RIVERSIDE PUBLIC UTILITIES

Board Memorandum

BOARD OF PUBLIC UTILITIES **DATE: JULY 28, 2025**

GENERAL MANAGER'S REPORT

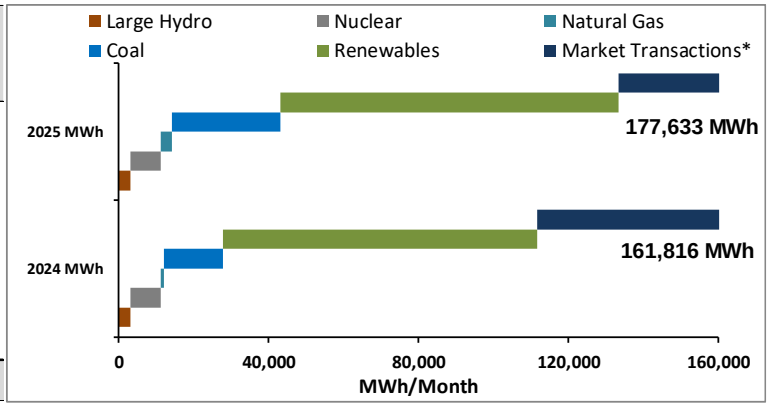
SUBJECT: MONTHLY POWER SUPPLY REPORT – MAY 31, 2025

Monthly Power Usage:

In May 2025, total wholesale load at the Vista Substation increased by 9.77%, rising from 161,816 MWh in May 2024 to 177,633 MWh. Renewables increased by 7.53% (from 83,909 MWh to 90,227 MWh), primarily driven by improved geothermal output. Coal generation increased by 85.24%, the second largest percentage increase among all resource types, reflecting a shift in dispatchable baseload supply. Market transactions declined by 11.77%, suggesting a reduced reliance on external energy purchases as portfolio generation strengthened. Nuclear output saw a modest 3.32% increase, consistent with incremental recovery following scheduled maintenance. Hydro output declined slightly by 3.98%, remaining within seasonal expectations.

Wholesale Resource Mix - May 2024 vs 2025

Energy	2024 MWh	2025 MWh	% Δ
Large Hydro	3,168	3,042	-3.98%
Natural Gas	1,017	2,938	188.74%
Nuclear	7,944	8,208	3.32%
Coal	15,653	28,996	85.24%
Market Transactions*	50,124	44,222	-11.77%
Renewables	83,909	90,227	7.53%
Wholesale Load (Vista)	**161,816**	**177,633**	**9.77%**



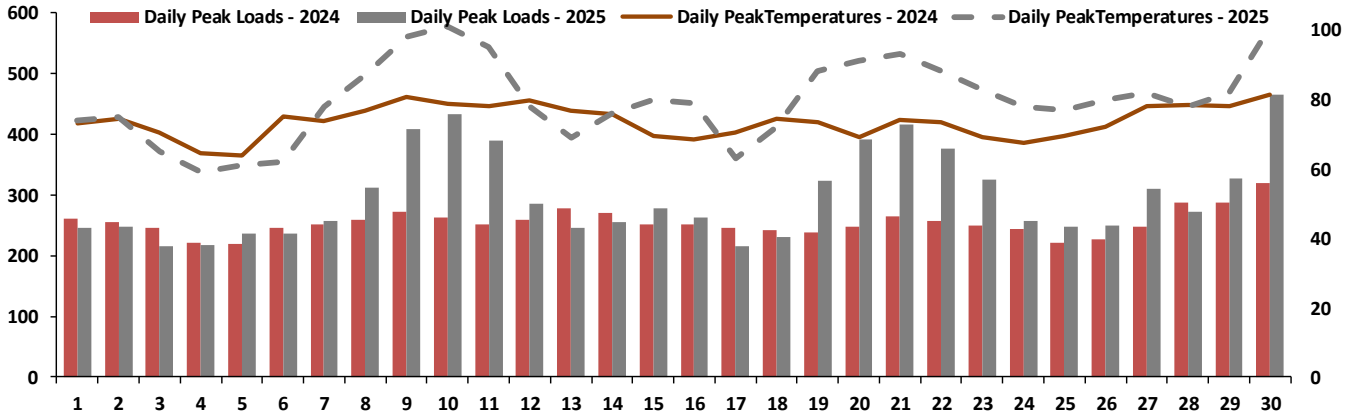
*** The Market Transaction category comprises bilateral power contracts and purchases(sales) from(to) the CAISO.**

Daily & Monthly Load & Temperature Trends

Weather, especially the variable temperature, significantly impacts electricity demand. Typically, as temperatures increase, electricity demand will also increase, and vice versa. The charts below graphically extrapolate the correlation between weather and electricity demand.

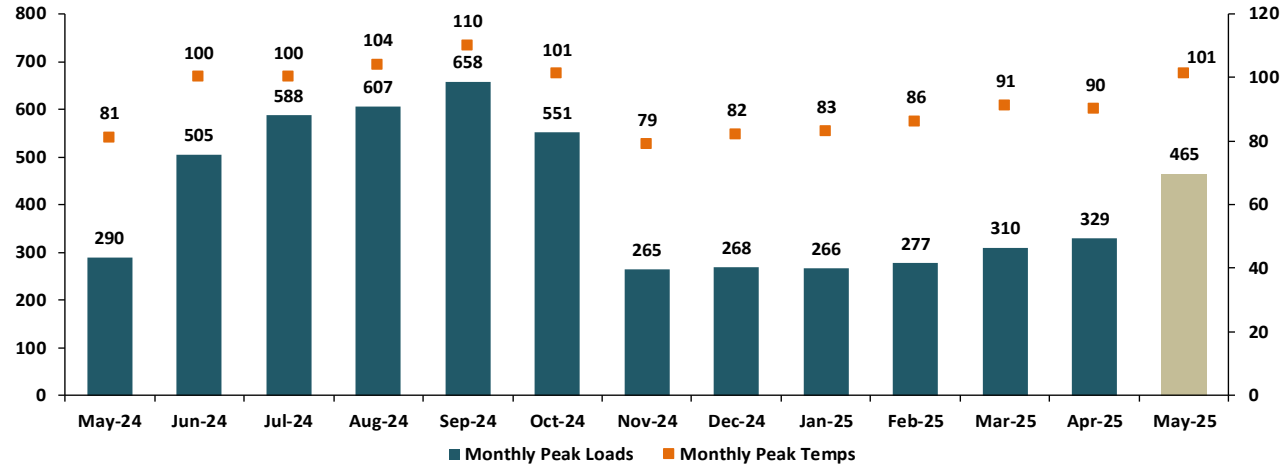
In May 2025, average daily peak temperatures hovered around 80°F, notably higher than the 74°F average in May 2024. The monthly peak temperature reached 101°F in May 2025, far exceeding the 81°F peak in May 2024, signaling more frequent and intense heat events. May 2025 experienced more days above 80°F, with sharp spikes occurring on May 10th (100°F) and May 30th (101°F), contributing to elevated system demand. Differences in the graphical representation of average peak loads may be due to variations in day-of-week effects or operational behaviors, such as weekday and weekend demand profiles.

Daily Peak Load and Peak Temperature Comparisons



These higher temperatures were matched by stronger demand patterns. In 2025, the average daily peak load rose to 302 MW, compared to 256 MW in 2024. The monthly peak load also climbed significantly, hitting 465 MW in 2025, up from 320 MW in 2024. Both years recorded their highest loads on May 30th, suggesting a consistent end-of-month surge likely tied to temperature extremes. The data confirms that May 2025 was both hotter and more demanding on Riverside's system, with elevated heat events sustaining higher average load levels year-over-year.

Monthly Peak Load and Temperature

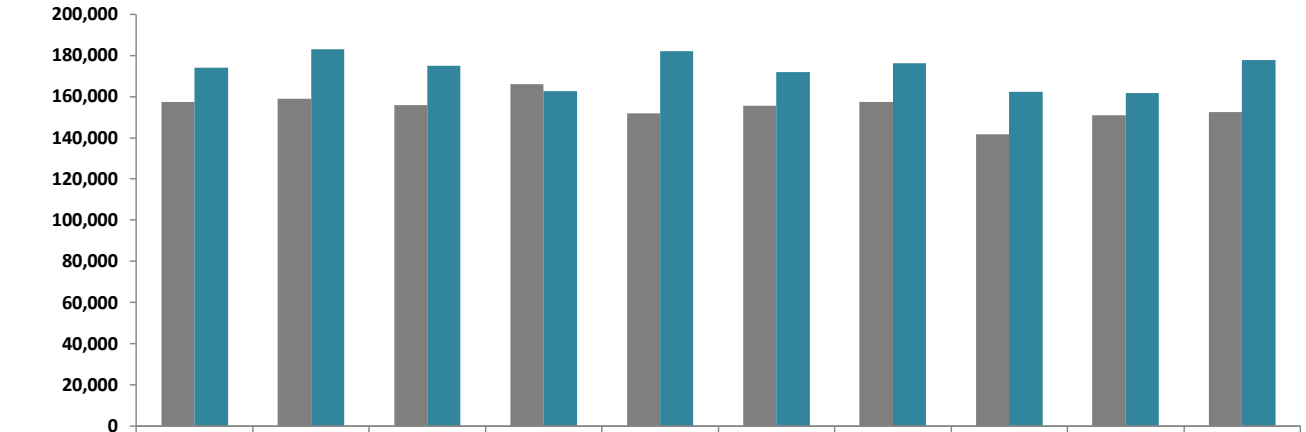


Hourly demand peaked at 465 MW on 05/30/25 HE 18, an increase of 145 MW compared to a peak of 320 MW the same month last year. Riverside's resources covered 61% of the hourly peak demand on 05/30/25.

10-Year Retail Load Trends

The retail load for May 2025 was 152,455 MWh, an increase of 1,470 MWh from the previous year's reading of 150,985 MWh. The System load for May 2025 was 177,633 MWh, an increase of 15,817 MWh from the previous year's reading of 161,816 MWh. The 10-year trend reflects a long-term flattening or slight decline in electricity demand, both at the retail and system levels, with occasional rebounds that could be attributed to weather and/or economic conditions. The system's response in May 2025, compared to May 2024, can be attributed to a weather driven rebound within an otherwise stable consumption pattern. Retail load values can be impacted by the significant adoption of residential PV solar, efficiency programs, available meter data, losses, non-retail obligations, etc.

May Retail & System Loads (MWh/Month): 10-Year Trends



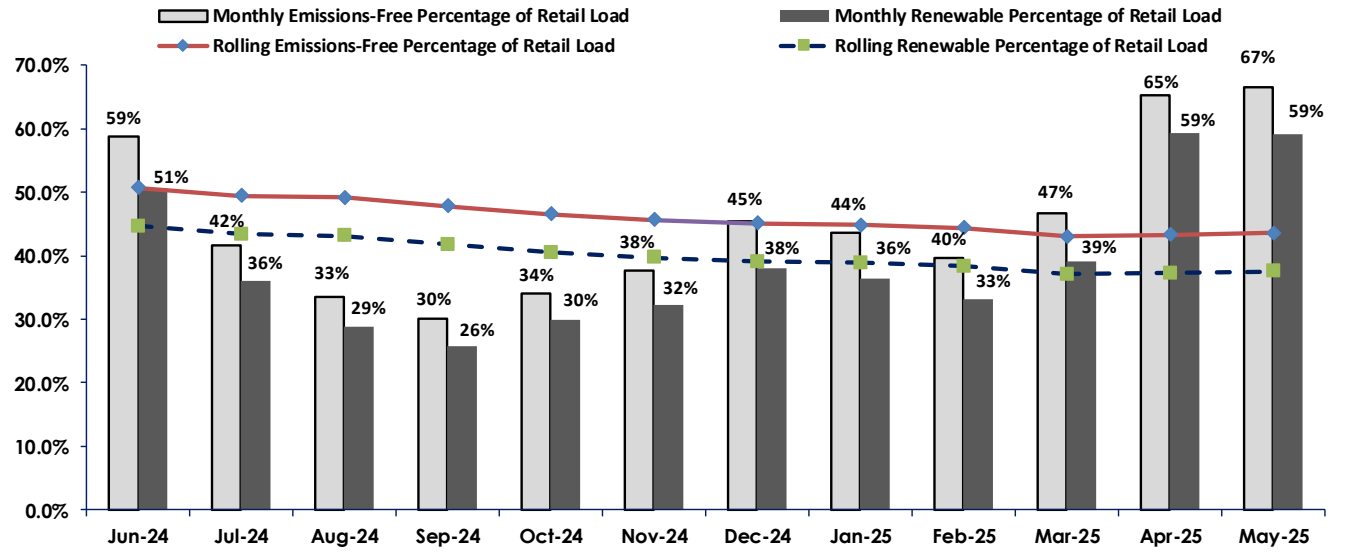
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Retail Load	157,318	158,829	155,792	166,186	151,739	155,440	157,505	141,752	150,985	152,455
System Load	173,922	182,983	174,964	162,751	182,079	171,980	176,278	162,197	161,816	177,633

Renewable Generation Trends

In May 2025, nuclear generation totaled 8,208 MWh, representing a 37.9% increase from April 2025 (5,952 MWh) and a 3.3% increase from May 2024 (8,544 MWh), as generation rebounded following spring maintenance. Total hydroelectric generation for May 2025 totaled 3,042 MWh, an increase of 3.68% compared to April 2025 (2,934 MWh) and a 3.98% decline compared to May 2024 (3,168 MWh) due to typical seasonal fluctuations. In May 2025, wind generation totaled 2,570 MWh, representing a 29.8% decrease from April 2025 (3,662 MWh) and a 30.17% decrease from May 2024 (3,680 MWh). This decline reflects poor wind conditions during the month. In May 2025, solar generation reached 26,490 MWh across all facilities, increasing 10% from April 2025 (24,108 MWh) and decreasing 2% from May 2024 (26,964 MWh). The May peak aligns with seasonal increases in solar production as daylight hours lengthen. In May 2025, geothermal generation reached 61,168 MWh, representing a 4.3% increase from April 2025 (58,658 MWh) and a 15% increase from May 2024 (53,266 MWh). In May 2025, renewable generation, as a percentage of retail load, decreased by approximately 0.07 percentage points from April 2025 and increased by approximately 4 percentage points compared to May 2024. This reflects strong performance across solar and geothermal assets, along with a modest change in retail load. Lastly, in May 2025, Emissions-Free generation, as a percentage of retail

load, increased by about 1 percentage point from April 2025 and increased by 4 percentage points compared to May 2024. The Emissions Free and Renewable Resources summary graph reflects a rolling 12-month trend line.

Emission Free and Renewable Resources' Summary



*Riverside's emmisions free resources are composed of renewables plus hydro and nuclear
*Riverside's renewable resources are composed of solar, wind and geothermal.

May 2025 Resource Availability - Internal Generation

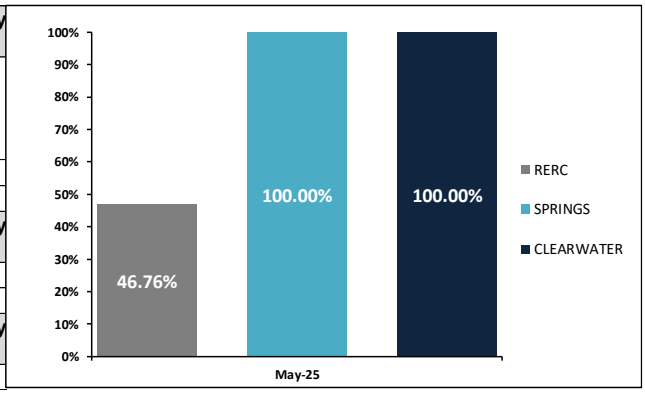
- RERC's availability for the month was 46.76%.
- Spring's availability for the month was 100.00%.
- Clearwater's availability for the month was 100.00%.

Resource Availibility

May-25	Total Outage Hours	Total Monthly Hrs.	Actual Available Hrs.	Availability %
RERC1	408.00	744.00	336.00	45.16%
RERC2	408.00	744.00	336.00	45.16%
RERC3	384.00	744.00	360.00	48.39%
RERC4	384.50	744.00	359.50	48.32%
RERC	**1584.50**	**2976.00**	**1391.50**	**46.76%**

May-25	Total Outage Hours	Total Monthly Hrs.	Actual Available Hrs.	Availability %
SPRINGS	**0**	**2976**	**2976**	**100.00%**

May-25	Total Outage Hrs.	Total Monthly Hrs.	Actual Available Hrs.	Availability %
CLEARWATER	**0**	**744**	**744**	**100.00%**



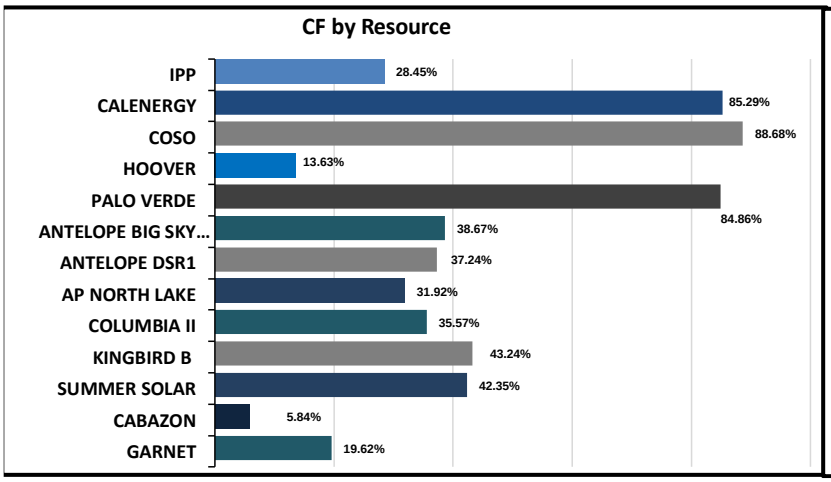
May 2025 Resource Availability – External Resources

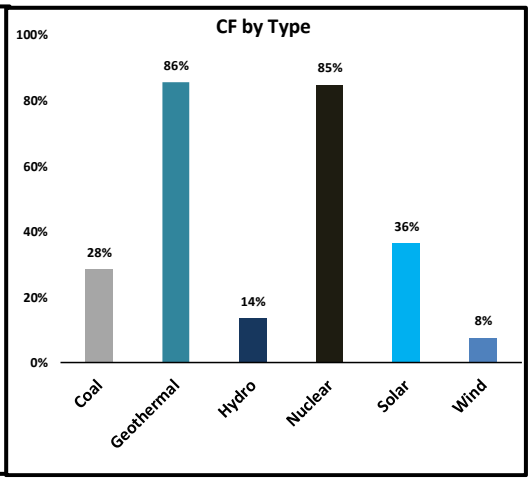
Solar resources in May 2025 exhibited capacity factors ranging from 23.89% to 43.24%, reflecting strong seasonal irradiance across most sites. Wind resources showed greater variability, with capacity factors varying from a low of 5.84% to a high of 19.62%, underscoring the inherent intermittency of wind generation based on weather conditions. Riverside's share of Palo Verde nuclear output delivered steady performance, achieving an 84.86% capacity factor. Hoover, a hydroelectric resource constrained by lake-level limitations, operated at a 13.63% capacity factor, consistent with its status as an energy-limited asset. IPP, Riverside's coal-based resource, maintained a 28.45% capacity factor due to coal availability limitations. Geothermal resources provided output with capacity factors ranging from 85.29% to 88.68%. It is worth reiterating that intermittent renewable resources, including wind and solar, have capacity factors influenced by natural factors such as cloud cover, blowing wind, etc.

Resource Capacity Factor Table

May-25	Resource Type	Max. Monthly MWH	Actual Energy MWH	Capacity Factors
IPP	Coal	101,928	28,996	28.45%
CALENERGY	Geothermal	63,984	54,570	85.29%
COSO	Geothermal	7,440	6,598	88.68%
HOOVER	Hydro	22,320	3,042	13.63%
PALO VERDE	Nuclear	9,672	8,208	84.86%
ANTELOPE BIG SKY RANCH	Solar	7,440	2,877	38.67%
ANTELOPE DSR1	Solar	18,600	6,927	37.24%
AP NORTH LAKE	Solar	14,880	4,749	31.92%
COLUMBIA II	Solar	8,288	2,948	35.57%
KINGBIRD B	Solar	10,416	4,504	43.24%
SUMMER SOLAR	Solar	7,440	3,151	42.35%
TEQUESQUITE	Solar	5,580	1,333	23.89%
CABAZON	Wind	29,016	1,694	5.84%
GARNET	Wind	4,464	876	19.62%

Resource Capacity Factor Charts





Resource Outages and Transmission Constraints

- RERC
  - Unit 1 perform various maintenance tasks
  - Unit 1 software updates
  - Unit 2 perform various maintenance tasks
  - Unit 2 software updates
  - Unit 3 perform various maintenance tasks
  - Unit 4 perform various maintenance tasks
  - Unit 4 Controller replacement

- SPRINGS
  - None

- CLEARWATER
  - None