



## **Item 6: Periodic Report on Credit Work Group Activity**

*Donald Meek*

Chair, Credit Work Group

Finance & Audit Committee Meeting

ERCOT Public

June 10, 2019

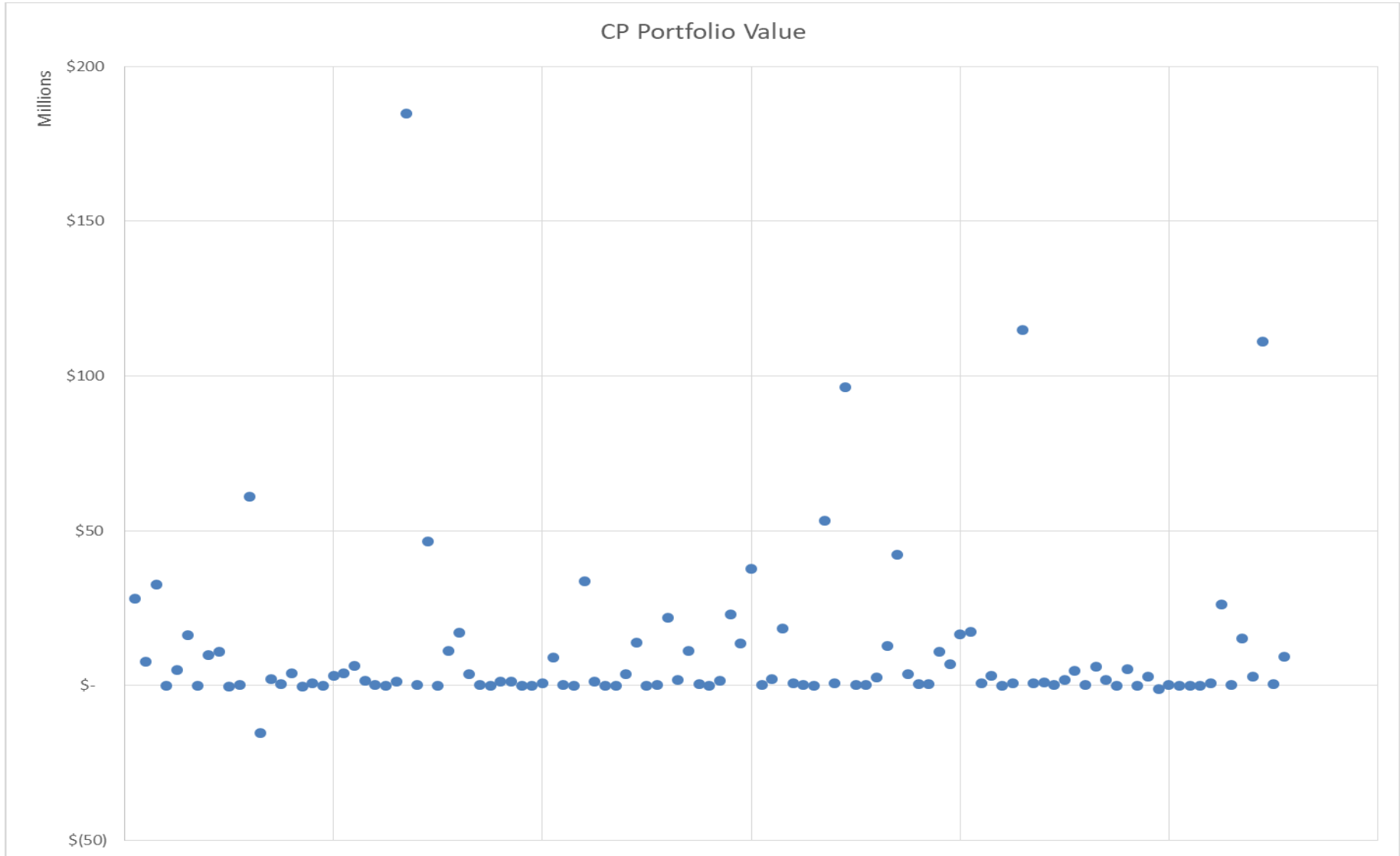
# Credit Work Group Update – Reviewed NPRRs

- **NPRRs Reviewed Without Credit Impact**
  - NPRR 823 – Amend the Definition of an Affiliate
  - NPRR 904 – Revisions to Real-Time On-Line Reliability Deployment Price Adder for ERCOT-Directed Actions Related to DC Ties
  - NPRR 917 – Nodal Pricing for Settlement Only Distribution Generators (SODGs) and Settlement Only Transmission Generators (SOTGs)
  - NPRR 926 – Removal of 90-Day Period Between SSR Study Approval and Synchronization
  - NPRR 929 – PTP Obligations with Links to an Option Dam Award Eligibility
  - NPRR 931 – As Built Hub Average Calculation
  - NPRR 932 – Addition of Load to Existing Load Zone
  - NPRR 935 – Post All Wind and Solar Forecasts

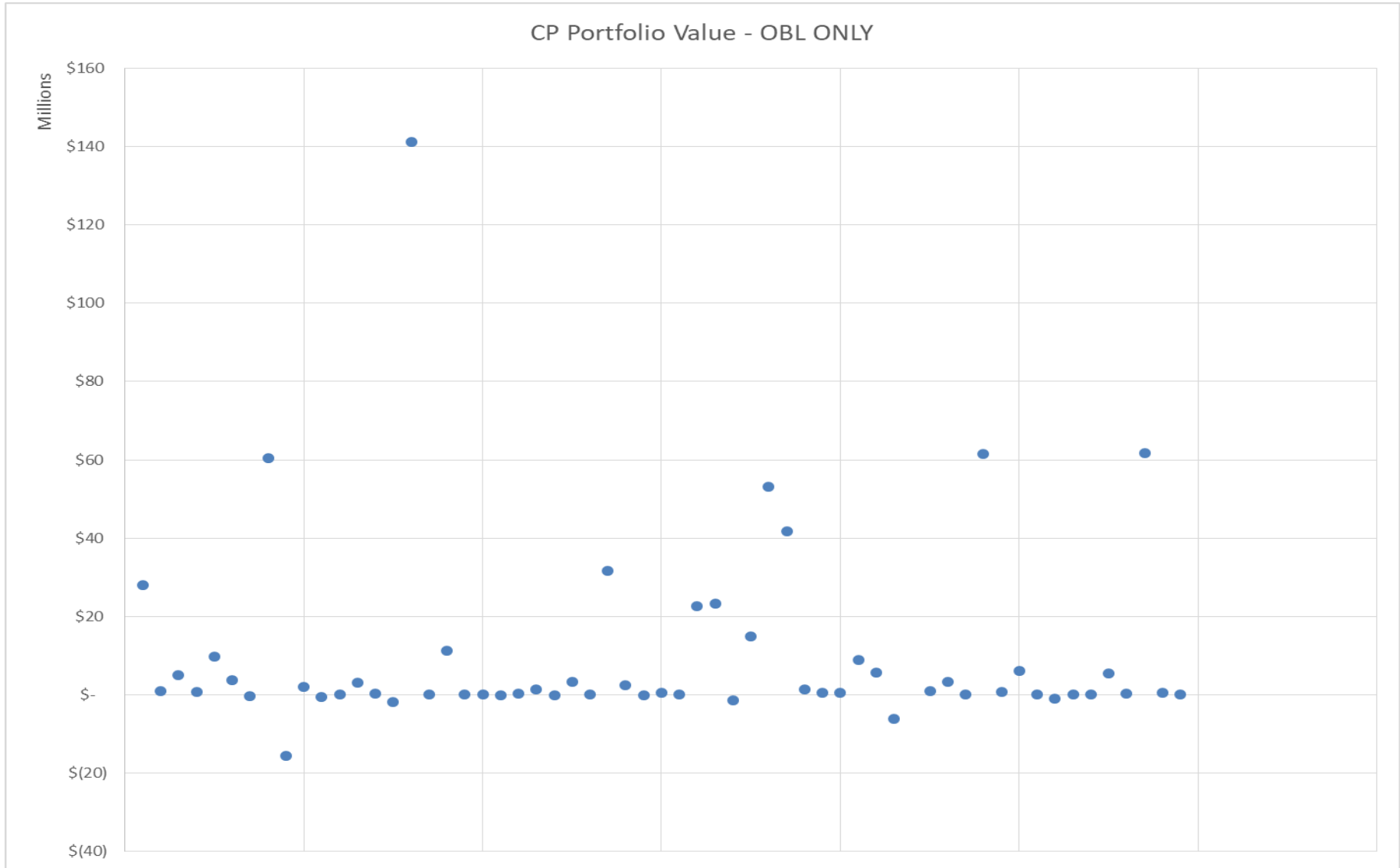
# CRR Portfolio Inventory by Counterparty

- Based on CRR inventory as of 3/1/19
- Value is based on the most recent auction clearing price available for each CRR as of 3/1/19
  - PCRRs that have been allocated but not yet priced were ignored
- Aggregated to the Counter-Party level

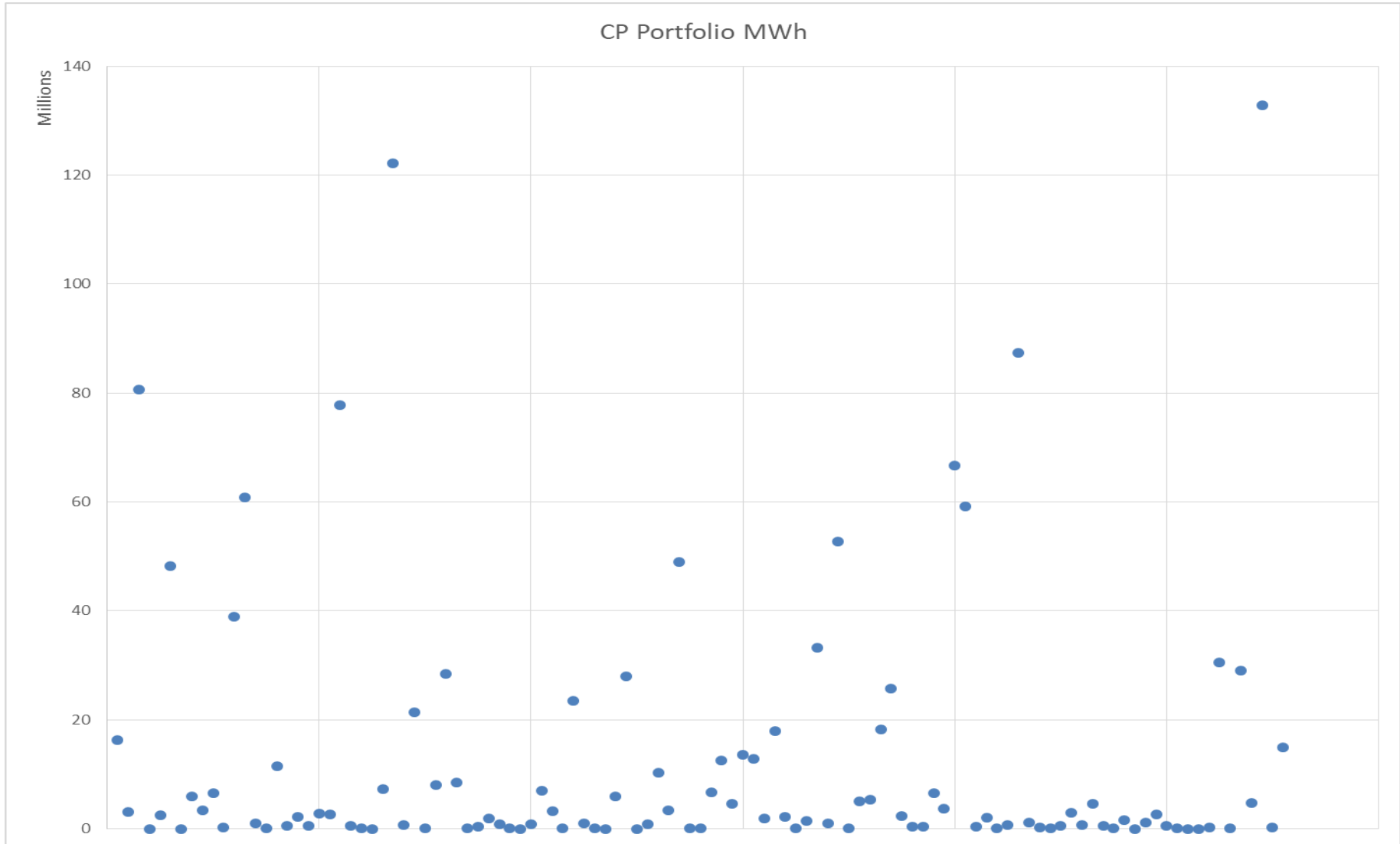
# CRR Portfolio Value by Counter-Party – All CRRs



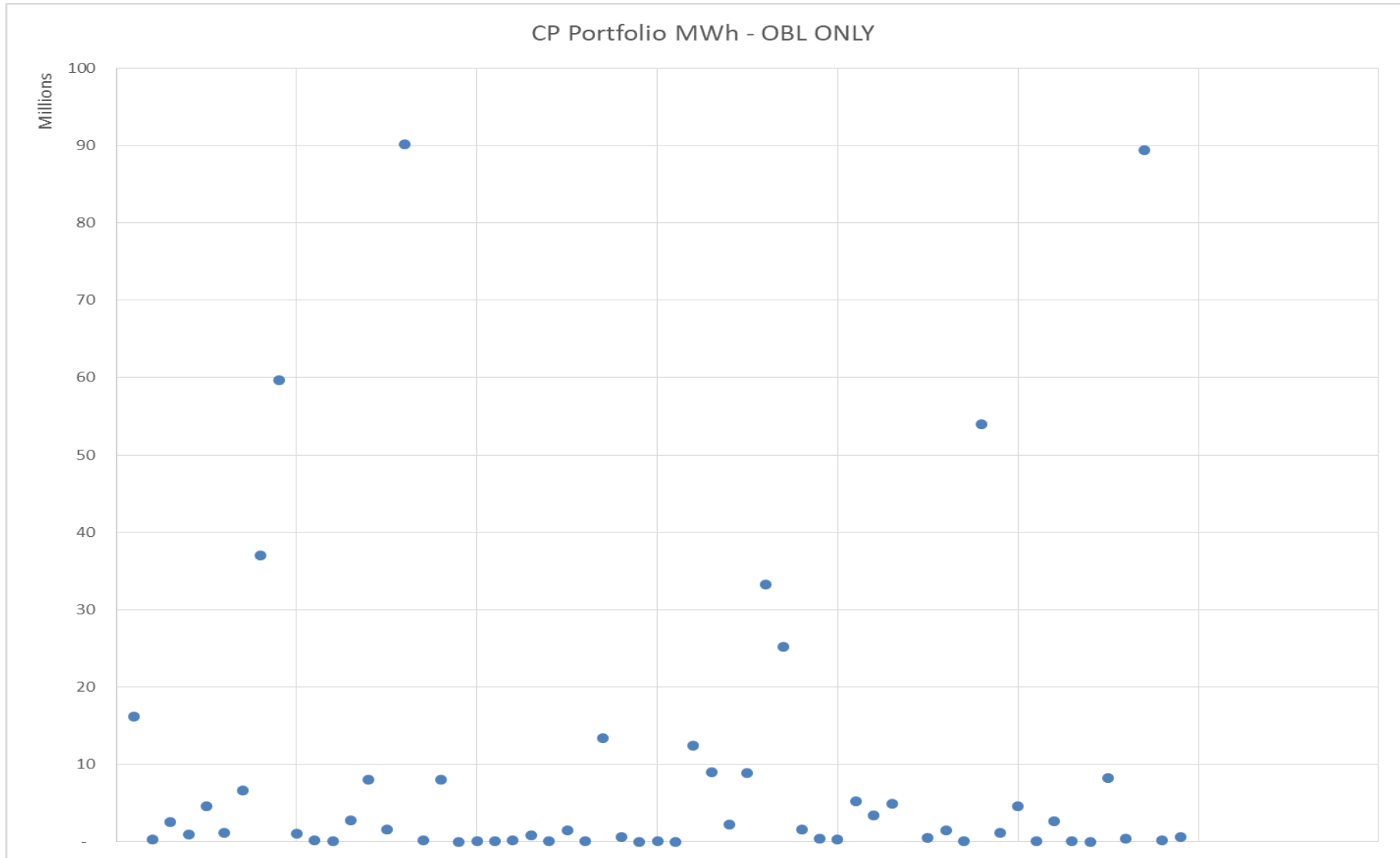
# CRR Portfolio Value by Counter-Party – Obligations



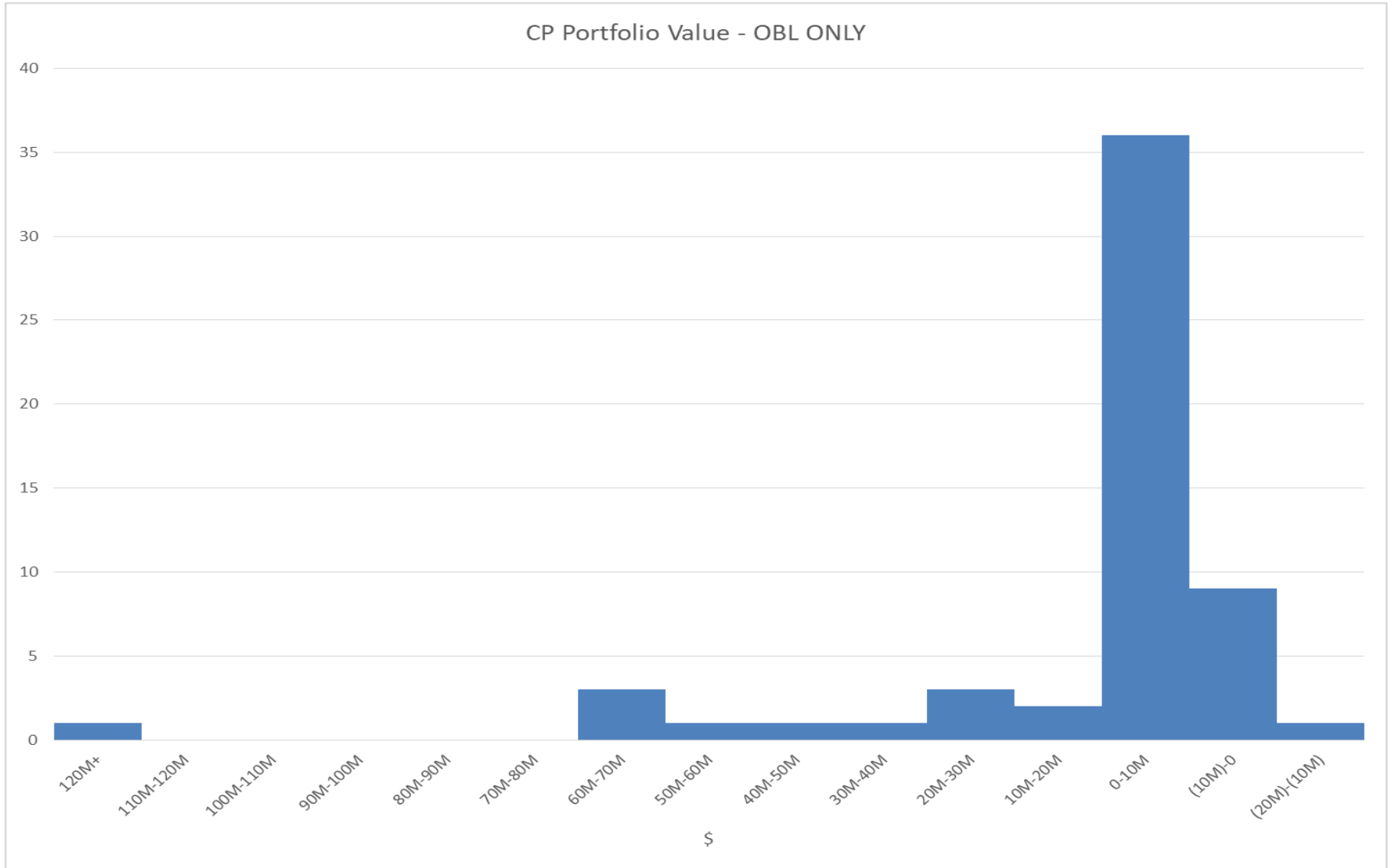
# CRR Portfolio Size by Counter-Party – All CRRs



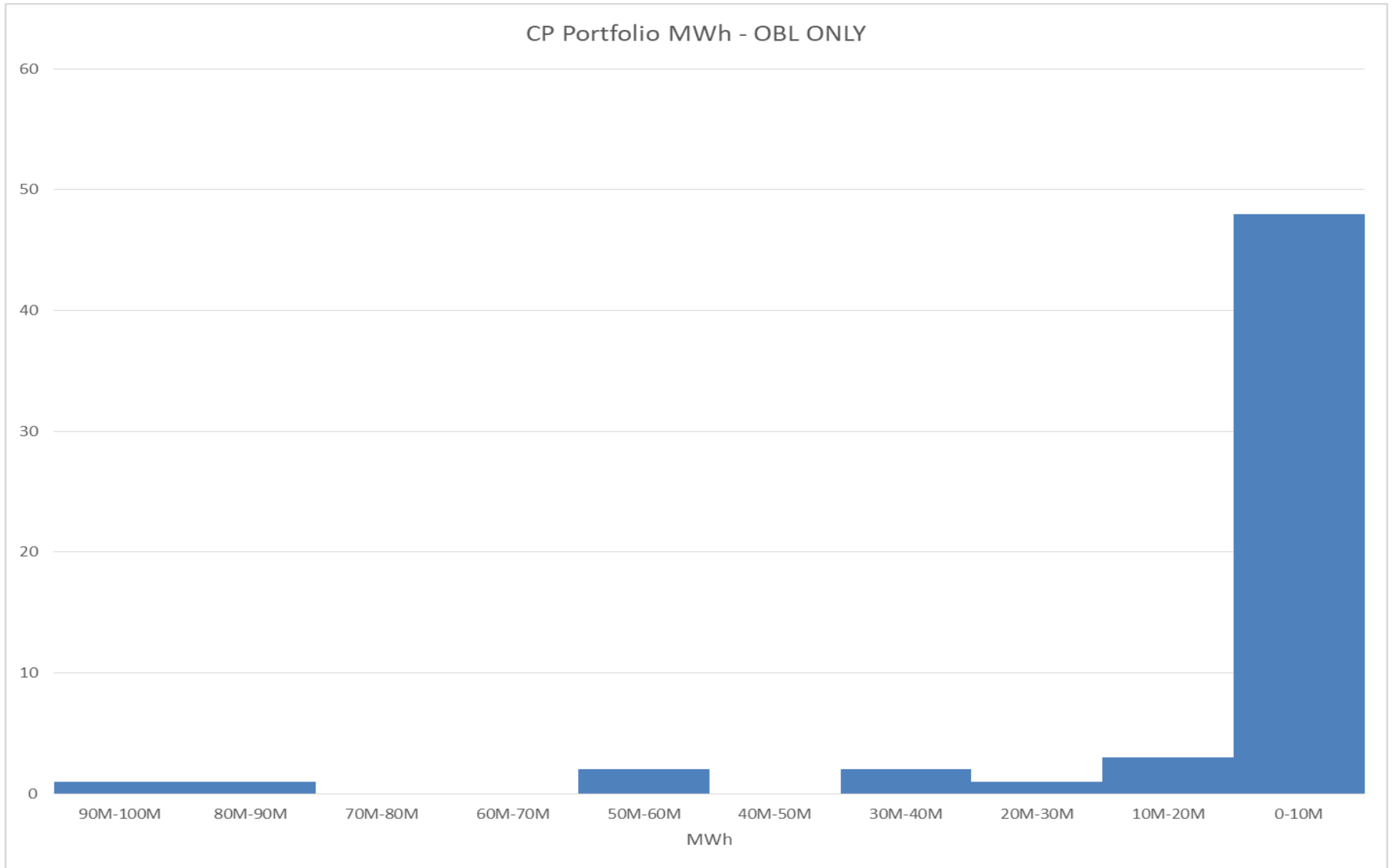
# CRR Portfolio Size by Counter-Party – Obligations



# CRR Portfolio Size by Counter-Party – Obligations



# CRR Portfolio Size by Counter-Party – Obligations



# ERCOT CRR Portfolio Liquidation

## Potential Proposal to Modify CRR Repossession Process

- Dollars needing to be paid or charged as a result of the repossessed CRRs in a default should be tracked and eventually flow in settlements to/from the default uplift allocation process
- Simplify as much as possible to reduce implementation costs
- Three categories of CRR portfolio positions to be considered:
  1. CRRs settling during the current month OR the prompt month and the default occurs late in the current month (auction bid window is already closed/ there is not enough time to hold a one-time special auction)
    - If an auction cannot be held due to timing, then ERCOT will create a placeholder CRRAH to accept transfer of defaulted CRRs
    - CRR will continue to exist and ownership would go to a “tracking” entity
    - If charge in DAM, short pay for the Operating Day
    - If payment in DAM, add to defaulted entity collateral (Hold the money in collateral default entity then true up, reconcile everything at the ~180-day default uplift settlement)

# ERCOT CRR Portfolio Liquidation (Continued)

## Potential Proposal to Modify CRR Repossession Process

### 2. Small positively valued portfolios

- Below a threshold of \$X, evaluate based on the most recent ACP (Auction Clearing Price), continue with current one-time auction approach
- Finalizes the default quickly for small portfolios
- If no bids are received (still only allow positive bids), proceed with liquidation similar to large portfolios
- ERCOT discretion to reject? For example, what if only one bid is received and it is 1% of the ACP value. Propose to only allow positive bid?

### 3. Negatively valued portfolios or large positively valued portfolios

- Above a threshold of \$X, based on mark-to-market value (ACP), or if the one-time auction fails/is rejected, CRR market operator would offer in all the repossessed CRRs on an individual basis at a very low price in the next available auction for that time period until all CRRs are sold.
- Could take as much as 6 months, depending on particular portfolio tenors
- The payment or charge from that auction would track against the default dollars.
- Must have an offer price established: -\$0.01 for OPT, -\$XXX for OBL
- In the unlikely case the OBL doesn't clear, dissolve the capacity
- ERCOT has the option to rerun auction with fewer offers or hold some positions back until next auction

# Market Entry Qualifications

The traditional “Five C’s of Credit” include:

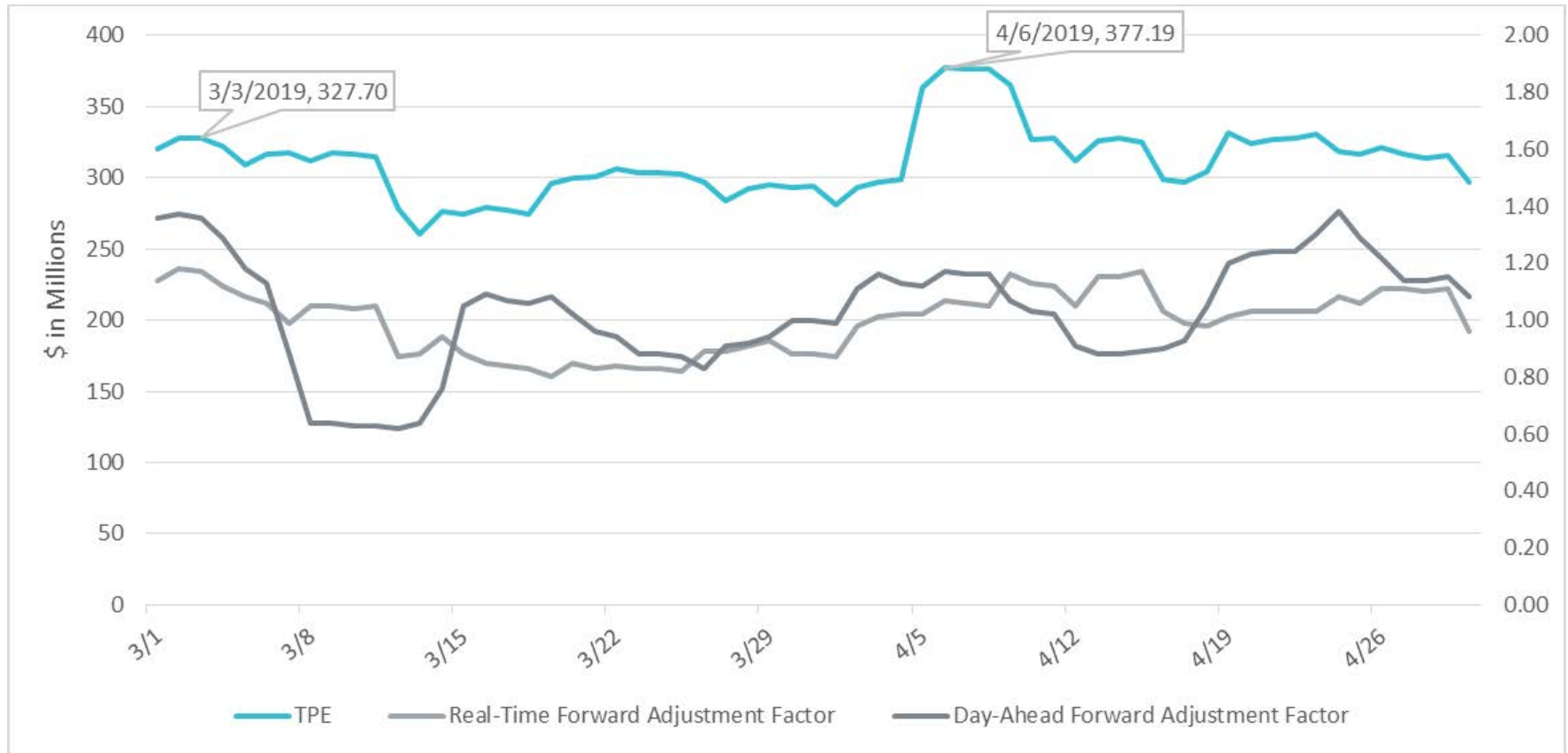
- Character / “Know your Customer”
  - Capacity / Cash Flow
  - Capital
  - Conditions
  - Collateral
- 
- ERCOT Legal is currently working to develop a risk matrix with several buckets for market entry qualifications
  - They will look at how other financial markets and ISOs/RTOs conduct their respective market entry qualification process
  - ERCOT Legal will also review the PJM consultant’s recommendations related to the GreenHat default

# Credit Exposure Update

## April 2019 compared to March 2019

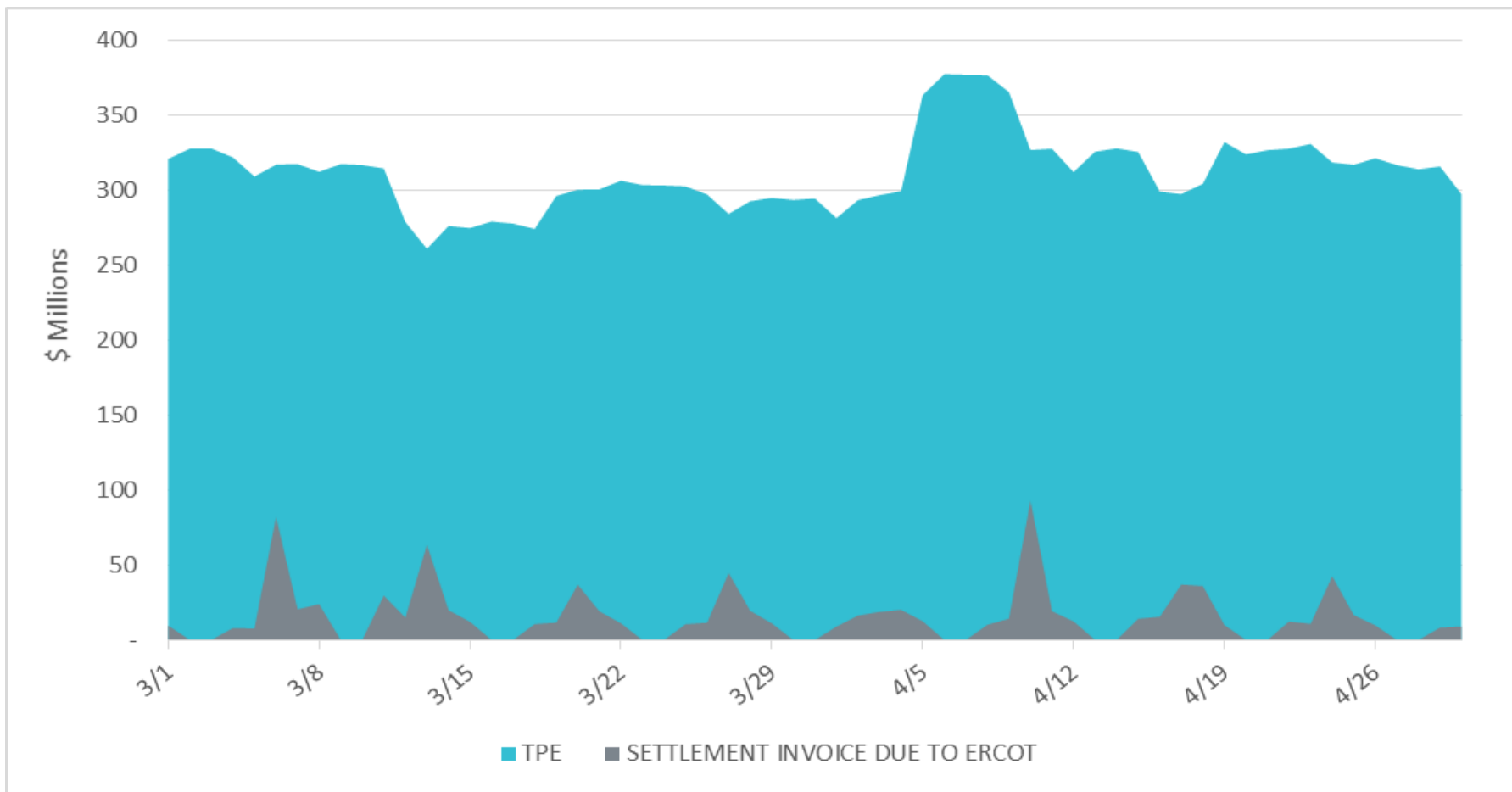
- Market-wide average TPE increased from \$298.5 million to \$322.6 million
- The increase in TPE is due to slightly higher Forward Adjustment Factors in April
- Discretionary Collateral is defined as Secured Collateral in excess of TPE, CRR Locked ACL and DAM Exposure.
- Average Discretionary Collateral decreased from \$926.7 million to \$796.3 million
- The decrease in Discretionary Collateral is largely due to increase in CRR Locked ACL during April
- Number of active Counter-Parties increased from 237 to 241
- No unusual collateral call activity

# TPE and Forward Adjustment Factors Mar. / Apr. 2019



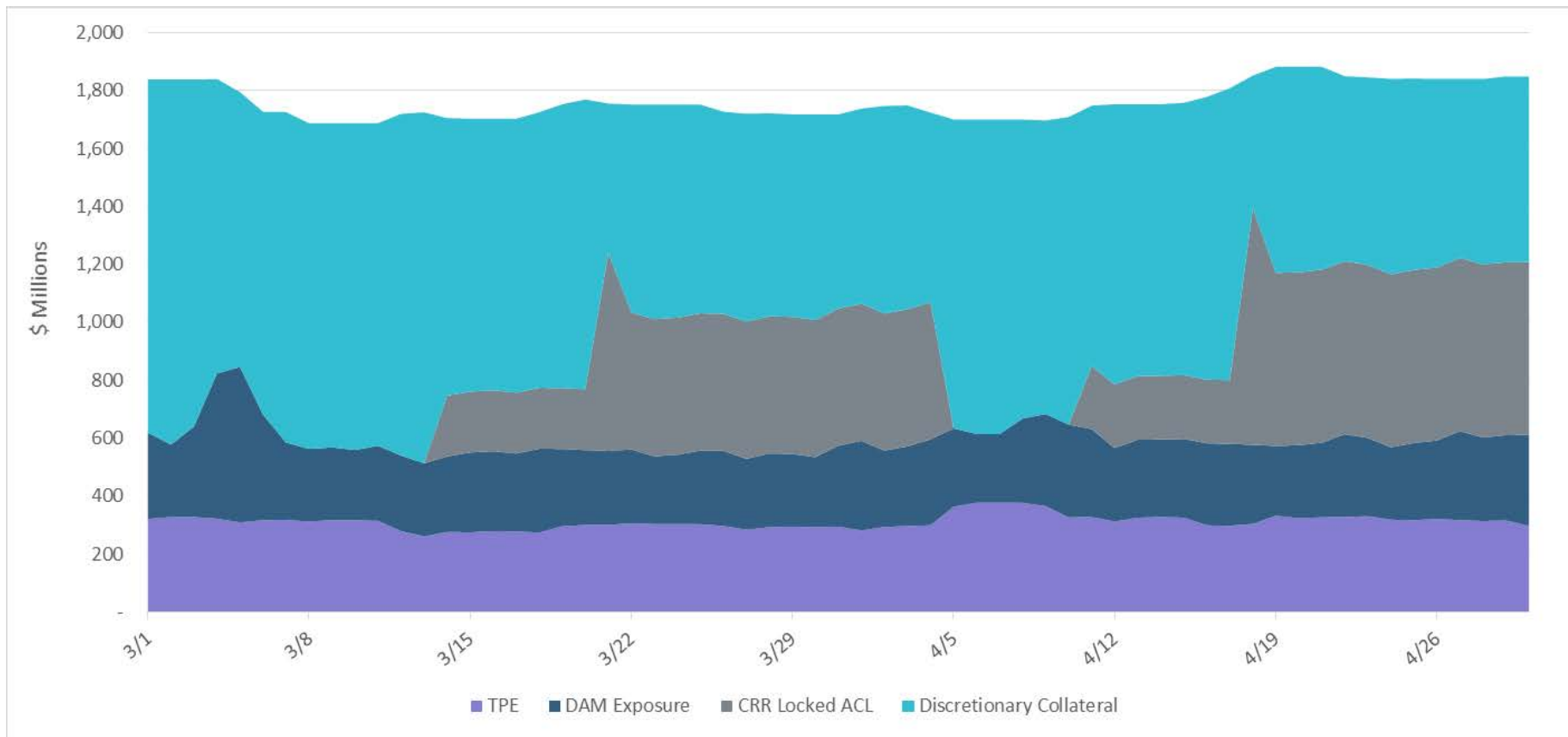
The Real-Time (RFAF) and Day-Ahead (DFAF) forward adjustment factors capture the ratio of forward ERCOT North prices to actual prices.

## Settlement Invoice Charges / Total Potential Exposure Mar 2019 - Apr 2019



## Discretionary Collateral Mar 2019 - Apr 2019

At a Counter-Party level, no unusual changes were noted



Note: Discretionary collateral doesn't include Unsecured Credit Limit or parent guarantees

# Counter-Party Credit Changes Mar – Apr 2019

Category	Counter-Party Distribution			Average TPE Distribution			Average Excess Collateral Distribution		
	Mar-19	Apr-19	Change	Mar-19	Apr-19	Change	Mar-19	Apr-19	Change
CRR Only	9.70%	10.79%	1.08%	0.79%	0.97%	0.18%	2.18%	2.55%	0.37%
Gen Only	14.35%	14.11%	-0.24%	7.34%	7.01%	-0.33%	4.12%	4.20%	0.08%
Load Only	14.35%	14.52%	0.18%	9.70%	13.10%	3.40%	9.11%	11.34%	2.23%
Load and Gen	13.92%	13.69%	-0.23%	44.84%	44.55%	-0.29%	58.33%	58.27%	-0.06%
Trader	47.68%	46.89%	-0.79%	37.33%	34.36%	-2.96%	26.26%	23.64%	-2.62%

Rating Group	Counter-Party Distribution			Average TPE Distribution			Average Excess Collateral		
	Mar-19	Apr-19	Change	Mar-19	Apr-19	Change	Mar-19	Apr-19	Change
AAA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
AA- to AA+	4.22%	4.15%	-0.07%	2.77%	2.02%	-0.75%	1.82%	2.01%	0.19%
A- to A+	7.59%	7.05%	-0.54%	15.69%	15.54%	-0.15%	22.37%	21.39%	-0.98%
BBB- to BBB+	12.24%	12.03%	-0.20%	26.20%	27.52%	1.33%	27.19%	27.96%	0.77%
<b>Investment Grade</b>	<b>24.05%</b>	<b>23.24%</b>	<b>-0.81%</b>	<b>44.66%</b>	<b>45.08%</b>	<b>0.42%</b>	<b>51.38%</b>	<b>51.35%</b>	<b>-0.02%</b>
BB- to BB+	3.80%	3.73%	-0.06%	19.00%	19.15%	0.16%	12.29%	11.98%	-0.31%
B- to B+	2.11%	2.07%	-0.04%	3.92%	2.96%	-0.95%	2.35%	1.88%	-0.47%
CCC+ and below	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Not Rated	70.04%	70.95%	0.91%	32.42%	32.80%	0.37%	33.99%	34.79%	0.80%
<b>Non-investment Grade</b>	<b>75.95%</b>	<b>76.76%</b>	<b>0.81%</b>	<b>55.34%</b>	<b>54.92%</b>	<b>-0.42%</b>	<b>48.62%</b>	<b>48.65%</b>	<b>0.02%</b>

# Counter-Party Credit Exposure – April 2019

Rating Group	CRR Only	Generation Only	Load Only	Load and Generation	Trader	Total TPE	Percent TPE
AAA	0	0	0	0	0	0	0.00%
AA- to AA+	555,451	0	0	5,967,941	0	6,523,393	2.02%
A- to A+	172,886	221,442	17,123,398	32,424,775	189,277	50,131,778	15.54%
BBB- to BBB+	0	7,040,126	14,167,337	36,605,848	30,990,852	88,804,163	27.52%
<b>Investment Grade</b>	<b>728,338</b>	<b>7,261,568</b>	<b>31,290,735</b>	<b>74,998,564</b>	<b>31,180,130</b>	<b>145,459,334</b>	<b>45.08%</b>
BB- to BB+	0	0	6,980,552	28,668,981	26,151,081	61,800,615	19.15%
B- to B+	0	14,675	0	5,612,086	3,930,839	9,557,600	2.96%
CCC+ and below	0	0	0	0	0	0	0.00%
Not Rated	2,405,049	15,354,996	3,994,583	34,453,227	49,609,146	105,817,001	32.80%
<b>Non-Investment Grade</b>	<b>2,405,049</b>	<b>15,369,671</b>	<b>10,975,135</b>	<b>68,734,294</b>	<b>79,691,066</b>	<b>177,175,216</b>	<b>54.92%</b>
<b>Total TPE</b>	<b>3,133,387</b>	<b>22,631,239</b>	<b>42,265,870</b>	<b>143,732,858</b>	<b>110,871,196</b>	<b>322,634,550</b>	<b>100.00%</b>
<b>Percent TPE</b>	<b>0.97%</b>	<b>7.01%</b>	<b>13.10%</b>	<b>44.55%</b>	<b>34.36%</b>	<b>100.00%</b>	

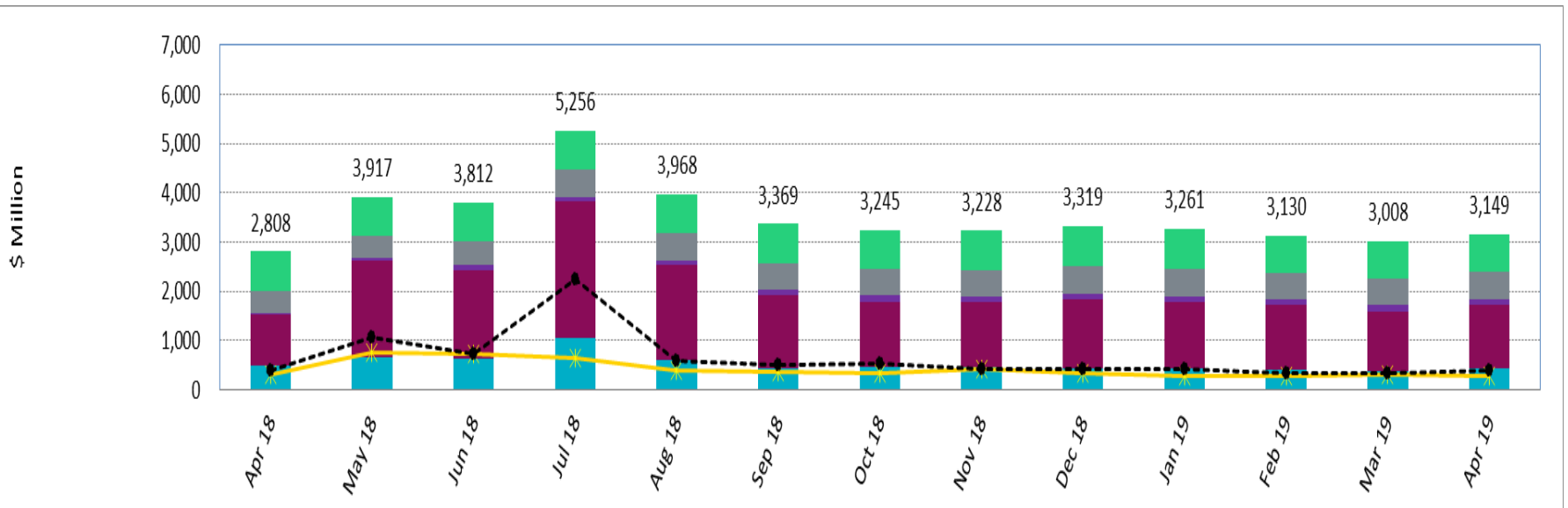
Rating Group	CRR Only	Generation Only	Load Only	Load and Generation	Trader	Excess Collateral	Percent Excess Collateral
AAA	0	0	0	0	0	0	0.00%
AA- to AA+	7,008,438	0	0	33,062,079	0	40,070,517	2.01%
A- to A+	14,084,730	34,778,558	109,276,603	268,925,419	(189,276)	426,876,034	21.39%
BBB- to BBB+	3,150,000	26,376,548	57,433,706	293,506,801	177,457,166	557,924,222	27.96%
<b>Investment Grade</b>	<b>24,243,168</b>	<b>61,155,107</b>	<b>166,710,309</b>	<b>595,494,300</b>	<b>177,267,890</b>	<b>1,024,870,773</b>	<b>51.35%</b>
BB- to BB+	0	0	43,124,492	175,520,209	20,394,759	239,039,460	11.98%
B- to B+	0	170,369	0	34,087,914	3,213,756	37,472,038	1.88%
CCC+ and below	0	0	0	0	0	0	0.00%
Not Rated	26,589,050	22,545,133	16,495,008	357,782,943	270,868,938	694,281,073	34.79%
<b>Non-Investment Grade</b>	<b>26,589,050</b>	<b>22,715,502</b>	<b>59,619,501</b>	<b>567,391,065</b>	<b>294,477,453</b>	<b>970,792,571</b>	<b>48.65%</b>
<b>Total Excess Collateral</b>	<b>50,832,218</b>	<b>83,870,609</b>	<b>226,329,810</b>	<b>1,162,885,365</b>	<b>471,745,343</b>	<b>1,995,663,344</b>	<b>100.00%</b>
<b>Percent Excess Collateral</b>	<b>2.55%</b>	<b>4.20%</b>	<b>11.34%</b>	<b>58.27%</b>	<b>23.64%</b>	<b>100.00%</b>	

# Counter-Party Credit Exposure – April 2019 Average TPE and Excess Collateral for the Bottom Quintile of Market Participants

Rating Group	CRR Only	Generation Only	Load Only	Load and Generation	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+	0	0	0	0	0	0	0.0%	0.00%
A- to A+	46,425	0	0	417,298	0	463,723	10.0%	0.14%
BBB- to BBB+	0	96	0	0	5,915	6,011	0.1%	0.00%
<b>Investment Grade</b>	<b>46,425</b>	<b>96</b>	<b>0</b>	<b>417,298</b>	<b>5,915</b>	<b>469,734</b>	<b>10.1%</b>	<b>0.15%</b>
BB- to BB+	0	0	0	0	4,595	4,595	0.1%	0.00%
B- to B+	0	14,675	0	0	0	14,675	0.3%	0.00%
CCC+ and below	0	0	0	0	0	0	0.0%	0.00%
Not Rated	0	661,510	295,966	0	3,187,552	4,145,028	89.4%	1.28%
<b>Non-Investment Grade</b>	<b>0</b>	<b>676,185</b>	<b>295,966</b>	<b>0</b>	<b>3,192,147</b>	<b>4,164,299</b>	<b>89.86%</b>	<b>1.29%</b>
<b>Quintile Average TPE</b>	<b>46,425</b>	<b>676,281</b>	<b>295,966</b>	<b>417,298</b>	<b>3,198,062</b>	<b>4,634,032</b>	<b>100.0%</b>	<b>1.44%</b>
<b>Percent Quintile Average TPE</b>	<b>1.0%</b>	<b>14.6%</b>	<b>6.4%</b>	<b>9.0%</b>	<b>69.0%</b>	<b>100.0%</b>		
<b>Percent Total Average TPE</b>	<b>0.01%</b>	<b>0.21%</b>	<b>0.09%</b>	<b>0.13%</b>	<b>0.99%</b>	<b>1.44%</b>		

Rating Group	CRR Only	Generation Only	Load Only	Load and Generation	Trader	Total Quintile Excess Collateral	Percent Quintile Excess Collateral	Percent Total Excess Collateral
AAA	0	0	0	0	0	0	0.00%	0.00%
AA- to AA+	0	0	0	0	0	0	0.00%	0.00%
A- to A+	211,192	0	0	136,738	0	347,930	10.64%	0.02%
BBB- to BBB+	150,000	103,401	0	0	3,918	257,320	7.87%	0.01%
<b>Investment Grade</b>	<b>361,192</b>	<b>103,401</b>	<b>0</b>	<b>136,738</b>	<b>3,918</b>	<b>605,249</b>	<b>18.51%</b>	<b>0.03%</b>
BB- to BB+	0	0	0	0	157,910	157,910	4.83%	0.01%
B- to B+	0	170,369	0	0	144,594	314,962	9.63%	0.02%
CCC+ and below	0	0	0	0	0	0	0.00%	0.00%
Not Rated	11,778	367,192	523,132	0	1,289,333	2,191,434	67.03%	0.11%
<b>Non-Investment Grade</b>	<b>11,778</b>	<b>537,560</b>	<b>523,132</b>	<b>0</b>	<b>1,591,837</b>	<b>2,664,307</b>	<b>81.49%</b>	<b>0.13%</b>
<b>Total Quintile Excess Collateral</b>	<b>372,970</b>	<b>640,962</b>	<b>523,132</b>	<b>136,738</b>	<b>1,595,755</b>	<b>3,269,556</b>	<b>100.00%</b>	<b>0.16%</b>
<b>Percent Quintile Excess Collateral</b>	<b>11.41%</b>	<b>19.60%</b>	<b>16.00%</b>	<b>4.18%</b>	<b>48.81%</b>	<b>100.00%</b>		
<b>Percent Total Excess Collateral</b>	<b>0.02%</b>	<b>0.03%</b>	<b>0.03%</b>	<b>0.01%</b>	<b>0.08%</b>	<b>0.16%</b>		

# Available Credit by Type Compared to Total Potential Exposure (TPE)

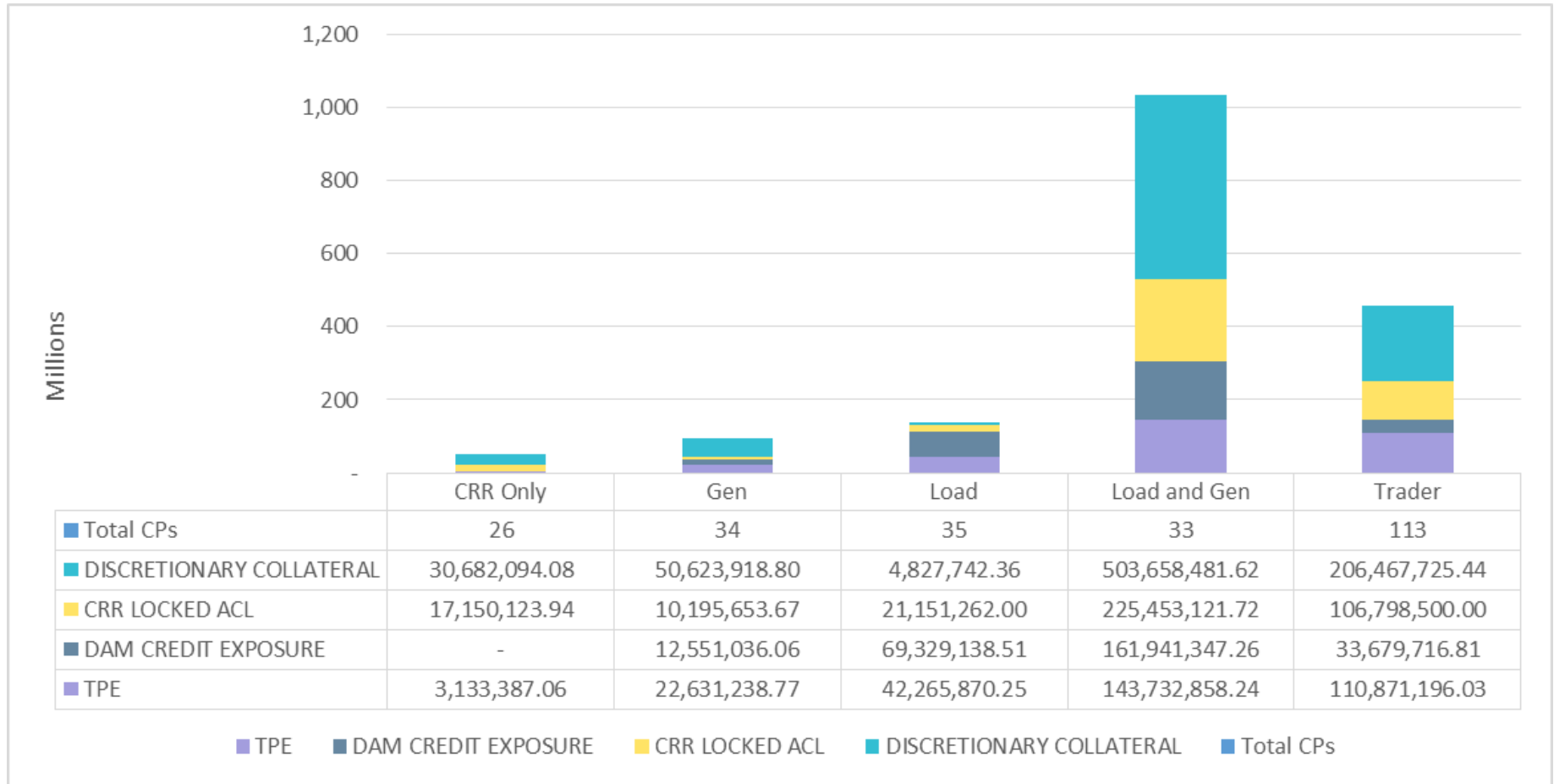


	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19
Total Credit Limit	2,808	3,917	3,812	5,256	3,968	3,369	3,245	3,228	3,319	3,261	3,130	3,008	3,149
Unsecured Credit	799	786	792	790	794	794	796	795	798	803	753	755	765
Guarantees	441	455	495	544	544	544	544	541	561	561	541	541	541
Surety Bonds	51	66	91	92	102	112	122	125	125	125	125	125	125
Letters of Credit	1,026	1,964	1,801	2,771	1,921	1,474	1,332	1,298	1,398	1,336	1,293	1,199	1,284
Cash	491	646	633	1,059	606	446	452	468	437	436	418	388	434
TPE	301	750	737	639	390	360	340	425	324	279	270	294	285
Max TPE	383	1,077	741	2,247	590	489	518	430	407	408	326	328	377

\*Numbers are as of month end except for Max TPE

# TPE and Discretionary Collateral by Market Segment - Apr 2019

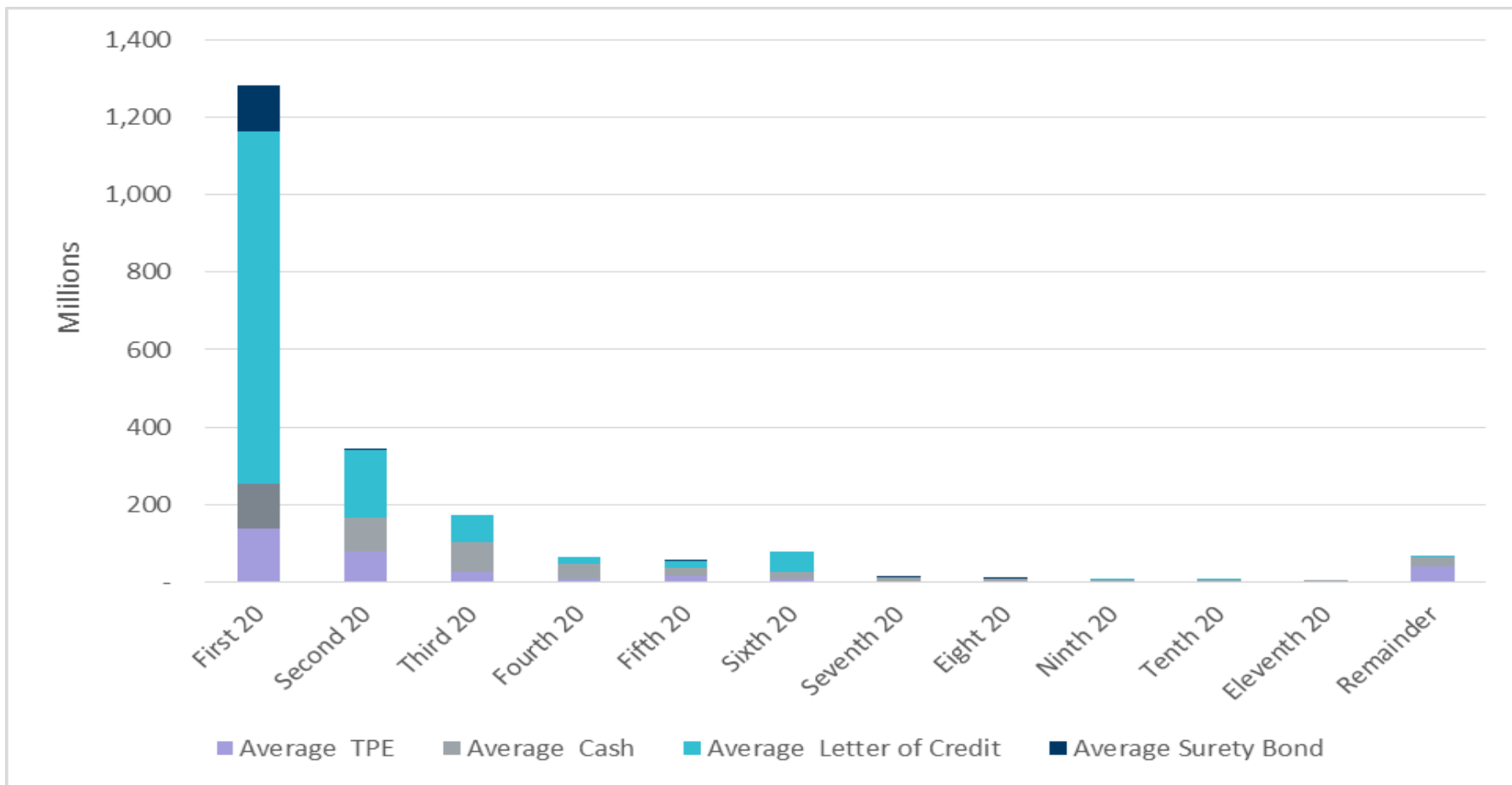
Load and Generation entities accounted for the largest portion of discretionary collateral



■ TPE ■ DAM CREDIT EXPOSURE ■ CRR LOCKED ACL ■ DISCRETIONARY COLLATERAL ■ Total CPs

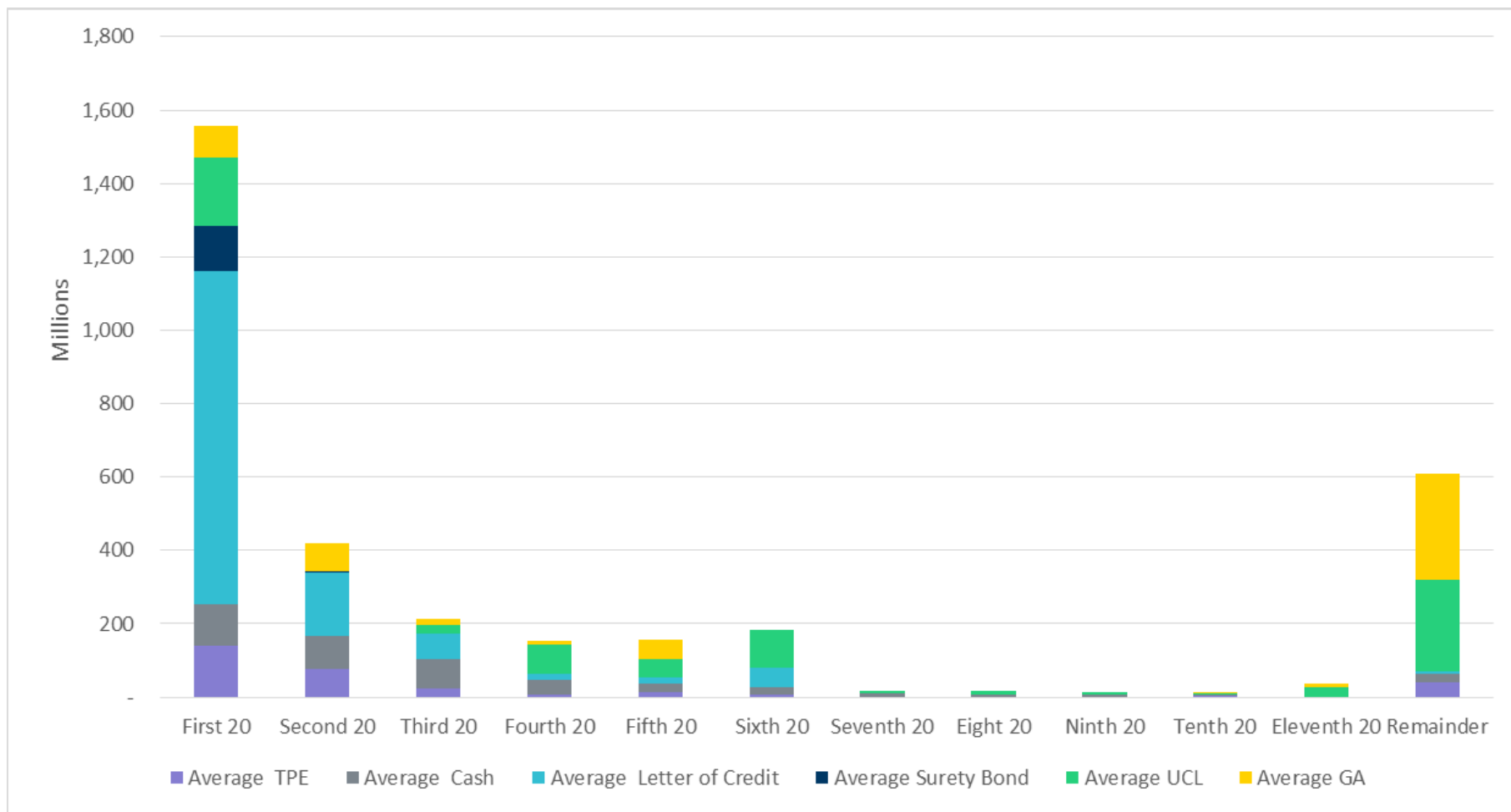
## Secured collateral distribution / TPE - Apr 2019

Posting of discretionary collateral is relatively concentrated.

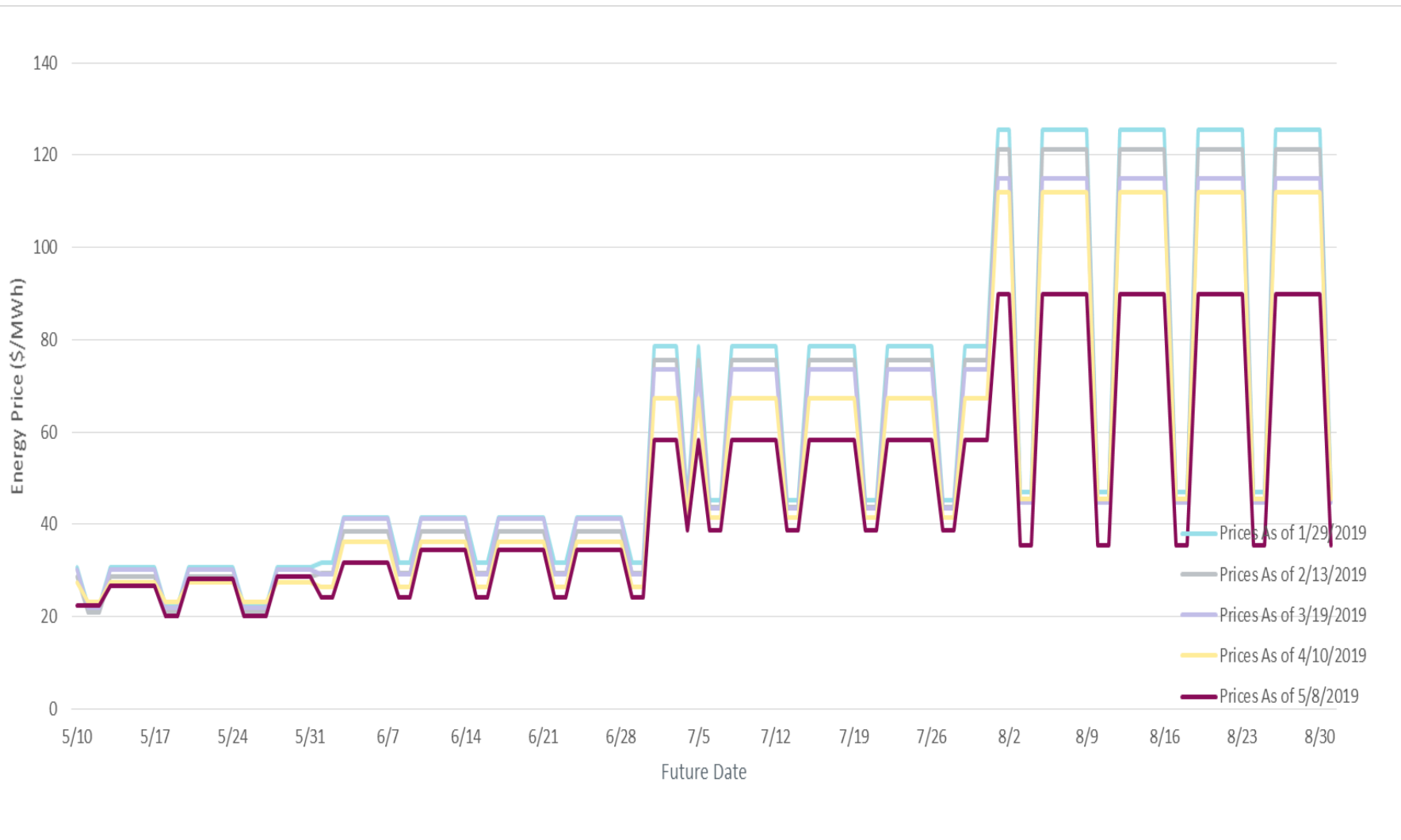


# Secured collateral and Unsecured Credit Limit (UCL) / TPE - Apr 2019

TPE in the last bucket is covered by Guarantees and Unsecured Credit



# ICE Daily Average Prices May 2019 - August 2019



\*Daily Average Price = (Peak price\*16 +Off-Peak price\*8)/24

# Credit Monitoring & Management (CMM) Refresh

## Project Overview

- Improve the ability to support and maintain the CMM system by upgrading the technology and replacing vendor application components.
  - Phase 1A – Implement NPRRs 648, 683, 743, 760, and 800 via the existing CMM application (Completed February 2018)
  - Phase 1B – Implement modern architecture, user improvements, and NPRRs (519, 620, 660, and 741) (June 2019 implementation date)
  - Phase 2 – Implement user improvements and NPRRs (484-1B, 829, 867, 907) (TBD)

## The following NPRRs were scheduled for implementation on June 2, 2019

NPRR 519 – Exemption of ERS- Only QSEs from Collateral and Capitalization Requirements

NPRR 620 – Collateral Requirements for Counter-Parties with No Load or Generation

NPRR 660 – Remove CRR State Change Adder

NPRR 741 – Clarification to TPE and EAL Credit Exposure Calculations

NPRR 755 – Data Agent Only QSE Registration – will be implemented on June 15, 2019

## Other CWG Topics for Discussion

- A simulated 'mass transition' exercise was held in April 2019 in conjunction with the TDSPs and POLR REPs in each of the competitive load zones. Approximately 3,900 ESI IDs were included in the exercise. The transaction drill status on Day 3 was as follows:

TDSP	Cancelled	In Review	Scheduled	Complete	Total
AEP	48	0	1	833	882
CNP	181	0	0	937	1118
ONCOR	57	0	0	1005	1062
TNMP	63	0	5	758	826
<b>Grand Total</b>	<b>349</b>	<b>0</b>	<b>6</b>	<b>3533</b>	<b>3888</b>

- ERCOT held a Summer Preparedness Workshop on March 4<sup>th</sup>.
- ERCOT held two training sessions related to changes planned to be introduced in Phase 1B of the CMM refresh.
- The Acquisition Transfer Contact List developed for Summer 2018 providing M&A contact information at potentially acquiring market participants has been reviewed and updated for Summer 2019.

# Questions?