

Regulation Effective MW Requirement Annual Review

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Performance Compliance

Operating Committee

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Disclaimer: While materials are current at the time of publishing, applicable requirements may change. PJM Governing Documents control.

Season	Dates	Hours Ending	Requirement MW
Winter	Nov. 1–Feb. 28	HE 5 – 10, HE 17 – 24	750
		HE 1, HE 11	650
		HE 2 – 4, HE 12 – 16	550
Spring	March 1–April 30	HE 19 – 1, HE 6 – 9	750
		HE 2, HE 10	650
		HE 3 – 5, HE 11 – 18	550
Summer	May 1–Sept. 15	HE 5 – 1	750
		HE 2	650
		HE 3 – 4	550
Fall	Sept. 16–Oct. 31	HE 6 – 9, HE 18 – 24	750
		HE 1, HE 10	650
		HE 2 – 5, HE 11 – 17	550

Put in place an annual review to modify the requirement based on system needs to address the energy transition and integration of renewables.

**Maintaining High/
Low Regulation
Requirement Hours**

	Δ Requirement			
	-25 MW	No Change	+25 MW	+50 MW
ACE TOB ($>2 \cdot L_{10}$)	10%	$> 10\%$ and $< 50\%$	50%	60%
BAAL	NA	< 50 Min.	50 Min.	75 Min.
RU	20%	$> 20\%$ and $< 80\%$	80%	90%
Min/Max Deploy.	NA	$< 7.5\%$	7.5%	10%

Step-Down Constraint: Result cannot be $<$ the prior hour by 150 MW or more.

Adjustment levels -25/+25/+50 are based on 10%/20% of NERC L_{10} value (CPS2).

- For sake of smooth transition from phase 1 to phase 2, no changes will be implemented.
- The current effective MW requirement of 550, 650 and 750 will remain and be equally set for RegUp and RegDn.
- Annual review of metrics performed for demonstration and transparency purpose.
- The MW requirement will be reviewed again next year with phase 2 operational data.

- Data Range: 10/1/2025 – 9/15/2026
- Data Source: Operational data retrieved from PJ.
- Calculation Methodology:

ACE Time Out of Bounds (TOB): Time Net ACE spends “out of bounds”

- Bounds set as $2 \times \text{NERC } L_{10}$ value for PJM (CPS2) (NERC BAL-001)
- Percentage of 1-min intervals that the net ACE exceeds bounds of an hour
- The percentages are averaged by hour and by season

BAAL Minutes (BAAL): Reflects PJM’s negative impact on system frequency

- Sum of BAAL minutes by hour and by season

Regulation Utilization (RU): Quantifies how much regulation is being actually used

- Ratio of regulation signal MW over TREG for all 1-min intervals in each hour

Min/Max Deployment: Time that regulation is pegged in either direction

- The percentage of pegged minutes averaged by hour and by season

Season	Dates	HE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Winter	Nov. 1– Feb. 28	Pct	7%	5%	4%	6%	9%	13%	10%	12%	16%	10%	11%	10%	7%	8%	9%	13%	10%	9%	8%	6%	5%	6%	7%	6%
		Adj.	-25	-25	-25	-25	-25	0	0	0	0	-25	0	0	-25	-25	-25	0	0	-25	-25	-25	-25	-25	-25	-25
Spring	March 1– April 30	Pct	8%	8%	5%	6%	10%	13%	11%	16%	15%	12%	14%	12%	9%	11%	11%	15%	16%	18%	12%	10%	8%	8%	10%	9%
		Adj.	-25	-25	-25	-25	0	0	0	0	0	0	0	0	-25	0	0	0	0	0	0	-25	-25	-25	0	-25
Summer	May 1– Sept. 15	Pct	11%	10%	9%	6%	5%	7%	10%	12%	9%	9%	10%	10%	10%	13%	13%	12%	14%	14%	12%	9%	10%	18%	16%	16%
		Adj.	0	0	-25	-25	-25	-25	0	0	-25	-25	0	0	0	0	0	0	0	0	0	-25	0	0	0	0
Fall	Sept. 16– Oct. 31	Pct	8%	7%	6%	4%	7%	9%	8%	9%	11%	6%	10%	6%	6%	7%	6%	10%	15%	10%	7%	10%	6%	5%	6%	7%
		Adj.	-25	-25	-25	-25	-25	-25	-25	-25	0	-25	0	-25	-25	-25	-25	0	0	-25	-25	-25	-25	-25	-25	-25

ACE TOB indicates most non-peak hours could reduce by 25MW. No change needed for most peak hours.

Season	Dates	HE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Winter	Nov. 1– Feb. 28	Count	6	1	7	4	7	31	4	8	46	8	13	9	14	6	19	13	7	24	1	5	2	6	14	3
		Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spring	March 1– April 30	Count	6	0	2	5	11	10	7	20	1	5	2	5	3	12	8	16	25	46	18	16	0	9	13	2
		Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Summer	May 1– Sept. 15	Count	22	16	3	3	11	2	3	13	10	18	20	11	8	9	11	15	37	44	32	4	22	69	54	39
		Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	25	0
Fall	Sept. 16– Oct. 31	Count	0	4	0	0	0	1	4	2	8	0	9	0	9	0	0	1	11	7	0	4	5	0	0	1
		Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Summer appears to have more BAAL minutes than other seasons. HE 22 and 23 could increase by 25 MW.

Season	Dates	HE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Winter	Nov. 1– Feb. 28	Pct	41%	45%	42%	46%	43%	51%	45%	49%	57%	44%	47%	52%	49%	50%	49%	52%	40%	46%	51%	43%	42%	40%	41%	42%
		Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spring	March 1– April 30	Pct	38%	40%	41%	40%	49%	45%	42%	52%	50%	45%	52%	49%	46%	47%	47%	52%	51%	53%	42%	44%	42%	42%	43%	40%
		Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Summer	May 1– Sept. 15	Pct	53%	51%	55%	52%	43%	47%	50%	56%	48%	42%	44%	44%	42%	48%	47%	46%	49%	47%	48%	47%	48%	59%	54%	55%
		Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fall	Sept. 16– Oct. 31	Pct	39%	44%	39%	39%	45%	42%	36%	48%	55%	50%	48%	49%	43%	46%	45%	48%	51%	39%	48%	59%	49%	40%	44%	39%
		Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Utilization stays low throughout the period and indicates no changes needed for any hours

Season	Dates	HE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Winter	Nov. 1– Feb. 28	Pct	2%	2%	2%	3%	2%	5%	3%	6%	8%	2%	4%	6%	4%	5%	6%	7%	1%	3%	3%	1%	1%	1%	1%	1%
		Adj.	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spring	March 1– April 30	Pct	1%	1%	2%	2%	4%	2%	2%	5%	3%	3%	5%	5%	3%	4%	3%	5%	5%	7%	2%	2%	1%	1%	1%	0%
		Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Summer	May 1– Sept. 15	Pct	4%	4%	7%	4%	1%	2%	3%	6%	3%	2%	2%	2%	2%	4%	4%	3%	5%	6%	5%	2%	4%	10%	6%	7%
		Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0
Fall	Sept. 16– Oct. 31	Pct	1%	2%	1%	1%	2%	1%	1%	2%	4%	2%	5%	4%	2%	2%	1%	4%	7%	1%	2%	5%	2%	0%	1%	0%
		Adj.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Winter and summer show more pegging than spring and fall. Winter HE09 and summer HE22 could increase by 25MW

Hourly Differentiated Requirement Based on Metrics

Season	Dates	HE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Winter	Nov. 1– Feb. 28	MW	650	550	550	550	750	750	750	750	750	750	650	550	550	550	550	550	750	750	750	750	750	750	750	750
		Adj.	625	525	525	525	725	750	750	750	775	725	650	550	525	525	525	550	750	725	725	725	725	725	725	725
Spring	March 1– April 30	MW	750	650	550	550	550	750	750	750	750	650	550	550	550	550	550	550	550	550	750	750	750	750	750	750
		Adj.	725	625	525	525	550	750	750	750	750	650	550	550	525	550	550	550	550	550	750	725	725	725	750	725
Summer	May 1– Sept. 15	MW	750	650	550	550	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750
		Adj.	750	650	525	525	725	725	750	750	725	725	750	750	750	750	750	750	750	750	750	725	750	800	775	750
Fall	Sept. 16– Oct. 31	MW	650	550	550	550	550	750	750	750	750	650	550	550	550	550	550	550	550	750	750	750	750	750	750	750
		Adj.	625	525	525	525	525	725	725	725	750	625	550	525	525	525	525	550	550	725	725	725	725	725	725	725

Season	Dates	Hours Ending	RegUp	RegDn
Winter	Nov. 1–Feb. 28	HE 5 – 10, HE 17 – 24	750	750
		HE 1, HE 11	650	650
		HE 2 – 4, HE 12 – 16	550	550
Spring	March 1–April 30	HE 19 – 1, HE 6 – 9	750	750
		HE 2, HE 10	650	650
		HE 3 – 5, HE 11 – 18	550	550
Summer	May 1–Sept. 15	HE 5 – 1	750	750
		HE 2	650	650
		HE 3 – 4	550	550
Fall	Sept. 16–Oct. 31	HE 6 – 9, HE 18 – 24	750	750
		HE 1, HE 10	650	650
		HE 2 – 5, HE 11 – 17	550	550

1

The current MW requirement of 550, 650 and 750 remains effective going into phase 2 and equally set for RegUp and RegDn.

2

Metrics performance show hourly difference.

3

The next annual review shall be performed in 2027 with phase 2 operational metrics.

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Member Hotline

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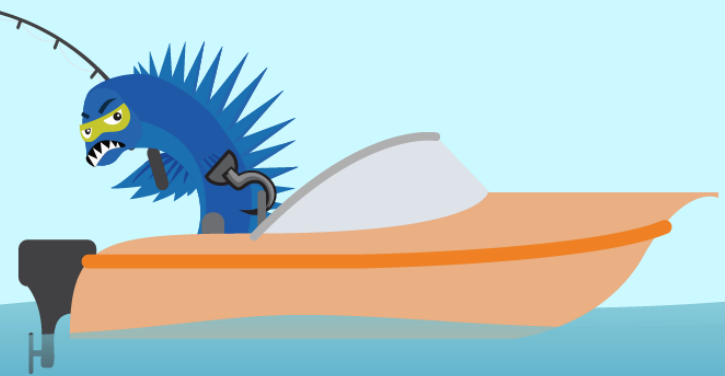
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