

2026/27 BRA - Estimated Hours of Simulated PAIs in Resource Adequacy Risk Analysis

To assist capacity market sellers in their evaluation of Capacity Performance Quantifiable Risk (CPQR) for the 2026/2027 BRA, PJM is providing the estimated hours of Performance Assessment Intervals (PAIs) observed in the probabilistic simulation model that is used to establish the RTO reserve requirement and ELCC capacity accreditation. This data may be used by market sellers in their own CPQR analysis; however, nothing herein requires market sellers to use the data or prevents market sellers from relying on and supporting their own analysis of potential PAIs in their assessment of CPQR.

For this calculation of estimated hours of PAIs, the probabilistic model was run using the same set of assumptions used in the reserve requirement study with the system at criteria (i.e. at the target reserve requirement) where resource adequacy was simulated and evaluated on an hourly basis across a broad range of potential weather scenarios, forecasted load profiles, and resource availability. However, rather than focusing solely on loss-of-load hours in the analysis, the simulated hours of PAIs were assessed and counted in the model during any hour that was expected to be in a primary reserve shortage, consistent with the current PAI trigger definition (i.e. in any hour that simulated resource availability was less than load plus an estimated primary reserve requirement of 2600 MW).

The total simulated years in the probabilistic analysis for the 2026/2027 BRA is 40,300 (31 weather years * 13 alternative load scenarios * 100 alternative resource performance draws). The results of the analysis showing various statistical measures on the estimated hours of simulated PAIs annually is provided in the table below:

Table 1: Estimated Hours of PAIs Annually

Expected	50/50	90/10	95/5	97.5/2.5	99/1	Max
0.54	0	1	3	6	12	50

The resulting expected hours of simulated PAIs by historical weather year is provided in the table below:

Table 2: Expected Hours of PAIs Annually by Historical Weather Year

Year	Year #	Expected	Year	Year #	Expected
1993	0	5.143	2009	16	0.000
1994	1	0.058	2010	17	0.014
1995	2	1.985	2011	18	1.380
1996	3	1.036	2012	19	0.023
1997	4	0.000	2013	20	1.214
1998	5	0.000	2014	21	2.405
1999	6	0.363	2015	22	0.000
2000	7	0.000	2016	23	0.052
2001	8	0.001	2017	24	0.875
2002	9	0.232	2018	25	0.050
2003	10	0.002	2019	26	0.000
2004	11	0.288	2020	27	0.000
2005	12	0.000	2021	28	0.000
2006	13	1.110	2022	29	0.182
2007	14	0.003	2023	30	0.000
2008	15	0.197	Annual Average:		0.54

In addition, market sellers may view the full distribution of historical weather year scenarios with simulated hours of PAIs that are observed in the 2026/2027 BRA risk model in the companion Excel file posted on the [RPM webpage](#) under the relevant Delivery Year and auction materials.