



ERCOT Monthly Operational Overview
(July 2018) Revised 08.22.18

ERCOT Public
August 15, 2018

Grid Planning & Operations

Summary – July 2018

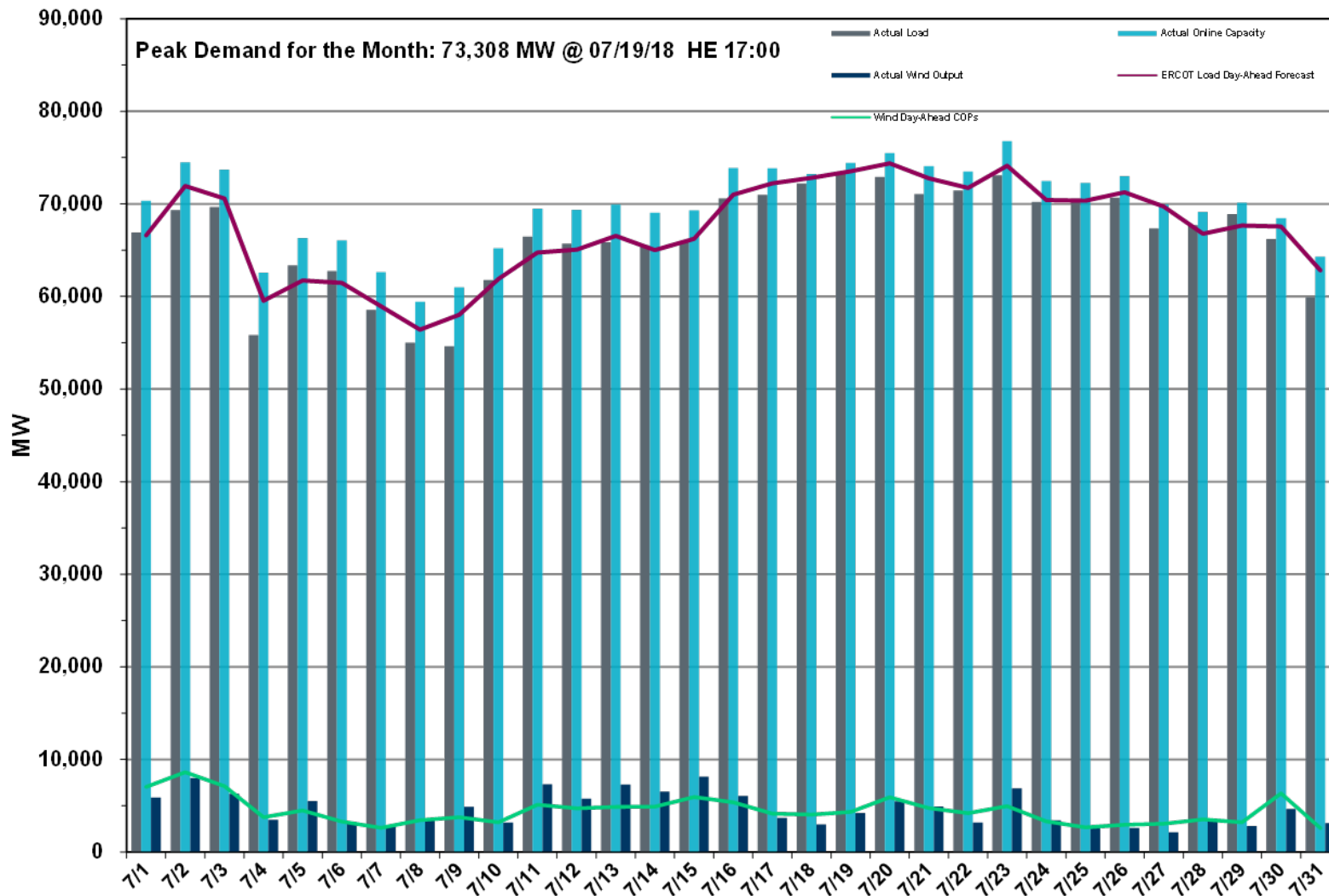
Operations

- The preliminary Settlements hourly peak demand of 73,308* MW on July 19 was lower than the day-ahead mid-term load forecast peak of 73,518 MW for the same operating hour.
 - The operational instantaneous peak demand was 73,405 MW (telemetry).
- Day-ahead load forecast error for July was 1.97%
- ERCOT issued 12 notifications:
 - Four Advisories issued due to Physical Responsive Capability being below 3000 MW
 - One Advisory issued for extreme hot weather
 - Five DC Tie-related Watches
 - One OCN issued for extreme hot weather
 - One OCN issued for projected reserve capacity shortage

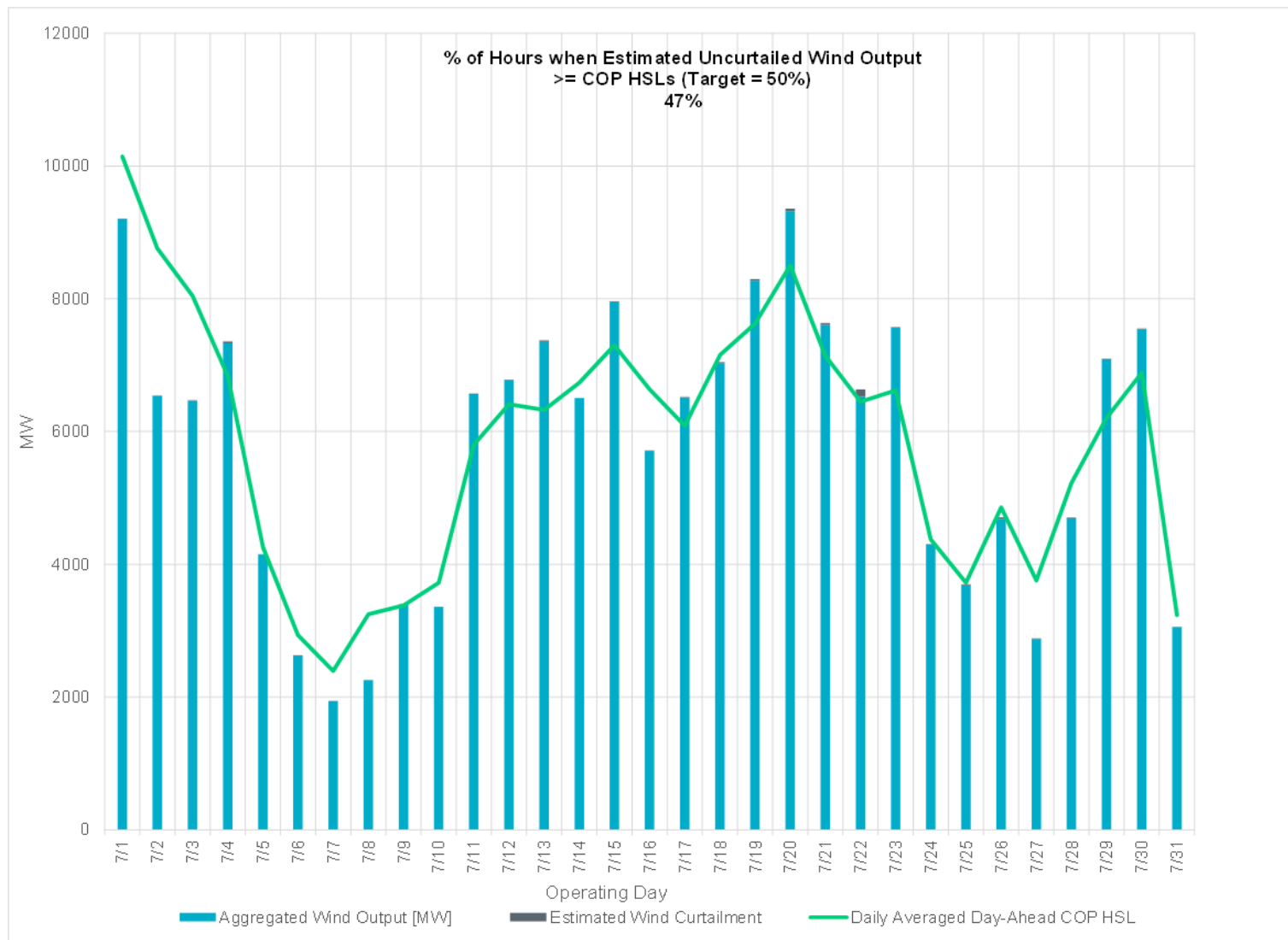
Planning Activities

- 404 active generation interconnection requests totaling 79,852 MW, including 37,697 MW of wind generation, as of July 31, 2018. Twenty five additional requests and an increase of 2,832 MW from June 30, 2018.
- 21,190 MW wind capacity in commercial operations as of August 1, 2018.

Daily Peak Demand: Hourly Average Actual vs. Forecast, Wind Day-Ahead COPs & On-Line Capacity at Peak – July 2018



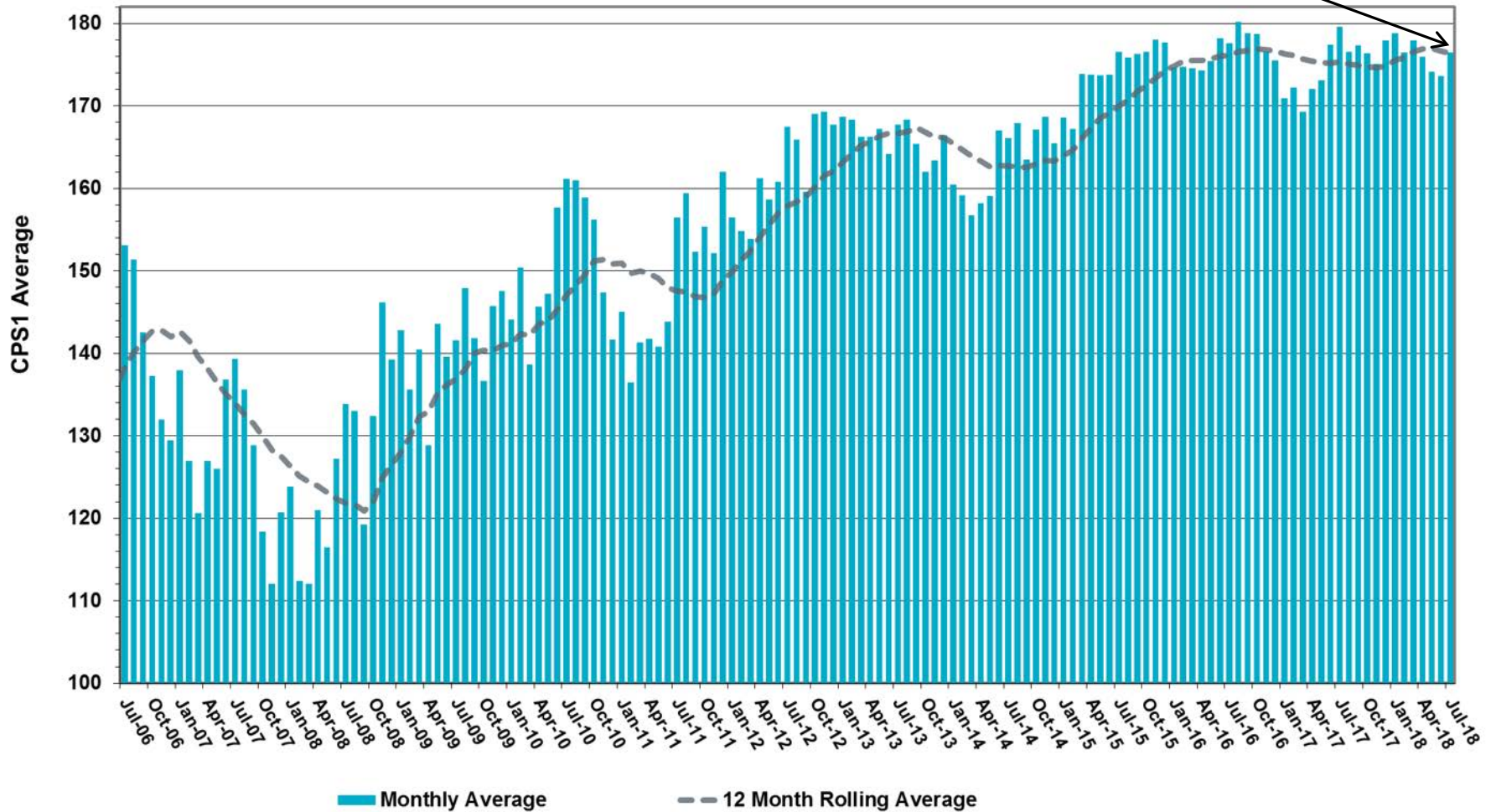
Actual Wind Output plus Curtailments vs. Wind Day-Ahead COPs for All Hours – July 2018



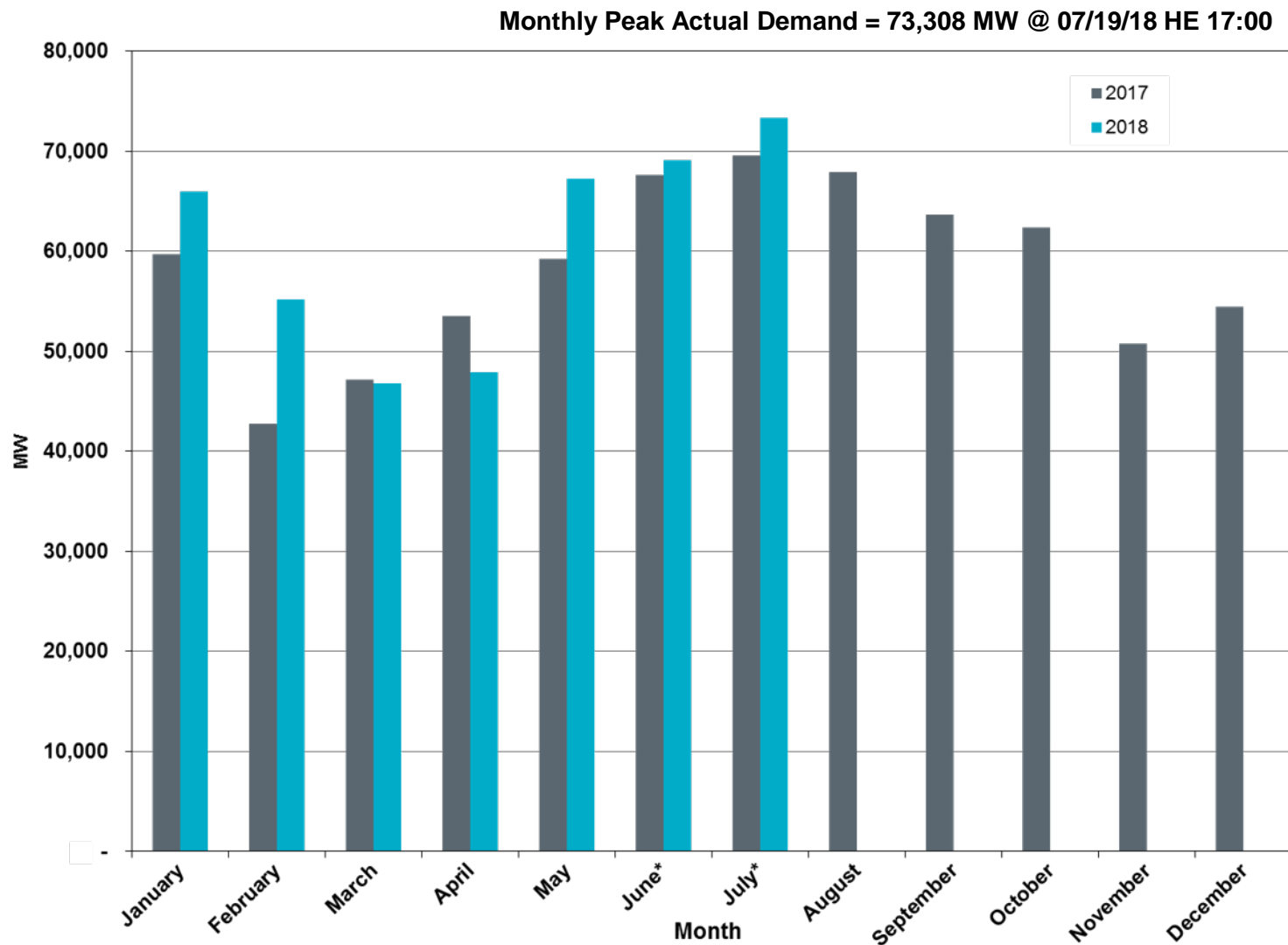
ERCOT's CPS1 Monthly Performance – July 2018

CPS1 12 Month Rolling Average = 176.41%

ERCOT CPS1



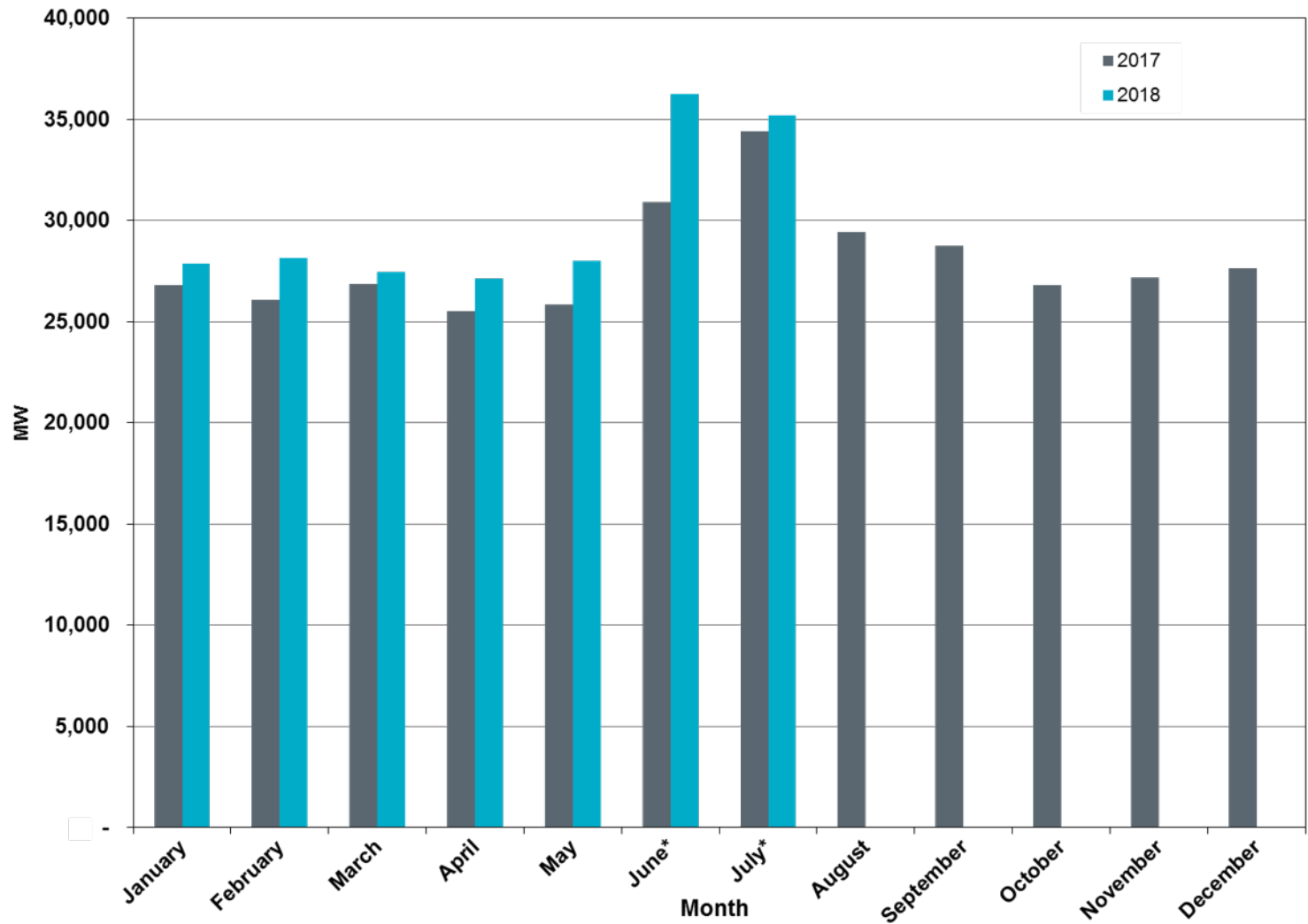
Monthly Peak Actual Demand – July 2018



*Preliminary for latest two months of the current year



Monthly Minimum Actual 15-Minute Demand – July 2018



*Preliminary for latest two months of the current year

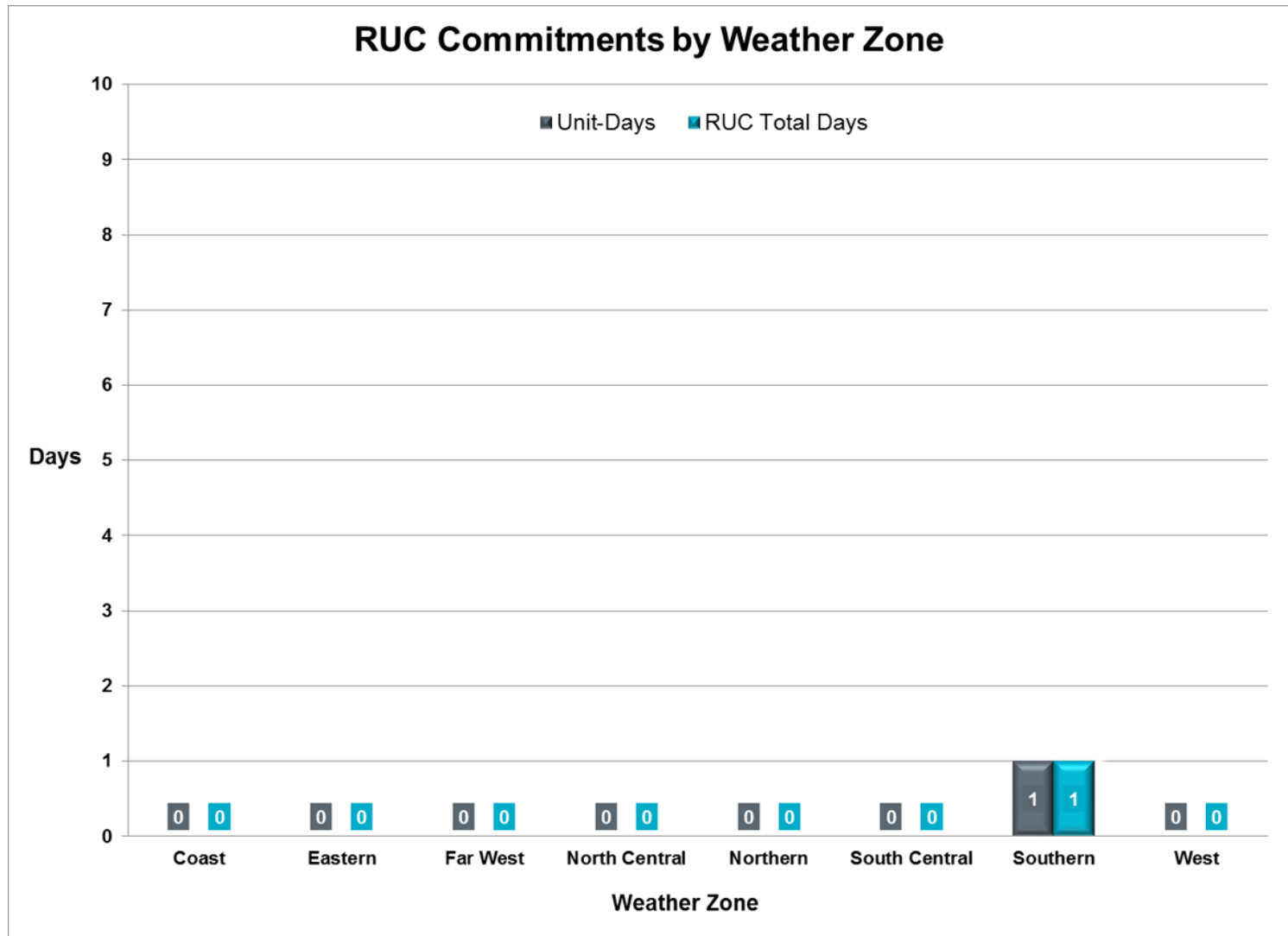


Day-Ahead Load Forecast Performance – July 2018

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

	2015 MAPE	2016 MAPE	2017 MAPE	2018 MAPE	July 2018 MAPE	
Average Annual MAPE	2.86	2.62	2.55	2.38	1.97	
Lowest Monthly MAPE	1.89	1.94	1.69	1.65	Lowest Daily MAPE	0.55 Jul 16
Highest Monthly MAPE	3.81	3.86	4.07	3.66	Highest Daily MAPE	5.24 Jul 4

Reliability Unit Commitment (RUC) Capacity by Weather Zone – July 2018



Generic Transmission Constraints (GTCs) – July 2018

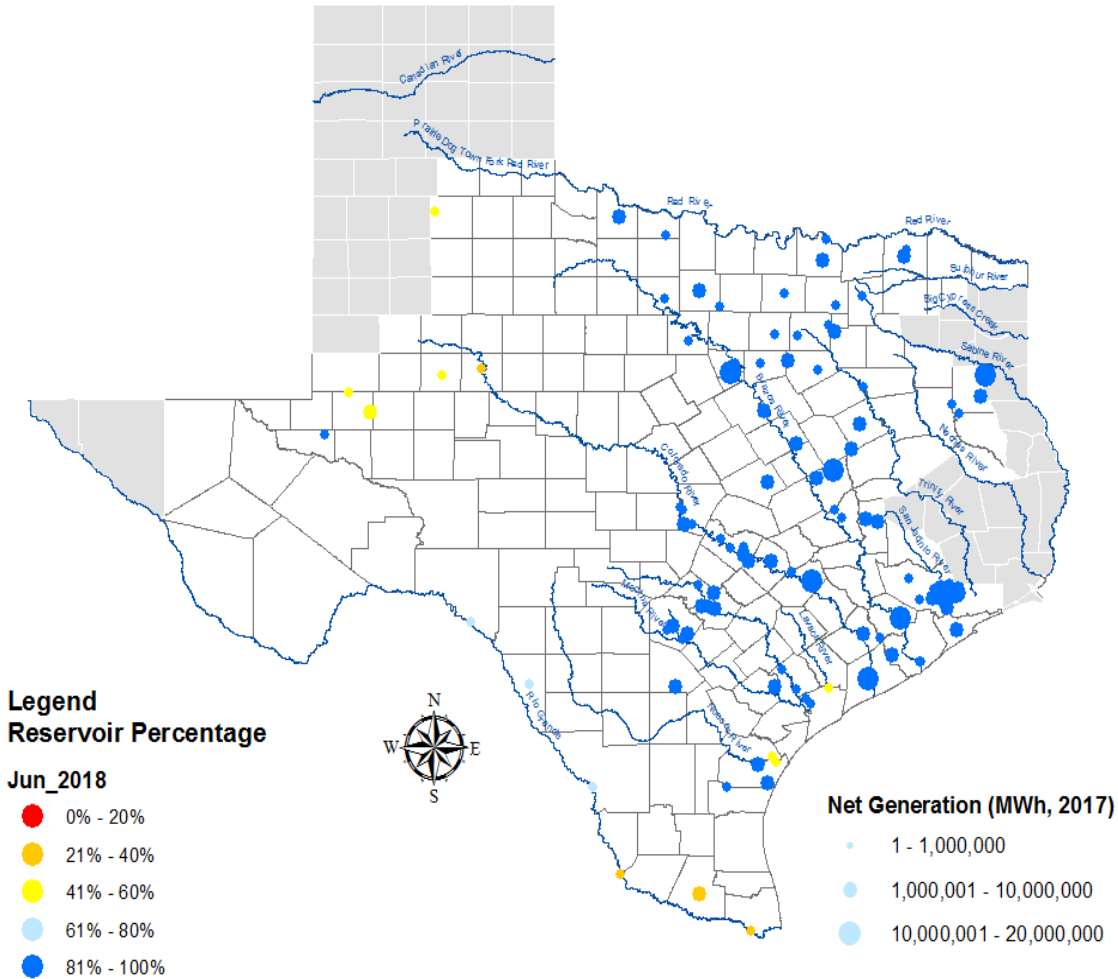
GTCs	Jul-17 Days GTCs	May-18 Days GTCs	Jun-18 Days GTCs	Jul-18 Days GTCs	Last 12 Months Total Days (Aug 17 – Jul 18)
North – Houston	1	0	1	0	8
Valley Import	0	4	0	1	15
Panhandle	17	27	23	5	261
Red Tap	0	0	0	0	0
North Edinburg – Lobo	0	0	0	0	1
Nelson Sharpe – Rio Hondo	-	0	2	0	65
East Texas	-	0	0	0	16

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.

- Two OCNs issued for extreme hot weather.
 - Issued 7/14 and 7/20
- Four Advisories issued due to Physical Responsive Capability being below 3000 MW.
 - Issued 7/18, 7/19, 7/25 and 7/28
- One OCN issued due to projected reserve capacity shortage for hours ending 14:00 through 19:00. ERCOT requested all QSE's to update their COPs.
 - Issued 7/26
- One Watch issued due to the post-contingency loss of the Bevo to Asherton 138 kV (SBEVASH8) overloads the Big Wells to Cotulla Sub 69 kV and curtailment of Eagle Pass DC-Tie exports to CENACE.
 - Issued 7/17
- Three Watches issued due to the post-contingency loss of Bentsen to Railroad 138 kV (SBENRAI8) overloads South Mission to Railroad 138 kV and curtailment of Railroad DC-Tie exports to CENACE.
 - Issued 7/23
- One Watch issued for the de-rate of the Railroad DC-Tie and curtailment of the DC-Tie exports to CENACE.
 - Issued 7/31

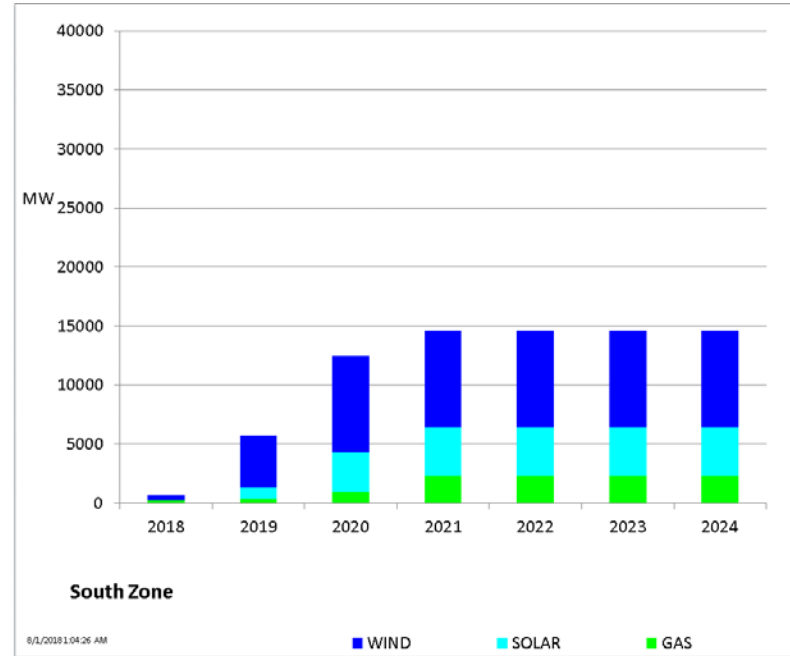
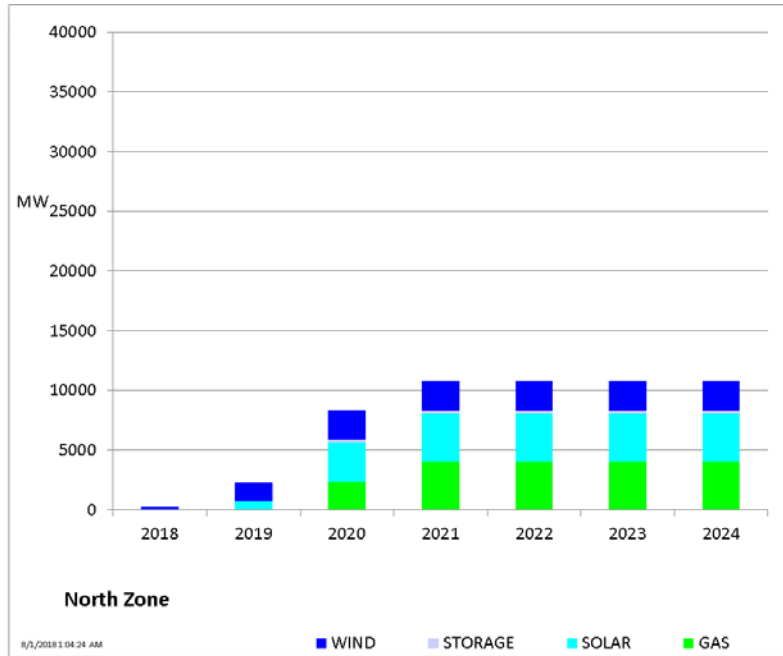
Lake Levels Update – August 1, 2018



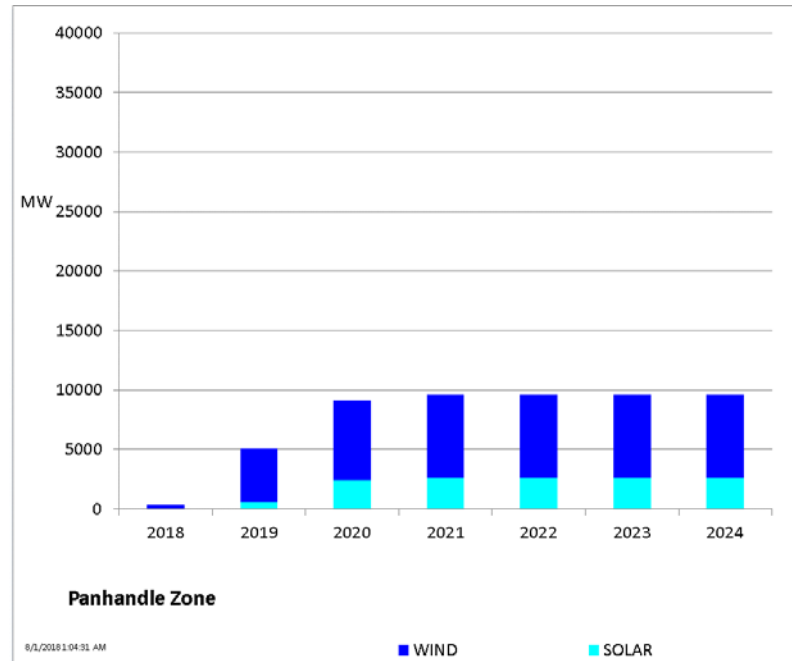
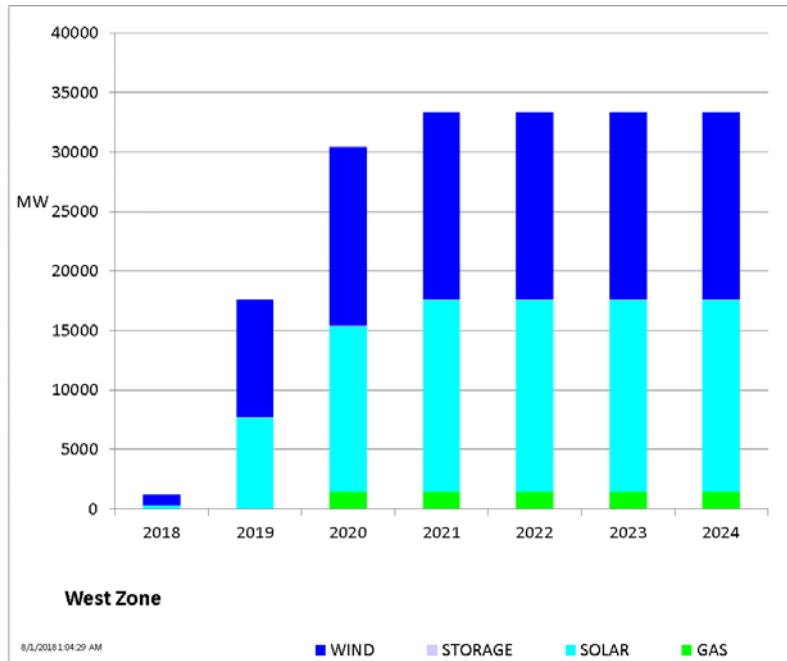
Planning Summary – July 2018

- ERCOT is currently tracking 404 active generation interconnection requests totaling 79,852 MW. This includes 37,697 MW of wind generation.
- ERCOT is currently reviewing proposed transmission improvements with a total cost of \$603.5 million.
- Transmission Projects endorsed in 2018 total \$393.5 million.
- All projects (in engineering, routing, licensing, and construction) total approximately \$6.49 billion (as of June 1, 2018).
- Transmission Projects energized in 2018 total about \$1.120 billion (as of June 1, 2018).

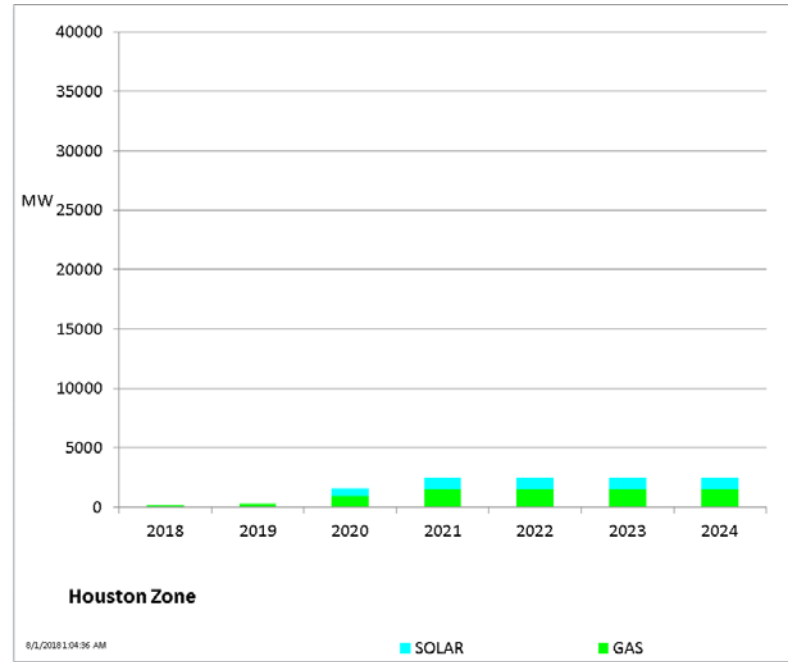
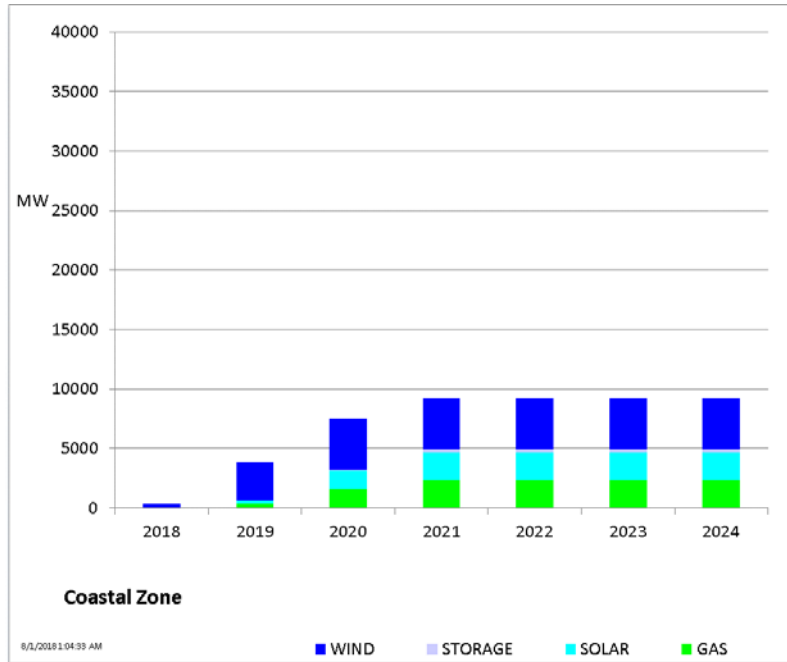
Cumulative MW Capacity of Interconnection Requests by Zone – July 2018



Cumulative MW Capacity of Interconnection Requests by Zone – July 2018

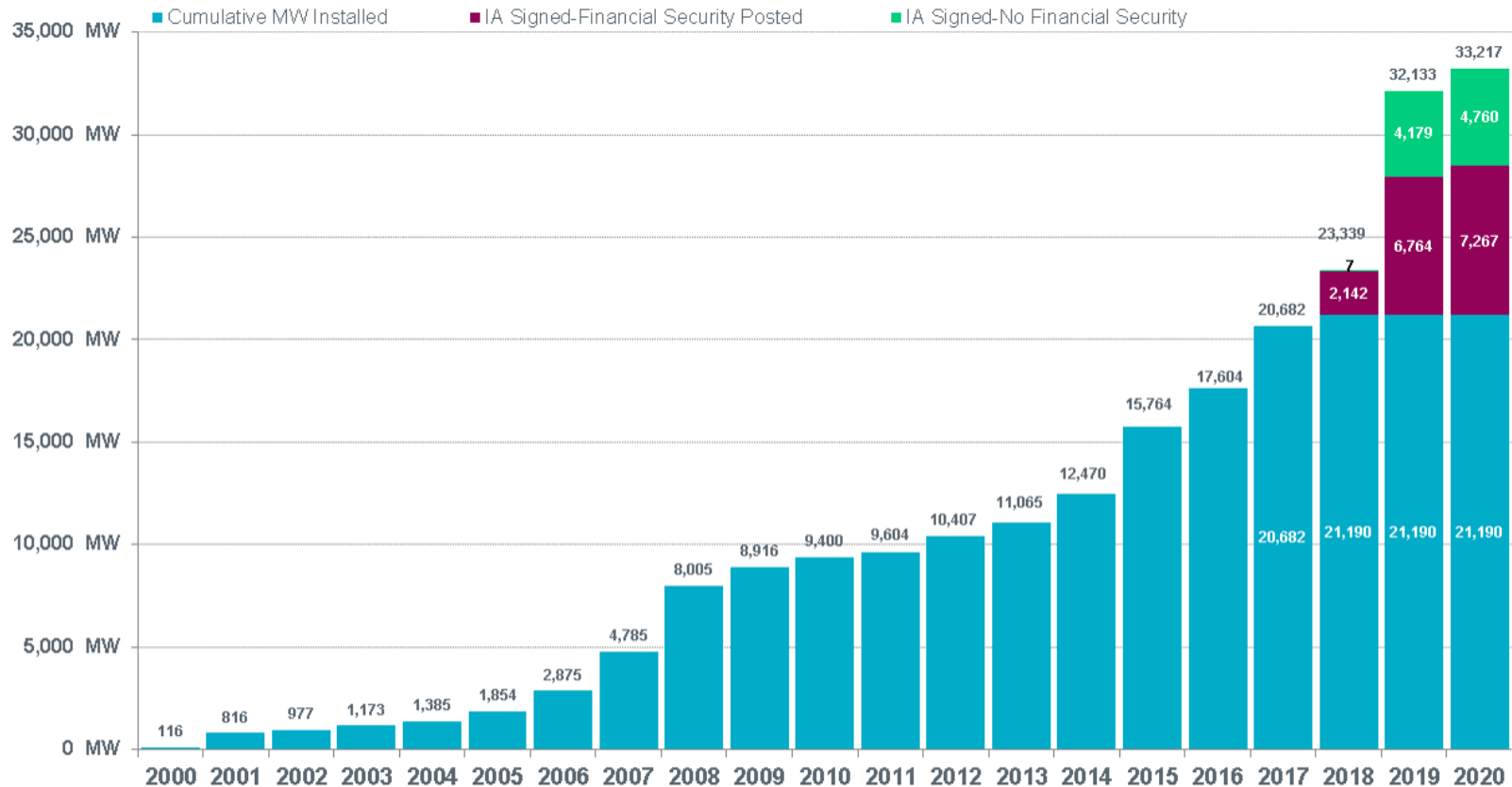


Cumulative MW Capacity of Interconnection Requests by Zone – July 2018



Wind Generation – July 2018

ERCOT Wind Additions by Year (as of July 31, 2018)

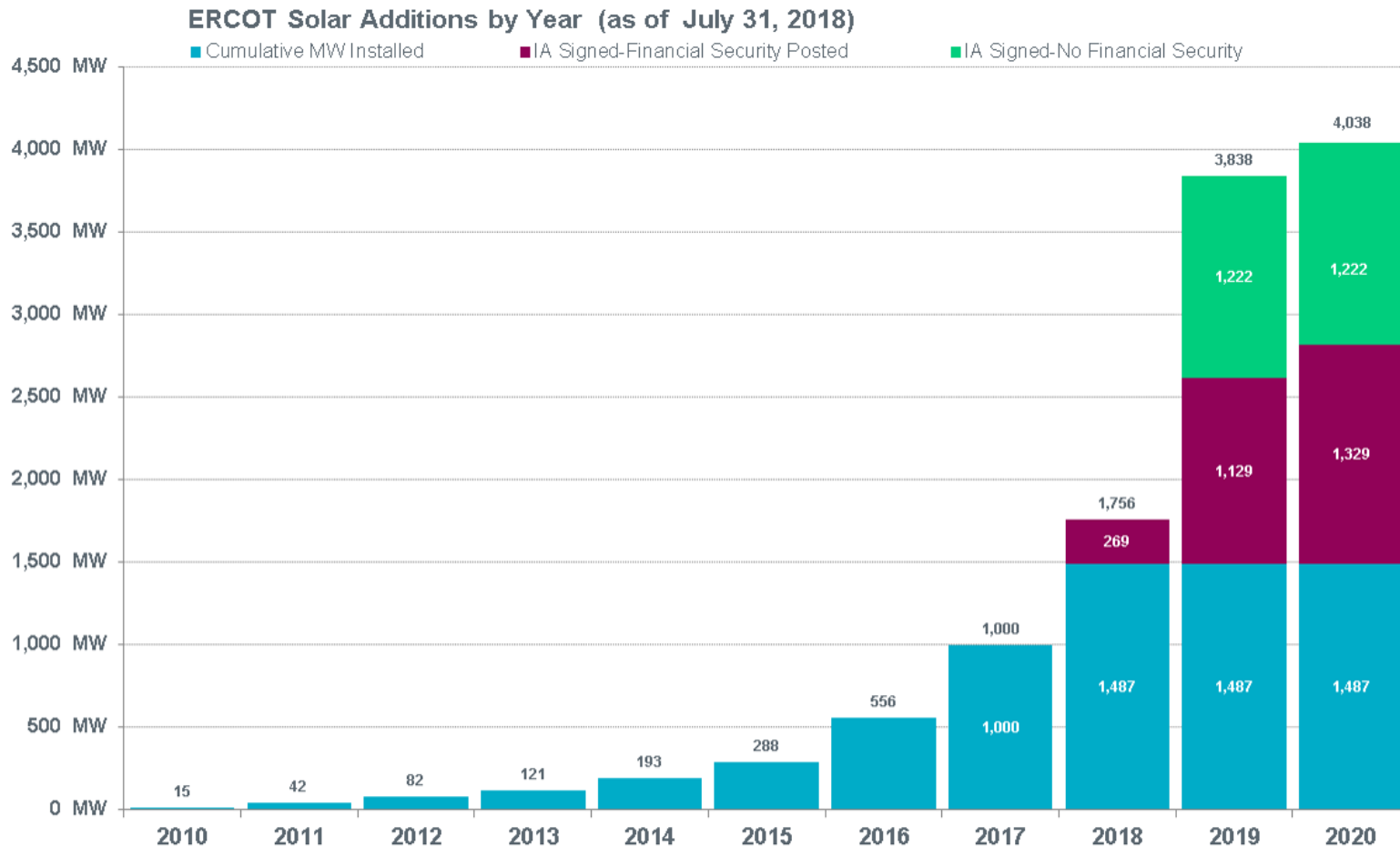


Notes:

- 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 when an IA is signed.



Solar Generation – July 2018

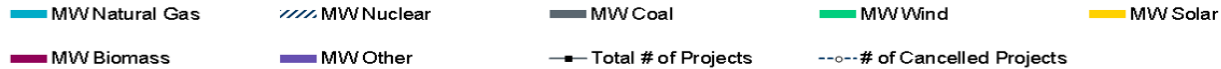


Notes:

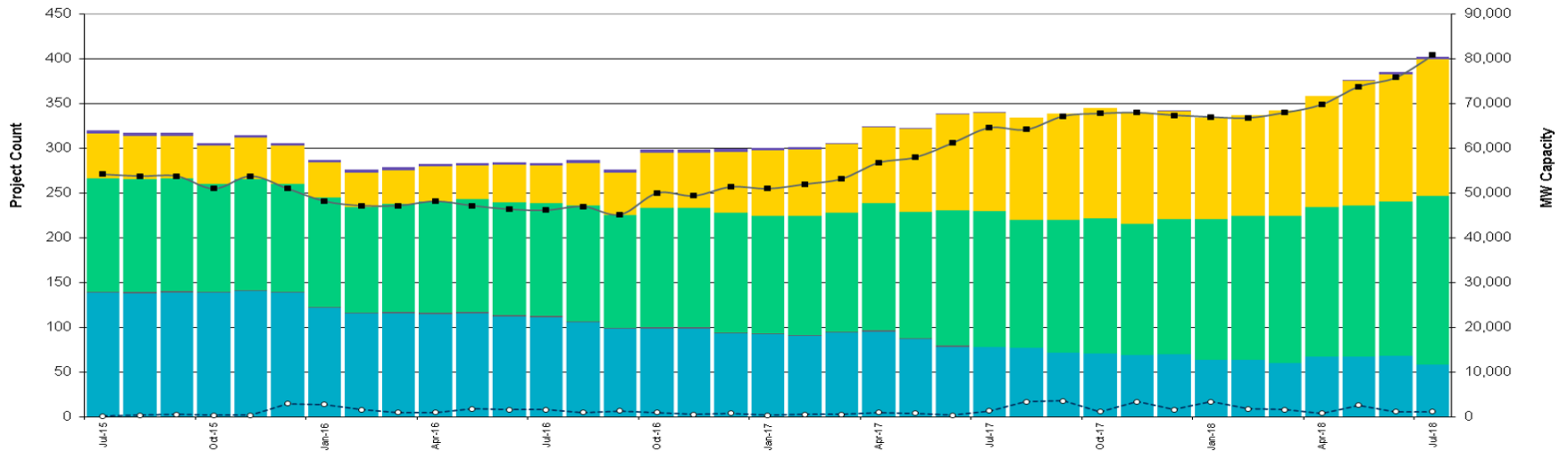
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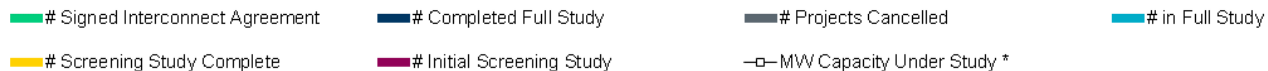
Generation Interconnection Activity by Fuel – July 2018



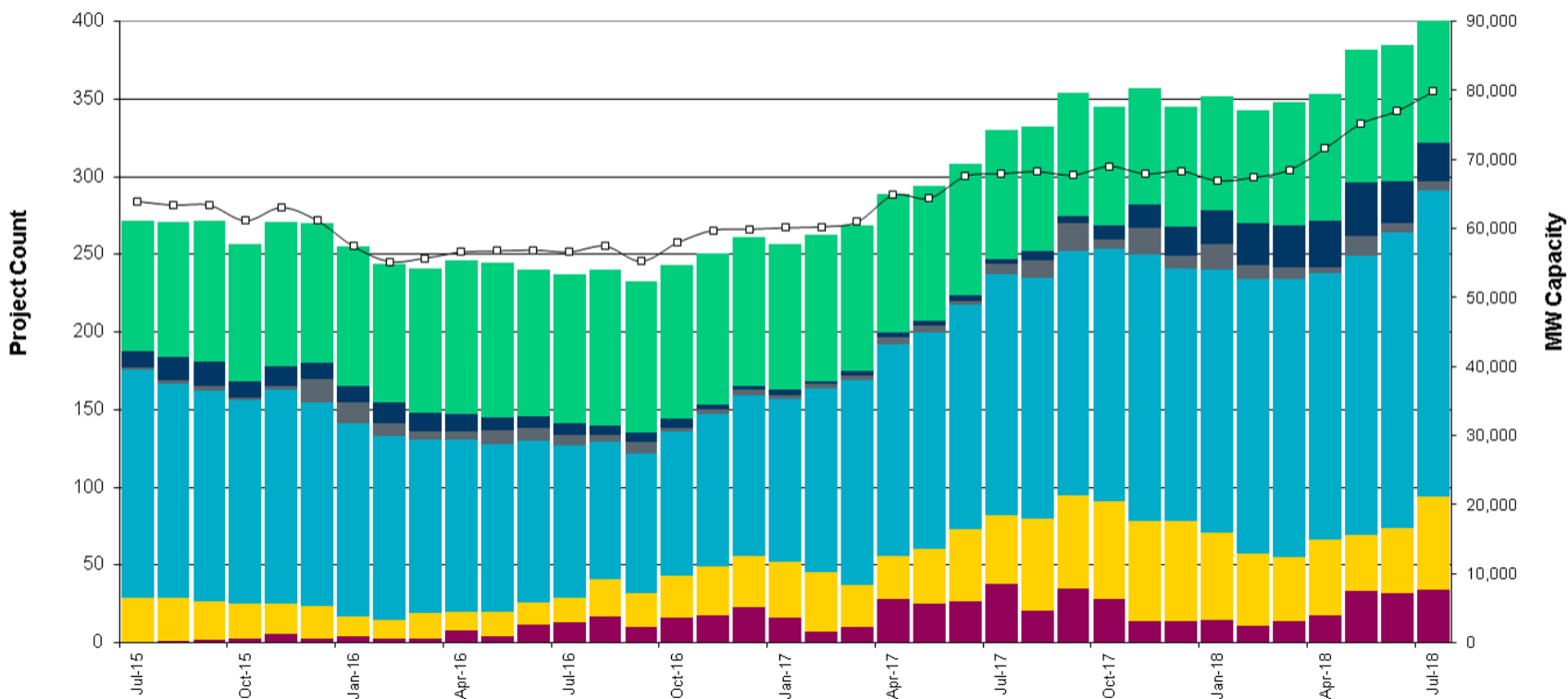
Projects in all phases of interconnection study are reflected in this graph



Generation Interconnection Activity by Project Phase – July 2018

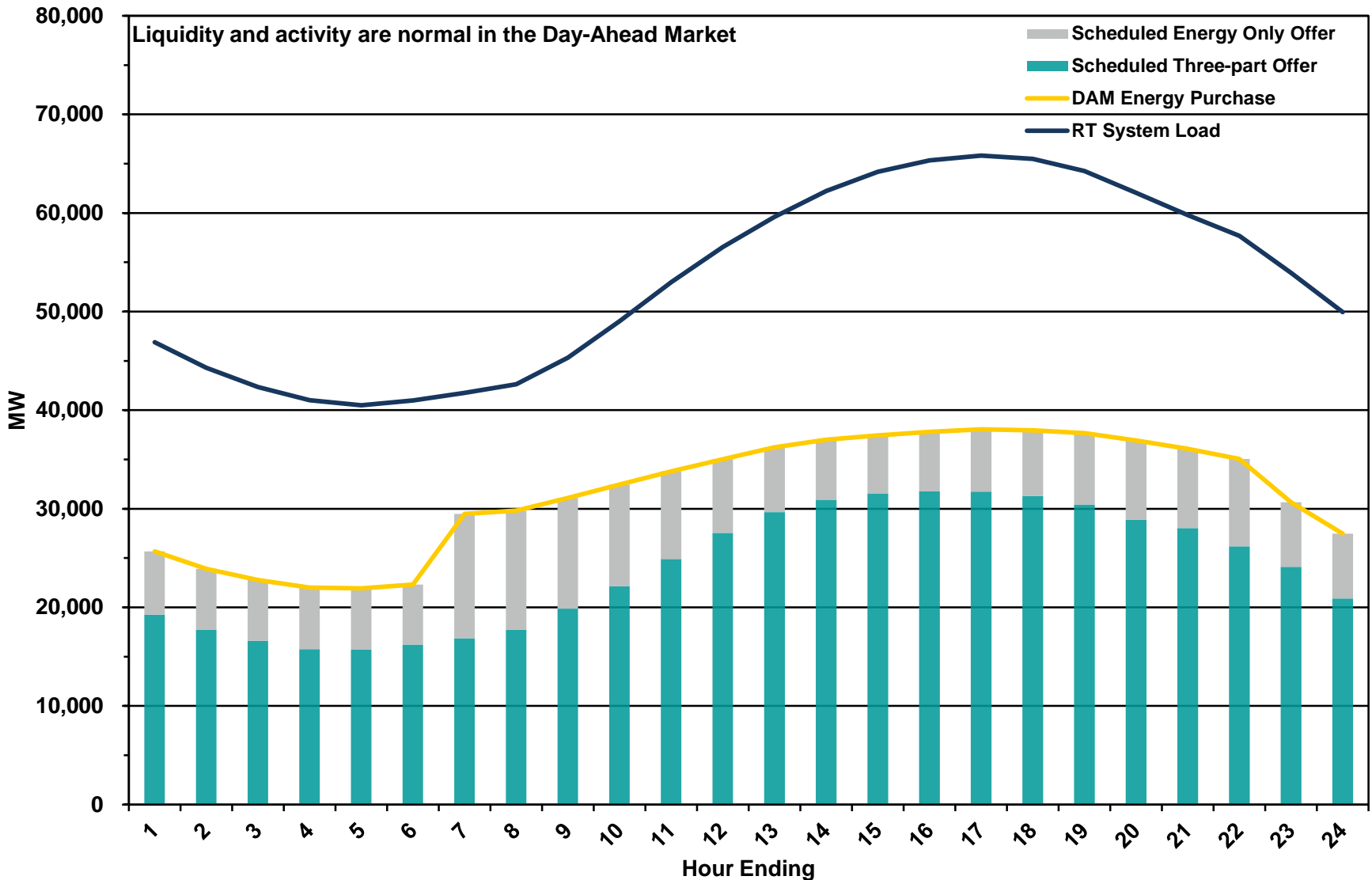


* Nameplate capacity will change across time due to additional projects, cancellations, expirations, adjustments from study results, and projects being placed in service.

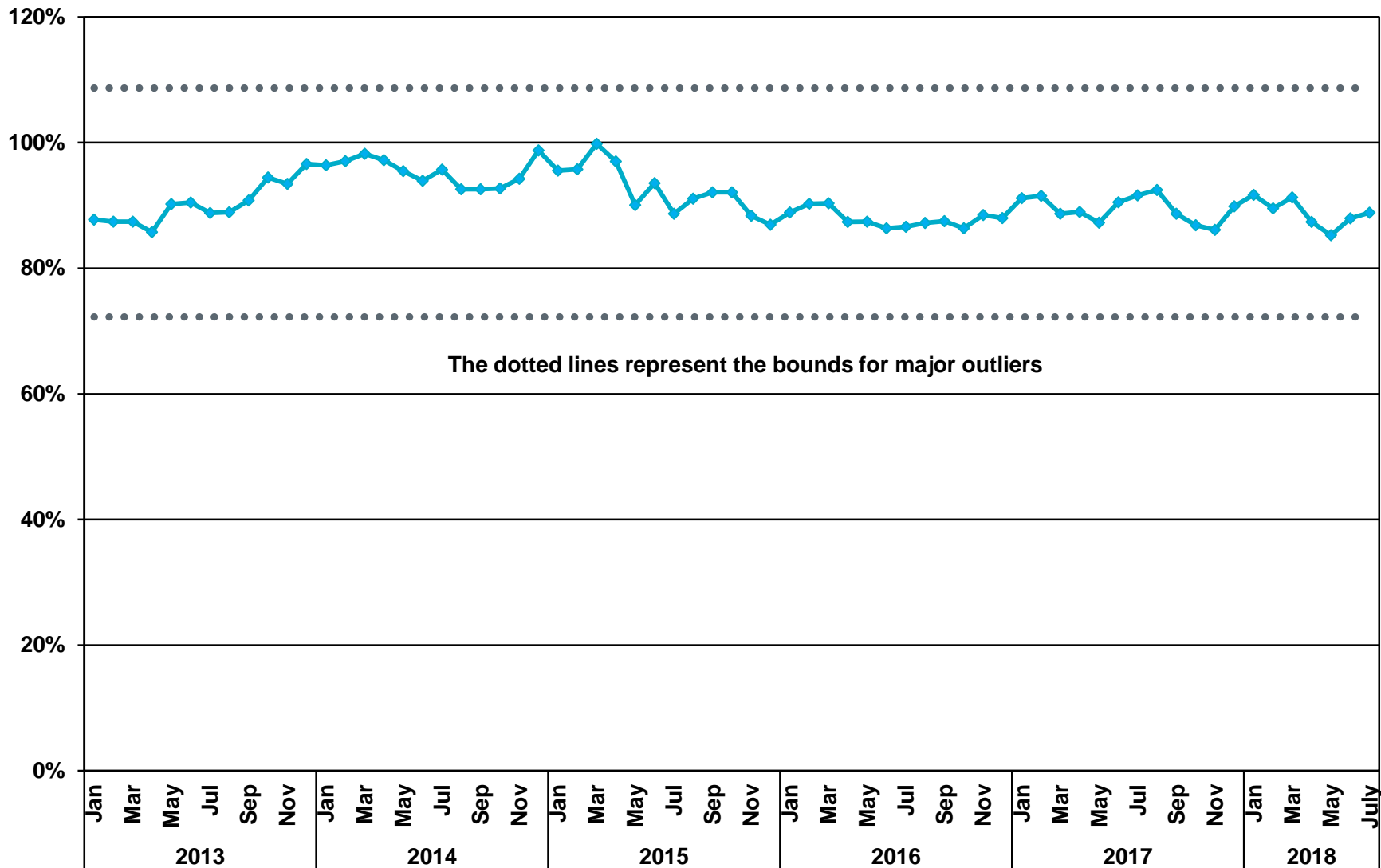


Market Operations

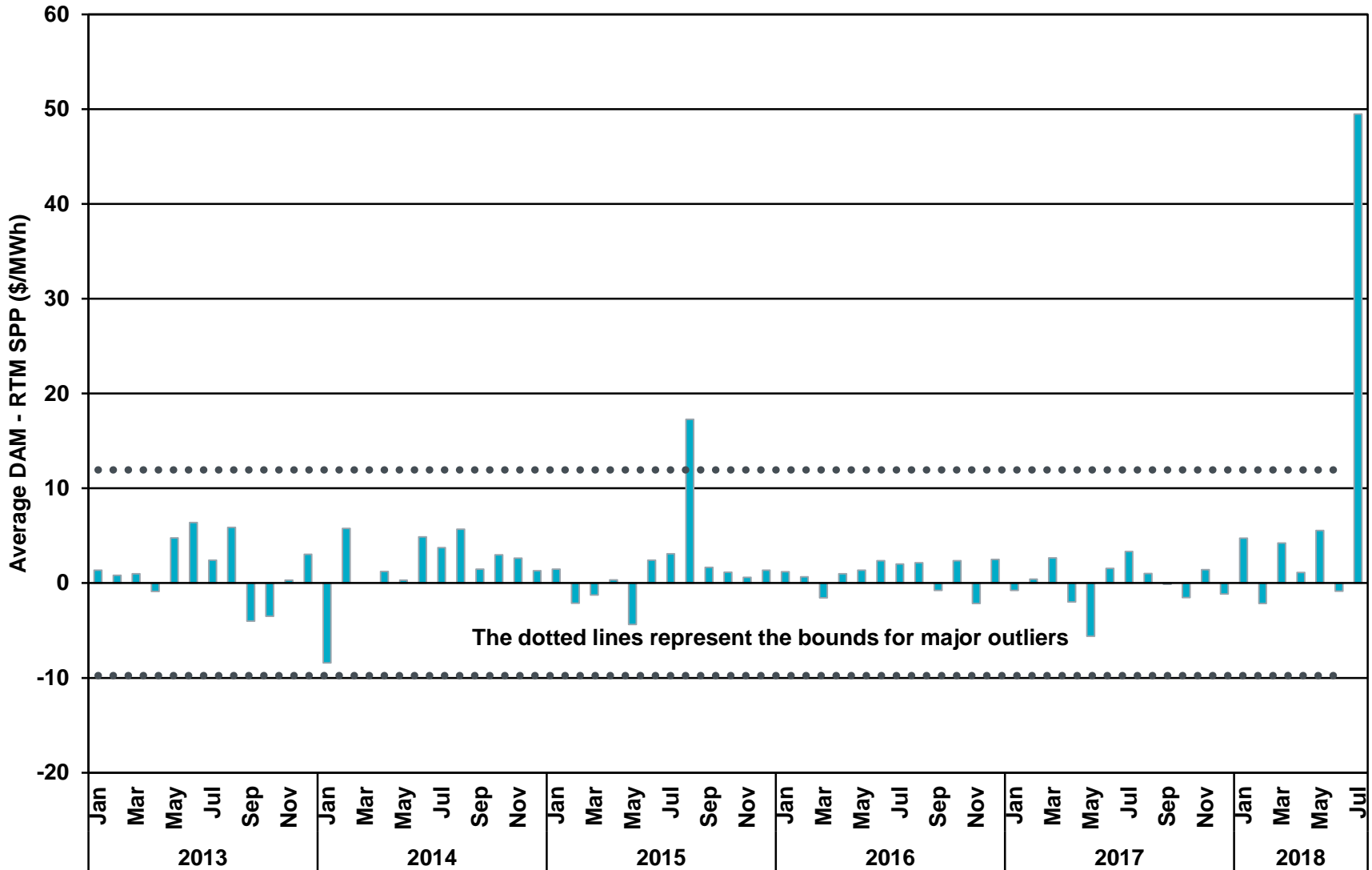
Day-Ahead Schedule (Hourly Average) – July 2018



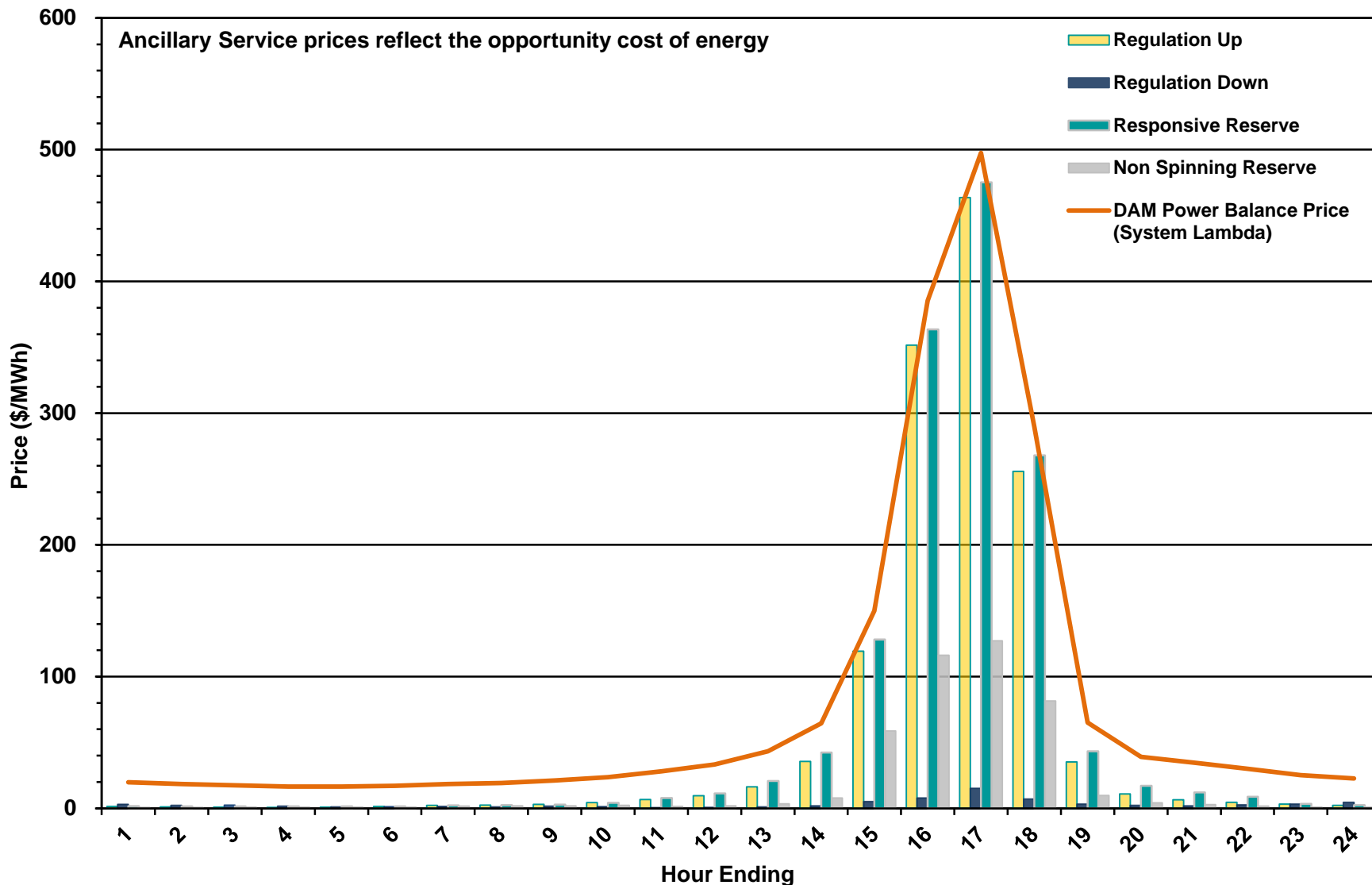
Percentage of Real-Time Load Hedged in the DAM (Counter-Party Level) – July 2018



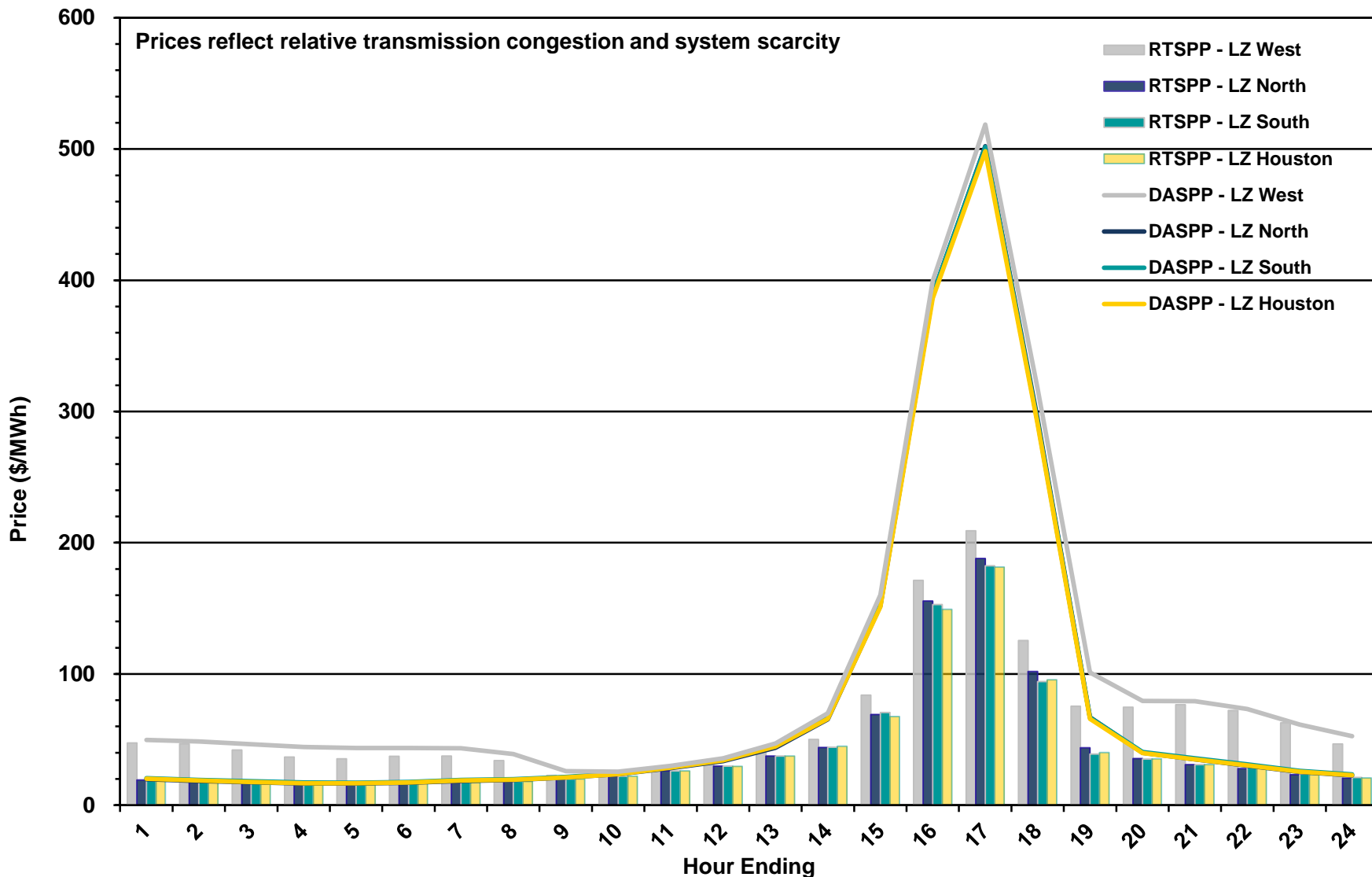
DAM and RTM Price Convergence – July 2018



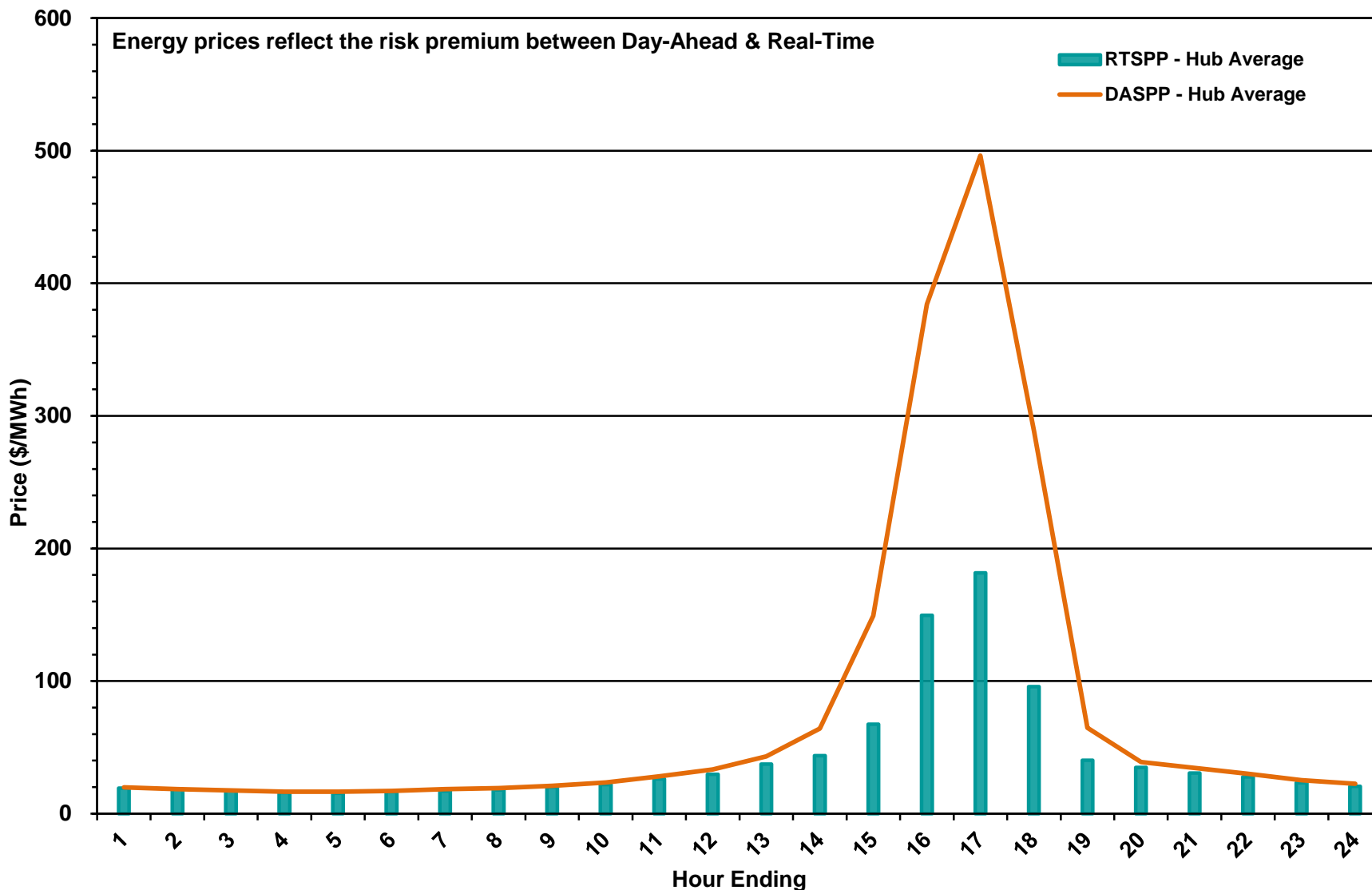
Day-Ahead Electricity and Ancillary Service Prices (Hourly Average) – July 2018



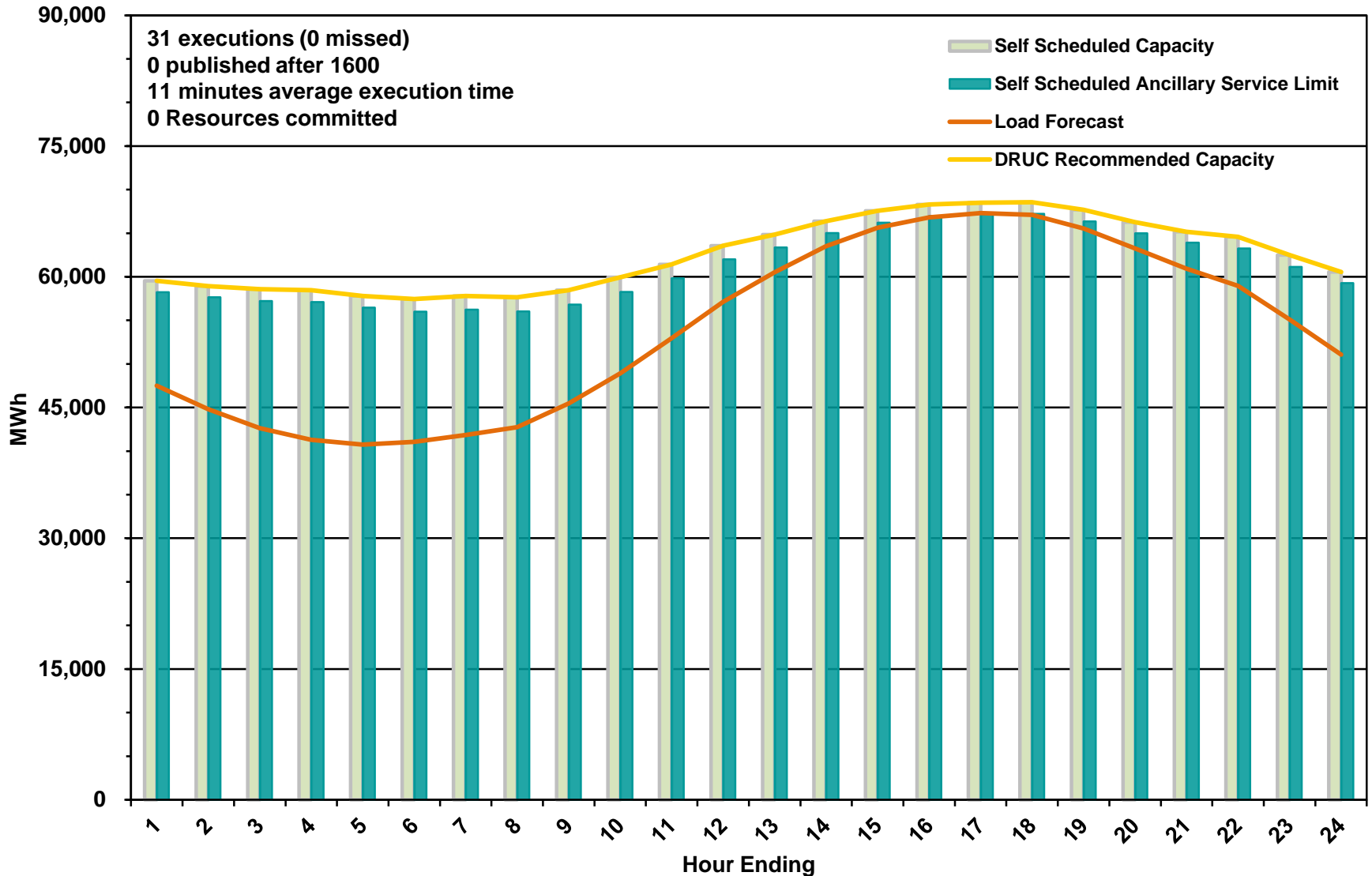
Day-Ahead vs Real-Time Load Zone SPP (Hourly Average) – July 2018



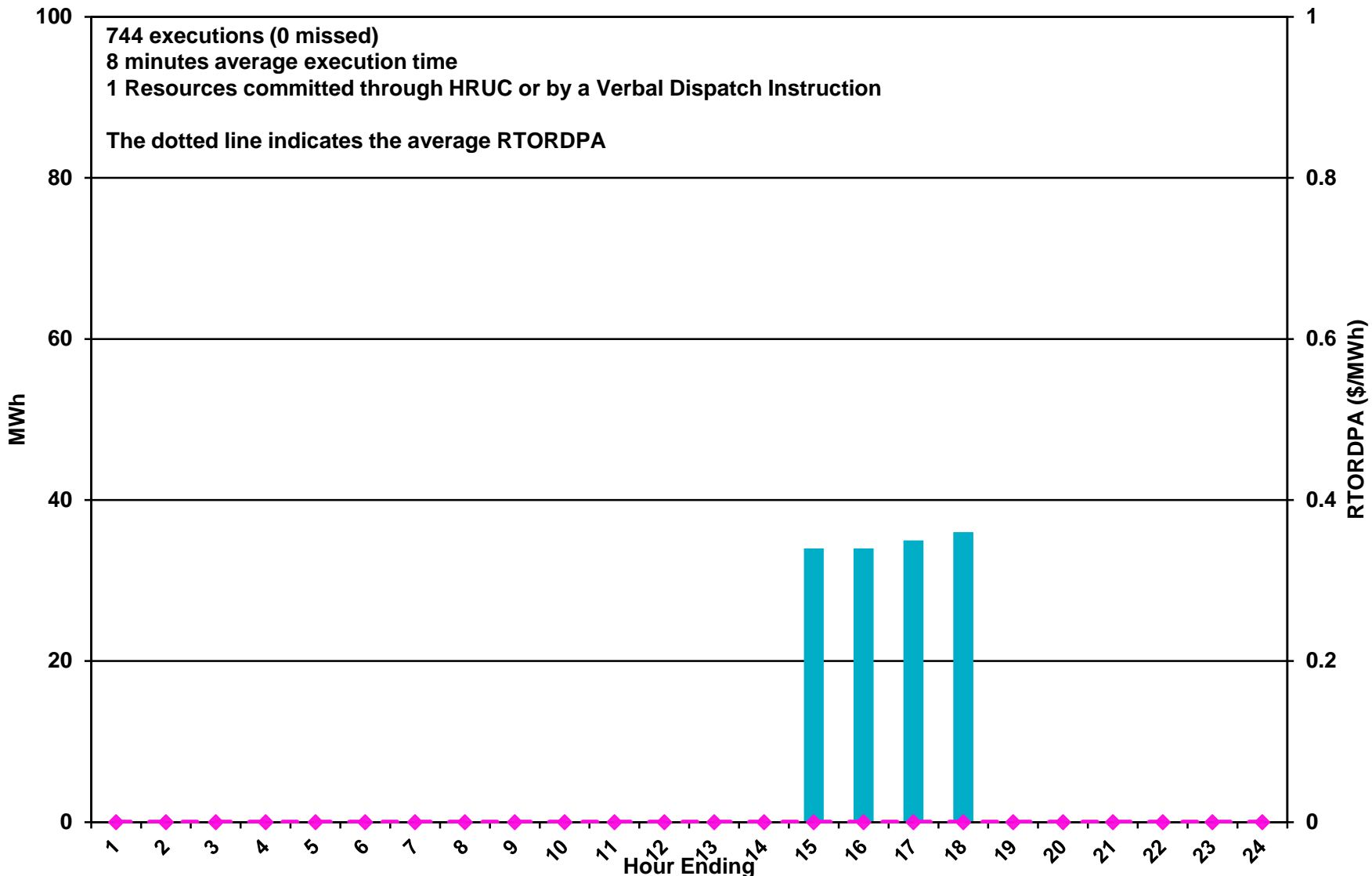
Day-Ahead vs Real-Time Hub Average SPP (Hourly Average) – July 2018



DRUC Monthly Summary (Hourly Average) – July 2018



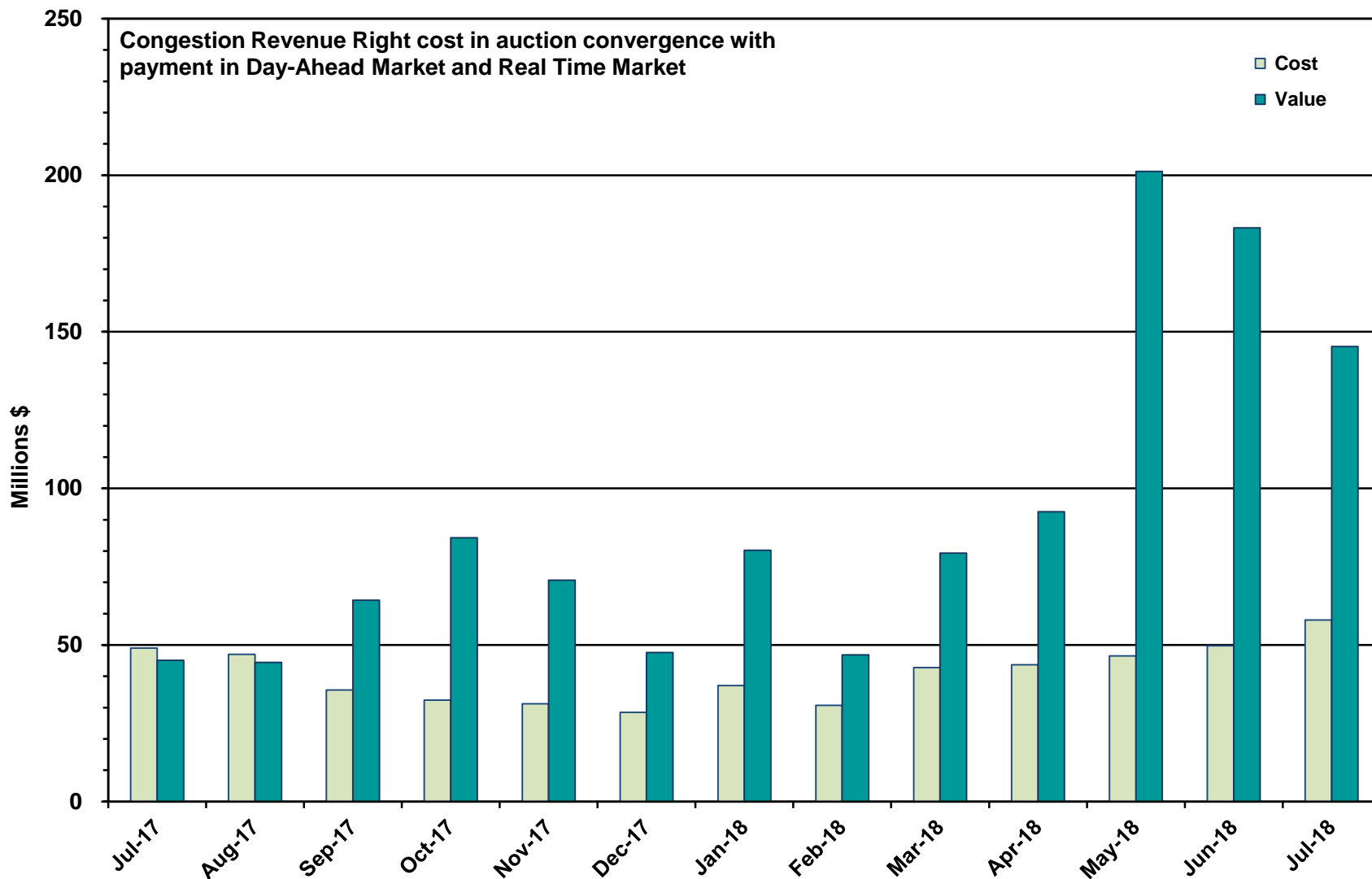
HRUC Monthly Summary and Real Time On-Line Reliability Deployment Price Adder (RTORDPA) (Hourly Average) – July 2018



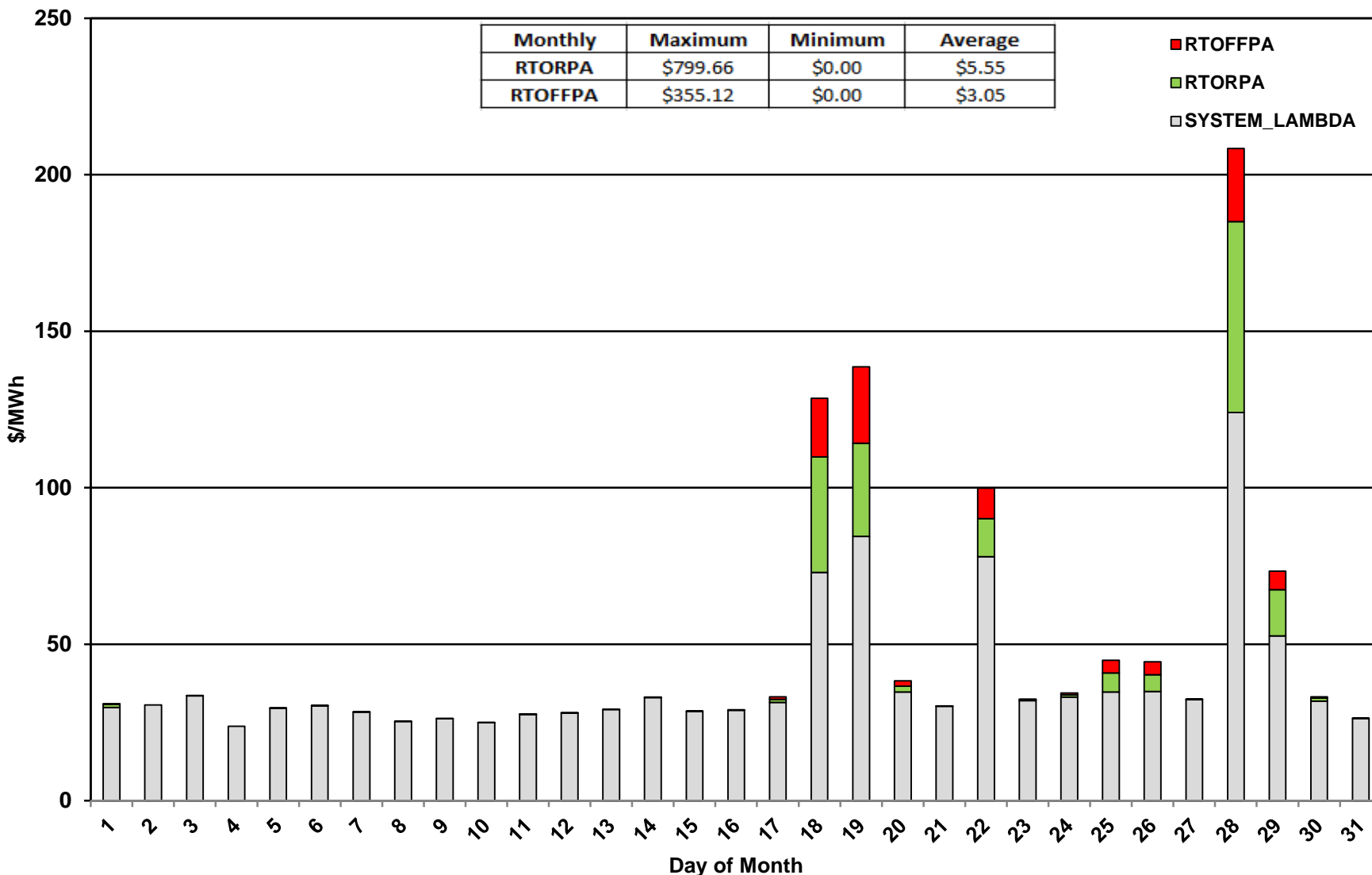
Non-Spinning Reserve Service Deployment – July 2018

Deployment Start Time	Deployment End Time	Deployment Duration (Hours)	Max Deployment (MW)	Reason
N/A				

CRR Price Convergence – July 2018



Daily Average System Lambda and ORDC Price Adders – July 2018



ERS Procurement for June 2018 – September 2018

	TP1	TP2	TP3	TP4	TP5	TP6
Non Weather-Sensitive ERS-10 MW	160.562	165.996	143.324	140.708	156.699	151.138
Non Weather-Sensitive ERS-30 MW	736.864	781.559	702.529	625.067	755.153	657.394
Weather-Sensitive ERS-10 MW	0	0	0	0	0	0
Weather-Sensitive ERS-30 MW	0	0	11.850	11.850	0	0
Total MW Procured	897.426	947.555	857.703	777.625	911.852	808.532
Clearing Price	\$2.01	\$1.85	\$21.08	\$21.77	\$1.99	\$2.25

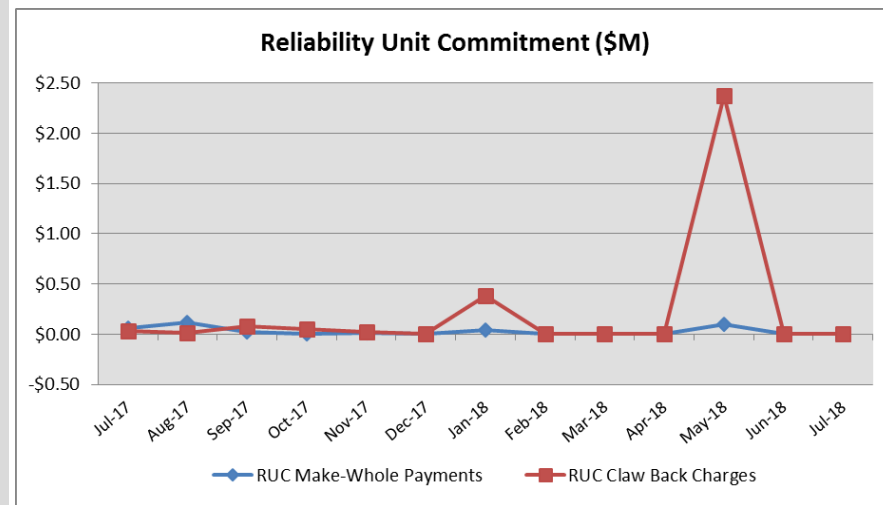
Time Period

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 – July 2018

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



In July 2018, there was a credit of \$0.00M allocated to load for RUC compared to:

- A credit of \$0.00M in June 2018
- A credit of \$0.03M in July 2017

Ancillary and Other Services – July 2018

Ancillary and Other Services	\$ in Millions
Regulation Up Service	\$11.05
Regulation Down Service	\$0.72
Responsive Reserve Service	\$71.77
Non-Spinning Reserve Service	\$17.87
Black Start Service	\$0.59
Voltage Services - Reactive Power	\$0.00
Voltage Services - Lost Opportunity	\$0.00
Total Charges Allocated to Load	\$102.00

In July 2018, Ancillary and Other Services was a charge of \$102.00M, compared to:

- A charge of \$20.01M in June 2018
- A charge of \$23.22M in July 2017

Real-Time Ancillary Service Imbalance (ORDC) – July 2018

Real-Time Ancillary Service Imbalance	\$ in Thousands
Real-Time AS Imbalance	(\$2,228)
Real-Time Reliability Deployment AS Imbalance	\$0.00
Total RTASI Amount Allocated to Load	\$2,228

In July 2018, Real-Time Ancillary Service Imbalance was a charge to load of \$2,228K, compared to:

- A charge of \$147K in June 2018
- A charge of \$534K in July 2017

Energy Settlement – July 2018

Day-Ahead Market Energy Settlement	\$ in Millions
Energy Purchases	\$2,153.96
Point to Point Obligation Purchases	\$117.26
Energy Sales	(\$2,125.92)
Day-Ahead Congestion Rent	\$145.31
Day-Ahead Market Make-Whole Payments	(\$0.01)

Day-Ahead Market energy settlement activity increased from last month and increased from July 2017.

Real-Time Market energy settlement activity increased from last month and increased from July 2017.

Real-Time Market Energy Settlement	\$ in Millions
Energy Imbalance at a Resource Node	(\$919.63)
Energy Imbalance at a Load Zone	\$1,607.37
Energy Imbalance at a Hub	(\$574.97)
Net Real-Time Energy Imbalance	\$112.76
Real Time Congestion from Self Schedules	\$0.13
Block Load Transfers and DC Ties	(\$20.63)
Total Impact to Revenue Neutrality	\$92.27
Load-Allocated Emergency Energy Payments	(\$0.16)
Load-Allocated Base Point Deviation Charges	\$0.26

Congestion Revenue Rights (CRR) – July 2018

	\$ in Millions
Long-Term Auction	(\$40.26)
Monthly Auction	(\$17.73)
Total Auction Revenue	(\$57.99)
Day-Ahead CRR Settlements	(\$157.97)
Day-Ahead CRR Short-Charges	\$18.85
Day-Ahead CRR Short-Charges Refunded	(\$8.99)
Day-Ahead CRR Short-Charges Net	\$9.86
Total CRR Funding	(\$148.10)
Day-Ahead Point-to-Point Obligations	\$117.26
Real-Time Point-to-Point Obligations	(\$101.13)
Net Point-to-Point Obligations	\$16.14

Congestion Revenue Rights settlement payments were not fully funded. Partial funding to settle the CRR Short Charges was provided from the CRR Balancing Account Fund and the remaining \$9.86M of CRR Short Charges were not refunded. The CRR Fund Balance is now \$0.

Point to Point Obligations settled with a net charge of \$16.14M compared to a net credit of \$17.58M last month.

CRR Balancing Account Fund – July 2018

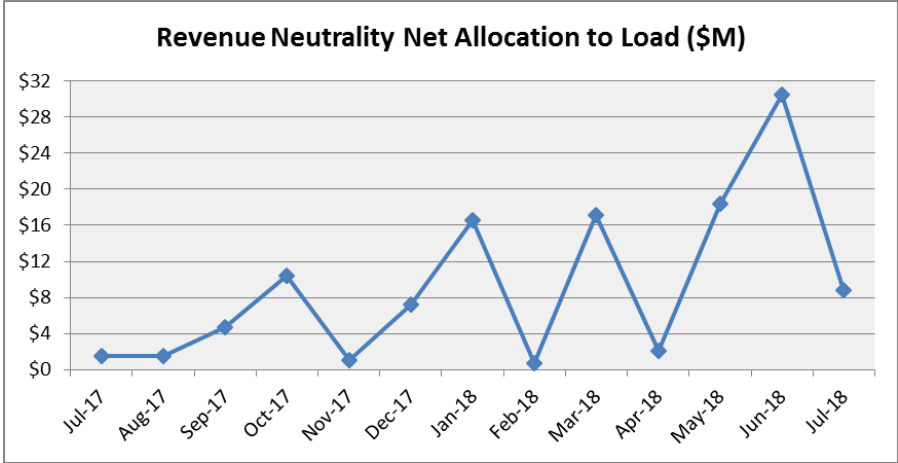
CRR Balancing Account	\$ in Millions
Monthly Day-Ahead Congestion Rent	\$145.31
Monthly Day-Ahead CRR Settlements	(\$157.97)
Monthly Day-Ahead CRR Short -Charges	\$18.85
CRR Balancing Account Credit Total	\$6.19
Beginning Fund Balance for the Month	\$2.75
CRR Balancing Account Credit Total	\$6.19
Day-Ahead CRR Short-Charges Refunded	(\$8.99)
CRR PTP Option Award Charges	\$0.04
Load-Allocated CRR Amount	\$0.00
Total Fund Amount	\$0.00

Revenue Neutrality – July 2018

Revenue Neutrality	\$ in Millions
Real-Time Energy Imbalance	\$112.76
Real-Time Point to Point Obligation	(\$101.13)
Real-Time Congestion from Self-Schedules	\$0.13
DC Tie & Block Load Transfer	(\$20.63)
Allocation to Load	\$8.86

In July 2018, the Revenue Neutrality charge to load was \$8.86M compared to:

- A charge of \$30.46M in June 2018
- A charge of \$1.45M in July 2017

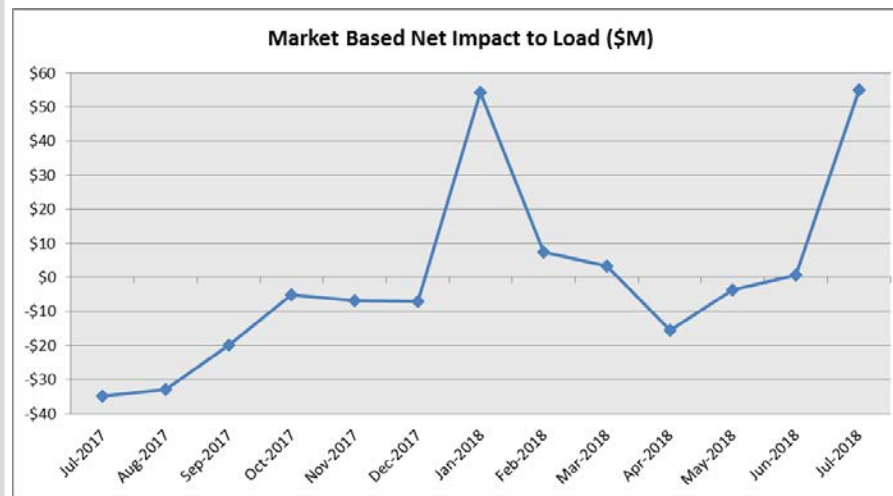


Net Allocation to Load – July 2018

Market-Based Allocation	\$ in Millions
Reliability Unit Commitment	\$0.00
Ancillary and Other Services	\$102.00
Real-Time Ancillary Service Imbalance	\$2.23
Emergency Energy	\$0.16
Base Point Deviation	(\$0.26)
CRR Auction Revenue	(\$57.99)
CRR Balancing Account	\$0.00
Real-Time Revenue Neutrality	\$8.86
Reliability Must Run	\$0.00
Monthly Block Load Transfer	\$0.00
Total	\$55.00
Fee Allocation	
ERCOT Administrative Fee	\$22.07
Net Allocated to Load	\$77.07

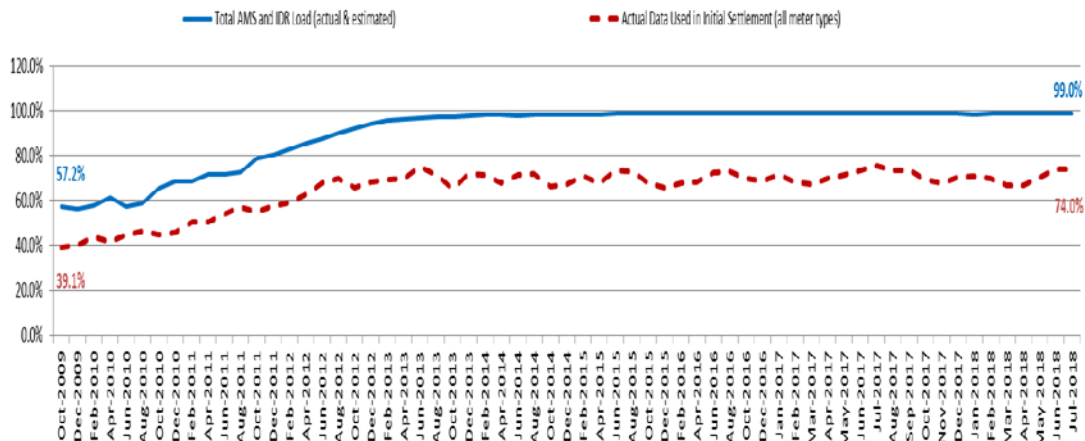
In July 2018, the Net Allocation to load was a charge of \$77.07M compared to:

- A charge of \$21.52M in June 2018
- A credit of \$13.63M in July 2017



Advanced Meter Settlement Impacts – July 2018

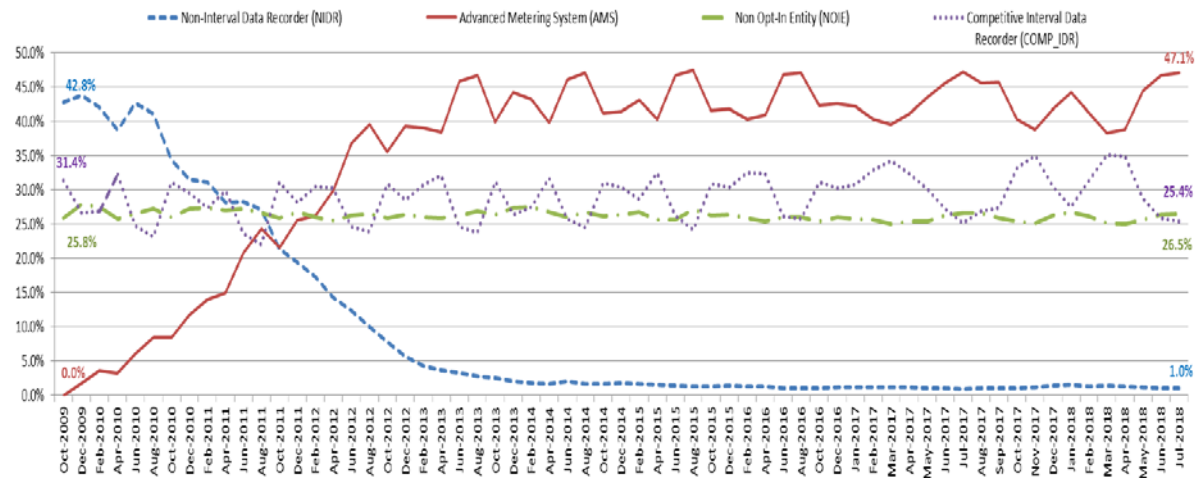
Percent Actual/Percent Interval Data Recorder (IDR)



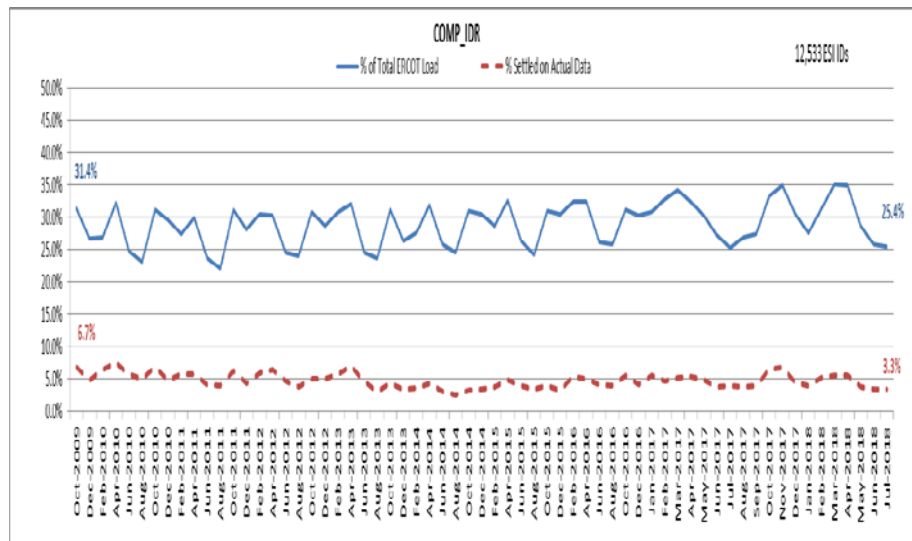
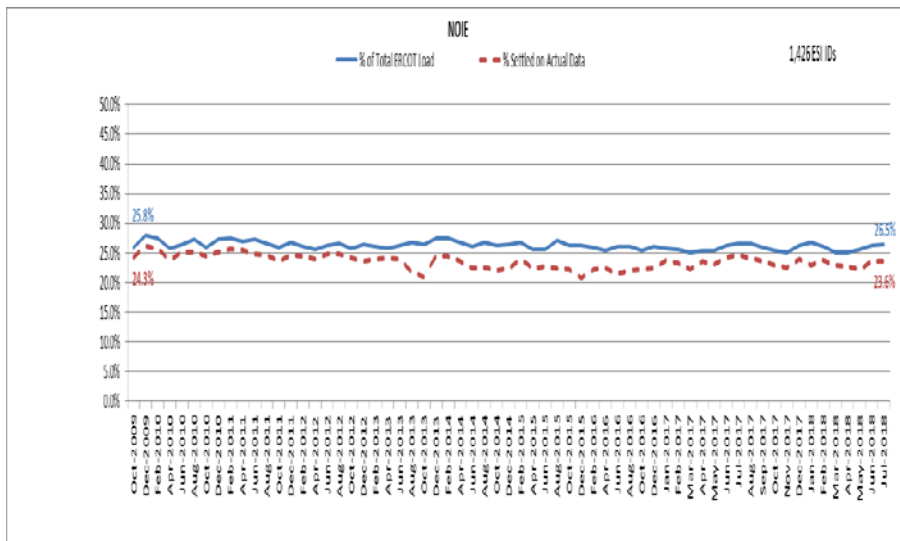
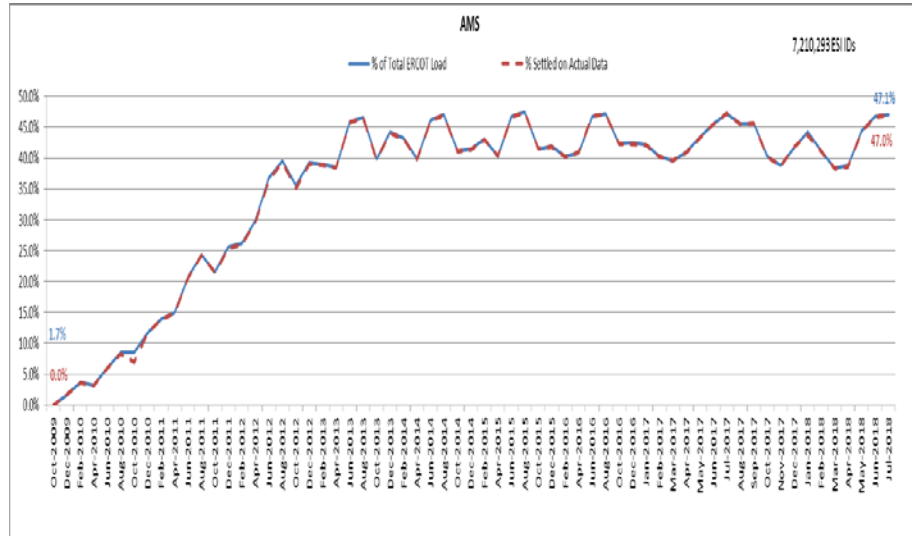
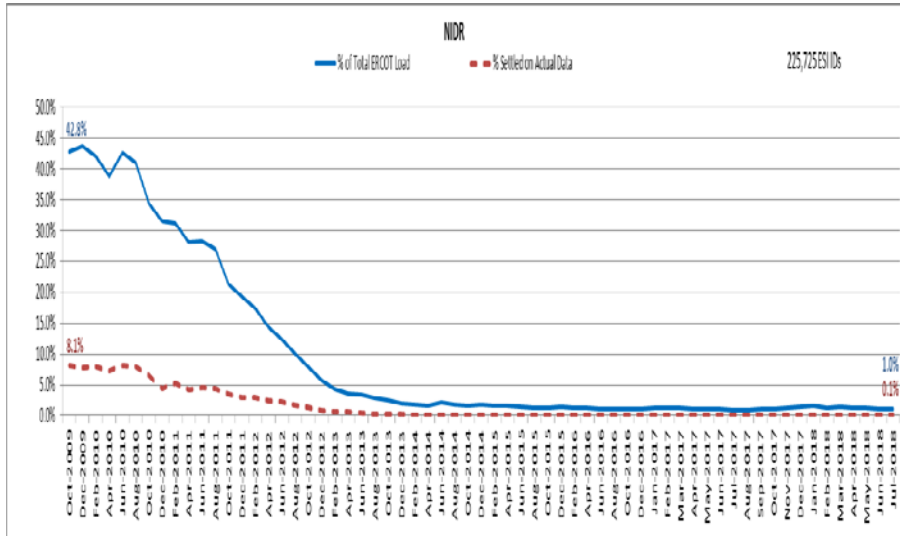
July 2018: At month end, settling 7.2M ESIIDs using Advanced Meter data.

July 2018: 99.0% 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 – July 2018

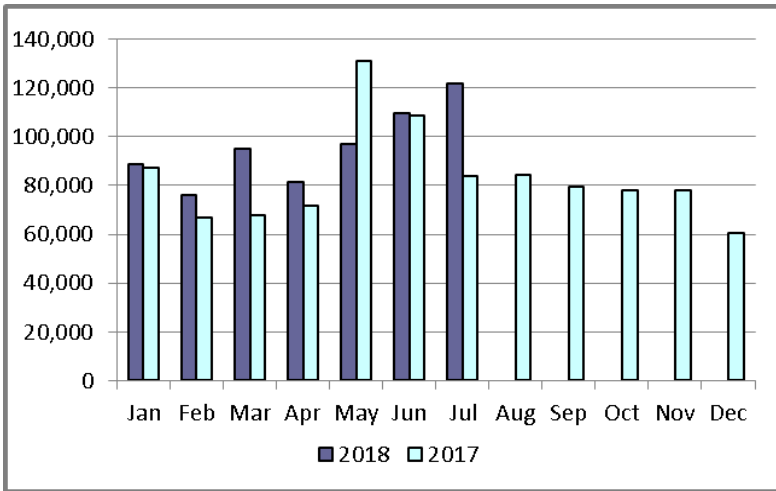


Retail Transaction Volumes – Summary – July 2018

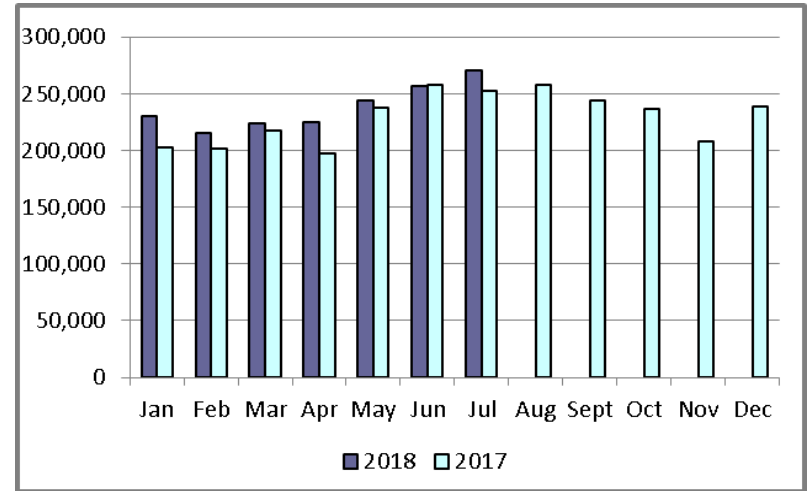
Transaction Type	Year-To-Date		Transactions Received	
	July 2018	July 2017	July 2018	July 2017
Switches	669,909	617,300	121,926	84,059
Acquisition	0	0	0	0
Move - Ins	1,667,037	1,568,153	270,122	252,360
Move - Outs	814,580	802,779	129,820	127,073
Continuous Service Agreements (CSA)	395,944	283,259	40,217	55,770
Mass Transitions	9,033	0	0	0
Total	3,556,503	3,271,491	562,085	519,262

Retail Transaction Volumes – Summary – July 2018

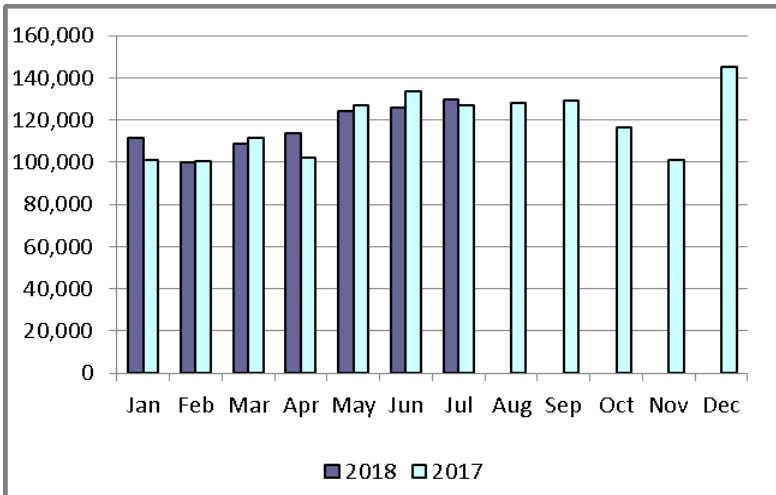
Switches/Acquisitions



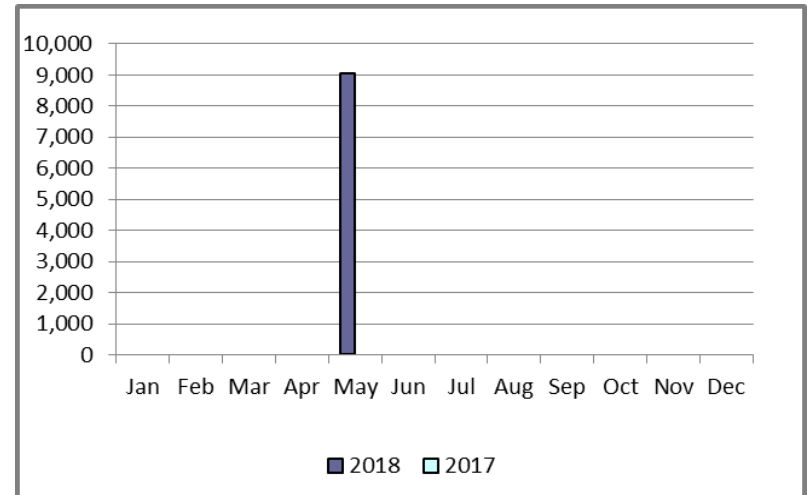
Move-Ins



Move-Outs



Mass Transition



Projects Report

ERCOT Portfolio Stoplight Report – July 2018

Impact Metric Tolerances	2018 Project Funding	\$20,000,000	2018 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 = 100)		\$ 24,905,011
	Projects Not Yet Started (Count = 10)		\$ 1,320,628
	Projects Completed (Count = 43)		\$ 795,250
	Spending Reductions Required to Maintain Capital Budget		\$ (7,020,889)
	TOTAL		\$ 20,000,000

Project Number	Projects in Initiation Phase (Count = 4)	Footnotes
TBD	IT Asset Recovery	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
NPRR842	Study Area Load Information	
209-03	Study Network (STNET) Integration	
288-01	EDI Map and Translator Replacement	

Project Number	Projects in Planning Phase (Count = 8)	Phase Start	Baseline Phase Finish	Approved Phase Finish	Scheduled Go-Live Date	Scheduled Phase Finish	Schedule Health	Budget Health
134-02	Privileged Account Management (PAM) Phase 2	8/8/2018	12/19/2018	12/19/2018	TBD	12/19/2018	0%	10%
183-01	CMM-FT GUI Integration	12/16/2015	8/17/2016	TBD	TBD	TBD	0%	NA See 2015 CMM NPRRs
242-01	Portfolio Reporting Assessment	11/8/2017	12/19/2018	12/19/2018	TBD	12/19/2018	0%	21%
260-01	Information Governance Assessment	10/18/2017	5/30/2018	9/19/2018	TBD	9/19/2018	0%	5%
286-01	Java Platform Assessment	6/20/2018	11/21/2018	11/21/2018	TBD	11/21/2018	0%	6%
287-01	Security Constrained Unit Commitment (SCUC)	8/8/2018	2/27/2019	2/27/2019	TBD	2/27/2019	0%	-1%
NPRR484	Revisions to Congestion Revenue Rights Credit Calculations and Payments - Phase 1b / 2	12/16/2015	8/17/2016	TBD	TBD	TBD	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	TBD	TBD	TBD	0%	NA See 2015 CMM NPRRs



ERCOT Portfolio Stoplight Report – July 2018

Project Number	Projects in Execution Phase (Count = 42)	Phase Start	Baseline Go-Live Date	Approved Go-Live Date	Scheduled Go-Live Date	Scheduled Phase Finish	Schedule Health		Budget Health	
170-01	Enterprise Content Alignment Program	8/26/2015	11/15/2017	8/31/2018	8/31/2018	8/31/2018		0%		0%
170-06	ECAP - ECMS Implementation Phase 1	4/25/2018	11/30/2018	11/30/2018	11/30/2018	11/30/2018		0%		3%
173-02	ERCOT Flight Certification Website	11/15/2017	2/28/2019	2/28/2019	2/28/2019	5/31/2019		0%		2%
181-01	CRR Framework Upgrade	10/26/2016	10/2/2017	11/19/2018	11/19/2018	2/27/2019		0%		2%
183-01	CMM Tech Refresh	3/15/2017	5/19/2018	12/11/2018	12/11/2018	12/31/2018		0%	NA	See 2015 CMM NPRRs
193-01	PMU Tool Evaluation and Implementation	12/13/2017	8/9/2018	2/15/2019	2/15/2019	3/20/2019		0%		0%
196-01	GINR Project Status Application Replacement	12/21/2016	9/14/2017	2/28/2019	2/28/2019	3/31/2019		0%		1%
198-02	Reactive Power Coordination PoC	9/6/2017	6/16/2018	8/15/2018	8/15/2018	8/15/2018		0%		54%
209-02	Weather Imaging and Line Observation (WILO)	5/30/2018	2/1/2019	2/1/2019	2/1/2019	2/27/2019		0%		2%
210-01	REC Technology Refresh	8/30/2017	3/18/2018	12/13/2018	12/13/2018	1/16/2019		0%		3%
228-01	Enterprise Database Upgrade	8/8/2018	1/29/2020	1/29/2020	1/29/2020	1/29/2020		0%		17%
229-01	IT Change and Configuration Management Phase 2	8/2/2017	6/19/2018	12/13/2018	12/13/2018	3/25/2019		0%	2	-9%
238-01	Application Authentication Tech Refresh	9/6/2017	3/19/2018	12/13/2018	12/13/2018	1/30/2019		0%		3%
239-01	Identity and Access Management	5/9/2018	3/13/2019	3/13/2019	3/13/2019	3/13/2019		0%		2%
241-01	AREA - Generation	10/11/2017	3/30/2018	8/9/2018	8/9/2018	9/5/2018		0%		-4%
244-01	Corporate Wireless	11/29/2017	3/28/2018	12/5/2018	12/5/2018	1/9/2019		0%		9%
245-01	2017 EPS Metering Enhancements	6/27/2018	8/9/2019	8/9/2019	8/9/2019	9/25/2019		0%		1%
246-01	iTest Data Refresh	12/13/2017	11/9/2018	11/15/2018	11/15/2018	1/2/2019		0%		25%
249-01	Secondary Wind Forecasting Service	8/30/2017	2/28/2018	8/9/2018	8/9/2018	9/5/2018		0%		0%
253-01	CIP Recovery Plan Project - Planning Phase 1	1/31/2018	8/29/2018	8/29/2018	8/29/2018	8/29/2018		0%		-2%
257-01	Security Constrained Optimal Powerflow in Study Network Analysis	12/6/2017	10/25/2018	10/25/2018	10/25/2018	12/8/2018		0%		19%
261-01	Generic Transmission Constraint Calculation	3/7/2018	12/13/2018	12/13/2018	12/13/2018	1/23/2019		0%		0%
263-01	Market Simulator	4/11/2018	12/13/2018	12/13/2018	12/13/2018	1/30/2019		0%		7%
265-01	Real-Time Assessment Continuity	1/31/2018	12/13/2018	12/13/2018	12/13/2018	1/30/2019		0%		0%
279-01	Cyber Security Project #24	6/27/2018	10/26/2018	10/26/2018	10/26/2018	11/28/2018		0%		0%
280-01	Quest Software Portfolio Transition	4/4/2018	6/27/2018	9/26/2018	9/26/2018	9/26/2018		0%		13%
282-01	Synchronous Condenser Outage Modeling	6/6/2018	10/25/2018	10/25/2018	10/25/2018	12/5/2018		0%		1%
Various	2015 CMM NPRRs								2	-18%
NPRR519	Exemption of ERS-Only QSEs from Collateral and Capitalization Requirements	3/15/2017	5/19/2018	12/11/2018	12/11/2018	12/31/2018		0%		See 2015 CMM NPRRs
NPRR620	Collateral Requirements for Counter-Parties with No Load or Generation	3/15/2017	5/19/2018	12/11/2018	12/11/2018	12/31/2018		0%	NA	See 2015 CMM NPRRs
NPRR660	Remove CRR State Change Adder	3/15/2017	5/19/2018	12/11/2018	12/11/2018	12/31/2018		0%	NA	See 2015 CMM NPRRs



ERCOT Portfolio Stoplight Report – July 2018

Project Number	Projects in Execution Phase (Count = 42)	Phase Start	Baseline Go-Live Date	Approved Go-Live Date	Scheduled Go-Live Date	Scheduled Phase Finish	Schedule Health		Budget Health	
NPRR741	Clarifications to TPE and EAL Credit Exposure Calculations	3/15/2017	5/19/2018	12/11/2018	12/11/2018	12/31/2018		0%	NA	See 2015 CMM NPRRs
NPRR749	Option Cost for Outstanding CRRs	8/8/2018	12/13/2018	12/13/2018	12/13/2018	TBD		0%	NA	See 2015 CMM NPRRs
NPRR755	Data Agent-Only QSE Registration	3/15/2017	5/19/2018	12/11/2018	12/11/2018	12/31/2018		0%	NA	See 2015 CMM NPRRs
NPRR819	Modification of Non-Price Error Resettlement Thresholds and Resettlement Clean-Ups	5/9/2018	8/9/2018	8/9/2018	8/9/2018	9/5/2018		0%		36%
NPRR833	Modify PTP Obligation Bid Clearing Change	8/8/2018	12/13/2018	12/13/2018	12/13/2018	TBD		0%		1%
NPRR843	Short-Term System Adequacy and AS Offer Disclosure Reports Additions	7/18/2018	10/25/2018	10/25/2018	10/25/2018	11/28/2018		0%		0%
NPRR864	RUC Modifications to Consider Market-Based Solutions	6/20/2018	10/25/2018	10/25/2018	10/25/2018	11/28/2018		0%		4%
SCR777	Bilateral CRR Interface Enhancement	10/26/2016	10/2/2017	11/19/2018	11/19/2018	2/27/2019		0%	NA	See #181-01
SCR781	RARF Replacement	12/20/2017	4/25/2018	12/19/2018	12/19/2018	12/19/2018		0%		3%
SCR791	Correction of 60-day SCED GRD Disclosure Report	5/2/2018	8/9/2018	8/9/2018	8/9/2018	9/5/2018		0%		39%
SCR795	Addition of Intra-Hour Wind Forecast to GTBD Calculation	8/8/2018	10/25/2018	10/25/2018	10/25/2018	11/14/2018		0%		0%
Project Number	Expedited Projects in Execution (Count = 34)									
Project Number	Projects in Stabilization (Count = 10)	Execution Phase Start	Baseline Go-Live Target	Approved Go-Live Target	Actual Go-Live Date	Scheduled Execution Phase Finish	Schedule Health		Budget Health	
NPRR648	Remove References to Flowgate Rights	3/15/2017	5/19/2018	5/19/2018	2/6/2018	12/31/2018		23%	NA	See 2015 CMM NPRRs
NPRR683	Revision to Available Credit Limit Calculation	3/15/2017	5/19/2018	5/19/2018	2/6/2018	12/31/2018		23%	NA	See 2015 CMM NPRRs
NPRR743	Revision to MCE to Have a Floor For Load Exposure	3/15/2017	5/19/2018	5/19/2018	2/6/2018	12/31/2018		23%	NA	See 2015 CMM NPRRs
NPRR760	Calculation of Exposure Variables For Days With No Activity	3/15/2017	5/19/2018	5/19/2018	2/6/2018	12/31/2018		23%	NA	See 2015 CMM NPRRs
NPRR776	Voltage Set Point Communication	9/20/2017	3/19/2018	4/5/2018	4/5/2018	9/5/2018		0%		1%
NPRR800	Revisions to Credit Exposure Calculations to Use Electricity Futures Market Prices	3/15/2017	5/19/2018	5/19/2018	2/6/2018	12/31/2018		23%	NA	See 2015 CMM NPRRs
NPRR815	Revise the Limitation of Load Resources Providing Responsive Reserve (RRS) Service	3/21/2018	5/31/2018	5/31/2018	5/31/2018	8/29/2018		0%		2%
209-01	Multi Station Breaker to Breaker One Lines	2/8/2017	3/9/2018	5/3/2018	5/3/2018	8/22/2018		0%		-1%
259-01	DC SCADA and Metering Upgrade	10/25/2017	1/17/2018	7/25/2018	7/25/2018	8/29/2018		0%		22%
266-01	Remote Email Access Enhancement	12/13/2017	3/7/2018	6/6/2018	6/19/2018	9/26/2018	2	-7%	2	-9%



ERCOT Portfolio Stoplight Report – July 2018

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	
SCR789	Update NMMS Topology Processor to PSSE 34 Capability									0%
269-01	Document Repository Redesign and Governance Implementation - Phase 1									0%
Project Number	Projects Completed (Count = 20)	Baseline Execution Phase Start	Baseline Go-Live Target	Approved Go-Live Target	Actual Go-Live Date	Actual Execution Phase Finish	Schedule Health		Budget Health	
185-01	Records Management and eDiscovery	12/15/2016	5/24/2017	8/29/2017	8/22/2017	12/13/2017		2%		0%
224-01	TelAlert Replacement	4/5/2017	6/27/2017	8/4/2017	8/4/2017	5/9/2018		0%		5%
230-01	SAS Technical Architecture Redesign	3/1/2017	12/13/2017	12/13/2017	12/13/2017	6/27/2018		0%		2%
234-01	Reporting Solution Resiliency (RSR)	4/5/2017	8/23/2017	11/27/2017	11/27/2017	1/10/2018		0%		8%
240-01	EDI Translator and Mapping Replacement Assessment	4/19/2017	9/27/2017	2/28/2018	TBD	3/7/2018		-2%		20%
254-01	Retail Windows Upgrade	10/11/2017	12/18/2017	12/18/2017	1/22/2018	2/7/2018	1	-51%		65%
255-01	Settlements Architecture Enhancements	10/25/2017	1/11/2018	1/11/2018	1/19/2018	2/14/2018	1	-10%		53%
258-01	WD Kainos SMART Automation Testing Tool	4/11/2018	6/4/2018	6/4/2018	6/6/2018	7/18/2018		-3%		33%
271-01	Issue Tracking and Resolution Tool Assessment	12/13/2017	4/25/2018	4/25/2018	TBD	5/2/2018	1	-5%		-1%
272-01	Operator Training Simulator Black Start GE Effort	12/6/2017	4/25/2018	4/25/2018	4/27/2018	5/16/2018		-1%		19%
274-01	Average Mid-Term Load Forecast	3/7/2018	5/31/2018	5/31/2018	5/31/2018	6/27/2018		0%		50%
NPRR768	Revisions to Real-Time On-Line Reliability Deployment Price Adder Categories	3/7/2018	5/31/2018	5/31/2018	5/31/2018	6/27/2018		0%		16%
NPRR778	Modifications to Date Change and Cancellation Evaluation Window	7/19/2017	10/29/2017	12/11/2017	12/11/2017	1/31/2018		0%		23%
NPRR782	Settlement of Infeasible Ancillary Services Due to Transmission Constraints	5/24/2017	8/31/2017	11/2/2017	11/2/2017	1/10/2018		0%		20%
NPRR808	Three Year CRR Auction	8/23/2017	9/18/2017	9/18/2017	9/1/2017	1/31/2018		65%		68%
NPRR810	Applicability of RMR Incentive Factor on Reservation and Transportation Costs Associated with Firm Fuel Supplies	7/17/2017	11/12/2017	3/31/2018	3/31/2018	3/31/2018		0%	NA	See #233-00
NPRR830	Revision of 4-Coincident Peak Methodology	12/13/2017	2/6/2018	2/6/2018	2/6/2018	3/7/2018		0%		85%
NPRR831	Inclusion of Private Use Networks in Load Zone Price Calculations	8/2/2017	11/2/2017	11/2/2017	11/2/2017	2/21/2018		0%		33%
OBDRR002	ORDC OBD Revisions for PUCT Project 47199	3/7/2018	5/31/2018	5/31/2018	5/31/2018	6/27/2018		0%		See NPRR768
SCR792	Enhance Communications of BAAL Exceedances	2/14/2018	4/5/2018	4/5/2018	4/5/2018	4/25/2018		0%		69%
Project Number	Expedited Projects Completed (Count = 23)									



ERCOT Portfolio Stoplight Report – July 2018

Project Number	2018 Projects Not Yet Started (Count = 10)	Forecast Start Date
NPRR858	Provide Complete Current Operating Plan (COP) Data	Aug-2018
TBD	2018 OS Enhancements	Aug-2018
TBD	Additional Branch Limit for Relays	Aug-2018
NPRR817	Create a Panhandle Hub	Sep-2018
NPRR821	Elimination of the CRR Deration Process	Oct-2018
NPRR865	Publish RTM Shift Factors for Hubs, Load Zones, and DC Ties	Oct-2018
SCR793	SSR Related Telemetry for Transmission Service Provider (TSP) Operators	Oct-2018
ECAP	ECAP - ECMS Implementation Phase 2	Oct-2018
TBD	Job Scheduler Update in CSI Framework	Oct-2018
TBD	Parameter Estimation	Oct-2018