California ISO | WESTERN ENERGY MARKETS

Memorandum

To: ISO Board of Governors and Western Energy Markets Governing Body

From: Eric Hildebrandt, Executive Director, Market Monitoring

Date: April 22, 2026

Re: **Department of Market Monitoring update**

This memorandum does not require ISO Board of Governors or WEM Governing Body action.

EXECUTIVE SUMMARY

This memo provides a short summary by the Department of Market Monitoring (DMM) of market performance and trends in the Western Energy Imbalance Market (WEIM) for the first quarter of 2026.

- Across the WEIM, 15-minute market prices averaged $24/MWh, down 35 percent from Q1 2025 due mainly to lower natural gas prices.
- Prices decreased in each region compared to 2025. Desert Southwest and California balancing area prices were down 16 and 29 percent, respectively. Pacific Northwest prices were down 47 percent, and Intermountain West prices were down 38 percent.
- The average impact of WEIM transfer limits on prices in Pacific Northwest balancing areas decreased by $2.49/MWh in Q1 2026 compared to the same quarter of 2025. The impact of this congestion on prices in Intermountain West balancing areas decreased by $1.24/MWh.
- Average natural gas prices at major Western hubs decreased in the first quarter of 2026 compared to the first quarter of 2025. Prices at Henry Hub, the standard reference point for national natural gas prices, increased 9 percent over this same time period.
- Hydro and natural gas resources continued to be the dominant sources of supply across the WEIM. Average hourly hydro generation was 28,390 MW in the first quarter of 2026, an increase of about 5,210 MW compared to the same quarter of 2025. Average hourly natural gas generation was 17,340 MW, down about 3,080 MW. Solar was the third largest source of supply at 9,080 MW and was up about 1,380 MW.
- Total WEIM system load averaged 76.3 GW in Q1 2026, a 0.7 percent increase from Q1 2025. Average load in the California and Desert Southwest regions increased, but average load in the Pacific Northwest and Intermountain West regions decreased between Q1 2025 and Q1 2026,

- Transfers across the WEIM system averaged about 4,010 MW in the first quarter of 2026, down about 500 MW from the same quarter of 2025. Transfers were mainly out of the Intermountain West, Desert Southwest, and Pacific Northwest regions during non-solar hours, and out of the CAISO balancing area during mid-day solar hours.

MARKET TRENDS

15-minute market prices by region

Figure 1 shows weighted average monthly prices for the 15-minute market across regions from April 2025 through March 2026.[1] Figure 2 shows Q1 2026 weighted average hourly 15-minute market prices by region.

- Across the Western Energy Imbalance Market, 15-minute market prices averaged $24/MWh, down 35 percent from Q1 2025 due mainly to lower natural gas prices.
- Prices decreased significantly in each region, with Desert Southwest balancing area prices down 16 percent, Pacific Northwest prices down 47 percent, Intermountain West prices down 38 percent, and California prices down 29 percent.
- During mid-day solar hours, abundant solar production in southern areas contributed to transmission congestion from southern areas to northern areas. This resulted in lower prices in Southern California, Desert Southwest, and Intermountain West balancing areas relative to the Pacific Northwest.
- During evening and morning non-solar hours, prices were higher on average in California balancing areas due mainly to California greenhouse gas pricing.

[1] The California region includes CAISO, BANC, TIDC, and LADWP. The Desert Southwest region includes NEVP, AZPS, TEPC, SRP, PNM, WALC, and EPE. The Intermountain West includes PACE, IPCO, NWMT, and AVA. The Pacific Northwest includes AVRN, BCHA, BPA, TWPR, PGE, PSEI, and SCL.

Figure 1. Weighted average monthly 15-minute market prices by region

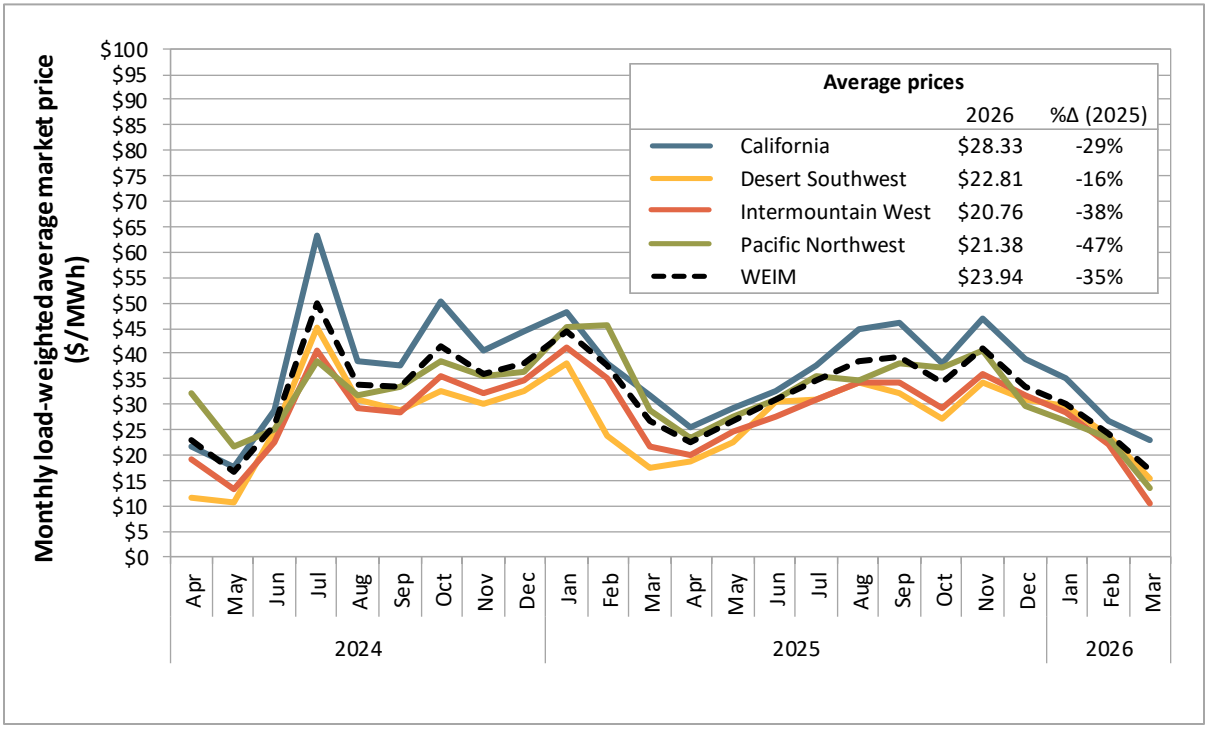
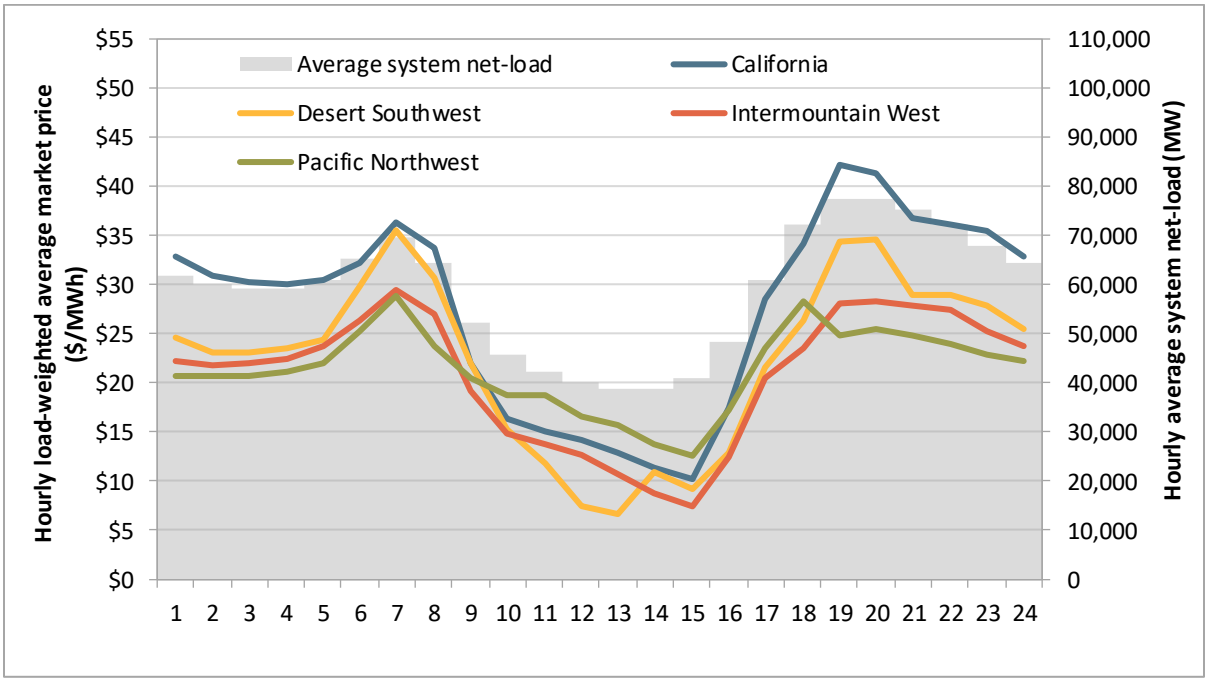


Figure 2. Weighted average hourly 15-minute market prices by region (Q1 2026)



15-minute market prices by balancing area

Figure 3 shows the average 15-minute market price by component for each balancing authority area in the first quarter of 2026. Figure 4 shows the change in each balancing area's average price in Q1 2026 compared to Q1 2025. These figures highlight how price differences between regions are determined by differences in greenhouse gas compliance costs (green), congestion on transfer constraints (red), congestion on constraints within the balancing area (yellow), and congestion on constraints from other balancing areas (turquoise).

- California greenhouse gas compliance costs continued to be the most significant driver of price differences between areas. These costs caused prices to be lower in WEIM balancing areas outside of California relative to WEIM balancing areas in California.
- The average impact of WEIM transfer constraint congestion on prices in Pacific Northwest balancing areas decreased by $2.49/MWh in Q1 2026 compared to Q1 2025. The impact of transfer constraint congestion on prices in Intermountain West balancing areas decreased by $1.24/MWh.
- The impact on prices in Pacific Northwest balancing areas from congestion on transmission constraints in other balancing areas decreased by $4.22/MWh in Q1 2026 compared to Q1 2025. The impact of external transmission constraints on prices in Desert Southwest balancing areas increased by $5.99/MWh. This was due largely to less congestion in Q1 2026 on constraints that increased prices in northern regions relative to southern regions during mid-day solar hours in the first quarter of 2025.
- The system component of energy prices decreased by $12.61/MWh in the first quarter of 2026 compared to the same quarter of 2025.

Figure 3. Average 15-minute market prices by balancing area

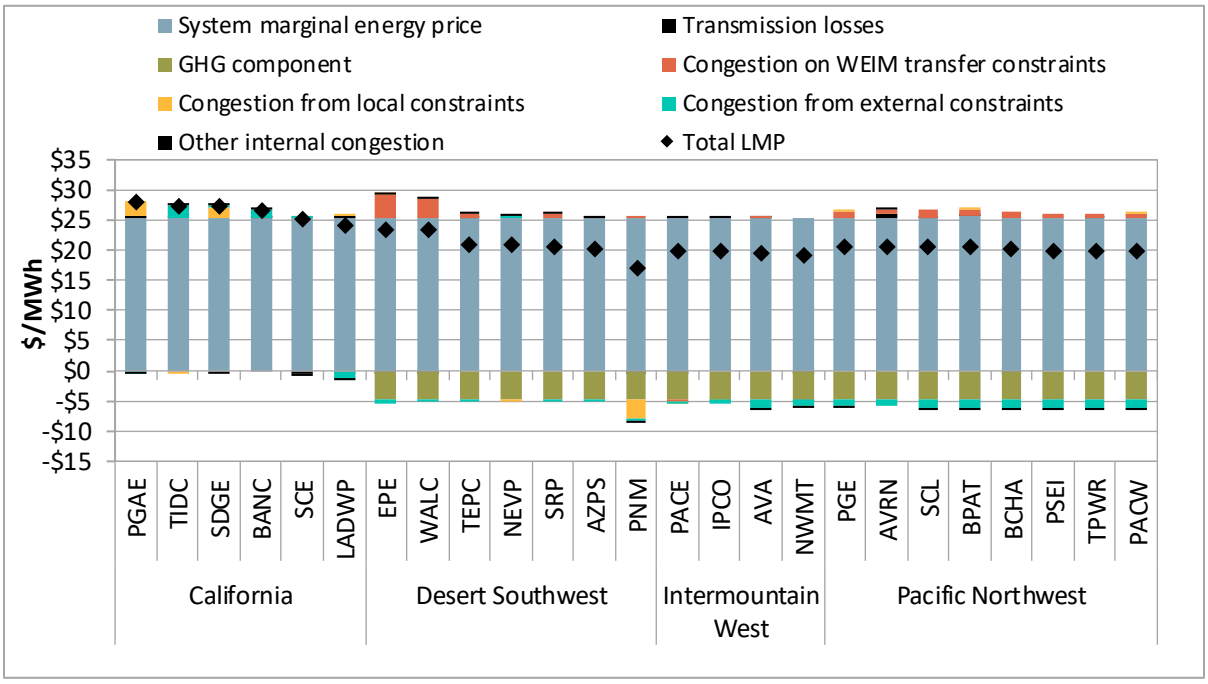
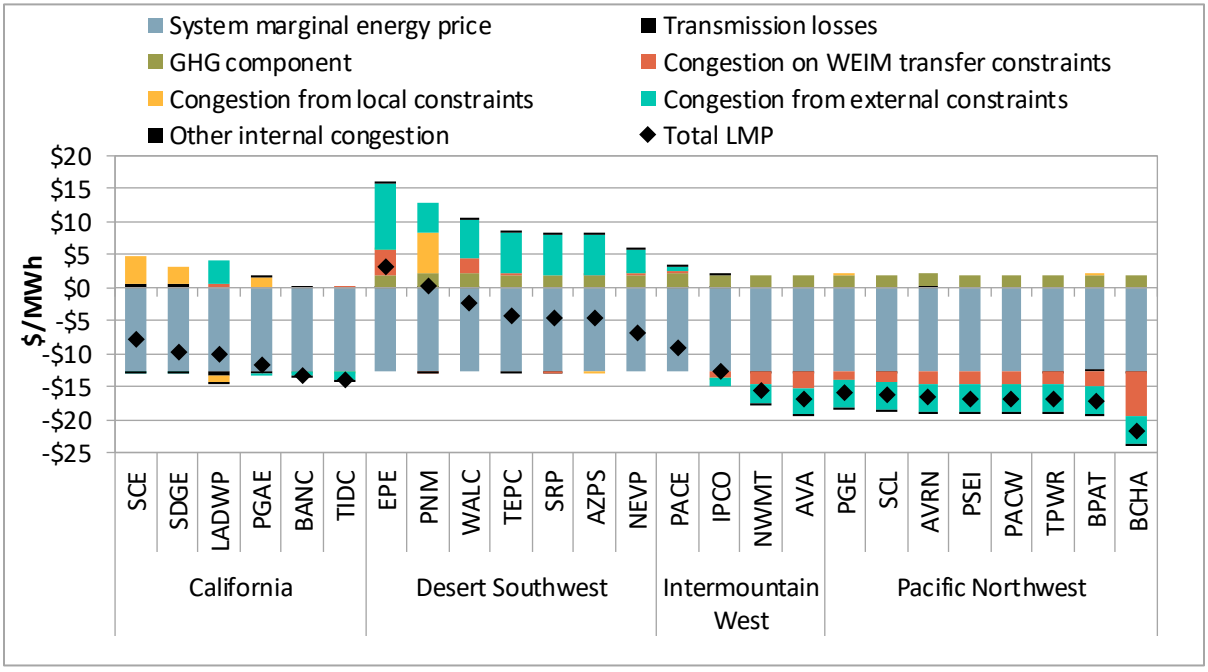


Figure 4. Change in average 15-minute market prices (Q1 2026 vs. Q1 2025)

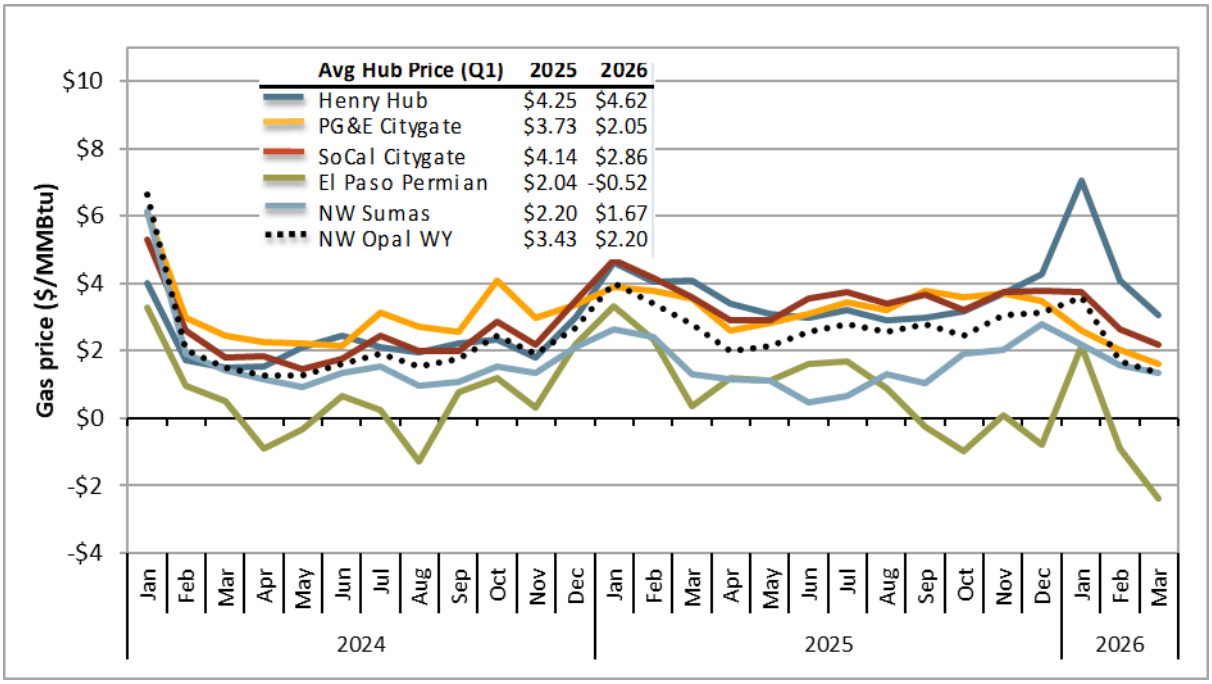


Natural gas prices

Figure 5 shows monthly average natural gas prices at major hubs around the West, as well as at Henry Hub, which serves as a national reference point.

- Average natural gas prices declined at major western hubs in the first quarter of 2026 relative to the same period in 2025. Prices at PG&E Citygate and SoCal Citygate fell by 45 percent and 31 percent, respectively. Prices at NW Opal WY and NW Sumas declined by 36 percent and 24 percent, respectively.
- Natural gas prices at Henry Hub, on the other hand, increased 9 percent in the first quarter of 2026 compared to the same period in 2025.
- El Paso Permian prices declined into negative territory in the first quarter of 2026, averaging –$0.52/MMBtu compared with $2.04/MMBtu in the same period in 2025. Oil-driven natural gas production in the Permian Basin reached record highs during the quarter, largely due to sustained increases in oil output related to the conflict between the U.S. and Iran. Excess supply, combined with maintenance-related and structural pipeline constraints, resulted in negative prices.[2]

Figure 5. Monthly average natural gas prices



[2] *Why Permian Basin Natural Gas Prices Can't Catch a Break*, Natural Gas Intelligence: https://naturalgasintel.com/news/why-permian-basin-natural-gas-prices-cant-catch-a-break/

Generation by fuel type

Figure 6 shows the average hourly generation by fuel type across the WEIM. Figure 7 shows the change in average hourly WEIM generation by fuel type in the first quarter of 2026 compared to the first quarter of 2025.

- Natural gas and hydro resources continued to be the dominant sources of supply across the WEIM. Average hourly natural gas generation was 17,340 MW, down about 3,080 MW compared to the same quarter of 2025. Average hourly hydro generation was 28,390 MW, an increase of about 5,210 MW.
- Solar and wind were the second and third largest sources of generation, averaging about 9,080 MW and 8,810 MW, respectively. Hourly average solar generation increased by about 1,380 MW, while wind generation increased by about 280 MW.
- Hourly net battery discharge during hours 18 to 23 increased by about 2,380 MW on average compared to the first quarter of 2025. Higher solar generation contributed to increased battery charging during mid-day solar hours, and greater battery discharge during evening hours contributed to decreased natural gas generation.

Figure 6. Average hourly generation by fuel type (Q1 2026)

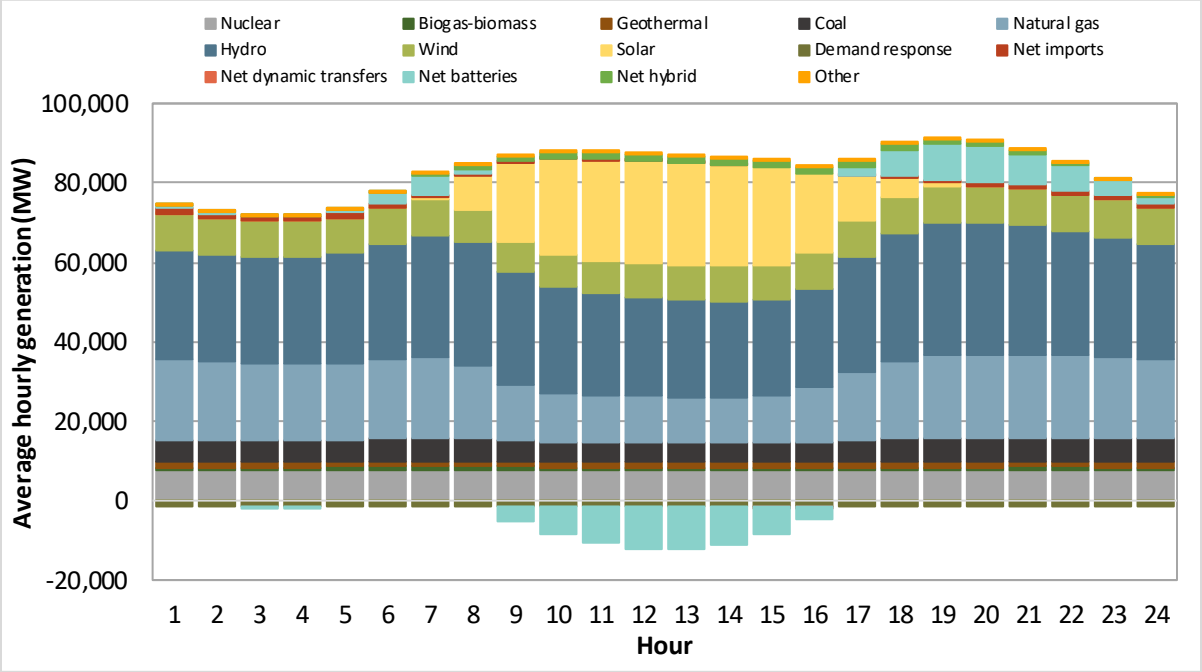
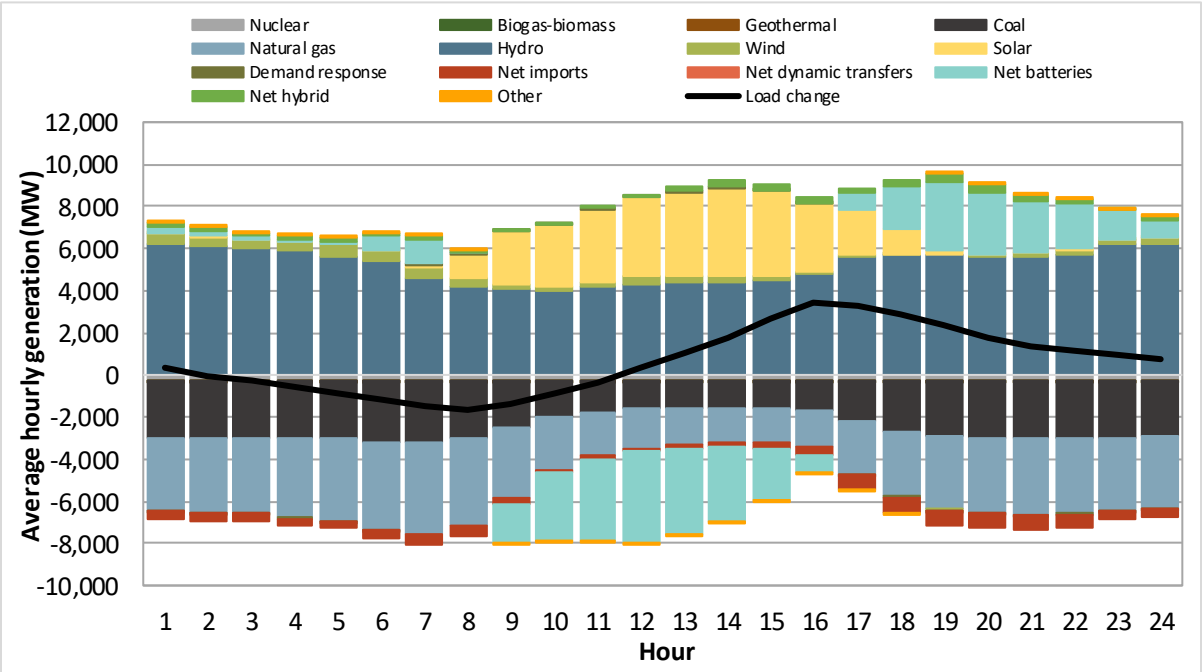


Figure 7. Change in average hourly generation by fuel type (Q1 2025 vs. Q1 2026)



Load

Figure 9 shows hourly average 5-minute market load by region for Q1 2026, along with the hourly average system load for Q1 2026 and Q1 2025. Figure 10 shows hourly average percent change in load by region between Q1 2025 and Q1 2026.

- Total WEIM system load averaged 76.3 GW in Q1 2026, a 0.7 percent increase from the Q1 2025 average system load of 75.7 GW.
- Between Q1 2025 and Q1 2026, load in the Pacific Northwest decreased 1.7 percent to 25.6 GW. Load in the Intermountain West decreased 2.8 percent to 10.0 GW. In both regions, average load was lower in Q1 2026 compared to Q1 2025 during all hours of the day.
- Between Q1 2025 and Q1 2026, load in California increased 1.8 percent to 25.9 GW. Load in the Desert Southwest increased 5.9 percent to 14.8 GW. In both regions, this increase in Q1 2026 relative to Q1 2025 is driven by increases in average load between hours 12 and 24, peaking around hour 16.

Figure 9. Hourly average 5-minute market load by region

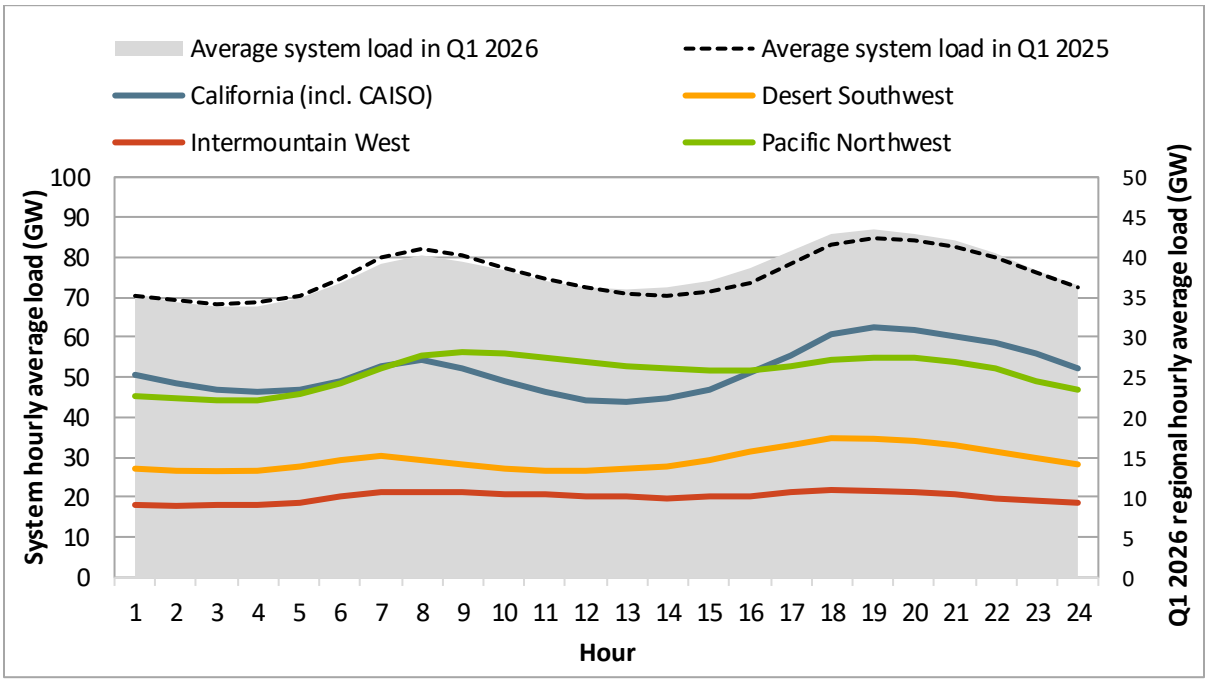
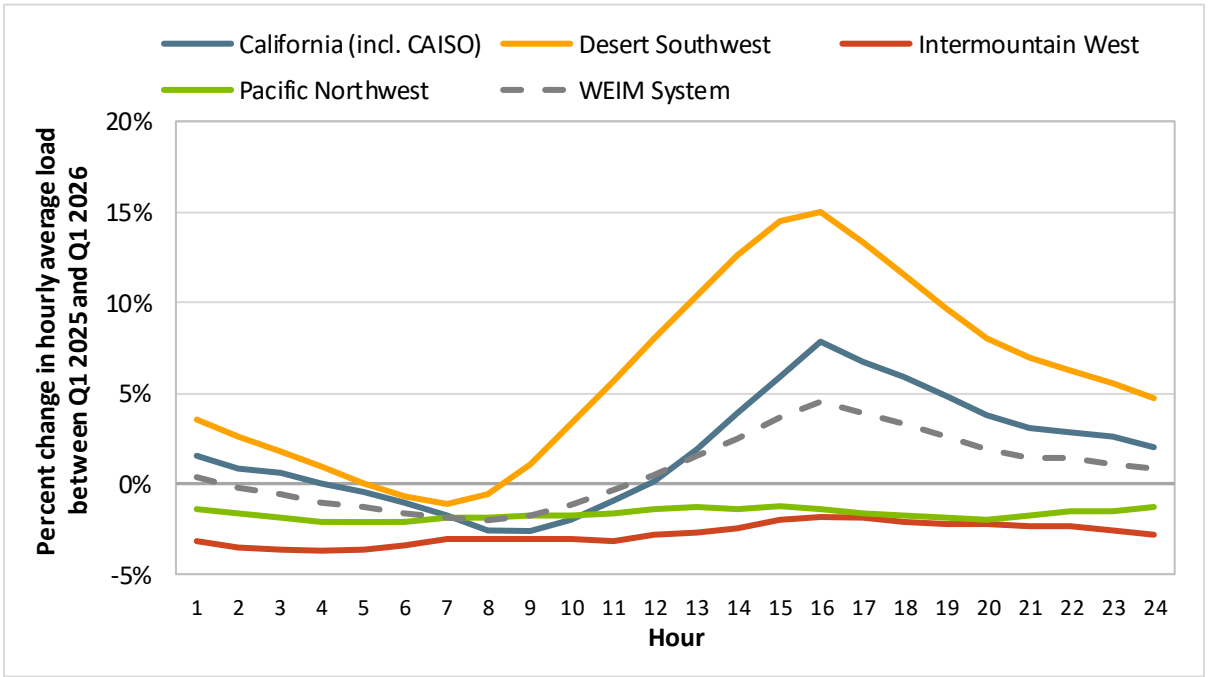


Figure 10. Percent change in hourly average 5-minute market load by region (Q1 2026 vs. Q1 2025)



Western Energy Imbalance Market transfers

Figure 11 summarizes the average volume of WEIM transfers in the 5-minute market by hour during the last five quarters.[3] In the first quarter of 2026, the average volume of transfers across the system was around 4,010 MW, about 500 MW lower compared to the same quarter of 2025.

Figure 12 shows average inter-regional transfers during the last five quarters. The bars show *net* WEIM transfers for each region by hour. Net WEIM imports for a region are shown as positive and net WEIM exports for a region are shown as negative.

- During the mid-day hours, regional WEIM transfers were typically highest, with significant levels of exports from the CAISO balancing area.
- During the non-solar hours, regional WEIM transfers were relatively lower. Transfers in these hours were mainly out of the Intermountain West, Desert Southwest, and Pacific Northwest regions.
- In the first quarter of 2026, transfers out of the Pacific Northwest region increased in the morning and evening non-solar hours. In previous quarters, the Pacific Northwest region was typically a net importer in these hours.

[3] WEIM transfers in this section exclude the fixed bilateral transactions between WEIM entities (base WEIM transfer schedules), and therefore reflect only EIM transfer schedules optimized in the market.

Figure 11. Average WEIM transfer volume by hour and quarter (5-minute market, Q1 2025 to Q1 2026)

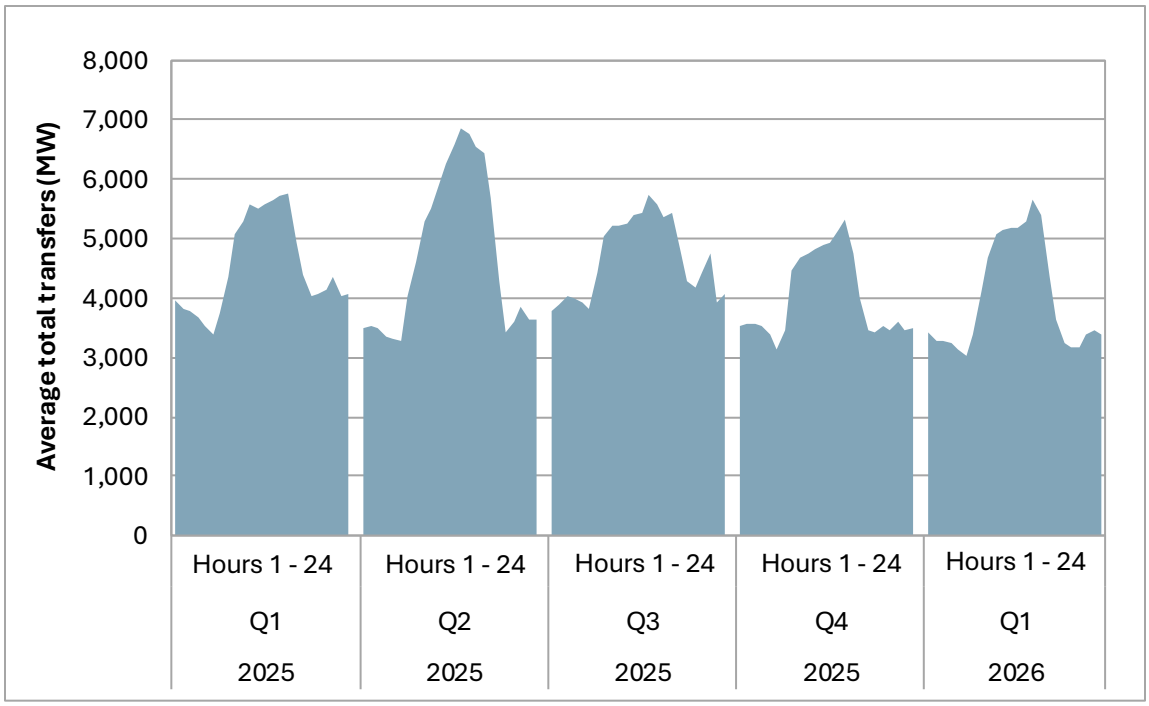


Figure 12. Average inter-regional WEIM transfers by hour (5-minute market, Q1 2025 to Q1 2026)