Informational Data Request – Reserves

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- **Primary Reserves** are the amount of power that can be received within 10 minutes. The power provided is the sum of online or offline resources that can respond in 10 minutes or less.

$$Primary\ Reserves = Synchronized\ Reserves + Non\ Synchronized\ Reserves$$

- **Primary Reserve Requirement** is based on the Largest Single Contingency and Extended Reserve Requirements detailed in Manual 11.

- Reviewed hourly data from 2013 through 2022 to locate the lowest available Primary Reserves for 30 hours of each year.

- Data is based on available MW submitted by Market Sellers.

Lowest available Primary Reserve hours : 2022-2013

Interval count with lowest total Primary Reserves

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0	0	0	1	1	2	0	0	2	13	2	9
2021	0	0	0	14	1	0	0	0	0	4	11	0
2020	0	0	0	0	5	0	0	3	0	19	1	2
2019	0	0	0	4	8	0	2	0	0	16	0	0
2018	7	0	0	1	4	0	0	0	1	16	1	0
2017	6	0	9	7	6	0	0	0	0	0	2	0
2016	4	0	18	1	0	2	0	3	0	1	1	0
2015	3	6	5	3	0	0	1	1	0	2	3	6
2014	21	1	4	3	1	0	0	0	0	0	0	0
2013	0	0	0	2	0	0	4	13	3	5	1	2

Average available Primary Reserves during the lowest total available Primary Reserve hours

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	-	-	-	2,290	2,263	2,132	-	-	2,284	2,284	2,301	1,929
2021	-	-	-	2,254	2,280	-	-	-	-	2,285	2,282	-
2020	-	-	-	-	2,405	-	-	2,453	-	2,432	2,453	2,413
2019	-	-	-	2,436	2,387	-	2,392	-	-	2,344	-	-
2018	2,197	-	-	2,266	2,237	-	-	-	2,266	2,242	2,222	-
2017	2,179	-	2,189	2,189	2,177	-	-	-	-	-	2,193	-
2016	2,170	-	2,166	2,156	-	2,130	-	2,166	-	2,175	2,162	-
2015	2,069	2,141	2,136	2,133	-	-	2,122	2,152	-	2,158	2,104	2,108
2014	1,676	2,037	2,008	2,040	2,060	-	-	-	-	-	-	-
2013	-	-	-	2,073	-	-	2,071	2,067	2,070	2,070	2,067	2,068

- **Available reserves** are the sum of Emergency Max MW offered by Market Sellers, and subtracting out the Primary Reserve requirement and load.

$$Available\ reserves = \sum (Emergency\ Max\ MW_i) - (Primary\ Reserves_{req} + Load)$$

- **Available reserves** are a non defined PJM term, used for illustrative purposes, and do not have a defined requirement.

- Reviewed interval data from 2013 through 2022 to locate the lowest available Primary Reserves for 360 intervals (30 hours) of each year.

- Data is based on available MW submitted by Market Sellers.

Interval count with lowest total available reserves

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0	0	0	0	15	9	16	120	0	0	0	200
2021	0	0	0	0	0	102	42	176	20	4	16	0
2020	0	0	0	0	0	0	281	79	0	0	0	0
2019	0	0	0	0	0	0	88	0	109	149	14	0
2018	0	0	0	0	34	10	106	28	102	80	0	0
2017	0	0	0	0	34	0	86	0	199	41	0	0
2016	0	0	0	93	0	0	130	137	0	0	0	0
2015	0	42	0	0	187	0	125	0	6	0	0	0
2014	322	0	9	0	0	29	0	0	0	0	0	0
2013	0	0	0	0	0	0	360	0	0	0	0	0

Average available reserves during the lowest total available reserves intervals

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	-	-	-	-	20,701	20,745	20,655	18,645	-	-	-	16,200
2021	-	-	-	-	-	20,675	21,234	20,414	21,757	22,628	22,424	-
2020	-	-	-	-	-	-	26,563	26,487	-	-	-	-
2019	-	-	-	-	-	-	26,079	-	22,976	22,941	26,227	-
2018	-	-	-	-	23,238	23,820	23,382	23,331	22,634	22,867	-	-
2017	-	-	-	-	23,366	-	24,103	-	21,846	24,204	-	-
2016	-	-	-	22,435	-	-	21,325	21,587	-	-	-	-
2015	-	19,697	-	-	19,503	-	19,609	-	22,310	-	-	-
2014	17,101	-	24,078	-	-	23,134	-	-	-	-	-	-
2013	-	-	-	-	-	-	10,984	-	-	-	-	-

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