



**Reliability & Security
Workshop**

WECC

**March 17–18, 2026
San Diego, California**

WECC's New Reliability Playbook: The Challenges and the Solution

Greg Park

Manager, Risk Analysis & Data Services

**Electric Reliability
& Security for the West**

March 17, 2026



Variability of Demand



Observations of Load Variability Year to Year – June 2023



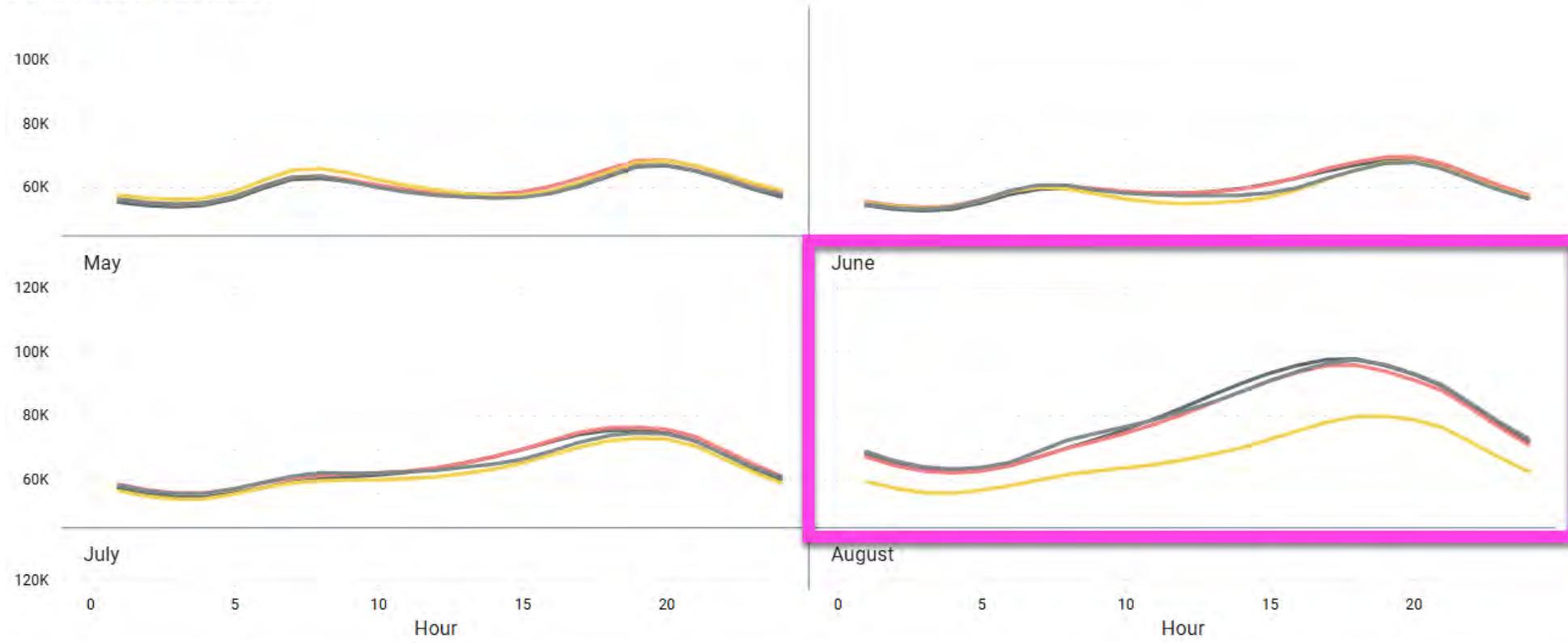


Observations of Load Variability Year to Year – June 2023

Alberta	Basin	British Columbia	California	Mexico	Northwest	Rocky Mountain	Southwest											
AZPS	BANC	CIPB	CIPV	CISC	CISD	EPE	IID	IPFE	IPMV	IPTV	LDWP	NEVP	PACE	PAID	PAUT	PAWY		
2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024				

Load by Hour, Year and Month

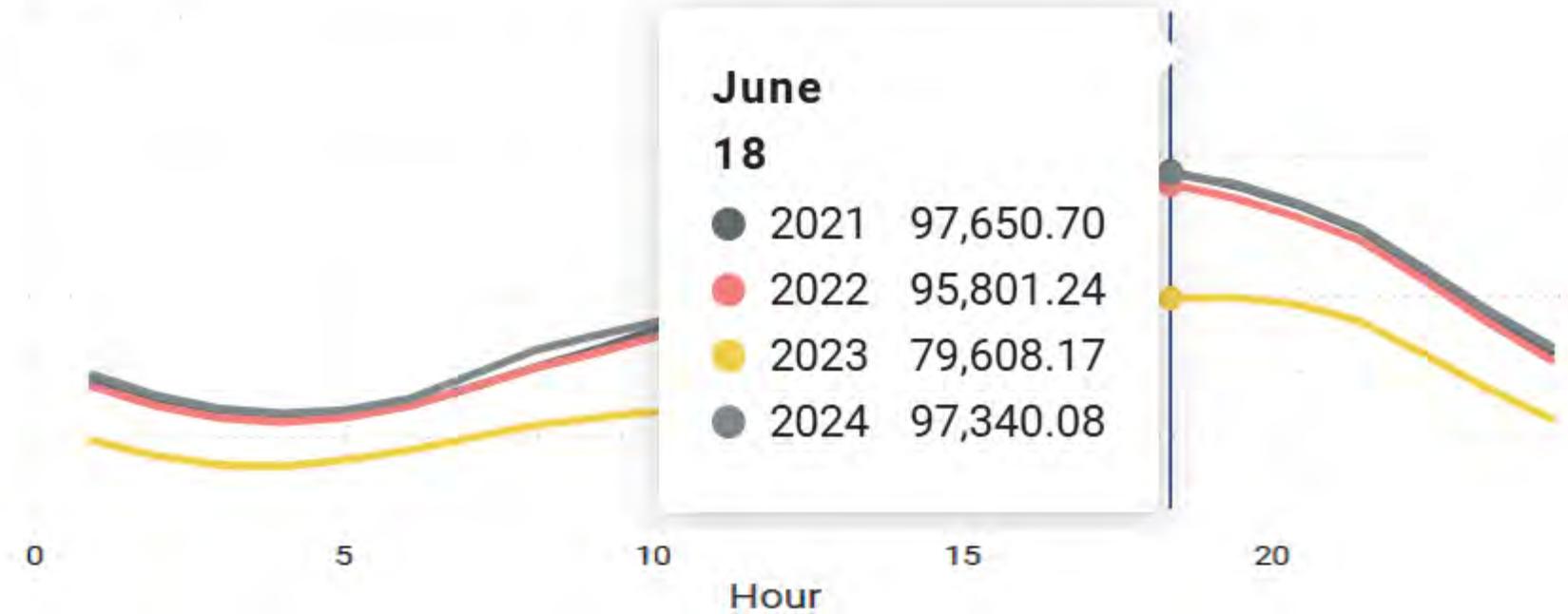
Legend: 2021 (black), 2022 (red), 2023 (yellow), 2024 (grey)





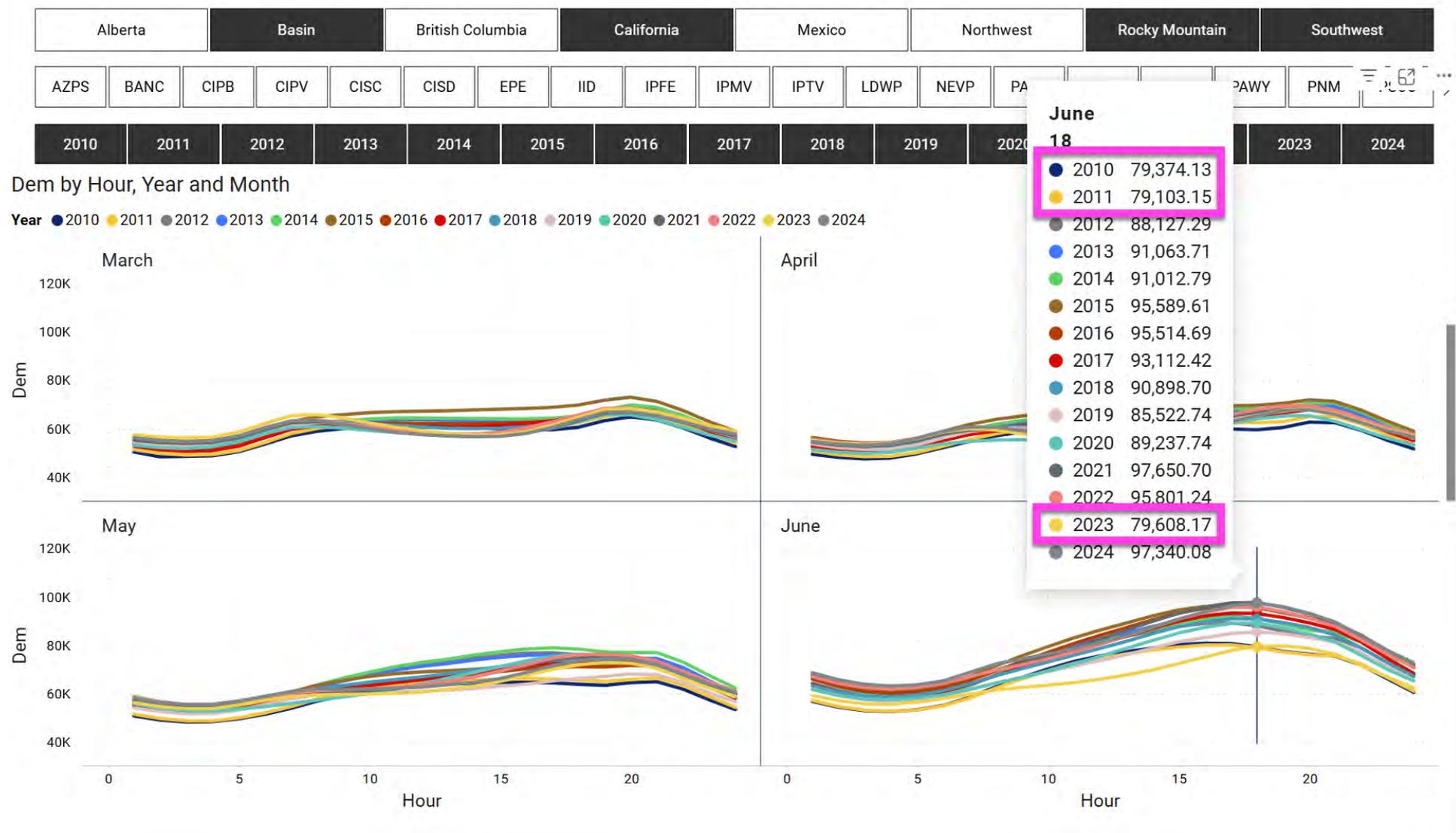
Observations of Load Variability Year to Year – June 2023

June





Observations of Load Variability Year to Year – June 2023





Observations of Load Variability Year to Year – June 2023





Increased Year-over-Year Demand – 2023 to 2024

ID	COMPANY	2023_MAX	2024_MAX	MAX_MONTHLY PEAK	2023_TOTAL	2024_TOTAL ENERGY_MWH	TOTAL ENERGY_MWH_PCT_DIFF
AESO	Alberta Electric System Operator	11632	12675	8.97	172603585	179542862	4.02
AVA	Avista Corporation	2395	2515	5.01	25685872	25521573	-0.64
AVRN	Avangrid Renewables	0	0	invalid	8796560	9661678	9.83
AZPS	Arizona Public Service Company	8288	8313	0.3	65644051	70242087	7
BANC	Balancing Authority of Northern California (Sacramento)	4561	4716	3.4	31419350	33025264	5.11
BCHA	British Columbia Hydro and Power Authority	10730	12334	14.95	117893038	122951064.6	4.29
BNBA	First LightEnergy, LLC		0			657000	
BPAT	Bonneville Power Administration	10687	11496	7.57	153071	157078	1.62
CFE	Comision Federal de Electricidad (CEN)	3393	3548.934412				4.07
CHPD	Portland Utility District No. 1 (Chelona City)	6	583	19.96	6254273	5857171	-6.35
CISO	City of Irvine		47440				0.88
DEAA	Arlington Valley, LLC - AVBA	0	0	invalid		24756	8.95
DOPD	Del Norte Electric Utility		553	25.11	275004	287277	4.99
EPE	El Paso Electric Company	30	2316	30.03	11108595	9500	4.46
GCPD	Public Utility District of Grant County, Washington	972	1048	7.82	11108595	9770841	-12.04
GRID	Gridforce Energy	0	0	invalid	15969640	11778076	-26.25
GWA	NaturEner Power Watch, LLC (BHE)	0	0	invalid	456517	493763	8.16
IID	Imperial Irrigation District	973	1176	20.86	4697994	3380704	-28.04
IPCO	Idaho Power Company	4008	4188	4.49	34773679	37448955	7.69
LDWP	Los Angeles Department of Water and Power	6000	6906	15.1	44619370	46375619	3.94
NEVP	Nevada Power Company	10146	10684	5.3	71642072	78296773	9.29
NWMT	NorthWestern Corporation (NorthWestern Energy)	1992	2079	4.37	22264757	21653198	-2.75
PACE	PacifiCorp_East	9460	9946	5.14	104277023	107630187	3.22
PACW	PacifiCorp_West	4009	4009	0	33576335	34734365	3.63
PGE	Portland General Electric Company	4464	4394	-1.57	41992337	45602722	8.6
PNM	Public Service Company of New Mexico	2818	2758	-2.13	27634256	26550332	-3.92
PSCO	Public Service Company of Colorado	8496	8493	-0.04	87794045	89447705	1.88
PSEI	Puget Sound Energy, Inc.	4755	5164	8.6	45510115	44574753	-2.06
SCL	Seattle City Light	1970	2025	2.79	14601834	14247914	-2.42
SRP	Salt River Project Agricultural Improvement and Power District	8269	8286	0.21	63118177	67553231	7.03
TEPC	Tucson Electric Power	3423	3319	-3.04	28765534	29377670	2.13
TIDC	Turlock Irrigation District	658	707	7.45	5117093	5126072	0.18
TPWR	City of Tacoma, Department of Public Utilities, Light Division	920	984	6.96	7076042	7022415	-0.76
WACM	Western Area Power Administration - Rocky Mountain Region	4790	5134	7.18	61370113	60125367	-2.03
WALC	Western Area Power Administration - Desert Southwest Region	1482	1632	10.12	15667875	16526432	5.48
WAUW	Western Area Power Administration - Upper Great Plains Region	160	162	1.25	1383815	1277809	-7.66
WWA	NaturEner Wind Watch, LLC (BHE)	0	0	invalid	563456	600338	6.25
TOTALS		178993	189583.934	5.92%	1757125344	1799958646	2.44%
				PCT DIFF			PCT DIFF

Non-Coincidental Peak
Increased 5.92% between
2023 and 2024

Total Energy (MWH)
increased 2.44%
between 2023 and 2024



High Levels of IBR Penetration

IBR Ratio

Region: BA: Year: Fuel Type:

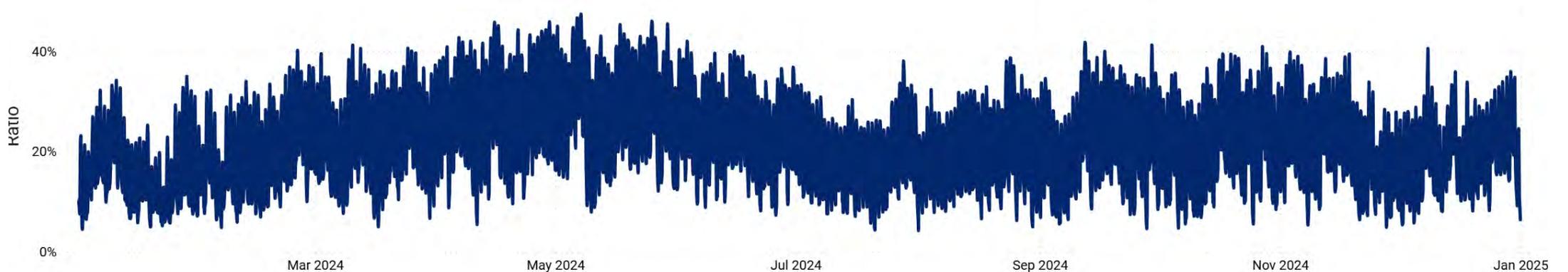
BR/Demand Ratio by Month and Hour

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	9.88%	10.46%	10.65%	10.73%	10.71%	10.56%	10.60%	11.16%	14.26%	19.17%	22.63%	24.26%	24.85%	25.08%	24.91%	23.88%	20.70%	14.70%	11.16%	11.12%	11.06%	10.53%	10.27%	9.95%
Feb	11.84%	12.25%	12.46%	12.65%	12.59%	12.48%	12.68%	14.60%	18.09%	24.16%	27.57%	29.28%	30.03%	30.39%	30.14%	29.25%	26.78%	20.64%	14.88%	13.43%	13.30%	12.65%	12.12%	11.55%
Mar	13.95%	13.98%	13.71%	13.57%	13.30%	13.06%	14.16%	18.05%	23.96%	29.38%	31.89%	33.39%	34.22%	34.65%	34.62%	33.94%	31.90%	27.56%	21.03%	16.74%	16.59%	15.53%	14.53%	13.79%
Apr	16.90%	16.89%	16.70%	16.40%	15.96%	15.85%	20.12%	25.62%	33.26%	36.79%	38.63%	39.49%	40.05%	40.36%	40.49%	39.87%	38.22%	34.79%	27.77%	22.11%	20.23%	19.14%	17.84%	16.92%
May	17.57%	17.49%	17.51%	17.29%	17.33%	19.67%	23.96%	31.94%	37.23%	39.07%	39.98%	40.38%	40.42%	40.25%	39.74%	38.98%	37.67%	34.95%	29.59%	25.60%	20.97%	19.83%	18.89%	17.54%
Jun	14.52%	14.40%	14.42%	14.32%	14.17%	17.20%	21.17%	29.28%	32.87%	34.31%	34.87%	34.97%	34.75%	34.11%	33.31%	32.38%	31.07%	28.94%	25.49%	22.25%	17.99%	16.52%	15.64%	14.66%
Jul	11.34%	11.19%	11.07%	10.71%	10.25%	11.55%	15.21%	22.24%	26.50%	28.03%	28.31%	28.08%	27.63%	26.77%	25.81%	24.96%	23.83%	22.50%	20.24%	17.30%	13.53%	12.58%	11.85%	11.02%
Aug	11.85%	11.55%	11.29%	10.83%	10.31%	10.06%	13.96%	20.48%	27.09%	29.41%	30.19%	30.12%	29.52%	28.75%	27.86%	26.87%	25.55%	23.44%	20.42%	17.17%	14.86%	14.03%	13.25%	12.03%
Sep	12.72%	12.54%	12.34%	12.09%	11.76%	11.63%	14.61%	19.78%	28.96%	32.37%	33.38%	33.27%	32.81%	32.11%	31.17%	29.85%	27.85%	23.99%	19.51%	15.72%	15.29%	14.18%	13.76%	12.72%
Oct	12.43%	12.45%	12.30%	12.19%	12.02%	11.82%	12.83%	17.49%	25.96%	31.02%	32.71%	33.31%	33.26%	33.07%	32.58%	31.22%	27.74%	22.74%	17.37%	16.73%	15.93%	14.27%	13.13%	12.43%
Nov	12.72%	12.77%	12.81%	12.73%	12.53%	12.48%	12.93%	16.52%	21.69%	28.19%	30.61%	31.32%	31.85%	32.10%	31.78%	30.06%	24.99%	19.33%	16.10%	16.27%	15.65%	14.76%	13.71%	12.86%
Dec	12.38%	12.84%	13.03%	13.10%	13.10%	12.95%	13.02%	14.24%	18.12%	23.68%	27.11%	28.50%	29.08%	29.54%	29.61%	28.11%	22.38%	17.12%	14.97%	15.12%	14.62%	13.76%	13.23%	12.69%

BR/Demand Ratio by Datetime

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.



IBR Ratio

Region:
 Year:
 Fuel Type:

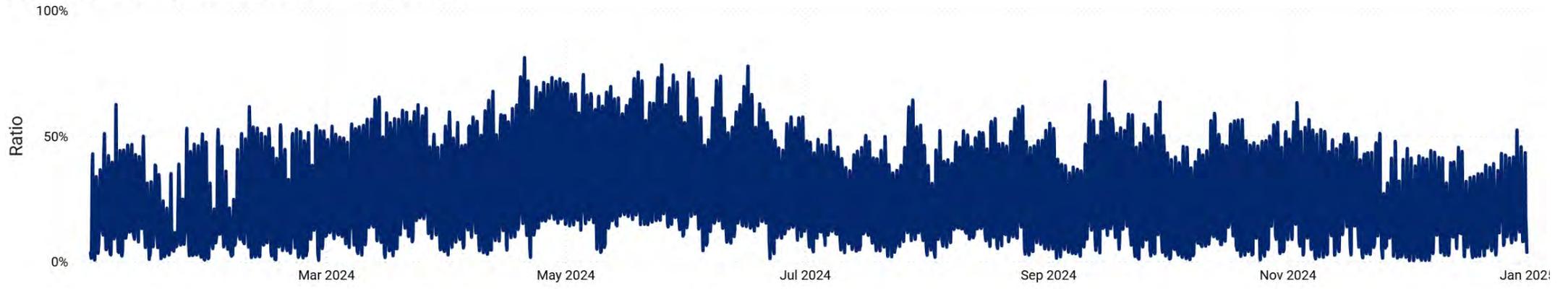
IBR/Demand Ratio by Month and Hour

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	6.01%	6.56%	6.26%	6.35%	6.63%	6.59%	7.53%	10.24%	13.97%	26.51%	34.32%	37.23%	38.29%	38.42%	37.31%	34.52%	26.63%	13.63%	12.55%	11.40%	10.64%	9.78%	8.48%	6.80%
Feb	6.33%	6.50%	6.53%	6.71%	6.59%	6.76%	9.04%	12.18%	19.30%	34.15%	40.80%	43.66%	44.70%	44.64%	43.30%	40.48%	34.55%	20.89%	14.35%	13.16%	11.99%	10.92%	8.76%	6.54%
Mar	10.68%	10.74%	10.27%	10.28%	10.36%	11.37%	14.79%	19.44%	34.17%	45.34%	49.73%	52.45%	53.50%	53.52%	52.09%	49.56%	44.45%	34.00%	21.33%	19.20%	18.44%	16.90%	13.45%	10.80%
Apr	12.20%	11.66%	11.18%	10.76%	10.67%	12.02%	16.46%	30.58%	46.42%	53.07%	56.13%	58.10%	60.04%	60.66%	60.92%	60.16%	55.87%	46.76%	29.46%	24.47%	23.21%	21.20%	16.32%	12.94%
May	16.20%	15.72%	15.85%	15.74%	15.53%	16.80%	25.18%	44.35%	55.02%	59.15%	61.87%	63.64%	64.96%	65.56%	64.76%	62.94%	58.90%	51.03%	36.04%	28.59%	25.81%	24.66%	20.70%	16.39%
Jun	13.64%	12.94%	12.82%	12.54%	12.38%	13.32%	22.35%	41.19%	48.57%	52.25%	54.51%	56.00%	57.17%	57.25%	55.47%	52.57%	48.62%	42.44%	32.95%	26.02%	22.71%	21.15%	17.18%	13.79%
Jul	9.64%	9.22%	8.99%	8.59%	7.95%	7.72%	12.95%	29.32%	38.26%	41.96%	43.54%	44.32%	44.35%	43.08%	41.08%	38.60%	35.38%	31.58%	26.23%	20.43%	17.52%	15.91%	12.64%	9.64%
Aug	9.69%	9.29%	9.33%	9.02%	8.62%	8.98%	11.44%	26.66%	40.37%	44.87%	46.55%	47.34%	47.24%	46.35%	44.42%	41.71%	37.88%	32.23%	25.26%	20.36%	18.52%	16.99%	13.77%	9.99%
Sep	8.91%	7.99%	7.55%	7.17%	6.86%	7.44%	8.97%	20.64%	39.47%	45.39%	48.01%	48.82%	48.82%	47.81%	45.73%	42.25%	37.28%	28.75%	21.44%	18.25%	16.72%	14.12%	11.84%	8.82%
Oct	7.06%	6.67%	6.36%	6.30%	6.17%	6.77%	9.66%	15.42%	34.72%	43.32%	45.78%	46.92%	46.83%	45.90%	44.19%	40.57%	32.85%	24.12%	20.49%	18.26%	16.10%	13.12%	9.77%	7.12%
Nov	7.52%	7.39%	6.87%	6.80%	6.58%	7.18%	9.85%	13.84%	26.48%	40.22%	44.37%	45.70%	46.01%	45.71%	43.93%	39.24%	27.99%	19.60%	19.22%	17.31%	15.85%	14.18%	11.96%	9.20%
Dec	5.79%	6.65%	6.36%	6.07%	6.09%	6.18%	8.10%	11.52%	16.40%	28.58%	34.71%	37.27%	38.59%	39.42%	39.06%	35.33%	22.69%	16.61%	17.13%	15.56%	13.72%	12.20%	10.16%	7.97%

IBR/Demand Ratio by Datetime

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.



IBR Ratio

Region: Southwest | BA: All | Year: 2024 | Fuel Type: All

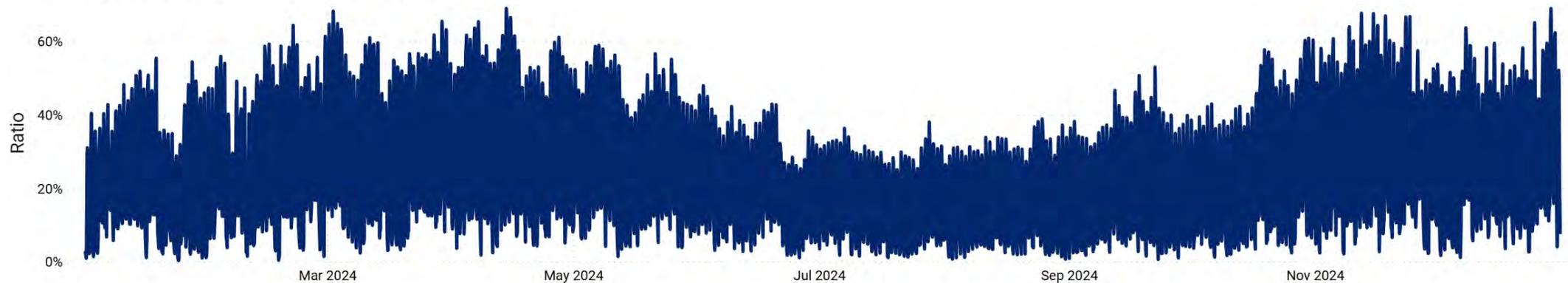
IBR/Demand Ratio by Month and Hour

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	7.60%	7.70%	7.83%	7.68%	7.56%	7.64%	8.04%	9.82%	23.73%	29.83%	34.95%	38.40%	39.75%	40.99%	41.25%	40.28%	38.62%	30.37%	10.99%	12.02%	11.63%	9.17%	8.43%	7.42%
Feb	9.81%	10.24%	10.56%	10.45%	10.20%	9.97%	10.10%	20.27%	29.21%	36.87%	42.69%	46.00%	47.34%	48.96%	49.02%	47.87%	45.48%	38.93%	22.08%	15.74%	15.90%	11.98%	11.12%	9.80%
Mar	12.12%	11.68%	11.48%	11.28%	10.82%	10.25%	13.82%	30.89%	36.62%	45.67%	50.56%	53.20%	54.48%	54.74%	54.83%	53.79%	51.76%	48.15%	39.53%	20.65%	20.16%	15.24%	13.62%	11.82%
Apr	11.04%	10.95%	10.79%	10.68%	10.25%	10.02%	32.09%	36.45%	47.39%	51.77%	54.18%	54.34%	53.81%	53.33%	52.57%	50.53%	48.28%	45.43%	41.01%	25.84%	19.27%	14.52%	13.69%	11.81%
May	9.42%	9.36%	9.36%	9.20%	9.77%	23.03%	32.30%	39.24%	45.99%	47.97%	47.71%	46.60%	44.86%	42.65%	41.29%	39.66%	37.94%	36.41%	34.78%	33.31%	18.47%	14.23%	13.53%	11.08%
Jun	7.29%	6.74%	6.86%	6.89%	7.26%	22.83%	25.89%	31.29%	34.44%	34.90%	34.26%	33.09%	31.52%	29.73%	28.42%	27.22%	26.40%	25.59%	24.85%	24.31%	13.71%	9.56%	9.46%	8.01%
Jul	4.95%	4.57%	4.59%	4.46%	4.42%	12.25%	21.37%	25.56%	28.93%	30.12%	29.59%	28.52%	27.12%	25.62%	24.42%	23.53%	22.94%	22.58%	21.90%	21.98%	11.35%	8.10%	7.42%	5.88%
Aug	4.86%	4.50%	4.19%	3.77%	3.63%	3.64%	19.54%	23.33%	28.75%	31.03%	31.28%	30.42%	29.04%	27.70%	26.44%	25.40%	24.43%	23.72%	23.02%	19.31%	11.65%	8.51%	8.36%	5.94%
Sep	5.62%	5.28%	5.07%	4.94%	4.76%	4.70%	20.50%	26.08%	34.72%	38.31%	38.28%	36.44%	34.85%	32.86%	31.25%	29.94%	28.98%	28.18%	25.22%	14.43%	12.79%	9.17%	8.39%	6.36%
Oct	6.92%	7.66%	7.85%	7.78%	7.68%	7.69%	11.00%	29.62%	36.78%	42.22%	43.54%	42.76%	41.10%	39.70%	37.90%	36.37%	34.77%	32.54%	16.55%	15.89%	14.04%	9.80%	7.97%	7.28%
Nov	11.47%	10.89%	11.29%	11.41%	11.11%	10.80%	10.77%	28.83%	35.82%	45.81%	50.85%	52.87%	54.92%	56.05%	56.51%	54.83%	50.95%	38.78%	18.77%	22.04%	19.82%	15.86%	12.50%	11.05%
Dec	10.77%	10.16%	10.29%	10.12%	9.92%	9.65%	9.79%	15.07%	31.45%	40.18%	47.83%	50.63%	51.00%	51.48%	52.02%	51.62%	47.50%	32.59%	17.37%	19.89%	19.35%	15.70%	14.02%	12.44%

IBR/Demand Ratio by Datetime

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.



IBR Ratio

Region: Southwest | BA: Multiple selections | Year: 2024 | Fuel Type: All

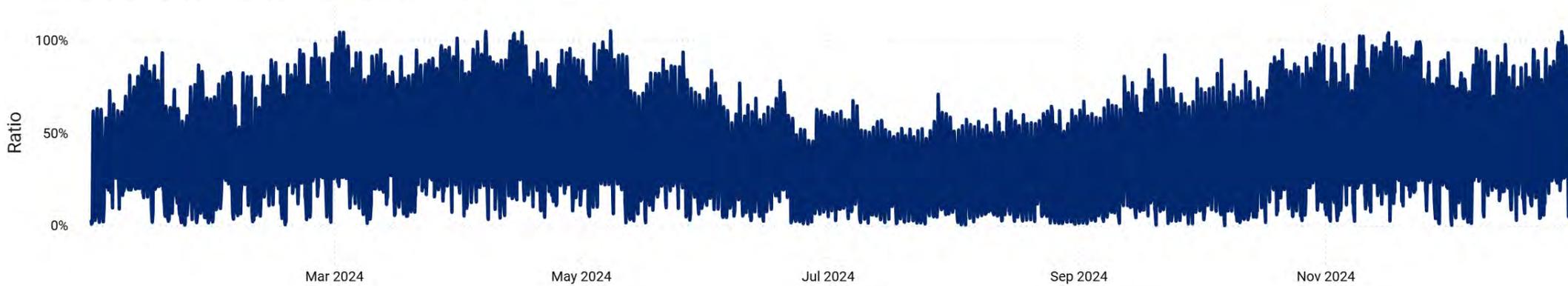
IBR/Demand Ratio by Month and Hour

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Jan	13.34%	13.84%	14.22%	14.14%	14.09%	14.41%	14.17%	15.54%	46.88%	56.49%	62.37%	66.79%	67.95%	69.37%	69.56%	67.96%	65.80%	52.49%	16.55%	15.83%	15.54%	14.74%	14.07%	12.74%	
Feb	16.50%	17.34%	18.06%	17.94%	17.75%	17.71%	17.75%	36.61%	57.30%	67.29%	73.09%	75.80%	76.05%	78.15%	77.59%	76.41%	73.01%	64.25%	34.11%	17.67%	17.80%	17.94%	17.22%	16.21%	
Mar	19.99%	19.66%	19.91%	19.89%	19.07%	18.12%	25.87%	64.30%	72.73%	80.28%	84.20%	86.16%	86.85%	86.42%	86.03%	84.94%	82.20%	77.97%	67.39%	23.05%	22.71%	22.38%	21.38%	19.13%	
Apr	18.03%	18.19%	17.96%	18.19%	17.94%	17.94%	17.94%	68.95%	76.11%	83.83%	85.76%	87.43%	86.81%	85.57%	84.52%	83.61%	80.97%	78.83%	75.13%	68.73%	33.46%	20.16%	20.62%	21.41%	18.34%
May	14.58%	14.71%	14.78%	14.91%	16.54%	48.70%	70.86%	79.08%	80.15%	80.23%	78.10%	74.87%	72.20%	69.51%	67.35%	65.36%	62.40%	59.74%	57.17%	53.18%	20.68%	20.24%	20.10%	16.08%	
Jun	9.99%	9.09%	9.64%	9.88%	11.25%	49.19%	56.83%	60.84%	60.40%	58.68%	56.48%	54.19%	51.84%	48.72%	46.33%	44.22%	42.72%	41.47%	40.80%	38.91%	16.52%	12.32%	12.60%	9.91%	
Jul	7.14%	6.26%	6.52%	6.41%	6.66%	26.27%	48.92%	53.15%	54.13%	53.29%	50.90%	48.12%	45.48%	42.58%	40.28%	38.51%	37.41%	36.55%	35.74%	34.77%	12.11%	10.17%	9.91%	7.89%	
Aug	6.96%	6.16%	5.69%	5.15%	5.08%	5.36%	44.20%	51.18%	55.41%	54.38%	53.03%	51.19%	48.56%	46.19%	43.92%	41.62%	39.58%	38.14%	37.07%	28.30%	12.47%	10.62%	12.17%	8.44%	
Sep	8.33%	7.81%	7.26%	7.02%	6.64%	6.78%	45.41%	57.89%	68.00%	66.69%	64.37%	61.56%	59.09%	56.50%	53.77%	50.69%	48.66%	47.31%	42.85%	15.56%	13.76%	12.30%	12.85%	9.91%	
Oct	11.20%	13.00%	13.45%	13.43%	13.07%	13.19%	21.20%	65.29%	75.97%	77.74%	75.40%	73.17%	70.97%	69.60%	66.71%	63.77%	59.97%	57.51%	21.88%	18.80%	17.27%	14.46%	11.93%	11.08%	
Nov	17.77%	17.15%	18.06%	18.97%	18.93%	18.41%	17.36%	57.31%	72.36%	83.23%	83.94%	83.85%	85.93%	87.30%	87.26%	86.52%	83.31%	68.13%	25.91%	28.25%	25.28%	23.32%	18.54%	16.56%	
Dec	17.35%	16.83%	17.34%	17.32%	17.02%	16.51%	16.28%	26.02%	64.50%	76.31%	82.05%	82.00%	81.94%	83.28%	83.89%	83.84%	79.48%	57.81%	26.70%	27.14%	26.73%	25.00%	23.28%	20.51%	

IBR/Demand Ratio by Datetime

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.



Year-to-Year Comparison

Region: All | BA: All | Year: 2024 | Fuel Type: All

IBR/Demand Ratio by Month and Hour

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	9.88%	10.46%	10.65%	10.73%	10.71%	10.56%	10.60%	11.16%	14.26%	19.17%	22.63%	24.26%	24.85%	25.08%	24.91%	23.88%	20.70%	14.70%	11.16%	11.12%	11.06%	10.53%	10.27%	9.95%
Feb	11.84%	12.25%	12.46%	12.65%	12.59%	12.48%	12.68%	14.60%	18.09%	24.16%	27.57%	29.28%	30.03%	30.39%	30.14%	29.25%	26.78%	20.64%	14.88%	13.43%	13.30%	12.65%	12.12%	11.55%
Mar	13.95%	13.98%	13.71%	13.57%	13.30%	13.06%	14.16%	18.05%	23.96%	29.38%	31.89%	33.39%	34.22%	34.65%	34.62%	33.94%	31.90%	27.56%	21.03%	16.74%	16.59%	15.53%	14.53%	13.79%
Apr	16.90%	16.89%	16.70%	16.40%	15.96%	15.85%	20.12%	25.62%	33.26%	36.79%	38.63%	39.49%	40.05%	40.36%	40.49%	39.87%	38.22%	34.79%	27.77%	22.11%	20.23%	19.14%	17.84%	16.92%
May	17.57%	17.49%	17.51%	17.29%	17.33%	19.67%	23.96%	31.94%	37.23%	39.07%	39.98%	40.38%	40.42%	40.25%	39.74%	38.98%	37.67%	34.95%	29.59%	25.60%	20.97%	19.83%	18.89%	17.54%
Jun	14.52%	14.40%	14.42%	14.32%	14.17%	17.20%	21.17%	29.28%	32.87%	34.31%	34.87%	34.97%	34.75%	34.11%	33.31%	32.38%	31.07%	28.94%	25.49%	22.25%	17.99%	16.52%	15.64%	14.66%
Jul	11.34%	11.19%	11.07%	10.71%	10.25%	11.55%	15.21%	22.24%	26.50%	28.03%	28.31%	28.08%	27.63%	26.77%	25.81%	24.96%	23.83%	22.50%	20.24%	17.30%	13.53%	12.58%	11.85%	11.02%
Aug	11.85%	11.55%	11.29%	10.83%	10.31%	10.06%	13.96%	20.48%	27.09%	29.41%	30.19%	30.12%	29.52%	28.75%	27.86%	26.87%	25.55%	23.44%	20.42%	17.17%	14.86%	14.03%	13.25%	12.03%
Sep	12.72%	12.54%	12.34%	12.09%	11.76%	11.63%	14.61%	19.78%	28.96%	32.37%	33.38%	33.27%	32.81%	32.11%	31.17%	29.85%	27.85%	23.99%	19.51%	15.72%	15.29%	14.18%	13.76%	12.72%
Oct	12.43%	12.45%	12.30%	12.19%	12.02%	11.82%	12.83%	17.49%	25.96%	31.02%	32.71%	33.31%	33.26%	33.07%	32.58%	31.22%	27.74%	22.74%	17.37%	16.73%	15.93%	14.27%	13.13%	12.43%
Nov	12.72%	12.77%	12.81%	12.73%	12.53%	12.48%	12.93%	16.52%	21.69%	28.19%	30.61%	31.32%	31.85%	32.10%	31.78%	30.06%	24.99%	19.33%	16.10%	16.27%	15.65%	14.76%	13.71%	12.86%
Dec	12.38%	12.84%	13.03%	13.10%	13.10%	12.95%	13.02%	14.24%	18.12%	23.68%	27.11%	28.50%	29.08%	29.54%	29.61%	28.11%	22.38%	17.12%	14.97%	15.12%	14.62%	13.76%	13.23%	12.69%

Ratio Difference Between Selected Year(s)

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	-0.56%	-0.42%	-0.28%	-0.22%	-0.09%	-0.01%	0.21%	0.84%	2.94%	3.28%	3.37%	3.58%	3.56%	3.58%	3.69%	3.78%	3.74%	2.81%	0.71%	0.86%	0.85%	0.49%	0.36%	-0.11%
Feb	-0.13%	-0.26%	-0.17%	0.04%	0.10%	0.17%	0.54%	2.34%	2.77%	2.70%	2.96%	3.24%	3.33%	3.37%	3.13%	2.98%	3.04%	3.51%	2.38%	1.75%	1.76%	1.07%	0.60%	-0.08%
Mar	2.75%	2.67%	2.57%	2.58%	2.47%	2.37%	3.35%	6.33%	7.58%	8.36%	7.82%	7.63%	7.54%	7.60%	7.56%	7.47%	7.19%	6.77%	5.92%	3.80%	4.37%	3.62%	3.10%	2.50%
Apr	2.96%	2.91%	2.96%	2.98%	2.96%	3.16%	7.12%	7.37%	7.79%	7.54%	7.47%	7.57%	7.81%	7.64%	7.68%	7.59%	7.15%	7.23%	7.03%	6.33%	5.63%	4.60%	3.83%	3.06%
May	4.93%	4.93%	5.28%	5.48%	5.95%	8.60%	10.55%	11.43%	11.23%	10.64%	10.39%	10.38%	10.28%	10.18%	10.15%	10.04%	10.06%	9.80%	9.45%	10.54%	7.67%	6.95%	6.68%	5.41%
Jun	1.70%	1.38%	1.41%	1.52%	1.89%	5.36%	6.16%	6.87%	5.97%	5.29%	4.93%	4.75%	4.56%	4.24%	3.78%	3.56%	3.65%	3.44%	4.16%	5.82%	4.53%	3.85%	3.27%	2.31%
Jul	1.11%	0.79%	0.52%	0.10%	-0.05%	1.72%	3.20%	3.51%	3.19%	3.02%	3.09%	3.18%	3.49%	3.45%	3.21%	3.17%	2.93%	3.01%	3.15%	4.10%	2.55%	2.19%	1.97%	1.11%
Aug	2.33%	1.76%	1.25%	0.81%	0.65%	0.89%	4.29%	5.22%	6.02%	5.66%	5.48%	5.50%	5.50%	5.64%	5.79%	5.74%	5.74%	5.36%	5.71%	6.19%	4.74%	4.38%	4.02%	2.90%
Sep	1.88%	1.51%	1.34%	1.24%	1.24%	1.52%	4.46%	5.69%	6.76%	5.97%	5.39%	4.87%	4.57%	4.37%	4.24%	4.09%	4.08%	4.49%	5.32%	4.13%	3.87%	2.78%	2.75%	1.84%
Oct	2.56%	2.35%	2.17%	2.09%	2.07%	2.05%	2.82%	5.66%	6.09%	5.58%	5.07%	5.03%	4.84%	4.85%	4.79%	4.57%	4.81%	6.68%	5.80%	6.13%	5.45%	4.39%	3.82%	3.06%
Nov	1.64%	1.46%	1.49%	1.24%	1.08%	1.12%	1.32%	4.35%	4.82%	4.64%	4.29%	3.95%	4.29%	4.42%	4.33%	4.41%	5.71%	6.65%	4.55%	5.11%	4.53%	3.62%	3.03%	2.12%
Dec	1.20%	1.23%	1.23%	1.19%	1.18%	1.13%	1.21%	2.32%	4.32%	3.73%	4.08%	4.59%	4.69%	5.00%	5.23%	5.27%	5.23%	5.16%	3.29%	3.58%	3.08%	2.45%	2.11%	1.66%

Select one year will show the difference between the selected year and the previous year, or select two years for the differences

IBR Ratio – Public Service of Colorado

Region: All | BA: PSCO | Year: 2024 | Fuel Type: All

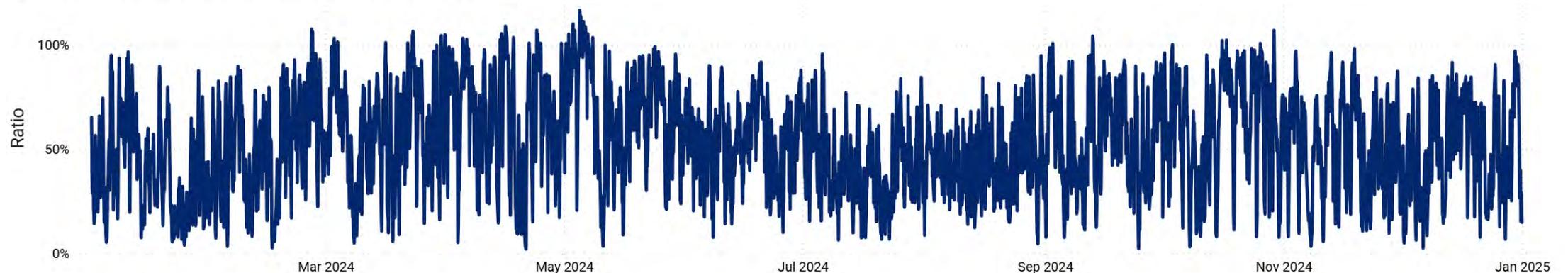
IBR/Demand Ratio by Month and Hour

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	38.72%	41.90%	43.27%	43.50%	43.22%	42.03%	40.68%	38.18%	37.38%	43.75%	46.82%	47.88%	49.28%	49.17%	48.85%	47.58%	42.11%	31.75%	28.62%	30.21%	31.87%	32.58%	35.20%	37.65%
Feb	47.03%	48.73%	50.63%	50.85%	50.55%	51.09%	48.82%	45.94%	48.01%	54.78%	57.33%	60.09%	62.61%	64.60%	62.86%	61.33%	59.48%	50.71%	41.43%	40.70%	42.46%	44.90%	45.63%	46.24%
Mar	62.16%	62.46%	59.75%	57.11%	53.98%	51.16%	48.22%	48.81%	56.17%	61.46%	63.19%	63.76%	63.61%	64.64%	65.47%	66.23%	63.82%	59.67%	52.47%	52.34%	55.88%	57.81%	59.49%	61.95%
Apr	62.32%	65.98%	65.04%	61.60%	58.63%	56.99%	55.71%	61.22%	67.06%	70.88%	73.26%	73.19%	71.82%	72.30%	71.18%	70.01%	67.20%	63.52%	57.53%	53.47%	55.23%	58.92%	59.74%	61.38%
May	69.32%	69.98%	70.14%	69.03%	68.86%	66.67%	66.85%	70.50%	73.04%	72.41%	71.78%	72.09%	72.00%	71.26%	69.71%	69.04%	68.36%	65.63%	63.36%	59.08%	58.80%	60.79%	65.83%	67.84%
Jun	55.60%	55.82%	55.80%	55.91%	54.75%	54.43%	56.98%	59.14%	60.43%	60.45%	57.74%	55.91%	54.02%	51.47%	49.64%	49.03%	48.34%	46.88%	46.36%	45.75%	45.37%	47.34%	51.97%	54.79%
Jul	47.26%	47.63%	47.85%	46.49%	44.80%	42.41%	43.22%	46.72%	48.89%	49.93%	49.43%	46.87%	44.17%	40.72%	36.88%	34.74%	33.68%	34.71%	34.40%	30.19%	32.41%	37.78%	42.33%	45.40%
Aug	53.05%	51.32%	49.05%	46.76%	44.20%	40.61%	40.33%	44.32%	46.80%	48.29%	49.04%	47.27%	44.40%	41.96%	39.39%	37.62%	38.18%	38.70%	38.58%	39.65%	42.62%	44.77%	46.42%	51.73%
Sep	63.76%	64.09%	62.81%	59.98%	58.29%	56.61%	52.94%	54.72%	58.29%	58.94%	59.76%	60.07%	58.92%	57.13%	53.92%	51.36%	49.49%	46.25%	42.94%	45.59%	51.32%	56.29%	61.00%	63.82%
Oct	59.53%	57.63%	56.54%	55.47%	53.91%	52.88%	52.39%	54.02%	62.40%	65.18%	67.90%	69.23%	68.74%	68.72%	68.69%	66.84%	64.28%	57.32%	55.79%	59.23%	60.52%	60.31%	60.28%	60.69%
Nov	51.00%	51.12%	50.69%	49.18%	48.07%	46.58%	44.58%	42.15%	48.19%	55.14%	58.16%	58.36%	59.47%	60.68%	60.65%	59.88%	53.98%	45.41%	42.43%	44.34%	45.73%	47.49%	47.47%	49.15%
Dec	51.95%	54.72%	56.17%	56.24%	54.69%	51.90%	48.09%	44.43%	43.71%	51.01%	51.99%	53.92%	54.87%	55.49%	57.13%	55.94%	48.41%	40.12%	39.78%	42.04%	42.88%	43.60%	45.81%	47.77%

IBR/Demand Ratio by Datetime

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.



IBR Ratio Year-over-Year Change – Public Service of Colorado

Region:
 BA:
 Year:
 Fuel Type:

BR/Demand Ratio by Month and Hour

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	38.72%	41.90%	43.27%	43.50%	43.22%	42.03%	40.68%	38.18%	37.38%	43.75%	46.82%	47.88%	49.28%	49.17%	48.85%	47.58%	42.11%	31.75%	28.62%	30.21%	31.87%	32.58%	35.20%	37.65%
Feb	47.03%	48.73%	50.63%	50.85%	50.55%	51.09%	48.82%	45.94%	48.01%	54.78%	57.33%	60.09%	62.61%	64.60%	62.86%	61.33%	59.48%	50.71%	41.43%	40.70%	42.46%	44.90%	45.63%	46.24%
Mar	62.16%	62.46%	59.75%	57.11%	53.98%	51.16%	48.22%	48.81%	56.17%	61.46%	63.19%	63.76%	63.61%	64.64%	65.47%	66.23%	63.82%	59.67%	52.47%	52.34%	55.88%	57.81%	59.49%	61.95%
Apr	62.32%	65.98%	65.04%	61.60%	58.63%	56.99%	55.71%	61.22%	67.06%	70.88%	73.26%	73.19%	71.82%	72.30%	71.18%	70.01%	67.20%	63.52%	57.53%	53.47%	55.23%	58.92%	59.74%	61.38%
May	69.32%	69.98%	70.14%	69.03%	68.86%	66.67%	66.85%	70.50%	73.04%	72.41%	71.78%	72.09%	72.00%	71.26%	69.71%	69.04%	68.36%	65.63%	63.36%	59.08%	58.80%	60.79%	65.83%	67.84%
Jun	55.60%	55.82%	55.80%	55.91%	54.75%	54.43%	56.98%	59.14%	60.43%	60.45%	57.74%	55.91%	54.02%	51.47%	49.64%	49.03%	48.34%	46.88%	46.36%	45.75%	45.37%	47.34%	51.97%	54.79%
Jul	47.26%	47.63%	47.85%	46.49%	44.80%	42.41%	43.22%	46.72%	48.89%	49.93%	49.43%	46.87%	44.17%	40.72%	36.88%	34.74%	33.68%	34.71%	34.40%	30.19%	32.41%	37.78%	42.33%	45.40%
Aug	53.05%	51.32%	49.05%	46.76%	44.20%	40.61%	40.33%	44.32%	46.80%	48.29%	49.04%	47.27%	44.40%	41.96%	39.39%	37.62%	38.18%	38.70%	38.58%	39.65%	42.62%	44.77%	46.42%	51.73%
Sep	63.76%	64.09%	62.81%	59.98%	58.29%	56.61%	52.94%	54.72%	58.29%	58.94%	59.76%	60.07%	58.92%	57.13%	53.92%	51.36%	49.49%	46.25%	42.94%	45.59%	51.32%	56.29%	61.00%	63.82%
Oct	59.53%	57.63%	56.54%	55.47%	53.91%	52.88%	52.39%	54.02%	62.40%	65.18%	67.90%	69.23%	68.74%	68.72%	68.69%	66.84%	64.28%	57.32%	55.79%	59.23%	60.52%	60.31%	60.28%	60.69%
Nov	51.00%	51.12%	50.69%	49.18%	48.07%	46.58%	44.58%	42.15%	48.19%	55.14%	58.16%	58.36%	59.47%	60.68%	60.65%	59.88%	53.98%	45.41%	42.43%	44.34%	45.73%	47.49%	47.47%	49.15%
Dec	51.95%	54.72%	56.17%	56.24%	54.69%	51.90%	48.09%	44.43%	43.71%	51.01%	51.99%	53.92%	54.87%	55.49%	57.13%	55.94%	48.41%	40.12%	39.78%	42.04%	42.88%	43.60%	45.81%	47.77%

Ratio Difference Between Selected Year(s)

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Jan	3.37%	6.80%	9.15%	9.52%	9.59%	9.60%	9.53%	8.94%	9.25%	13.90%	15.88%	16.28%	17.67%	17.46%	17.62%	16.56%	11.28%	3.98%	2.63%	3.00%	3.83%	3.02%	3.80%
Feb	2.46%	4.03%	5.95%	6.64%	5.91%	7.04%	5.42%	3.94%	4.44%	7.93%	9.28%	12.09%	15.36%	18.62%	17.59%	16.10%	14.54%	9.77%	5.46%	4.73%	5.45%	4.72%	3.33%
Mar	21.38%	21.67%	20.60%	19.68%	17.31%	14.61%	13.05%	14.30%	19.42%	21.86%	20.97%	19.29%	18.90%	19.17%	19.31%	19.58%	17.64%	14.79%	10.33%	9.09%	12.93%	16.19%	18.26%
Apr	9.29%	13.71%	15.08%	14.21%	13.49%	14.88%	16.94%	21.23%	24.82%	25.61%	26.88%	26.98%	24.73%	23.56%	21.64%	19.99%	17.29%	15.23%	12.36%	9.66%	11.93%	11.86%	9.26%
May	25.64%	26.58%	26.91%	26.83%	28.90%	29.18%	29.40%	31.58%	31.93%	29.99%	27.58%	27.86%	27.62%	24.96%	22.51%	21.25%	20.38%	17.68%	17.33%	16.45%	16.31%	16.34%	21.01%
Jun	17.29%	18.82%	20.37%	21.70%	23.24%	24.93%	24.79%	22.05%	21.65%	19.75%	15.60%	12.98%	10.83%	7.81%	5.09%	2.36%	2.25%	1.16%	3.78%	8.41%	11.86%	13.87%	15.60%
Jul	17.02%	16.47%	16.12%	14.12%	12.64%	10.90%	9.06%	8.63%	9.53%	10.05%	9.85%	8.39%	6.43%	4.96%	2.78%	2.27%	3.17%	5.93%	8.32%	6.87%	9.53%	11.54%	14.87%
Aug	13.85%	10.67%	5.71%	1.43%	1.13%	1.43%	2.78%	3.65%	3.20%	5.11%	7.07%	6.79%	6.10%	5.54%	4.40%	3.92%	6.78%	9.37%	10.60%	13.05%	12.61%	12.62%	11.55%
Sep	22.53%	23.01%	22.51%	21.63%	21.97%	21.58%	18.88%	17.82%	17.11%	15.97%	16.16%	16.15%	16.54%	16.58%	15.44%	13.94%	13.63%	12.85%	14.49%	14.93%	15.42%	16.98%	20.35%
Oct	15.76%	12.13%	9.80%	8.54%	9.50%	11.04%	13.62%	15.88%	16.70%	16.69%	19.17%	19.39%	17.51%	15.05%	13.31%	10.56%	12.63%	16.16%	19.51%	21.48%	20.25%	19.19%	17.53%
Nov	1.32%	0.03%	0.37%	-0.17%	0.42%	0.48%	-0.02%	-1.66%	0.71%	3.38%	5.52%	6.95%	9.58%	10.64%	10.75%	10.88%	12.66%	13.58%	10.00%	9.22%	7.65%	7.26%	5.58%
Dec	4.93%	5.11%	4.90%	3.60%	0.74%	-2.26%	-5.07%	-7.11%	-8.17%	-6.46%	-4.80%	-1.84%	-2.28%	-1.89%	0.89%	3.28%	2.46%	1.99%	2.70%	3.63%	4.65%	5.06%	4.77%

Select one year will show the difference between the selected year and the previous year, or select two years for the differences

IBR Ratio – Public Service New Mexico

Region: BA: Year: Fuel Type:

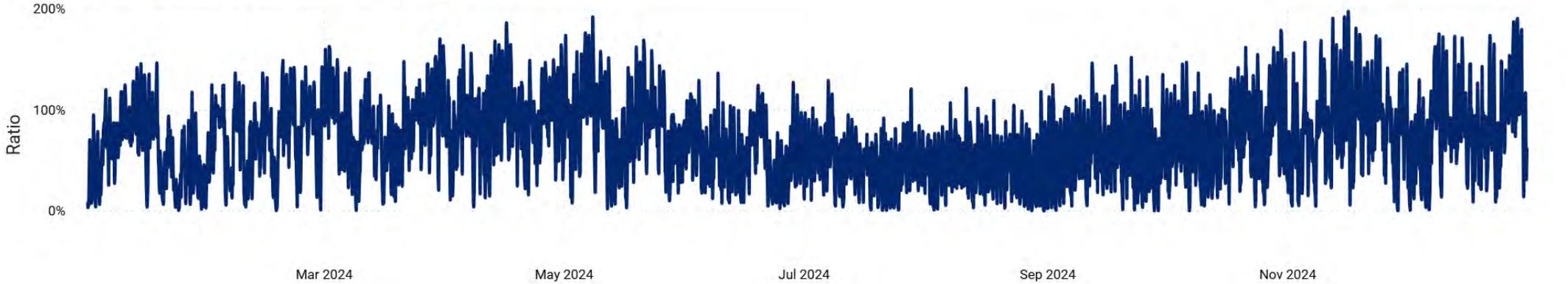
IBR/Demand Ratio by Month and Hour

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Jan	46.76%	48.42%	49.79%	49.26%	48.79%	49.49%	47.89%	45.60%	45.64%	58.74%	69.60%	77.77%	83.14%	85.77%	85.46%	84.32%	78.06%	58.70%	49.83%	48.55%	48.34%	46.07%	44.76%
Feb	61.64%	64.48%	67.01%	65.93%	64.35%	63.57%	62.36%	58.37%	62.99%	80.75%	91.17%	96.20%	98.80%	101.37%	101.67%	98.52%	93.75%	80.74%	61.17%	60.98%	62.40%	63.63%	63.04%
Mar	72.71%	72.61%	73.04%	71.94%	68.11%	61.89%	58.45%	59.27%	77.94%	95.28%	103.43%	107.43%	109.83%	110.07%	110.16%	106.89%	102.28%	93.26%	73.28%	70.87%	73.52%	75.28%	74.91%
Apr	71.62%	72.54%	71.33%	71.43%	68.72%	63.61%	59.01%	75.80%	101.46%	112.28%	120.39%	122.72%	123.29%	123.68%	124.93%	120.78%	115.63%	107.03%	84.02%	69.03%	68.52%	72.68%	78.34%
May	61.97%	63.56%	62.49%	62.10%	62.75%	60.18%	62.83%	89.66%	106.66%	113.83%	117.14%	117.16%	116.34%	113.26%	110.82%	108.01%	102.08%	94.62%	82.58%	66.78%	62.36%	66.35%	69.68%
Jun	44.13%	43.07%	45.64%	43.94%	42.01%	39.92%	44.83%	64.85%	76.70%	79.42%	80.40%	80.69%	80.68%	75.47%	70.80%	66.71%	64.09%	60.28%	56.61%	47.70%	41.03%	40.87%	42.30%
Jul	32.27%	31.38%	32.84%	32.11%	31.51%	29.53%	31.92%	54.87%	72.72%	78.69%	76.95%	72.59%	67.96%	62.57%	57.51%	54.91%	54.71%	52.37%	48.74%	44.85%	40.13%	41.13%	38.48%
Aug	30.49%	28.32%	25.51%	22.27%	20.70%	18.56%	18.01%	37.44%	64.17%	75.22%	77.67%	76.19%	72.29%	68.56%	65.51%	61.20%	56.05%	52.18%	41.05%	35.28%	36.31%	38.96%	37.30%
Sep	36.81%	35.18%	31.75%	29.85%	27.57%	26.41%	24.99%	40.24%	82.65%	100.10%	100.83%	97.96%	94.60%	91.04%	87.82%	84.12%	79.63%	71.54%	47.78%	42.13%	44.33%	47.86%	44.56%
Oct	47.79%	55.91%	56.92%	55.89%	53.46%	52.03%	49.43%	52.06%	87.77%	111.43%	116.57%	114.94%	110.77%	108.57%	104.37%	100.76%	92.07%	66.06%	50.65%	54.53%	56.30%	53.98%	48.53%
Nov	57.54%	62.17%	64.92%	67.66%	67.17%	64.73%	60.52%	57.31%	70.14%	100.86%	111.51%	115.79%	120.56%	125.51%	128.01%	125.32%	106.76%	71.50%	68.05%	69.88%	71.97%	65.85%	60.42%
Dec	61.51%	61.85%	63.15%	62.60%	61.30%	59.10%	57.58%	57.60%	60.67%	93.72%	114.80%	121.34%	122.17%	126.93%	131.00%	130.63%	108.05%	69.23%	69.76%	71.94%	72.27%	72.22%	70.07%

IBR/Demand Ratio by Datetime

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.



IBR Ratio Year-over-Year Change – Public Service New Mexico

Region: BA: Year: Fuel Type:

IBR/Demand Ratio by Month and Hour

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Jan	46.76%	48.42%	49.79%	49.26%	48.79%	49.49%	47.89%	45.60%	45.64%	58.74%	69.60%	77.77%	83.14%	85.77%	85.46%	84.32%	78.06%	58.70%	49.83%	48.55%	48.34%	46.07%	44.76%	4
Feb	61.64%	64.48%	67.01%	65.93%	64.35%	63.57%	62.36%	58.37%	62.99%	80.75%	91.17%	96.20%	98.80%	101.37%	101.67%	98.52%	93.75%	80.74%	61.17%	60.98%	62.40%	63.63%	63.04%	6
Mar	72.71%	72.61%	73.04%	71.94%	68.11%	61.89%	58.45%	59.27%	77.94%	95.28%	103.43%	107.43%	109.83%	110.07%	110.16%	106.89%	102.28%	93.26%	73.28%	70.87%	73.52%	75.28%	74.91%	7
Apr	71.62%	72.54%	71.33%	71.43%	68.72%	63.61%	59.01%	75.80%	101.46%	112.28%	120.39%	122.72%	123.29%	123.68%	124.93%	120.78%	115.63%	107.03%	84.02%	69.03%	68.52%	72.68%	78.34%	7
May	61.97%	63.56%	62.49%	62.10%	62.75%	60.18%	62.83%	89.66%	106.66%	113.83%	117.14%	117.16%	116.34%	113.26%	110.82%	108.01%	102.08%	94.62%	82.58%	66.78%	62.36%	66.35%	69.68%	6
Jun	44.13%	43.07%	45.64%	43.94%	42.01%	39.92%	44.83%	64.85%	76.70%	79.42%	80.40%	80.69%	80.68%	75.47%	70.80%	66.71%	64.09%	60.28%	56.61%	47.70%	41.03%	40.87%	42.30%	4
Jul	32.27%	31.38%	32.84%	32.11%	31.51%	29.53%	31.92%	54.87%	72.72%	78.69%	76.95%	72.59%	67.96%	62.57%	57.51%	54.91%	54.71%	52.37%	48.74%	44.85%	40.13%	41.13%	38.48%	3
Aug	30.49%	28.32%	25.51%	22.27%	20.70%	18.56%	18.01%	37.44%	64.17%	75.22%	77.67%	76.19%	72.29%	68.56%	65.51%	61.20%	56.05%	52.18%	41.05%	35.28%	36.31%	38.96%	37.30%	3
Sep	36.81%	35.18%	31.75%	29.85%	27.57%	26.41%	24.99%	40.24%	82.65%	100.10%	100.83%	97.96%	94.60%	91.04%	87.82%	84.12%	79.63%	71.54%	47.78%	42.13%	44.33%	47.86%	44.56%	4
Oct	47.79%	55.91%	56.92%	55.89%	53.46%	52.03%	49.43%	52.06%	87.77%	111.43%	116.57%	114.94%	110.77%	108.57%	104.37%	100.76%	92.07%	66.06%	50.65%	54.53%	56.30%	53.98%	48.53%	4
Nov	57.54%	62.17%	64.92%	67.66%	67.17%	64.73%	60.52%	57.31%	70.14%	100.86%	111.51%	115.79%	120.56%	125.51%	128.01%	125.32%	106.76%	71.50%	68.05%	69.88%	71.97%	65.85%	60.42%	5
Dec	61.51%	61.85%	63.15%	62.60%	61.30%	59.10%	57.58%	57.60%	60.67%	93.72%	114.80%	121.34%	122.17%	126.93%	131.00%	130.63%	108.05%	69.23%	69.76%	71.94%	72.27%	72.22%	70.07%	6

Ratio Difference Between Selected Year(s)

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
Jan	-15.41%	-18.20%	-16.69%	-16.17%	-14.97%	-13.46%	-11.66%	-11.41%	-12.40%	-7.75%	-4.75%	-1.45%	0.03%	-1.29%	-3.81%	-4.10%	-5.15%	-10.96%	-8.64%	-8.41%	-9.97%	-13.02%	-1
Feb	11.44%	12.16%	14.07%	11.87%	10.01%	9.69%	9.12%	7.19%	8.44%	17.42%	19.26%	20.13%	19.21%	19.29%	18.56%	15.14%	15.80%	15.95%	10.83%	14.31%	16.92%	17.40%	1
Mar	8.92%	9.57%	9.90%	8.37%	5.47%	0.16%	-0.91%	2.89%	14.57%	20.14%	14.74%	11.15%	9.92%	10.78%	11.83%	13.02%	10.64%	6.08%	-0.20%	8.74%	13.94%	15.61%	1
Apr	5.78%	8.04%	9.72%	10.64%	8.86%	5.42%	3.77%	12.15%	21.45%	21.24%	23.93%	27.26%	26.43%	24.79%	23.47%	23.22%	22.01%	19.31%	8.10%	5.51%	6.02%	8.63%	1
May	9.21%	12.33%	16.83%	21.66%	24.23%	24.69%	28.78%	45.61%	53.45%	54.05%	53.79%	51.79%	50.04%	46.01%	42.91%	40.70%	34.12%	28.19%	21.62%	16.54%	16.87%	19.30%	2
Jun	-6.71%	-5.16%	0.54%	0.52%	2.30%	4.39%	9.26%	22.29%	28.71%	25.97%	22.80%	19.02%	16.32%	9.31%	4.57%	2.21%	2.01%	-1.75%	2.60%	5.57%	4.19%	1.93%	1
Jul	-7.89%	-7.49%	-5.98%	-8.86%	-9.31%	-9.17%	-6.26%	12.26%	27.35%	33.82%	36.43%	36.10%	33.90%	30.78%	26.64%	22.46%	18.41%	14.78%	8.87%	5.81%	1.77%	2.16%	1
Aug	-9.98%	-11.50%	-16.03%	-19.74%	-16.68%	-14.20%	-13.94%	-1.87%	14.57%	21.03%	23.55%	23.87%	21.80%	20.43%	18.38%	13.59%	8.72%	5.89%	-3.16%	-6.64%	-4.20%	-4.28%	1
Sep	-2.69%	-5.33%	-9.57%	-12.23%	-12.56%	-10.03%	-8.07%	3.23%	33.41%	43.68%	41.38%	38.03%	34.83%	31.39%	29.52%	26.78%	21.17%	18.46%	3.18%	1.64%	-0.21%	1.84%	1
Oct	-7.33%	2.71%	5.76%	5.95%	6.05%	9.12%	11.97%	13.07%	31.67%	43.53%	44.93%	43.24%	38.07%	36.57%	32.40%	29.34%	22.82%	7.99%	0.81%	2.00%	1.54%	0.25%	1
Nov	3.07%	6.59%	9.12%	10.55%	10.80%	10.84%	9.88%	8.87%	16.22%	35.17%	39.27%	36.73%	38.88%	43.20%	45.81%	47.22%	37.99%	21.73%	20.99%	21.57%	21.70%	15.18%	1
Dec	15.93%	15.35%	16.18%	16.08%	14.47%	13.58%	12.96%	13.80%	14.48%	31.73%	44.51%	48.97%	47.78%	51.38%	56.10%	57.74%	44.82%	23.75%	23.89%	25.68%	26.97%	28.64%	2

Select one year will show the difference between the selected year and the previous year, or select two years for the differences

IBR Ratio – NV Energy

Region:
 BA:
 Year:
 Fuel Type:

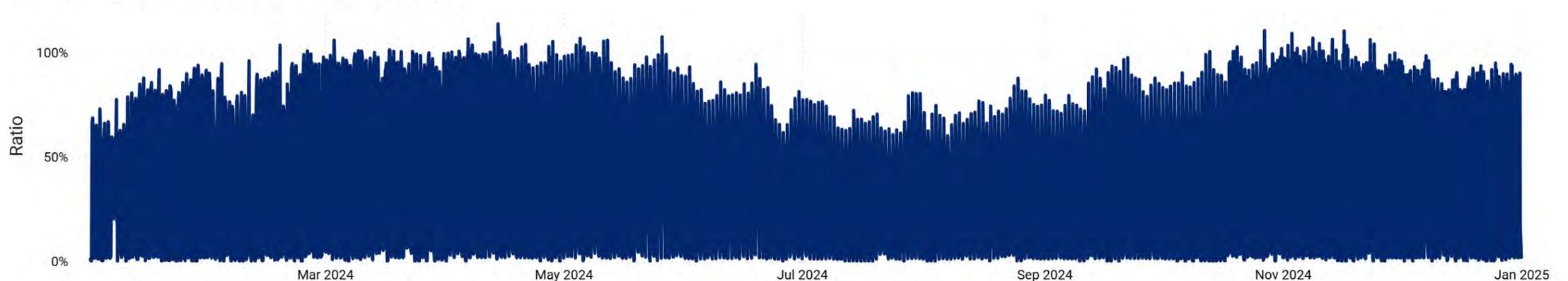
IBR/Demand Ratio by Month and Hour

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	2.87%	2.92%	2.80%	2.70%	2.74%	2.89%	3.05%	6.38%	60.77%	68.34%	71.82%	74.98%	74.48%	75.69%	76.19%	74.80%	75.47%	64.04%	6.59%	6.24%	5.93%	5.55%	5.03%	2.83%
Feb	1.84%	1.91%	1.72%	1.66%	1.81%	1.86%	1.91%	37.00%	69.42%	75.51%	79.69%	81.56%	80.72%	83.31%	82.68%	82.49%	80.17%	73.26%	31.59%	3.54%	3.53%	3.40%	2.62%	2.08%
Mar	3.41%	2.58%	2.53%	2.63%	2.68%	3.46%	18.34%	84.85%	87.99%	90.50%	92.06%	93.08%	93.23%	92.82%	93.06%	93.26%	91.75%	90.25%	82.28%	7.69%	6.72%	6.17%	5.20%	3.06%
Apr	2.41%	2.13%	1.96%	1.97%	2.21%	3.76%	93.42%	96.53%	95.53%	92.66%	92.20%	90.86%	89.41%	88.47%	87.60%	85.86%	85.35%	83.13%	82.49%	29.35%	6.74%	6.38%	6.02%	2.91%
May	2.79%	2.30%	2.28%	2.27%	4.24%	58.80%	94.89%	95.07%	87.99%	85.79%	82.11%	78.26%	75.56%	73.17%	71.47%	70.12%	67.75%	66.10%	66.31%	66.23%	12.42%	10.38%	9.77%	5.07%
Jun	2.92%	1.74%	1.57%	2.22%	4.82%	67.74%	78.85%	76.66%	70.04%	66.23%	62.98%	59.88%	56.85%	53.89%	51.60%	49.68%	48.27%	47.65%	48.12%	48.73%	14.37%	7.66%	7.90%	3.70%
Jul	2.51%	1.39%	1.26%	1.13%	1.52%	33.33%	69.23%	67.45%	61.92%	58.50%	55.59%	52.72%	50.22%	47.49%	45.46%	43.53%	42.12%	41.67%	41.73%	42.15%	7.68%	4.53%	5.23%	3.14%
Aug	2.22%	1.56%	1.49%	1.50%	1.76%	2.77%	67.85%	72.12%	67.87%	61.69%	59.23%	57.23%	54.67%	52.50%	49.81%	47.53%	45.92%	45.01%	46.92%	35.04%	8.92%	5.47%	8.83%	4.68%
Sep	1.89%	1.45%	1.46%	1.52%	1.49%	1.90%	67.76%	82.29%	80.67%	71.25%	67.99%	65.58%	63.78%	61.61%	58.61%	54.83%	53.21%	53.81%	54.76%	11.90%	8.49%	5.30%	7.27%	3.75%
Oct	1.62%	1.52%	1.50%	1.50%	1.43%	1.75%	16.21%	90.51%	91.38%	83.13%	77.65%	75.93%	75.36%	75.70%	73.42%	70.58%	67.24%	72.81%	18.52%	12.35%	9.17%	5.41%	3.09%	2.03%
Nov	5.19%	1.82%	1.85%	1.91%	1.80%	1.79%	1.72%	74.84%	92.47%	94.16%	89.51%	87.67%	89.73%	90.41%	90.15%	90.82%	95.45%	87.32%	14.45%	17.82%	11.68%	11.19%	5.40%	2.36%
Dec	2.98%	1.77%	1.80%	1.76%	1.63%	1.56%	1.52%	18.76%	84.48%	86.29%	85.87%	83.35%	83.28%	84.00%	83.69%	84.25%	87.18%	69.63%	15.21%	15.20%	14.35%	11.56%	9.63%	5.44%

IBR/Demand Ratio by Datetime

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.



IBR Ratio Year-over-Year Change – NV Energy

Region:
 BA:
 Year:
 Fuel Type:

IBR/Demand Ratio by Month and Hour

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	2.87%	2.92%	2.80%	2.70%	2.74%	2.89%	3.05%	6.38%	60.77%	68.34%	71.82%	74.98%	74.48%	75.69%	76.19%	74.80%	75.47%	64.04%	6.59%	6.24%	5.93%	5.55%	5.03%	2.83%
Feb	1.84%	1.91%	1.72%	1.66%	1.81%	1.86%	1.91%	37.00%	69.42%	75.51%	79.69%	81.56%	80.72%	83.31%	82.68%	82.49%	80.17%	73.26%	31.59%	3.54%	3.53%	3.40%	2.62%	2.08%
Mar	3.41%	2.58%	2.53%	2.63%	2.68%	3.46%	18.34%	84.85%	87.99%	90.50%	92.06%	93.08%	93.23%	92.82%	93.06%	93.26%	91.75%	90.25%	82.28%	7.69%	6.72%	6.17%	5.20%	3.06%
Apr	2.41%	2.13%	1.96%	1.97%	2.21%	3.76%	93.42%	96.53%	95.53%	92.66%	92.20%	90.86%	89.41%	88.47%	87.60%	85.86%	85.35%	83.13%	82.49%	29.35%	6.74%	6.38%	6.02%	2.91%
May	2.79%	2.30%	2.28%	2.27%	4.24%	58.80%	94.89%	95.07%	87.99%	85.79%	82.11%	78.26%	75.56%	73.17%	71.47%	70.12%	67.75%	66.10%	66.31%	66.23%	12.42%	10.38%	9.77%	5.07%
Jun	2.92%	1.74%	1.57%	2.22%	4.82%	67.74%	78.85%	76.66%	70.04%	66.23%	62.98%	59.88%	56.85%	53.89%	51.60%	49.68%	48.27%	47.65%	48.12%	48.73%	14.37%	7.66%	7.90%	3.70%
Jul	2.51%	1.39%	1.26%	1.13%	1.52%	33.33%	69.23%	67.45%	61.92%	58.50%	55.59%	52.72%	50.22%	47.49%	45.46%	43.53%	42.12%	41.67%	41.73%	42.15%	7.68%	4.53%	5.23%	3.14%
Aug	2.22%	1.56%	1.49%	1.50%	1.76%	2.77%	67.85%	72.12%	67.87%	61.69%	59.23%	57.23%	54.67%	52.50%	49.81%	47.53%	45.92%	45.01%	46.92%	35.04%	8.92%	5.47%	8.83%	4.68%
Sep	1.89%	1.45%	1.46%	1.52%	1.49%	1.90%	67.76%	82.29%	80.67%	71.25%	67.99%	65.58%	63.78%	61.61%	58.61%	54.83%	53.21%	53.81%	54.76%	11.90%	8.49%	5.30%	7.27%	3.75%
Oct	1.62%	1.52%	1.50%	1.50%	1.43%	1.75%	16.21%	90.51%	91.38%	83.13%	77.65%	75.93%	75.36%	75.70%	73.42%	70.58%	67.24%	72.81%	18.52%	12.35%	9.17%	5.41%	3.09%	2.03%
Nov	5.19%	1.82%	1.85%	1.91%	1.80%	1.79%	1.72%	74.84%	92.47%	94.16%	89.51%	87.67%	89.73%	90.41%	90.15%	90.82%	95.45%	87.32%	14.45%	17.82%	11.68%	11.19%	5.40%	2.36%
Dec	2.98%	1.77%	1.80%	1.76%	1.63%	1.56%	1.52%	18.76%	84.48%	86.29%	85.87%	83.35%	83.28%	84.00%	83.69%	84.25%	87.18%	69.63%	15.21%	15.20%	14.35%	11.56%	9.63%	5.44%

Ratio Difference Between Selected Year(s)

Source: WECC Loads and Resources. Dashboard refreshed 2/27/2026.

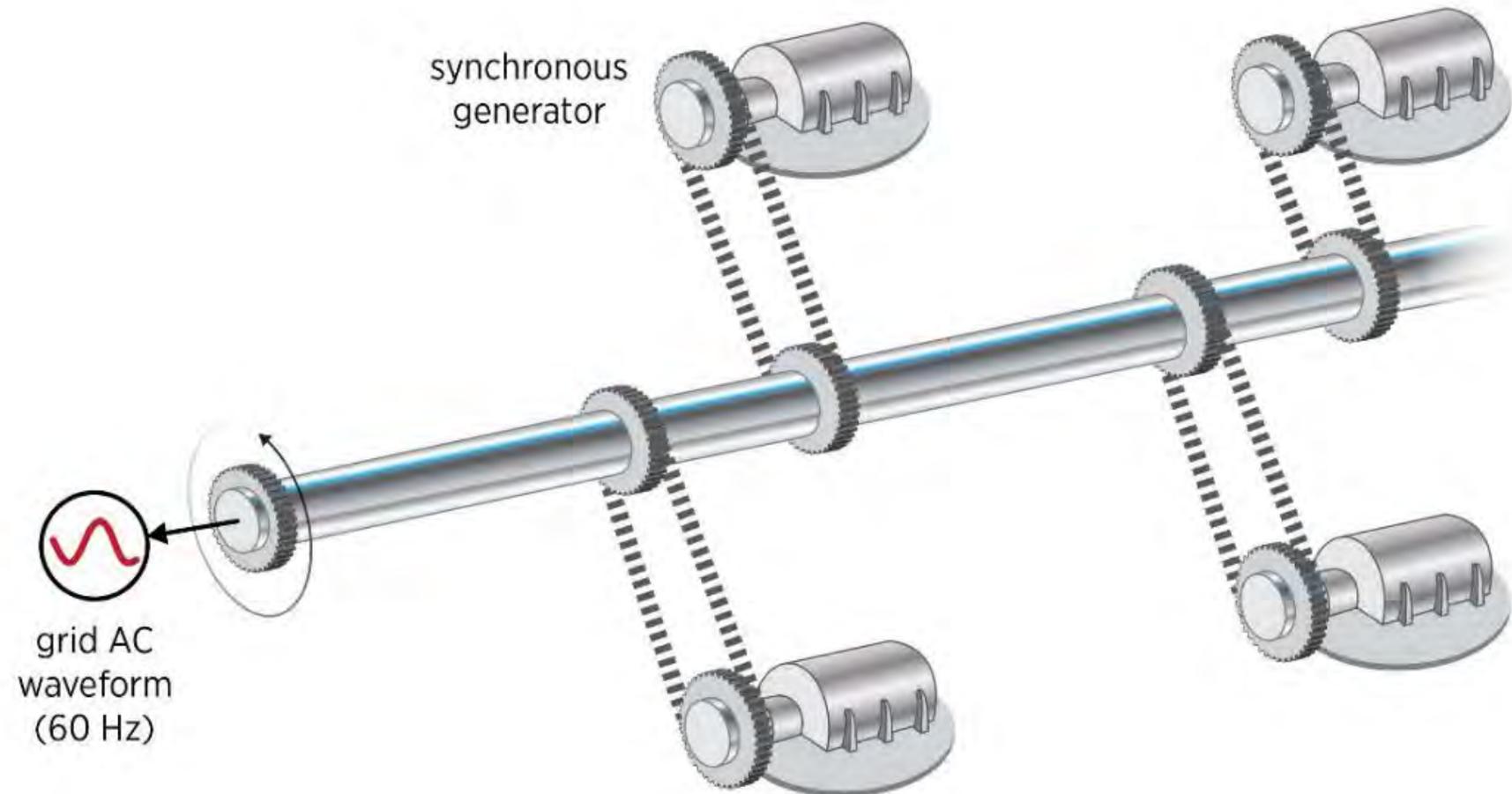
Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	1.06%	1.09%	1.12%	1.10%	1.21%	1.38%	1.45%	4.79%	53.24%	44.70%	40.33%	42.45%	42.03%	43.69%	44.52%	45.07%	55.58%	58.70%	2.85%	2.71%	2.43%	2.44%	3.21%	1.10%
Feb	0.65%	0.86%	0.87%	0.68%	0.84%	0.96%	1.00%	35.37%	54.25%	41.01%	38.57%	39.15%	39.12%	41.31%	40.81%	42.01%	46.32%	60.36%	27.68%	0.15%	0.59%	1.11%	1.31%	0.80%
Mar	2.09%	1.30%	1.37%	1.50%	1.54%	2.37%	17.01%	76.49%	60.18%	51.45%	47.55%	44.81%	45.08%	45.55%	46.38%	48.74%	52.11%	65.64%	76.93%	4.33%	3.36%	2.94%	2.57%	1.48%
Apr	1.52%	1.28%	1.14%	1.25%	1.68%	3.16%	87.97%	64.40%	42.76%	33.93%	31.96%	30.16%	30.06%	29.45%	29.94%	31.72%	35.59%	47.20%	70.19%	26.13%	3.95%	3.86%	4.39%	2.04%
May	2.15%	1.67%	1.67%	1.70%	3.74%	57.94%	80.53%	54.77%	36.93%	32.81%	29.11%	26.87%	26.71%	27.26%	28.67%	30.71%	32.55%	37.21%	51.65%	62.71%	10.11%	8.23%	8.12%	4.30%
Jun	2.18%	0.93%	0.78%	1.48%	4.11%	66.06%	61.72%	37.48%	23.66%	17.85%	14.70%	12.72%	12.32%	12.16%	12.91%	14.59%	16.93%	20.91%	31.93%	43.95%	12.06%	5.35%	5.69%	2.72%
Jul	1.84%	0.87%	0.80%	0.64%	1.05%	32.65%	58.60%	37.05%	24.16%	20.49%	18.98%	18.04%	18.28%	18.25%	18.29%	18.47%	18.79%	20.94%	28.15%	38.04%	5.98%	3.94%	3.67%	2.10%
Aug	1.38%	0.91%	0.91%	0.87%	1.17%	2.25%	63.52%	50.24%	35.02%	26.27%	23.43%	21.81%	20.89%	21.07%	20.44%	20.55%	22.04%	25.37%	38.47%	32.49%	6.78%	4.56%	6.51%	2.51%
Sep	0.85%	0.71%	0.75%	0.87%	0.85%	1.25%	66.05%	64.42%	42.92%	29.28%	25.90%	24.61%	23.69%	23.97%	24.29%	23.59%	26.06%	38.04%	51.58%	9.50%	6.15%	4.41%	4.66%	1.08%
Oct	0.88%	0.91%	0.85%	0.85%	0.72%	1.08%	15.52%	79.56%	53.48%	34.81%	28.51%	28.03%	28.75%	30.39%	29.53%	30.15%	38.54%	64.10%	15.50%	9.23%	6.10%	2.76%	1.44%	1.00%
Nov	4.03%	0.61%	0.76%	0.98%	0.93%	0.90%	0.77%	71.93%	72.04%	58.00%	49.57%	47.42%	49.26%	49.06%	48.76%	52.81%	76.30%	83.99%	11.99%	15.56%	9.60%	9.28%	3.97%	1.10%
Dec	2.12%	1.02%	1.01%	0.97%	0.93%	0.88%	0.78%	17.91%	76.08%	61.09%	55.32%	52.22%	51.16%	51.02%	49.66%	53.40%	74.36%	67.26%	12.78%	12.53%	11.66%	9.00%	7.49%	4.33%

Select one year will show the difference between the selected year and the previous year, or select two years for the differences

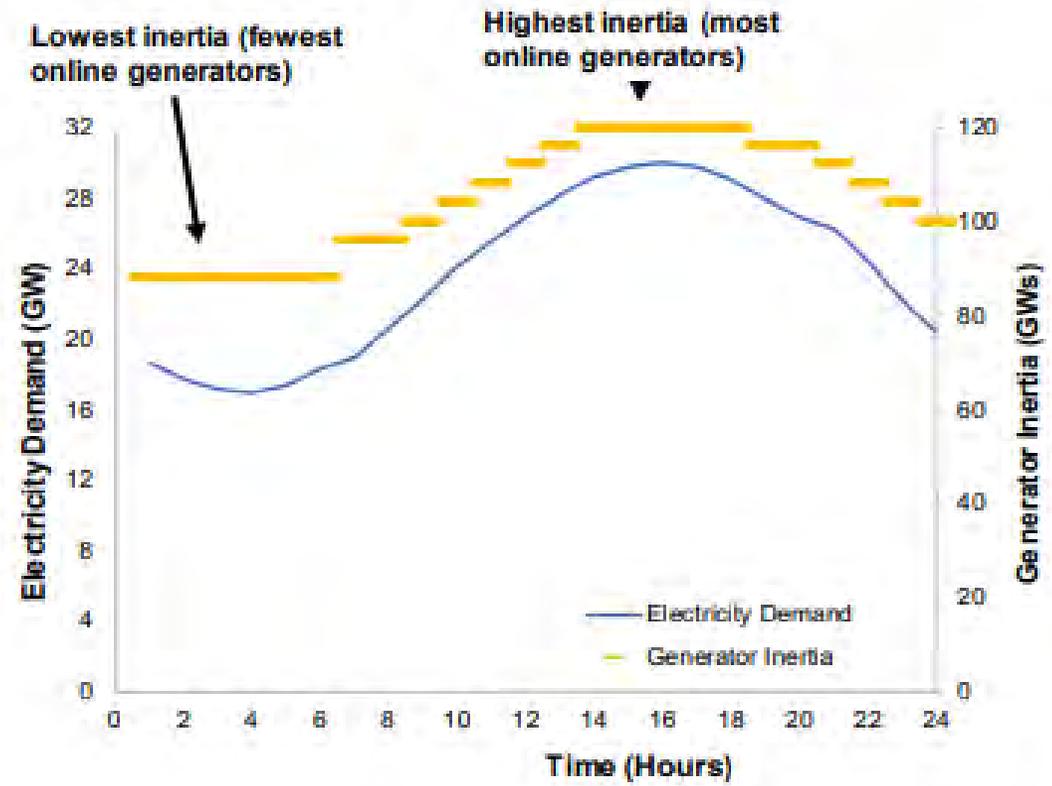


Interconnection Inertia

Interconnection Inertia

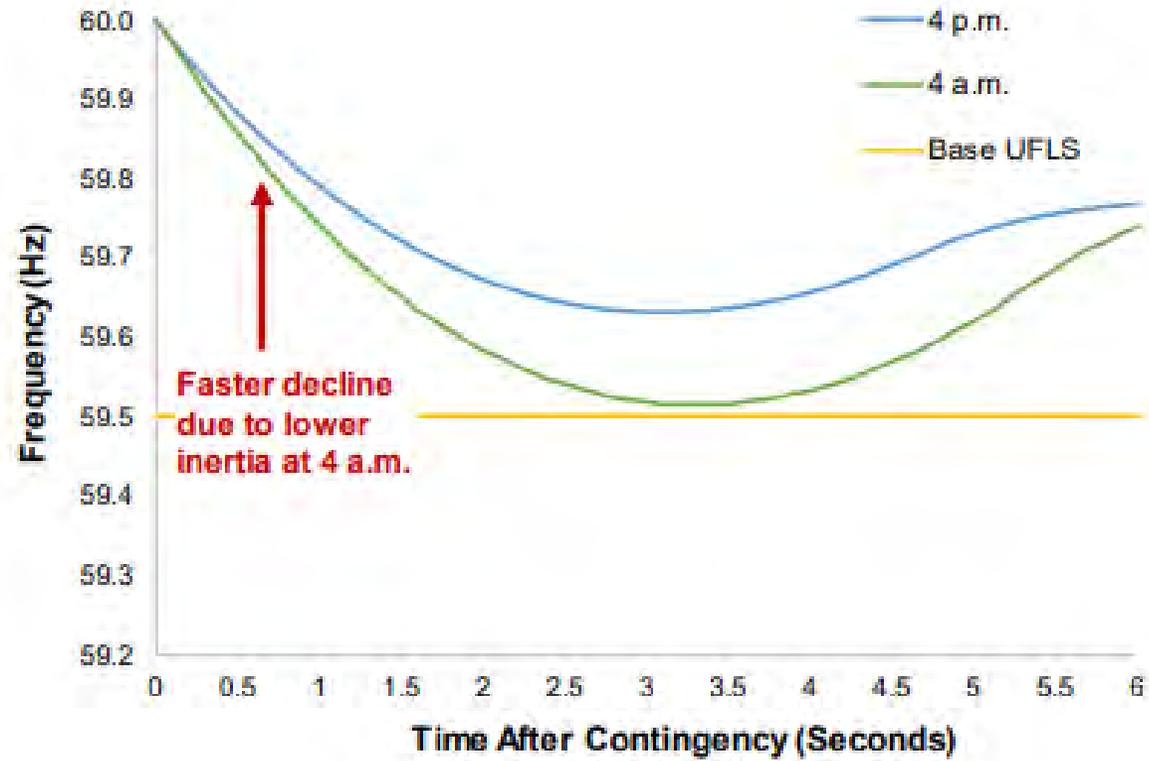


Interconnection Inertia

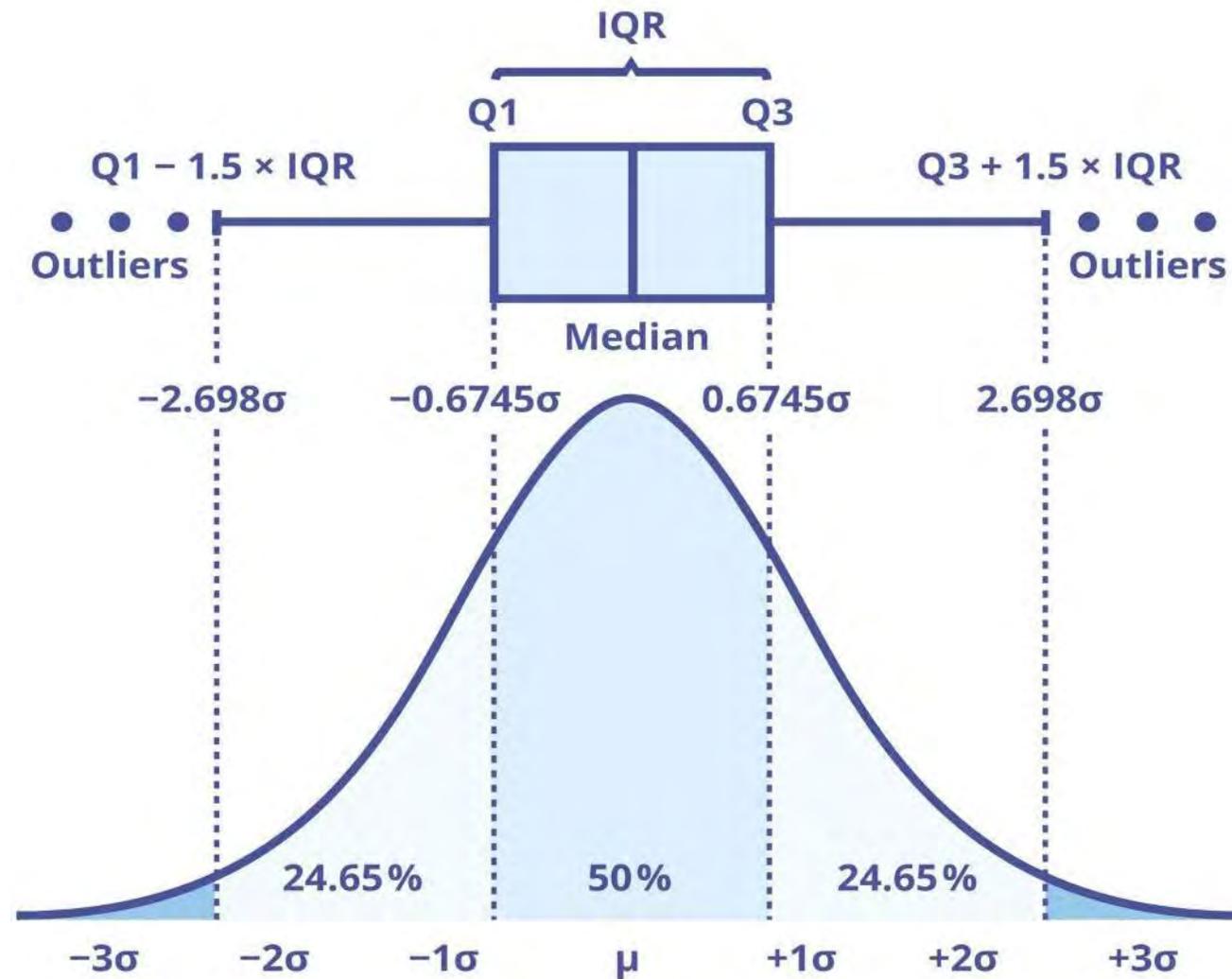


a) Load and inertia

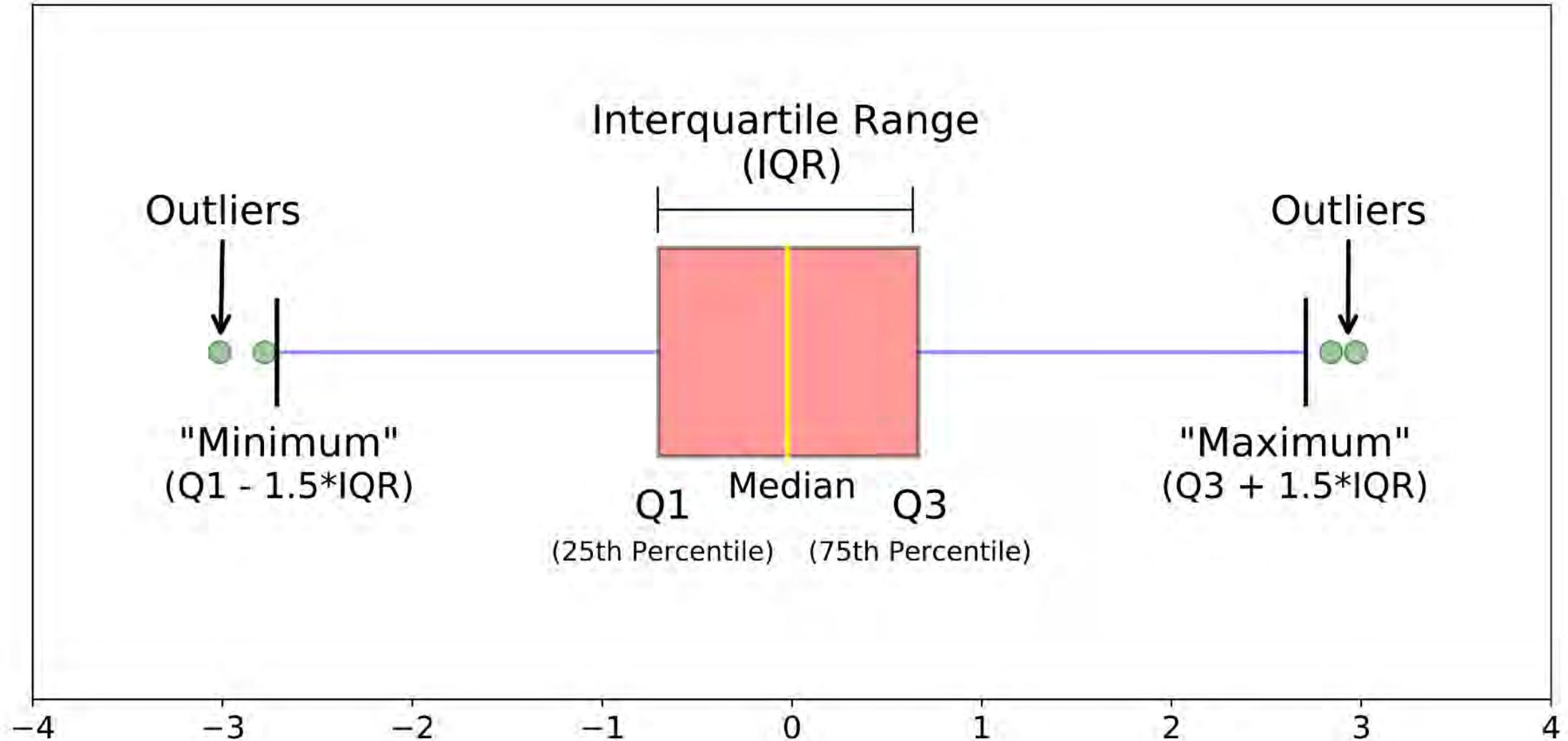
Interconnection Inertia



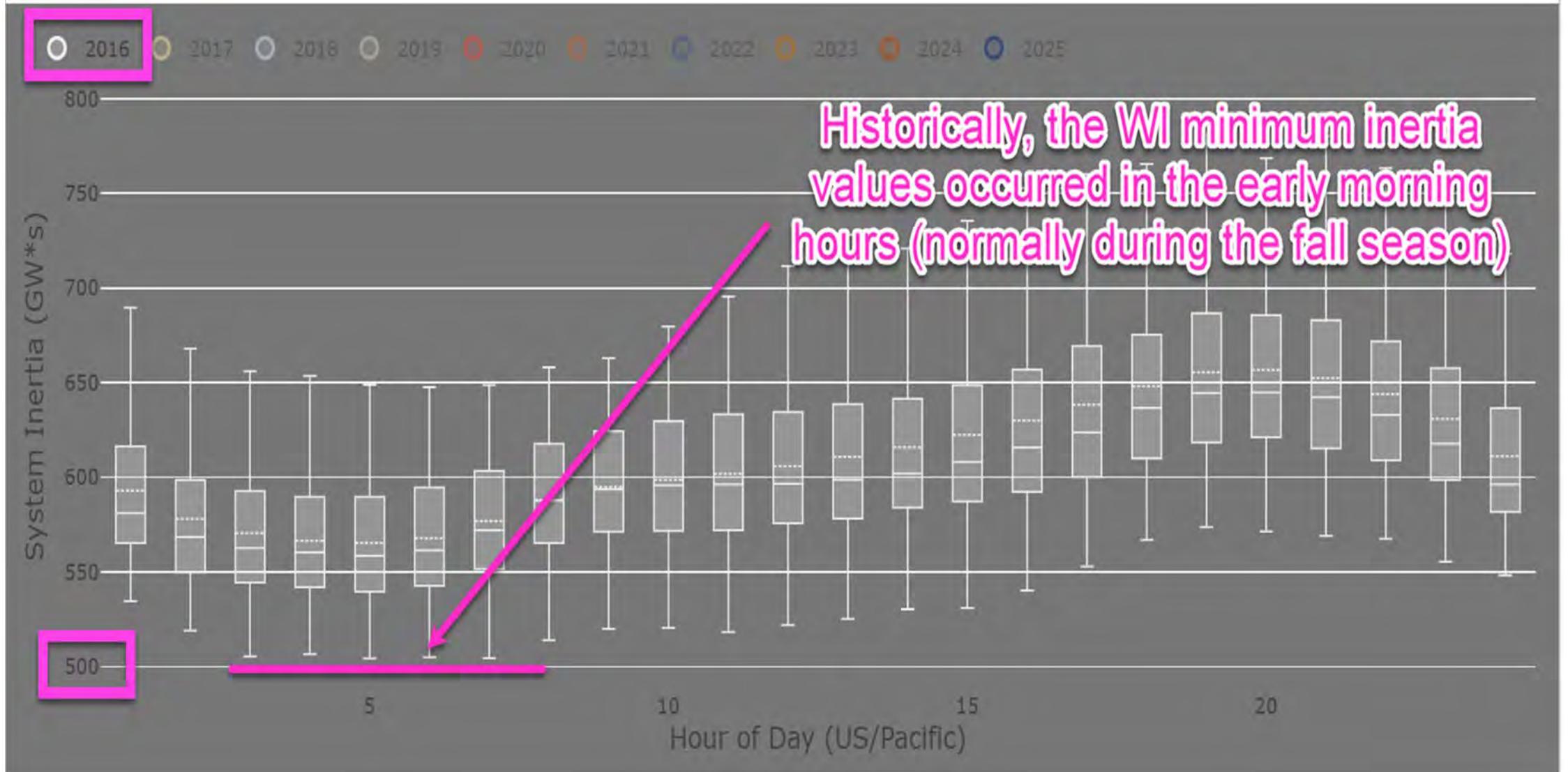
Box and Whisker Plot for the Standard Normal Distribution



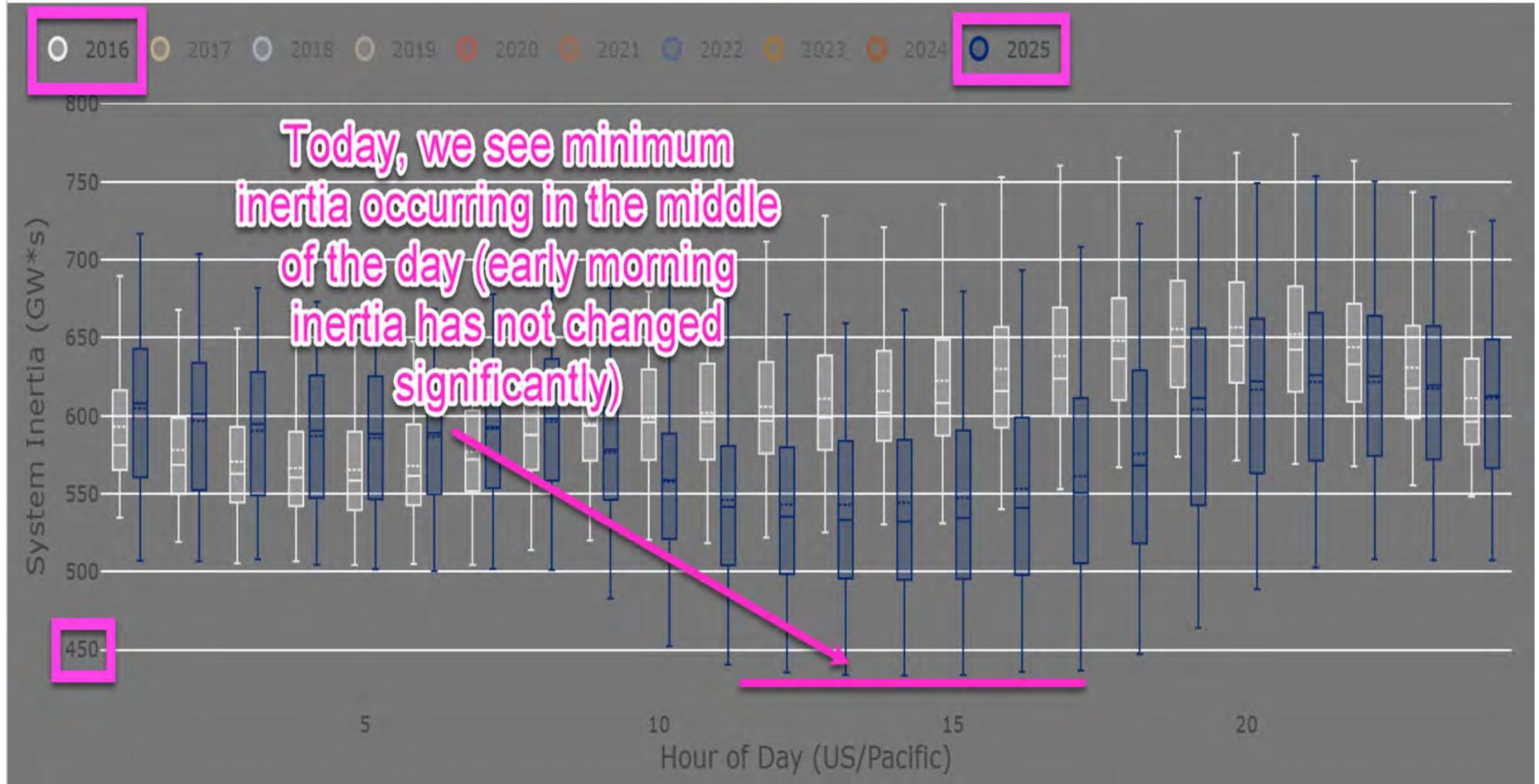
Interpreting a "Box and Whisker" plot



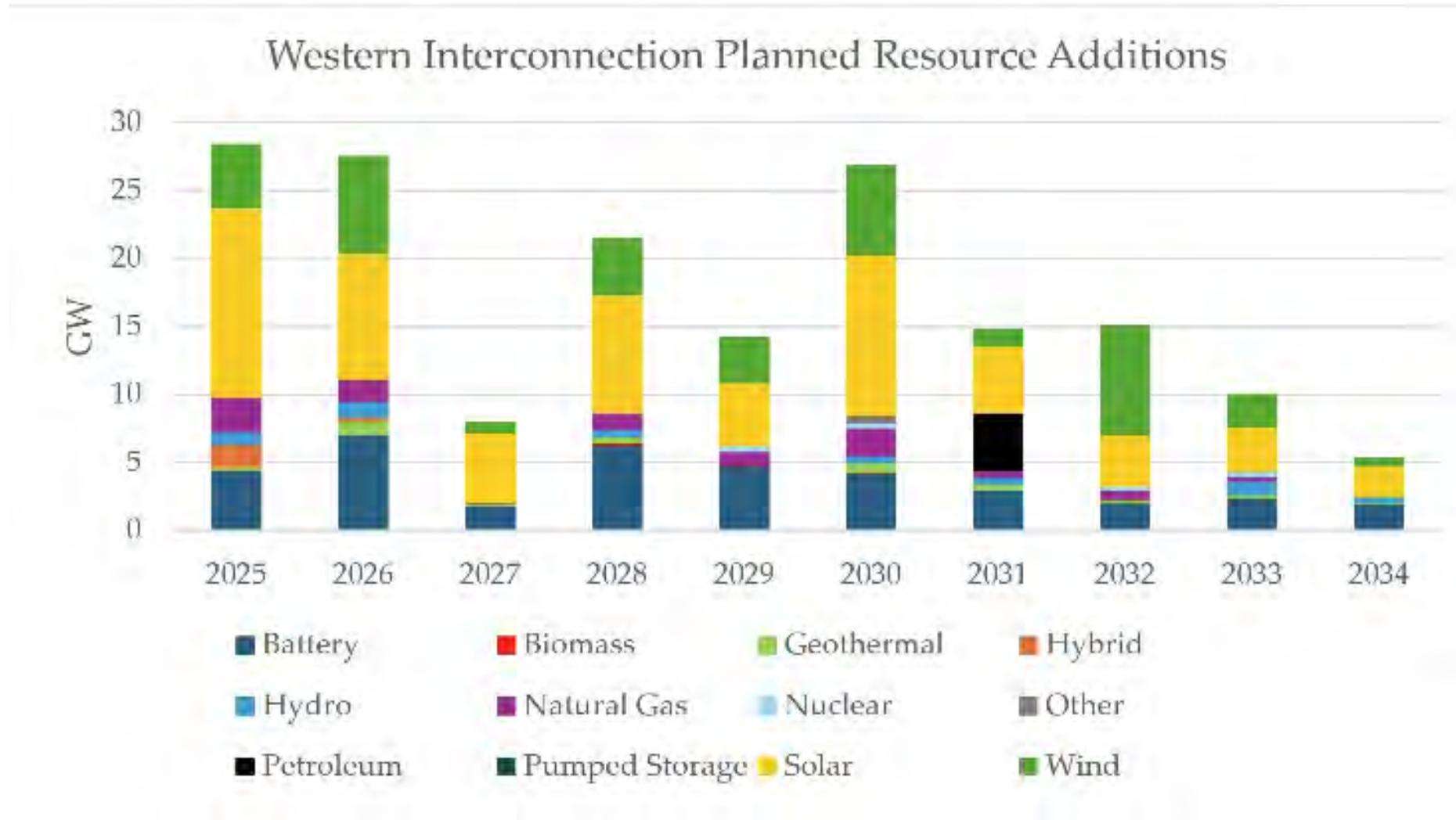
Interconnection Inertia – 2016



Interconnection Inertia – 2025

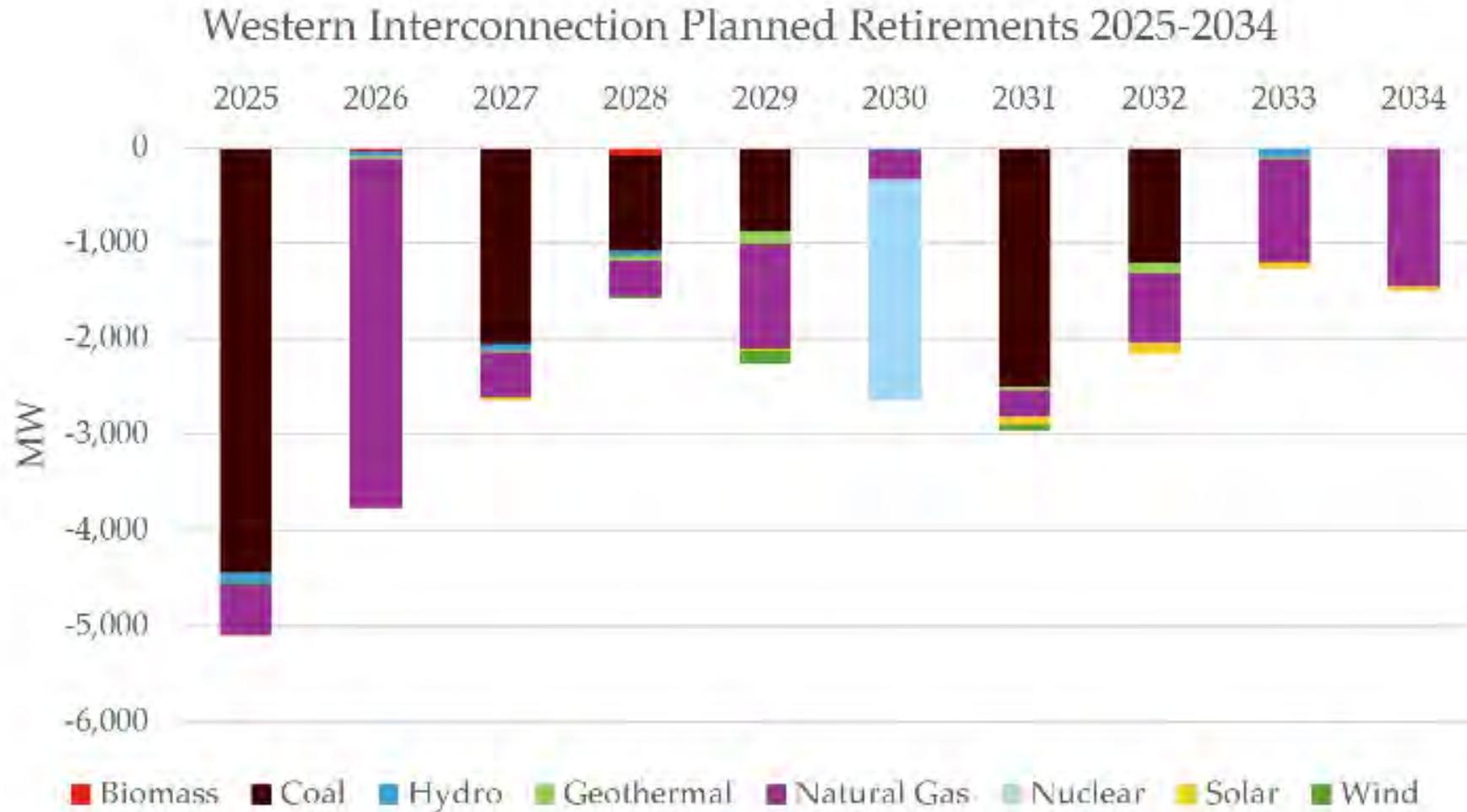


Grid Transformation—Resource Additions



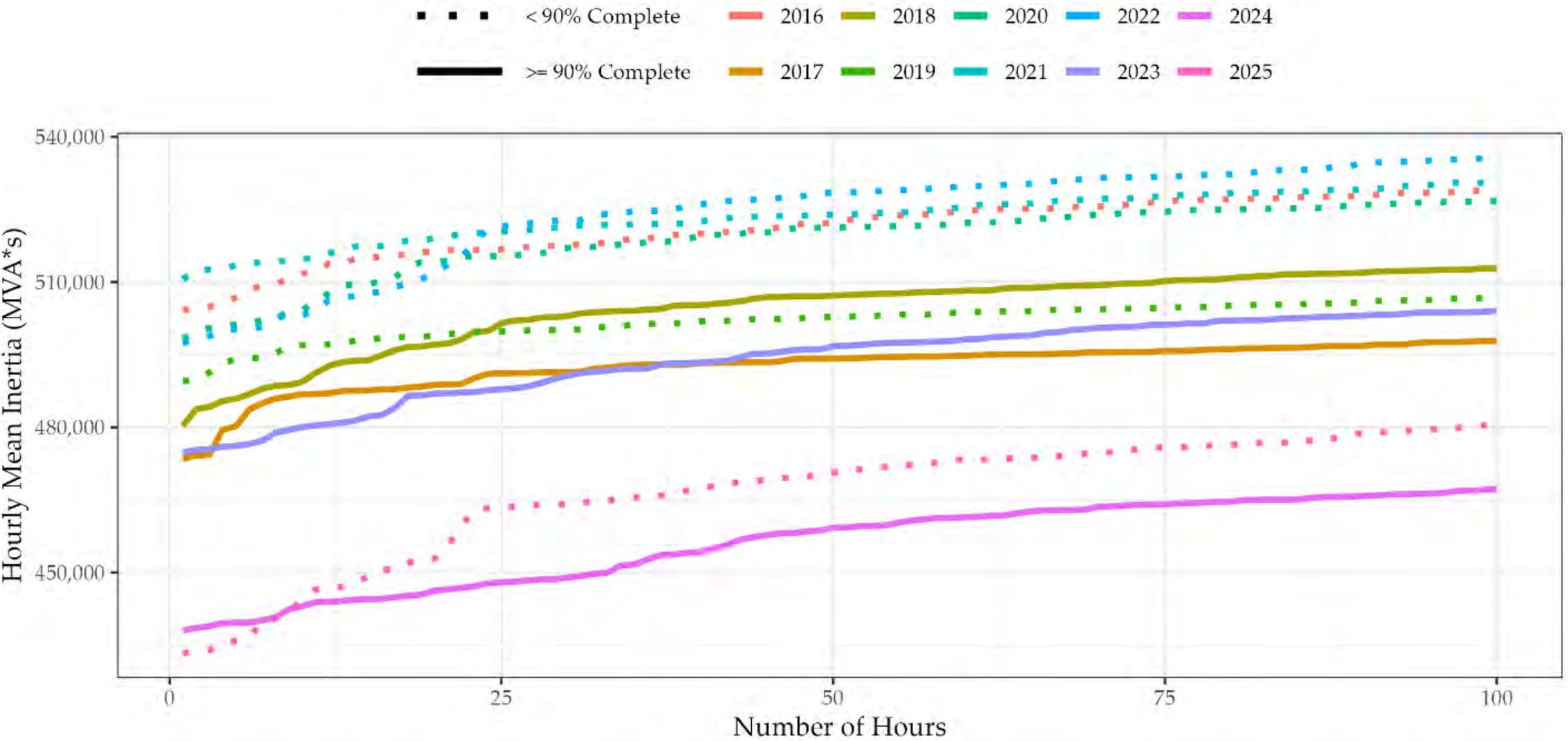
* 2025 WECC WARA

Grid Transformation—Resource Retirements

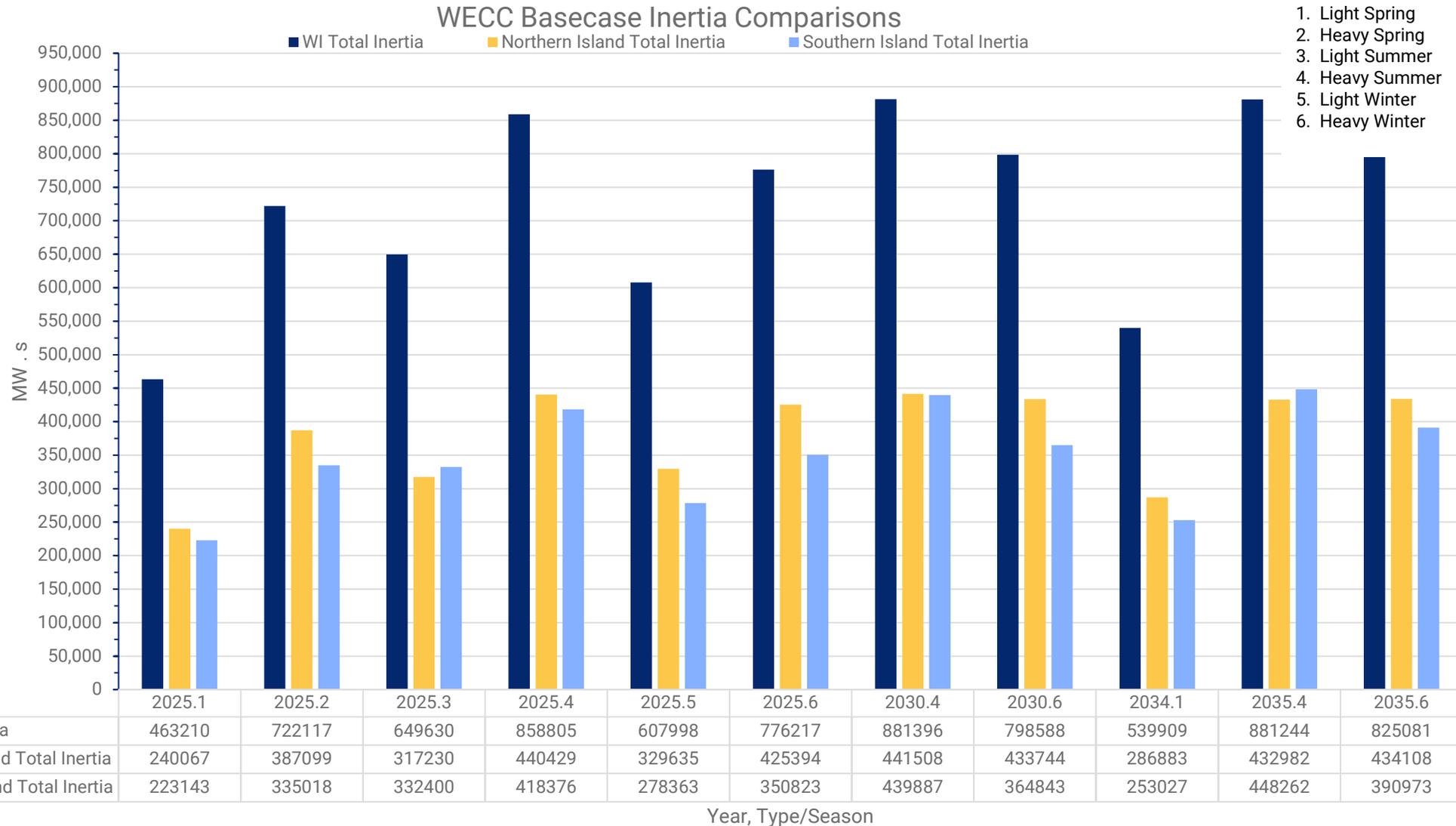


* 2025 WECC WARA

Historical Inertia Levels

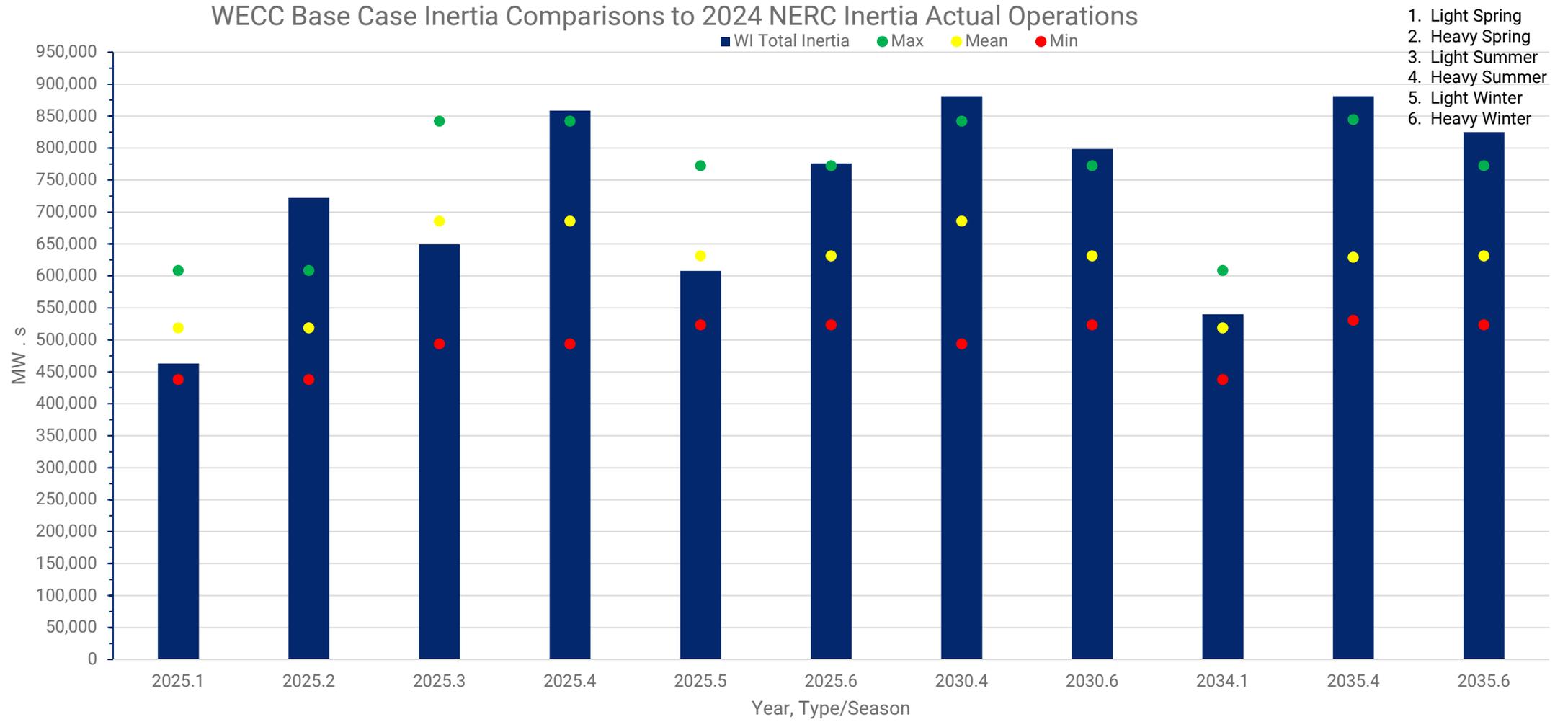


Inertia Base case Analysis



1. Light Spring
2. Heavy Spring
3. Light Summer
4. Heavy Summer
5. Light Winter
6. Heavy Winter

Base Case Comparison to Actual Operations





Western Interconnection Frequency Control – Hourly Evaluation

Western Interconnection Frequency Control – Background

- Industry Balancing Authorities expressed concern with degraded frequency performance during solar ramp hours
- Beginning in 2024, the NERC Resources Subcommittee began development of a methodology to determine impacts to PV on Interconnection Frequency Control
- NERC RS wanted to develop a metric that “made sense” to Balancing Authorities
- Developed a metric of frequency deviation of scheduled that related to the BA Control Performance Standard – CPS1

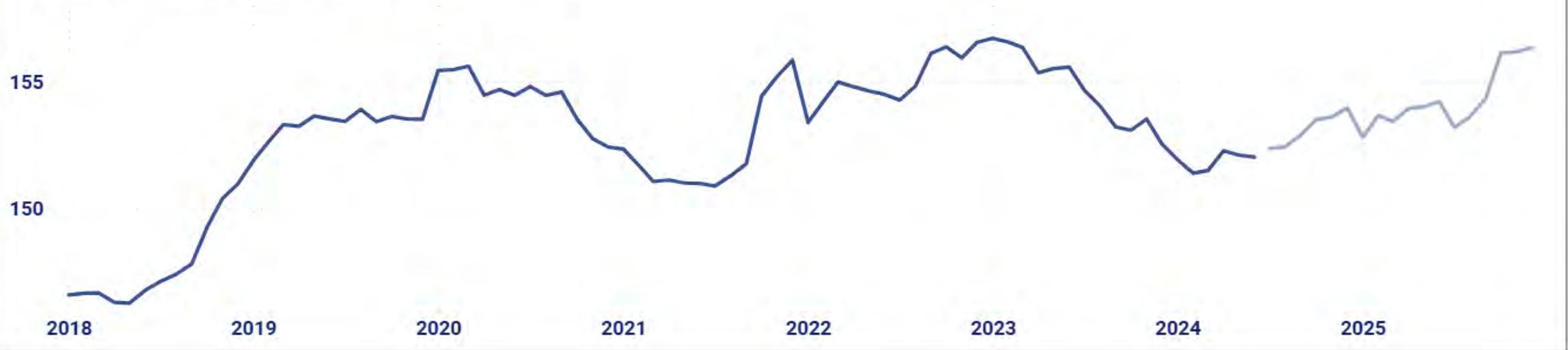
$$CPS1_{Interconnection} = 100 * \left(2 - \frac{\Delta F^2}{\epsilon_1^2} \right)$$



Western Interconnection Frequency Control – “Weighted CPS1”

Weighted Interconnection Rolling Mean CPS1 by Month

Source: BAL-001. Dashboard refreshed 3/16/2026. Data through 12/1/2025.





Western Interconnection Frequency Control – 2019

2019	2020	2021	2022	2023	2024	2025
------	------	------	------	------	------	------



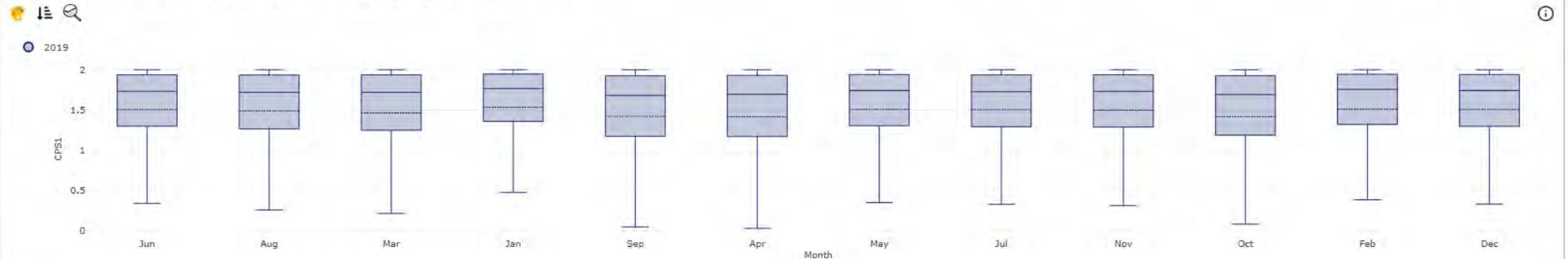
Western Interconnection Average CPS1 (PPT Time Zone)

Source: BPA One-Minute Frequency. Dashboard refreshed 1/26/2026. Data through 12/31/2025.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Jan	170%	168%	175%	165%	159%	146%	147%	140%	141%	152%	152%	160%	165%	153%	152%	126%	130%	155%	171%	165%	166%	156%	153%	157%	
Feb	159%	174%	174%	172%	163%	157%	145%	129%	144%	143%	155%	146%	146%	146%	156%	143%	105%	142%	169%	176%	163%	151%	153%	150%	
Mar	158%	171%	165%	166%	161%	145%	152%	141%	122%	133%	141%	144%	149%	154%	159%	146%	125%	107%	126%	163%	166%	154%	155%	151%	
Apr	156%	165%	164%	172%	137%	139%	139%	129%	136%	146%	149%	146%	153%	144%	137%	128%	122%	110%	124%	166%	164%	143%	126%	142%	
May	156%	166%	168%	168%	153%	142%	152%	143%	151%	154%	155%	159%	153%	155%	154%	147%	146%	146%	140%	168%	158%	146%	138%	139%	
Jun	144%	161%	167%	171%	160%	138%	152%	157%	148%	161%	148%	156%	155%	160%	156%	150%	147%	148%	147%	154%	143%	152%	142%	136%	
Jul	147%	162%	170%	170%	161%	143%	157%	153%	157%	151%	139%	146%	154%	152%	153%	147%	156%	149%	148%	152%	154%	139%	145%	142%	
Aug	149%	165%	163%	166%	164%	132%	158%	151%	158%	163%	136%	139%	152%	160%	155%	154%	156%	152%	149%	122%	149%	136%	133%	147%	
Sep	144%	158%	153%	162%	155%	129%	154%	133%	143%	151%	144%	145%	145%	150%	141%	141%	139%	138%	148%	136%	140%	132%	136%	135%	
Oct	154%	164%	157%	163%	149%	125%	138%	125%	132%	141%	157%	156%	158%	149%	152%	130%	125%	157%	153%	155%	163%	158%	151%	154%	158%
Nov	160%	157%	167%	172%	154%	145%	147%	130%	148%	150%	147%	147%	152%	152%	130%	125%	157%	153%	155%	163%	158%	151%	154%	158%	
Dec	164%	171%	170%	163%	148%	146%	140%	136%	148%	156%	148%	143%	154%	146%	137%	107%	152%	160%	167%	169%	160%	158%	158%	153%	

Western Interconnection Hourly Average CPS1 Performance (PPT Time Zone)

Source: BPA One-Minute Frequency. Dashboard refreshed 1/26/2026. Data through 12/31/2025.





Western Interconnection Frequency Control – 2020

2019 | **2020** | 2021 | 2022 | 2023 | 2024 | 2025

▶ || ⏏ ⏪ ⏩ Year

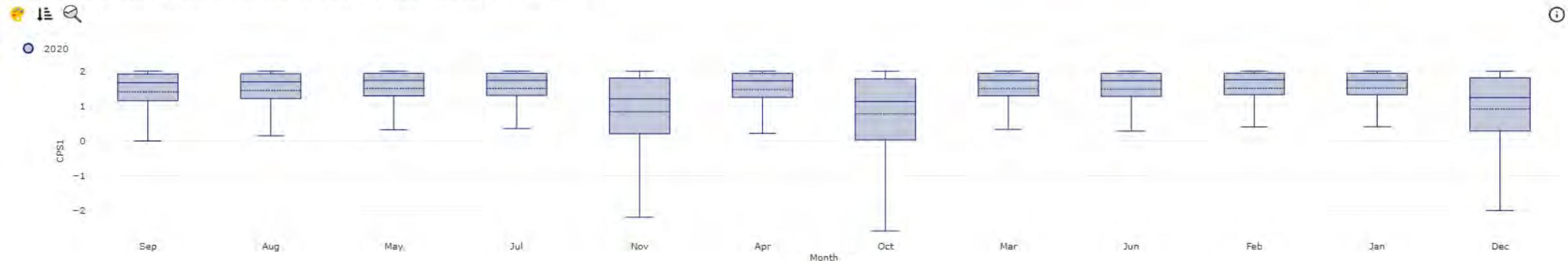
Western Interconnection Average CPS1 (PPT Time Zone)

Source: BPA One-Minute Frequency. Dashboard refreshed 1/26/2026. Data through 12/31/2025.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	170%	173%	173%	167%	152%	149%	151%	143%	138%	147%	151%	161%	152%	153%	138%	98%	129%	164%	172%	170%	158%	154%	156%	161%
Feb	167%	178%	170%	170%	165%	155%	151%	132%	138%	150%	152%	157%	165%	159%	146%	120%	71%	151%	173%	165%	159%	154%	160%	157%
Mar	163%	172%	163%	170%	165%	163%	160%	148%	136%	151%	145%	147%	138%	149%	137%	134%	117%	117%	150%	170%	162%	151%	159%	161%
Apr	157%	160%	162%	170%	160%	169%	155%	139%	149%	152%	139%	131%	149%	150%	146%	137%	131%	112%	139%	160%	159%	154%	146%	142%
May	158%	166%	168%	164%	165%	158%	152%	147%	147%	150%	136%	142%	153%	147%	146%	157%	148%	145%	145%	161%	161%	145%	141%	148%
Jun	153%	165%	160%	168%	164%	146%	159%	154%	148%	149%	142%	141%	146%	154%	153%	147%	148%	148%	151%	152%	142%	150%	136%	129%
Jul	157%	171%	174%	180%	167%	151%	163%	166%	154%	139%	137%	145%	158%	157%	156%	153%	152%	150%	152%	136%	143%	121%	128%	143%
Aug	159%	159%	161%	171%	164%	151%	158%	154%	153%	140%	129%	142%	144%	144%	136%	146%	131%	151%	138%	122%	137%	136%	131%	150%
Sep	143%	156%	156%	164%	148%	127%	160%	143%	149%	144%	147%	130%	150%	138%	133%	145%	143%	134%	119%	133%	128%	140%	139%	145%
Oct	140%	155%	161%	158%	155%	145%	153%	133%	123%	134%	139%	137%	129%	136%	146%	152%	103%	134%	137%	139%	131%	148%	141%	134%
Nov	164%	169%	168%	164%	155%	136%	148%	141%	152%	146%	149%	141%	147%	151%	142%	79%	147%	159%	156%	164%	159%	154%	150%	149%
Dec	159%	165%	167%	168%	159%	141%	141%	145%	147%	157%	149%	144%	158%	155%	144%	84%	131%	174%	169%	165%	165%	154%	156%	156%

Western Interconnection Hourly Average CPS1 Performance (PPT Time Zone)

Source: BPA One-Minute Frequency. Dashboard refreshed 1/26/2026. Data through 12/31/2025.





Western Interconnection Frequency Control – 2021



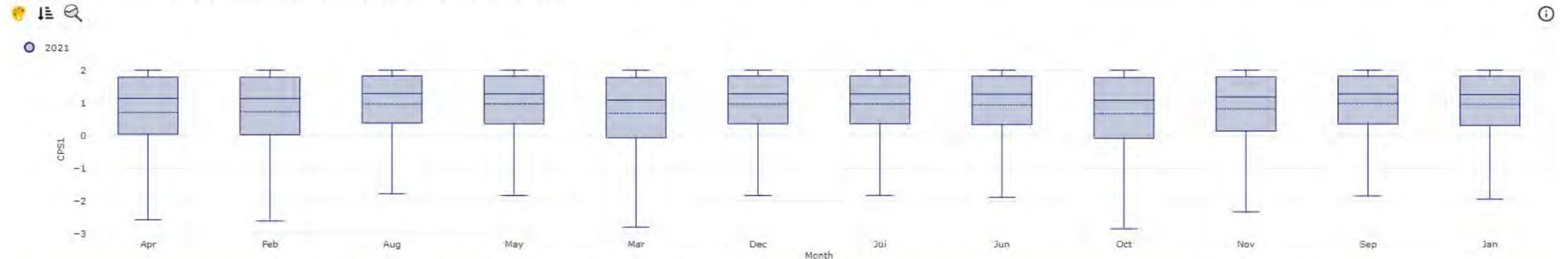
Western Interconnection Average CPS1 (PPT Time Zone)

Source: BPA One-Minute Frequency. Dashboard refreshed 1/26/2026. Data through 12/31/2025.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	171%	172%	169%	168%	162%	155%	136%	133%	148%	146%	158%	156%	152%	162%	138%	114%	115%	153%	173%	171%	173%	160%	157%	151%
Feb	163%	163%	171%	167%	154%	147%	140%	135%	135%	140%	143%	148%	150%	147%	156%	126%	20%	134%	168%	164%	169%	158%	151%	152%
Mar	162%	166%	166%	173%	149%	129%	141%	136%	126%	132%	150%	148%	155%	157%	147%	136%	90%	75%	127%	159%	163%	156%	141%	150%
Apr	155%	163%	168%	170%	146%	145%	151%	128%	148%	141%	154%	154%	155%	159%	150%	140%	145%	85%	85%	154%	160%	154%	139%	145%
May	161%	169%	172%	161%	164%	164%	149%	137%	156%	163%	160%	162%	152%	157%	154%	153%	150%	144%	133%	152%	157%	145%	139%	143%
Jun	158%	163%	162%	169%	162%	146%	157%	155%	158%	163%	156%	154%	146%	149%	156%	149%	160%	153%	148%	152%	143%	152%	133%	145%
Jul	155%	164%	167%	174%	169%	149%	162%	158%	165%	160%	159%	152%	153%	146%	157%	148%	150%	146%	161%	151%	145%	151%	137%	148%
Aug	146%	167%	167%	173%	163%	142%	159%	159%	164%	160%	148%	151%	153%	154%	164%	151%	154%	148%	155%	151%	151%	141%	140%	143%
Sep	154%	166%	166%	168%	160%	126%	144%	145%	135%	152%	152%	147%	143%	145%	150%	144%	137%	117%	156%	148%	156%	151%	151%	154%
Oct	152%	165%	165%	159%	156%	135%	121%	134%	127%	140%	145%	157%	145%	145%	140%	118%	68%	118%	158%	157%	166%	156%	152%	154%
Nov	165%	167%	164%	164%	152%	136%	131%	129%	148%	143%	156%	162%	155%	156%	112%	90%	148%	162%	166%	170%	168%	164%	164%	167%
Dec	164%	172%	176%	176%	167%	150%	147%	150%	144%	147%	148%	148%	157%	155%	148%	118%	155%	169%	172%	173%	168%	164%	159%	161%

Western Interconnection Hourly Average CPS1 Performance (PPT Time Zone)

Source: BPA One-Minute Frequency. Dashboard refreshed 1/26/2026. Data through 12/31/2025.



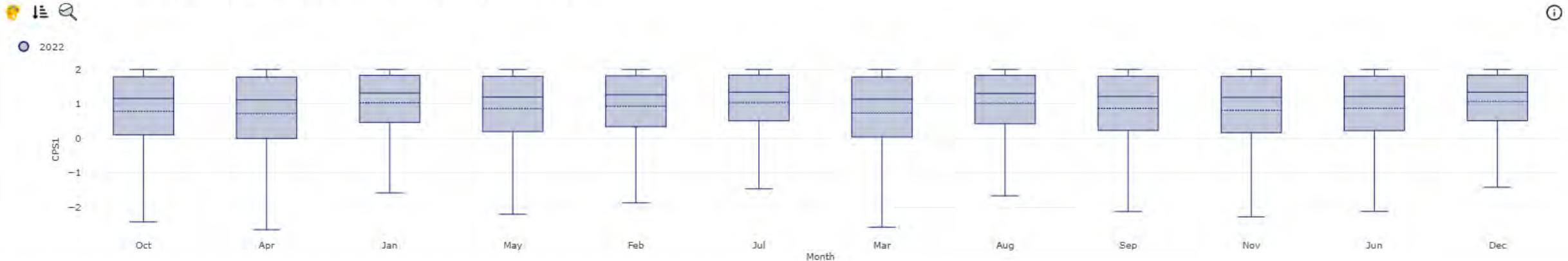


Western Interconnection Frequency Control – 2022

W Sc	2019		2020			2021			2022				2023			2024			2025			Year		
	Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Jan	172%	172%	177%	165%	158%	148%	144%	144%	136%	154%	157%	168%	163%	156%	155%	111%	134%	165%	173%	174%	176%	168%	161%	165%
Feb	174%	179%	175%	173%	161%	151%	160%	128%	141%	148%	158%	167%	162%	161%	161%	117%	74%	154%	169%	174%	174%	173%	164%	168%
Mar	165%	171%	172%	169%	159%	142%	142%	137%	133%	128%	139%	148%	153%	146%	148%	138%	88%	99%	149%	174%	173%	161%	160%	157%
Apr	162%	168%	172%	167%	150%	141%	152%	113%	119%	148%	151%	154%	156%	154%	143%	136%	120%	80%	95%	155%	165%	160%	154%	163%
May	162%	167%	170%	166%	156%	149%	143%	116%	149%	152%	153%	160%	147%	155%	156%	145%	139%	132%	111%	162%	161%	156%	149%	153%
Jun	154%	163%	164%	164%	160%	152%	150%	151%	149%	160%	157%	151%	147%	153%	150%	152%	147%	148%	135%	151%	150%	156%	143%	137%
Jul	153%	161%	175%	174%	170%	166%	168%	155%	165%	158%	165%	164%	167%	163%	161%	154%	152%	157%	152%	164%	145%	150%	153%	157%
Aug	157%	161%	171%	174%	169%	164%	162%	160%	158%	161%	158%	158%	159%	155%	148%	150%	143%	146%	159%	143%	163%	148%	146%	153%
Sep	147%	163%	160%	168%	159%	145%	152%	142%	158%	159%	142%	136%	144%	146%	141%	143%	137%	129%	152%	156%	144%	153%	151%	154%
Oct	155%	162%	162%	165%	154%	137%	133%	117%	141%	154%	154%	154%	157%	148%	148%	137%	78%	135%	153%	160%	157%	150%	161%	149%
Nov	167%	168%	168%	167%	140%	133%	146%	145%	140%	152%	153%	151%	149%	154%	147%	75%	120%	154%	162%	169%	168%	162%	156%	157%
Dec	163%	174%	174%	173%	158%	151%	145%	149%	153%	161%	161%	167%	166%	162%	138%	121%	155%	172%	178%	170%	173%	166%	160%	162%

Western Interconnection Hourly Average CPS1 Performance (PPT Time Zone)

Source: BPA One-Minute Frequency. Dashboard refreshed 1/26/2026. Data through 12/31/2025.





Western Interconnection Frequency Control – 2023



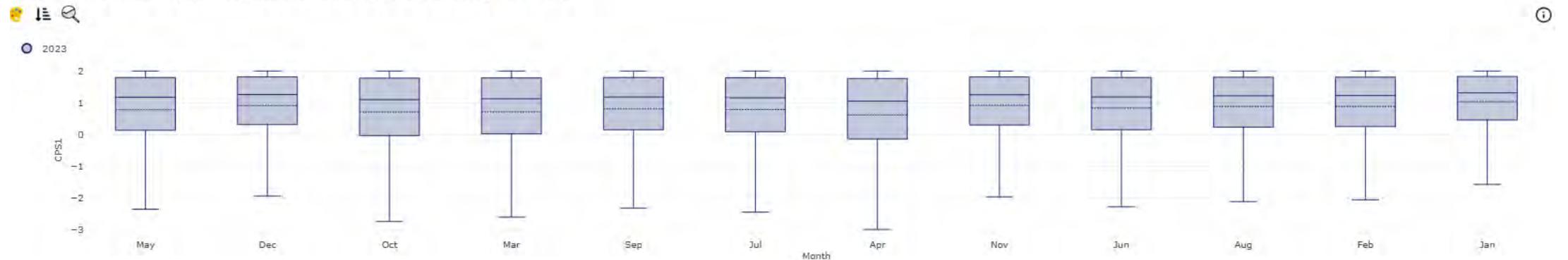
Western Interconnection Average CPS1 (PPT Time Zone)

Source: BPA One-Minute Frequency. Dashboard refreshed 1/26/2026. Data through 12/31/2025.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	160%	174%	173%	166%	152%	150%	147%	137%	145%	150%	159%	167%	162%	157%	152%	133%	132%	167%	176%	172%	173%	168%	157%	165%
Feb	163%	172%	172%	171%	163%	159%	149%	129%	148%	163%	157%	157%	158%	155%	150%	107%	85%	157%	162%	169%	172%	161%	154%	161%
Mar	169%	166%	167%	170%	154%	142%	141%	132%	131%	130%	139%	149%	141%	143%	140%	126%	102%	114%	139%	171%	167%	162%	157%	157%
Apr	151%	161%	166%	164%	160%	148%	129%	106%	126%	142%	149%	145%	133%	138%	138%	130%	126%	70%	101%	157%	156%	150%	140%	138%
May	153%	167%	168%	175%	168%	152%	147%	126%	153%	164%	155%	162%	157%	148%	142%	122%	122%	137%	124%	156%	170%	151%	147%	155%
Jun	156%	165%	169%	171%	161%	161%	142%	130%	156%	161%	159%	157%	149%	152%	141%	153%	121%	119%	122%	148%	155%	160%	147%	148%
Jul	143%	158%	166%	161%	158%	155%	149%	148%	153%	149%	156%	154%	149%	140%	145%	155%	139%	147%	137%	125%	123%	136%	141%	148%
Aug	152%	156%	158%	169%	159%	155%	145%	152%	154%	151%	160%	158%	153%	150%	140%	130%	144%	139%	154%	137%	154%	143%	135%	149%
Sep	144%	172%	167%	169%	169%	148%	137%	123%	136%	146%	157%	152%	139%	136%	130%	130%	116%	105%	137%	148%	157%	153%	140%	148%
Oct	143%	163%	164%	158%	159%	143%	142%	110%	130%	139%	142%	149%	149%	143%	142%	139%	83%	130%	156%	159%	158%	157%	152%	152%
Nov	162%	167%	170%	173%	159%	148%	143%	131%	145%	149%	154%	157%	152%	147%	136%	101%	148%	162%	172%	174%	170%	165%	158%	165%
Dec	161%	171%	177%	170%	166%	150%	148%	121%	132%	145%	150%	147%	142%	144%	121%	111%	152%	165%	167%	173%	168%	166%	156%	155%

Western Interconnection Hourly Average CPS1 Performance (PPT Time Zone)

Source: BPA One-Minute Frequency. Dashboard refreshed 1/26/2026. Data through 12/31/2025.





Western Interconnection Frequency Control – 2024



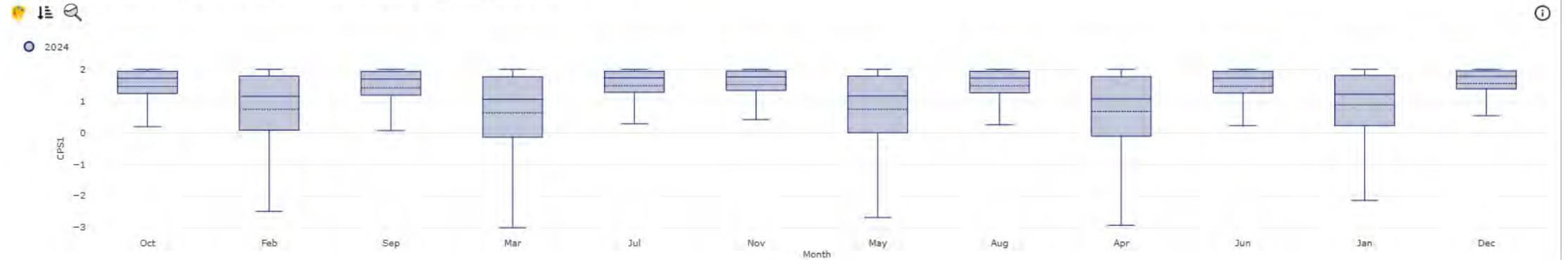
Western Interconnection Average CPS1 (PPT Time Zone)

Source: BPA One-Minute Frequency. Dashboard refreshed 1/26/2026. Data through 12/31/2025.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	158%	165%	163%	164%	156%	132%	147%	126%	137%	141%	144%	152%	151%	145%	135%	105%	140%	156%	170%	169%	169%	161%	158%	158%
Feb	164%	165%	166%	169%	159%	154%	139%	139%	133%	132%	143%	140%	138%	136%	110%	92%	99%	157%	161%	165%	163%	157%	151%	155%
Mar	165%	174%	172%	172%	164%	147%	144%	129%	142%	124%	136%	137%	126%	122%	124%	113%	87%	76%	135%	166%	169%	172%	163%	158%
Apr	167%	163%	172%	163%	158%	155%	139%	128%	133%	140%	147%	142%	132%	144%	139%	130%	127%	65%	68%	150%	161%	164%	161%	157%
May	156%	168%	167%	169%	158%	156%	131%	121%	139%	153%	150%	149%	142%	140%	133%	136%	115%	96%	62%	145%	167%	170%	157%	158%
Jun	158%	169%	169%	163%	165%	153%	130%	127%	145%	154%	150%	155%	147%	139%	128%	140%	125%	135%	126%	154%	149%	156%	159%	153%
Jul	153%	164%	165%	172%	161%	153%	119%	151%	158%	162%	158%	158%	145%	137%	147%	137%	133%	137%	123%	152%	146%	155%	141%	156%
Aug	156%	163%	160%	167%	166%	152%	134%	130%	152%	157%	158%	149%	150%	137%	144%	141%	135%	129%	143%	145%	156%	151%	152%	152%
Sep	140%	163%	171%	170%	163%	152%	134%	106%	141%	151%	146%	153%	150%	139%	135%	142%	92%	86%	131%	155%	158%	148%	153%	155%
Oct	158%	172%	171%	169%	157%	146%	140%	131%	128%	144%	147%	149%	148%	148%	140%	137%	82%	148%	144%	158%	163%	157%	153%	151%
Nov	163%	171%	174%	172%	153%	142%	141%	131%	146%	153%	152%	157%	144%	147%	127%	90%	154%	163%	171%	171%	169%	166%	161%	157%
Dec	165%	170%	168%	173%	158%	145%	146%	144%	139%	153%	157%	156%	151%	155%	136%	99%	159%	169%	170%	174%	175%	169%	164%	163%

Western Interconnection Hourly Average CPS1 Performance (PPT Time Zone)

Source: BPA One-Minute Frequency. Dashboard refreshed 1/26/2026. Data through 12/31/2025.





Western Interconnection Frequency Control – 2025

2019	2020	2021	2022	2023	2024	2025	▶	⏸	⏹	⏮	⏭	Year
------	------	------	------	------	------	------	---	---	---	---	---	------

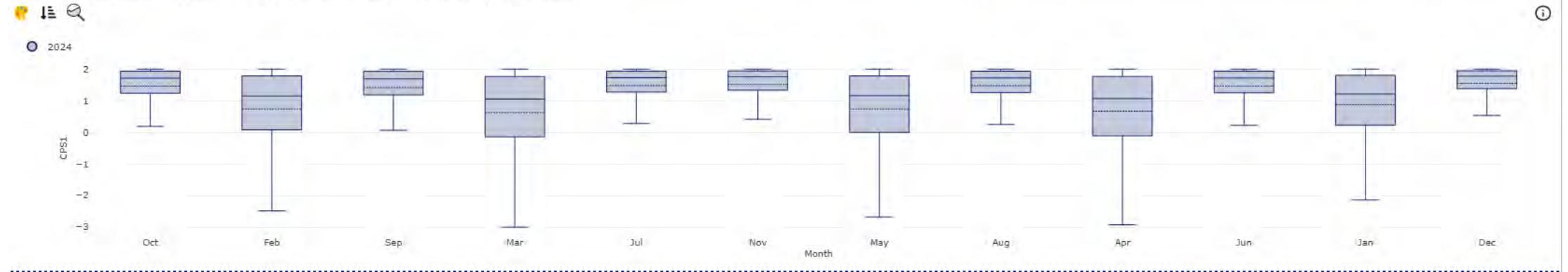
Western Interconnection Average CPS1 (PPT Time Zone)

Source: BPA One-Minute Frequency. Dashboard refreshed 1/26/2026. Data through 12/31/2025.

Mth/Hr	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Jan	164%	171%	170%	171%	156%	149%	148%	131%	116%	147%	153%	155%	156%	156%	155%	100%	113%	162%	169%	173%	171%	167%	160%	164%
Feb	167%	173%	175%	171%	165%	155%	152%	131%	129%	145%	146%	154%	151%	144%	138%	125%	95%	156%	169%	165%	172%	168%	163%	163%
Mar	158%	171%	172%	168%	158%	154%	157%	129%	114%	127%	137%	138%	132%	131%	124%	128%	82%	94%	138%	158%	167%	165%	163%	162%
Apr	161%	170%	174%	175%	163%	160%	143%	123%	137%	149%	145%	151%	143%	146%	138%	130%	120%	82%	102%	162%	160%	162%	163%	161%
May	165%	171%	174%	177%	167%	165%	146%	135%	148%	150%	155%	152%	146%	139%	140%	122%	137%	117%	104%	155%	161%	167%	151%	163%
Jun	149%	157%	167%	165%	159%	155%	140%	147%	155%	162%	162%	158%	151%	139%	131%	141%	130%	112%	88%	155%	148%	151%	139%	155%
Jul	152%	167%	171%	169%	158%	156%	129%	140%	152%	159%	159%	159%	153%	144%	151%	145%	139%	144%	127%	155%	161%	142%	156%	145%
Aug	158%	167%	166%	165%	175%	157%	133%	144%	134%	156%	156%	147%	154%	144%	148%	137%	131%	120%	155%	147%	155%	147%	148%	152%
Sep	156%	164%	169%	172%	165%	145%	148%	142%	138%	141%	136%	141%	130%	132%	123%	119%	95%	113%	148%	163%	151%	152%	154%	154%
Oct	150%	167%	164%	158%	153%	144%	145%	128%	137%	144%	149%	153%	151%	142%	139%	123%	67%	132%	150%	161%	162%	158%	154%	156%
Nov	165%	172%	173%	172%	166%	149%	149%	136%	141%	148%	150%	140%	144%	141%	115%	107%	148%	164%	171%	170%	168%	155%	168%	161%
Dec	165%	167%	172%	171%	162%	159%	149%	133%	143%	161%	164%	163%	153%	153%	144%	121%	167%	173%	168%	174%	166%	164%	159%	161%

Western Interconnection Hourly Average CPS1 Performance (PPT Time Zone)

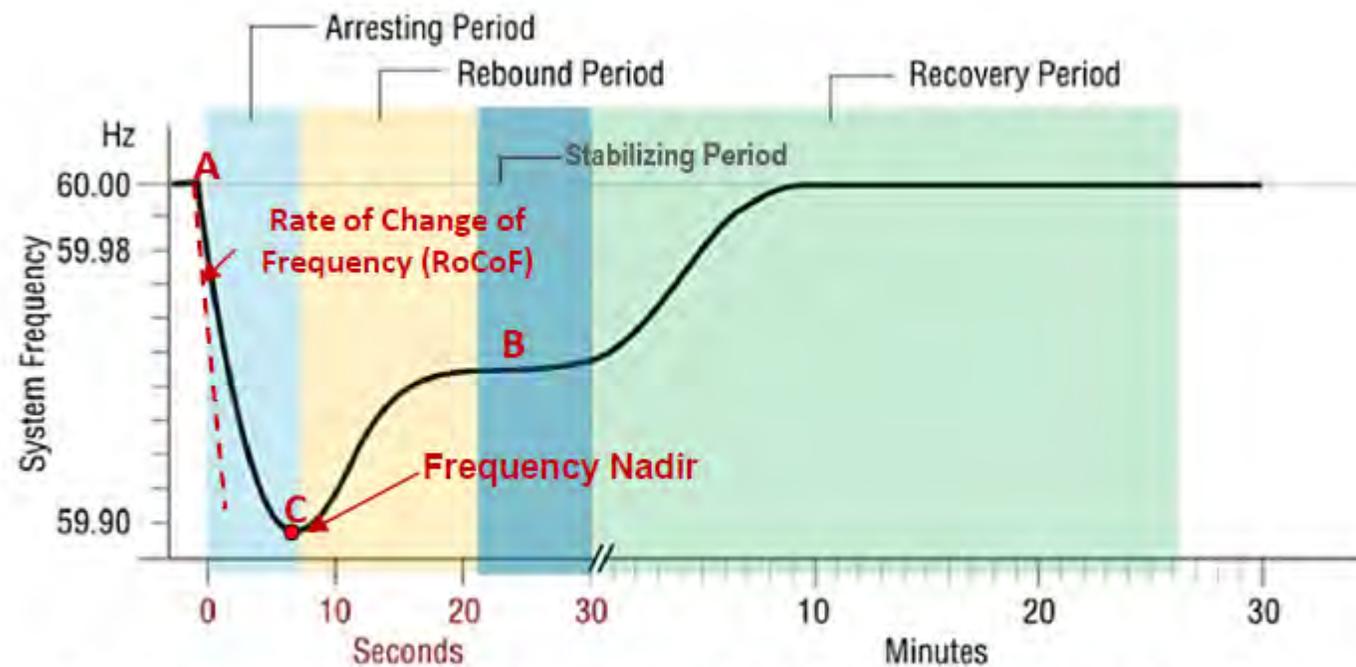
Source: BPA One-Minute Frequency. Dashboard refreshed 1/26/2026. Data through 12/31/2025.





Top-of-hour Frequency Events

FNET/GridEye Emails



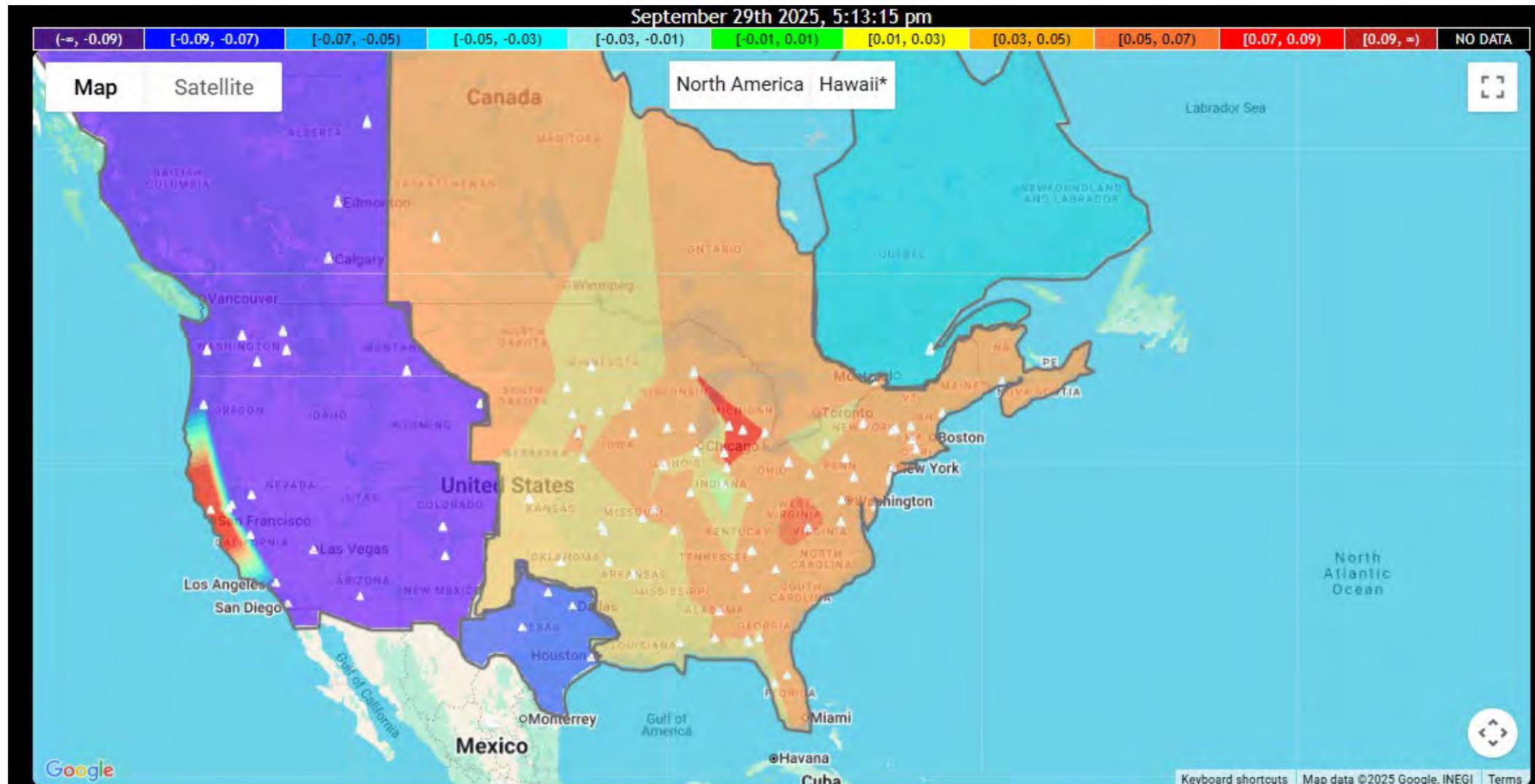
* Based on figure from [Eto, et al. Lawrence Berkeley National Laboratory, "Frequency Control Requirements for Reliable Interconnection Frequency Response", February 2018]

FNET/GridEye Emails



[FNET/GridEye - Power IT Lab](#)

FNET/GridEye Emails



[FNET/GridEye Server Map Gradient Display](#)



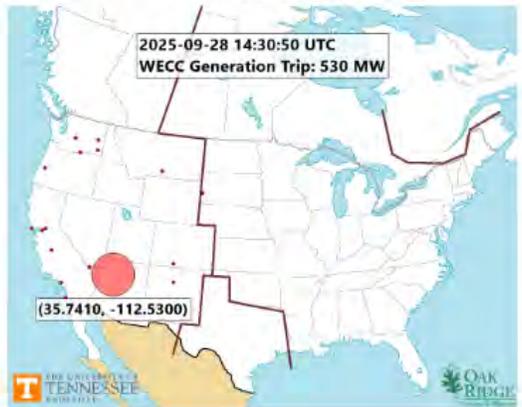
FNET Event Report

Basic Event Information

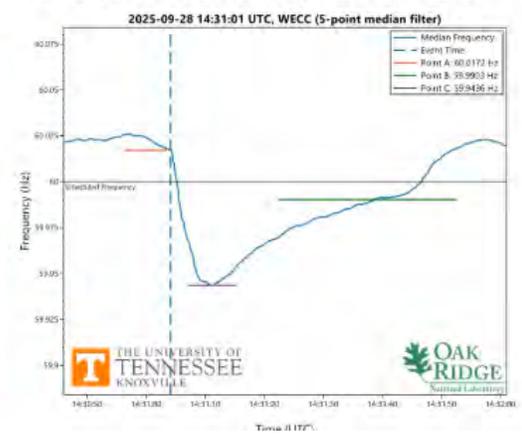
Event Date	Event Time	Event Type	Estimated Amount
2025-09-28	14:31:01 UTC	Generation Trip	530 MW
Point A	Point B	Point C	Point C Prime
60.0172 Hz	59.9903 Hz	59.9436 Hz	N/A Hz
MOD-027-1 Event	Inter Connection	Estimated Regional Entity	ROCOF
NO	WECC	WECC	N/A
Estimated Event Location		Additional Location Information	
(35.741, -112.53)		not available	
Unit Detection Order (the first 6 units)			
UsNvLasVegas1640, UsCaLosAngelesUGA2214, UsCaSanDiego1715, UsCaPaloalto3101, UsNmSantaFe1412, UsSantaRosa853			

*Due to limited knowledge on WECC and ERCOT, the magnitude estimation may not be accurate. Please verify it before use.

Location Map



Frequency Plot - System Median



FNET/GridEye Emails

Favorites

- Inbox 127
- Sent Items
- Deleted Items 217

gpark@wecc.org

- Inbox 127
- Drafts 31
- Sent Items
- Deleted Items 217
- Junk Email
- Notes
- Archive 4
- Conversation History
- Outbox
- Quarantine
- RSS Feeds
- WECC News
- Search Folders
- Go to Groups

WECC Generator Readin...

Loads and Resources

Add account

All results

- FNET/GridEye Event Notification**
380MW WECC Generation T... Mon 9:01 PM
- FNET/GridEye Event Notifica...**
320MW WECC Pump Storage... Mon 5:01 PM
- FNET/GridEye Event Notification**
320MW WECC Pump Storage... Mon 3:31 PM
- FNET/GridEye Event Notification**
300MW WECC Generation T... Mon 12:01 PM
- FNET/GridEye Event Notification**
280MW WECC Pump Stora... Mon 12:00 AM
- FNET/GridEye Event Notification**
400MW WECC Generation Tri... Sun 8:01 PM
- FNET/GridEye Event Notification**
310MW WECC Pump Storage ... Sun 5:46 PM
- FNET/GridEye Event Notification**
300MW WECC Generation Tr... Sun 12:01 AM
- FNET/GridEye Event Notification**
470MW WECC Pump Storage... Sat 11:01 PM
- FNET/GridEye Event Notification**
350MW WECC Generation Trip... Sat 8:01 PM
- FNET/GridEye Event Notification**
380MW WECC Generation Tri... Sat 12:01 AM

380MW WECC Generation Trip at 03:59:59, 8/19/2025 UTC

FN FNET/GridEye Event Notification <fnet.event.alert@gmail.com>

This Message Is From an External Sender
This message came from outside your organization.

380MW WECC Generation Trip at 03:59:59 UTC, on 8/19/2025.
near area (Latitude: 37.4824005126953, Longitude: -118.154997253418)

Event Report is available through: <https://event.fnetglobe.com/fnet-event-report/eventreport>
(The report will include event details, and different types of plotting information.)

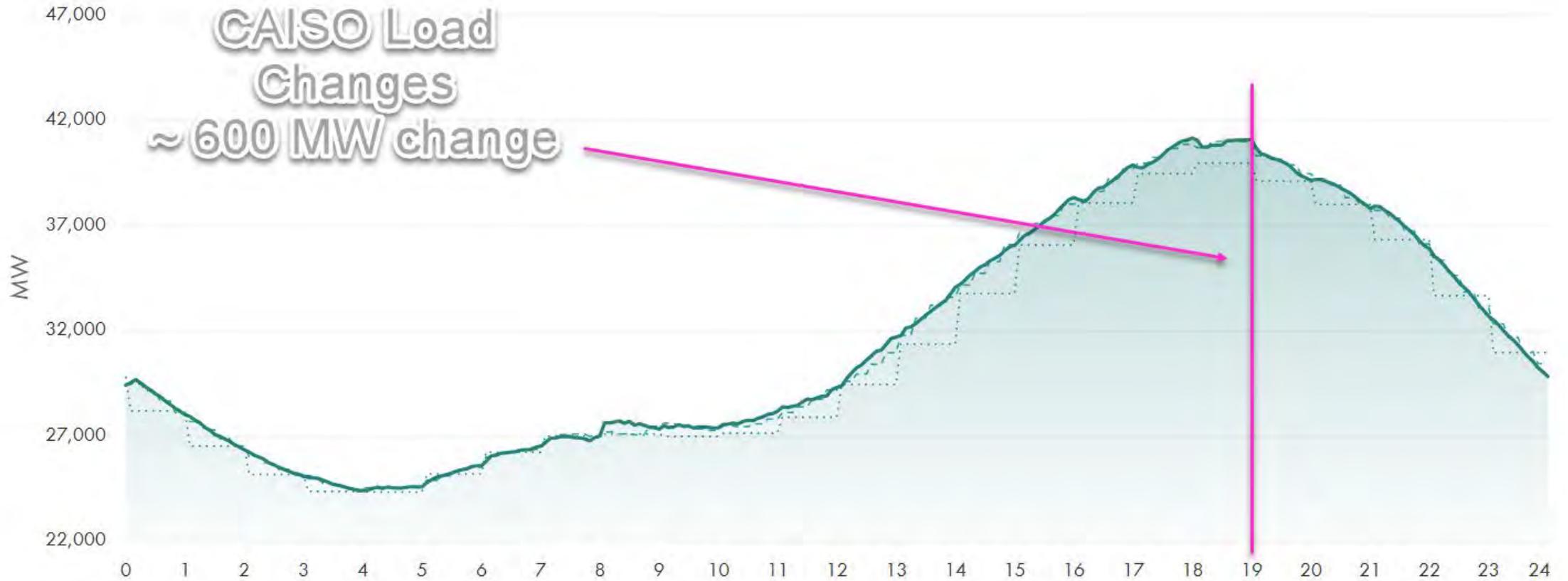
If you have information regarding this event that you would like to share with the Power IT L: <https://event.fnetglobe.com/feedback/feedback.php?eventid=253967&date=2025-08-19&t>

PLEASE KEEP THIS INFORMATION CONFIDENTIAL.
This is just an ESTIMATE and the accuracy of information can not be guaranteed which SHOU

Reply Reply all Forward

CAISO Load Changes

08/07/2025 Options Download





CAISO Load Changes

08/14/2025 Options Download



CAISO Load Changes

08/15/2025 Options Download

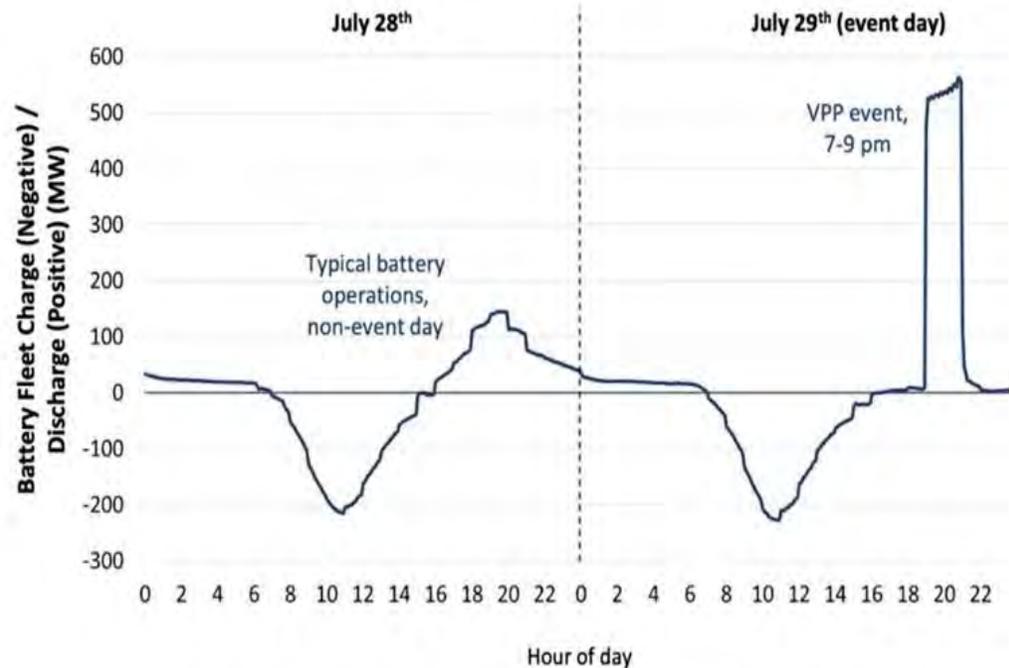


California tested as one distributed power plant

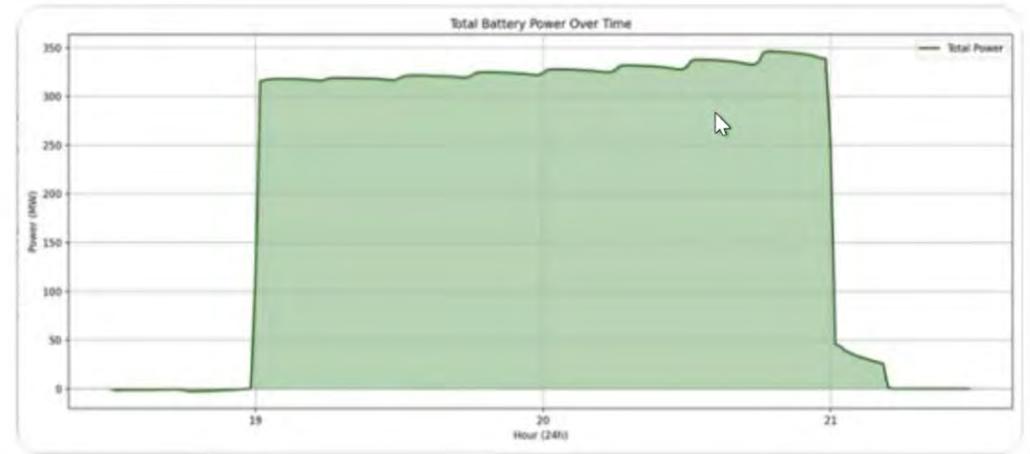
A statewide test showed how California's residential batteries could perform routinely when the sun is going down and the grid is challenged.

AUGUST 6, 2025 **WILLIAM DRISCOLL**

GRIDS & INTEGRATION TECHNOLOGY CALIFORNIA UNITED STATES



Tonight, the Powerwall fleet in California dispatched 345MW to the grid during a Virtual Power Plant event, reducing the need for fossil-fueled peaking plants



10:28 PM · Jun 24, 2025 · **2.5M** Views

403 1.9K 8.1K 349

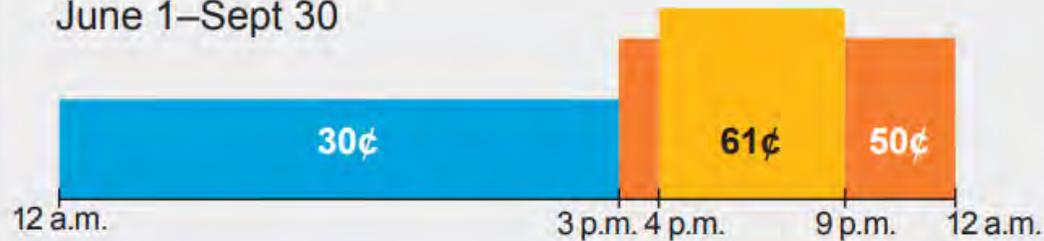
Electric Vehicle (EV) Rate Plans

pge.com/evrates

Home Charging EV2-A

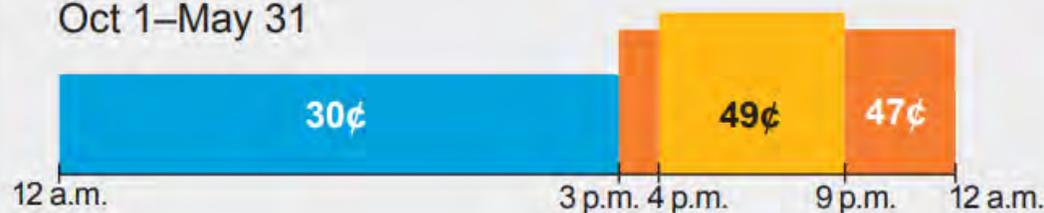
Summer Season

June 1–Sept 30



Winter Season

Oct 1–May 31



Electric Vehicle Rate Plan EV-B

Summer Season

June 1–Sept 30



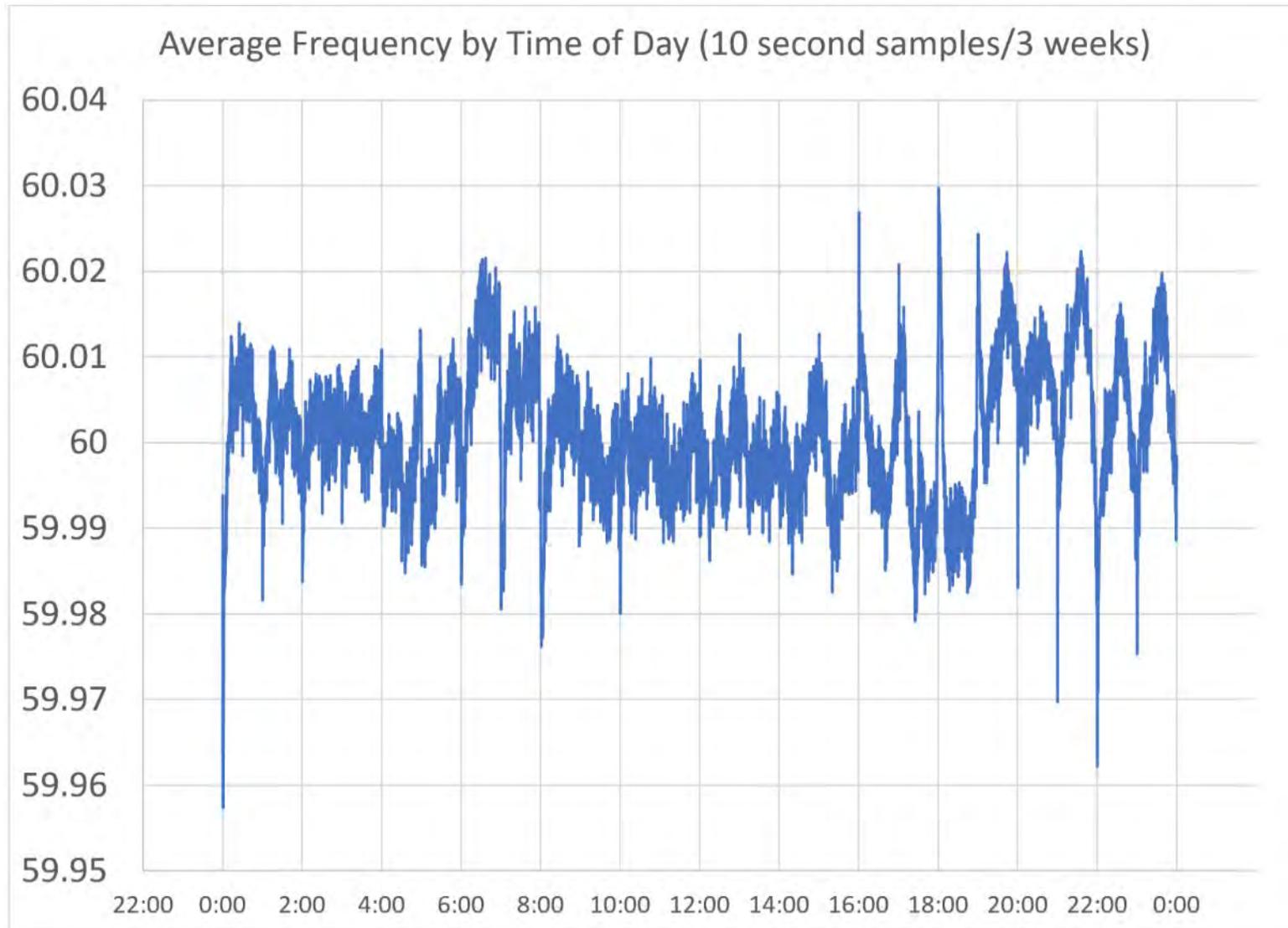
Winter Season

Oct 1–May 31

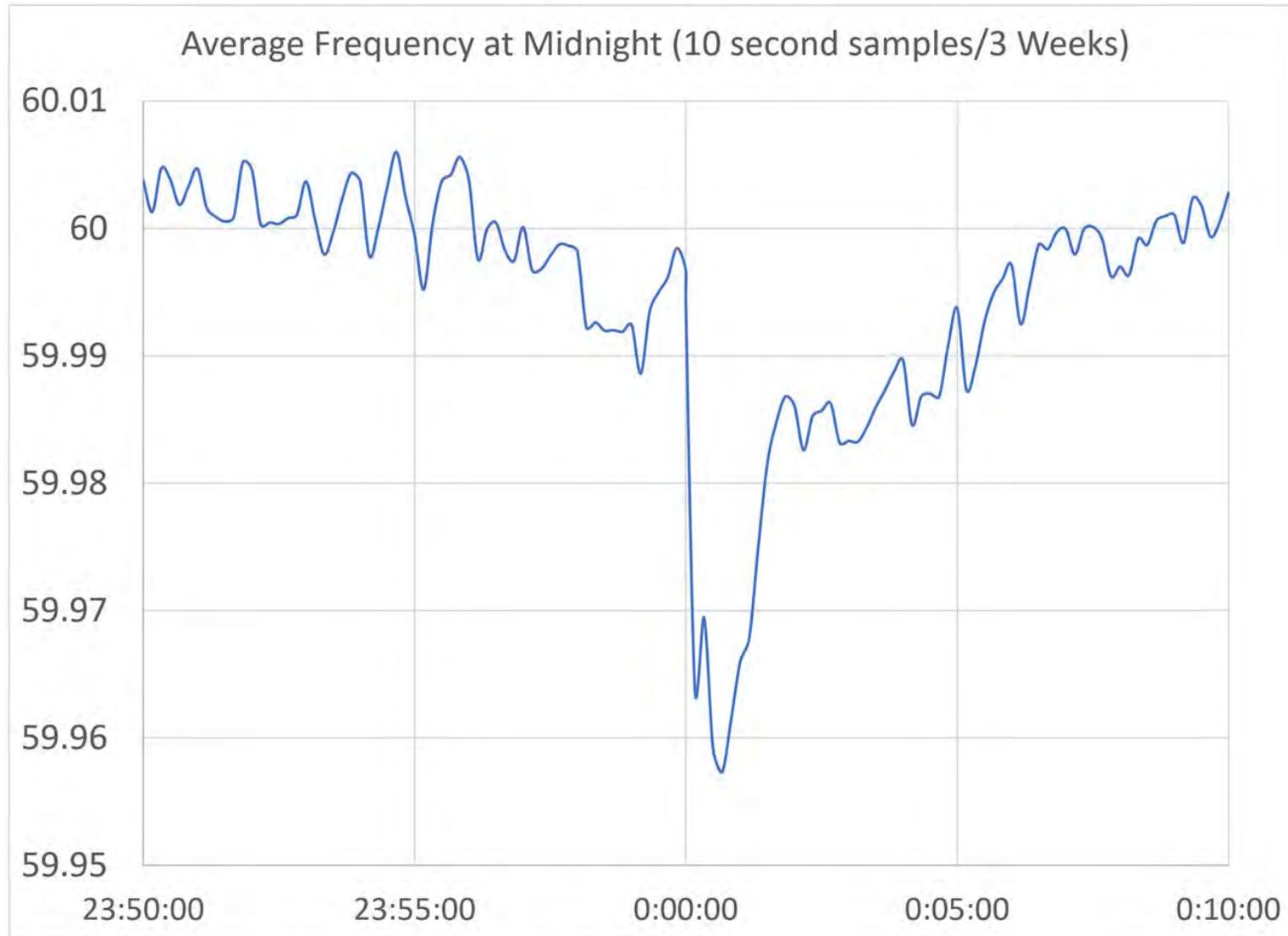


<https://www.pge.com/assets/pge/docs/account/rate-plans/residential-electric-rate-plan-pricing.pdf>

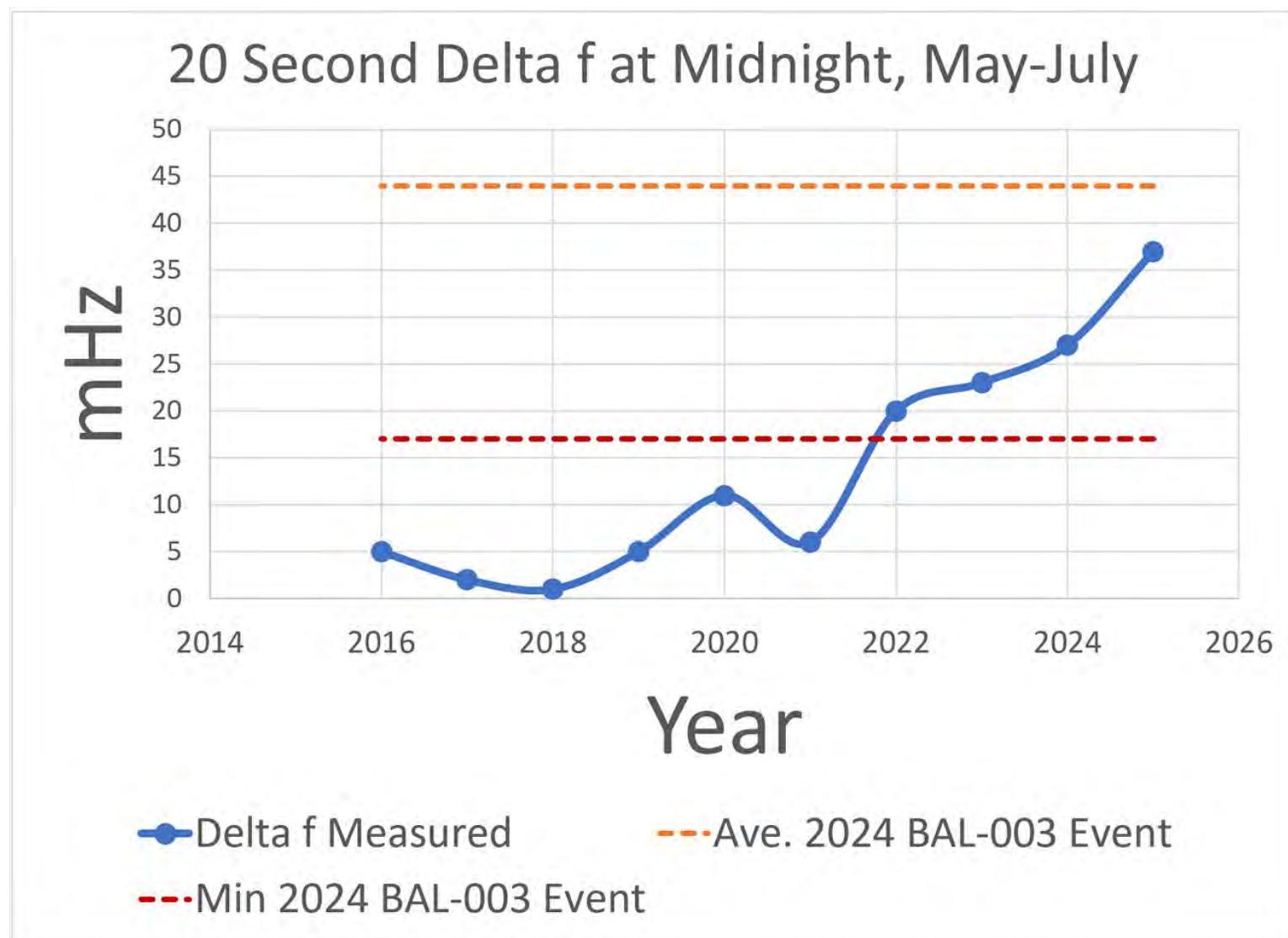
FNET/Grideye Emails



FNET/Grideye Emails

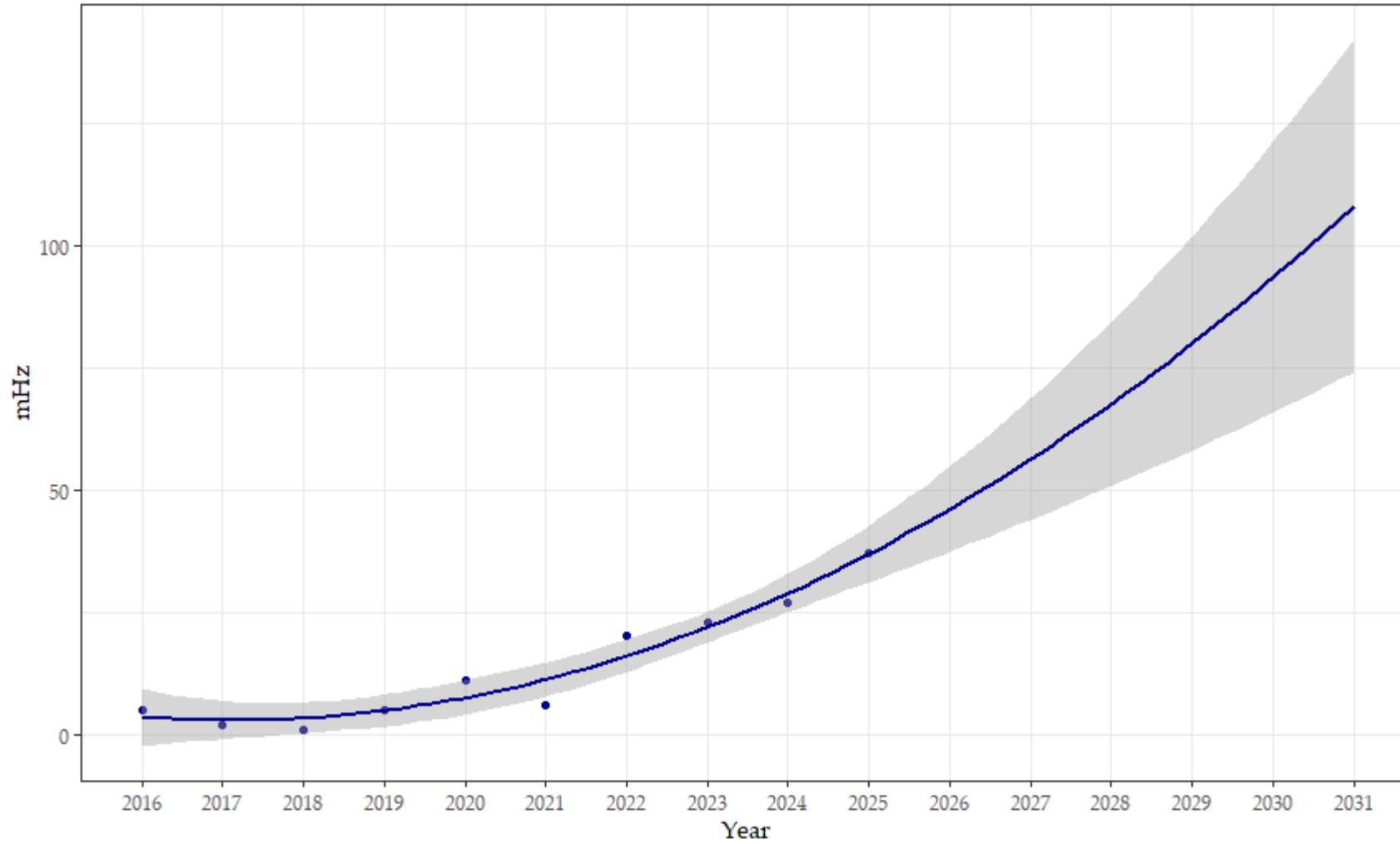


FNET/Grideye Emails



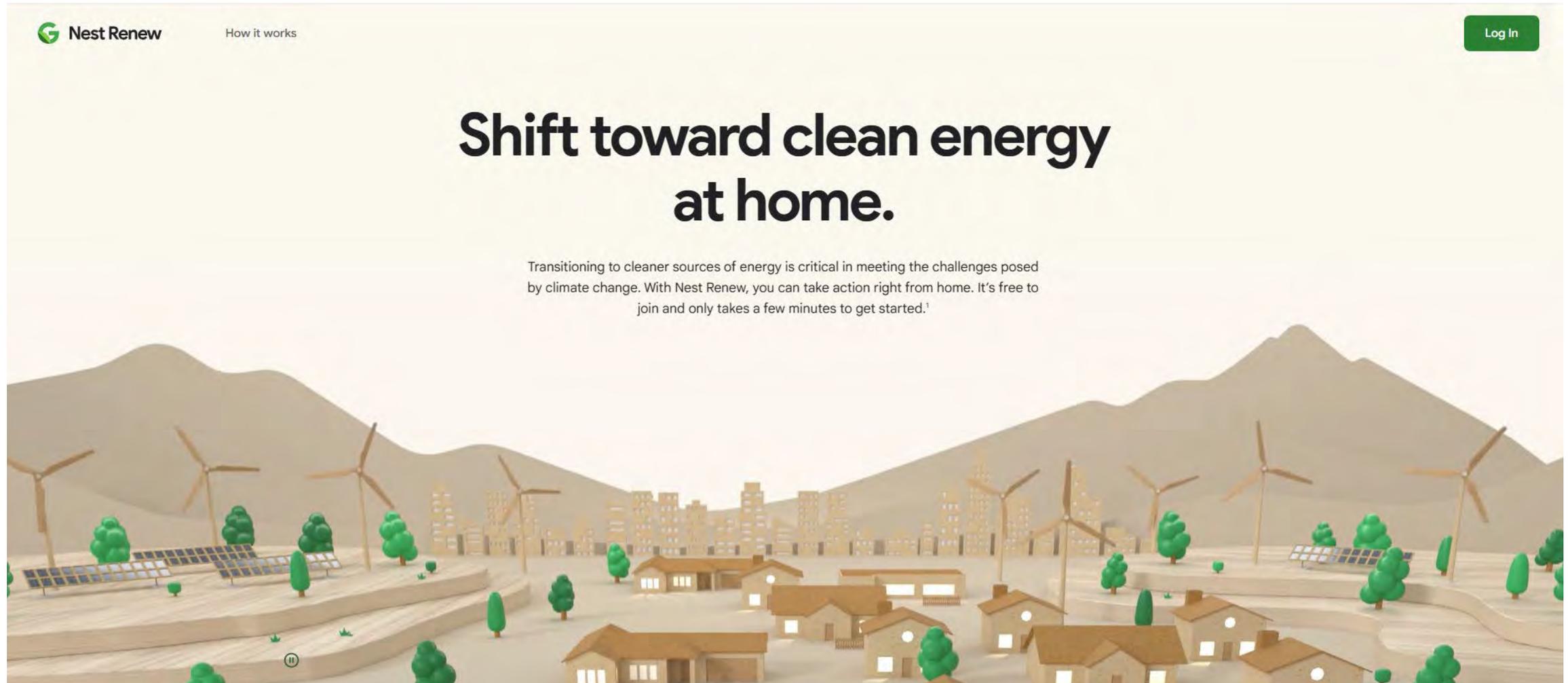
FNET/Grideye Emails

20 Second Delta f at Midnight, May-July



Eastern Interconnection Events.

FNETDATE/Time		Event Day	Event Date	Confirmed MW	Event Description	FNET Estimate
1	17:33:44	Tue	9/2/2025	750	Generation Trip/near Louisa power plant(MRO) in (Muscatine, IA)	820
2	23:59:52	Sun	9/7/2025		Generation Trip/near West County Energy Center power plant(FRCC) in (Loxahatchee, FL)	910
3	23:59:52	Wed	9/10/2025		Generation Trip/	860
4	23:59:51	Wed	9/17/2025		Generation Trip/near Lauderdale power plant(FRCC) in (Ft. Lauderdale, FL)	1100
5	23:59:52	Sun	9/21/2025		Generation Trip/near Fort Myers power plant(FRCC) in (Ft. Myers, FL)	980
6	23:59:52	Tue	9/23/2025		Generation Trip/near Riviera power plant(FRCC) in (Riviera Beach, FL)	840
7	18:46:52	Wed	9/24/2025	753	Generation Trip/near Arkansas Nuclear One power plant(SERC) in (Russellville, AR)	690
8	23:59:52	Thu	9/25/2025		Generation Trip/near Lauderdale power plant(FRCC) in (Ft. Lauderdale, FL)	1100
9	23:59:51	Sat	9/27/2025		Generation Trip/near Lauderdale power plant(FRCC) in (Ft. Lauderdale, FL)	850
10	22:54:59	Sun	9/28/2025		Generation Trip/near Anclote power plant(FRCC) in (Holiday, FL)	850
11	23:59:50	Mon	9/29/2025		Generation Trip/near West County Energy Center power plant(FRCC) in (Loxahatchee, FL)	1300
12	1:28:30	Tue	9/30/2025	1792	Generation Trip/near FirstEnergy Pleasants Power Station power plant(RFC) in (Willow Island, WV)	1700
13	23:59:51	Tue	9/30/2025		Generation Trip/near Turkey Point power plant(FRCC) in (Homestead, FL)	930
14	23:59:54	Wed	10/1/2025		Generation Trip/near Lauderdale power plant(FRCC) in (Ft. Lauderdale, FL)	1000
15	23:59:57	Tue	10/7/2025		Generation Trip/near West County Energy Center power plant(FRCC) in (Loxahatchee, FL)	690
16	17:07:24	Thu	10/9/2025	1014	Generation Trip/near Big Cajun 2 power plant (SERC) in (New Roads, LA)	390
17	0:14:30	Tue	10/14/2025	1057	Generation Trip/near Colbert power plant(SERC) in (Tuscumbia, AL)	1200



[Google's Nest Renew and OhmConnect Combine to Form Renew Home, the Nation's Largest Residential Virtual Power Plant | Utility Dive](#)

Eastern Interconnection Top-of-hour Events

- *Renew already controls nearly 3 GW of electrical energy use and is planning to expand to 50 GW by 2030 – approximately 25% of the total VPP growth recently projected by the U.S. Department of Energy (DOE). DOE [projects that, by tripling the scale of VPPs, we could meet 10–20% of peak electricity demand by 2030](#) – which would avoid \$10 billion in grid costs.
- *News article from May 2024...



ENGAGE WITH WECC





www.wecc.org | 801-582-0353



155 N 400 W, Salt Lake City, Utah 84103, USA