Item 4: Periodic Report on Credit Work Group Activity

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Finance & Audit Committee Meeting

ERCOT Public
October 16, 2017

Credit Work Group Update – Reviewed NPRRs

- **NPRRs Reviewed Without Credit Impact**
  - NPRR 815 – Revise the Limitation of Load Resources providing Responsive Reserve (RRS) Service
  - NPRR 817 – Create a Panhandle Hub
  - NPRR 825 – Require ERCOT to Declare an Emergency Condition Prior to Curtailing any DC Tie Load
  - NPRR 836 – Incorporation of Other Binding Document Forms into Protocol Section 23
  - NPRR 840 – Implementation of Infeasible Ancillary Service Protocol Revisions

- **NPRRs Reviewed with Comments Previously Filed by CWG**
  - NPRR 821 – Elimination of the CRR Deration Process for Resource Node to Hub or Load Zone CRRs *(No Credit Implications)*
  - NPRR 829 – Incorporate Real-Time Non-Modeled Telemetered Net Generation by Load Zone into the Estimate of RTL *(Positive Credit Implications)*

Credit Work Group Update – Change Requests

- **Implemented Change Requests**
  - NPRR 741 – Clarifications to TPE and EAL Credit Exposure Calculations
    - Implemented only language clarifications part
    - Change for removal of “abs” from MCE formula is not yet implemented
  - NPRR 773 – Broadening Scope of Acceptable Letter of Credit Issuers
  - NPRR 791 – Clarifications to IEL, MCE, and Aggregate Amount Owed by Breaching Party
  - NPRR 803 – Remove Grey-boxed Language from NPRR 439, Updating a Counter-Party’s Credit Limit for Current Day DAM

- **Withdrawn Change Requests**
  - SCR 785 – Update RTL calculation to include Real-Time Reserve Price Adder-based components
  - NPRR 811 – Two Day Cure Period for Foreign Market Participant Guarantee Agreements

Credit Work Group Update – CMM Refresh

- Refresh of the Credit Monitoring and Management System (CMM) incorporating recently approved NPRRs is in the planning stage and targeted for Phase 1 implementation in Q1 2018.
- **Phase 1** is in Execution and includes delivery of the CMM technical refresh along with the majority of the Credit-related NPRRs. The team has completed a re-plan effort to address departure of two key team resources and has taken actions to mitigate impacts to the planned delivery date.
  - **Phase 1A** will deliver NPRRs 648, 683, 743, 760 and 800 via the existing CMM application. The estimated completion date is targeted for Q1 2018.
  - **Phase 1B** will continue to focus on delivery of the technical refresh along with delivery of the full scope of NPRRs in Phase 1. Development has been re-planned and is on track; FAT testing will start in August. The team continues to assess schedule impacts to confirm the go-live date.
- **Phase 2** will deliver Financial Transfer functionality and additional Credit/Treasury efficiencies (NPRR 702). Team continues to document Requirements and User Interface designs and workflows. The go-live date will be set once re-plan efforts for Phase 1 are complete.
- **Phase 3** will deliver any remaining low-priority scope (NPRR 484(1B)). The go-live date for this phase will be addressed following completion of Planning for Phase 2.

Credit Work Group Update – CRR Calculator

- One of the CWG goals is to “pursue a calculator to allow market participants to calculate their credit requirements for CRR auctions” on an ad hoc basis prior to submitting CRR bids.
- Vistra Energy presented three options for the CWG to consider:
  - Option 1 – Better information on ERCOT website with ERCOT supplied templates with updated calculation methodology
  - Option 2 – ERCOT to provide calculator outside of CRR system
  - Option 3 – CRR system included calculator (vendor solution)
- ERCOT recommended Option 3 which would receive an impact analysis upon submission of a System Change Request (SCR).
- Vistra offered to prepare a draft SCR for discussion at a future CWG meeting in pursuit of Option 3.

Credit Work Group Update – North Maple ADR

- There was an active discussion of the North Maple Energy LLC ADR No. 2017-NME-01 and the associated credit implications.
- A conflict existed between Protocol Section 4.4.6 (containing 'not-to-exceed' language) and Protocol Section 4.6.3 (containing DAM PTP Obligation settlement language), resulting in significant settlement and margin requirement costs beyond expectation to the impacted Market Participant, forcing the Market Participant to temporarily leave the ERCOT Market.
- Discussion revolved around the discretion ERCOT had around similar potential future events and potential market suspensions.
- The ADR noted that "… potential conflicts could have impacts on the efficient operation of the ERCOT market, it is an issue that may be worth further discussion in the stakeholder process."

Counter-Party Credit Exposure – July/August 2017

Changes from May/June 2017 to July/August 2017

- Number of active Counter-Parties increased from 204 to 213.
- 6 new *Traders* and 3 new *Load Only* entities.
- Market-wide TPE decreased from 368 million to 360 million.
- Excess Collateral increased from 1,563 million to 1,599 million.
- TPE of Load and Gen category as a percentage of Total TPE increased by 2.39% while it decreased for Gen only category by 2.32%.
- Excess Collateral for Load and Gen increased by $25 million.

Counter-Party Credit Exposure – July/August 2017

- Profile data for Counter-Party credit exposure has been updated to reflect average values for July and August 2017.

Number of CPs that are Active by Rating and Category

Rating Group	CRR Only	Gen Only	Load Only	Load and Gen	Trader	Total CPs	Percent CPs
AAA	0	0	0	0	0	0	0.0%
AA- to AA+	5	0	0	5	0	10	4.7%
A- to A+	2	1	4	6	4	17	8.0%
BBB- to BBB+	3	5	6	9	4	27	12.7%
BB- to BB+	0	1	2	0	1	4	1.9%
B- to B+	0	2	1	4	4	11	5.2%
CCC+ and below	0	0	0	0	0	0	0.0%
Not Rated	11	25	26	7	75	144	67.6%
Total CPs	**21**	**34**	**39**	**31**	**88**	213	**100.0%**
Percent CPs	**9.9%**	**16.0%**	**18.3%**	**14.6%**	**41.3%**	**100.0%**	

Counter-Party Credit Exposure – July/August 2017

Distribution of TPE by Rating and Category

Rating Group	CRR Only	Gen Only	Load Only	Load and Gen	Trader	Total TPE	Percent TPE
AAA	0	0	0	0	0	0	0.0%
AA- to AA+	88,689	0	0	10,891,363	0	10,980,053	3.1%
A- to A+	22,629	1,780,924	2,308,781	32,077,456	1,761,746	37,951,536	10.5%
BBB- to BBB+	144,544	3,410,257	3,686,108	45,584,531	26,032,183	78,857,622	21.9%
BB- to BB+	0	2,316,125	6,936,581	0	5,192,690	14,445,395	4.0%
B- to B+	0	1,731,319	0	58,399,157	30,296,288	90,426,764	25.1%
CCC+ and below	0	0	0	0	0	0	0.0%
Not Rated	17,279,044	23,668,447	9,804,539	25,874,870	50,702,744	127,329,644	35.4%
Total TPE	**17,534,906**	**32,907,072**	**22,736,008**	**172,827,378**	**113,985,651**	**359,991,014**	**100.0%**
Percent TPE	**4.9%**	**9.1%**	**6.3%**	**48.0%**	**31.7%**	**100.0%**	

Distribution of Excess Collateral by Rating and Category

Rating Group	CRR Only	Gen Only	Load Only	Load and Gen	Trader	Excess Collateral	Percent Excess Collateral
AAA	0	0	0	0	0	0	0.0%
AA- to AA+	3,805,029	0	0	21,781,292	0	25,586,321	1.6%
A- to A+	436,349	33,219,076	59,555,191	192,321,251	21,766,192	307,298,059	19.2%
BBB- to BBB+	22,005,456	10,835,165	70,459,871	321,800,833	92,441,899	517,543,224	32.3%
BB- to BB+	0	10,239,749	3,941,654	0	30,092,784	44,274,188	2.8%
B- to B+	0	38,383,397	390,473	142,390,105	27,413,501	208,577,477	13.0%
CCC+ and below	0	0	0	0	0	0	0.0%
Not Rated	27,459,594	44,151,467	17,619,023	206,940,022	200,550,169	496,720,275	31.0%
Total Excess Collateral	**53,706,428**	**136,828,854**	**151,966,213**	**885,233,503**	**372,264,546**	**1,599,999,544**	**100.0%**
Percent Excess Collateral	**3.4%**	**8.6%**	**9.5%**	**55.3%**	**23.3%**	**100.0%**	

Counter-Party Credit Exposure – July/August 2017 Average TPE and Excess Collateral for the Bottom Quintile of Market Participants

Quintile Distribution of Average TPE by Rating and Category

Rating Group	CRR Only	Gen Only	Load Only	Load and Gen	Trader	Quintile Average TPE	Percent Quintile Average TPE	Percent Total Average TPE
AAA	0	0	0	0	0	0	0.0%	0.00%
AA- to AA+	27,770	0	0	0	0	27,770	1.0%	0.01%
A- to A+	2,085	0	0	0	0	2,085	0.1%	0.00%
BBB- to BBB+	0	0	0	0	0	0	0.0%	0.00%
BB- to BB+	0	0	0	0	0	0	0.0%	0.00%
B- to B+	0	44,275	0	0	770	45,045	1.6%	0.01%
CCC+ and below	0	0	0	0	0	0	0.0%	0.00%
Not Rated	0	356,480	1,376,528	201,809	737,960	2,672,777	97.3%	0.74%
Quintile Average	**29,855**	**400,754**	**1,376,528**	**201,809**	**738,730**	**2,747,678**	**100.0%**	**0.76%**
Percent Quintile Average TPE	**1.1%**	**14.6%**	**50.1%**	**7.3%**	**26.9%**	**100.0%**		
Percent Total Average TPE	**0.01%**	**0.11%**	**0.38%**	**0.06%**	**0.21%**	**0.76%**		

Quintile Distribution of Excess Collateral by Rating and Category

Rating Group	CRR Only	Gen Only	Load Only	Load and Gen	Trader	Total Quintile Excess Collateral	Percent Quintile Excess Collateral	Percent Total Excess Collateral
AAA	0	0	0	0	0	0	0.0%	0.0%
AA- to AA+	116,448	0	0	0	0	116,448	6.2%	0.0%
A- to A+	109,465	0	0	0	6,424	115,888	6.2%	0.0%
BBB- to BBB+	0	3,427	0	0	0	3,427	0.2%	0.0%
BB- to BB+	0	0	0	0	0	0	0.0%	0.0%
B- to B+	0	70,441	0	0	76,834	147,275	7.9%	0.0%
CCC+ and below	0	0	0	0	0	0	0.0%	0.0%
Not Rated	26,044	129,361	622,435	58,211	651,943	1,487,995	79.5%	0.1%
Total Quintile Excess Collateral	**251,957**	**203,230**	**622,435**	**58,211**	**735,201**	**1,871,034**	**100.0%**	**0.1%**
Percent Quintile Excess Collateral	**13.5%**	**10.9%**	**33.3%**	**3.1%**	**39.3%**	**100.0%**		
Percent Total Excess Collateral	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.1%**		

Counter-Party Credit Changes July/August 2017

Summary of distribution by Category

Category	CP Distribution			Average TPE Distribution			Average Excess Collateral Distribution		
	May-Jun	Jul-Aug	Change	May-Jun	Jul-Aug	Change	May-Jun	Jul-Aug	Change
CRR Only	9.80%	9.86%	0.06%	3.66%	4.87%	1.21%	3.01%	3.36%	0.35%
Gen Only	17.16%	15.96%	-1.19%	11.46%	9.14%	-2.32%	7.98%	8.55%	0.57%
Load Only	17.65%	18.31%	0.66%	6.71%	6.32%	-0.40%	9.33%	9.50%	0.17%
Load and Gen	15.20%	14.55%	-0.64%	45.62%	48.01%	2.39%	54.98%	55.33%	0.35%
Trader	40.20%	41.31%	1.12%	32.54%	31.66%	-0.88%	24.71%	23.27%	-1.44%

Summary of distribution by Rating Group

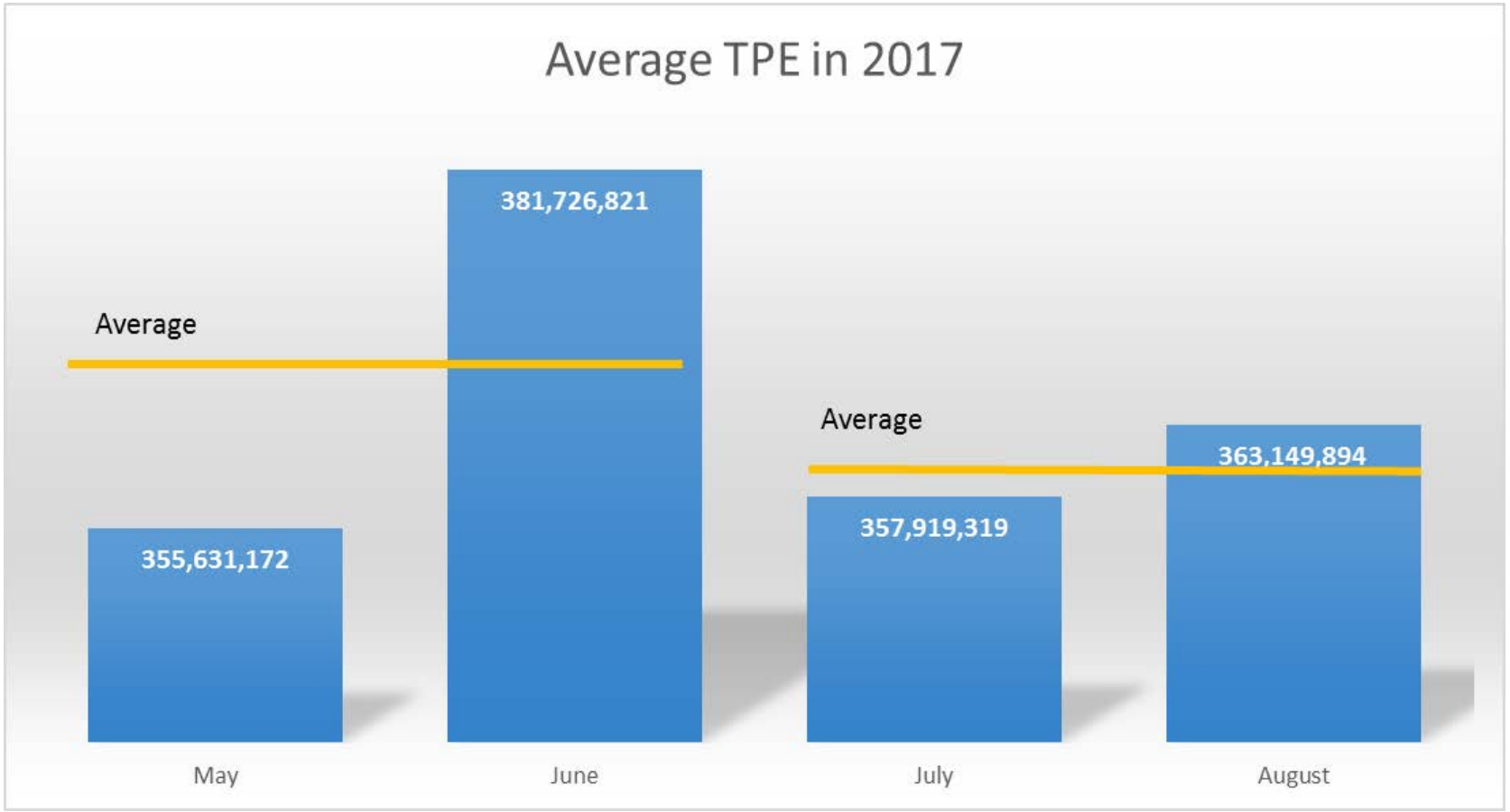
Rating Group	CP Distribution			Average TPE Distribution			Average Excess Collateral Distribution		
	May-Jun	Jul-Aug	Change	May-Jun	Jul-Aug	Change	May-Jun	Jul-Aug	Change
AAA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
AA- to AA+	4.90%	4.69%	-0.21%	1.91%	3.05%	1.14%	1.86%	1.60%	-0.26%
A- to A+	8.33%	7.98%	-0.35%	11.58%	10.54%	-1.04%	18.72%	19.21%	0.49%
BBB- to BBB+	13.73%	12.68%	-1.05%	20.04%	21.91%	1.86%	30.40%	32.35%	1.95%
BB- to BB+	1.96%	1.88%	-0.08%	3.95%	4.01%	0.06%	2.75%	2.77%	0.01%
B- to B+	5.39%	5.16%	-0.23%	26.70%	25.12%	-1.58%	13.90%	13.04%	-0.86%
CCC+ and below	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Not Rated	65.69%	67.61%	1.92%	35.90%	35.37%	-0.53%	32.39%	31.05%	-1.35%

ERCOT Credit Exposure – Summer 2017 Summary

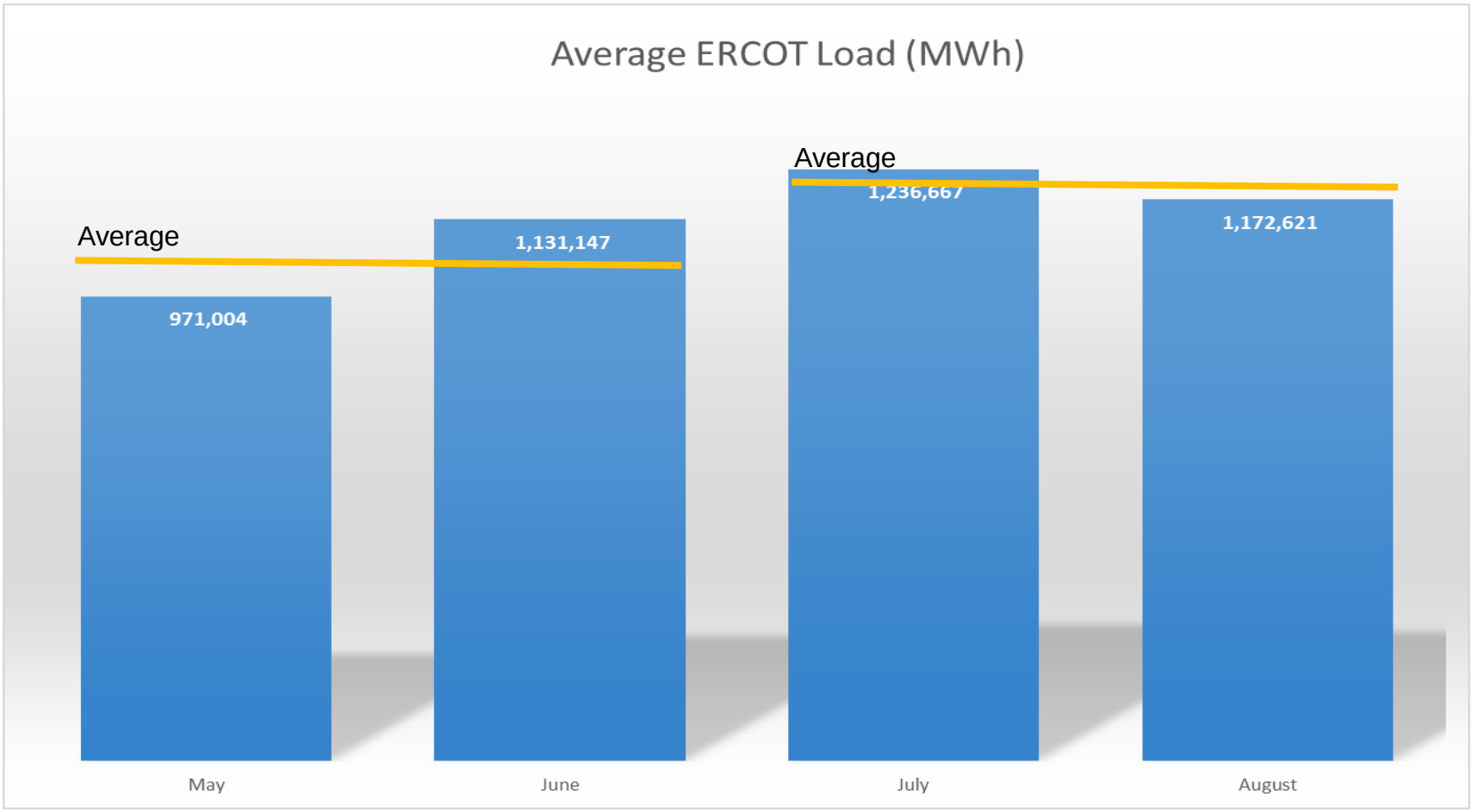
Observations:

- Load volume in the ERCOT market:
  - increased from May to July
  - tapered off towards end of August largely due to Harvey, although average Load was 14.6% higher in July-August than in May-June
- Several price spikes were experienced:
  - in May / June for Real-Time (only one day in August)
  - in July / August for Day-Ahead Market
  - Average Load-weighted prices were 13.08% higher in May-June than in July-August
- Total Potential Exposure (TPE):
  - Increased in May /June due to higher Real-Time prices and increased load
  - Decreased in July / August due to fewer price spikes even though load increased in July
    - Peak Real-Time exposure (MAX RTLE) from May and June rolled out of the calculation in mid-July

ERCOT Credit Exposure – Summer 2017 Summary



ERCOT Credit Exposure – Summer 2017 Summary



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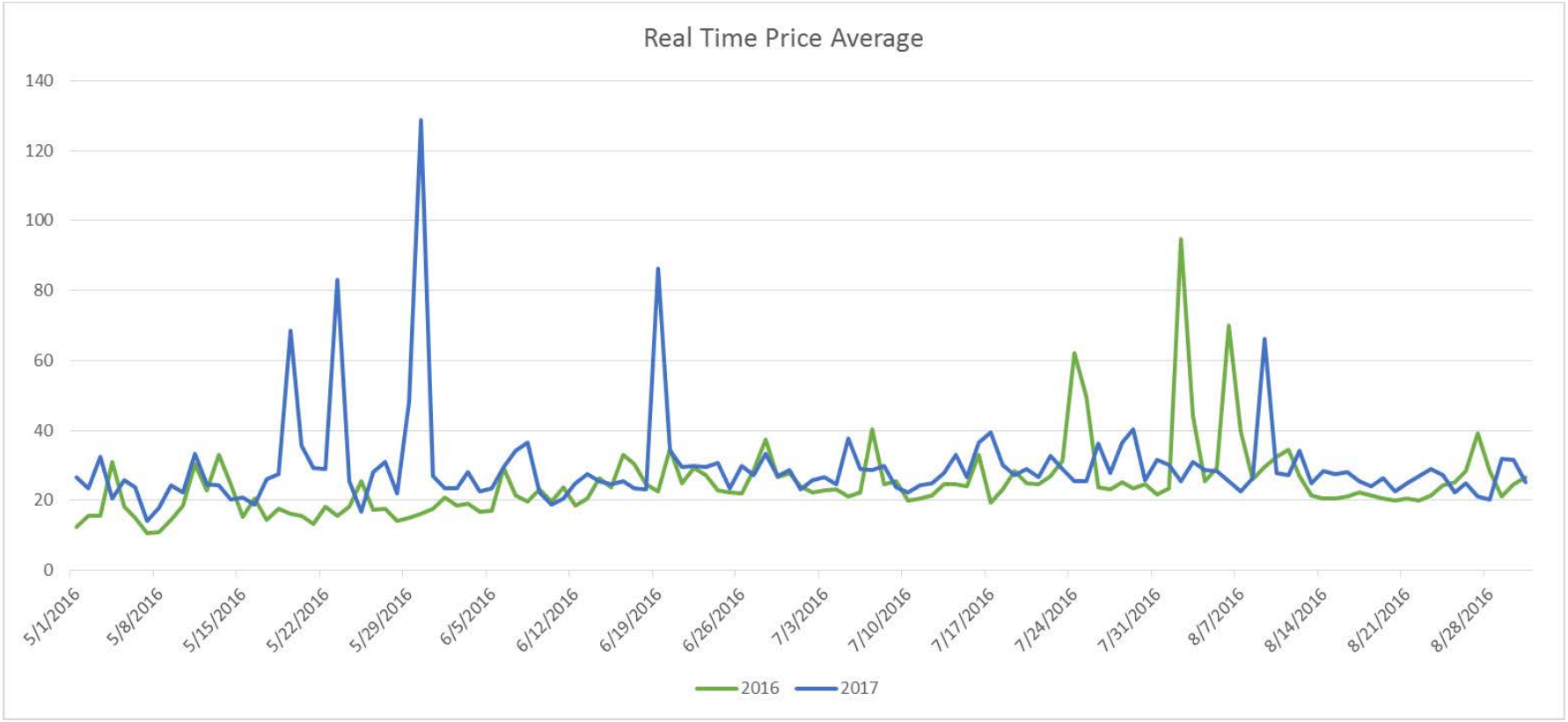

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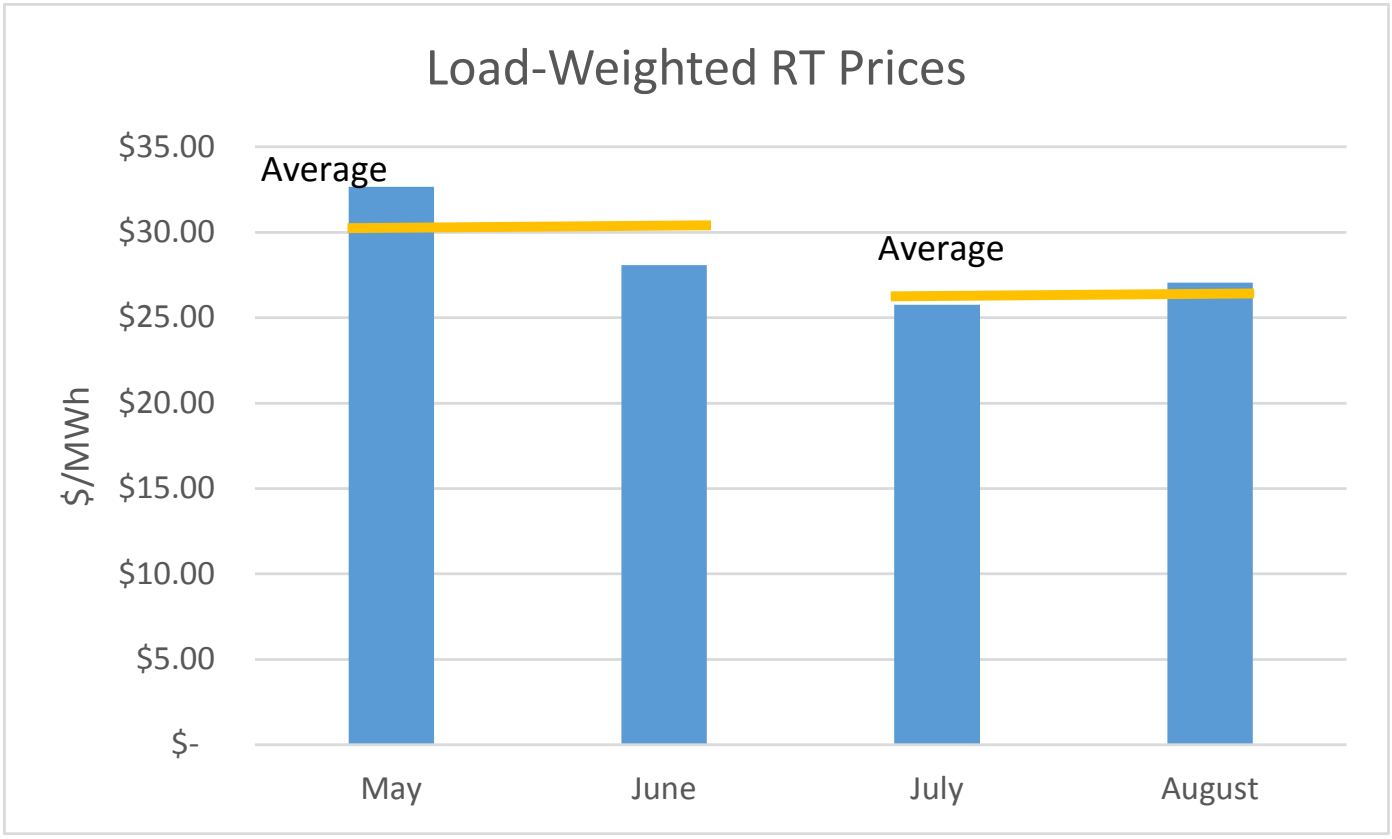

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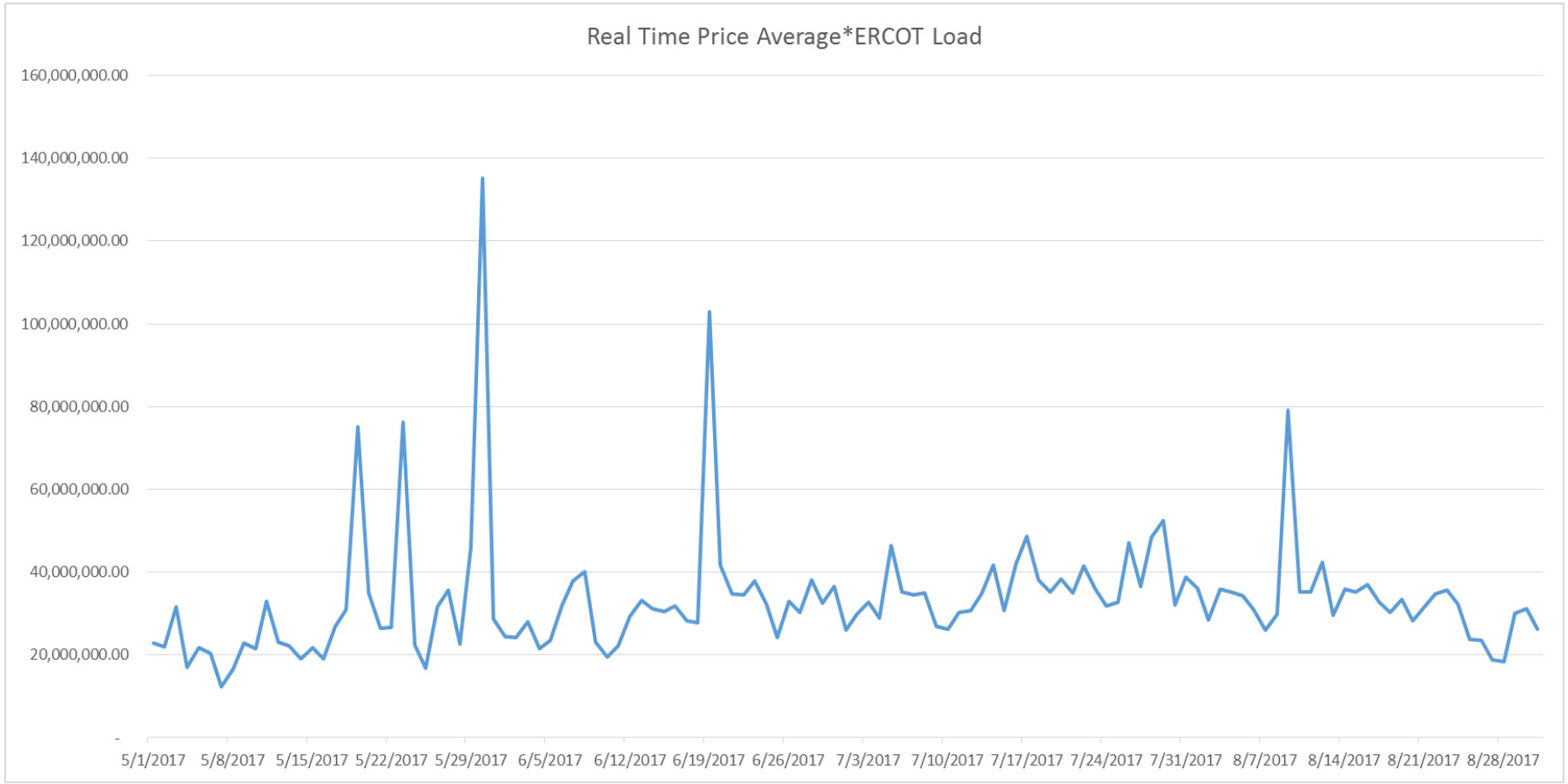

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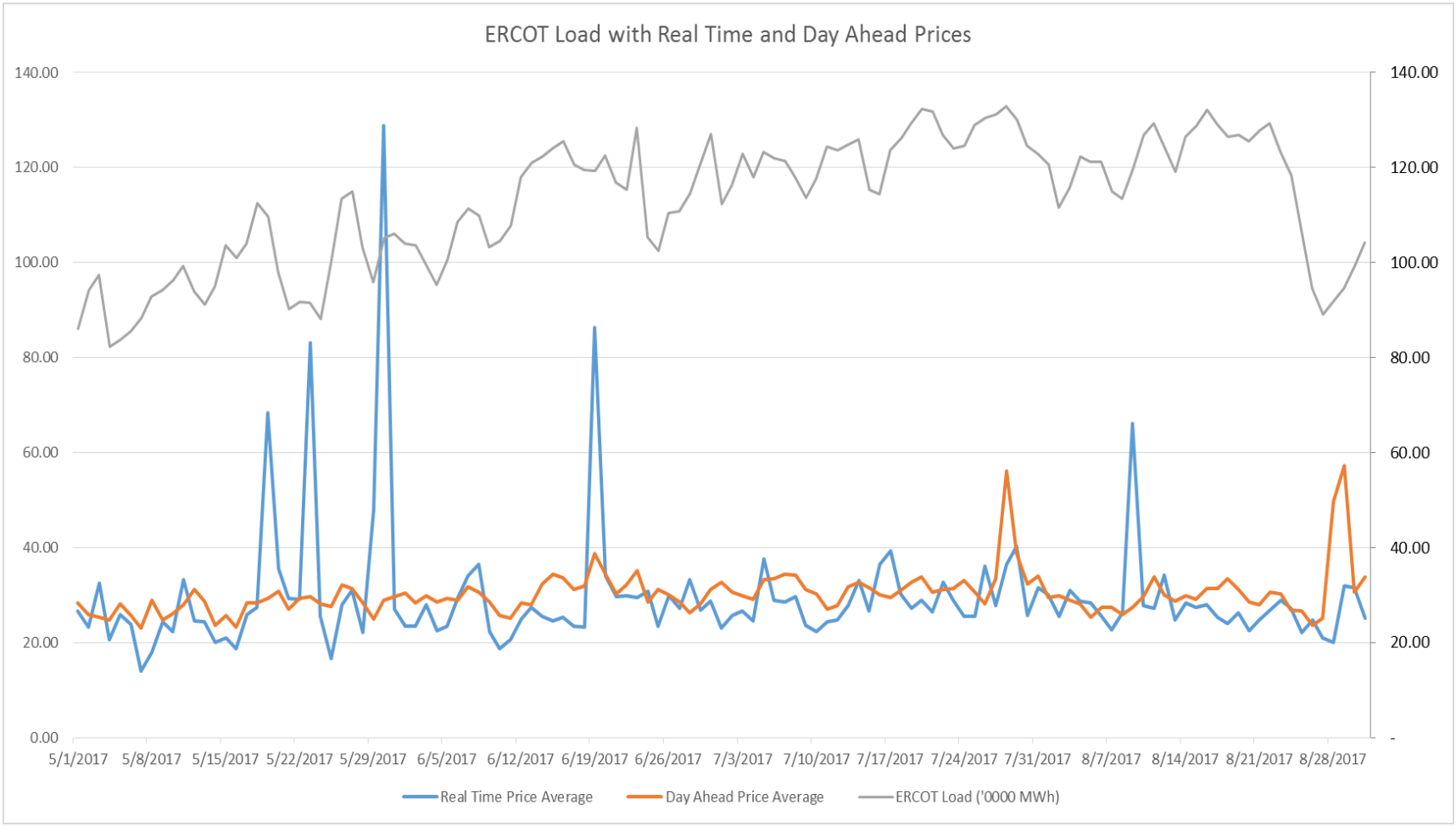

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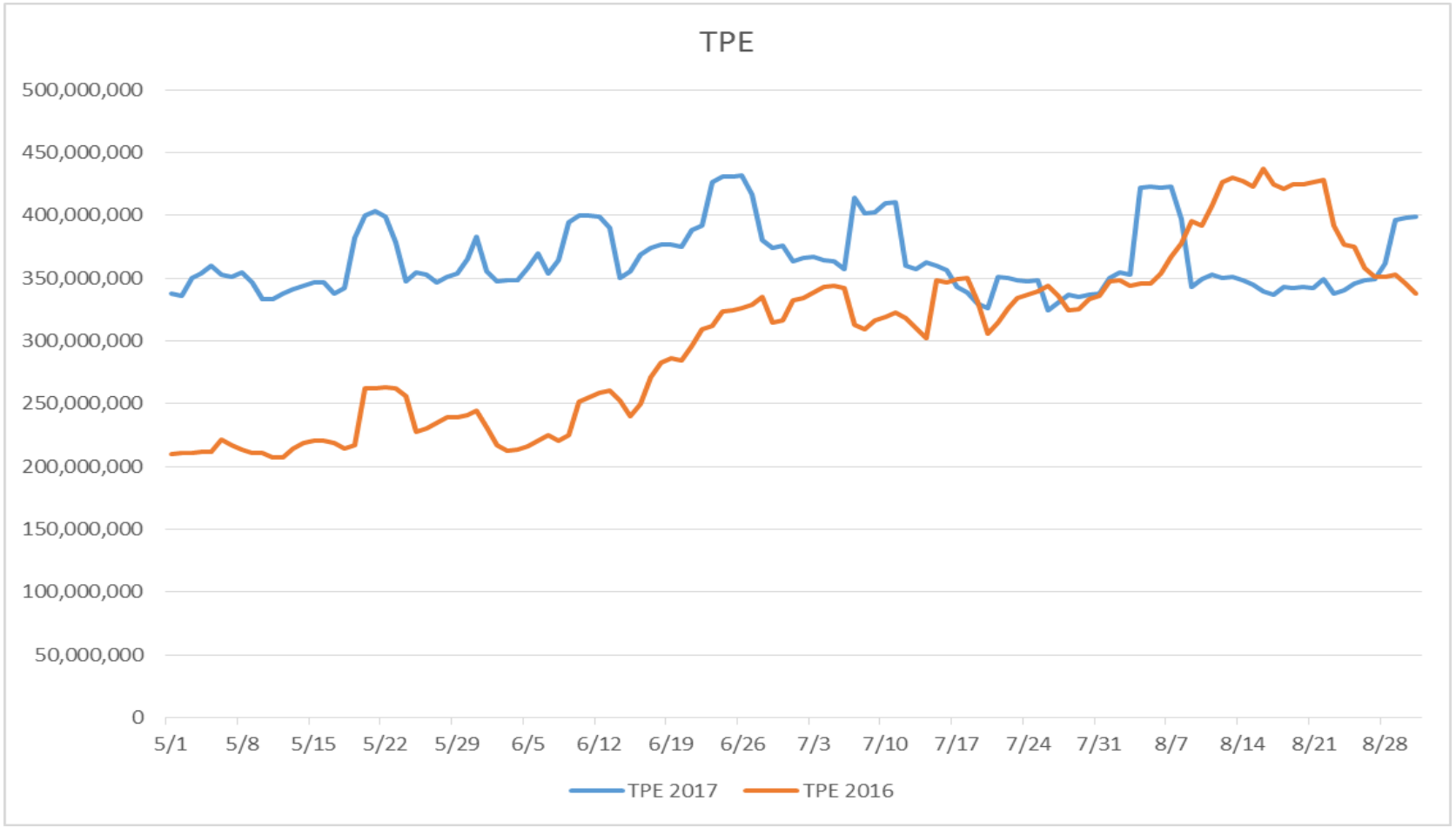

Questions?