non Weather-Sensitive ERS-30 MW	593.46	535.94	502.46	477.44
Weather-Sensitive ERS-30 MW	0.00	21.74	21.74	0.00
Total MW Procured	1,017.62	929.24	880.70	853.03
Clearing Price	\$2.40	\$26.44	\$26.96	\$2.80

BH1 - Business Hours 1

BH2 - Business Hours 2

BH3 - Business Hours 3

NBH - Non-Business Hours

HE 0900 through 1300, Monday thru Friday except ERCOT Holidays

HE 1400 through 1600, Monday thru Friday except ERCOT Holidays

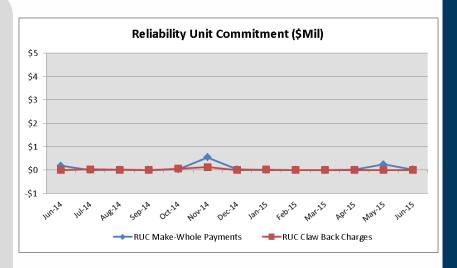
HE 1700 through 2000, Monday thru Friday except ERCOT Holidays

All other hours



Reliability Services – June 2015

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



RUC Make-Whole Payments were \$0.02M in June 2015. RUC Clawback Charges were \$0.00M.

There was \$0.00M allocated directly to load in June 2015, compared to:

- \$0.00M in May 2015
- \$0.00M in June 2014



Capacity Services – June 2015

Capacity Services	\$ in Millions
Regulation Up Service	\$2.30
Regulation Down Service	\$1.91
Responsive Reserve Service	\$12.83
Non-Spinning Reserve Service	\$7.98
Black Start Service	\$0.61
Voltage Services - Reactive Power	\$0.00
Voltage Services - Lost Opportunity	\$0.00
Total Charges	\$25.63

Capacity Services costs decreased from last month and from June 2014.

June 2015 cost was \$25.63M, compared to:

- A charge of \$26.73M in May 2015
- A charge of \$29.39M in June 2014



Energy Settlement – June 2015

Day-Ahead Market Energy Settlement	\$ in Millions
Energy Purchases	\$441.79
Point to Point Obligation Purchases	\$36.18
RMR Day-Ahead Revenue	\$0.00
Energy Sales	(\$434.80)
Day-Ahead Congestion Rent	\$43.17
Day-Ahead Market Make-Whole Payments	(\$0.17)

Day-Ahead Market energy settlement activity increased from last month and decreased from June 2014.

Real-Time Market energy settlement activity decreased from last month and from June 2014.

Real-Time Market Energy Settlement	\$ in Millions
Energy Imbalance at a Resource Node	(\$452.47)
Energy Imbalance at a Load Zone	\$650.34
Energy Imbalance at a Hub	(\$174.60)
Real Time Congestion from Self Schedules	\$1.32
Block Load Transfers and DC Ties	(\$0.49)
Impact to Revenue Neutrality	\$24.10
Emergency Energy Payments	(\$0.04)
Base Point Deviation Charges	\$0.24
Real-Time Metered Generation (MWh in millions)	32.36



Congestion Revenue Rights (CRR) – June 2015

	\$ in Millions
Annual Auction	(\$28.09)
Monthly Auction	(\$7.48)
Total Auction Revenue	(\$35.57)
Day-Ahead CRR Settlement	(\$40.01)
Day-Ahead CRR Short-Charges	\$0.22
Day-Ahead CRR Short-Charges Refunded	(\$0.22)
Real-Time CRR Settlement	\$0.00
Real-Time CRR Short-Charges	\$0.00
Real-Time CRR Short-Charges Refunded	\$0.00
Total CRR Funding	(\$40.01)
Day-Ahead Point to Point Obligations Settlement	\$36.18
Real-Time Point to Point Obligation Settlement	(\$26.74)
Net Point to Point Obligation Settlement	\$9.44

Congestion Revenue Rights settlement payments were fully funded and excess funds were deposited into the CRR Balancing Account Fund.

Point to Point Obligations settled with a net charge of \$9.44M compared to a net credit of \$33.70M last month.



CRR Balancing Account Fund – June 2015

CRR Balancing Account Fund	\$ in Millions
Beginning Balance for the Month	\$6.69
CRR Balancing Account Credit Total	\$3.37
CRR PTP Option Award Charges	\$0.06
Day-Ahead CRR Short-Charges Refunded	(\$0.22)
Total Fund Amount	\$9.90

ERCOT implemented the rolling CRR Balancing Account Fund beginning with Operating Month December 2014. The month of June 2015 closed with \$3,211,329 in excess Day-Ahead congestion rent which was deposited into the Fund.

As of June 2015, the amount available in the CRR Balancing Account Fund is \$9,903,649.



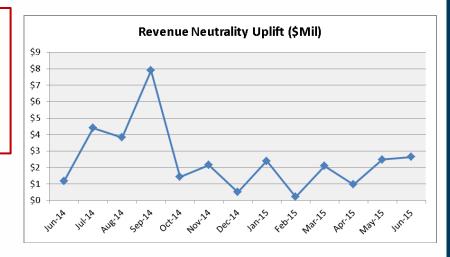
Revenue Neutrality – June 2015

Revenue Neutrality Settlement	\$ in Millions
Real-Time Point to Point Obligation Settlement	(\$26.74)
Real-Time Point to Point Options and Options with Refund Settlement	\$0.00
Real-Time Energy Imbalance Settlement	\$23.27
Real-Time Congestion from Self-Schedules Settlement	\$1.32
DC Tie & Block Load Transfer Settlement	(\$0.49)
Charge to Load	\$2.64

Revenue Neutrality charges to load increased compared to last month and compared to June 2014.

June 2015 was a charge of \$2.64M, compared to:

- \$2.47M charge in May 2015
- \$1.19M charge in June 2014





Real-Time Ancillary Service Imbalance (ORDC) – June 2015

Real-Time Ancillary Service Imbalance	\$ in Thousands
Real-Time AS Imbalance Payment Amount	(\$86.12)
Load Allocated AS Imbalance Revenue Neutrality Amount	\$86.11
Total Charges	\$86.11

Real-Time Ancillary Service Imbalance Settlements decreased from May 2015 to June 2015. Total payments for the month of June 2015 were \$86,112 compared to a payment of \$200,072 in May 2015.

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

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

The highest settlement occurred on June 25th. The total Real-Time Ancillary Service Imbalance payments on that day were \$20,681.



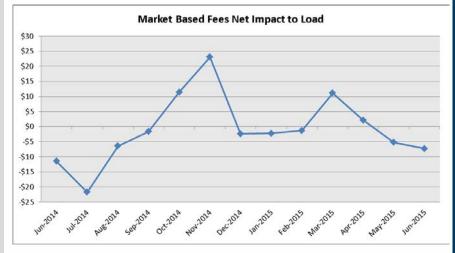
Net Allocation to Load – June 2015

Market-Based Allocation	\$ in Millions
CRR Auction Revenue Disbursement Settlement	(\$35.57)
Balancing Account Proceeds Settlement	\$0.00
Net Reliability Unit Commitment Settlement	\$0.00
Ancillary Services Settlement	\$25.63
Reliability Must Run Settlement (incl. RMR for Capacity)	\$0.00
Real-Time Revenue Neutrality Settlement	\$2.64
Emergency Energy Settlement	\$0.04
Base Point Deviation Settlement	(\$0.24)
ORDC Settlement	\$0.09
Total	(\$7.41)
Fee Allocation	
ERCOT Administrative Fee Settlement	\$15.09
Net Allocated to Load	\$7.68

The charge for the net allocation to Load decreased from last month and increased from June 2014.

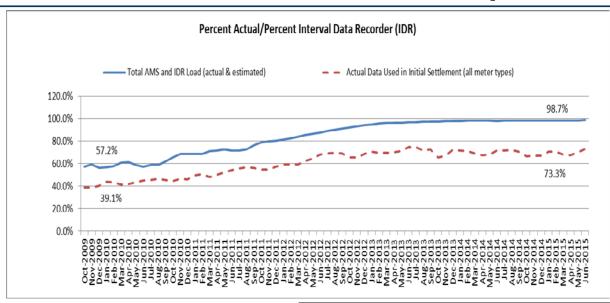
June 2015 was a charge of \$7.68M, compared to:

- A charge of \$7.75M in May 2015
- A charge of \$3.29M in June 2014



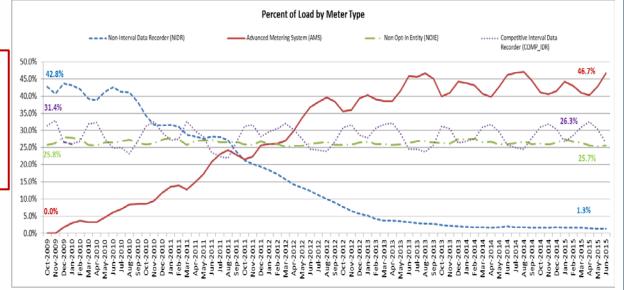


Advanced Meter Settlement Impacts – June 2015



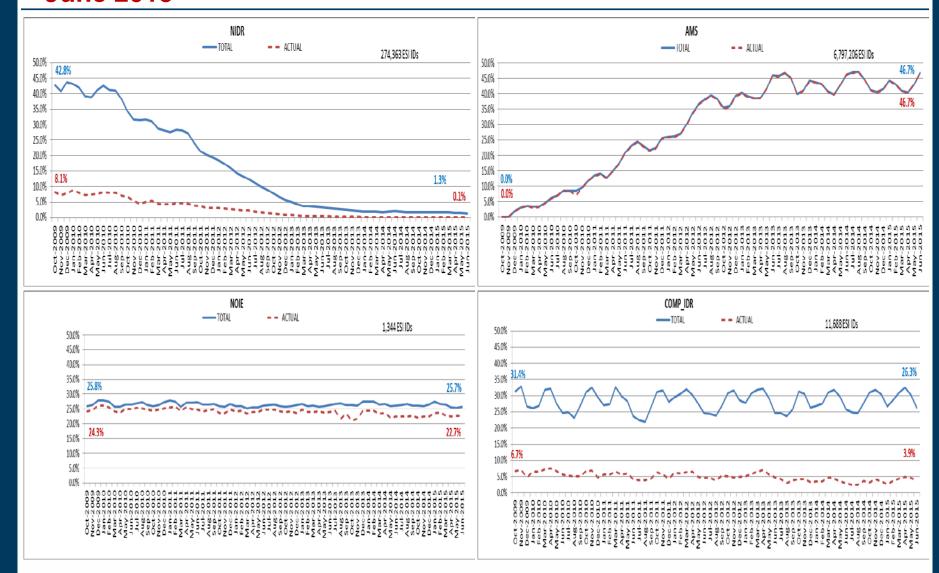
June 2015: At month end, settling 6.7M ESIIDs using Advanced Meter data.

June 2015: 98.7% 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 2015





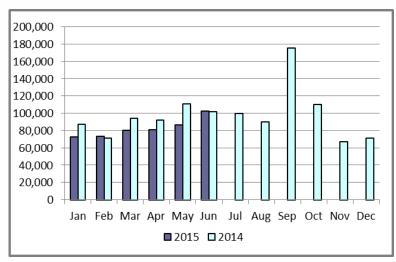
Retail Transaction Volumes – Summary – June 2015

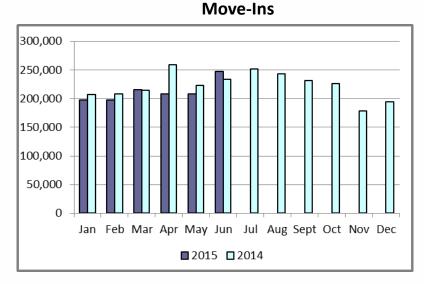
	Year-To-Date		Transactions Received			
Transaction Type	June 2015 June 2014		June 2015	June 2014		
Switches	496,421	556,520	102,661	101,490		
Acquisition	0	0	0	0		
Move - Ins	1,274,927	1,345,472	247,089	233,679		
Move - Outs	658,761	664,815	133,855	126,785		
Continuous Service Agreements (CSA)	263,625	355,901	59,611	64,408		
Mass Transitions	0	4,975	0	0		
Total	2,693,734	2,927,683	543,216	526,362		



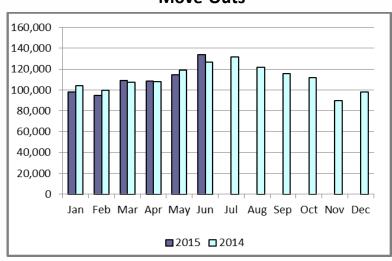
Retail Transaction Volumes – Summary – June 2015

Switches/Acquisitions

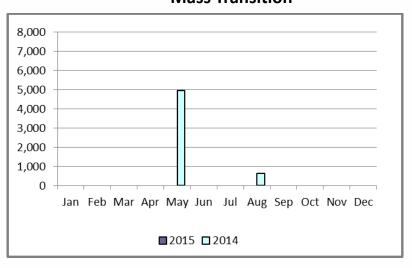




Move-Outs

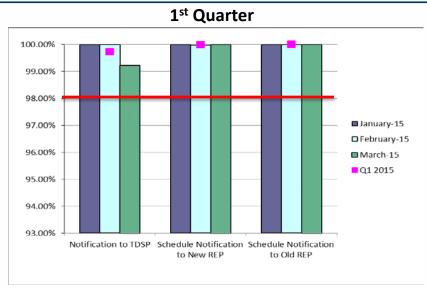


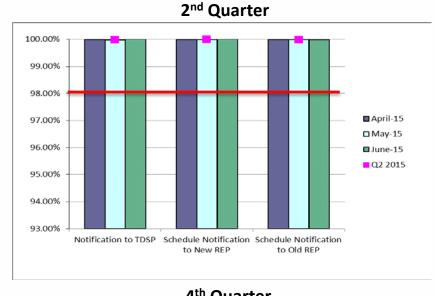
Mass Transition

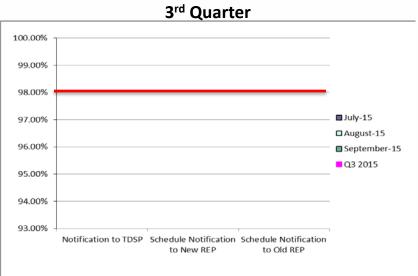


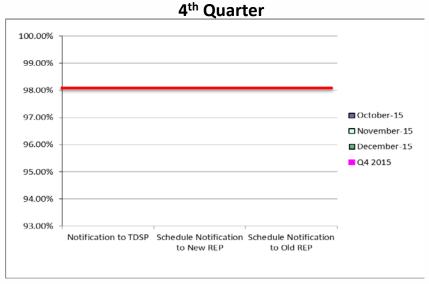


Retail Performance Measures – Switch – June 2015



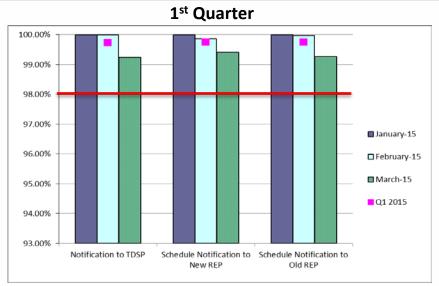


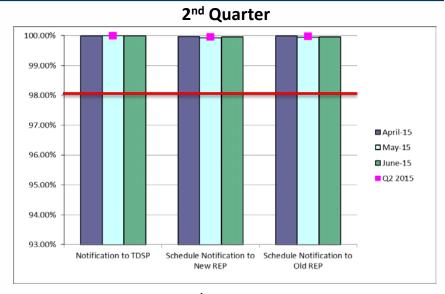


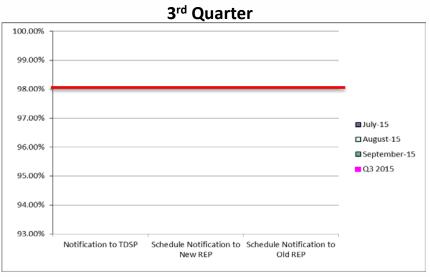


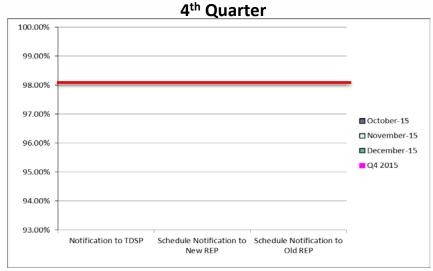


Retail Performance Measures (Same Day Move-In) - June 2015



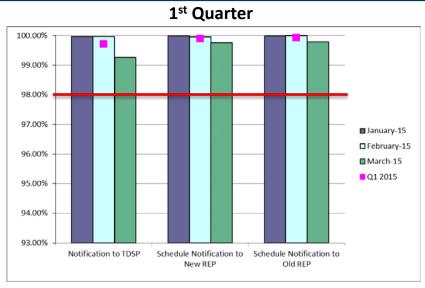


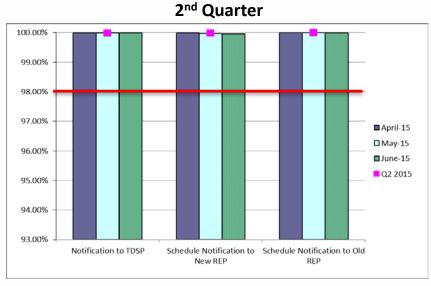




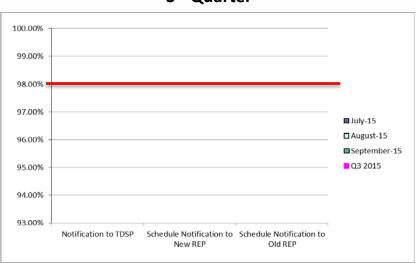


Retail Performance Measures (Standard Move-In) - June 2015

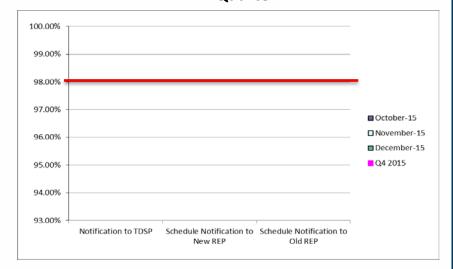




3rd Quarter



4th Quarter





Projects Report

		2015 Project Funding	\$	21,650,000
Impact Metric Tolerances				015 Portfolio
Unfavorable variances are represented as negative numbers within the	Projects In Fligh	t/On Hold (Count = 54)	\$	24,665,224
report. - Green = No more than 4.9% unfavorable variance	Projects Not Yet Started (Count = 23)			1,531,103
- Yellow = Unfavorable variance between 4.9% and 9.9% - Red = Unfavorable variance more than 9.9%	Projects Comple	\$	631,860	
- Ned - Offiavorable variance more than 5.5%	Spending Reduct Capital Budget	tions Required to Maintain	\$	(5,178,187)
	TOTAL		\$	21,650,000

Project Number	Projects in Initiation Phase (Count = 7)
172-01	Physical Security Project #2
173-01	ERCOT Flight Certification Website
TBD	2015 Outage Scheduler Enhancements
SCR783	Outage Scheduler Enhancements – Group 2, Usability and Filtering Enhancements
NPRR219	Resolution of Alignment Items A33, A92, A106, and A150 - TSPs Must Submit Outages for Resource Owned Equipment and Clarification of Changes in Status of Transmission Element Postings
TBD	Infoblox Hardware Refresh
NPRR573	Alignment of PRC Calculation

Project Number	Projects in Planning Phase (Count = 12)	Baseline Phase Start	Baseline Phase Finish	Scheduled Go-Live Date	Scheduled Phase Finish	Schedule Impact		Bu	dget Impact
106-01	MP Online Data Entry - Ph 1	10/9/2013	3/5/2014	TBD	10/8/2015	4	-395%		1%
141-01	Production Virtualization	11/6/2014	3/4/2015	TBD	5/29/2015	1	-72%		33%
158-01	Move iTron LF Application to High Availability Environment	1/14/2015	6/19/2015	TBD	6/19/2015		0%		0%
161-01	NPRRs 588 and 615	5/20/2015	7/15/2015	TBD	7/7/2015		14%		8%
164-01	Browser Compatibility Assessment	2/25/2015	4/29/2015	TBD	7/24/2015	1	-136%		18%
168-01	Configuration Management System Requirements for CIP v5 Readiness	3/12/2015	6/17/2015	TBD	6/12/2015		5%		0%
169-01	Short Circuit Ratio Functionality	4/6/2015	6/17/2015	TBD	11/4/2015	1	-194%		0%
170-01	Enterprise Content Alignment Program	4/8/2015	8/5/2015	TBD	7/2/2015		28%		26%
171-01	CIP v5 Readiness Project	3/19/2015	8/6/2015	TBD	7/13/2015		17%		0%
NPRR588	Clarifications for PV Generation Resources	5/20/2015	8/7/2015	TBD	7/7/2015		39%		See #161-01
NPRR615	PVGR Forecasting	5/20/2015	8/8/2015	TBD	7/7/2015		40%		See #161-01
NPRR698	Clarifications to NPRR595, RRS Load Resource Treatment In ORDC	6/19/2015	8/9/2015	TBD	7/10/2015		58%		0%



065-01 EMS Upgrade	Project Number	Projects in Execution Phase (Count = 22)	Baseline Phase Start	Baseline Go- Live Target	Scheduled Go-Live Date	Scheduled Phase Finish	Sche	dule Impact	Bu	dget Impact
D88-01 Information Technology Change Management 10/2/8/2014 5/1/2015 5/27/2015 6/15/2015 2 -14%, 2 -3-39%, 115-01 Collage Replacement 2/6/2014 9/22/2014 9/22/2016 7/8/2015 1 -125%, 2 -86%, 120-01 T Production Hardening 5/21/2015 4/1/2015 3/25/2016 4/25/2016 2/6 -0 %, 127-01 SQL Senere 2012 Upgrade / Cluster Consolidation 12/16/2014 7/17/2015 7/19/2015 9/9/2015 0% 14%, 127-01 SQL Senere 2012 Upgrade / Cluster Consolidation 12/16/2014 7/17/2015 7/19/2015 9/9/2015 0% 14%, 134-01 OSI PI Visualization Enhancements 1/16/2015 6/19/2015 8/28/2015 8/28/2015 0% 23%, 144-01 OSI PI Visualization Enhancements 1/16/2015 6/19/2015 8/28/2015 8/28/2015 1/9/2015 0% 23%, 144-01 Market System Enhancements 2015 1/15/2015 6/28/2015 7/12/2015 7/13/2015 1/9/2015	052-01	EMS Upgrade	9/24/2014	5/25/2016	5/25/2016	10/31/2016		0%		1%
116-01 Collage Replacement	065-01	NMMS Upgrade	12/17/2014	5/27/2016	5/30/2016	7/12/2016		0%		6%
120-01 TP Production Hardening	089-01	Information Technology Change Management	10/29/2014	5/1/2015	5/27/2015	6/15/2015	2	-14%	2	-39%
127-01 SOL Server 2012 Upgrade / Oluster Consolidation 12/18/2014 7/17/2015 7/19/2015 9/90/2015 0/96 0/96 14% 134-01 Privileged Account Management 4/1/2015 6/19/2015 9/30/2015 10/30/2015 10/30/2015 1 - 45% 23% 144-01 OSI PI Visualization Enhancements 1/16/2015 6/19/2015 8/28/2015 8/28/2015 11/9/2015 1 - 45% 23% 144-01 OC-48 Replacement with DWDM 2/4/2015 10/6/2015 7/12/2015 7/12/2015 7/12/2015 1/9/20	116-01	Collage Replacement	2/6/2014	9/22/2014	7/8/2015	7/8/2015	4	-126%	2	-85%
134-01 Privileged Account Management	120-01	IT Production Hardening	5/21/2015	4/1/2016	3/25/2016	4/25/2016		2%		0%
143-01 OSI PI Visualization Enhancements	127-01	SQL Server 2012 Upgrade / Cluster Consolidation	12/18/2014	7/17/2015	7/19/2015	9/9/2015		0%		14%
144-01 OC-48 Replacement with DWDM	134-01	Privileged Account Management	4/1/2015	9/30/2015	9/30/2015	10/30/2015		0%		6%
149-01 Market System Enhancements 2015 1/15/2015 6/28/2015 7/1/2015 7/31/2015 1-1% 1-3% 1-3% 1-50-01 Replace N2N System 2/5/2015 5/14/2015 5/14/2015 10/8/2015 1/16/2015 2 - 1-50% 2 - 2-5% 1-50-01 1-50-01 1/16/2015 1/16/2015 2 - 1-50% 2 - 2-5% 1-50-01 1-50-01 1/16/2015 1/16/	143-01	OSI Pi Visualization Enhancements	1/16/2015	6/19/2015	8/28/2015	8/30/2015	1	-45%		23%
155-01 Replace N2N System	144-01	OC-48 Replacement with DWDM	2/4/2015	10/5/2015	10/5/2015	11/9/2015		0%		8%
156-01 Symposium Call Center Replacement 2/5/2015 5/19/2015 8/31/2015 10/7/2015 2 -100% 2 -32%	149-01	Market System Enhancements 2015	1/15/2015	6/28/2015	7/1/2015	7/31/2015		-1%		13%
163-01 Cyber Security Project #10	155-01	Replace N2N System	2/5/2015	5/14/2015	10/8/2015	11/16/2015	2	-150%	2	-25%
165-00 Capital Efficiencies and Enhancements - 2015 1/1/2015 1/2/31/2015 12/31/2015 12/31/2015 0% 0%	156-01	Symposium Call Center Replacement	2/5/2015	5/19/2015	8/31/2015	10/7/2015	2	-100%	2	-32%
NPRR553	163-01	Cyber Security Project #10	7/1/2015	9/15/2015	9/15/2015	11/30/2015		0%		0%
NPRR553 Monthly BLT Payment and Charge for Presidio Exception 4/9/2015 10/25/2015 10/25/2015 10/25/2015 0/6 See #165-00	165-00	Capital Efficiencies and Enhancements - 2015	1/1/2015	12/31/2015	12/31/2015	12/31/2015		0%		0%
NPRR626 Reliability Deployment Price Adder 1/15/2015 6/28/2015 7/1/2015 7/31/2015 -1% NA See #149-01 NPRR645 Real-Time On-Line Capacity Revisions 1/15/2015 6/28/2015 7/1/2015 7/31/2015 -1% NA See #149-01 NPR665 As-Built Clarification of Reliability Deployment Price Adder 1/15/2015 6/28/2015 7/1/2015 7/31/2015 -1% NA See #149-01 OBD Setting the Shadow Price Caps and Power Balance Penalties in Security-Constrained Economic Dispatch 6/28/2015 7/1/2015 7/31/2015 -1% NA See #149-01 SCR771 ERCOT System Change Allowing Independent Master QSE to Represent Split Generation Resources 4/23/2015 8/14/2015 8/14/2015 8/14/2015 0% NA See #165-00 SCR775 Posting Results of Real-Time Data in a Display Format 3/31/2015 6/22/2015 7/20/2015 7/20/2015 0% NA See #165-00 NPRR559 Revisions to MCE Calculation 1/29/2015 6/13/2015 6/13/2015 7/10/2015 0% NA See #154-01	NPRR543	Message for Confirmed E-Tags	3/18/2015	6/23/2015	6/25/2015	7/9/2015		-2%		6%
NPRR645 Real-Time On-Line Capacity Revisions 1/15/2015 6/28/2015 7/1/2015 7/31/2015 -1% NA See #149-01 NPRR665 As-Built Clarification of Reliability Deployment Price Adder 1/15/2015 6/28/2015 7/1/2015 7/31/2015 -1% NA See #149-01 OBD Setting the Shadow Price Caps and Power Balance Penalties in Security-Constrained Economic Dispatch 1/15/2015 6/28/2015 7/1/2015 7/31/2015 -1% NA See #149-01 SCR771 ERCOT System Change Allowing Independent Master QSE to Represent Split Generation Resources 4/23/2015 8/14/2015 8/14/2015 8/14/2015 0% NA See #165-00 SCR775 Posting Results of Real-Time Data in a Display Format 3/31/2015 6/22/2015 6/22/2015 7/20/2015 0% NA See #165-00 Project Number Projects in Stabilization (Count = 9) Easeline Execution Phase Start Baseline Co-Live Date Co-Live Date Co-Live Date Co-Live Date Co-Live Date Start Scheduled Execution Phase Finish Scheduled Execution Phase Finish Scheduled Execution Phase Finish Schedule Impact Scheduled Co-Live Date Scheduled Co-Live Date Scheduled Co-Live Date Finish Sch	NPRR553	Monthly BLT Payment and Charge for Presidio Exception	4/9/2015	10/25/2015	10/25/2015	10/25/2015		0%		See #165-00
NPRR665 As-Built Clarification of Reliability Deployment Price Adder 1/15/2015 6/28/2015 7/1/2015 7/31/2015 -1% NA See #149-01	NPRR626	Reliability Deployment Price Adder	1/15/2015	6/28/2015	7/1/2015	7/31/2015		-1%	NA	See #149-01
OBD Setting the Shadow Price Caps and Power Balance Penalties in Security-Constrained Economic Dispatch 1/15/2015 6/28/2015 7/1/2015 7/31/2015 -1% NA See #149-01 SCR771 ERCOT System Change Allowing Independent Master QSE to Represent Split Generation Resources 4/23/2015 8/14/2015 8/14/2015 8/14/2015 0% NA See #165-00 SCR775 Posting Results of Real-Time Data in a Display Format 3/31/2015 6/22/2015 6/22/2015 7/20/2015 0% 23% Project Number Projects in Stabilization (Count = 9) Baseline Execution Phase Start Baseline Go-Live Date Clive Date Start Scheduled Execution Phase Finish Schedule Impact Execution Phase Finish Budget Impact Execution Phase Finish NPRR597 Revisions to MCE Calculation 1/29/2015 6/13/2015 6/13/2015 7/10/2015 0% NA See #154-01 NPRR597 Utilize Initial Estimated Liability (IEL) Only During Initial Market Activity 1/29/2015 6/13/2015 6/13/2015 7/10/2015 0% NA See #154-01 NPRR601 Inclusion of Incremental Exposure in Mass Transitions to Counter-Parties that are Registered as QSEs and LS	NPRR645	Real-Time On-Line Capacity Revisions	1/15/2015	6/28/2015	7/1/2015	7/31/2015		-1%	NA	See #149-01
Security-Constrained Economic Dispatch 1/15/2015 6/28/2015 7/12/015 7/31/2015 -1% NA See #149-01	NPRR665	As-Built Clarification of Reliability Deployment Price Adder	1/15/2015	6/28/2015	7/1/2015	7/31/2015		-1%	NA	See #149-01
Represent Split Generation Resources 4/23/2015 8/14/2015 8	OBD		1/15/2015	6/28/2015	7/1/2015	7/31/2015		-1%	NA	See #149-01
Project Number Projects in Stabilization (Count = 9) Baseline Execution Phase Start Baseline Go-Live Date Inlish Actual Go-Live Date Execution Phase Finish Schedule Impact Execution Phase Finish Budget Impact NPRR559 Revisions to MCE Calculation 1/29/2015 6/13/2015 6/13/2015 7/10/2015 0% NA See #154-01 NPRR597 Utilize Initial Estimated Liability (IEL) Only During Initial Market Activity 1/29/2015 6/13/2015 6/13/2015 7/10/2015 0% NA See #154-01 NPRR601 Inclusion of Incremental Exposure in Mass Transitions to Counter-Parties that are Registered as QSEs and LSEs and Provide POLR Service 1/29/2015 6/13/2015 6/13/2015 7/10/2015 0% NA See #154-01 NPRR639 Correction to Minimum Current Exposure 1/29/2015 6/13/2015 6/13/2015 7/10/2015 0% NA See #154-01 SCR778 Credit Exposure Calculations for NOIE Options Linked to RTM PTP Obligations 1/29/2015 3/28/2015 3/28/2015 7/10/2015 0% NA See #154-01 SCR779 Increase to the CRR Auction Transaction Limit 9/29/2014 6/28/2015	SCR771		4/23/2015	8/14/2015	8/14/2015	8/14/2015		0%	NA	See #165-00
Projects in Stabilization (Count = 9) Execution Phase Start Execution Phase Start Schedule Impact Execution Phase Finish Schedule Impact Schedule Impa	SCR775	Posting Results of Real-Time Data in a Display Format	3/31/2015	6/22/2015	6/22/2015	7/20/2015		0%		23%
Projects in Stabilization (Count = 9) Execution Phase Start Execution Phase Start Execution Phase Co-Live Date Execution Phase Go-Live Date Execution Phase Finish Execution Phase Finish Schedule Impact Execution Phase Finish										
NPRR597 Utilize Initial Estimated Liability (IEL) Only During Initial Market Activity 1/29/2015 6/13/2015 6/13/2015 7/10/2015 0% NA See #154-01 NPRR601 Inclusion of Incremental Exposure in Mass Transitions to Counter-Parties that are Registered as QSEs and LSEs and Provide POLR Service 1/29/2015 6/13/2015 6/13/2015 7/10/2015 0% NA See #154-01 NPRR639 Correction to Minimum Current Exposure 1/29/2015 6/13/2015 6/13/2015 7/10/2015 0% NA See #154-01 SCR778 Credit Exposure Calculations for NOIE Options Linked to RTM PTP Obligations 1/29/2015 3/28/2015 3/28/2015 7/10/2015 0% NA See #154-01 SCR779 Increase to the CRR Auction Transaction Limit 9/29/2014 6/28/2015 5/27/2015 6/24/2015 11% 0%		Projects in Stabilization (Count = 9)	Execution Phase			Execution Phase	Schedule Impact		Bu	dget Impact
NPRR597 Activity 1/29/2015 6/13/20	NPRR559		1/29/2015	6/13/2015	6/13/2015	7/10/2015		0%	NA	See #154-01
NPRR601 Parties that are Registered as QSEs and LSEs and Provide POLR Service 1/29/2015 6/13/2015 6/13/2015 7/10/2015 0% NA See #154-01 NPRR639 Correction to Minimum Current Exposure 1/29/2015 6/13/2015 6/13/2015 7/10/2015 0% NA See #154-01 SCR778 Credit Exposure Calculations for NOIE Options Linked to RTM PTP Obligations 1/29/2015 3/28/2015 3/28/2015 7/10/2015 0% NA See #154-01 SCR779 Increase to the CRR Auction Transaction Limit 9/29/2014 6/28/2015 5/27/2015 6/24/2015 11% 0%	NPRR597	Activity	1/29/2015	6/13/2015	6/13/2015	7/10/2015		0%	NA	See #154-01
SCR778 Credit Exposure Calculations for NOIE Options Linked to RTM PTP Obligations 1/29/2015 3/28/2015 3/28/2015 7/10/2015 0% NA See #154-01 SCR779 Increase to the CRR Auction Transaction Limit 9/29/2014 6/28/2015 5/27/2015 6/24/2015 11% 0%	NPRR601	Parties that are Registered as QSEs and LSEs and Provide POLR	1/29/2015	6/13/2015	6/13/2015	7/10/2015		0%	NA	See #154-01
SCR778 PTP Obligations 1/29/2015 3/28/2015 3/28/2015 7/10/2015 0% NA See #154-01 SCR779 Increase to the CRR Auction Transaction Limit 9/29/2014 6/28/2015 5/27/2015 6/24/2015 11% 0%	NPRR639	Correction to Minimum Current Exposure	1/29/2015	6/13/2015	6/13/2015	7/10/2015		0%	NA	See #154-01
	SCR778		1/29/2015	3/28/2015	3/28/2015	7/10/2015		0%	NA	See #154-01
097-01 ABB MMS OS Technology Refresh 8/15/2014 3/26/2015 3/26/2015 5/8/2015 0% 0%	SCR779	Increase to the CRR Auction Transaction Limit	9/29/2014	6/28/2015	5/27/2015	6/24/2015		11%		0%
	097-01	ABB MMS OS Technology Refresh	8/15/2014	3/26/2015	3/26/2015	5/8/2015		0%		0%
122-01 Infoblox DNS/DHCP 5/21/2014 11/5/2014 11/20/2014 8/10/2015 1 -8% 0%	122-01	Infoblox DNS/DHCP	5/21/2014	11/5/2014	11/20/2014	8/10/2015	1	-8%		0%
154-01 2014 CMM NPRRs and SCRs 1/29/2015 6/13/2015 6/13/2015 7/10/2015 0% 1 -9%	154-01	2014 CMM NPRRs and SCRs	1/29/2015	6/13/2015	6/13/2015	7/10/2015		0%	1	-9%



Projects On Hold (Count - 1)

Number	Projects On Hold (Count = 4)	Date	Finish	Go-Live Date	Finish	Schedule Impact		t Budget Impact	
SCR777	Bilateral CRR Interface Enhancement	8/20/2014	11/28/2014	TBD	TBD	3		3	
NPRR327	State Estimator Data Redaction Methodology	12/5/2012	2/12/2013	TBD	TBD	3		3	
129-01	Access and Roles Management	7/1/2014	10/1/2014	TBD	TBD	3		3	
166-01	Jboss Application Monitoring & Management (JAMM)	TBD	TBD	TBD	TBD	3		3	
Project Number	Projects Completed (Count =16)	Baseline Execution Phase Start	Baseline Go- Live Target	Actual Go-Live Date	Actual Execution Phase Finish Schedule Stat		Schedule Status		tal Variance
NPRR467	Balancing Account Resettlement Due to DAM Resettlement	7/1/2014	12/6/2014	12/6/2014	6/12/2015		0%	NA	See #10052
NPRR500	Posting of Generation that is Off but Available	1/7/2015	2/6/2015	2/6/2015	3/27/2015		0%		48%
NPRR580	Establishment of a Rolling CRR Balancing Account Fund	7/1/2014	12/6/2014	12/6/2014	6/12/2015		0%	NA	See #10052
NPRR586	Align Credit Lock for CRR Auctions with Transaction Submission Deadline	7/2/2014	9/26/2014	9/22/2014	10/28/2014		4%	2	-18%
NPRR598	Clarify Inputs to PRC and ORDC	1/15/2015	6/28/2015	7/1/2015	7/31/2015		-1%	NA	See #149-01
SCR772	New Extract for Five Minute Interval Settlement Data	11/5/2014	2/13/2015	2/12/2015	3/30/2015		1%		19%
10052_01	Settlement System Upgrade	1/25/2012	12/23/2014	12/6/2014	6/12/2015		1%		-1%
057-01	EPS Metering DB Redesign	4/17/2013	9/6/2013	12/11/2014	1/14/2015	2	-324%	2	-216%
083-01	Centralized Application Log Management	8/28/2013	5/7/2014	3/27/2014	2/4/2015		16%		9%
104-01	Disaster Recovery: S&B, RTL, MDT	10/9/2014	1/18/2015	1/18/2015	1/28/2015		0%		2%
115-01	Cyber Security Project #14	6/30/2014	1/15/2015	1/15/2015	3/6/2015		0%		13%
130-01	Electronic Crisis Communications Enhancements	6/19/2014	12/12/2014	2/16/2015	6/12/2015	1	-37%	2	-6%
137-01	EIS Reporting and Control Systems Upgrade	8/13/2014	1/15/2015	1/13/2015	2/25/2015		1%		9%
142-01	Implementation of NERC BAL-TRE-001 Regional Standard	1/14/2015	2/16/2015	2/6/2015	3/6/2015		30%		46%
150-01	Backup Resiliency	12/17/2014	2/6/2015	2/6/2015	3/2/2015		0%		-3%
153-01	Infrastructure Performance Management	12/22/2014	1/22/2015	2/19/2015	3/2/2015	1	-90%		0%

Forecast Start Baseline Phase Scheduled

Footnotes

- 1 One or more phases took longer than expected, resulting in additional funding and/or time required
- 2 One or more phases required more labor than expected, resulting in additional funding and/or time required

Scheduled Phase

- 3 Project placed on hold
- 4 Resource constraints resulted in delay to one or more phases
- 5 Project w as on an urgent timeline to meet a pre-defined target implementation date. Compressed project planning required budget estimation before full requirements were known. Additional effort needed, resulting in additional fun
- NA Metric not calculated because:
 - it is reported at the parent project level, or
 - it is an administrative project



Project Number	2015 Projects Not Yet Started (Count = 23)	Forecast Start Date
NPRR495	Changes to Ancillary Services Capacity Monitor	Jul-2015
NPRR515	Day-Ahead Market Self-Commitment of Generation Resources	Jul-2015
NPRR556	Resource Adequacy During Transmission Equipment Outage	Jul-2015
RMGRR126	Additional ERCOT Validations for Customer Billing Contact Information File	Jul-2015
TBD	Enterprise Resource Planning	Jul-2015
TBD	Compliance Project #1	Aug-2015
NPRR419	Revise Real Time Energy Imbalance and RMR Adjustment Charge	Aug-2015
NPRR617	RR617 Energy Offer Flexibility	
NPRR662	PRR662 Proxy Energy Offer Curves	
RRGRR003	Modifications to Improve Wind Forecasting	Aug-2015
TBD	CRR UI Framework Upgrade	Aug-2015
TBD	Cyber Security Project #19	Aug-2015
TBD	AV Upgrades to TCC1 Conference Rooms	Sep-2015
TBD	Build Load Models for TSAT	Sep-2015
TBD	N-1-x Tool	Sep-2015
TBD	Tools for Renewables Desk	Sep-2015
134-02	Privileged Account Management - SSAE16	Oct-2015
NOGRR084	Daily Grid Operations Summary Report	Oct-2015
TBD	CREZ Voltage Control and Coordination - Phase 2	Oct-2015
TBD	PMU Monitor	Oct-2015
TBD	Records Management and eDiscovery	Oct-2015
NPRR620	Collateral Requirements for Counter-Parties with No Load or Generation	Nov-2015
NPRR679	ONOPTOUT for RUC Given After the Adjustment Period	Nov-2015

