



Item 7: Periodic Report on Credit Work Group Activity

Donald Meek

Chair, Credit Work Group

Finance and Audit Committee Meeting

ERCOT Public

February 19, 2018

Credit Work Group Update – Reviewed NPRRs

- **NPRRs Reviewed Without Credit Impact**

- NPRR 844 – Clarification to Outage Report
- NPRR 852 – CRR Activity Calendar Approval Process
- NPRR 854 – NOIE TDSP Submittal of Meters with Bidirectional Flow Caused by Generation Interconnected at Distribution Voltage
- NPRR 855 – Criteria for Including Resources in the CDR Peak Average Capacity Contribution
- NPRR 860 – Day-Ahead (DAM) Clean-Up
- NPRR 861 – Clarification of ERCOT’s Authority to Protect Its Jurisdictional Status

- **NPRRs Tabled for Further Discussion**

- NPRR 850 – Market Suspension and Restart
 - Tabled for discussion until the February 2018 CWG/MCWG meeting in order to incorporate anticipated comments expected from simultaneous review by other Working Groups

Annual CWG Activities Conducted in Q1 2018

- Election of 2018 Officers
- Annual review and affirmation of Credit Work Group Charter
- Establishment and affirmation of CWG Goals for 2018 for review by ERCOT F&A

2018 Credit Working Group Goals

- Review the implementation of NPRR800, the incorporation of a forward price curve-based methodology in collateral requirement calculations
- Provide support to the ERCOT stakeholder process for Market Suspension and Restart (NPRR850)
- Clarify the market's risk tolerance/appetite level and provide regular updates on credit exposure to the ERCOT Board
- Evaluate and quantify potential market risk under current credit rules and examine a framework for reviewing rules in flight
- Explore potential usage of letter of credit/credit insurance
- Pursue a calculator to allow market participants to calculate their requirements for CRR auctions

Credit Work Group Update – CMM Refresh

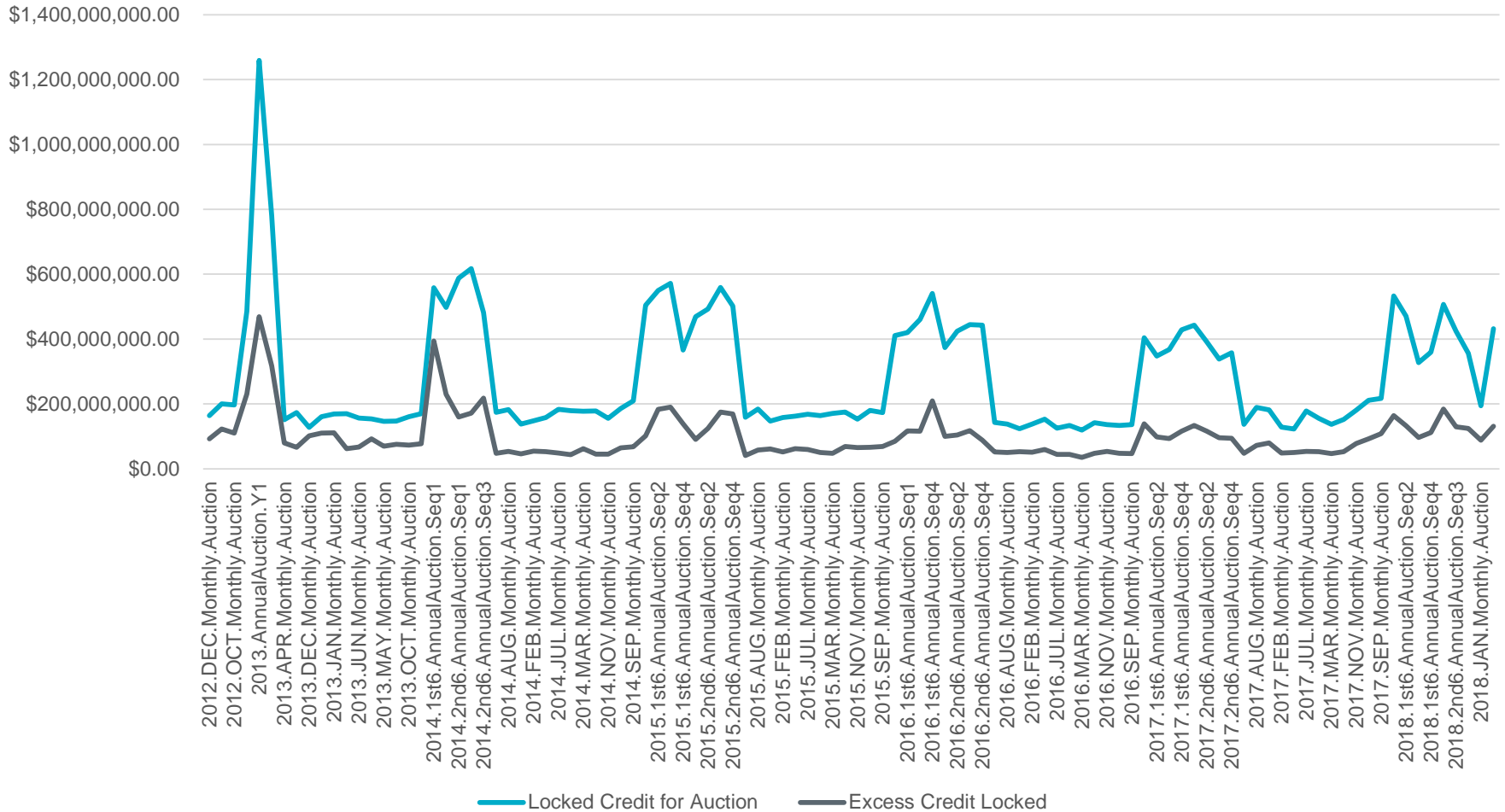
- Refresh of the Credit Monitoring and Management System (CMM) incorporating recently approved NPRRs is in the planning stage and targeted for Phase 1 implementation in 2018.
- **Phase 1** is in Execution and includes delivery of the CMM technical refresh along with the majority of the Credit-related NPRRs.
 - **Phase 1A** will deliver NPRRs 648, 683, 743, 760 and 800 via the existing CMM application. **Phase 1A 'go live' was scheduled to occur between February 6th to February 8th, 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 – **Phase 1B is tentatively scheduled to 'go-live' in December 2018.**
- **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.

CRR Auction Credit Requirements 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.
- A draft System Change Request (SCR) was presented for CWG to consider at the Dec. 2017 and Jan. 2018 CWG Meetings with additional comments provided by ERCOT and market participants during each meeting as to the scope and content of the SCR.
- Of note, \$10,365,293,555 excess collateral has been locked for 105 markets since NPRR484 was implemented in late 2012.
- On average, 119 Counter-Parties lock credit for an auction, with an average of 73 Counter-Parties locking more than \$500 excess.
- Further discussion of the proposed SCR will take place at the February CWG meeting with a possible SCR filed the CWG in early 2018 incorporating various Market Participant comments.

CRR Auction Credit Requirements Calculator

Total vs. Excess Credit Locked



Counter-Party Credit Exposure – Nov./Dec. 2017

Changes from Sep./Oct. 2017 to Nov./Dec 2017

- Number of active Counter-Parties increased from 216 to 217.
- Market-wide TPE decreased from 362 million to 350.8 million.
- Excess Collateral increased from 1,573 million to 1,698 million.
- TPE of Load and Generation category increased by \$14 million and it decreased across all the other market segments for a net decrease in TPE.
- Excess Collateral increased by \$72 million for Load and Generation category and \$58 million for traders.
- Relatively low volatility in Real Time Prices during Nov-Dec compared to Sep-Oct.

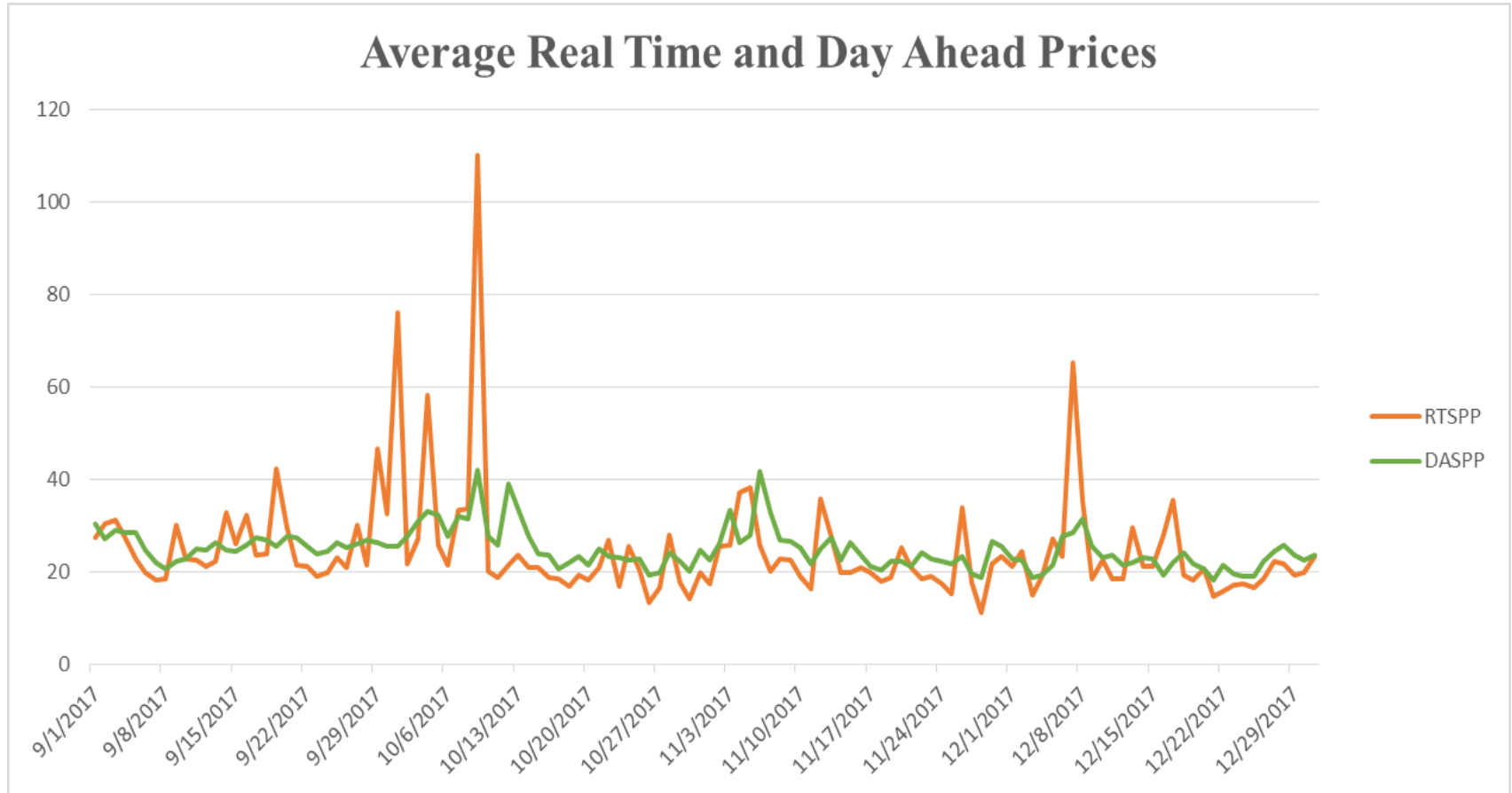
Counter-Party Credit Exposure – Nov./Dec. 2017

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

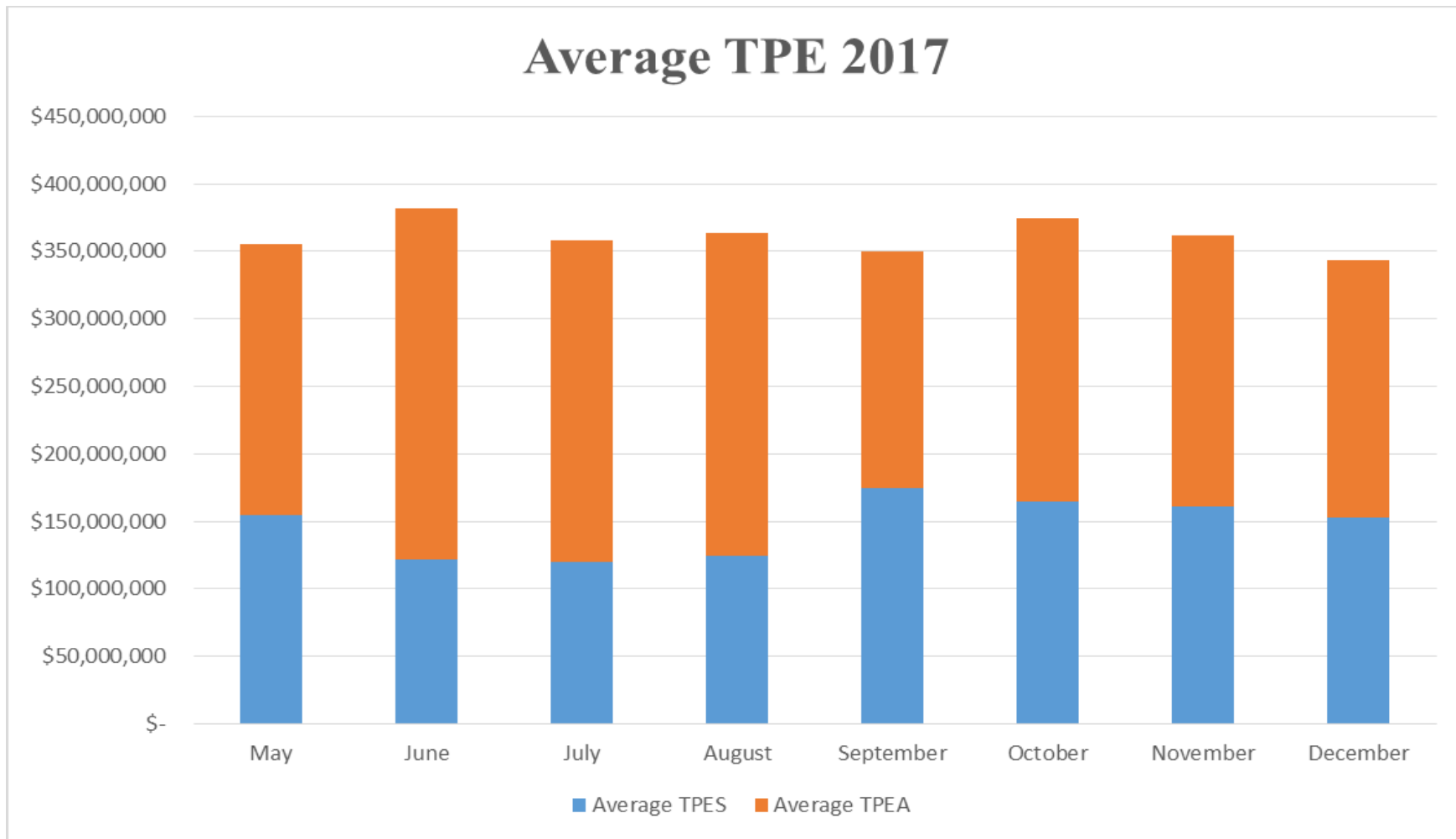
Number of CPs that are Active by Rating and Category

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	4.6%
A- to A+	3	1	3	7	4	18	8.3%
BBB- to BBB+	2	5	6	9	4	26	12.0%
BB- to BB+	0	0	2	1	1	4	1.8%
B- to B+	0	2	1	4	4	11	5.1%
CCC+ and below	0	0	0	0	0	0	0.0%
Not Rated	13	26	27	7	75	148	68.2%
Total CPs	23	34	39	33	88	217	100.0%
Percent CPs	10.6%	15.7%	18.0%	15.2%	40.6%	100.0%	

Counter-Party Credit Exposure – Nov./Dec. 2017



Counter-Party Credit Exposure – Nov./Dec. 2017



Counter-Party Credit Exposure – Nov./Dec. 2017

Distribution of TPE by Rating and Category

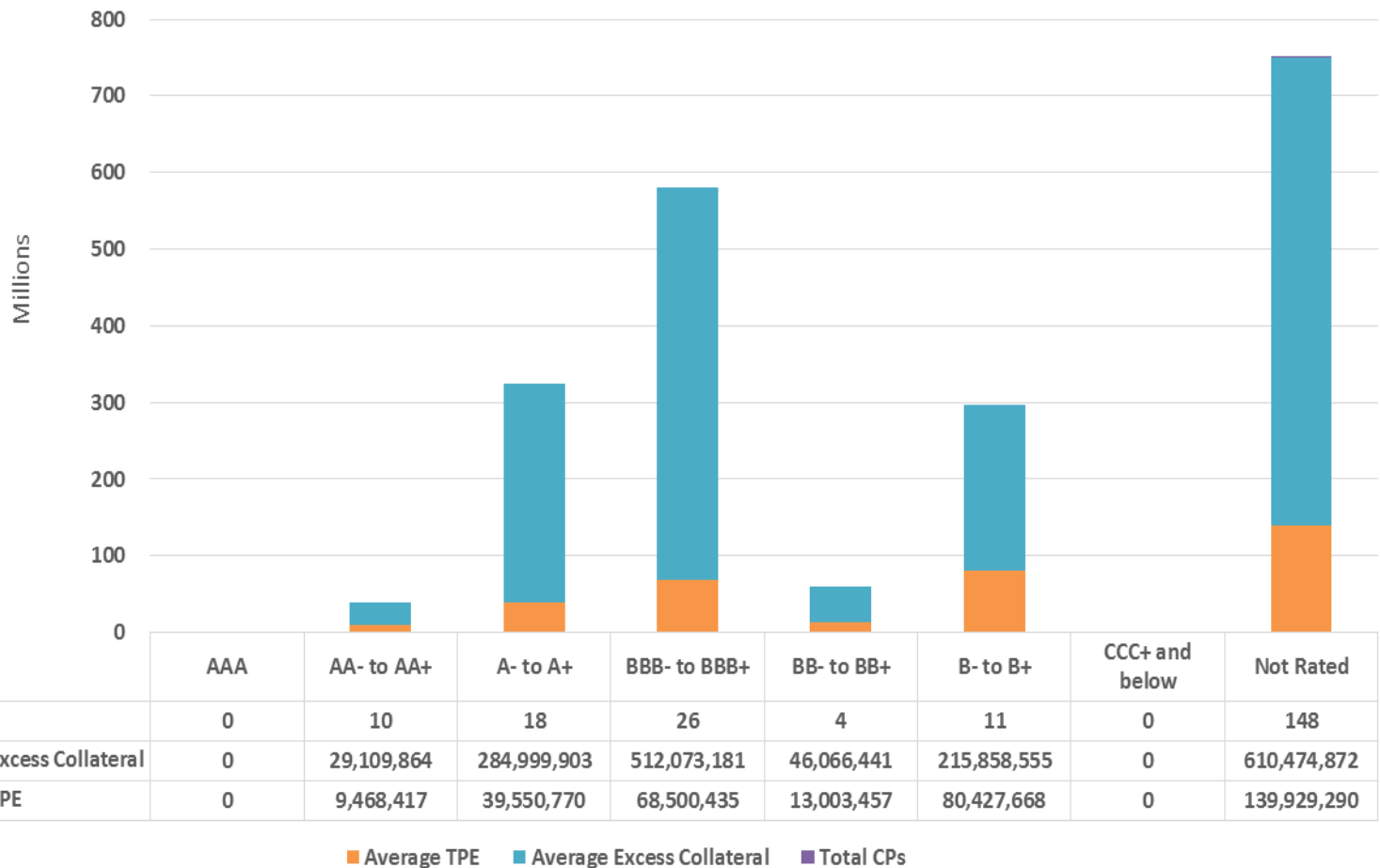
Rating Group	CRR Only	Gen Only	Load Only	Load and Gen	Trader	Total TPE	Percent TPE
AAA	0	0	0	0	0	0	0.0%
AA- to AA+	187,112	0	0	9,281,305	0	9,468,417	2.7%
A- to A+	1,044	1,004,789	3,907,822	34,289,373	347,743	39,550,770	11.3%
BBB- to BBB+	29,263	4,393,900	5,411,802	37,475,064	21,190,406	68,500,435	19.5%
BB- to BB+	0	0	6,029,829	1,665,405	5,308,224	13,003,457	3.7%
B- to B+	0	673,422	0	44,179,526	35,574,721	80,427,668	22.9%
CCC+ and below	0	0	0	0	0	0	0.0%
Not Rated	33,285,815	12,966,583	7,270,483	24,998,369	61,408,041	139,929,290	39.9%
Total TPE	33,503,233	19,038,694	22,619,935	151,889,042	123,829,134	350,880,038	100.0%
Percent TPE	9.5%	5.4%	6.4%	43.3%	35.3%	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+	5,419,137	0	0	23,690,726	0	29,109,864	1.7%
A- to A+	14,676,506	33,995,211	55,892,179	157,255,812	23,180,195	284,999,903	16.8%
BBB- to BBB+	3,809,262	11,561,475	69,488,209	332,656,366	94,557,869	512,073,181	30.1%
BB- to BB+	0	0	4,945,180	10,889,575	30,231,686	46,066,441	2.7%
B- to B+	0	29,441,294	390,473	158,004,957	28,021,830	215,858,555	12.7%
CCC+ and below	0	0	0	0	0	0	0.0%
Not Rated	46,695,227	49,058,167	19,413,063	265,331,654	229,976,761	610,474,872	35.9%
Total Excess Collateral	70,600,133	124,056,148	150,129,105	947,829,090	405,968,341	1,698,582,816	100.0%
Percent Excess Collateral	4.2%	7.3%	8.8%	55.8%	23.9%	100.0%	

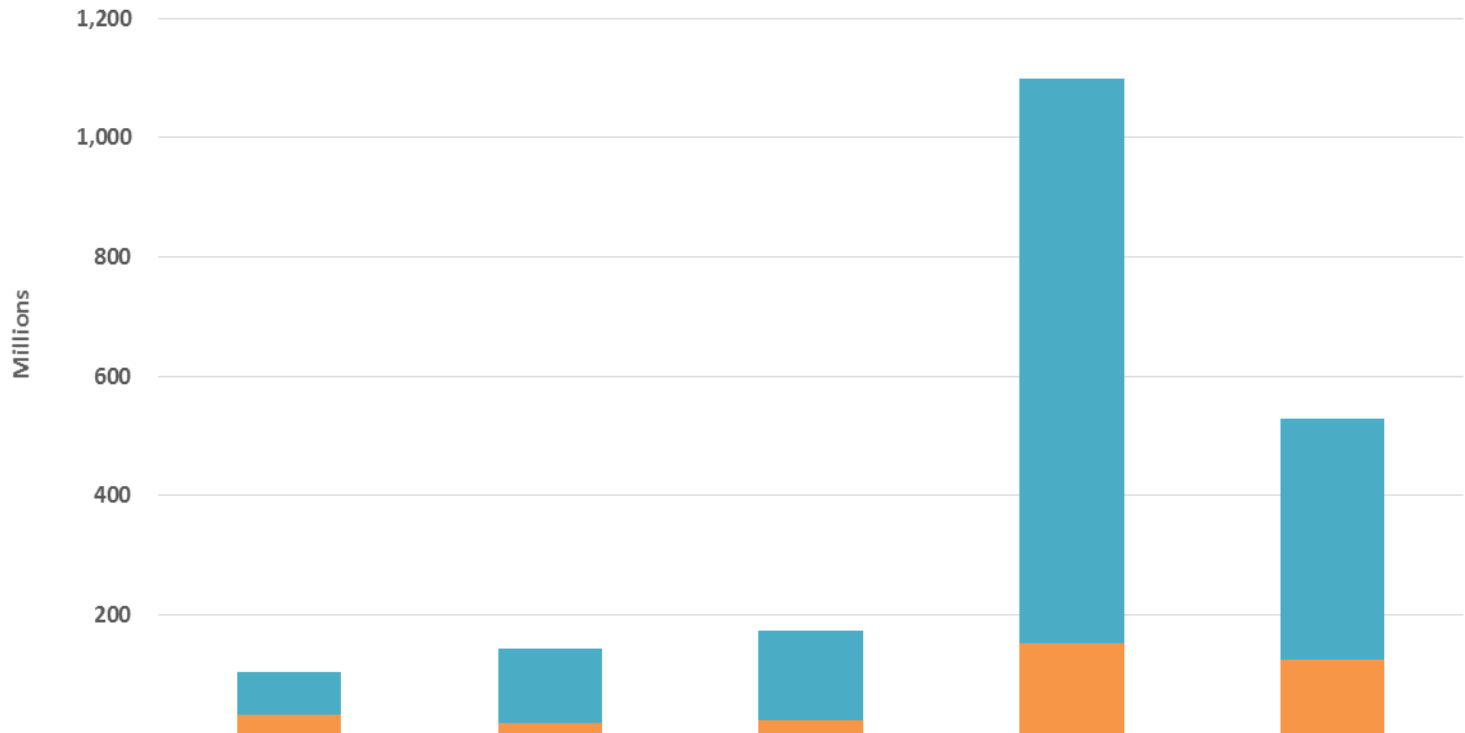
Counter-Party Credit Exposure – Nov./Dec. 2017

Average TPE and Collateral Distribution by Rating Category



Counter-Party Credit Exposure – Nov./Dec. 2017

Average TPE and Collateral Distribution by Market Segment

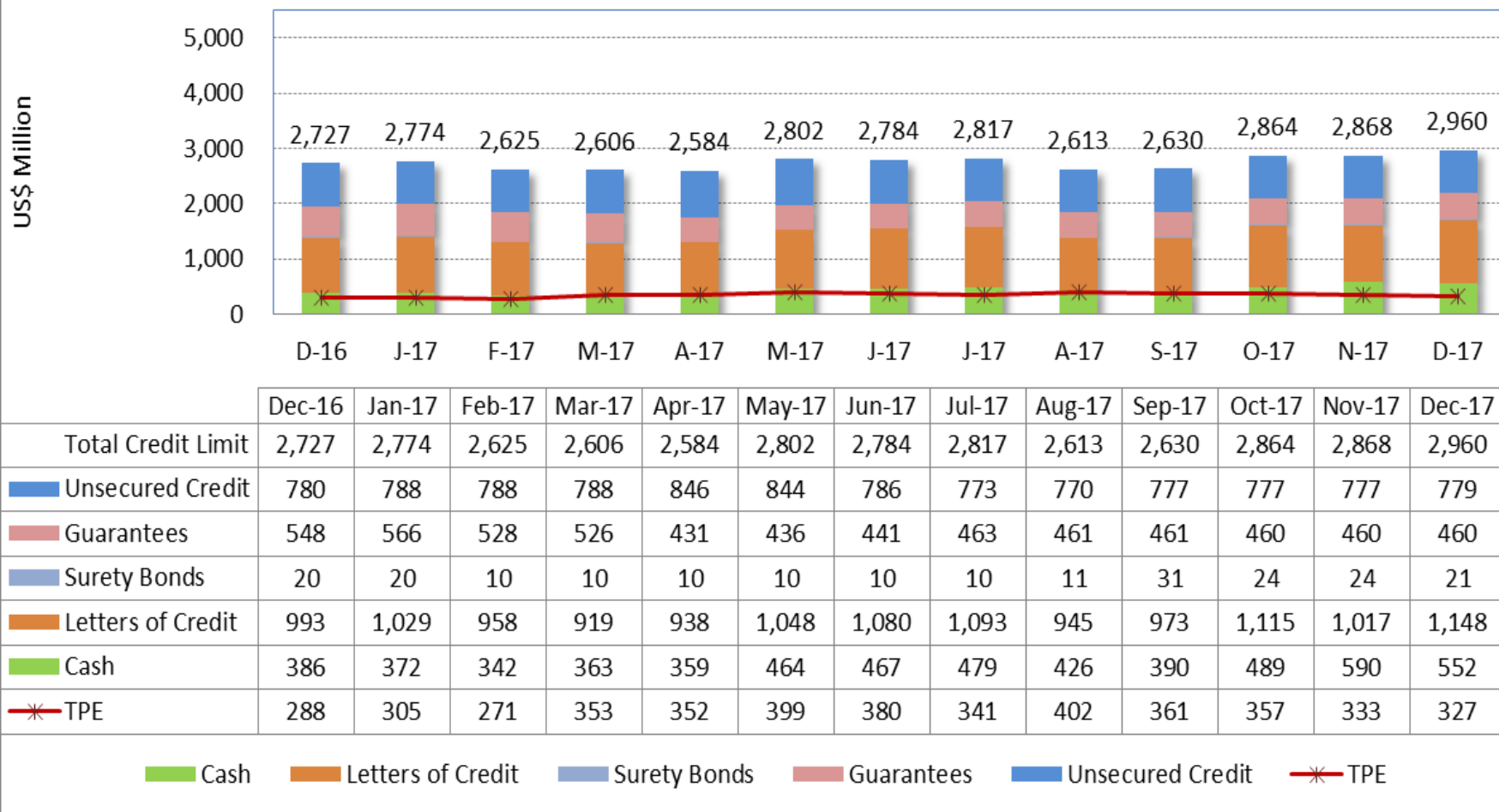


	CRR Only	Gen Only	Load Only	Load and Gen	Trader
■ Total CPs	23	34	39	33	88
■ Average Excess Collateral	70,600,133	124,056,148	150,129,105	947,829,090	405,968,341
■ Average TPE	33,503,233	19,038,694	22,619,935	151,889,042	123,829,134

■ Average TPE ■ Average Excess Collateral ■ Total CPs

Counter-Party Credit Exposure – Nov./Dec. 2017

Credit Limit/Type of Security vs TPE



Counter-Party Credit Changes Nov./Dec. 2017

Summary of distribution by Category									
Category	CP Distribution			Average TPE Distribution			Average Excess Collateral Distribution		
	Sep-Oct	Nov-Dec	Change	Sep-Oct	Nov-Dec	Change	Sep-Oct	Nov-Dec	Change
CRR Only	10.65%	10.60%	-0.05%	11.14%	9.55%	-1.59%	3.41%	4.16%	0.75%
Gen Only	16.20%	15.67%	-0.54%	6.44%	5.43%	-1.02%	9.25%	7.30%	-1.95%
Load Only	17.59%	17.97%	0.38%	8.78%	6.45%	-2.33%	9.64%	8.84%	-0.81%
Load and Gen	14.8%	15.2%	0.39%	37.82%	43.29%	5.47%	55.63%	55.80%	0.17%
Trader	40.7%	40.6%	-0.19%	35.83%	35.29%	-0.54%	22.07%	23.90%	1.83%

Summary of distribution by Rating Group									
Rating Group	CP Distribution			Average TPE Distribution			Average Excess Collateral Distribution		
	Sep-Oct	Nov-Dec	Change	Sep-Oct	Nov-Dec	Change	Sep-Oct	Nov-Dec	Change
AAA	0.0%	0.0%	0.00%	0.0%	0.0%	0.00%	0.0%	0.0%	0.00%
AA- to AA+	4.6%	4.6%	-0.02%	1.9%	2.7%	0.78%	1.8%	1.7%	-0.08%
A- to A+	8.3%	8.3%	-0.04%	10.4%	11.3%	0.85%	18.5%	16.8%	-1.74%
BBB- to BBB+	12.0%	12.0%	-0.06%	14.5%	19.5%	5.06%	31.1%	30.1%	-0.93%
BB- to BB+	1.9%	1.8%	-0.01%	3.1%	3.7%	0.60%	3.0%	2.7%	-0.33%
B- to B+	5.1%	5.1%	-0.02%	22.8%	22.9%	0.13%	13.5%	12.7%	-0.83%
CCC+ and below	0.0%	0.0%	0.00%	0.0%	0.0%	0.00%	0.0%	0.0%	0.00%
Not Rated	68.1%	68.2%	0.15%	47.3%	39.9%	-7.41%	32.0%	35.9%	3.91%

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

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+	26,775	0	0	0	0	26,775	1.4%	0.0%
A- to A+	110,506	0	0	2,073	6,424	119,003	6.3%	0.0%
BBB- to BBB+	0	3,151	0	0	0	3,151	0.2%	0.0%
BB- to BB+	0	0	0	0	0	0	0.0%	0.0%
B- to B+	0	100,509	0	0	62,121	162,629	8.5%	0.0%
CCC+ and below	0	0	0	0	0	0	0.0%	0.0%
Not Rated	2,044	312,820	537,660	58,687	679,993	1,591,204	83.6%	0.1%
Total Quintile Excess Collateral	139,326	416,479	537,660	60,760	748,537	1,902,763	100.0%	0.1%
Percent Quintile Excess Collateral	7.3%	21.9%	28.3%	3.2%	39.3%	100.0%		
Percent Total Excess Collateral	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%		
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+	432	0	0	0	0	432	0.0%	0.00%
A- to A+	1,044	0	0	311,963	0	313,007	8.9%	0.09%
BBB- to BBB+	0	276	0	0	0	276	0.0%	0.00%
BB- to BB+	0	0	0	0	0	0	0.0%	0.00%
B- to B+	0	14,207	0	0	0	14,207	0.4%	0.00%
CCC+ and below	0	0	0	0	0	0	0.0%	0.00%
Not Rated	0	604,034	1,094,153	201,333	1,285,768	3,185,288	90.7%	0.91%
Quintile Average TPE	1,476	618,517	1,094,153	513,296	1,285,768	3,513,210	100.0%	1.00%
Percent Quintile Average TPE	0.0%	17.6%	31.1%	14.6%	36.6%	100.0%		
Percent Total Average TPE	0.00%	0.18%	0.31%	0.15%	0.37%	1.00%		

Planned CWG Discussions in February 2018

- Initial Observations of CMM Refresh Phase 1A 'Go Live' including NPPR 800 Forward Market Pricing Methodology
- Letter of Credit Concentration Report and Financial Institution Limits
- Risk Tolerance discussions related to the general level of risks posed by Market Participants in different Market Segments (e.g. load vs. generation, virtual organizations vs. 'steel in the ground', etc.)
- CRR Calculator System Change Request
- Credit Implications related to an ERCOT Market Suspension and Restart (NPPR 850)
- Credit Training Activities and Potential Needs relating to the incorporation of new NPPRs in the CMM Refresh

Questions?