



2019 RRS Results

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Resource Adequacy Planning
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October 8, 2019

- Some statements regarding RAAS endorsement are still tentative
- Final values are slightly different from the preliminary values reported at September RAAS and PC meetings
 - The final values account for deactivations withdrawals received in July

- Study results will re-set the IRM and FPR for 2020/21, 2021/22, 2022/23 and establish initial IRM and FPR for 2023/24.
- Capacity model built with GADS data from 2014-2018 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 2018/19 (in addition, data from DY 2013/14 was dropped and replaced with data from DY 2014/15)
- PJM and World load models based on 2003-2012 time period and 2019 PJM Load Forecast.
- Study assumptions were endorsed at June, 2019 PC meeting.
- Load Model selection was endorsed at July, 2019 PC meeting.

2019 RRS Results vs 2018 RRS Results

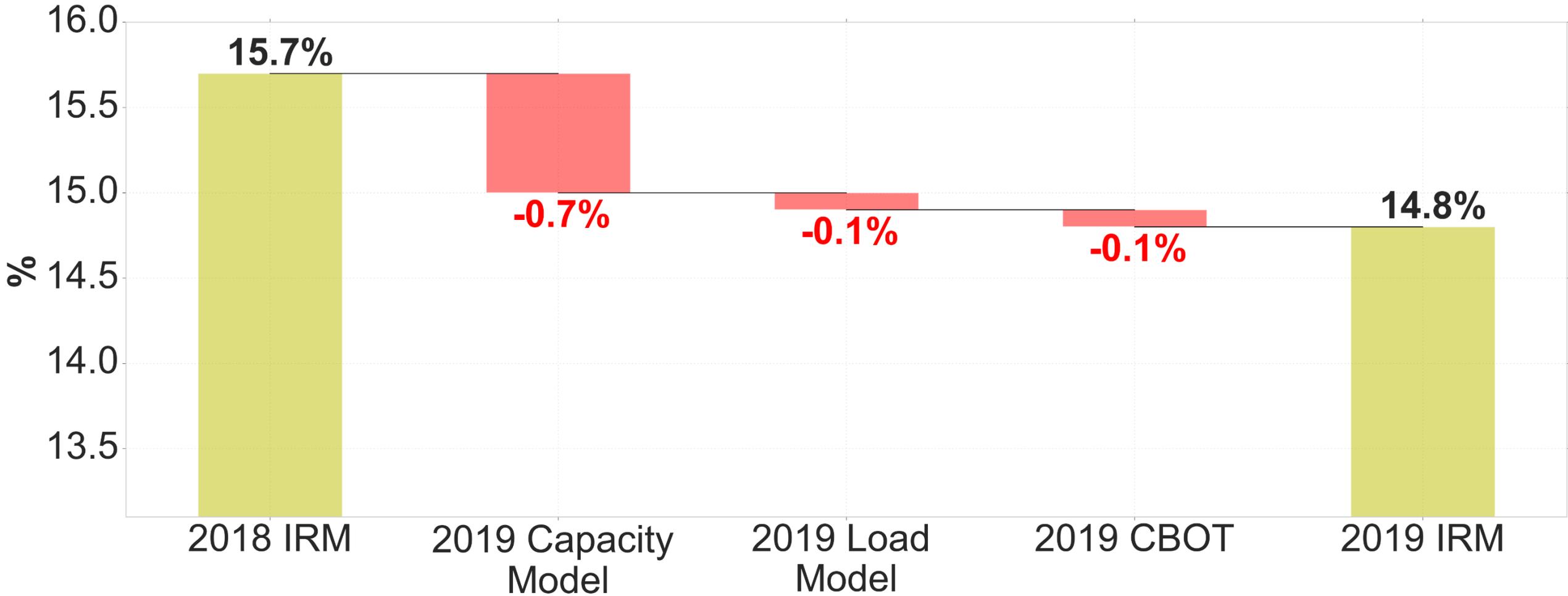
2019 RRS Study results:

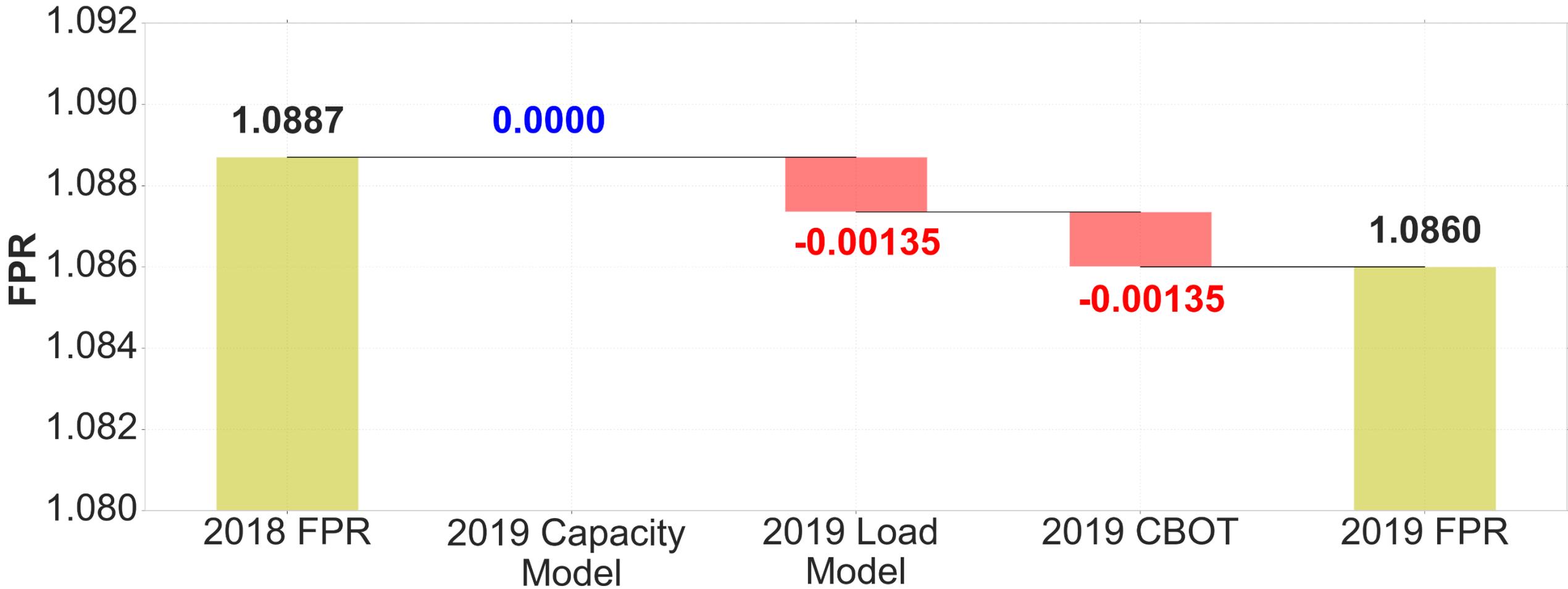
RRS Year	Delivery Year Period	Calculated IRM	Recommended IRM	Average EFORD	Recommended FPR*
2019	2020 / 2021	15.46%	15.5%	5.78%	1.0882
2019	2021 / 2022	15.14%	15.1%	5.56%	1.0870
2019	2022 / 2023	14.89%	14.9%	5.42%	1.0867
2019	2023 / 2024	14.84%	14.8%	5.40%	1.0860

2018 RRS Study results:

RRS Year	Delivery Year Period	Calculated IRM	Recommended IRM	Average EFORD	Recommended FPR*
2018	2019 / 2020	15.97%	16.0%	6.08%	1.0895
2018	2020 / 2021	15.89%	15.9%	6.04%	1.0890
2018	2021 / 2022	15.84%	15.8%	6.01%	1.0884
2018	2022 / 2023	15.66%	15.7%	5.90%	1.0887

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





- The 2019 Load Model and the 2019 Capacity Benefit of Ties (CBOT) put downward pressure on both the IRM and the FPR
 - The August peak in the 2019 RRS is 96.5% of the July peak whereas in the 2018 RRS it was 97.0%
 - The CBOT increased from 1.5% (2018 RRS) to 1.6% (2019 RRS)
- The 2019 Capacity Model is driving the decrease in the IRM.
 - The Average EEFORd in the 2019 RRS (for DY 2023) is 6.12% whereas in the 2018 RRS (for DY 2022) was 6.66 %
 - The driver for the drop in Average EEFORd is the retirement of ~8,600 MW with average EEFORd of 12.3% and the addition of ~15,000 MW with average EEFORd of 4.1% (mostly Combined Cycle units) in the period 2019 - 2023



2019/20 Winter Weekly Reserve Targets

Month	% Available Reserves	Max % Available Reserves (by Month)
December	17.38%	22%
	21.25%	
	21.60%	
	9.76%	
January	19.38%	28%
	13.15%	
	23.95%	
	27.19%	
February	19.43%	24%
	23.36%	
	17.53%	
	14.03%	

Corresponding values last year were:

December: 22%
 January: 28%
 February: 24%

- Endorsement of the Recommended IRM and FPR values in the table below

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- Endorsement of the Winter Weekly Reserve Target (WWRT) Values for 2019/20 as shown below

Month	WWRT
December 2019	22%
January 2020	28%
February 2020	24%

- October 17th, PC:
 - Request for endorsement
- October 31st, MRC
 - Request for endorsement
- December, PJM Board:
 - Final approval