

Q1 2025 Report on Market Issues and Performance

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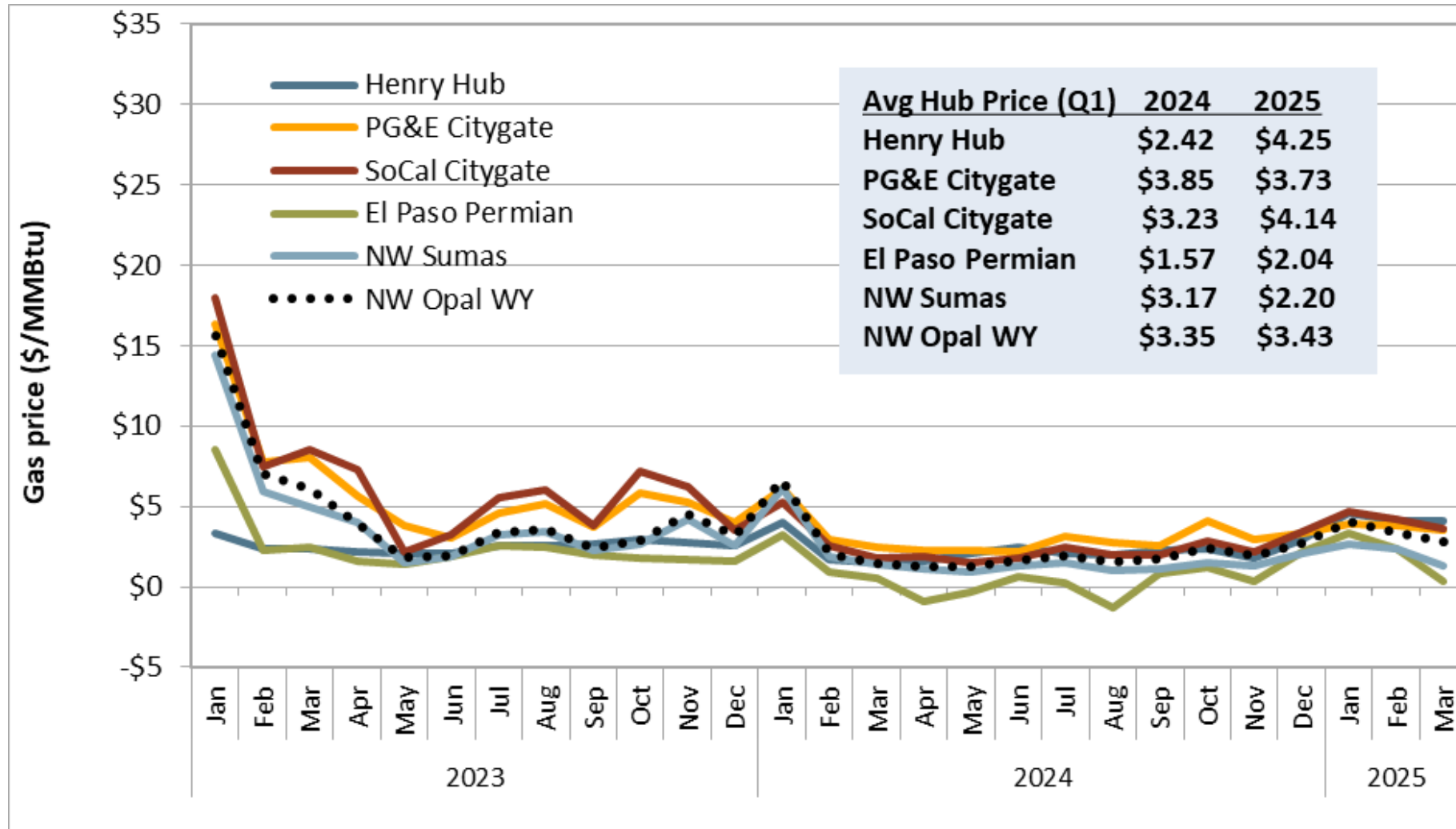
Department of Market Monitoring

June 26, 2025

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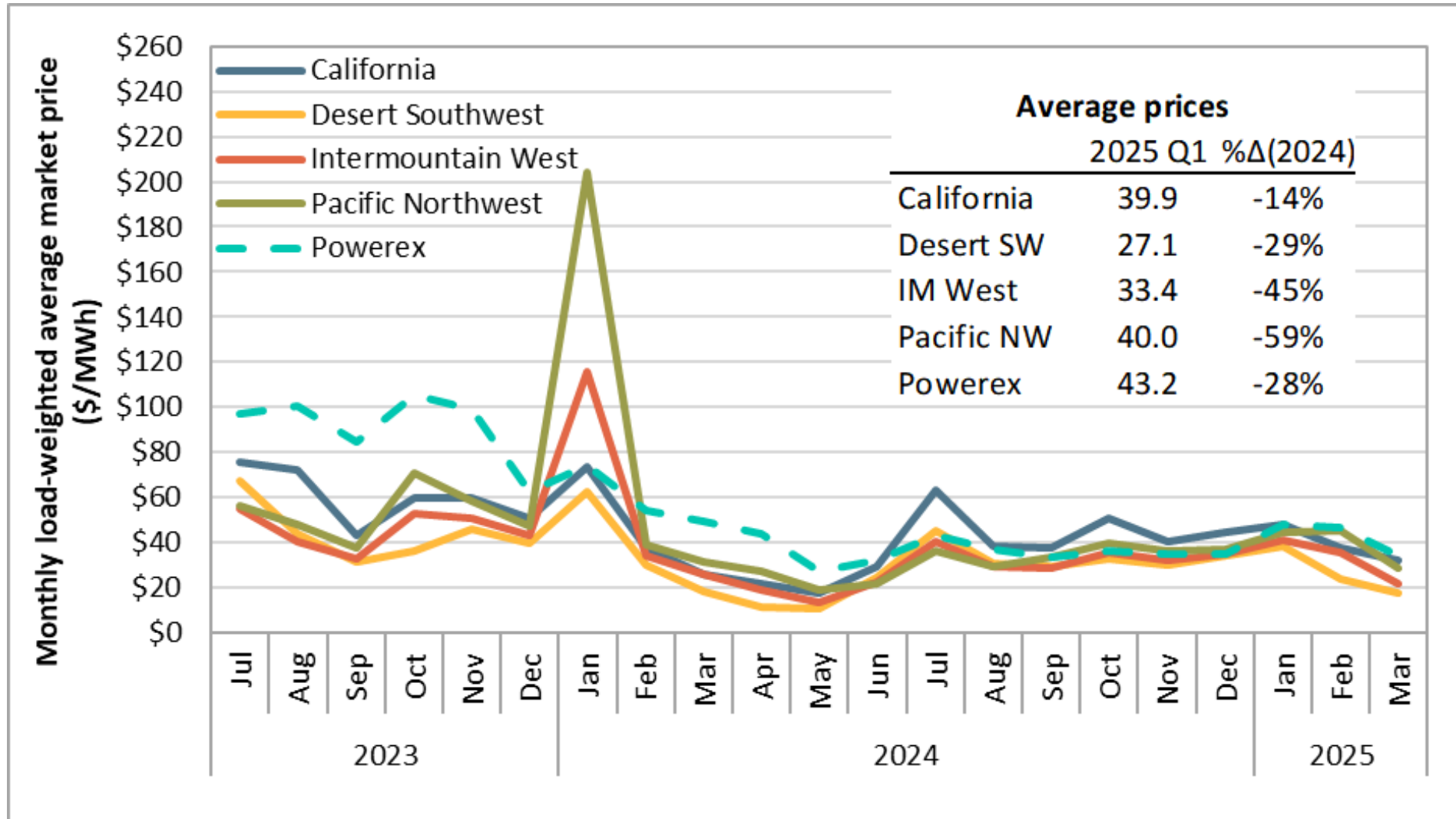
Gas prices down at some hubs and up at others compared to Q1 2024

Average monthly natural gas prices by hub



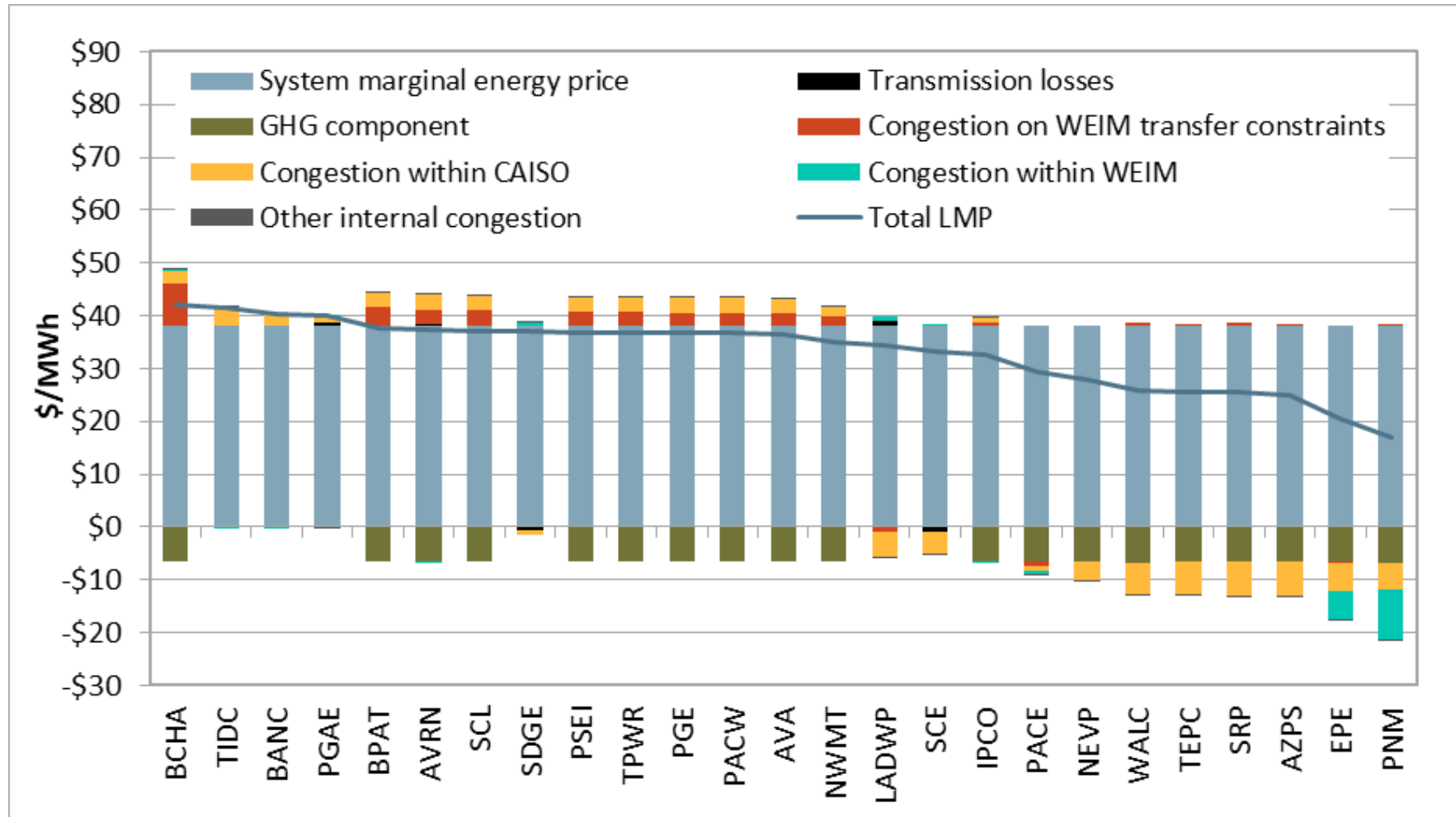
Electricity prices in West down 39% compared to Q1 2024

Weighted average monthly 15-minute market prices by region



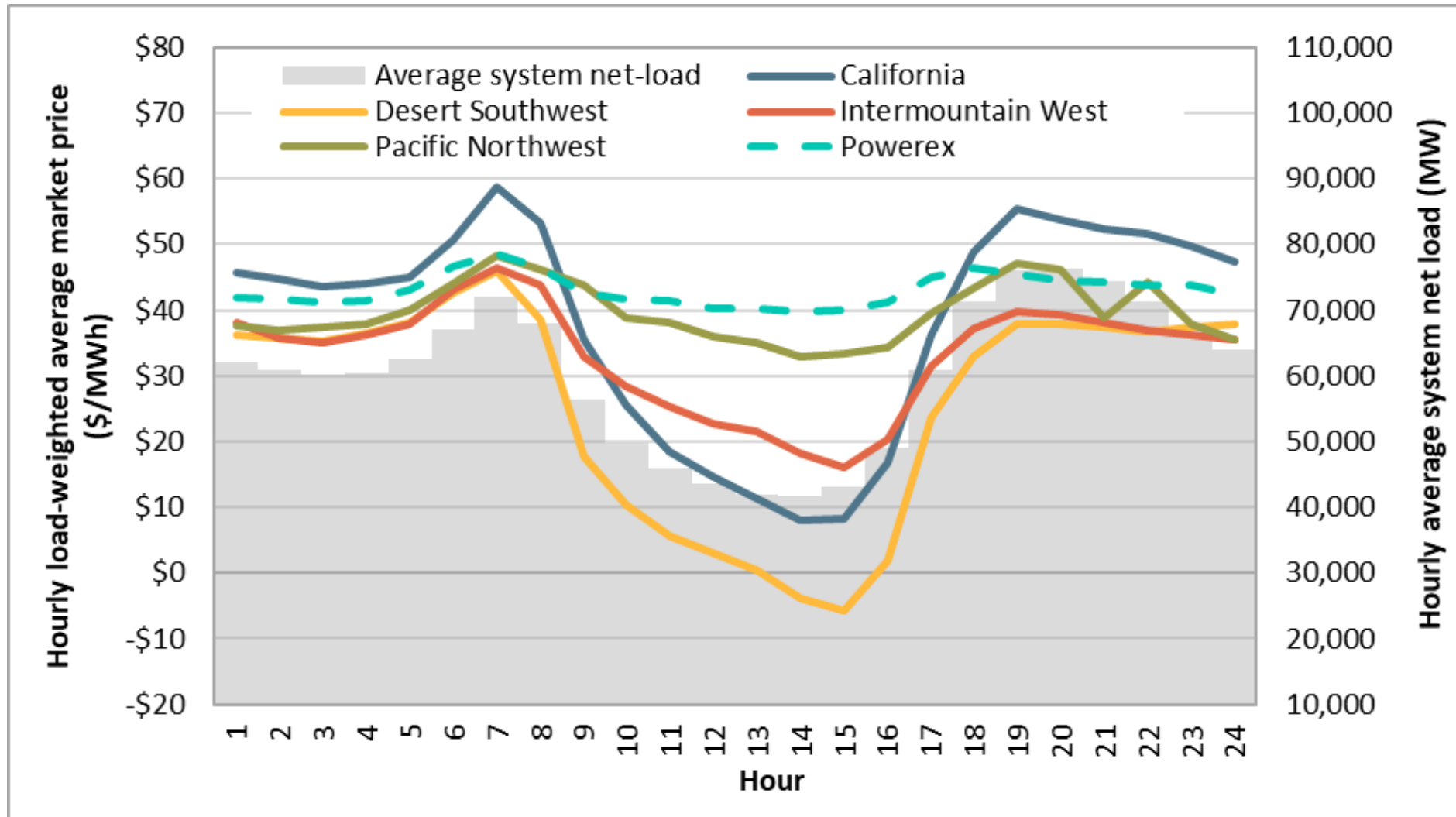
Average price separation driven largely by south-to-north congestion and greenhouse gas costs in California

Average 15-minute market prices by component (January–March 2025)



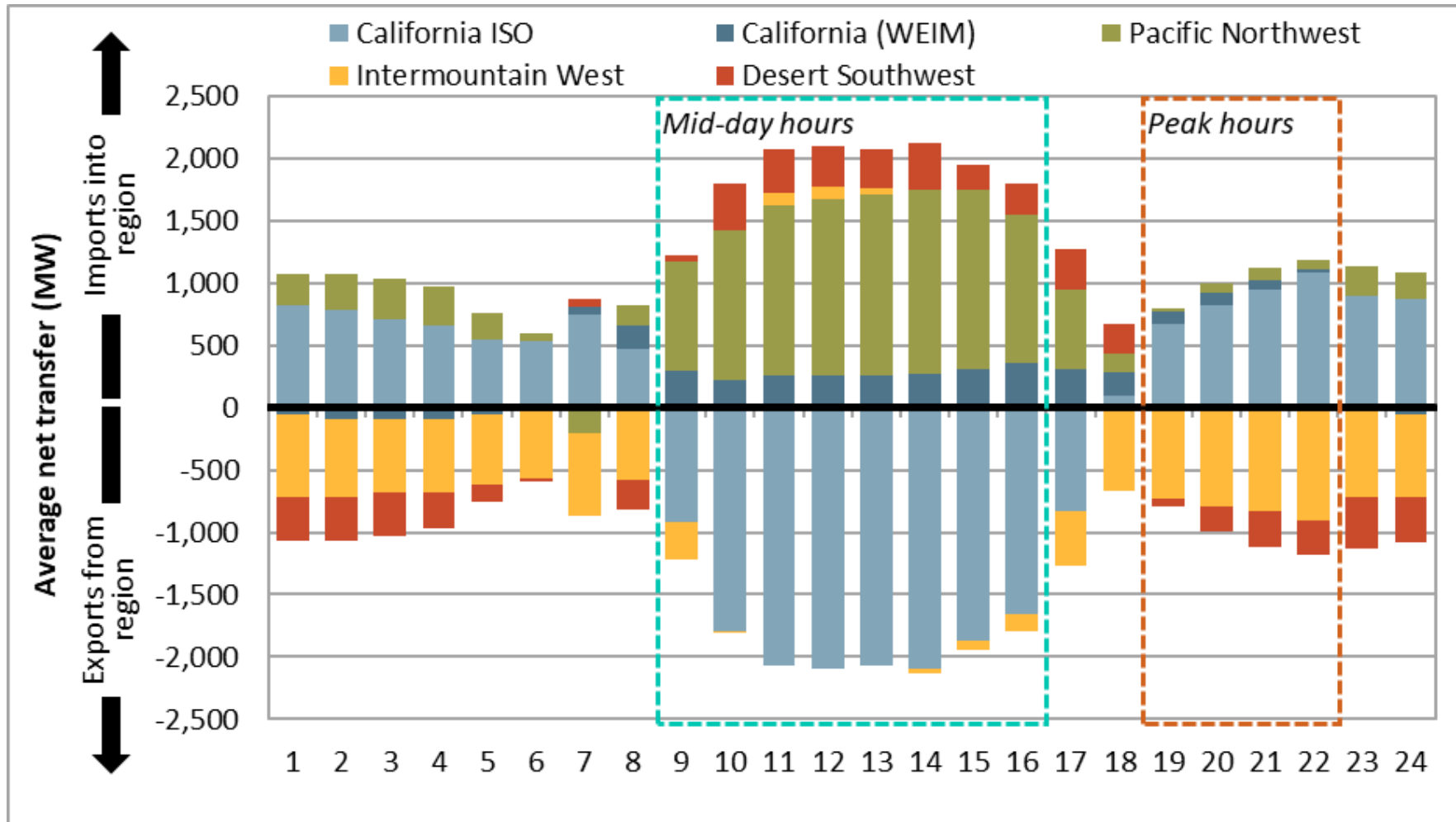
Higher prices in Northwest for solar hours, California for non-solar hours

Weighted average hourly 15-minute market prices by region (January–March 2025)



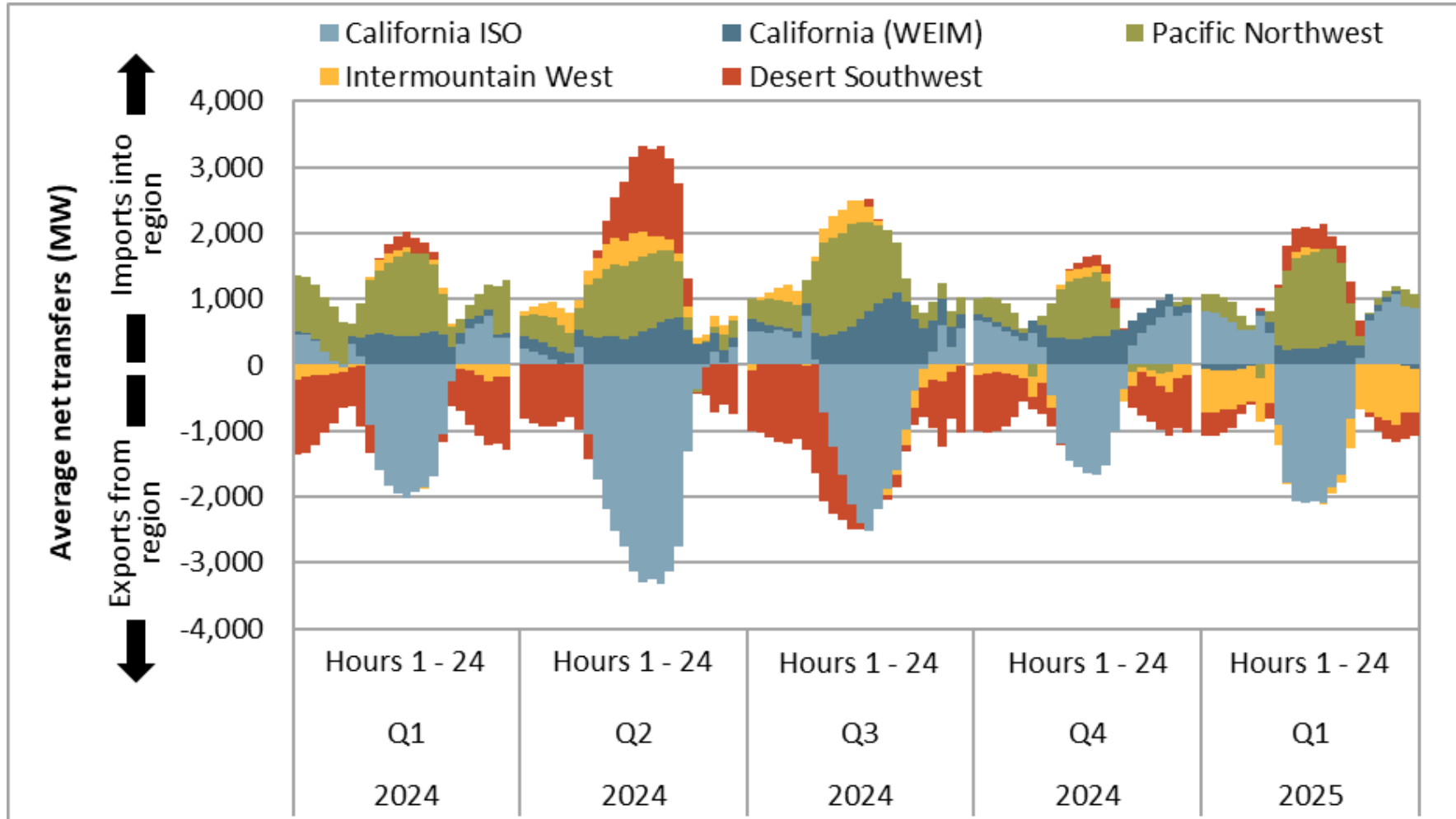
WEIM transfers from CAISO in mid-day hours and from Intermountain West and Desert Southwest in non-solar hours

Average dynamic inter-regional WEIM transfers by hour (5-minute market, January–March 2025)



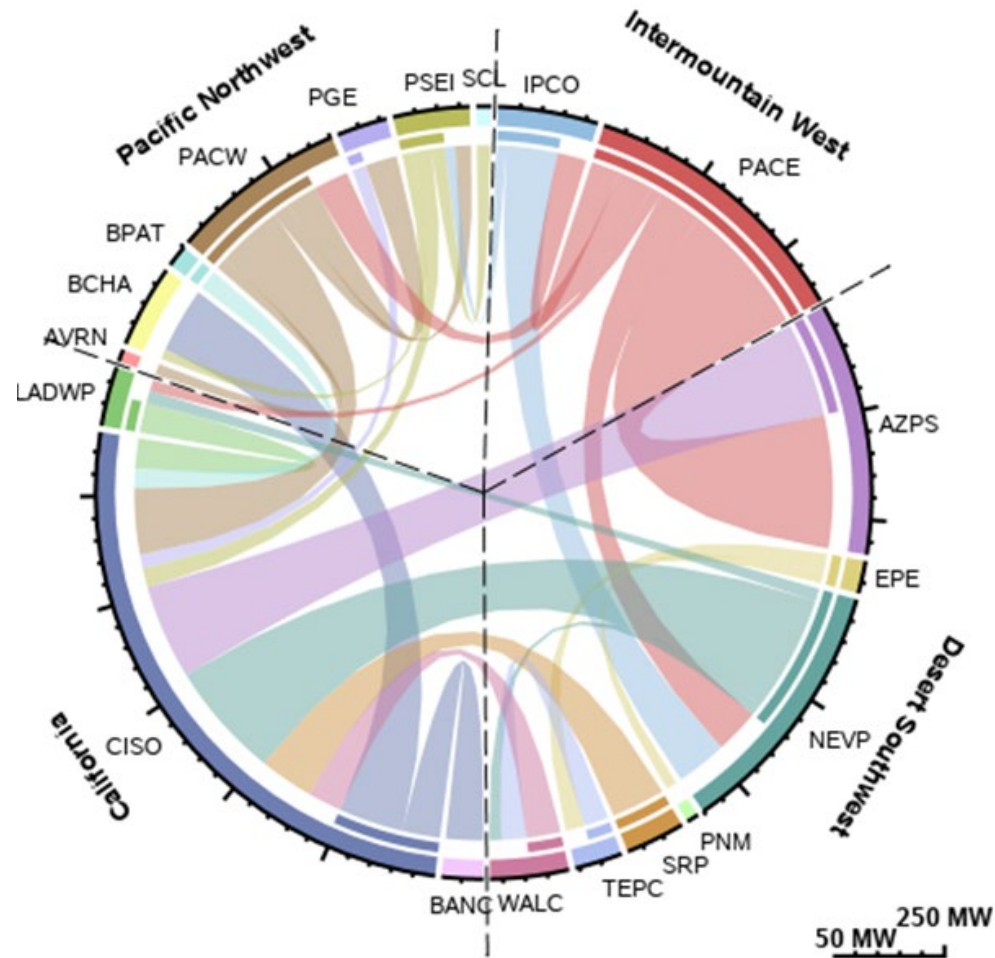
Intermountain West becomes dominant exporter of WEIM transfers during non-solar hours

Average dynamic inter-regional WEIM transfers by hour (5-minute market, Q1 2024–Q1 2025)



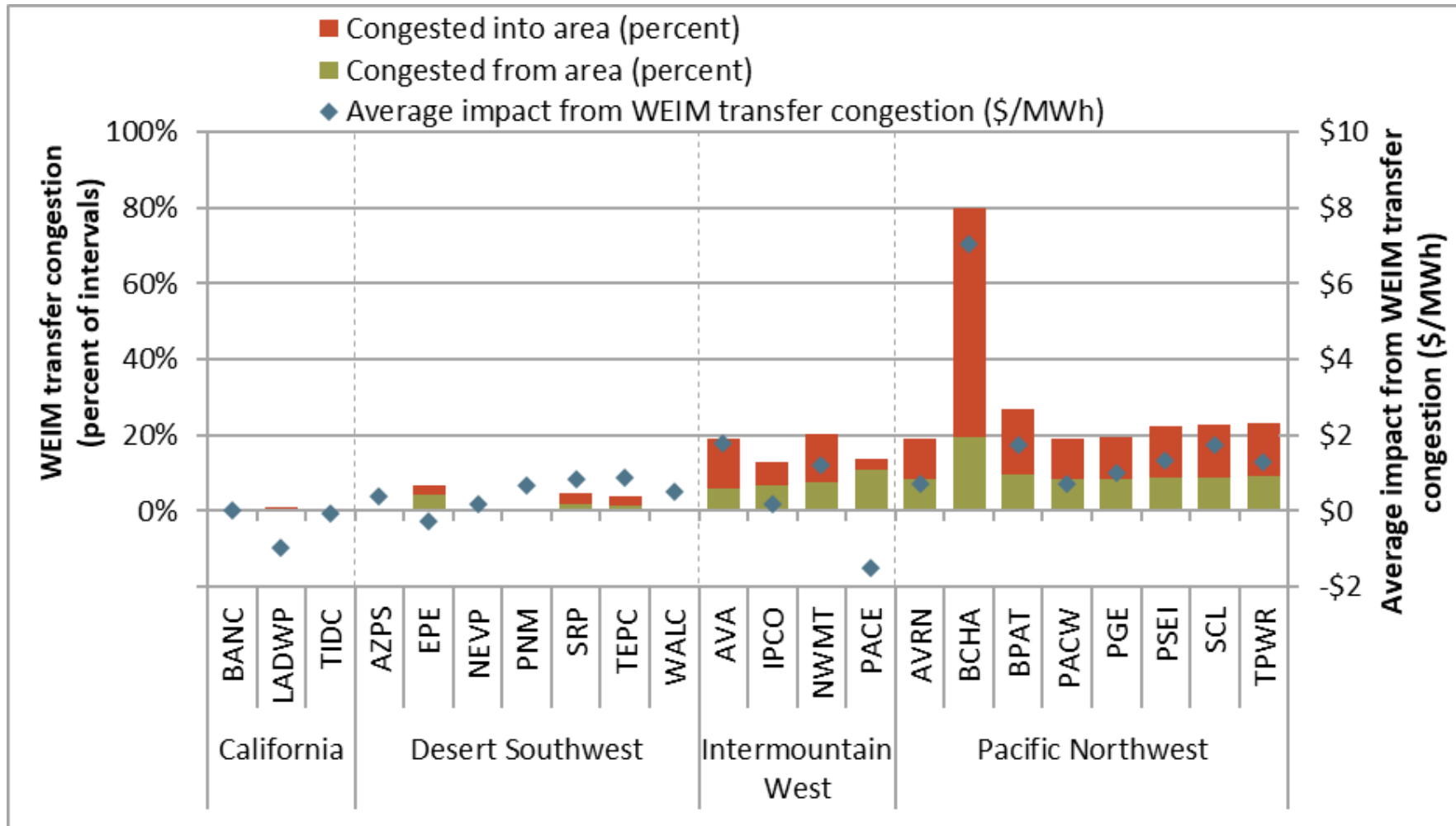
PacEast and Idaho Power main exporters of WEIM transfers during peak hours

Average dynamic WEIM transfers (5-minute market, peak hours 19–22, Q1 2025)



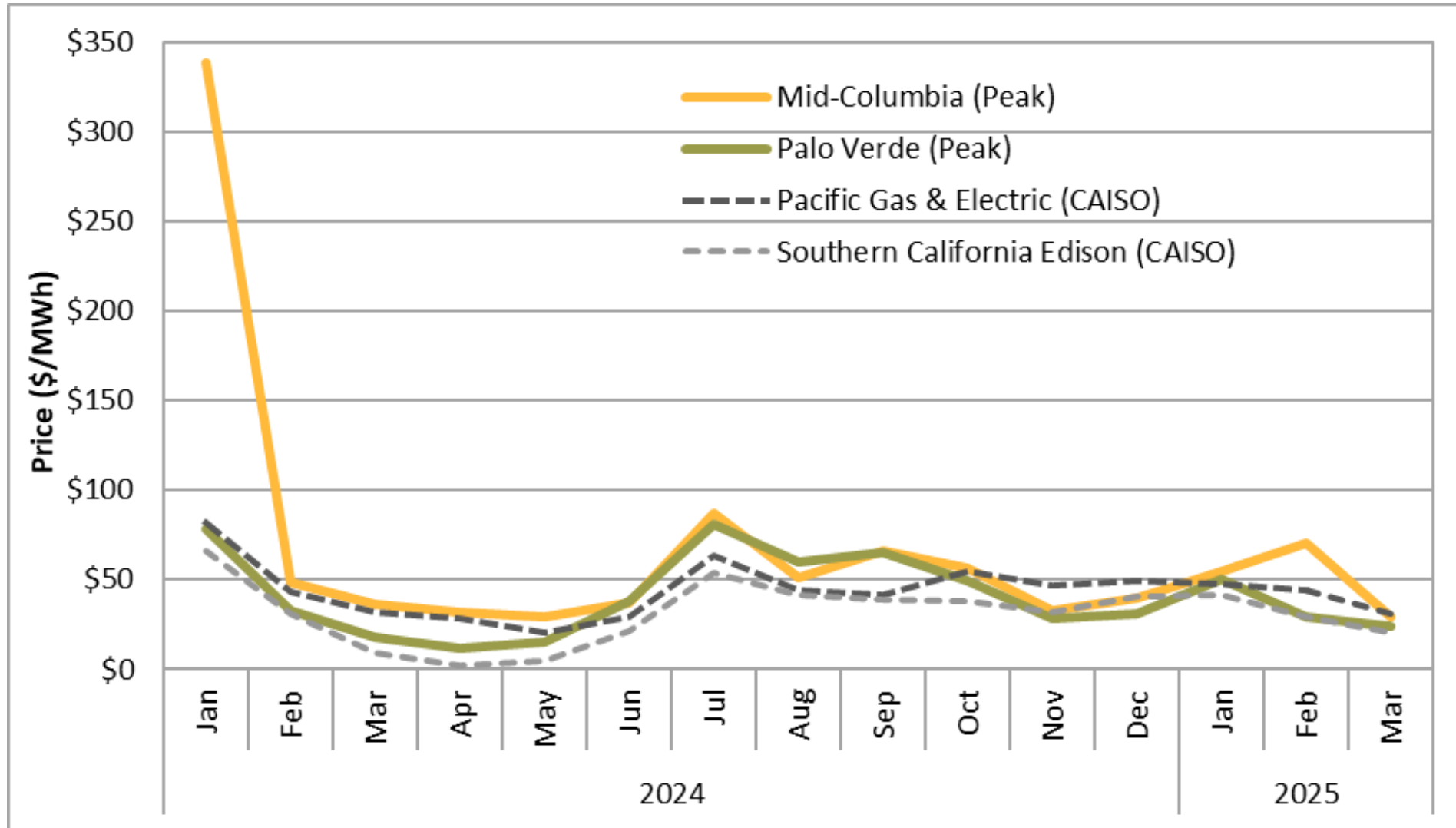
Transfer congestion into or out of most Pacific Northwest and Intermountain West areas in about 20% of 5-minute intervals

Frequency and impact of WEIM transfer congestion in the 5-minute market (Q1 2025)



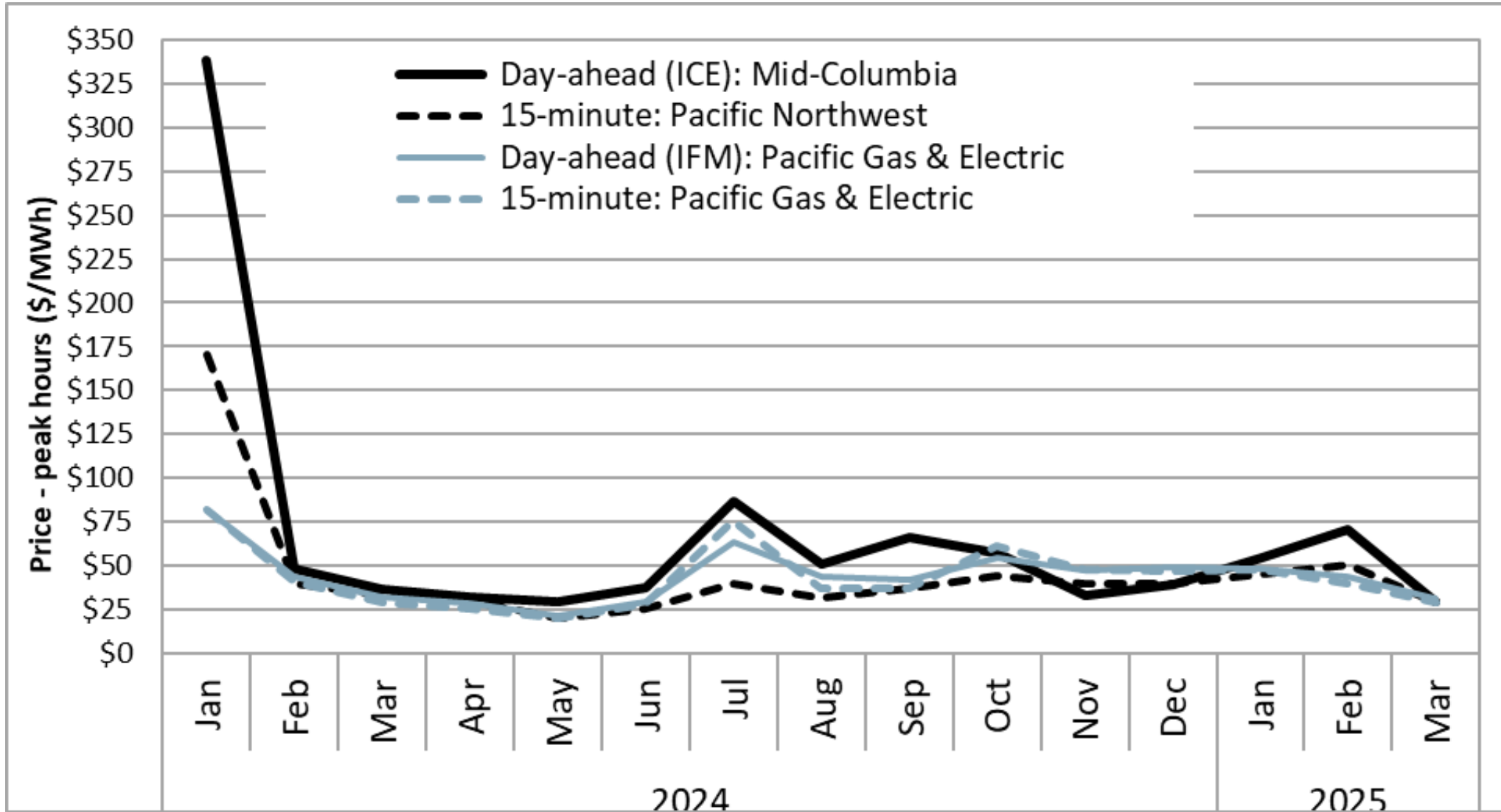
Day-ahead bilateral and ISO prices in north higher than in south

Monthly average day-ahead ISO and bilateral prices (peak hours)



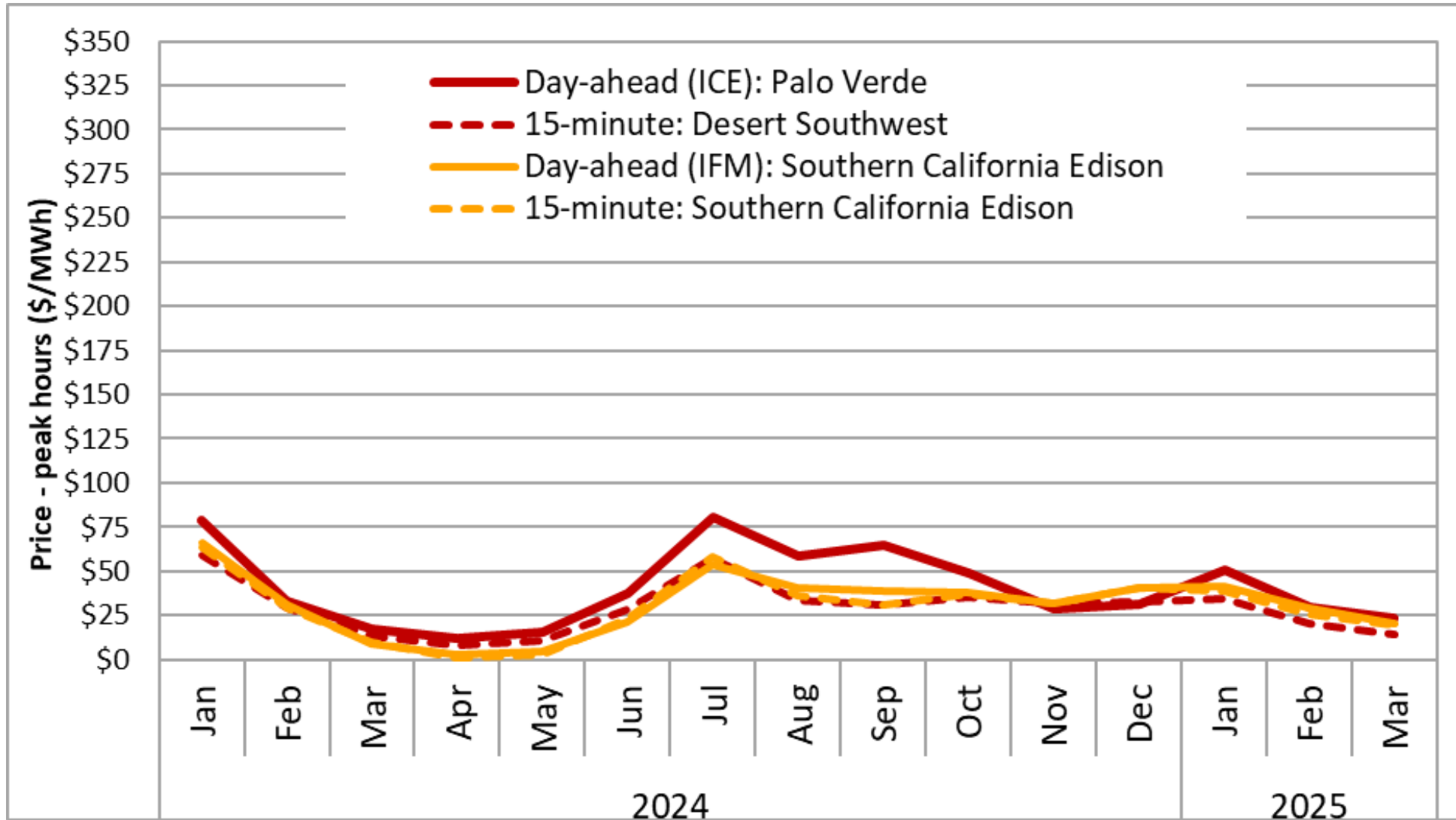
Bilateral day-ahead prices at Mid-C higher than ISO market prices

Mid-C bilateral day-ahead ICE vs. Pacific Northwest 15-minute market prices (peak hours)



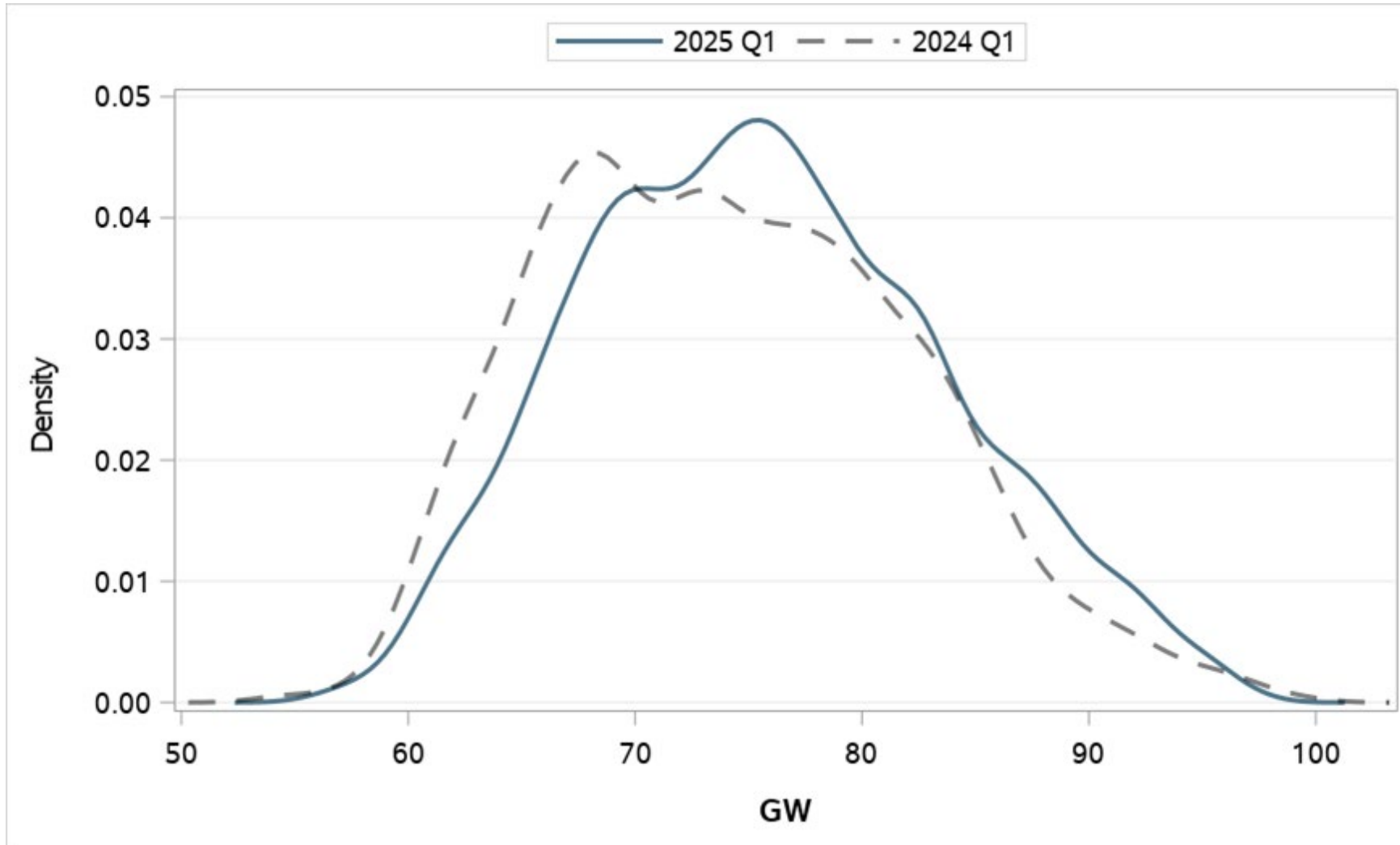
Bilateral day-ahead prices at Palo Verde higher than ISO market prices

Palo Verde bilateral day-ahead ICE vs. Desert Southwest 15-minute market prices (peak hours)



More high load and less low load intervals in Q1 2025 than Q1 2024

Quarterly 5-minute market system load distribution



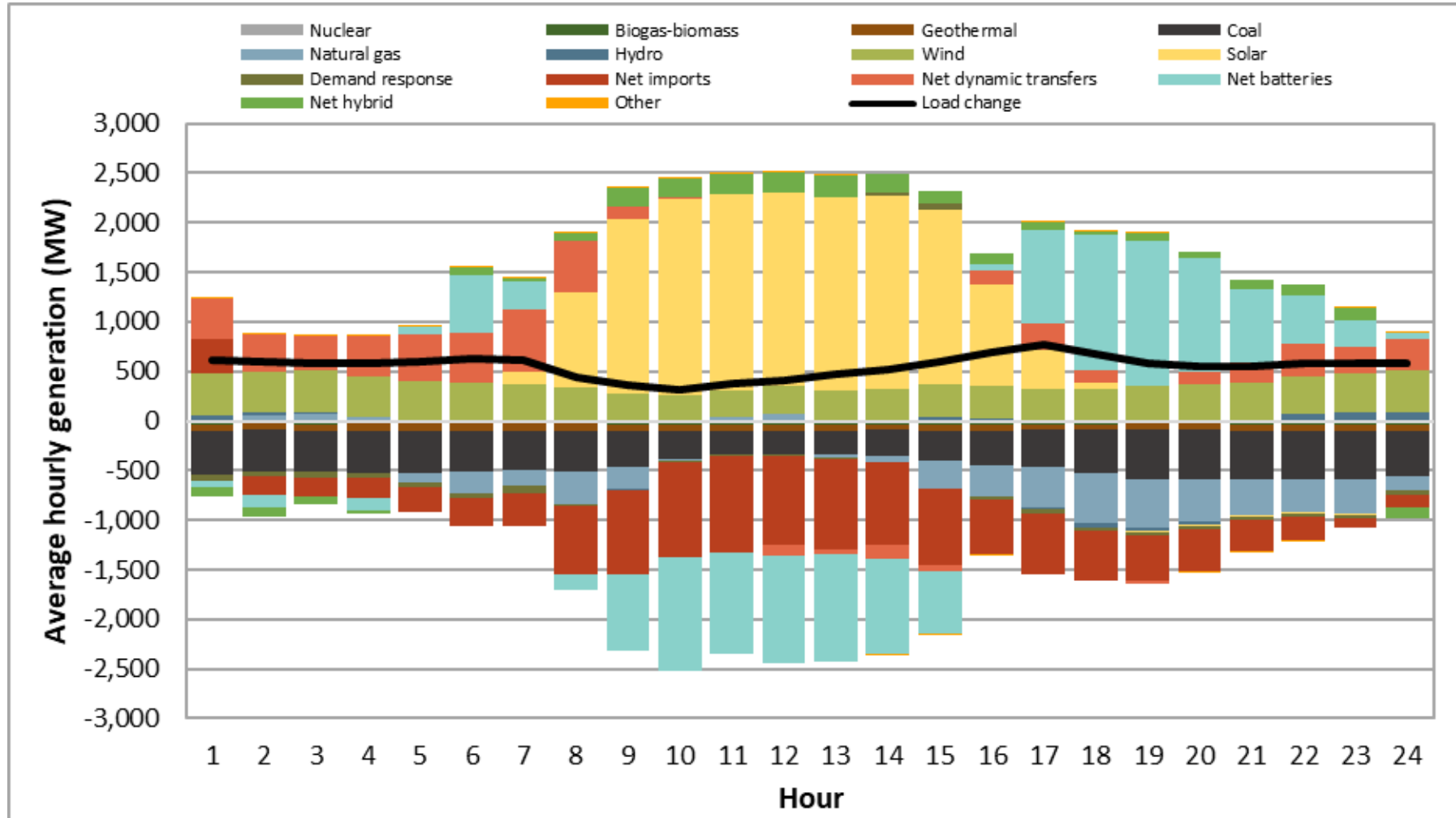
Balancing area peak loads at different times on day of WEIM system peak

Hourly system and BAA load profiles (GW) on the system peak load day (5-minute market, February 12, 2025)

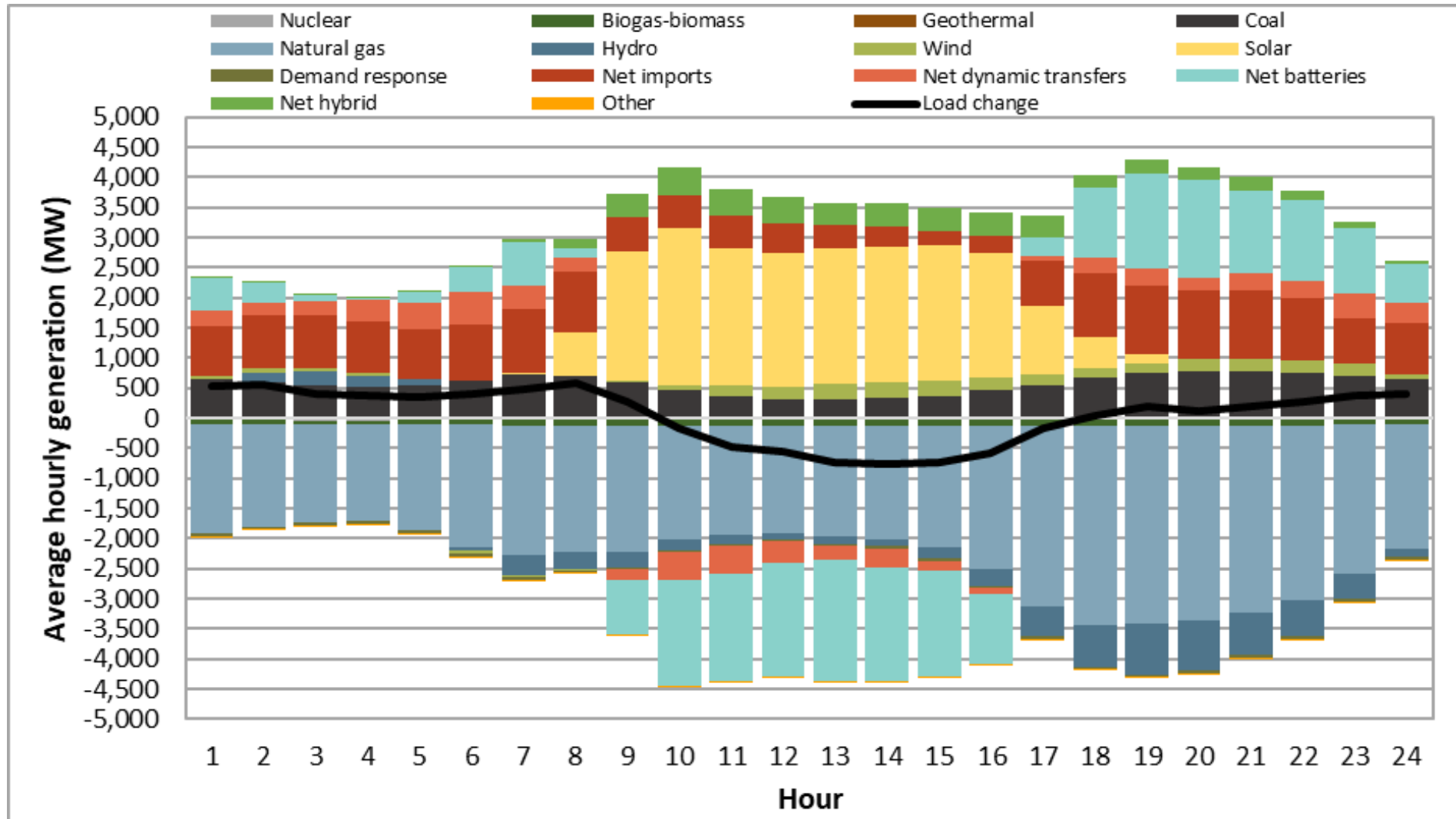
SYSTEM	85.4	92.4	98.2	99.7	98.5	94.6	90.9	87.3	85.4	84.2	84.5	87.6	92.4	98.0	98.4	97.8	96.4	93.5
CAISO	21.4	23.3	25.6	26.3	25.8	24.6	23.8	22.7	22.4	22.3	23.3	24.7	26.3	27.9	28.2	27.6	27.0	26.0
BANC	1.74	1.93	2.15	2.18	2.15	2.08	2.05	2.00	1.85	1.76	1.71	1.81	1.93	2.07	2.08	2.04	2.00	1.93
Turlock ID	.26	.28	.31	.31	.30	.29	.26	.28	.28	.27	.28	.29	.30	.32	.32	.31	.31	.31
LADWP	2.21	2.39	2.61	2.70	2.76	2.90	2.95	2.96	2.98	2.98	2.97	2.97	3.01	3.18	3.20	3.16	3.09	3.01
NV Energy	3.91	4.16	4.28	4.21	4.06	3.85	3.68	3.55	3.48	3.58	3.67	3.97	4.09	4.41	4.43	4.43	4.42	4.34
Arizona PS	3.64	3.96	3.90	3.84	3.62	3.26	3.22	3.10	3.10	3.16	3.33	3.51	3.72	3.93	3.94	3.91	3.86	3.72
Tucson Electric	1.17	1.29	1.28	1.25	1.23	1.04	.89	.83	.86	.84	.93	1.00	1.22	1.27	1.27	1.27	1.23	1.16
Salt River Project	3.15	3.43	3.38	3.35	3.29	3.21	3.23	3.11	3.12	3.16	3.16	3.23	3.41	3.56	3.57	3.56	3.47	3.36
PSC New Mexico	1.65	1.74	1.70	1.69	1.59	1.50	1.46	1.43	1.43	1.45	1.53	1.70	1.79	1.82	1.80	1.81	1.77	1.70
WAPA - Desert SW	.63	.69	.67	.67	.66	.64	.60	.57	.58	.56	.56	.57	.61	.63	.62	.66	.65	.61
El Paso Electric	.79	.85	.83	.84	.87	.83	.83	.83	.82	.79	.84	.87	.93	.98	.98	.97	.94	.88
PacifiCorp East	6.45	6.84	7.01	7.04	6.94	6.81	6.63	6.47	6.33	6.28	6.36	6.48	6.81	7.05	7.02	7.00	6.86	6.68
Idaho Power	2.67	2.86	2.94	2.91	2.84	2.73	2.60	2.52	2.46	2.41	2.39	2.43	2.55	2.73	2.74	2.76	2.71	2.62
NorthWestern	1.81	1.96	1.95	1.97	1.95	1.91	1.85	1.82	1.79	1.76	1.75	1.77	1.90	1.94	1.94	1.93	1.89	1.84
Avista Utilities	1.92	2.05	2.19	2.22	2.21	2.14	2.05	1.97	1.90	1.85	1.77	1.78	1.89	2.01	2.02	2.02	2.00	1.95
BPA	9.78	10.54	11.21	11.42	11.34	10.84	10.10	9.56	9.13	8.77	8.40	8.48	8.84	9.42	9.53	9.60	9.60	9.43
Tacoma Power	.75	.83	.88	.90	.91	.88	.82	.80	.78	.74	.69	.70	.73	.79	.79	.80	.79	.78
PacifiCorp West	3.47	3.81	4.14	4.20	4.15	3.92	3.66	3.42	3.25	3.14	3.02	3.06	3.23	3.54	3.55	3.56	3.54	3.45
Portland GE	3.19	3.47	3.80	3.89	3.84	3.66	3.45	3.35	3.25	3.19	3.15	3.28	3.44	3.69	3.72	3.73	3.69	3.60
Puget Sound Energy	4.09	4.45	4.84	4.98	4.96	4.77	4.50	4.25	4.09	3.92	3.77	3.83	4.06	4.34	4.38	4.38	4.36	4.27
Seattle City Light	1.43	1.55	1.73	1.78	1.79	1.74	1.65	1.59	1.53	1.49	1.42	1.43	1.48	1.58	1.58	1.58	1.57	1.54
Powerex	9.34	9.94	10.74	11.07	11.23	10.92	10.63	10.23	10.09	9.86	9.56	9.70	10.18	10.79	10.79	10.77	10.59	10.31
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

Change in average hourly generation by fuel type in the Desert Southwest region

Q1 2025 vs. Q1 2024

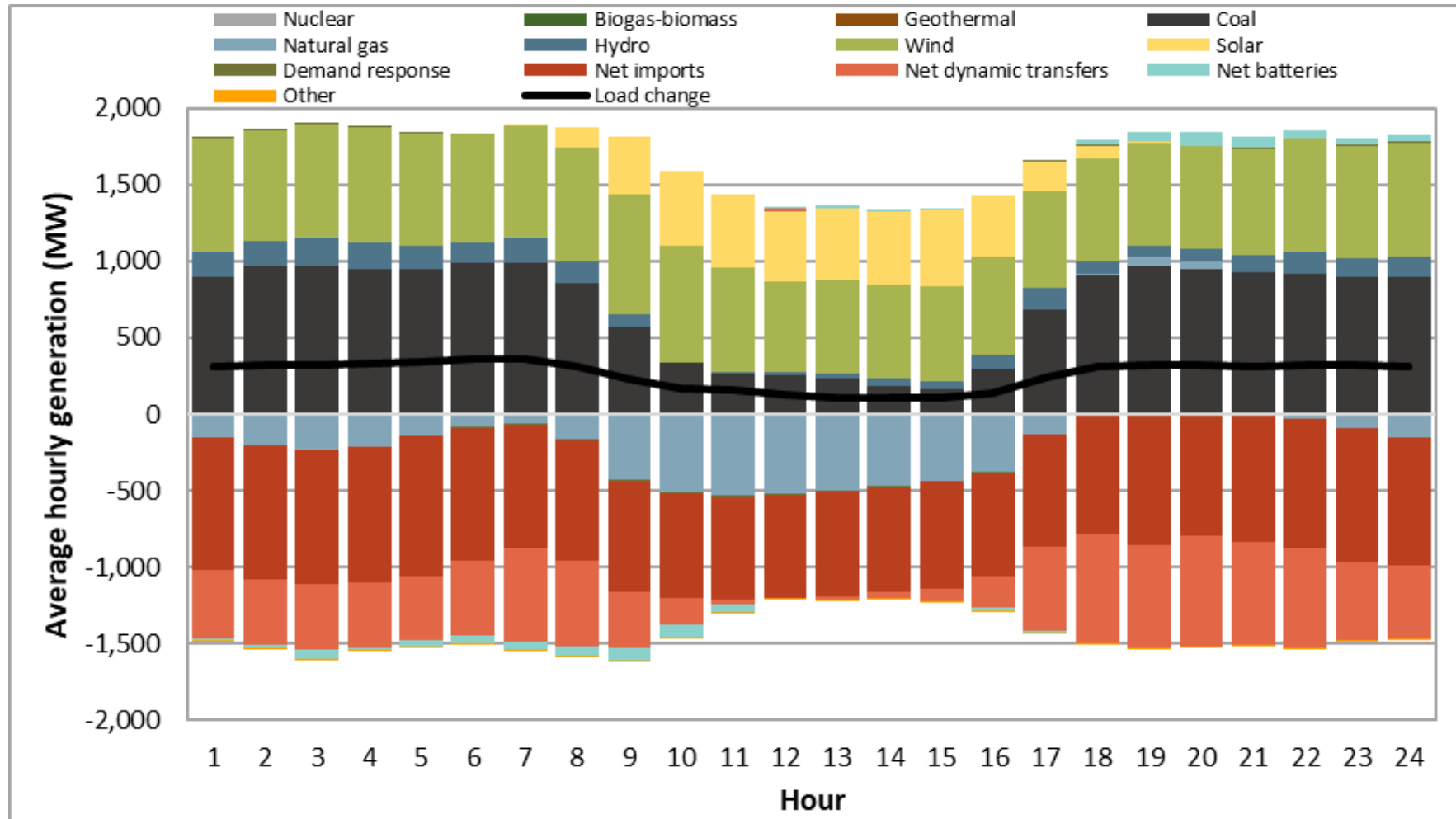


Change in average hourly generation by fuel type in the California region Q1 2025 vs. Q1 2024



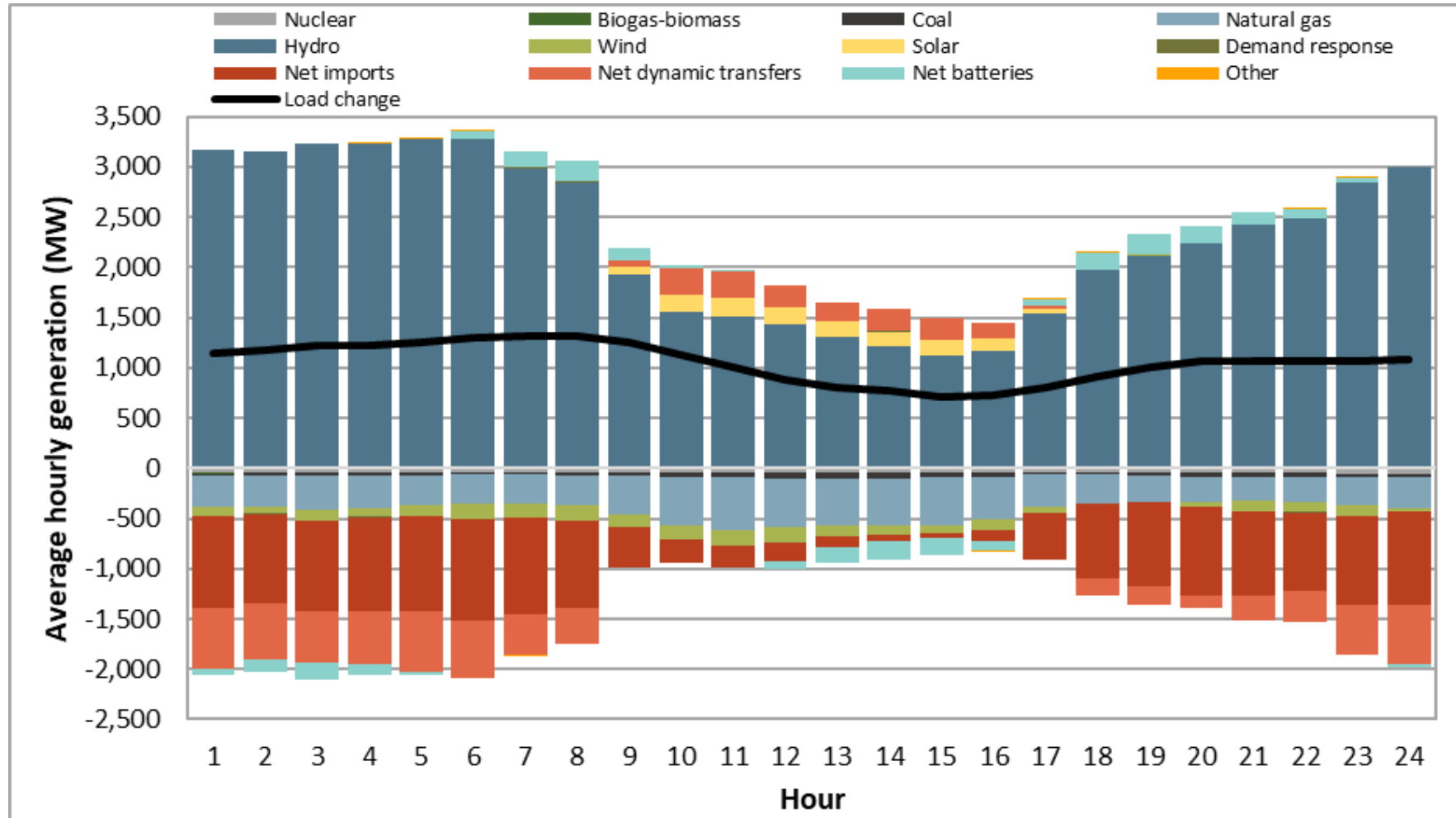
Change in average hourly generation by fuel type in the Intermountain West region

Q1 2025 vs. Q1 2024



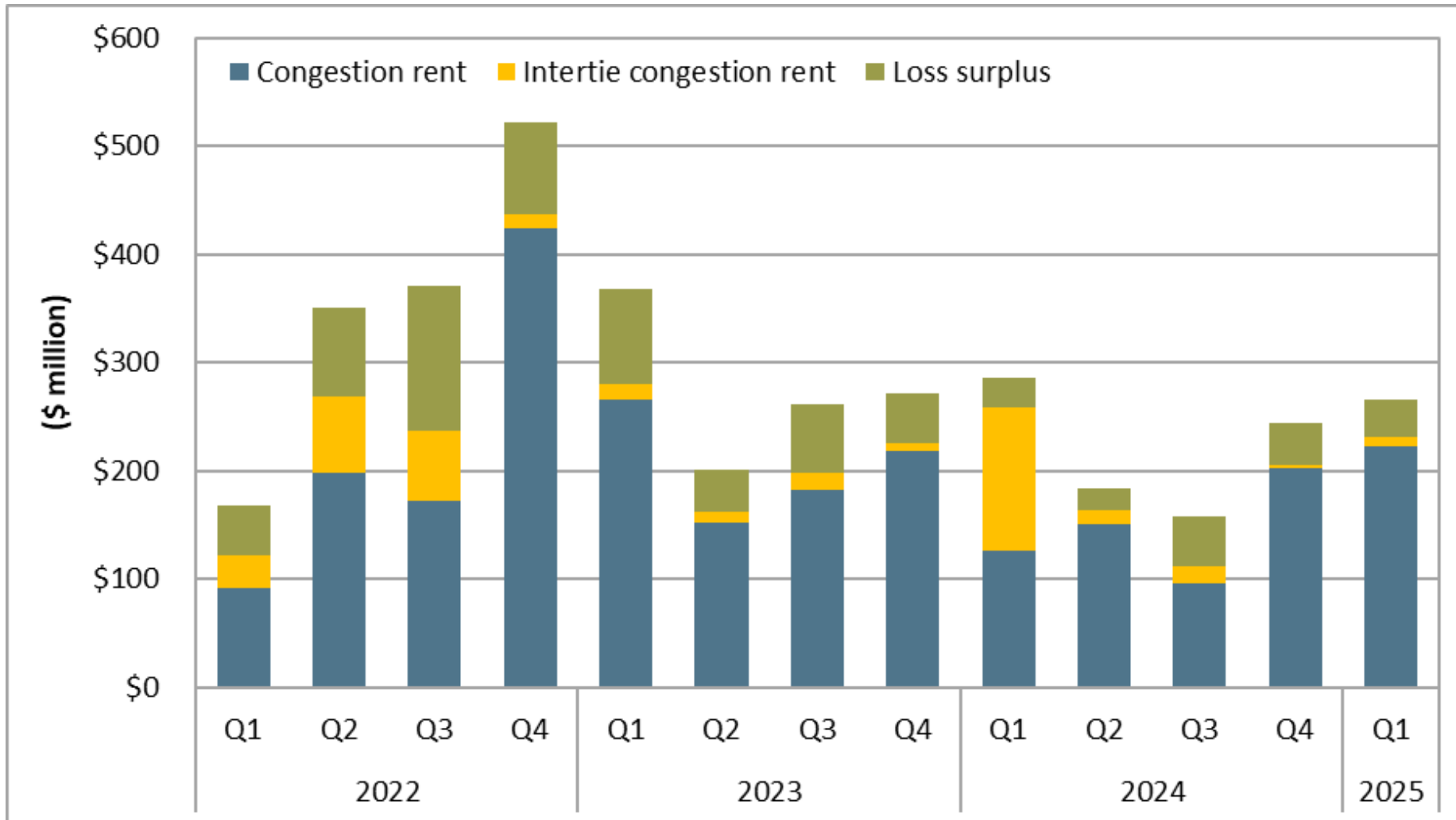
Change in average hourly generation by fuel type in the Pacific Northwest region

Q1 2025 vs. Q1 2024



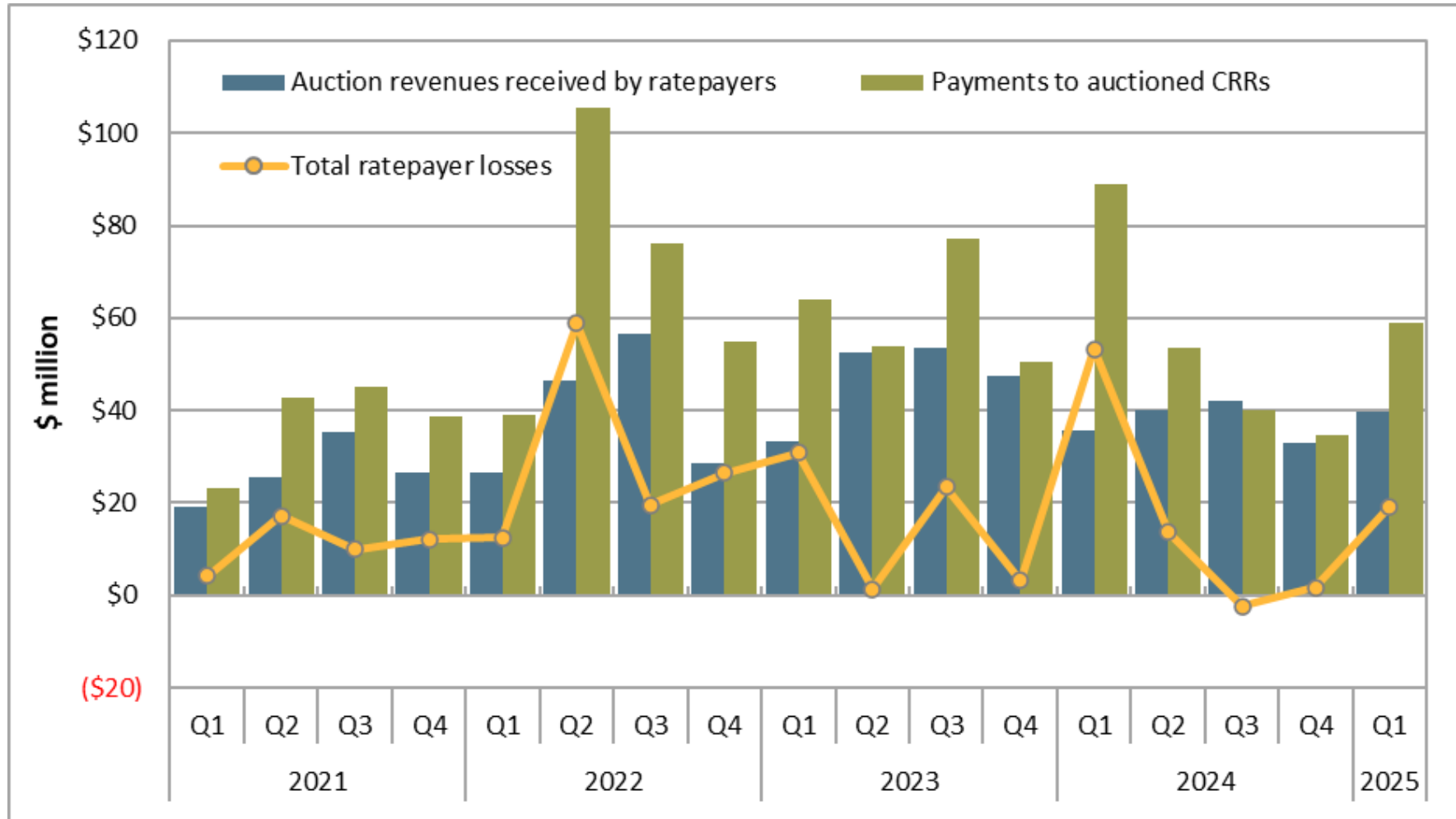
Congestion rent down due to large decrease in intertie congestion rent

Day-ahead congestion rent and loss surplus by quarter (2022–2025)



Transmission ratepayers lost about \$19.3 million from auctioned CRRs in Q1 2025

Auction revenues and payments to non-load serving entities



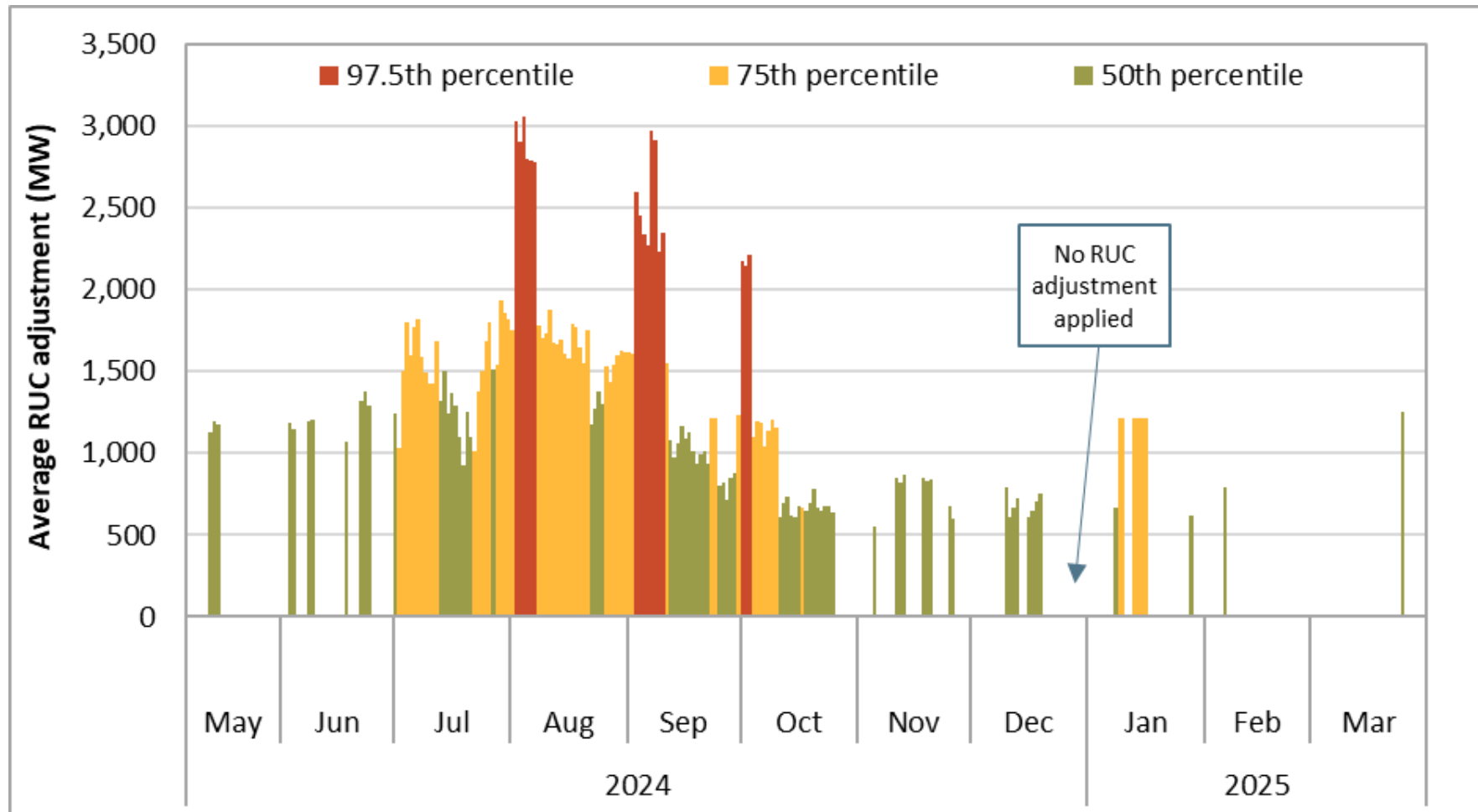
Assistance energy transfers increased WEIM transfers for seven entities

Resource sufficiency evaluation failures during assistance energy transfer opt-in

Balancing area	RSE failures under AET (15-min. intervals)	Total WEIM imports added (MWh)	Total cost of assistance energy transfers	Total cost per added WEIM imports
Avangrid	17	46	\$27,372	\$595
Idaho Power	12	119	\$91,895	\$774
NV Energy	5	176	\$54,763	\$312
NorthWestern Energy	37	198	\$4,738	\$24
PacifiCorp East	6	147	\$48,343	\$330
PacifiCorp West	30	96	\$91,170	\$947
PSC of New Mexico	12	551	\$326,185	\$591

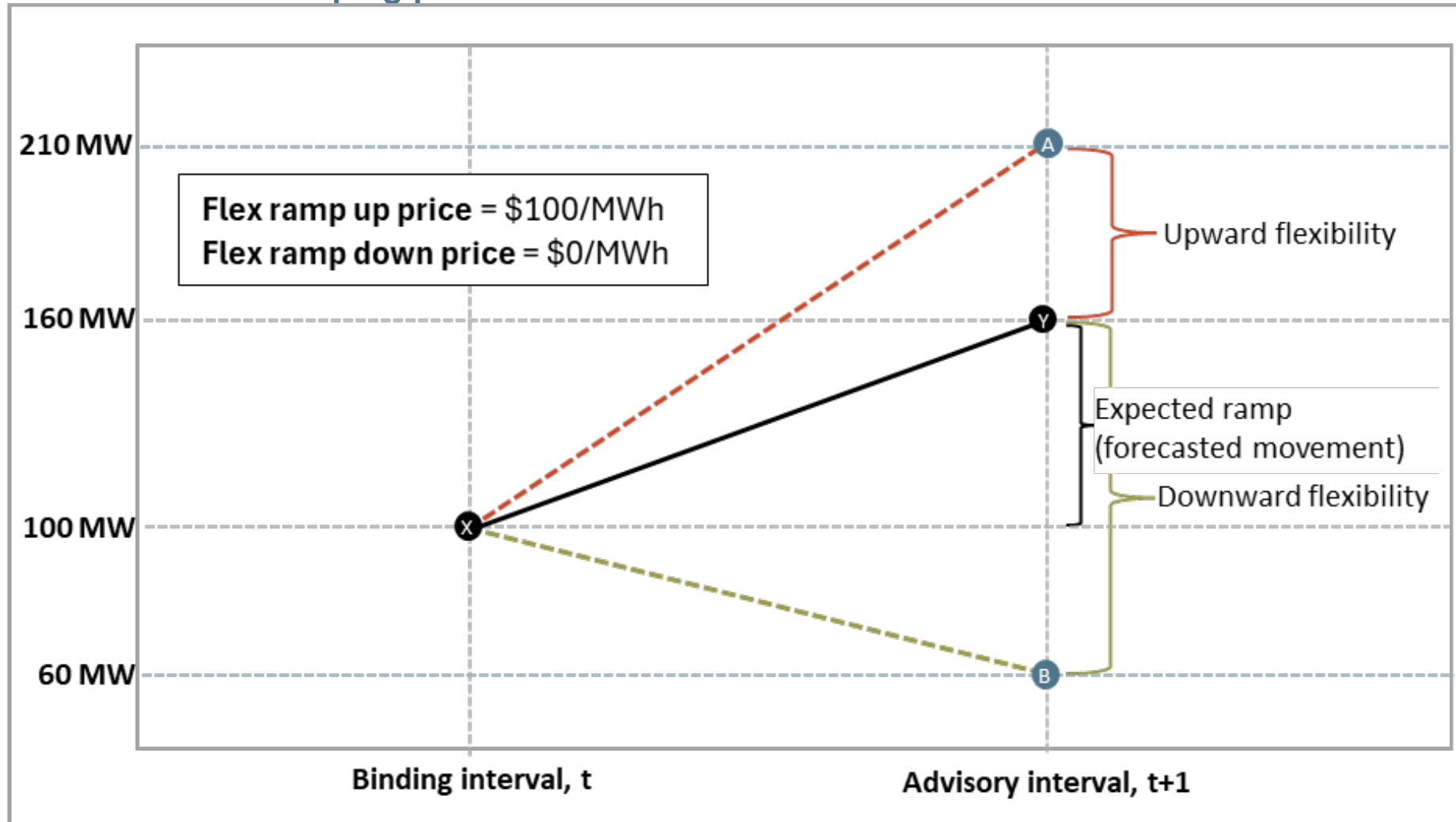
CAISO RUC adjustment targeted covering 97.5th percentile of uncertainty on 0 days in Q1 2025

Average residual unit commitment adjustment by day (peak morning and evening hours, May 7, 2024–March 31, 2025)



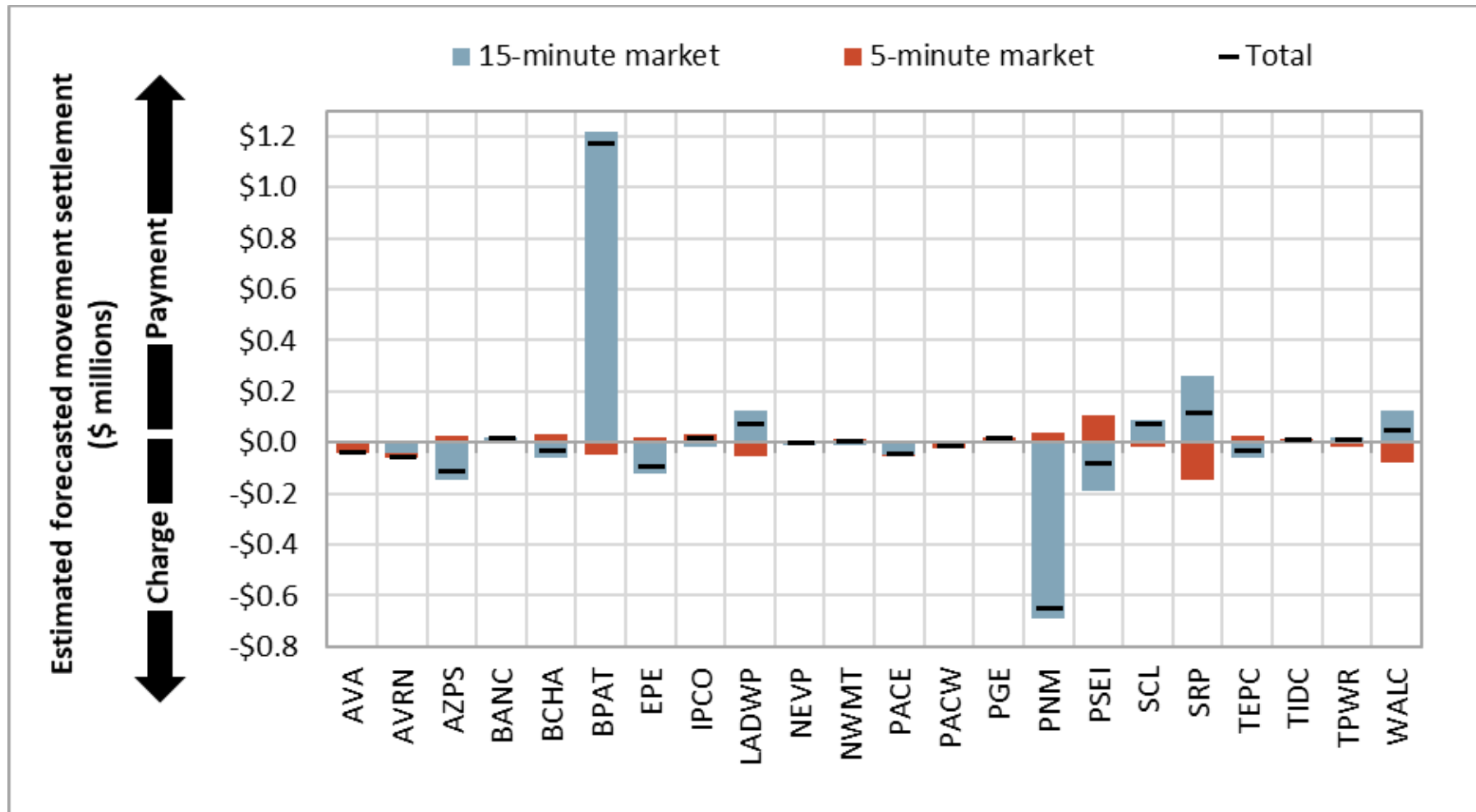
Bilateral imports from non-WEIM areas settled as FRP forecasted movement, but bilateral imports from WEIM areas are not

Example resource flexible ramping product settlement



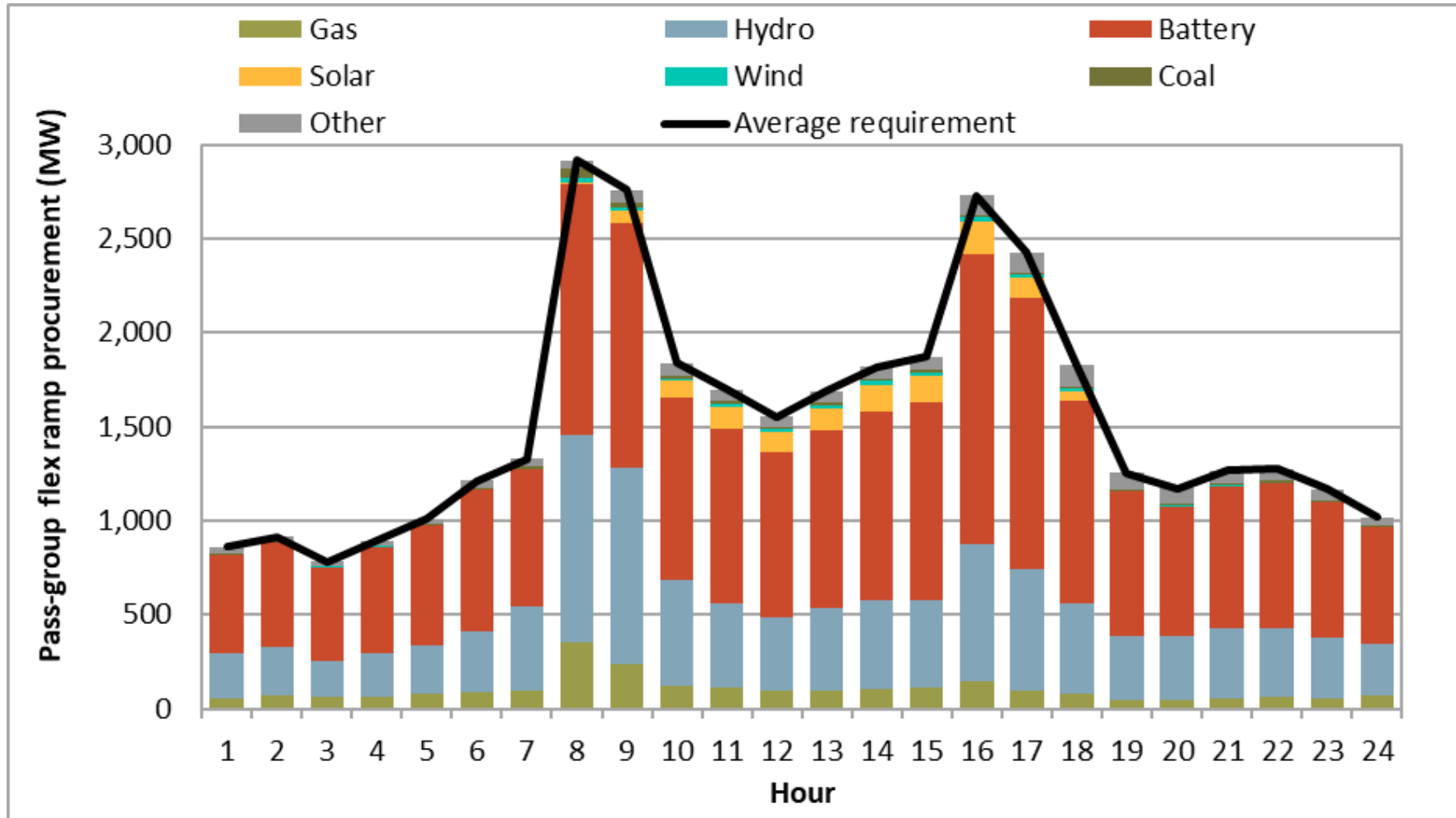
Limited impact of not settling bilateral imports from WEIM BAs as forecasted flexible ramping product movement

Estimated impact of settling forecasted movement of base WEIM transfers (2024)



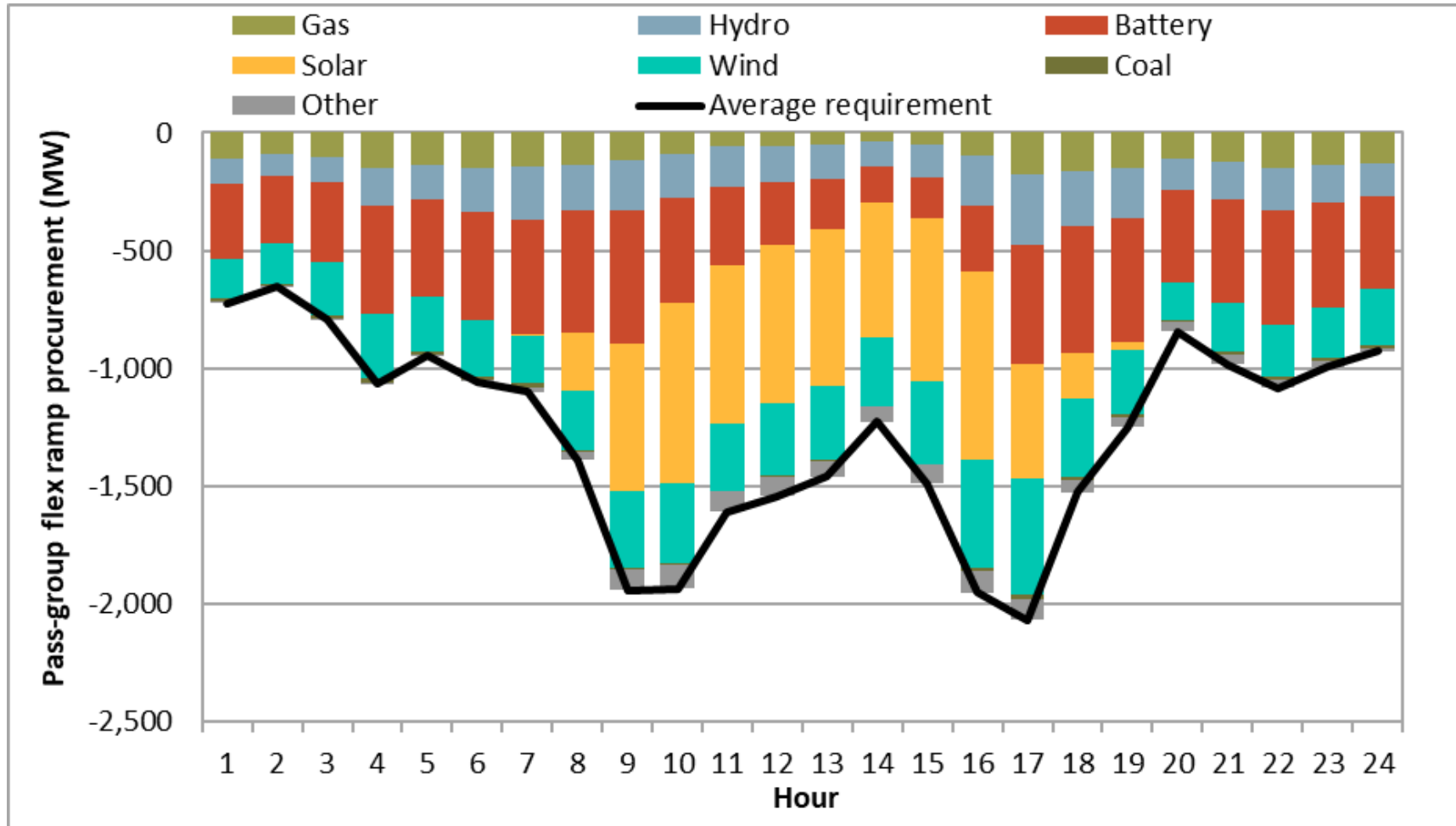
Upward flexible ramping product procurement mainly from batteries and hydro

Average upward pass-group flexible ramp procurement by fuel type (15-minute market, Q1 2025)



Significant downward flexible ramping product procurement from solar and wind

Average downward pass-group flexible ramp procurement by fuel type (15-minute market, Q1 2025)



For more information

- Q1 2025 report on market issues and performance
 - [2025-first-quarter-report-on-market-issues-and-performance-jun-23-2025.pdf](#)
- Department of Market Monitoring webpage
 - <http://https://www.caiso.com/market-operations/market-monitoring>
- CAISO Tariff, Appendix P
 - http://www.caiso.com/Documents/AppendixP_CAISODepartmentOfMarketMonitoring_asof_Apr1_2017.pdf
- Email questions to:
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 - DMM, DMM@caiso.com