



2023 Reserve Requirement Study (RRS) Preliminary Results

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Resource Adequacy Planning
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- The study results will re-set the FPR and IRM for 2024/25, 2025/26, 2026/27 and establish initial FPR and IRM for 2027/28.
- The study was conducted using two software tools and therefore, two sets of assumptions (the assumptions were approved at the June PC meeting)
 - PRISM (Assumptions Set #1)
 - Hourly loss of load model used to perform the ELCC study (Assumptions Set #2)
- The PRISM Load Model (LM) is based on the 2013-2019 time period and 2023 PJM Load Forecast (LM was approved at the August PC meeting)
- The Capacity Model (CM) was built with GADS data from 2018-2022 time period for all weeks of the year except the winter peak week.
 - For the winter peak week, the capacity model is created using historical actual RTO-aggregate outage data from time period DY 2007/08 – DY 2022/23

Capacity Benefit of Ties (CBOT) in the 2023 RRS

- The study assumptions consider calculating the CBOT to be used in the 2023 RRS as the average of the most recent historical CBOT values since the 2017 RRS (including the value calculated this year with PRISM)

RRS	CBOT
2017	1.6%
2018	1.5%
2019	1.6%
2020	1.5%
2021	1.4%
2022	1.0%
2023 PRISM	2.2%

Average Value = 1.5%
(to be used in the 2023 RRS)



2023 RRS Results (PRISM and Hourly Model) vs 2022 RRS Results

2023 RRS Study results - PRISM:

RRS Year	Delivery Year Period	Calculated IRM	Average EFORd	Calculated FPR*
2023	2024 / 2025	17.7%	5.10%	1.1170
2023	2025 / 2026	17.7%	5.09%	1.1171
2023	2026 / 2027	17.7%	5.08%	1.1172
2023	2027 / 2028	17.6%	5.06%	1.1165

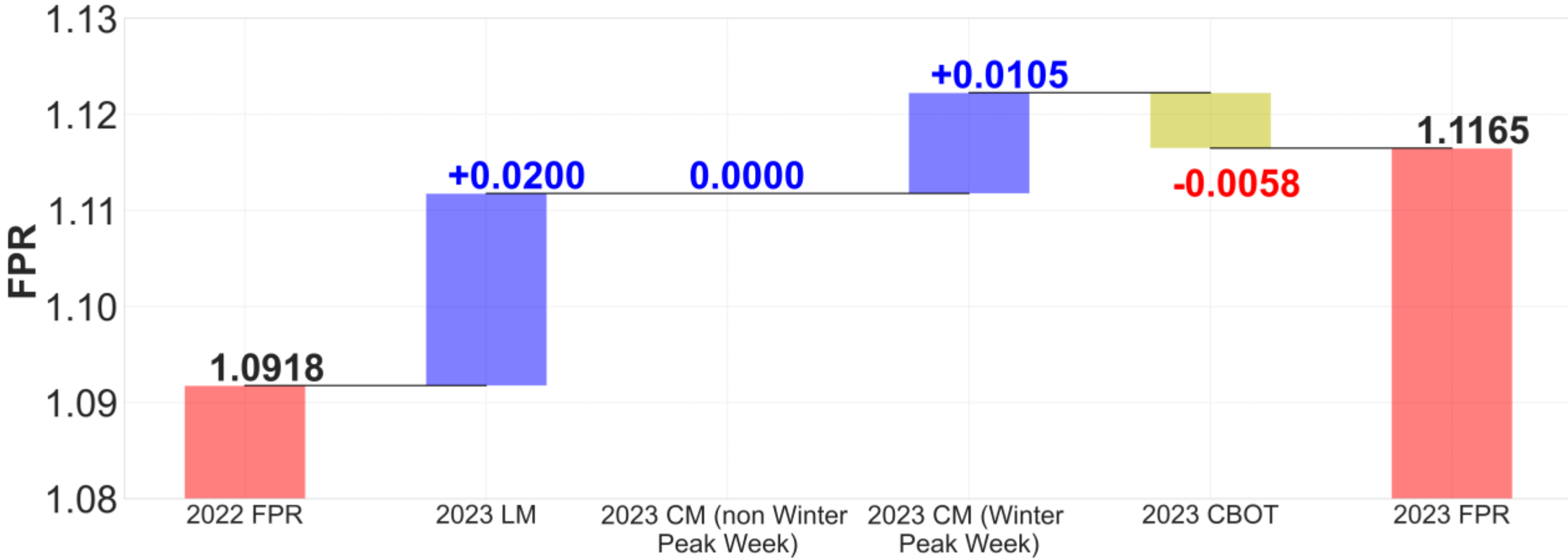
2023 RRS Study results - Hourly Model:

RRS Year	Delivery Year Period	Calculated IRM	Average EFORd	Calculated FPR*
2023	2024 / 2025	18.5%	5.10%	1.1246
2023	2025 / 2026	18.4%	5.09%	1.1237
2023	2026 / 2027	18.4%	5.08%	1.1239
2023	2027 / 2028	18.3%	5.06%	1.1231

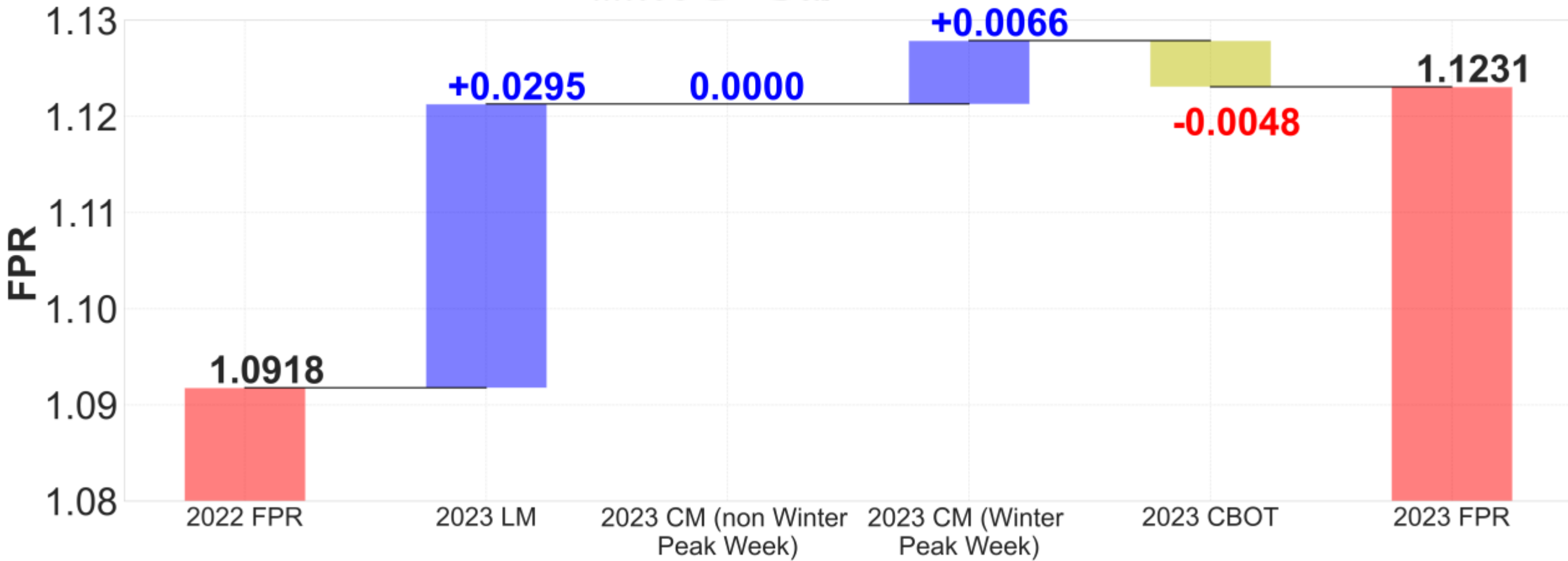
2022 RRS Study results:

RRS Year	Delivery Year Period	Calculated IRM	Average EFORd	Calculated FPR*
2022	2023 / 2024	14.9%	4.87%	1.0930
2022	2024 / 2025	14.8%	4.83%	1.0926
2022	2025 / 2026	14.7%	4.81%	1.0918
2022	2026 / 2027	14.7%	4.81%	1.0918

* FPR = (1 + IRM)*(1 - Average EFORd)

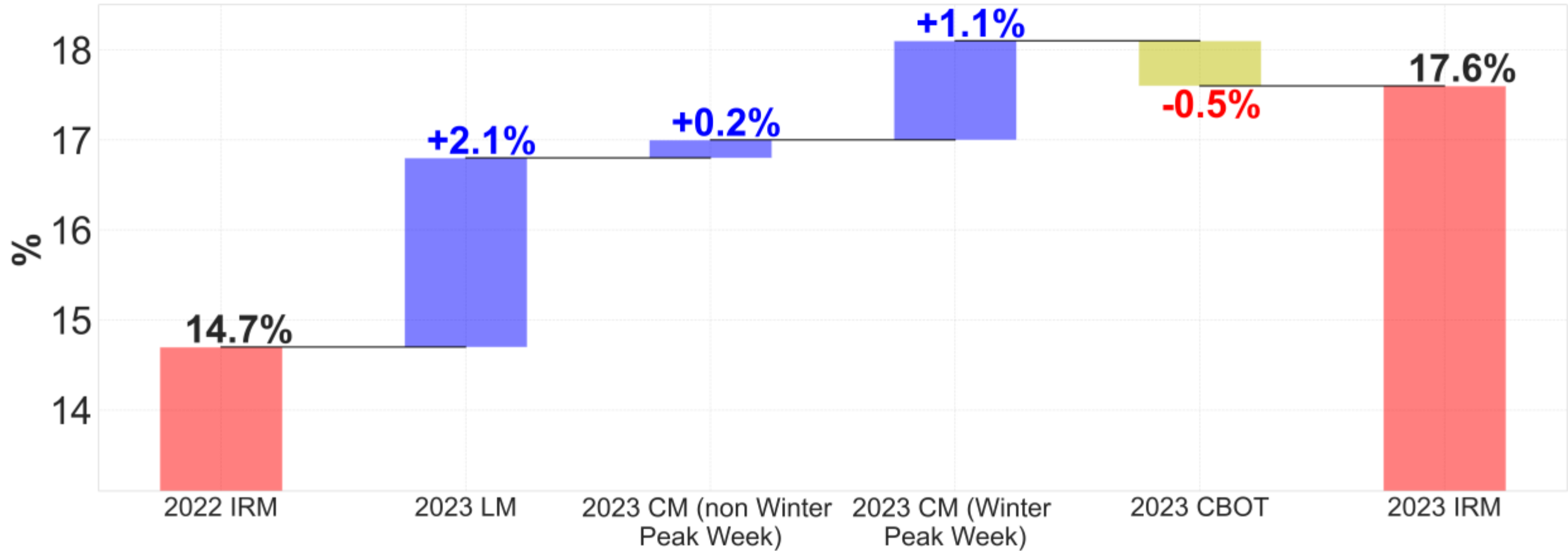


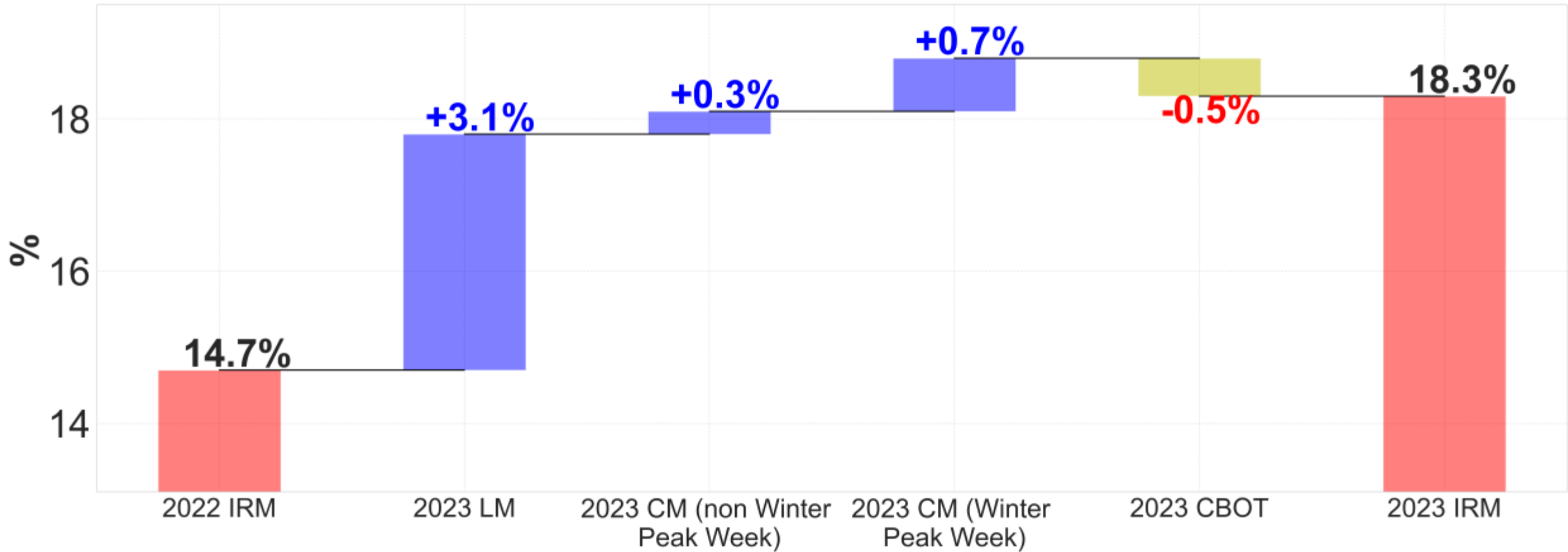
2023 FPR – Hourly Model – Waterfall Chart



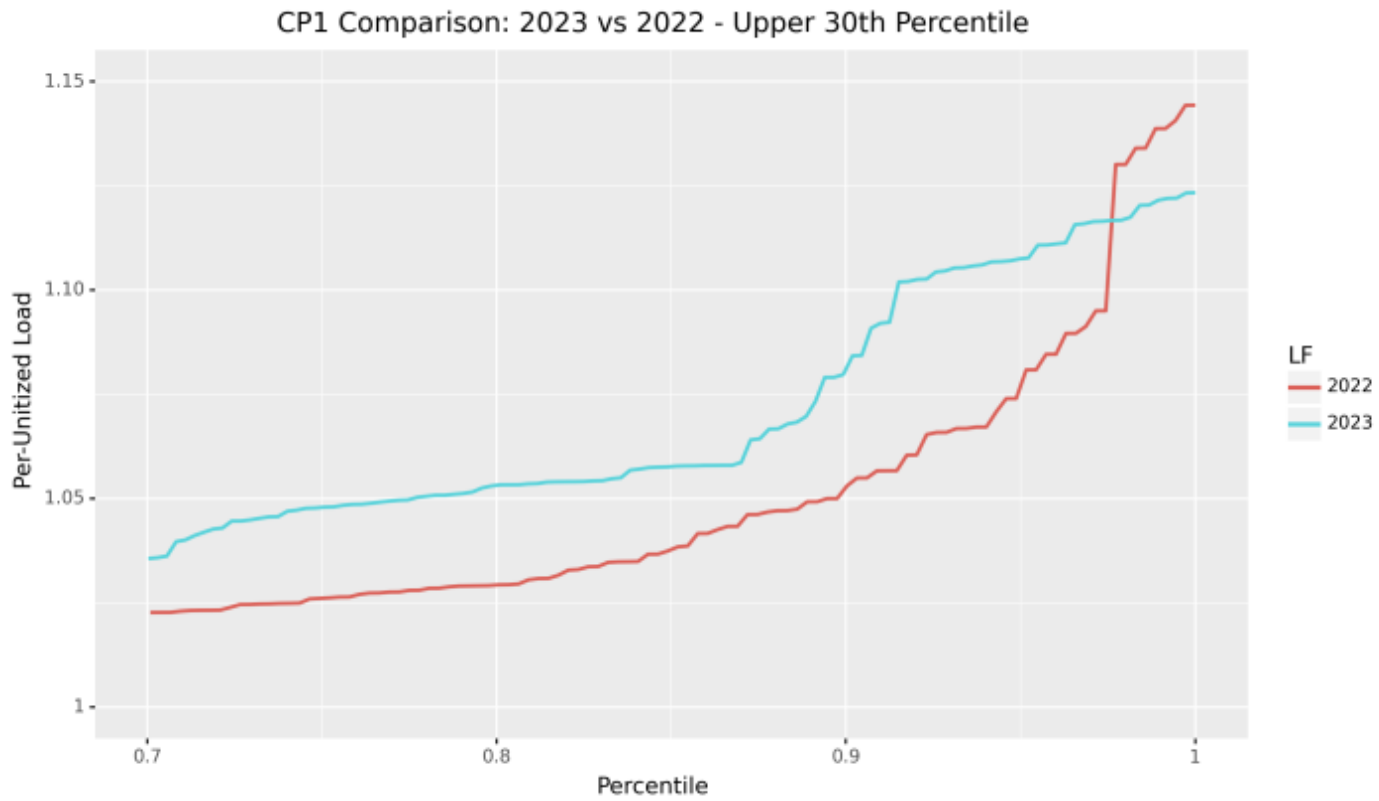
- For FPR and IRM
 - Sep, PC: first read of FPR and IRM
 - Sep, MRC: first read of FPR and IRM
 - Oct, PC: vote on FPR and IRM
 - Oct-Nov, MRC and MC: review and vote on FPR and IRM
 - Dec, PJM Board: final approval of FPR and IRM

Appendix

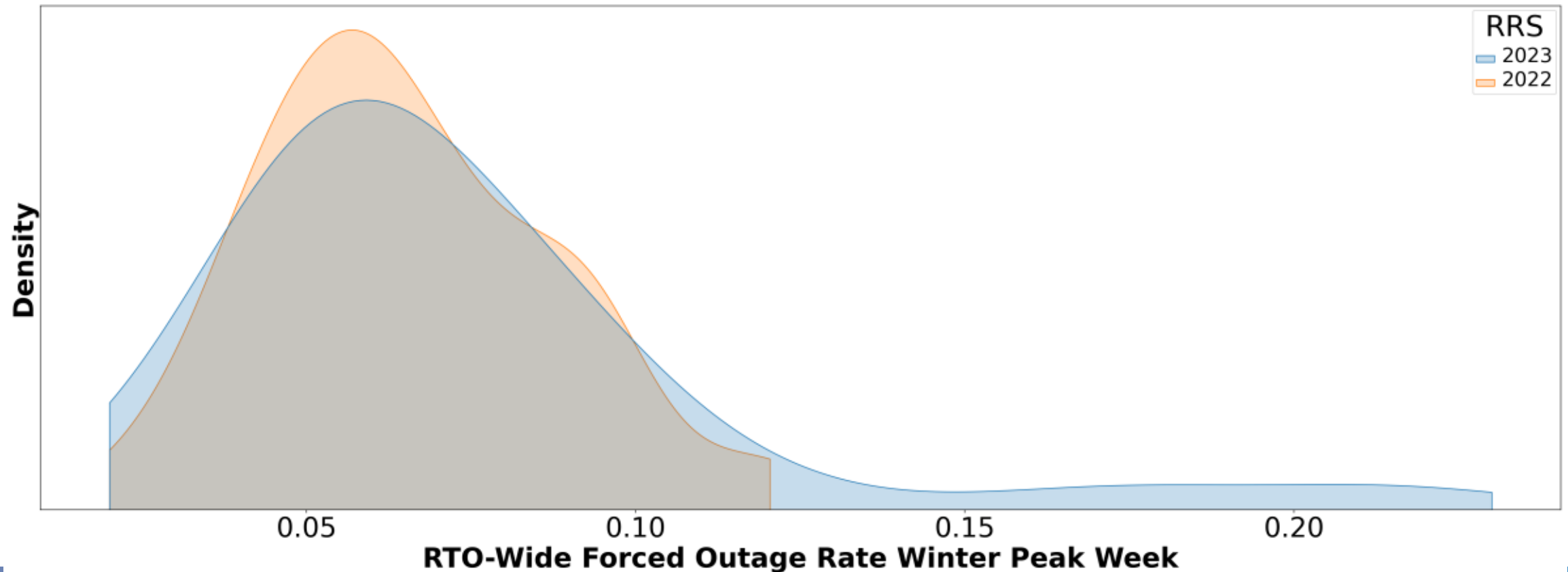




- The 2023 Load Model (LM), relative to the 2022 LM, puts upward pressure on both the FPR and the IRM



- The 2023 Winter Peak Week Capacity Model (WPWCM) relative to the 2022 WPWCM, puts upward pressure on both the FPR and the IRM.



- The 2023 Capacity Benefit of Ties (CBOT), relative to the 2022 CBOT, puts downward pressure on both the FPR and the IRM
 - The CBOT increased to 1.5% (2023 RRS) from 1.0% (2022 RRS).
- The 2023 Capacity Model (non Winter Peak Week), relative to the 2022 Capacity Model (non Winter Peak Week), puts upward pressure on the IRM.
 - The Average EEFORd in the 2023 RRS (for DY 2027) is 5.90% whereas in the 2022 RRS (for DY 2026) was 5.70 %

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