



ERCOT Monthly Operational Overview
(February 2017)

ERCOT Public
March 15, 2017

Grid Planning & Operations

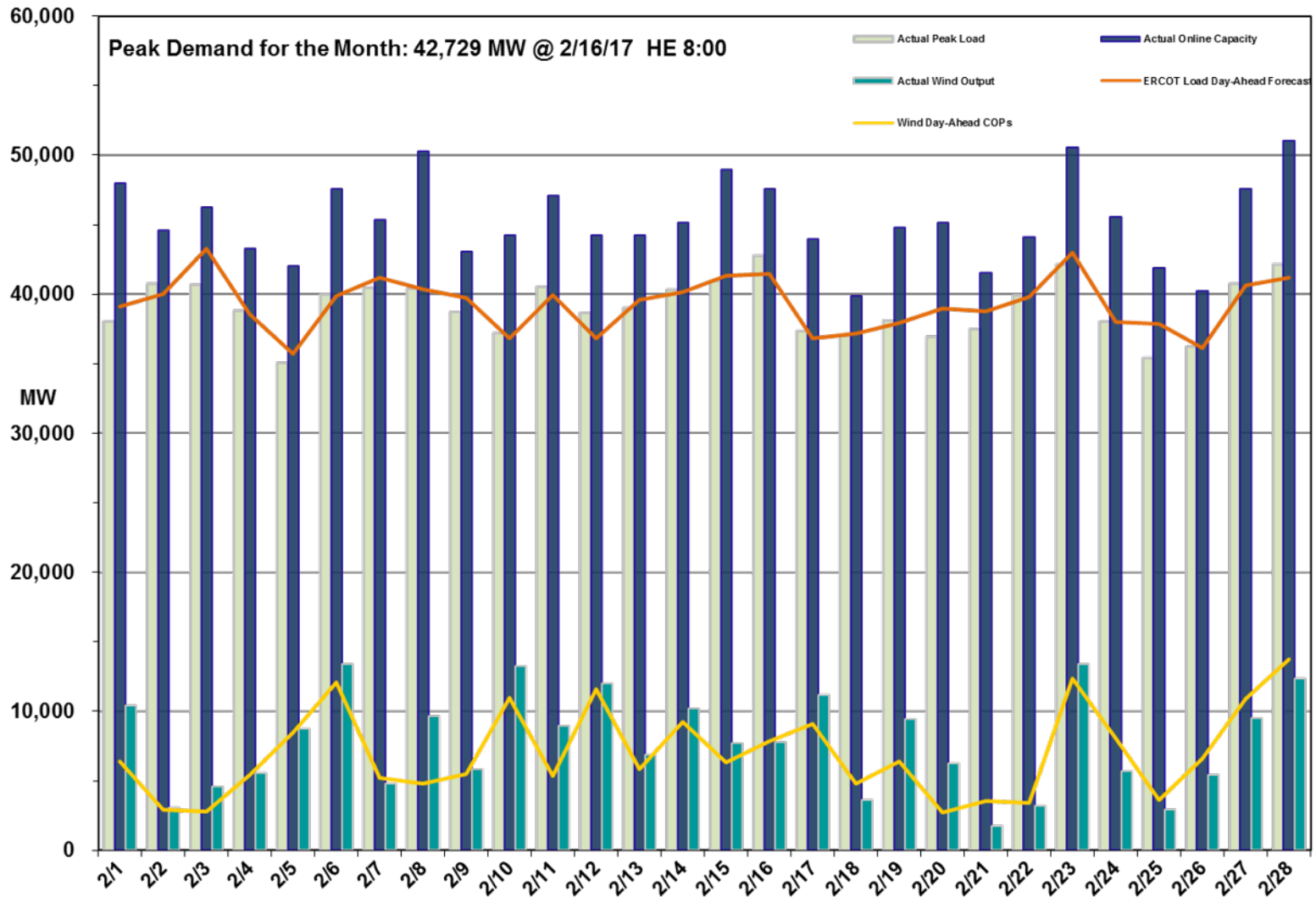
Operations

- The preliminary Settlements hourly peak demand of 42,729* MW on February 16 was higher than the day-ahead mid-term load forecast peak of 41,478 MW for the same operating hour.
 - The operational instantaneous peak demand was 43,370 MW (telemetry).
- Day-ahead load forecast error for February was 2.02%
- ERCOT issued three notifications:
 - One Advisory issued due to Physical Responsive Capability being below 3000 MW
 - One Advisory issued due to Delay in DAM Solution
 - One Watch issued due to DRUC not completing on schedule

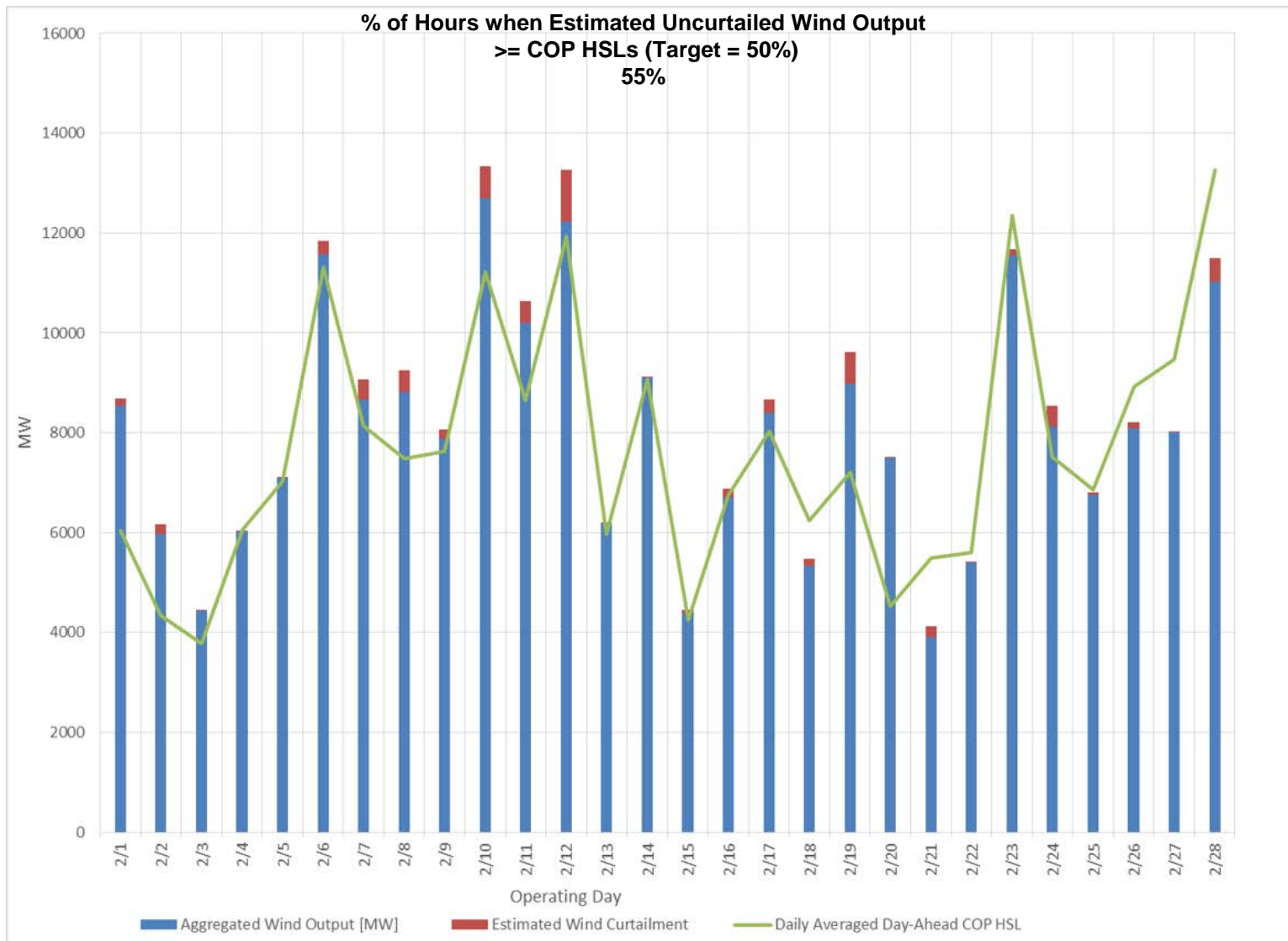
Planning Activities

- 260 active generation interconnection requests totaling 60,267 MW, including 26,510 MW of wind generation, as of February 28, 2017. Six additional requests and an increase of 159 MW from January 31, 2017.
- 18,358 MW wind capacity in commercial operations as of March 1, 2017.

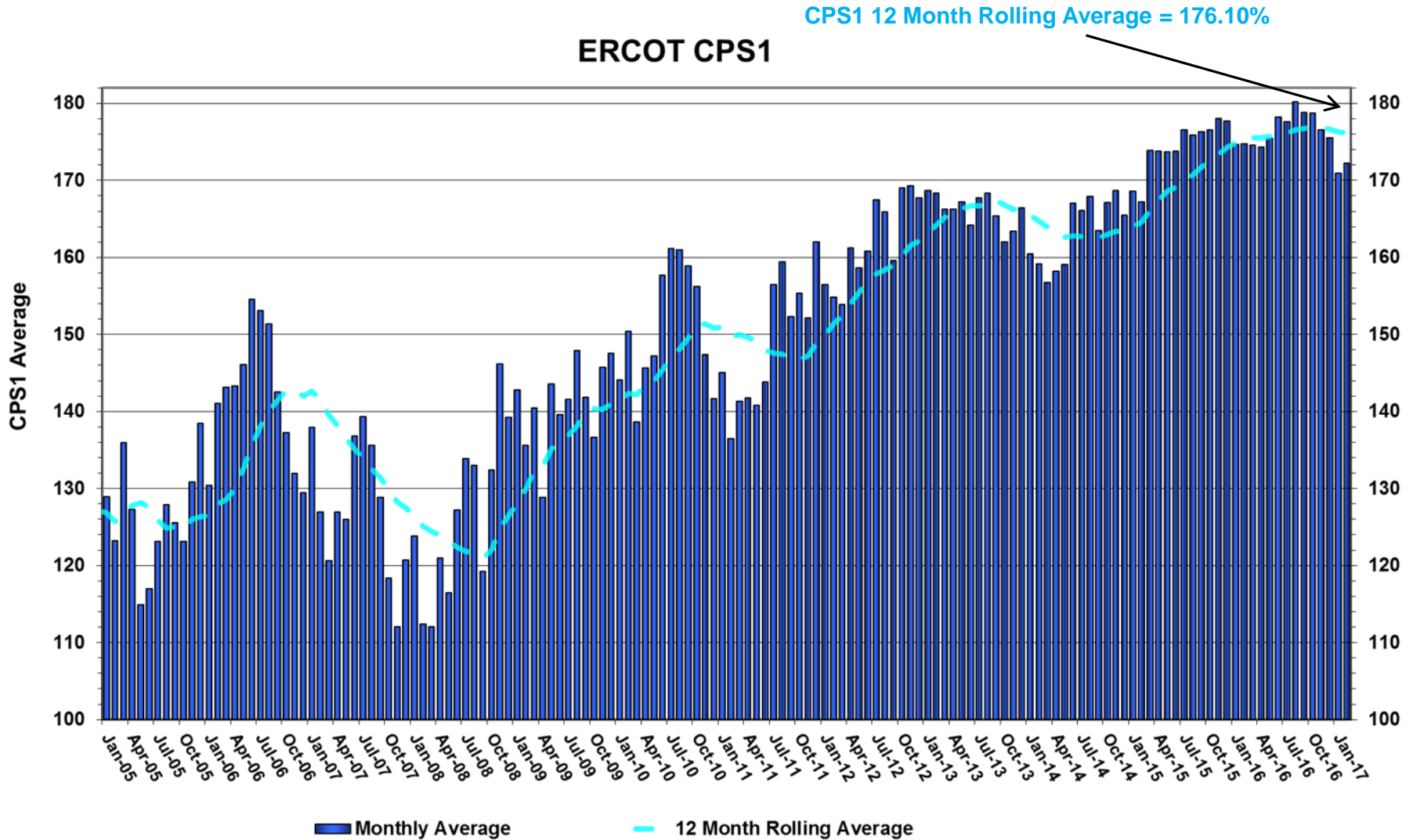
Daily Peak Demand: Hourly Average Actual vs. Forecast, Wind Day-Ahead COPs & On-Line Capacity at Peak – February 2017



Actual Wind Output plus Curtailments vs. Wind Day-Ahead COPs for All Hours – February 2017

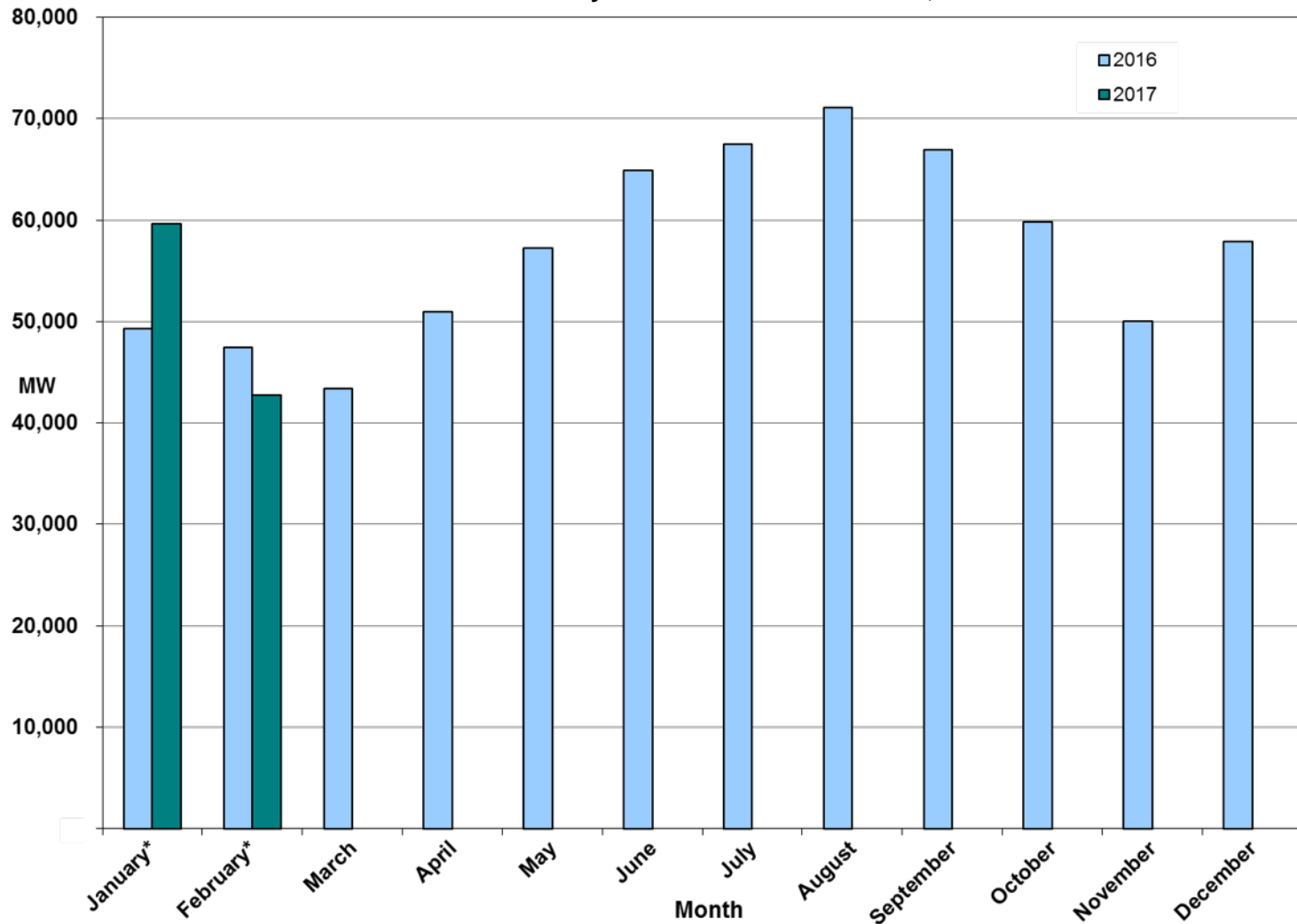


ERCOT's CPS1 Monthly Performance – February 2017



Monthly Peak Actual Demand – February 2017

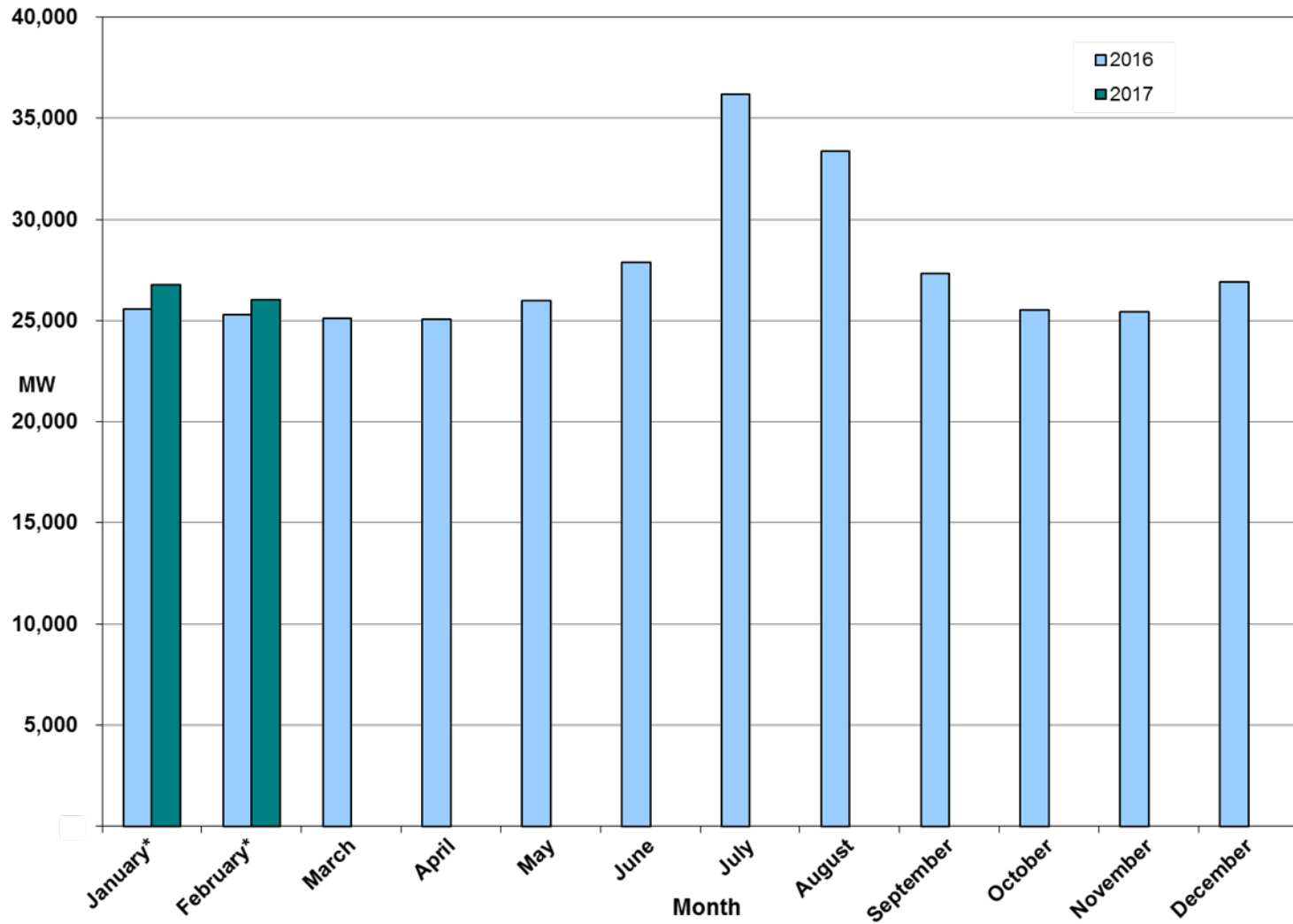
Monthly Peak Actual Demand = 42,729 MW @ 2/16/17 HE 8:00



* Preliminary for latest two months of the current year



Monthly Minimum Actual 15-Minute Demand – February 2017



* Preliminary for latest two months of the current year

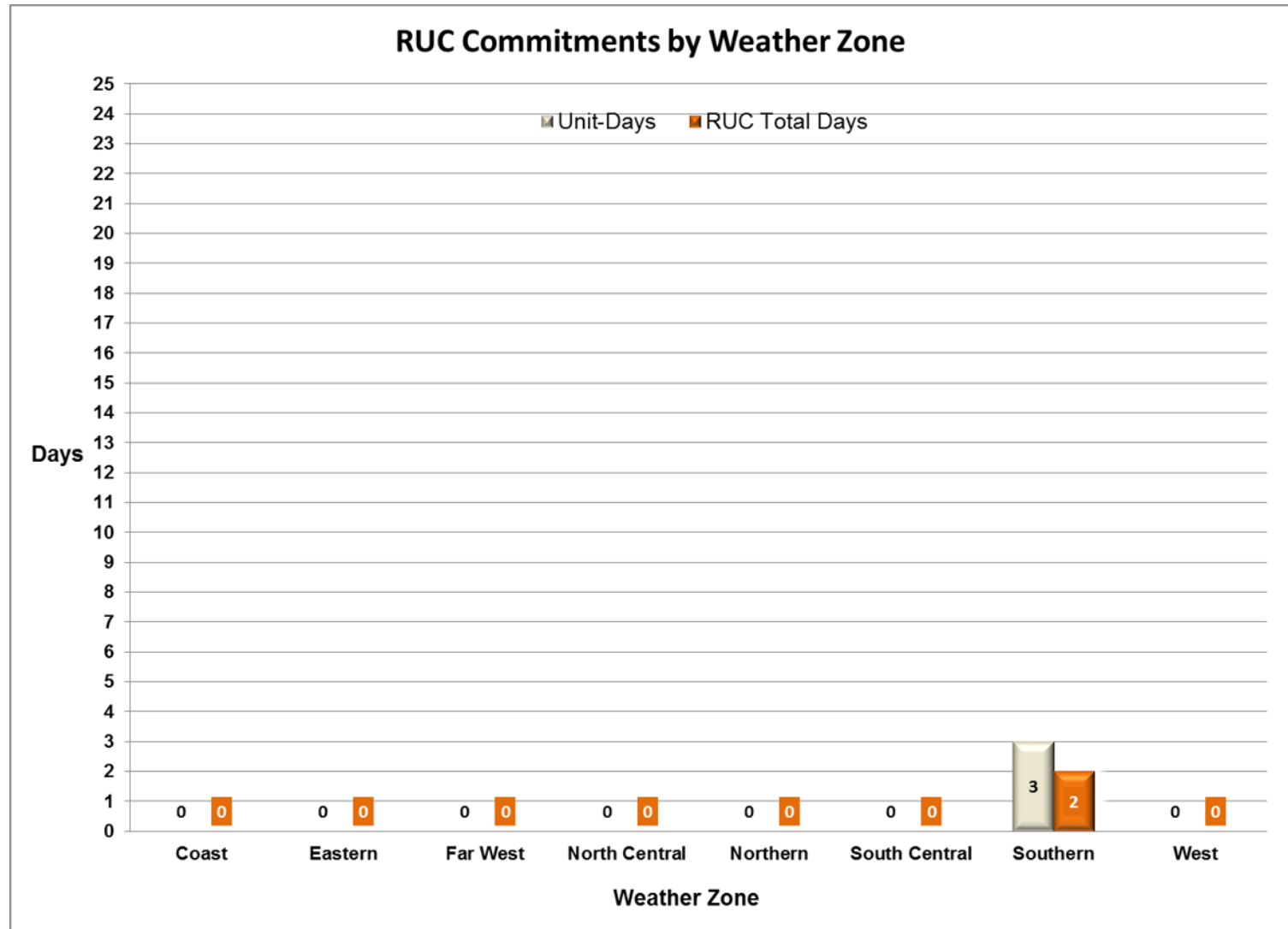


Day-Ahead Load Forecast Performance – February 2017

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

	2014 MAPE	2015 MAPE	2016 MAPE	2017 MAPE	February 2017 MAPE	
Average Annual MAPE	2.83	2.86	2.62	3.05	2.02	
Lowest Monthly MAPE	2.15	1.89	1.94	2.02	Lowest Daily MAPE	0.87 February 19
Highest Monthly MAPE	3.70	3.81	3.86	4.07	Highest Daily MAPE	3.83 February 25

Reliability Unit Commitment (RUC) Capacity by Weather Zone – February 2017



Generic Transmission Constraints (GTCs) – February 2017

GTCs	Jan-16	Dec-16	Jan-17	Feb-17	Last 12 Months Total Days (Mar 16 – Feb 17)
	Days GTCs	Days GTCs	Days GTCs	Days GTCs	
North – Houston	0	0	1	0	3
Valley Import	0	0	0	1	7
Zorillo - Ajo	4	0	0	9	71
Panhandle	1	25	17	21	180
Laredo	1	0	0	0	12
Liston	20	13	21	13	249
Red Tap	-	0	0	0	0
Bakersfield	-	-	0	7	7

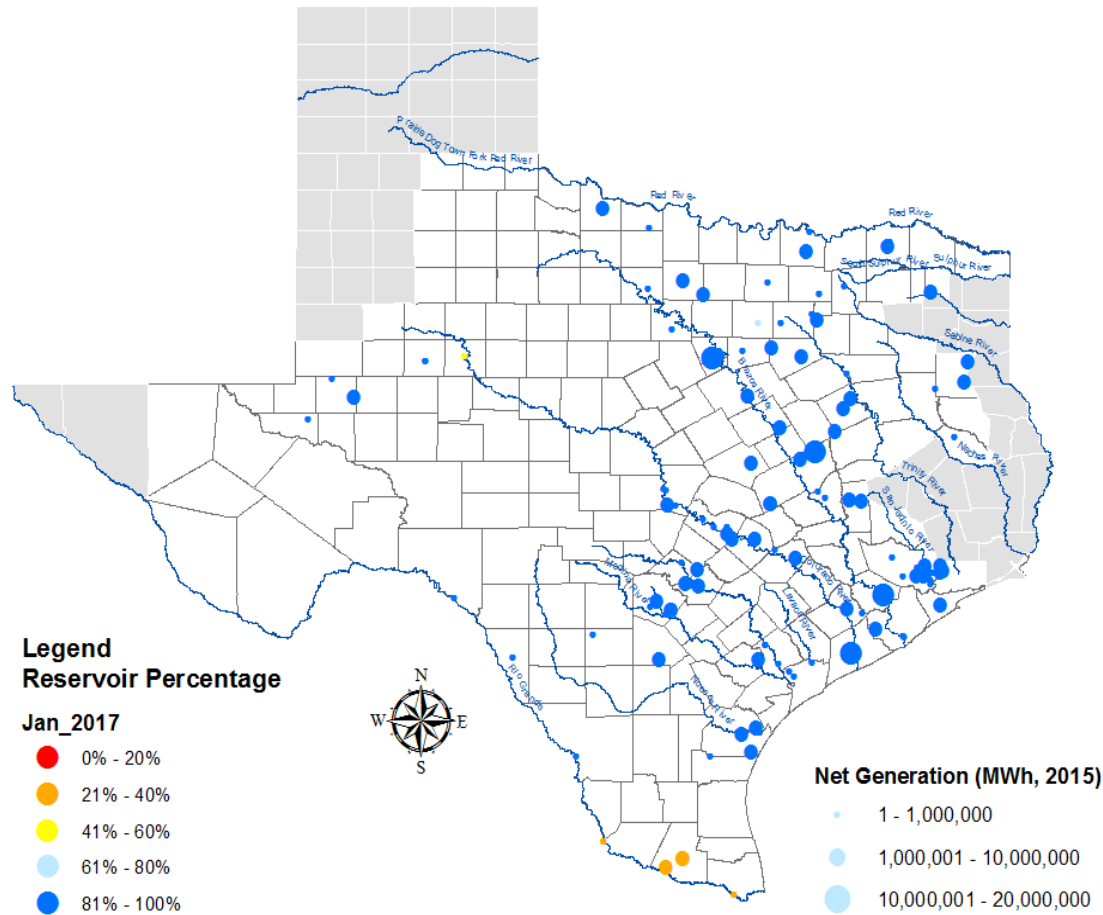
GTC: A transmission flow limit more constraining than a Transmission Element’s normal limit established to constrain flow between geographic areas of the ERCOT Transmission System that is used to enforce stability and voltage constraints that cannot be modeled directly in ERCOT’s transmission security 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 – February 2017

- One Advisory issued due to Physical Responsive Capability being below 3000 MW
 - Issued on 02/18
- One Advisory issued due to Delay in DAM Solution
 - Issued on 02/11
- One Watch issued due to DRUC not completing on schedule
 - Issued on 02/11

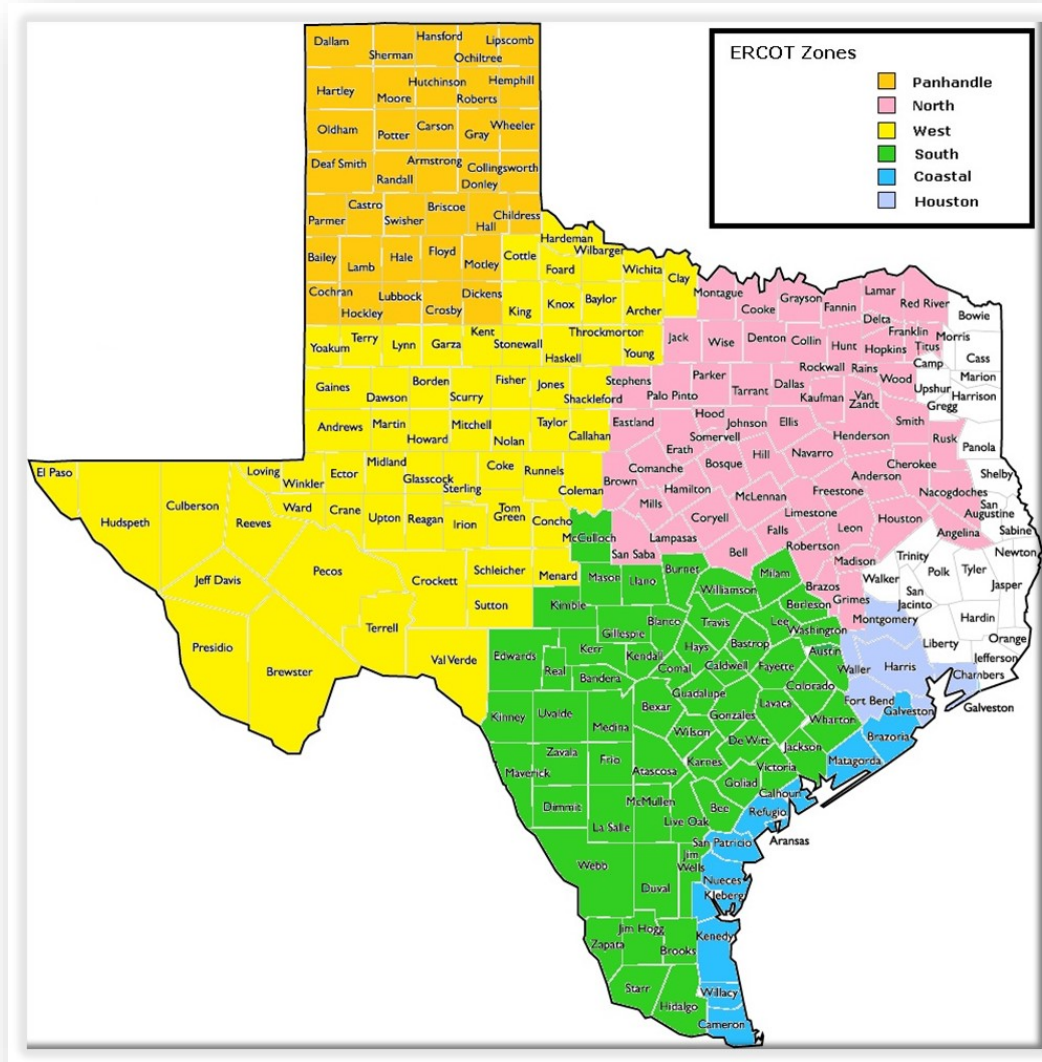
Lake Levels Update – March 1, 2017



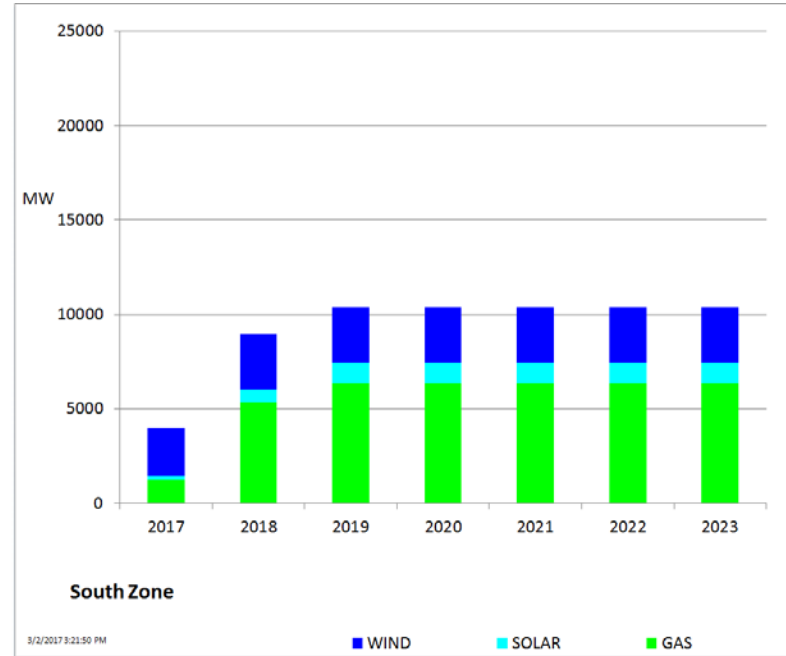
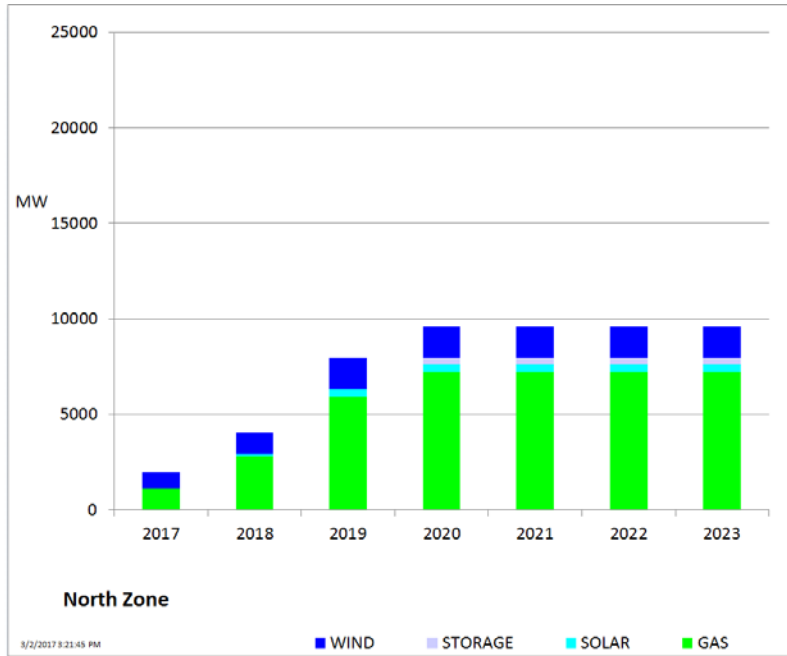
Planning Summary – February 2017

- ERCOT is currently tracking 260 active generation interconnection requests totaling 60,267 MW. This includes 26,510 MW of wind generation.
- ERCOT is currently reviewing proposed transmission improvements with a total cost of \$881.3 Million.
- Transmission Projects endorsed in 2017 total \$110.7 Million.
- All projects (in engineering, routing, licensing, and construction) total approximately \$6.91 Billion (as of February 1, 2017).
- Transmission Projects energized in 2017 total about \$3.71 Million (as of February 1, 2017).

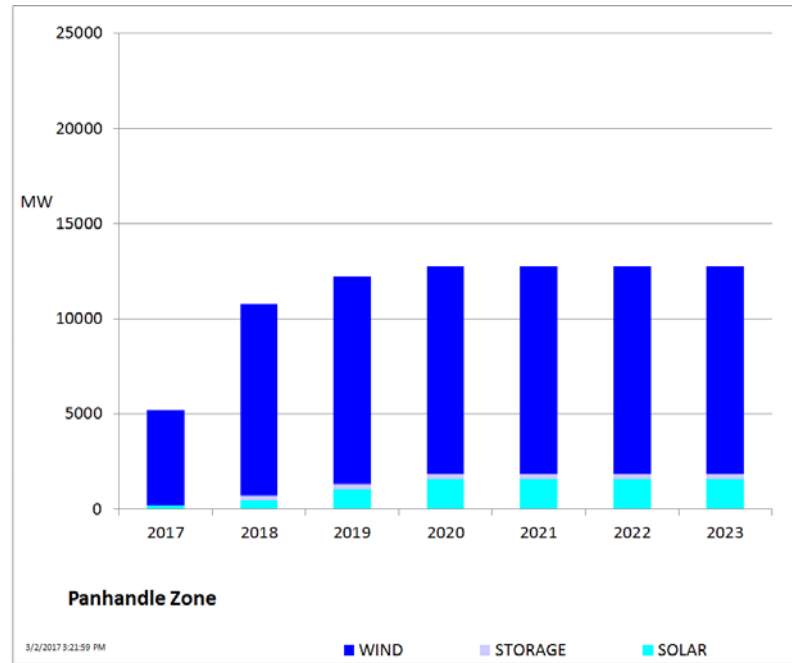
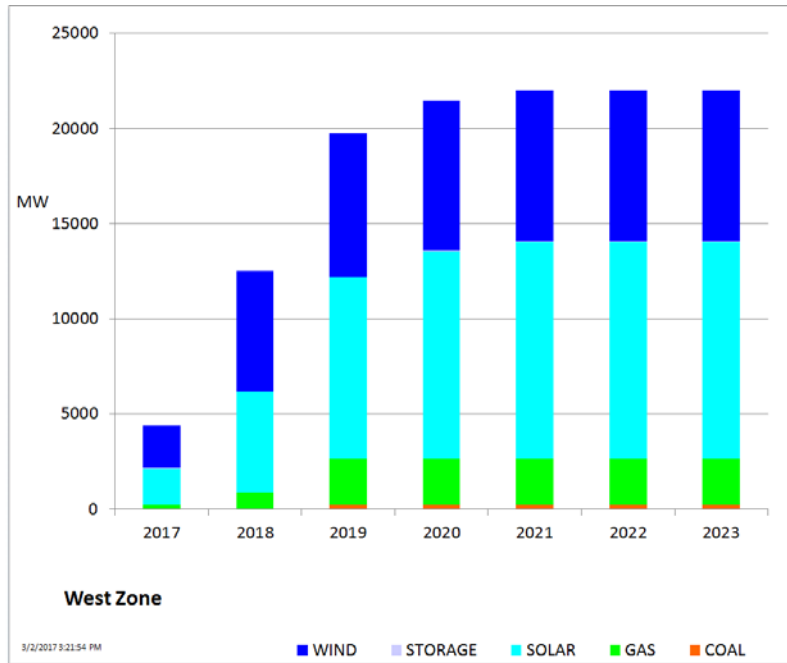
Mapping of Counties to ERCOT Zones – February 2017



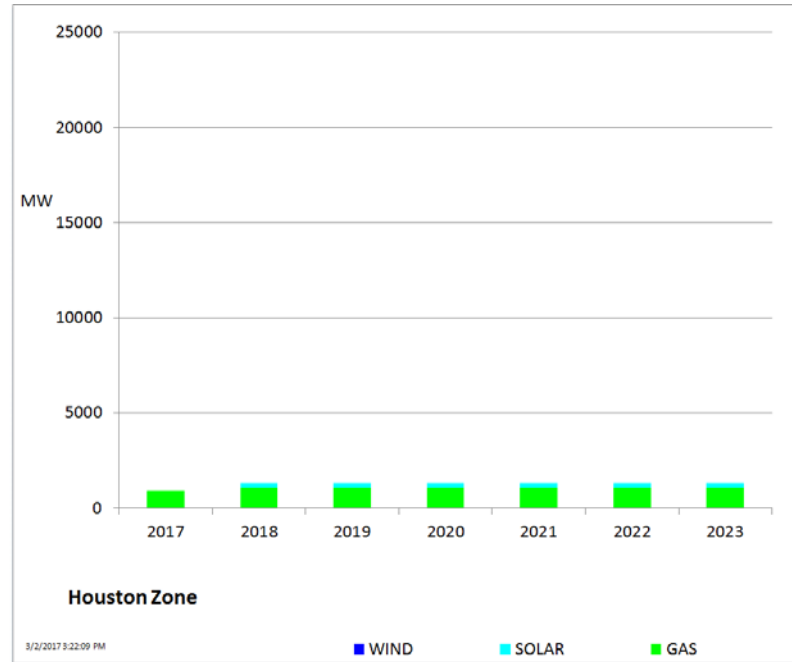
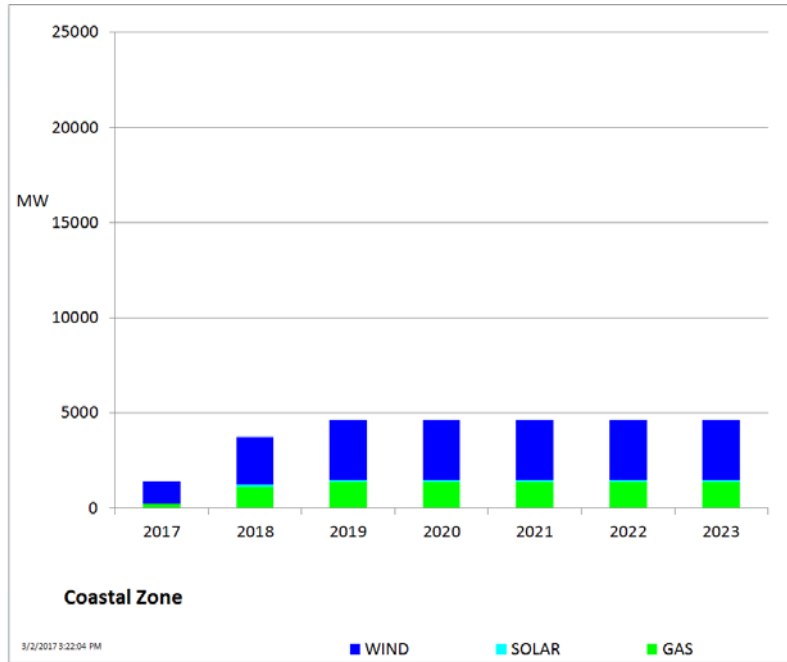
Cumulative MW Capacity of Interconnection Requests by Zone – February 2017



Cumulative MW Capacity of Interconnection Requests by Zone – February 2017

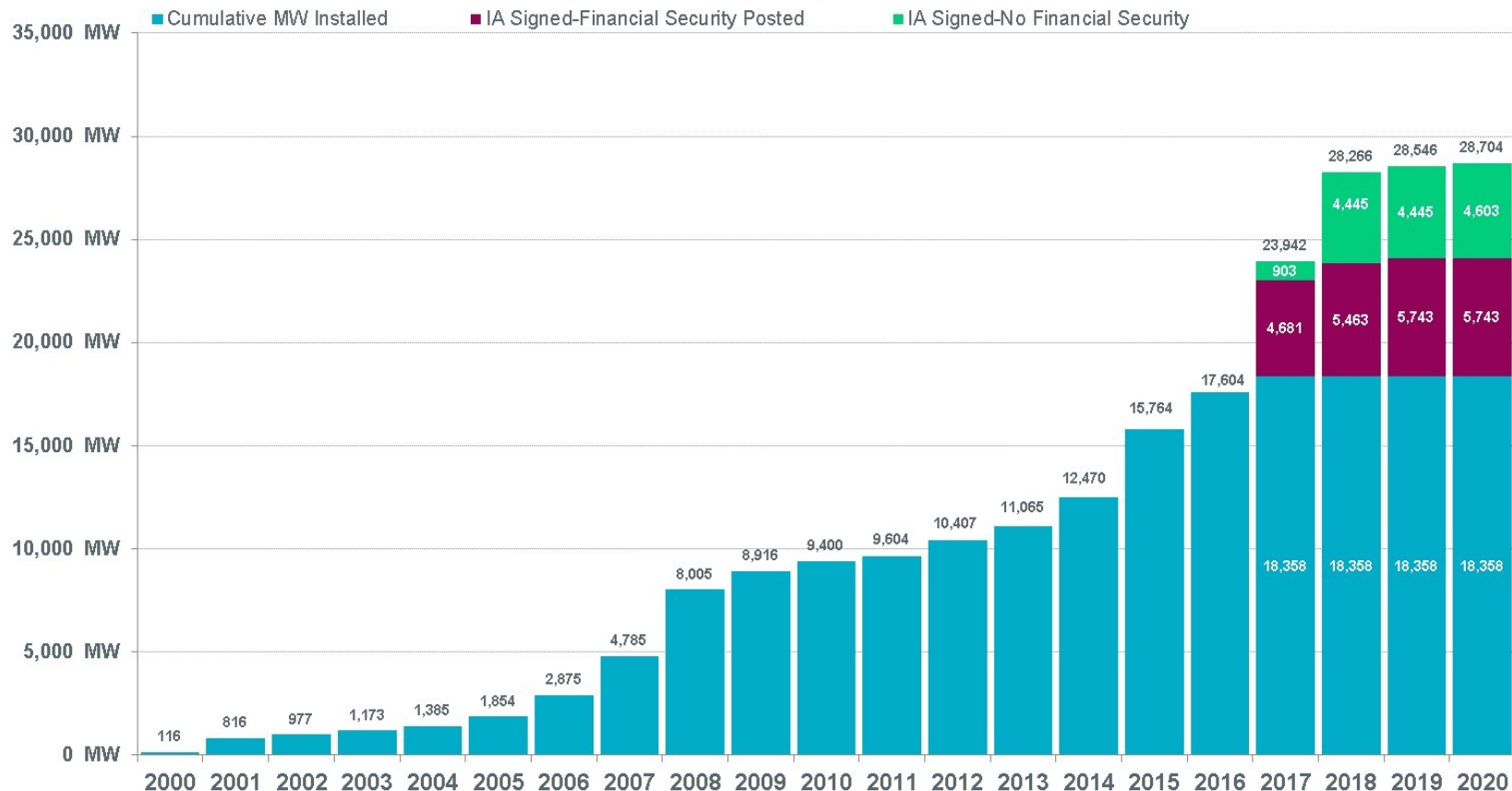


Cumulative MW Capacity of Interconnection Requests by Zone – February 2017



Wind Generation – February 2017

ERCOT Wind Additions by Year (as of March 1, 2017)



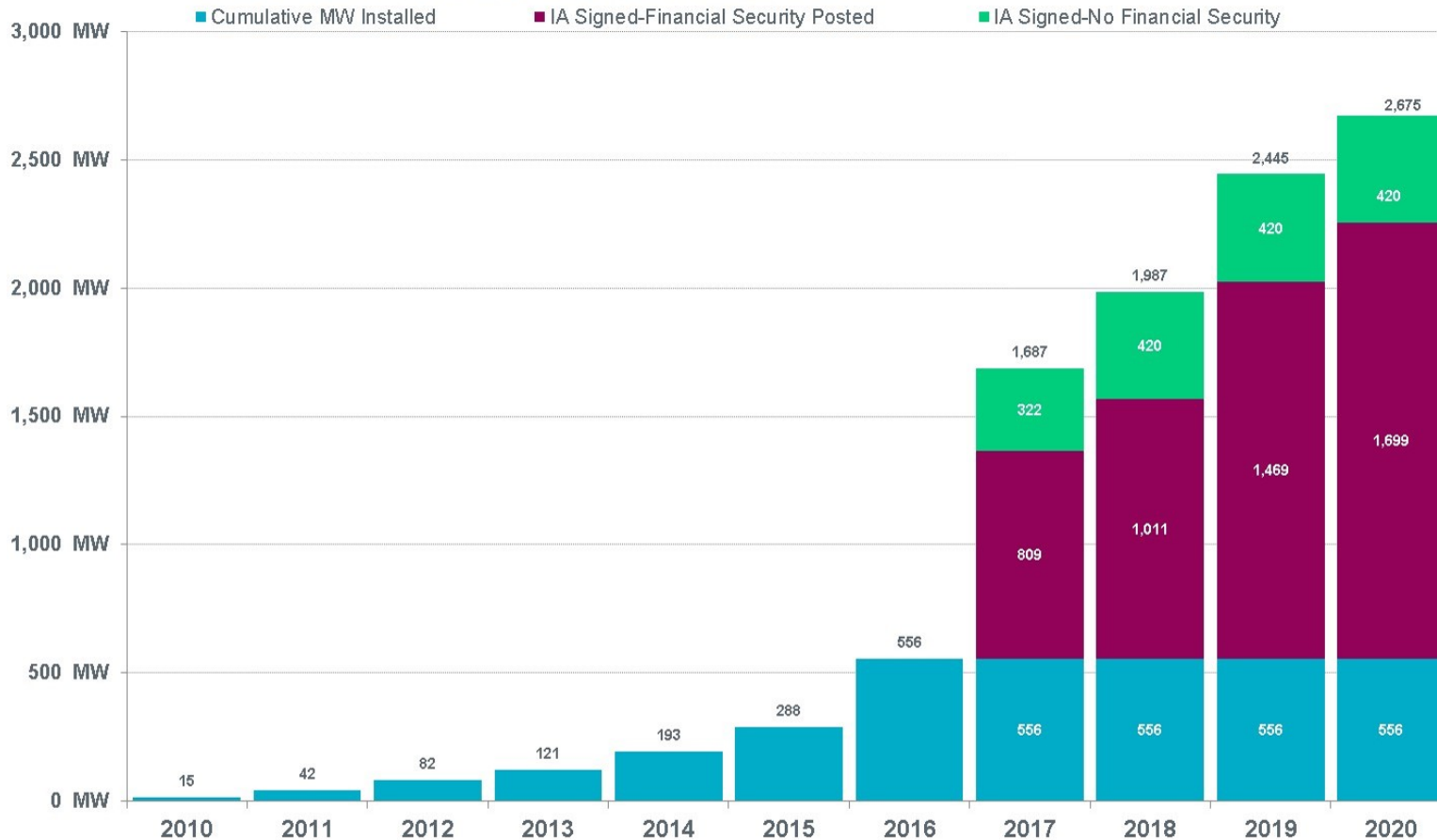
Notes:

- The data presented here is based upon the latest information provided to ERCOT by resource owners and developers and can change without notice.
- Installed capacities for the current year account for changes reported by the facility owners during the reporting month, and will be reflected in subsequent years' totals.
- Installed capacities include only wind facilities that have registered with ERCOT (Those larger than one megawatt and supply power to the ERCOT system.)
- This chart reports annual planned units with projected Commercial Operations Dates throughout the calendar year. In contrast, ERCOT's Capacity, Demand and Reserves (CDR) report shows planned capacity projected to be commercially available on or before the start of the Summer and Winter Peak Load seasons.
- Financial security posted for funding interconnection facilities does not include CREZ security deposits, which are refunded to the Interconnecting Entity



Solar Generation – February 2017

ERCOT Solar Additions by Year (as of March 1, 2017)

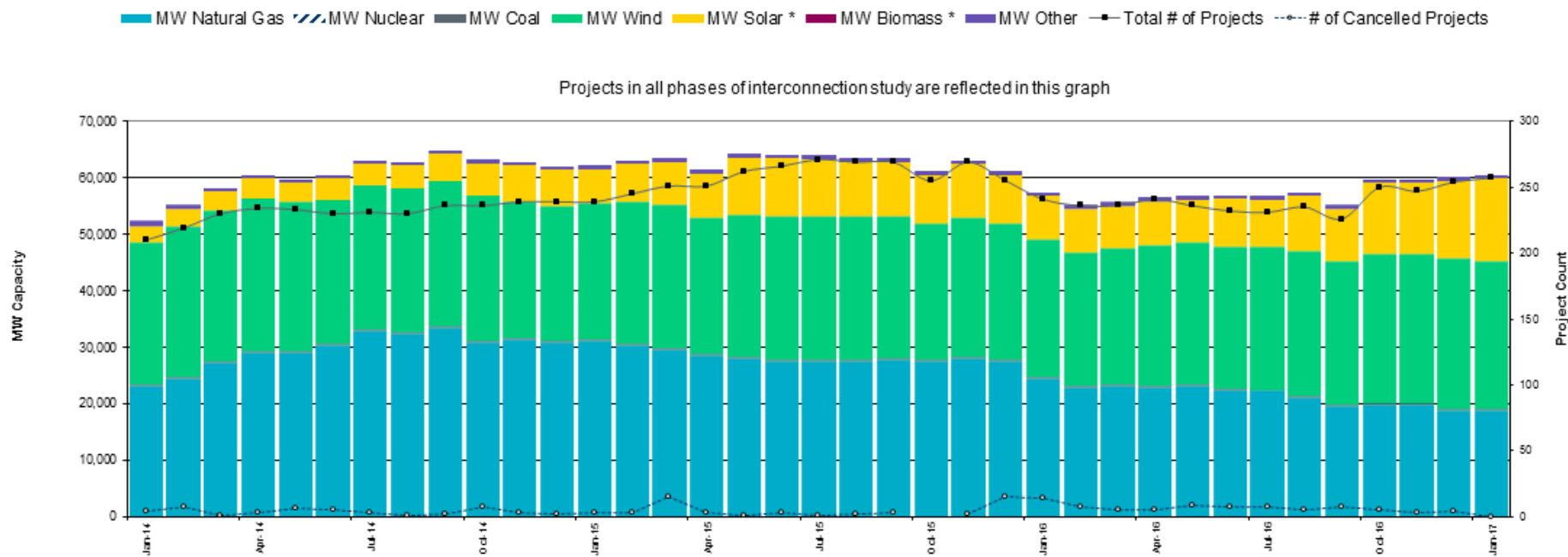


Notes:

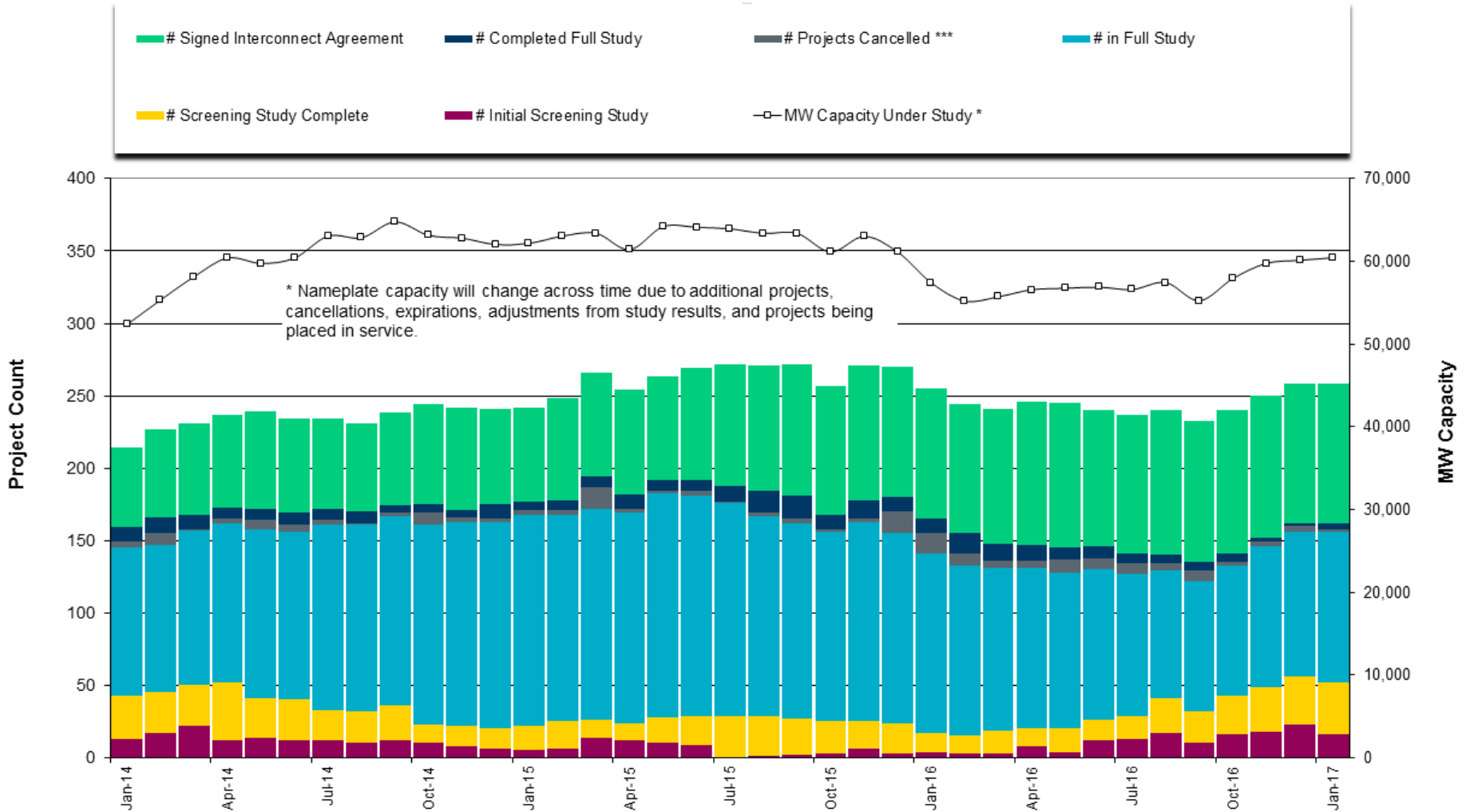
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Generation Interconnection Activity by Fuel – February 2017

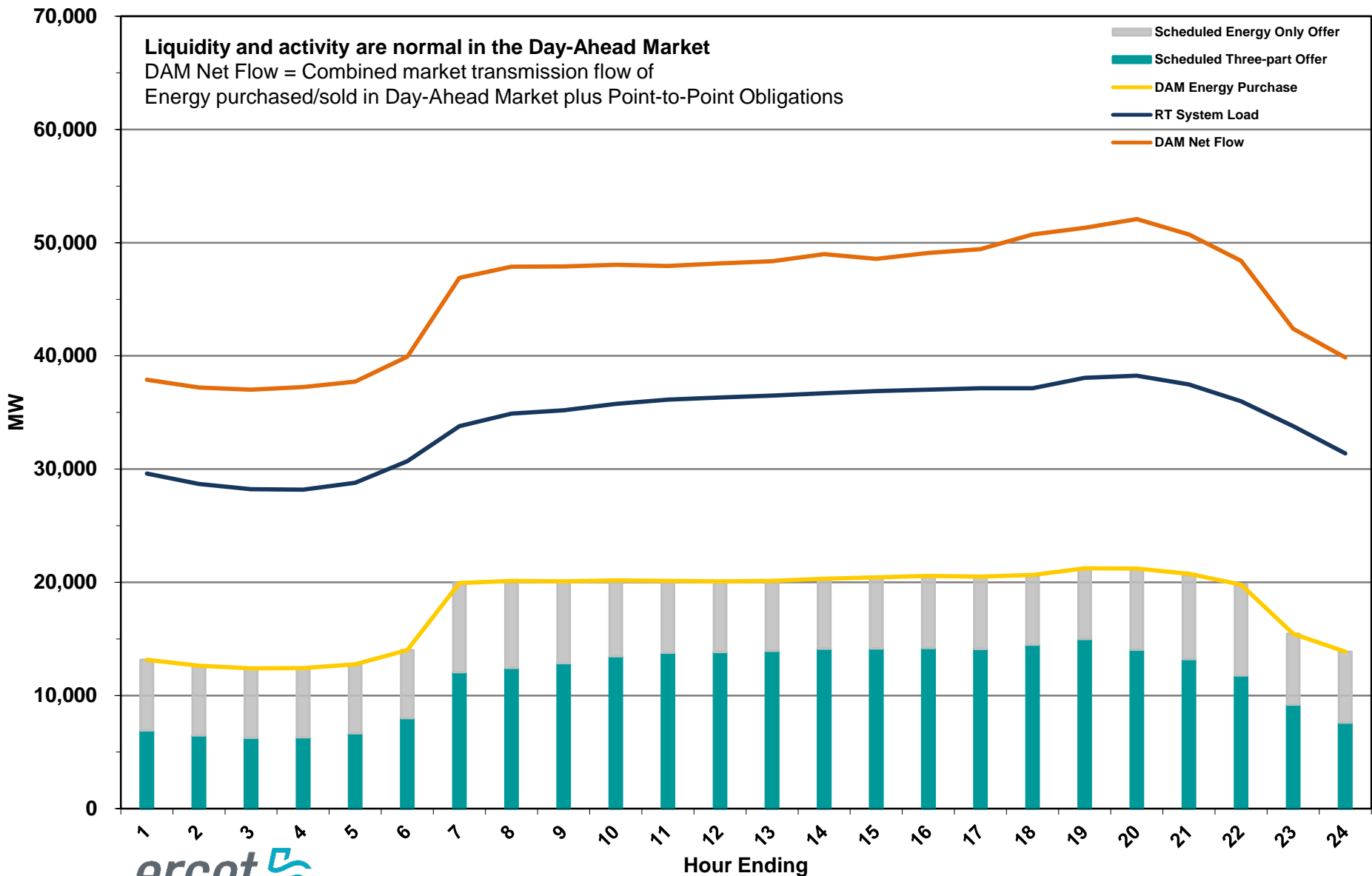


Generation Interconnection Activity by Project Phase – February 2017

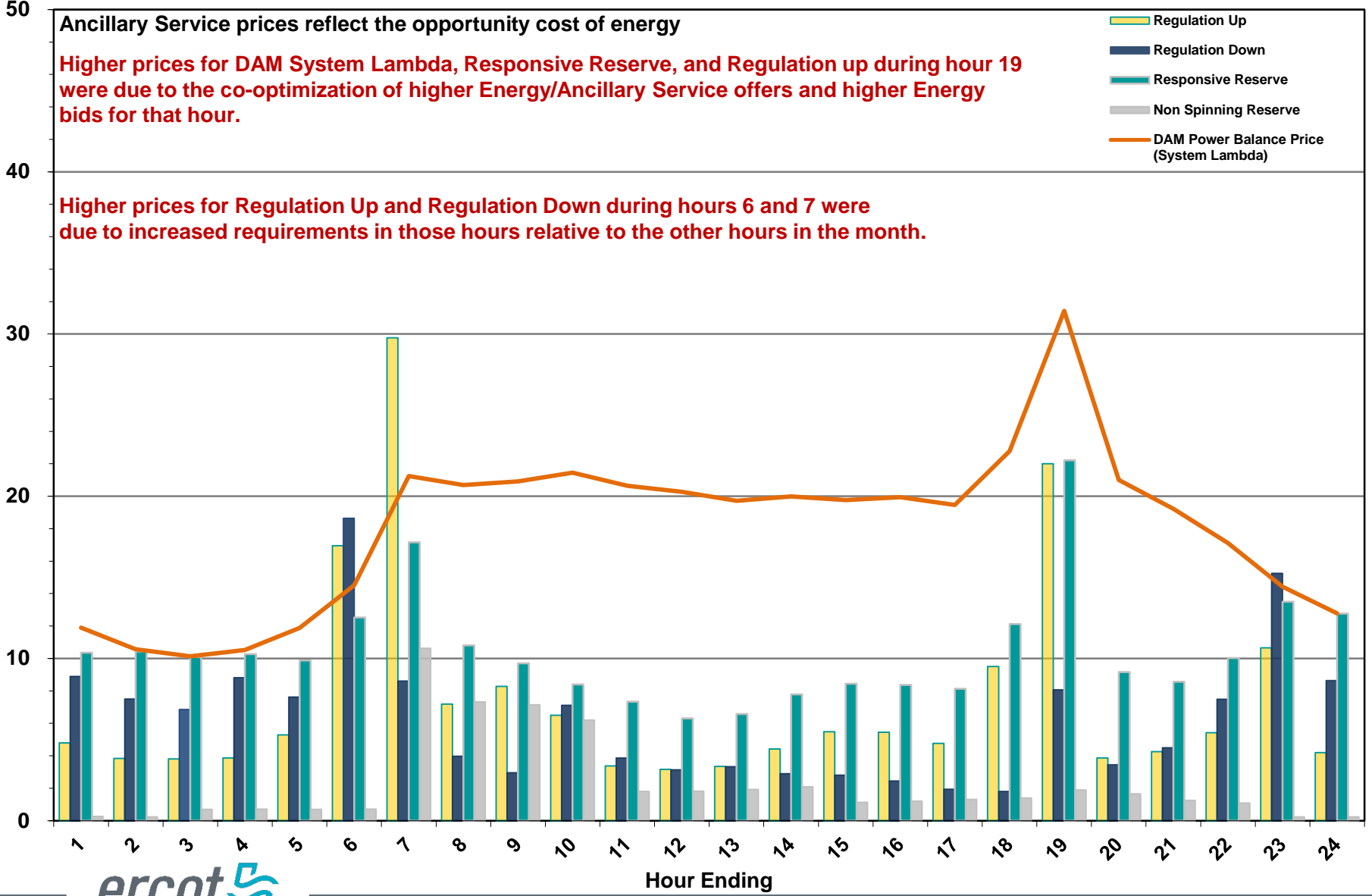


Market Operations

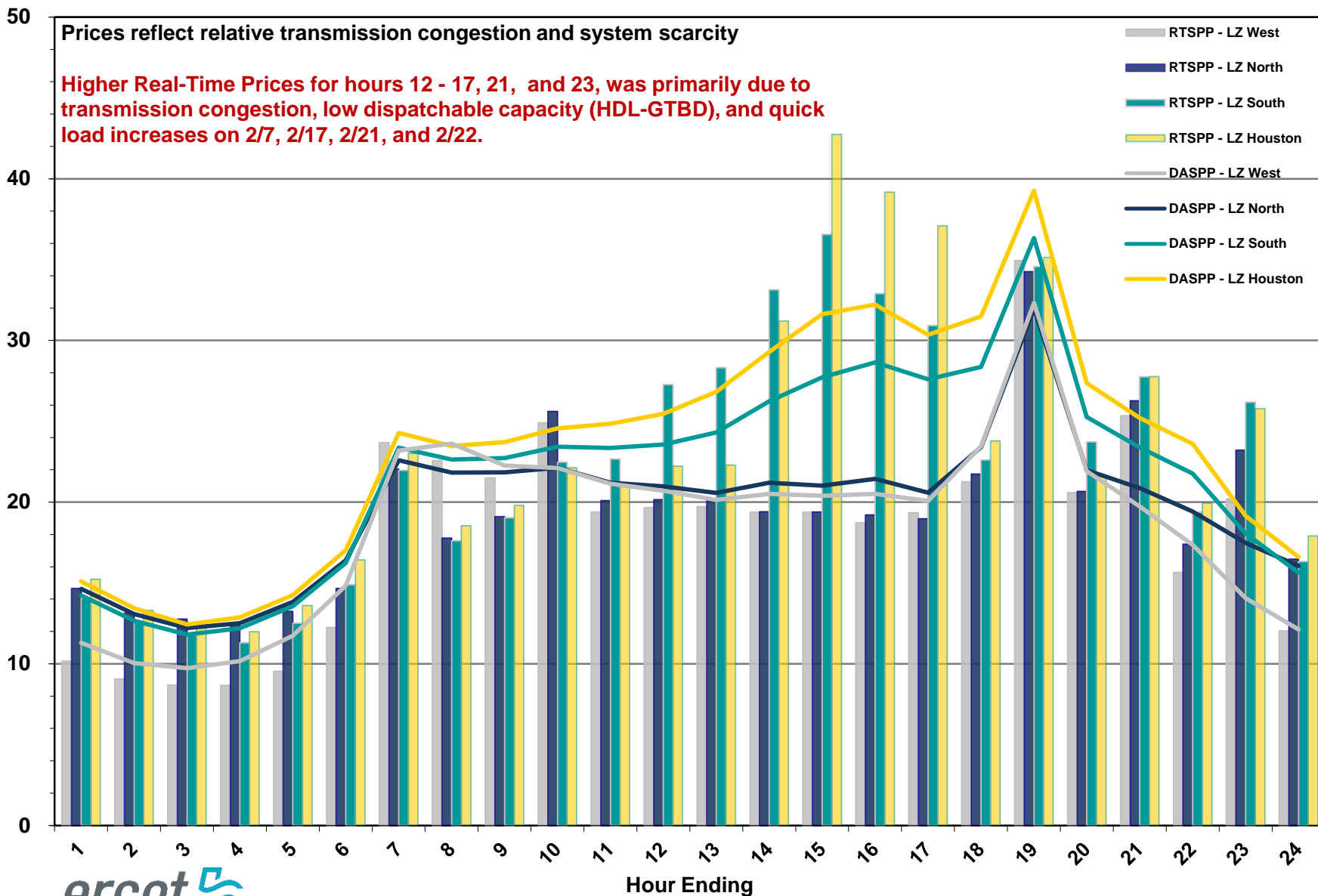
Day-Ahead Schedule (Hourly Average) – February 2017



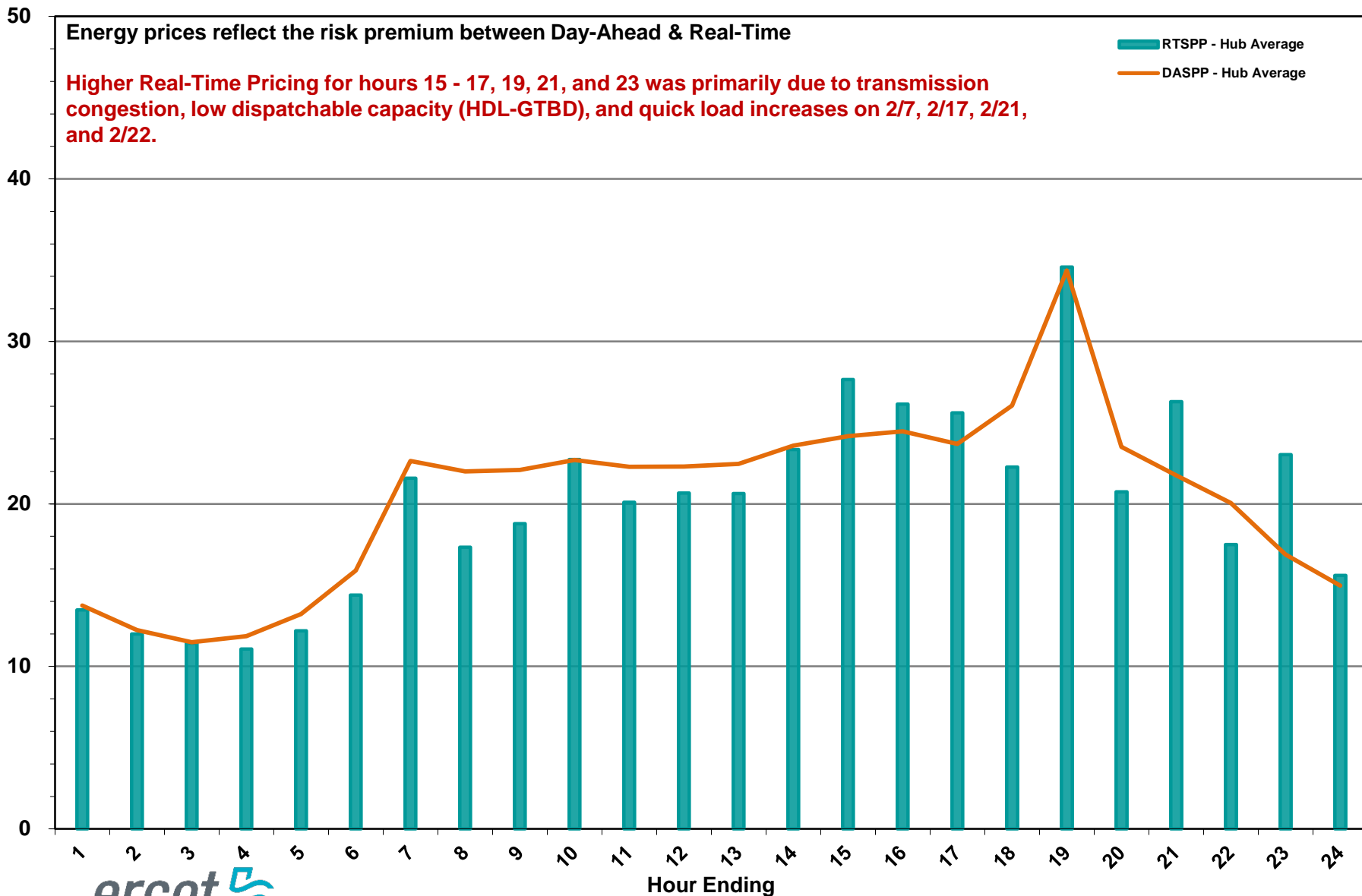
Day-Ahead Electricity and Ancillary Service Prices (Hourly Average) – February 2017



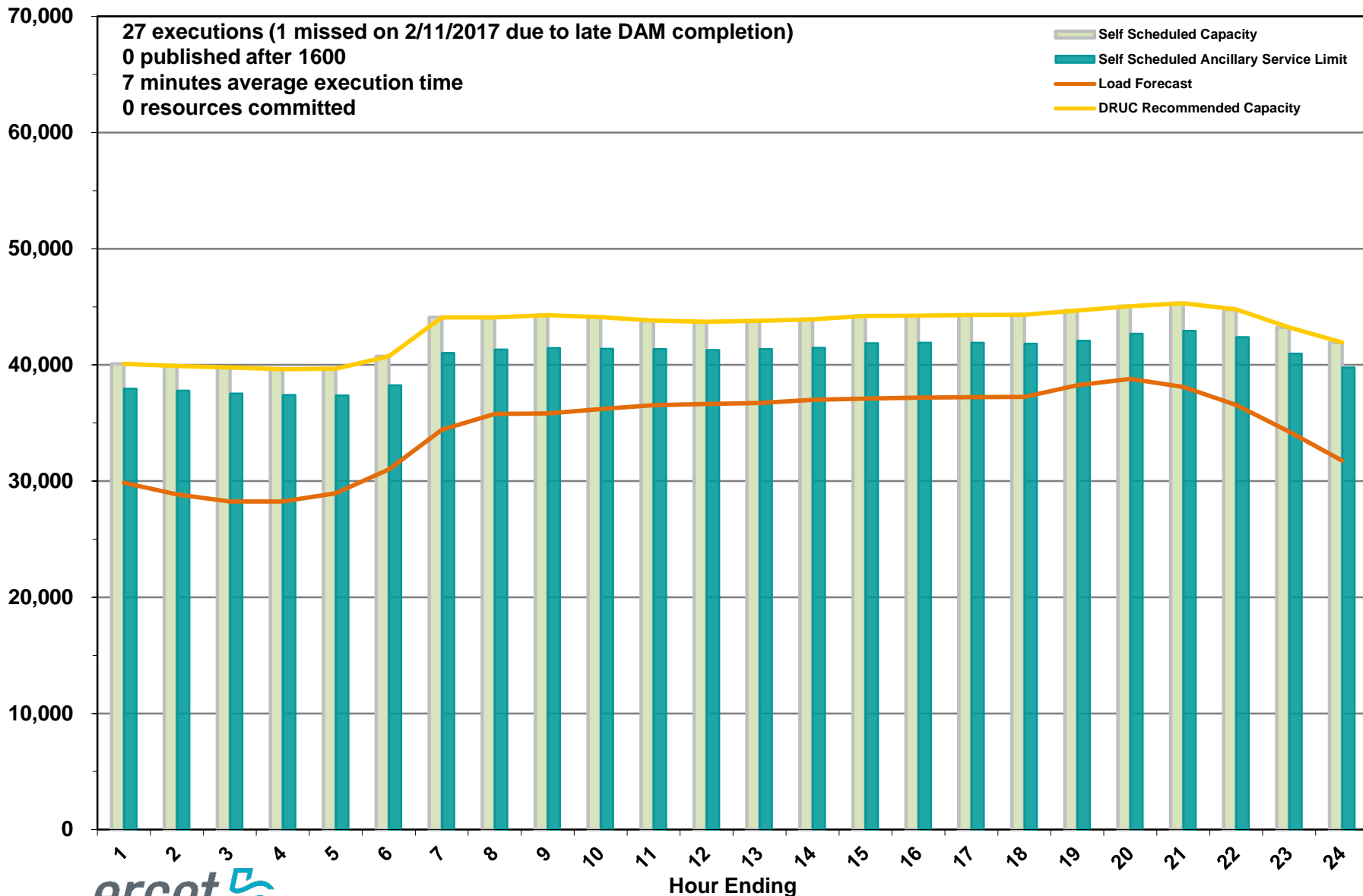
Day-Ahead vs Real-Time Load Zone SPP (Hourly Average) – February 2017



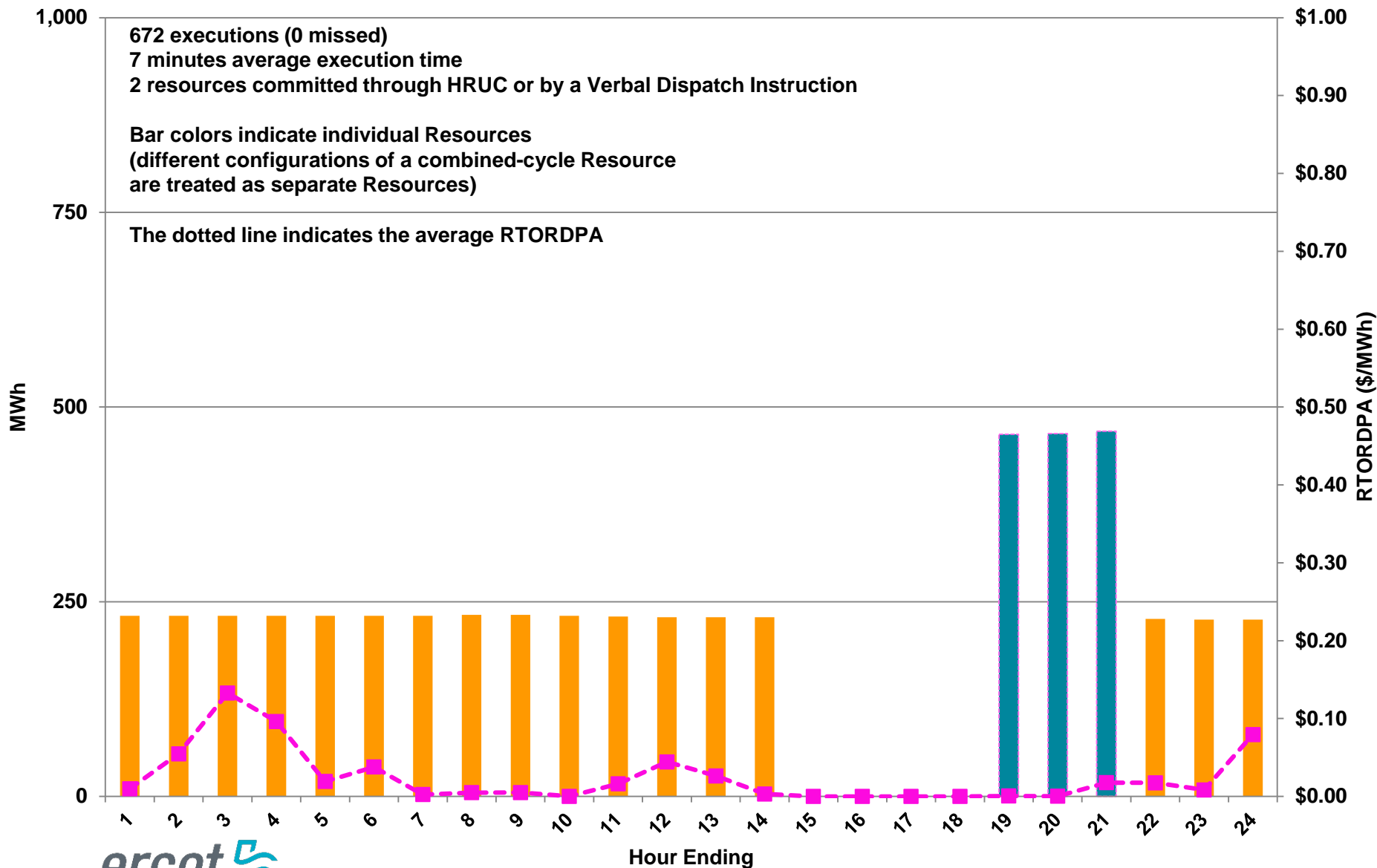
Day-Ahead vs Real-Time Hub Average SPP (Hourly Average) – February 2017



DRUC Monthly Summary (Hourly Average) – February 2017



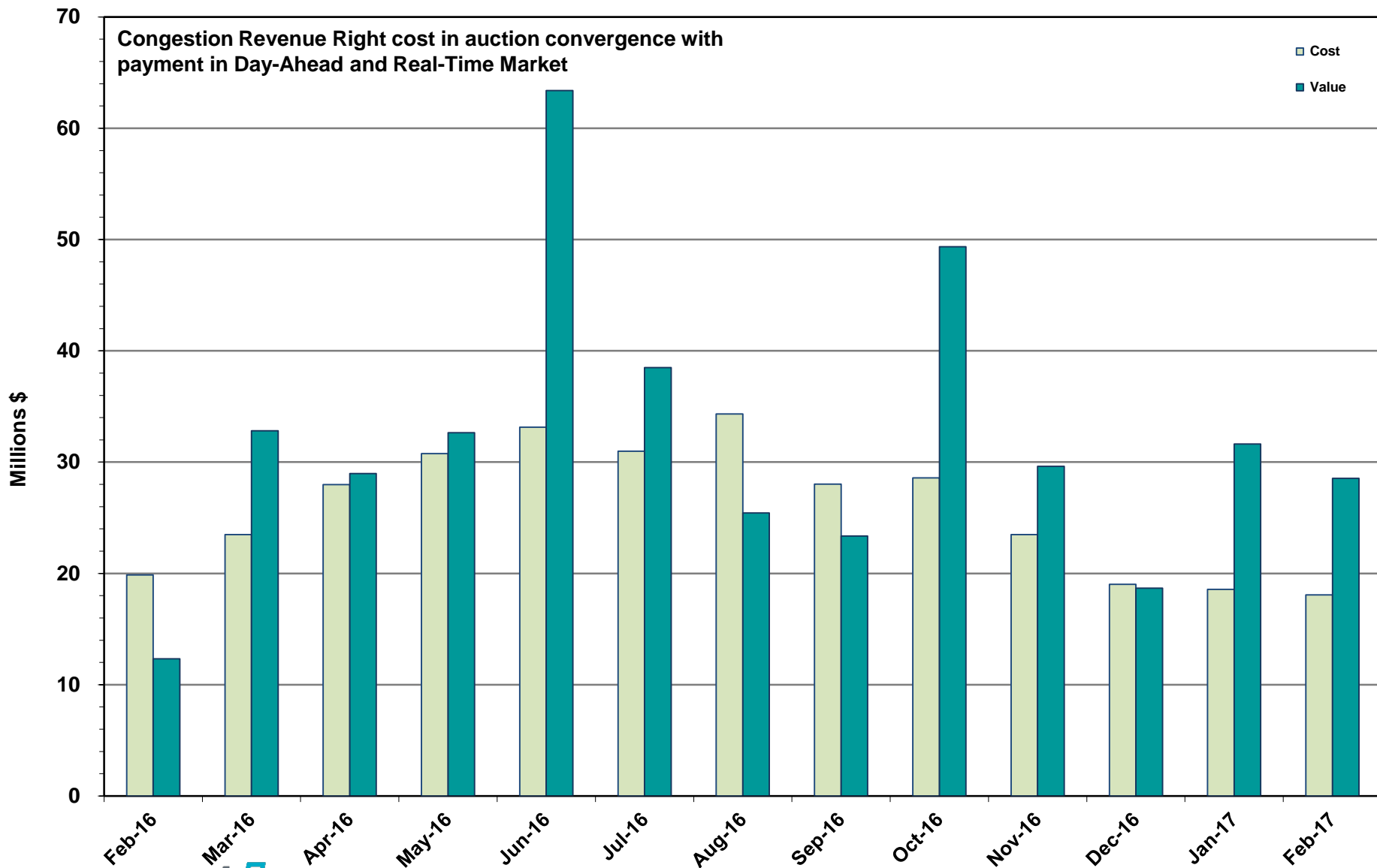
HRUC Monthly Summary and Real Time On-Line Reliability Deployment Price Adder (RTORDPA) (Hourly Average) – February 2017



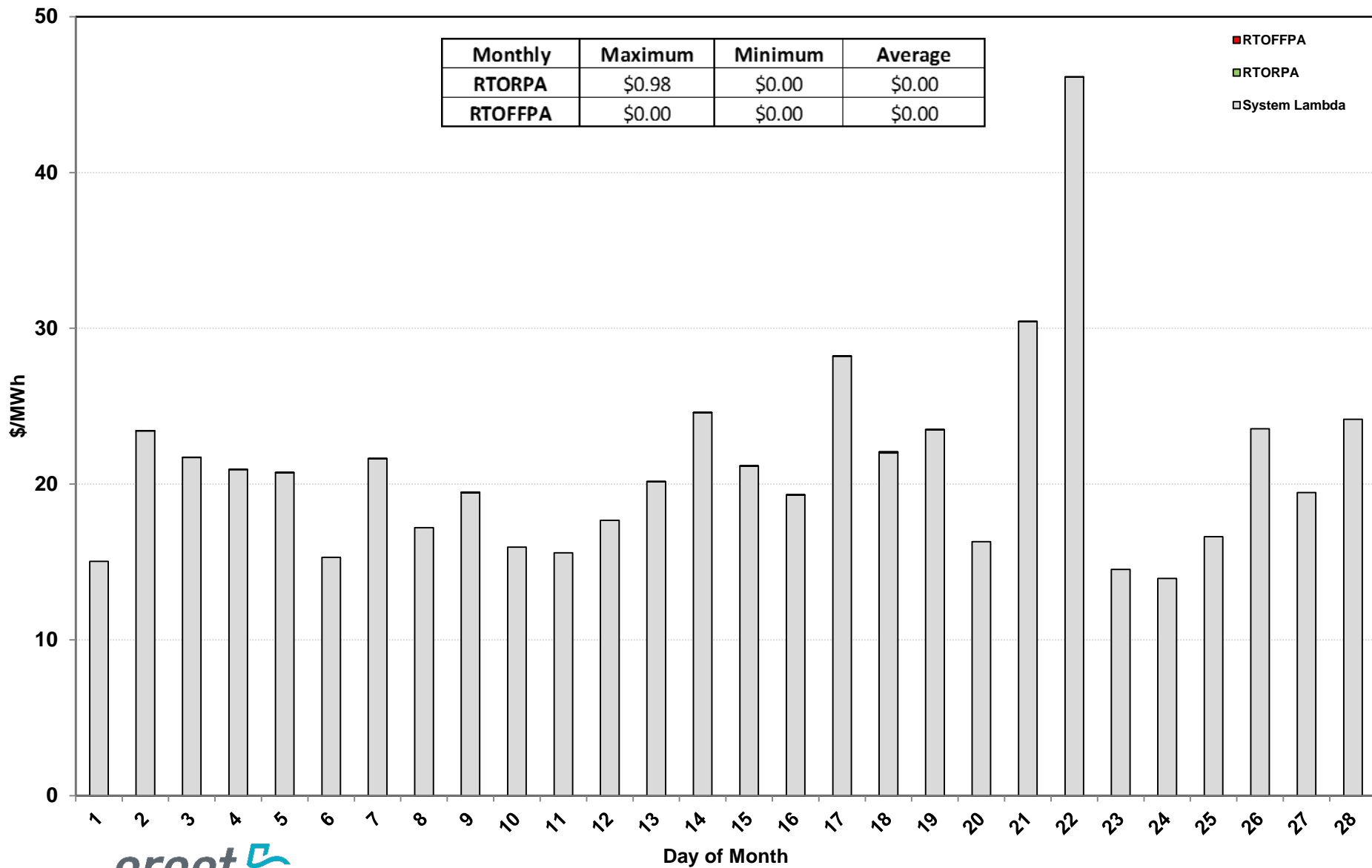
Non-Spinning Reserve Service Deployment – February 2017

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

CRR Price Convergence – February 2017



Daily Average System Lambda and ORDC Price Adders – February 2017



ERS Procurement for February – May 2017

	TP1	TP2	TP3	TP4	TP5	TP6
Non Weather-Sensitive ERS-10 MW	304.071	314.139	312.787	307.631	301.799	285.273
Non Weather-Sensitive ERS-30 MW	570.588	626.265	608.201	604.502	586.119	515.379
Weather-Sensitive ERS-10 MW	0	0	0	0	0	0
Weather-Sensitive ERS-30 MW	.91	0	.68	.91	0	0
Total MW Procured	875.569	940.404	921.668	913.043	887.918	800.652
Clearing Price	\$20.45	\$11.33	\$1.96	\$19.93	\$12.08	\$2.27

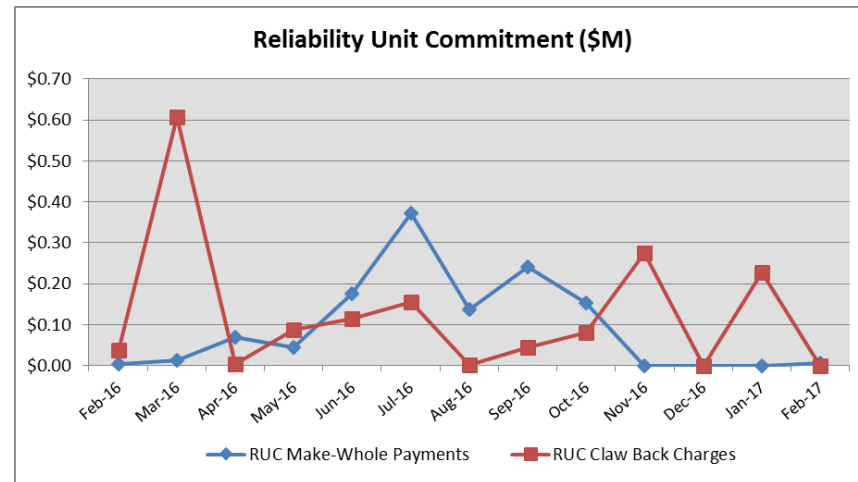
*Weather-Sensitive Time Periods for FebMay17 are TP1,TP3, TP4 and TP5.

Time Period **Time Period Hours**

- Time Period 1 Hours Ending 0600 - 0800 (5:00:00 a.m. to 8:00:00 a.m.) Monday through Friday except ERCOT Holidays.
- Time Period 2 Hours Ending 0900 - 1300 (8:00:00 a.m. to 1:00:00 p.m.) Monday through Friday except ERCOT Holidays.
- Time Period 3 Hours Ending 1400 - 1600 (1:00:00 p.m. to 4:00:00 p.m.) Monday through Friday except ERCOT Holidays.
- Time Period 4 Hours Ending 1700 - 1900 (4:00:00 p.m. to 7:00:00 p.m.) Monday through Friday except ERCOT Holidays.
- Time Period 5 Hours Ending 2000 - 2200 (7:00:00 p.m. to 10:00:00 p.m.) Monday through Friday except ERCOT Holidays.
- Time Period 6 All other hours

Reliability Services – February 2017

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



RUC Make-Whole Payments were \$0.01M in February 2017.
RUC Clawback Charges were \$0.00M.

There was \$0.00M allocated directly to load in February 2017, compared to:

- \$0.23M in January 2017
- \$0.04M in February 2016

Capacity Services – February 2017

Capacity Services	\$ in Millions
Regulation Up Service	\$2.00
Regulation Down Service	\$1.41
Responsive Reserve Service	\$15.96
Non-Spinning Reserve Service	\$3.10
Black Start Service	\$0.55
Voltage Services - Reactive Power	\$0.00
Voltage Services - Lost Opportunity	\$0.00
Total Charges	\$23.02

Capacity Services costs decreased from last month and decreased from February 2016.

February 2017 cost was \$23.02M, compared to:

- A charge of \$27.77M in January 2017
- A charge of \$32.83M in February 2016

Energy Settlement – February 2017

Day-Ahead Market Energy Settlement	\$ in Millions
Energy Purchases	\$265.10
Point to Point Obligation Purchases	\$28.94
RMR Day-Ahead Revenue	\$0.00
Energy Sales	(\$261.47)
Day-Ahead Congestion Rent	\$32.57
Day-Ahead Market Make-Whole Payments	(\$0.18)

Day-Ahead Market energy settlement decreased from last month and increased from February 2016.

Real-Time Market energy settlement activity decreased from last month and increased from February 2016.

Real-Time Market Energy Settlement	\$ in Millions
Energy Imbalance at a Resource Node	(\$254.44)
Energy Imbalance at a Load Zone	\$395.66
Energy Imbalance at a Hub	(\$109.28)
Real Time Congestion from Self Schedules	(\$0.16)
Block Load Transfers and DC Ties	(\$0.25)
Impact to Revenue Neutrality	\$31.53
Emergency Energy Payments	(\$0.12)
Base Point Deviation Charges	\$0.17
Real-Time Metered Generation (MWh in millions)	22.95

Congestion Revenue Rights (CRR) – February 2017

	\$ in Millions
Annual Auction	(\$14.30)
Monthly Auction	(\$3.77)
Total Auction Revenue	(\$18.07)
Day-Ahead CRR Settlement	(\$28.55)
Day-Ahead CRR Short-Charges	\$0.48
Day-Ahead CRR Short-Charges Refunded	(\$0.48)
Real-Time CRR Settlement	\$0.00
Real-Time CRR Short-Charges	\$0.00
Real-Time CRR Short-Charges Refunded	\$0.00
Total CRR Funding	(\$28.55)
Day-Ahead Point to Point Obligations Settlement	\$28.94
Real-Time Point to Point Obligation Settlement	(\$37.26)
Net Point to Point Obligation Settlement	(\$8.32)

Congestion Revenue Rights settlement payments were fully funded and excess funds were paid to load.

Point to Point Obligations settled with a net credit of \$8.32M compared to a net credit of \$10.16M last month.

CRR Balancing Account Fund – February 2017

CRR Balancing Account Fund	\$ in Millions
Beginning Balance for the Month	\$10.00
CRR Balancing Account Credit Total	\$4.49
CRR PTP Option Award Charges	\$0.05
Day-Ahead CRR Short-Charges Refunded	(\$0.48)
Load Allocated CRR Amount	(\$4.07)
Total Fund Amount	\$10.00

ERCOT implemented the rolling CRR Balancing Account Fund beginning with Operating Month December 2014.

As of February 2017, the CRR Balancing Account Fund was at \$10.00M and excess funds of \$4.07M were allocated to Load.

Revenue Neutrality – February 2017

Revenue Neutrality Settlement

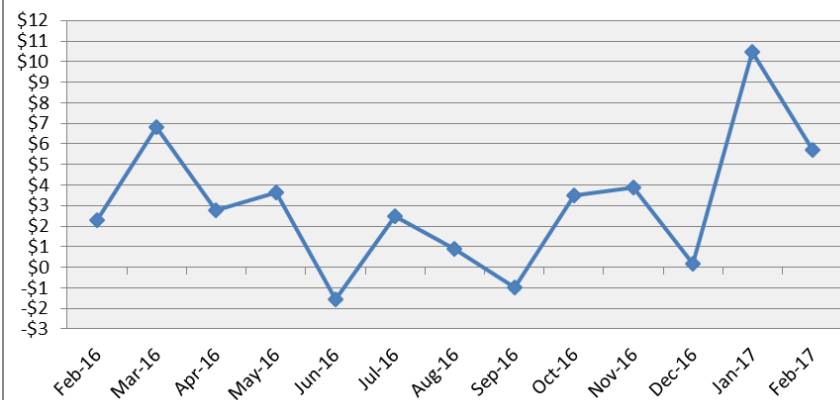
	\$ in Millions
Real-Time Point to Point Obligation Settlement	(\$37.26)
Real-Time Point to Point Options and Options with Refund Settlement	\$0.00
Real-Time Energy Imbalance Settlement	\$31.94
Real-Time Congestion from Self-Schedules Settlement	(\$0.16)
DC Tie & Block Load Transfer Settlement	(\$0.25)
Charge to Load	\$5.73

Revenue Neutrality charges to load decreased compared to last month and increased compared to February 2016.

February 2017 was a charge of \$5.73M, compared to:

- \$10.46M charge in January 2017
- \$2.32M charge in February 2016

Revenue Neutrality Uplift (\$M)



Real-Time Ancillary Service Imbalance (ORDC) – February 2017

Real-Time Ancillary Service Imbalance	\$ in Thousands
Real-Time AS Imbalance Payment Amount	(\$4.63)
Load Allocated AS Imbalance Revenue Neutrality Amount	\$4.63
Total Charges	\$4.63

In February 2017, total credits to QSEs with an Ancillary Service Imbalance were \$4,633 while total credits in January 2017 were \$103,709.

18 of the 28 days in February had settlement dollars equal to \$0 for the day.

All days in February with settlement greater than \$0 were settled as a net credit to QSEs with an Ancillary Service Imbalance and as a charge to QSEs representing load.

The highest payment to QSEs with an Ancillary Service Imbalance occurred on February 18th in the amount of \$2,450.

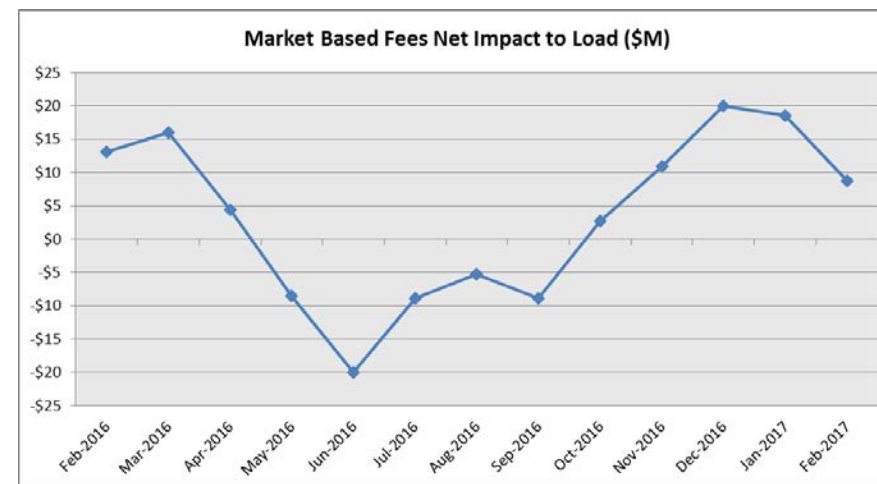
Net Allocation to Load – February 2017

Market-Based Allocation	\$ in Millions
CRR Auction Revenue Disbursement Settlement	(\$18.07)
Balancing Account Proceeds Settlement	(\$4.07)
Net Reliability Unit Commitment Settlement	\$0.00
Ancillary Services Settlement	\$23.02
Reliability Must Run Settlement (incl. RMR for Capacity)	\$2.14
Real-Time Revenue Neutrality Settlement	\$5.73
Emergency Energy Settlement	\$0.12
Base Point Deviation Settlement	(\$0.17)
ORDC Settlement	\$0.00
Total	\$8.70
Fee Allocation	
ERCOT Administrative Fee Settlement	\$12.78
Net Allocated to Load	\$21.48

The charge for the net allocation to Load decreased from last month and decreased from February 2016.

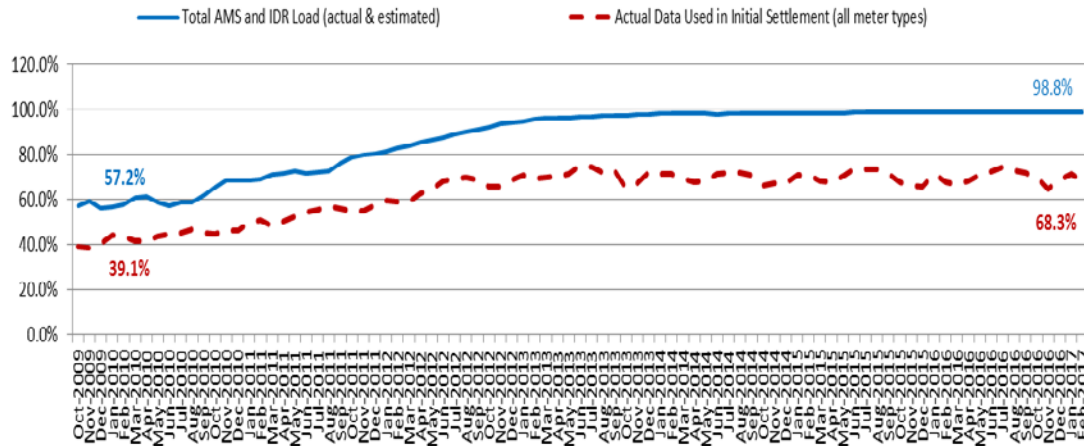
February 2017 was a charge of \$21.48M, compared to:

- A charge of \$33.71M in January 2017
- A charge of \$26.25M in February 2016



Advanced Meter Settlement Impacts – February 2017

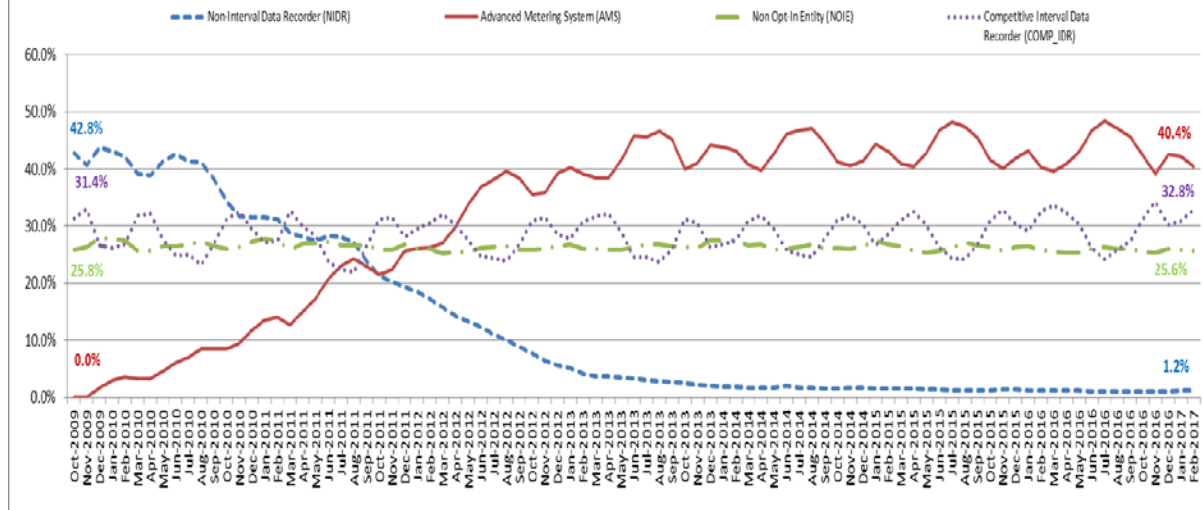
Percent Actual/Percent Interval Data Recorder (IDR)



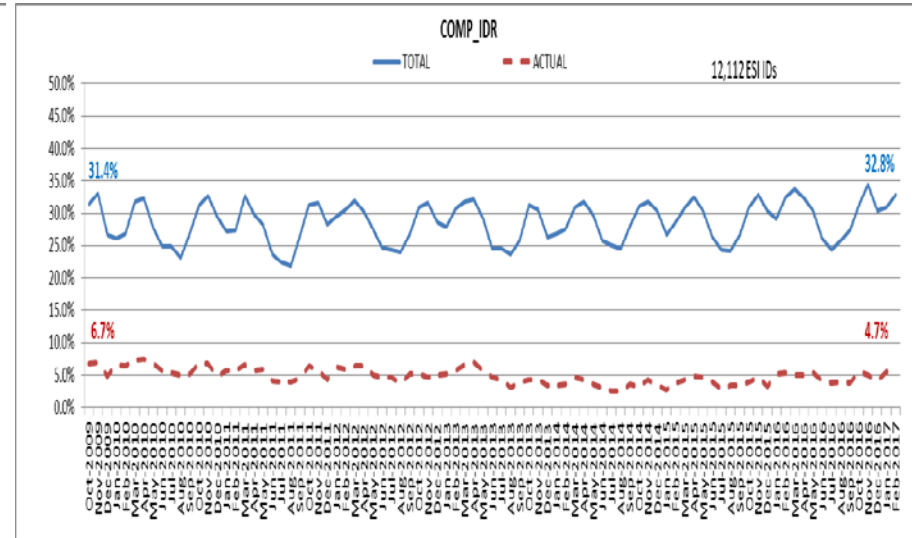
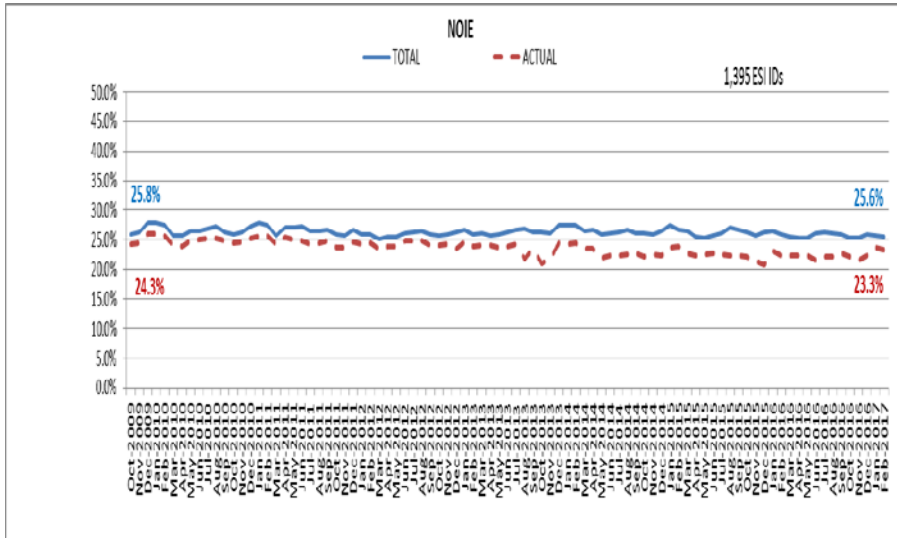
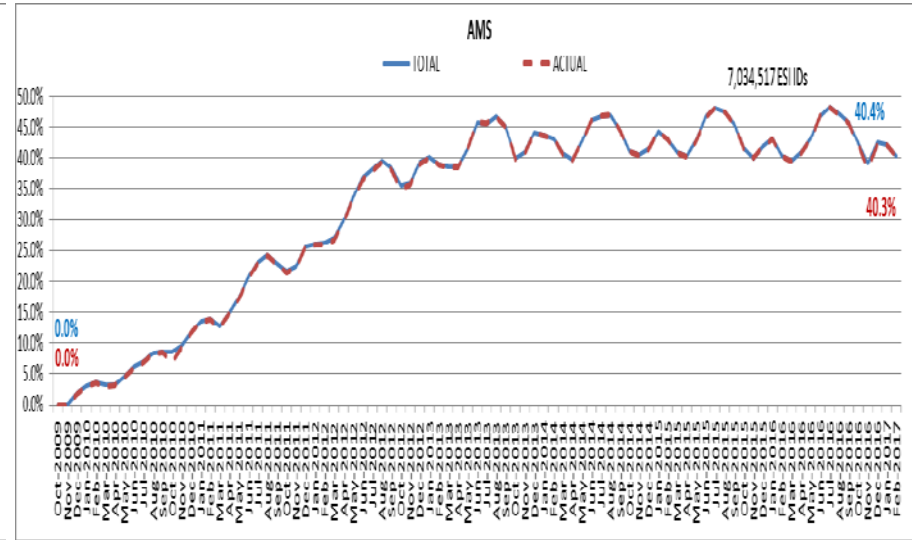
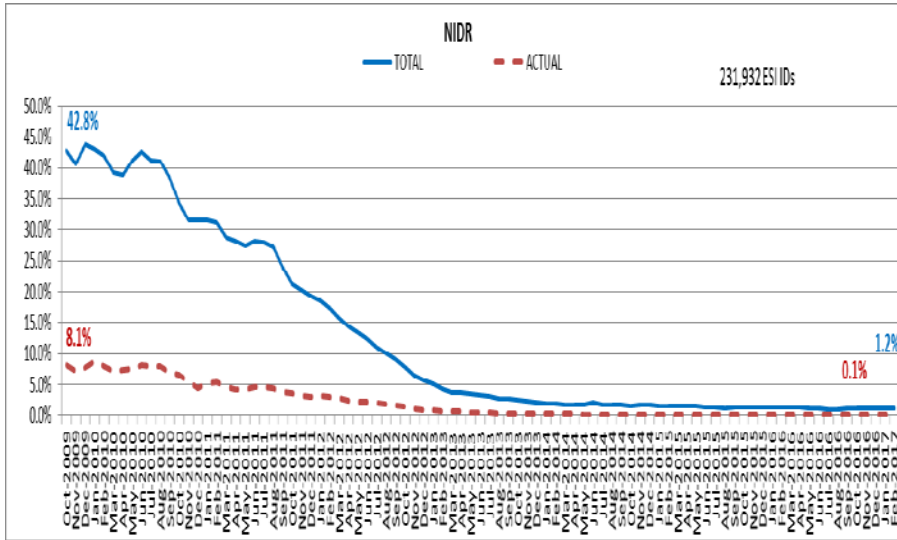
February 2017: At month end, settling 7.0M ESIIDs using Advanced Meter data.

February 2017: 98.8% of the load in ERCOT is settled with 15-min interval data (AMS, Competitive IDR, and NOIE IDR).

Percent of Load by Meter Type



ERCOT Wide Load Volumes by Meter Type – INITIAL Settlement – February 2017

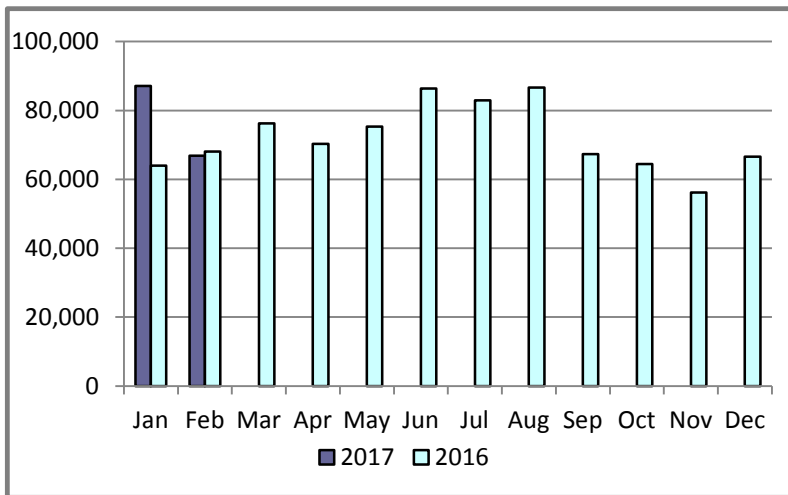


Retail Transaction Volumes – Summary – February 2017

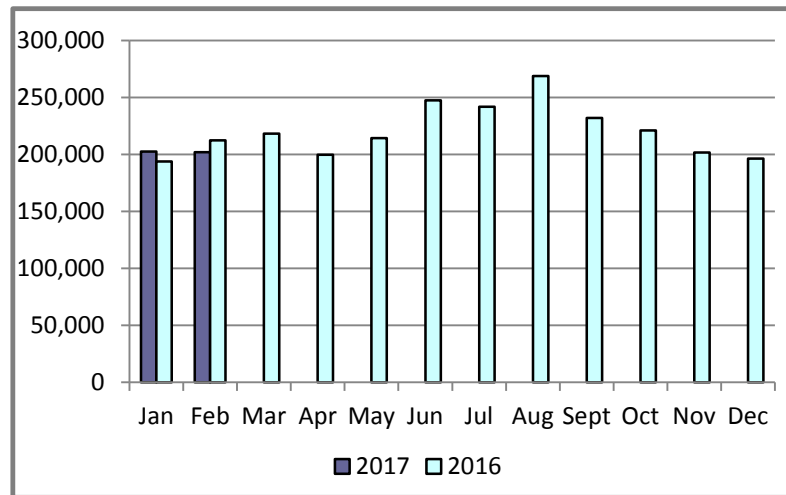
Transaction Type	Year-To-Date		Transactions Received	
	February 2017	February 2016	February 2017	February 2016
Switches	154,015	132,011	66,875	68,057
Acquisition	0	0	0	0
Move - Ins	404,596	406,190	201,984	212,474
Move - Outs	201,392	200,375	100,285	103,747
Continuous Service Agreements (CSA)	83,112	90,715	39,082	48,536
Mass Transitions	0	0	0	0
Total	843,115	829,291	408,226	432,814

Retail Transaction Volumes – Summary – February 2017

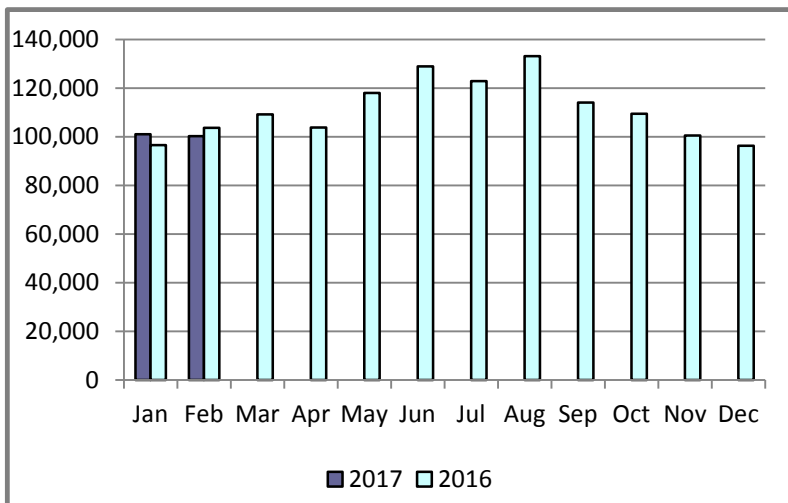
Switches/Acquisitions



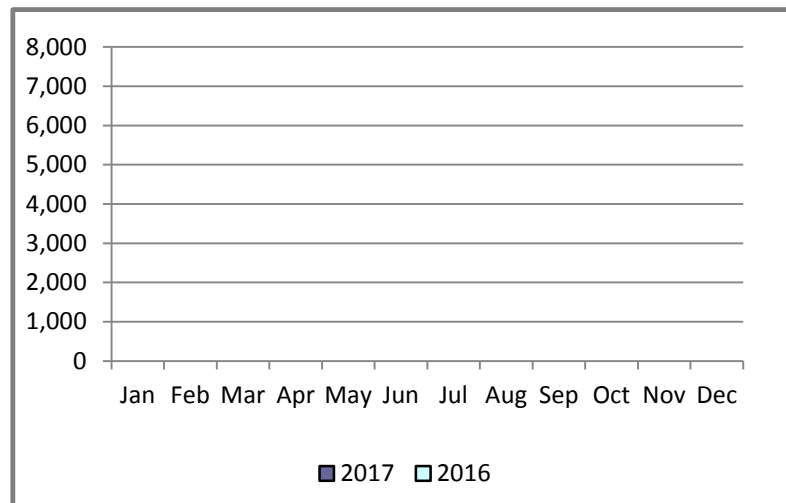
Move-Ins



Move-Outs

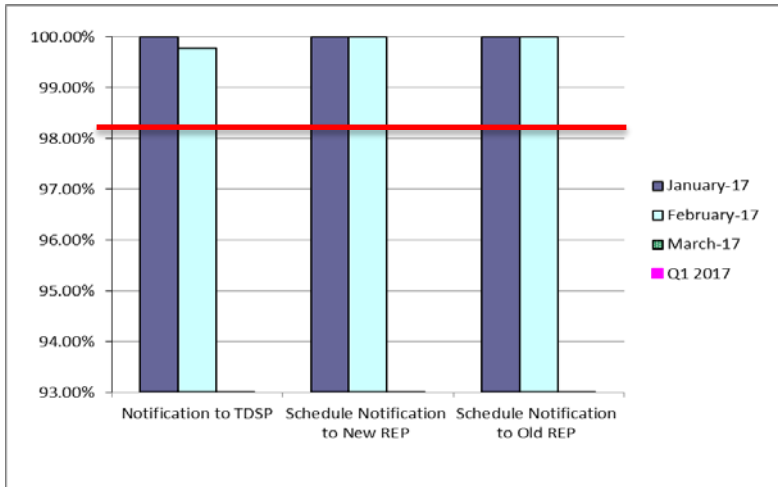


Mass Transition

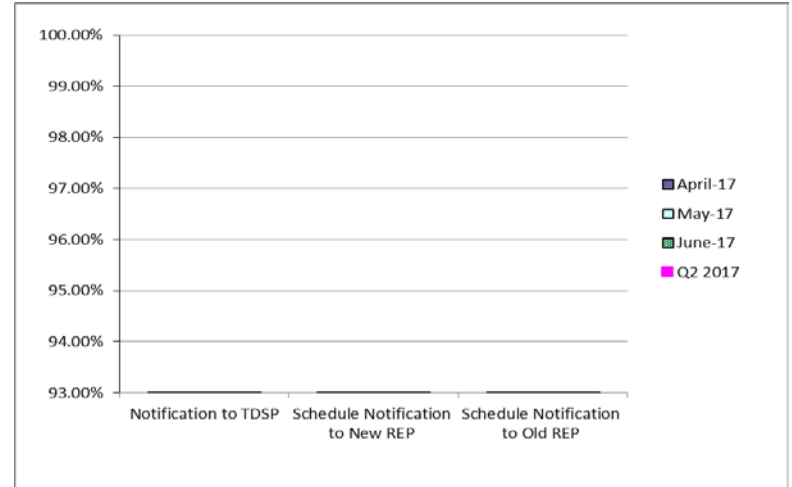


Retail Performance Measures – Switch – February 2017

1st Quarter



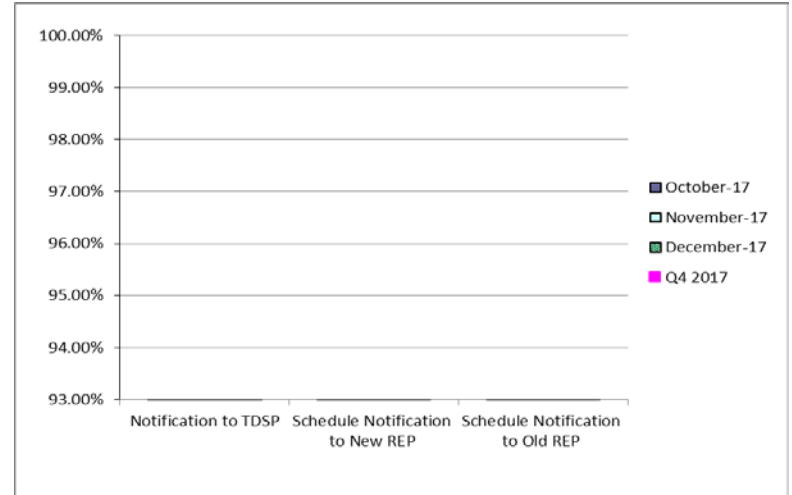
2nd Quarter



3rd Quarter

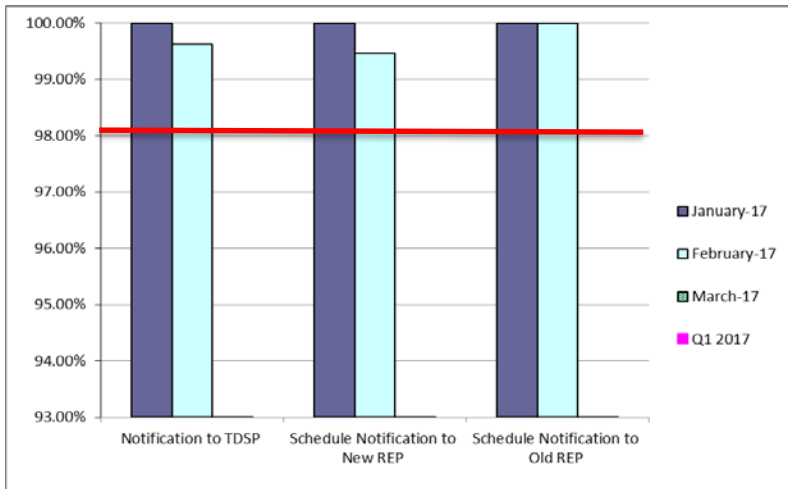


4th Quarter

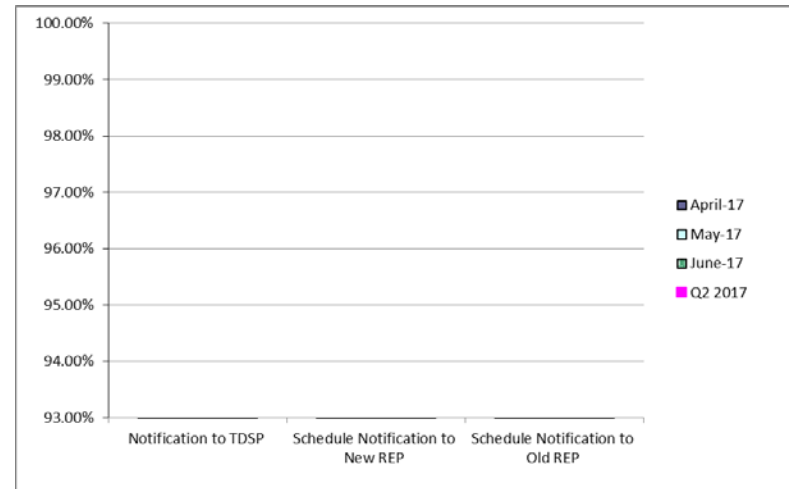


Retail Performance Measures – Same Day Move-In – February 2017

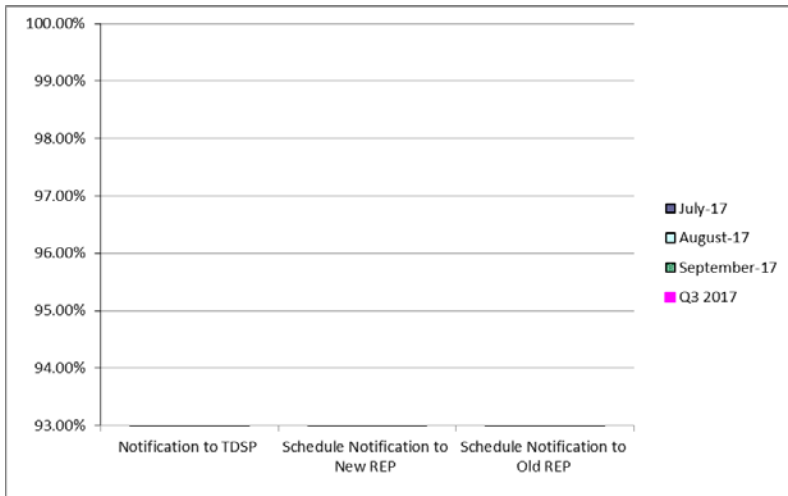
1st Quarter



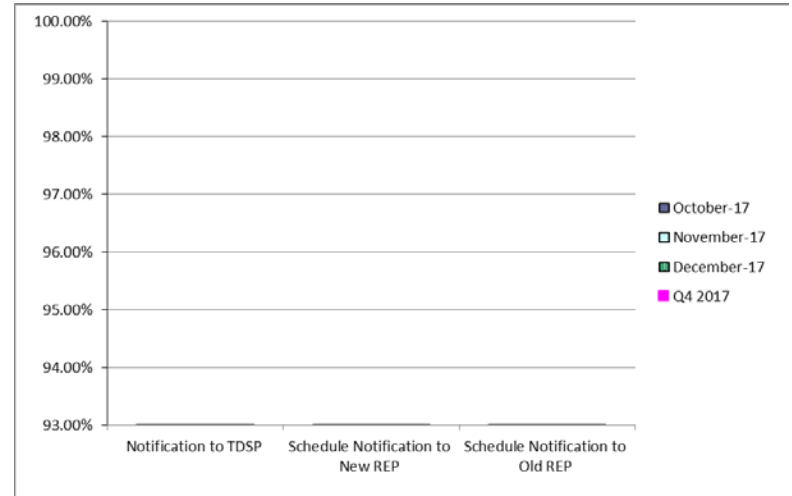
2nd Quarter



3rd Quarter

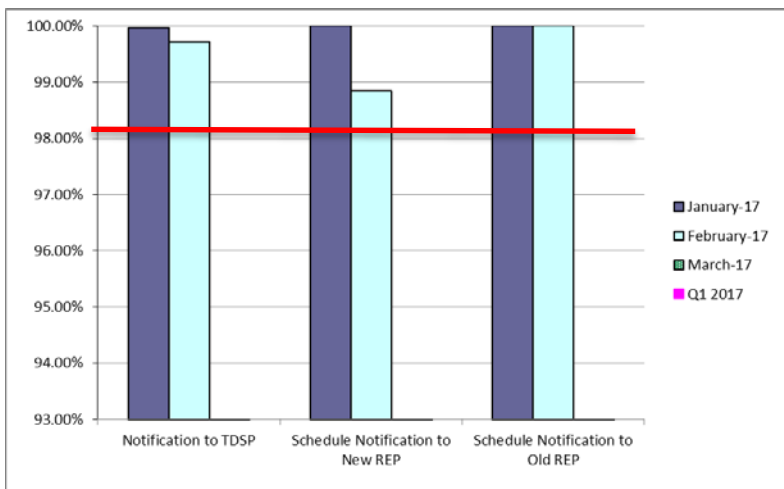


4th Quarter

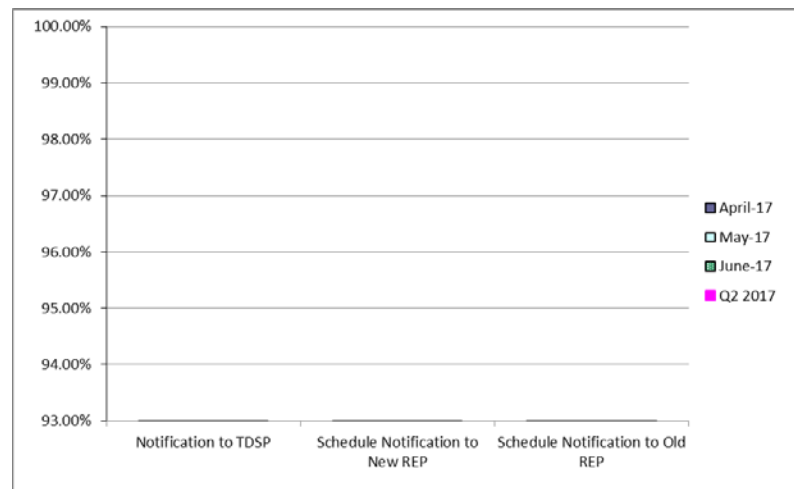


Retail Performance Measures – Standard Move-In – February 2017

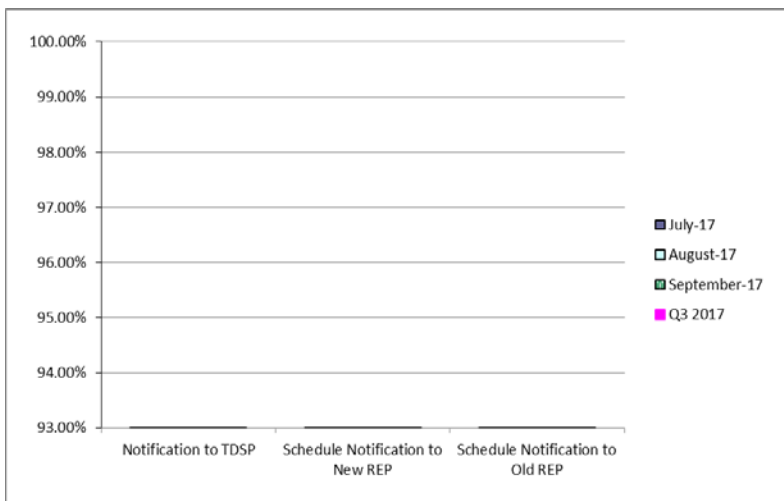
1st Quarter



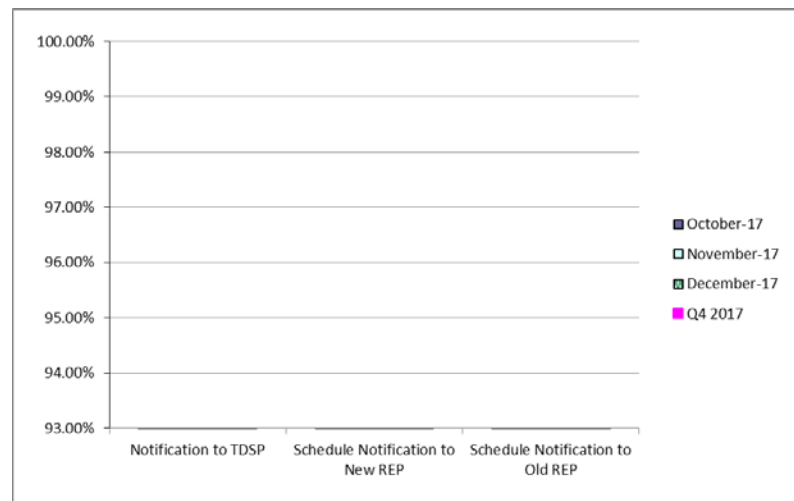
2nd Quarter



3rd Quarter



4th Quarter



Projects Report

ERCOT Portfolio Stoplight Report – February 2017

Impact Metric Tolerances		2017 Project Funding	\$20,500,000	2017 Portfolio Spending Estimate
Unfavorable variances are represented as negative numbers within the report. - Green = No more than 4.9% unfavorable variance - Yellow = Unfavorable variance between 4.9% and 9.9% - Red = Unfavorable variance more than 9.9%		Projects In Flight/On Hold (Count = 77)		\$ 17,333,498
		Projects Not Yet Started (Count = 17)		\$ 3,748,943
		Projects Completed (Count = 11)		\$ 189,366
		Spending Reductions Required to Maintain Capital Budget		\$ (771,807)
		TOTAL		\$ 20,500,000
Project Number	Projects in Initiation Phase (Count = 4)			
238-01	Application Authentication Tech Refresh			
239-01	Identity and Access Management			
240-01	PaperFree Replacement Assessment			
198-02	Reactive Power Coordination			

Footnotes

- 1 - One or more phases took longer than expected, resulting in additional time required
- 2 - One or more phases required more labor than expected, resulting in additional funding and/or time required
- 3 - Project placed on hold
- NA - Metric not calculated because:
 - it is reported at the parent project level, or
 - it is an administrative project



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Project Number	Projects in Planning Phase (Count = 27)	Phase Start	Baseline Phase Finish	Approved Phase Finish	Scheduled Go-Live Date	Scheduled Phase Finish	Schedule Health	Budget Health
173-02	ERCOT Flight Certification Website	10/5/2016	2/1/2017	7/19/2017	TBD	7/19/2017	0%	0%
183-01	CMM Tech Refresh	12/16/2015	8/17/2016	3/15/2017	TBD	3/15/2017	0%	NA See 2015 CMM NPRRs
183-01	CMM-FT GUI Integration	12/16/2015	8/17/2016	3/15/2017	TBD	3/15/2017	0%	NA See 2015 CMM NPRRs
190-01	Collaboration Software Governance	4/27/2016	7/20/2016	12/14/2016	TBD	3/22/2017	1 -42%	0%
193-01	PMU Tool Evaluation and Implementation	5/4/2016	11/9/2016	4/28/2017	TBD	4/26/2017	0%	1%
210-01	REC Technology Refresh	10/5/2016	1/4/2017	1/4/2017	TBD	3/15/2017	2 -76%	54%
212-01	Test Data and Environment Enhancements Initiative (TDEE)	10/5/2016	11/2/2016	5/31/2017	TBD	5/31/2017	0%	19%
217-01	Cyber Security Project #20	12/7/2016	5/11/2017	5/11/2017	TBD	5/11/2017	0%	27%
218-01	Cyber Security Project #21	1/11/2017	5/3/2017	5/3/2017	TBD	5/3/2017	0%	30%
224-01	TelAlert Replacement	11/2/2016	2/1/2017	4/5/2017	TBD	4/5/2017	0%	0%
228-01	Enterprise Database Upgrade	2/1/2017	6/28/2017	6/28/2017	TBD	6/28/2017	0%	0%
229-01	IT Change and Configuration Management Phase 2	1/25/2017	5/17/2017	5/17/2017	TBD	5/17/2017	0%	14%
234-01	Reporting Solution Resiliency (RSR)	1/18/2017	3/31/2017	3/31/2017	TBD	3/31/2017	0%	7%
Various	Implementation of NPRR573 & NPRR801	1/25/2017	3/15/2017	3/15/2017	TBD	3/15/2017	0%	66%
Various	2015 CMM NPRRs	12/16/2015	8/17/2016	3/15/2017	TBD	3/15/2017	0%	11%
NPRR484	Revisions to Congestion Revenue Rights Credit Calculations and Payments - Phase 1b / 2	12/16/2015	8/17/2016	3/15/2017	TBD	3/15/2017	0%	NA See 2015 CMM NPRRs
NPRR519	Exemption of ERS-Only QSEs from Collateral and Capitalization Requirements	12/16/2015	8/17/2016	3/15/2017	TBD	3/15/2017	0%	NA See 2015 CMM NPRRs
NPRR573	Alignment of PRC Calculation	1/25/2017	3/15/2017	3/15/2017	TBD	3/15/2017	0%	NA See Implementation of NPRR573 & 801
NPRR620	Collateral Requirements for Counter-Parties with No Load or Generation	12/16/2015	8/17/2016	3/15/2017	TBD	3/15/2017	0%	NA See 2015 CMM NPRRs
NPRR648	Remove References to Flowgate Rights	12/16/2015	8/17/2016	3/15/2017	TBD	3/15/2017	0%	NA See 2015 CMM NPRRs
NPRR660	Remove CRR State Change Adder	12/16/2015	8/17/2016	3/15/2017	TBD	3/15/2017	0%	NA See 2015 CMM NPRRs
NPRR683	Revision to Available Credit Limit Calculation	12/16/2015	8/17/2016	3/15/2017	TBD	3/15/2017	0%	NA See 2015 CMM NPRRs
NPRR702	Flexible Accounts, Payment of Invoices, and Disposition of Interest on Cash Collateral	12/16/2015	8/17/2016	3/15/2017	TBD	3/15/2017	0%	NA See 2015 CMM NPRRs
NPRR741	Clarifications to TPE and EAL Credit Exposure Calculations	12/16/2015	8/17/2016	3/15/2017	TBD	3/15/2017	0%	NA See 2015 CMM NPRRs
NPRR743	Revision to MCE to Have a Floor For Load Exposure	12/16/2015	8/17/2016	3/15/2017	TBD	3/15/2017	0%	NA See 2015 CMM NPRRs
NPRR782	Settlement of Infeasible Ancillary Services Due to Transmission Constraints	3/1/2017	4/5/2017	4/5/2017	TBD	4/5/2017	0%	-3%
NPRR801	Non-Controllable Load Resource MW in PRC	1/25/2017	3/15/2017	3/15/2017	TBD	3/15/2017	0%	NA See Implementation of NPRR573 & 801



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Project Number	Projects in Execution Phase (Count = 41)	Phase Start	Baseline Go-Live Date	Approved Go-Live Date	Scheduled Go-Live Date	Scheduled Phase Finish	Schedule Health		Budget Health	
065-01	NMMS Upgrade	12/17/2014	9/22/2016	5/1/2017	5/1/2017	8/2/2017		0%	10%	
158-01	Load Forecast Enhancements	9/28/2016	5/21/2017	5/21/2017	5/11/2017	7/19/2017		4%	15%	
170-01	Enterprise Content Alignment Program	8/26/2015	11/15/2017	9/25/2017	9/25/2017	9/25/2017		0%	25%	
170-03	ECAP - Enterprise Content Management System (Proof of Concept)	11/16/2016	3/15/2017	3/15/2017	3/15/2017	3/15/2017		0%	37%	
172-01	Physical Security Project #2	6/30/2016	2/13/2017	4/6/2017	6/13/2017	6/21/2017	1	-24%	16%	
173-01	Serena Software (MarkeTrak) Upgrade	10/5/2016	1/29/2017	3/26/2017	3/27/2017	5/10/2017		0%	3%	
177-01	Cyber Security Project #19	4/6/2016	7/13/2016	7/24/2017	7/24/2017	7/26/2017		0%	4%	
181-01	CRR Framework Upgrade	10/26/2016	10/2/2017	10/2/2017	10/2/2017	11/8/2017		0%	-1%	
185-01	Records Management and eDiscovery	12/15/2016	5/24/2017	5/24/2017	5/17/2017	7/5/2017		4%	6%	
188-01	Mass Transition/Acquisition Enhancements (MTAQ)	5/25/2016	4/2/2017	6/22/2017	6/4/2017	7/14/2017		4%	5%	
196-01	GINR Project Status Application Replacement	12/21/2016	9/14/2017	9/14/2017	9/14/2017	10/4/2017		0%	10%	
197-01	AREA - Demand and Energy Report	9/14/2016	5/4/2017	5/4/2017	5/4/2017	5/11/2017		0%	13%	
202-01	Email Gateway Replacement	11/9/2016	4/4/2017	4/4/2017	3/24/2017	4/5/2017		7%	42%	
205-01	TIBCO BusinessWorks Application Upgrade	1/11/2017	6/26/2017	6/26/2017	6/26/2017	9/1/2017		0%	3%	
209-01	Multi Station Breaker to Breaker One Lines (Planning)	2/8/2017	3/9/2018	3/9/2018	3/9/2018	5/1/2018		0%	12%	
216-01	CAT & RRS Tools for Control Room Project	11/30/2016	9/15/2017	11/2/2017	11/3/2017	11/29/2017		0%	5%	
216-01	Capacity Availability Tool (CAT)	11/30/2016	9/15/2017	11/2/2017	11/3/2017	11/29/2017		0%	NA	See CAT & RRS Tools for Cntl Rm
216-01	Responsive Reserve Service Sufficiency Analysis	11/30/2016	9/15/2017	8/31/2017	9/1/2017	11/29/2017		0%	NA	See CAT & RRS Tools for Cntl Rm
222-01	Physical Security Project #3	2/8/2017	5/31/2017	5/31/2017	5/31/2017	6/21/2017		0%	0%	
230-01	SAS Technical Architecture Redesign	3/1/2017	11/15/2017	11/15/2017	10/13/2017	11/3/2017		12%	-2%	
233-00	Capital Efficiencies and Enhancements - 2017	1/1/2017	12/31/2017	12/31/2017	12/31/2017	12/31/2017		0%	0%	
235-01	Forecast Monitoring and HSL Tracking	2/8/2017	5/11/2017	5/11/2017	5/11/2017	6/4/2017		0%	-2%	
Various	2016 RARF Enhancements	11/16/2016	2/17/2017	4/7/2017	4/7/2017	5/3/2017		0%	1%	
Various	NPRR797 & NPRR789 Load Forecast Enhancements	3/8/2017	6/29/2017	6/29/2017	6/29/2017	7/19/2017		0%	0%	
RMGRR127	Efficiencies for Acquisition Transfer	5/25/2016	4/2/2017	6/22/2017	6/4/2017	7/14/2017		4%	NA	See #188-01
RMGRR134	Allow AMS Data Submittal Process for TDSP-Read Non-Modeled Generators	12/14/2016	3/9/2017	3/9/2017	3/9/2017	5/17/2017		0%	15%	
RRGRR003	Modifications to Improve Wind Forecasting	11/16/2016	2/17/2017	4/7/2017	4/7/2017	5/3/2017		0%	NA	See 2016 RARF Enh.
RRGRR006	Clarification of Descriptions and Alignment with Resource Asset Registration Forms	11/16/2016	2/17/2017	4/7/2017	4/7/2017	5/3/2017		0%	NA	See 2016 RARF Enh.
RRGRR007	Adding Solar Resource Registration Inputs	11/16/2016	2/17/2017	4/7/2017	4/7/2017	5/3/2017		0%	NA	See 2016 RARF Enh.
RRGRR009	Adding Voltage Limit Sets, Relay Loadability, MLSE, and GMD Data	11/16/2016	2/17/2017	4/7/2017	4/7/2017	5/3/2017		0%	NA	See 2016 RARF Enh.
NPRR649	Addressing Issues Surrounding High Dispatch Limit (HDL) Overrides	11/9/2016	3/19/2017	3/19/2017	3/19/2017	3/29/2017		0%	34%	
NPRR744	RUC Trigger for the Reliability Deployment Price Adder and Alignment with RUC Settlement	2/8/2017	6/29/2017	6/29/2017	6/29/2017	7/19/2017		0%	-2%	
NPRR746	Adjustments Due to Negative Load	1/25/2017	5/11/2017	5/11/2017	5/11/2017	8/9/2017		0%	17%	



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Project Number	Projects in Execution Phase (Count = 41)	Phase Start	Baseline Go-Live Date	Approved Go-Live Date	Scheduled Go-Live Date	Scheduled Phase Finish	Schedule Health	Budget Health
NPRR758	Improved Transparency for Outages Potentially Having a High Economic Impact	1/11/2017	7/13/2017	7/13/2017	7/13/2017	8/3/2017	0%	27%
NPRR764	QSE Capacity Short Calculations Based on an 80% Probability of Exceedance (P80)	11/16/2016	3/9/2017	3/9/2017	3/9/2017	5/17/2017	0%	7%
NPRR785	Synchronizing WGR and PVGR COPs with the Short Term Wind and PhotoVoltaic Forecasts	11/30/2016	3/9/2017	3/9/2017	3/9/2017	3/9/2017	0%	See #187-00
NPRR789	Publish All Mid-Term Load Forecast Results	3/8/2017	6/29/2017	6/29/2017	6/29/2017	7/19/2017	0%	NA See NPRR797 & NPRR789 Load Forecast Enhancements
NPRR792	Changing Special Protection System (SPS) to Remedial Action Scheme (RAS)	11/30/2016	3/9/2017	3/9/2017	3/9/2017	3/9/2017	0%	See #187-00
NPRR797	Actual Load by Forecast Zone Report and Display	3/8/2017	6/29/2017	6/29/2017	6/29/2017	7/19/2017	0%	NA See NPRR797 & NPRR789 Load Forecast Enhancements
SCR777	Bilateral CRR Interface Enhancement	10/26/2016	10/2/2017	10/2/2017	10/2/2017	11/8/2017	0%	NA See #181-01
SCR790	Wind Resource Power Production and Forecast Transparency	1/11/2017	5/11/2017	5/11/2017	5/11/2017	5/11/2017	0%	2%
Project Number	Projects in Stabilization (Count = 3)	Execution Phase Start	Baseline Go-Live Target	Approved Go-Live Target	Actual Go-Live Date	Scheduled Execution Phase Finish	Schedule Health	Budget Health
NPRR272	Definition and Participation of Quick Start Generation Resources	8/3/2016	2/9/2017	3/9/2017	3/9/2017	3/15/2017	0%	24%
189-01	Enterprise Resource Planning	4/13/2016	9/27/2016	9/27/2016	9/27/2016	4/12/2017	0%	65%
223-01	Control Room Video Support and Upgrade	11/16/2016	2/17/2017	2/17/2017	2/3/2017	6/12/2017	15%	30%
Project Number	Projects On Hold (Count = 2)	Forecast Start Date	Baseline Phase Finish	Approved Go-Live Target	Scheduled Go-Live Date	Scheduled Phase Finish	Schedule Health	Budget Health
SCR781	MP Online Data Entry - Market Requirements	8/20/2014	11/28/2014	TBD	TBD	TBD		3 See #106-01
106-01	MP Online Data Entry - Ph 1	10/9/2013	3/5/2014	TBD	TBD	TBD		3
Project Number	Projects Completed (Count = 11)	Baseline Execution Phase Start	Baseline Go-Live Target	Approved Go-Live Target	Actual Go-Live Date	Actual Execution Phase Finish	Schedule Health	Budget Health
170-04	ECAP - ERCOT Information Governance and Taxonomy	11/16/2016	1/19/2017	2/17/2017	2/17/2017	2/22/2017	0%	18%
198-01	Reactive Power Coordination Assessment	7/13/2016	10/12/2016	1/11/2017	1/18/2017	1/18/2017	-3%	23%
203-01	DW Replication Upgrade	10/26/2016	12/10/2016	2/17/2017	2/17/2017	3/1/2017	0%	0%
211-01	Identity & Access Management Evaluation	10/5/2016	2/22/2017	2/22/2017	2/22/2017	3/1/2017	0%	29%
227-01	Engineer Workstations and Other Equipment	11/30/2016	3/1/2017	3/1/2017	3/1/2017	3/1/2017	0%	7%
NOGRR147	Reactive Power Testing Requirements	9/14/2016	12/8/2016	12/8/2016	12/8/2016	1/11/2017	0%	NA See NOGRR147 & SCR787
NPRR754	Revise Load Distribution Factors Report Posting Frequency	10/12/2016	12/11/2016	12/11/2016	12/12/2016	1/11/2017	-1%	47%
SCR786	Retail Market Test Environment	6/22/2016	12/12/2016	12/12/2016	12/11/2016	2/15/2017	0%	33%
SCR787	Maintain NDCRC Data For Generator Transfer Between Resource Entities	9/14/2016	12/8/2016	12/8/2016	12/8/2016	1/11/2017	0%	NA See NOGRR147 & SCR787
SCR788	Addition of Integral ACE Feedback to GTBD Calculation	10/5/2016	12/8/2016	12/8/2016	12/8/2016	12/16/2016	0%	53%
Various	NOGRR147 and SCR787 NDCRC Enhancement	9/14/2016	12/8/2016	12/8/2016	12/8/2016	1/11/2017	0%	1%



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Project Number	2017 Projects Not Yet Started (Count = 17)	Forecast Start Date
NPRR755	Data Agent-Only QSE Registration	Mar-2017
NPRR760	Calculation of Exposure Variables For Days With No Activity	Mar-2017
NPRR775	Enhanced Implementation of Limits for Fast Responding Regulation Service	Mar-2017
NPRR800	Revisions to Credit Exposure Calculations to Use Electricity Futures Market Prices	Mar-2017
SCR789	Update NMMS Topology Processor to PSSE 34 Capability	Mar-2017
TBD	2017 EPS Metering Enhancements	Mar-2017
TBD	Corporate Wireless	Apr-2017
TBD	Standard Report for Events and Near-Miss Analysis	May-2017
NPRR778	Modifications to Date Change and Cancellation Evaluation Window	Jun-2017
TBD	Generic Transmission Constraint Calculation	Jun-2017
TBD	AREA - Generation	Jul-2017
TBD	Automation of NPRR487 - QSGR Dispatch Adjustment	Jul-2017
TBD	Emergency Energy Settlements Inputs Automation	Jul-2017
TBD	Replace Paperfree	Jul-2017
TBD	Appworx Replaces TIBCO Code in CSI Framework	Jul-2017
TBD	EIF Database Utilization	Aug-2017
NPRR749	Option Cost for Outstanding CRRs	Sep-2017