



# RIVERSIDE PUBLIC UTILITIES

## Board Memorandum

**BOARD OF PUBLIC UTILITIES**

**DATE: JULY 22, 2024**

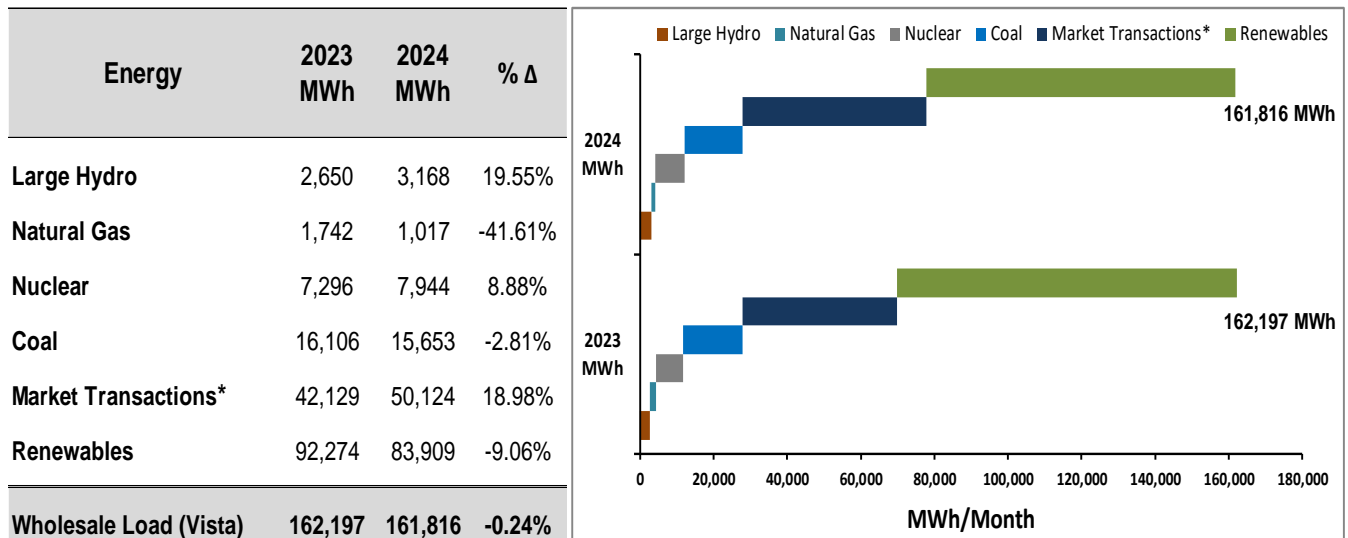
**GENERAL MANAGER'S REPORT**

**SUBJECT: MONTHLY POWER SUPPLY REPORT – MAY 31, 2024**

### Monthly Power Usage:

The wholesale load (Vista Substation) for May was 161,816 MWh, a decrease of 381 MWh compared to the same month in the previous year. Renewable generation served 51.85% or 83,909 MWh of Riverside's wholesale load. Coal generation served 9.67% or 15,653 MWh of the wholesale load. Nuclear energy covered 4.91% or 7,944 MWh. In May, internal natural gas generation served 0.63% or 1,017 MWh of wholesale load. Hydro generation represents 1.96% or 3,168 MWh of Riverside's wholesale load. Finally, the balance for May was covered by Market Transactions, which represented 30.98% or 50,124 MWh of the load.

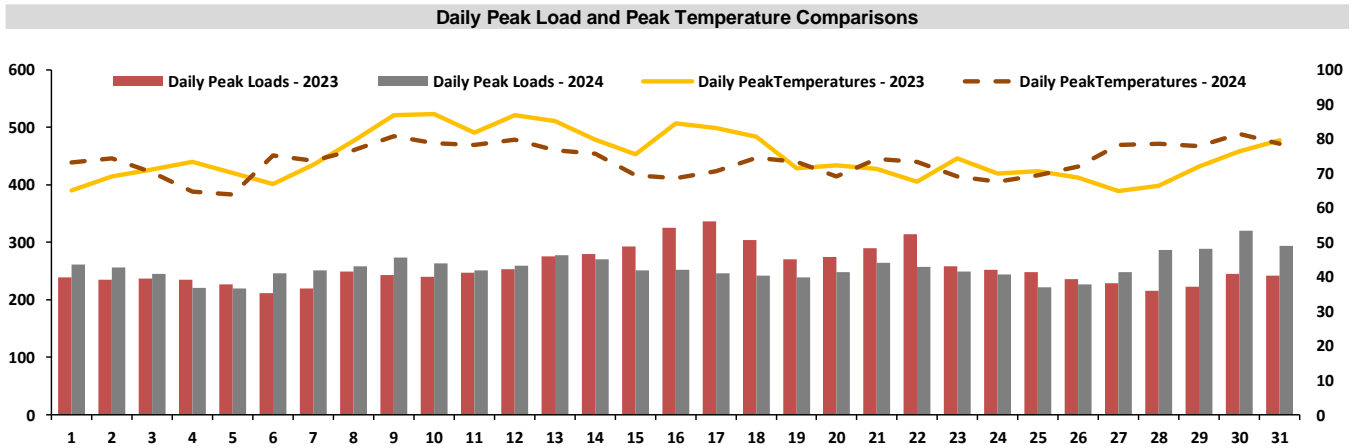
**Wholesale Resource Mix - May 2023 vs 2024**



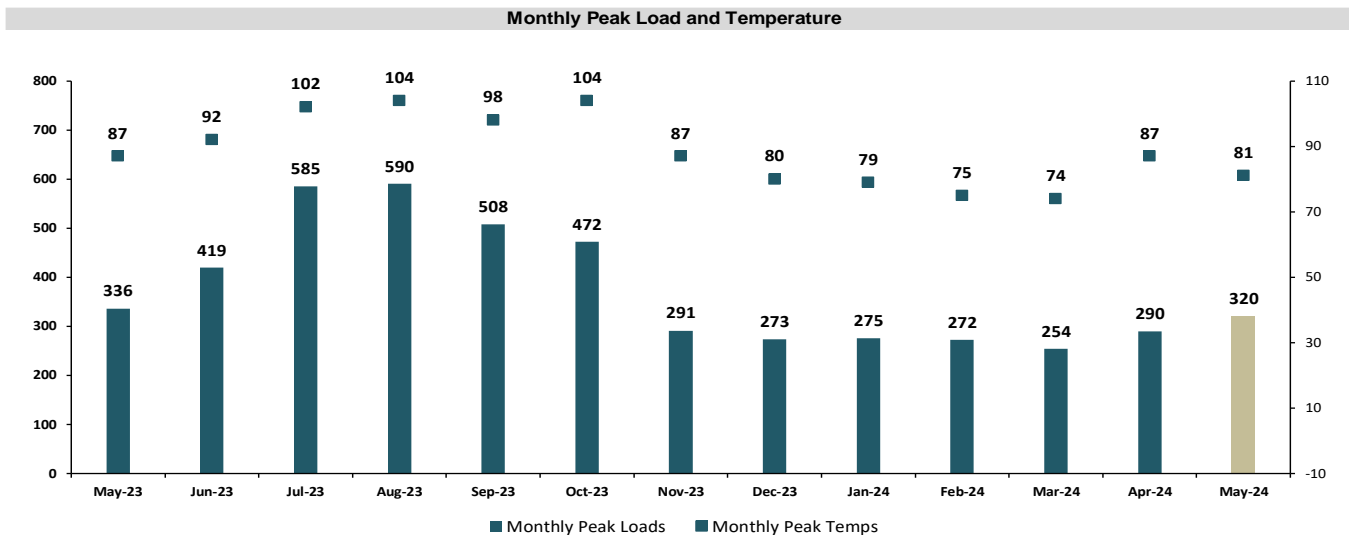
\* The Market Transaction category comprises bilateral power contracts and purchases(sales) from(to) the CAISO.

## 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 2024, average daily peak temperatures oscillated around 74 degrees, while in May 2023, they oscillated around 75 degrees. The monthly peak temperature in May 2024 was 81 degrees, while for comparison, the monthly peak temperature in May 2023 was 87 degrees. Differences in the graphical representation of average temperatures may be due to differences in the day of the week and/or weather trends presenting themselves in earlier or later parts of the month.



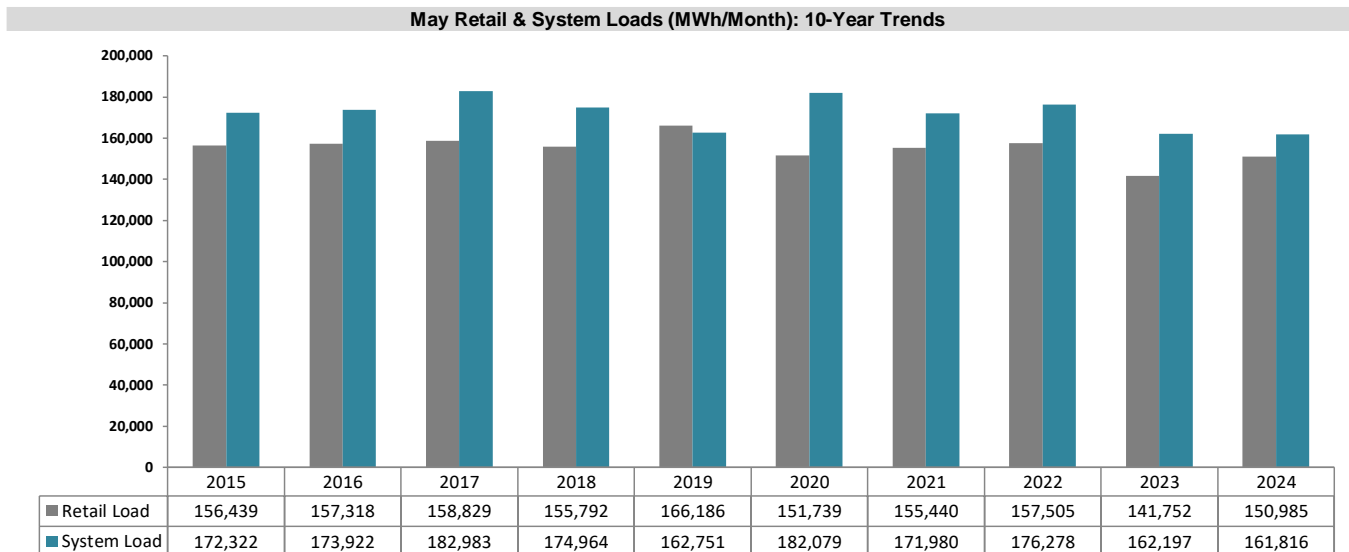
Weather patterns were very similar between May 2024 and May 2023, with slight differences throughout the month. In May 2024, the average daily peak load was 256 MW, with the monthly peak load reaching 320 MW. The average daily peak load in May 2023 was also 256 MW, with the monthly peak load reaching 336 MW. For the most part, the effect of warmer temperatures was isolated to a handful of days and had very little impact on the average load – pointing to relatively similar conditions year over year for May.



Hourly demand peaked at 320 MW on 05/30/24 HE 17, a decrease of 16 MW compared to a peak of 336 MW the same month last year. Riverside's resources covered 88% of the hourly peak demand on 05/30/24.

## 10-Year Retail Load Trends

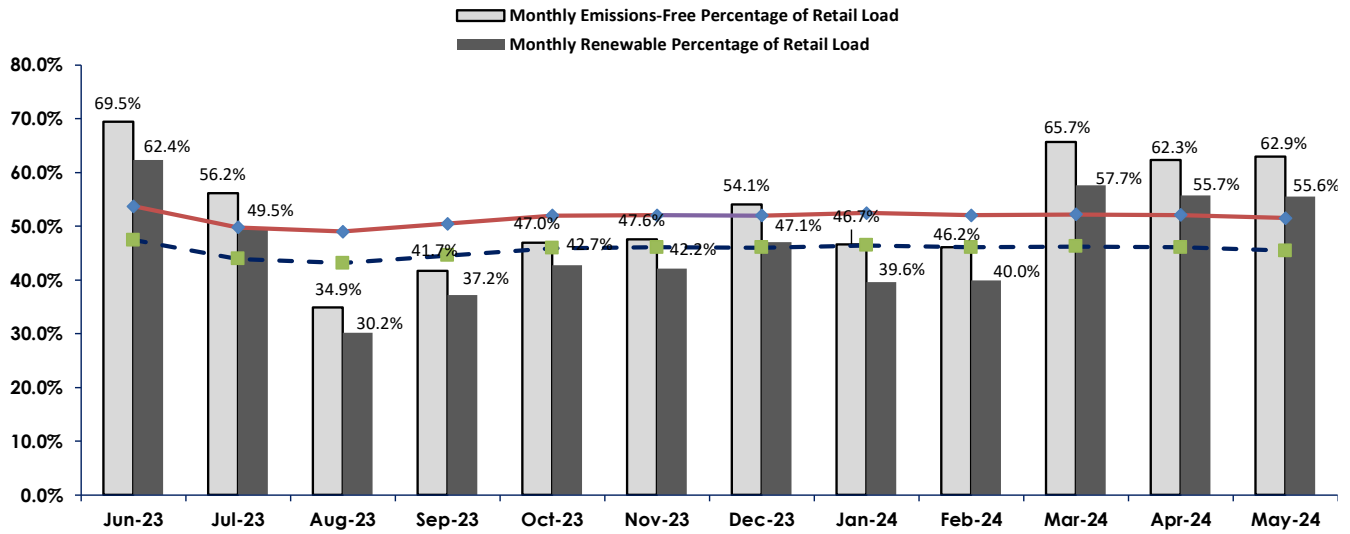
The retail load for May 2024 was 150,985 MWh, an increase of 9,233 MWh from the previous year's reading of 141,752 MWh. The System load for May 2024 was 161,816 MWh, a decrease of 381 MWh from the prior year's reading of 162,197 MWh. Retail load values can be impacted by the significant adoption of residential PV solar, efficiency programs, adoption of energy-efficient appliances, available meter data, etc.



## Renewable Generation Trends

In May 2024, nuclear generation experienced a 19.1% increase in production compared to April 2024 and an increase of 8.9% compared to May 2023. Total hydroelectric generation experienced an 8.0% increase compared to April 2024 and an increase of 19.5% compared to May 2023. May 2024 wind generation experienced a 53.0% increase in production compared to April 2024 and about an increase of 7% compared to May 2023. May 2024 solar generation experienced an increase of 16.0% in production compared to April 2024 and an increase of 19% in production compared to May 2023. Lastly, in May 2024, geothermal generation experienced a decrease in production of 3.6% compared to April 2024 and a reduction of 20.0% of output compared to May 2023. In May 2024, renewable generation, as a percentage of retail load, decreased by about 0.1% percentage points from April 2024 and decreased by about 9% percentage points compared to May 2023. Lastly, in May 2024, Emissions-Free generation, as a percentage of retail load, decreased by about 1.0% percentage points from April 2024 and 9% change in percentage points compared to May 2023. The driving factor for the decreased percentages in May 2024, compared to May 2023, are attributed to the increased May 2024 retail loads (as compared to May 2023). The Emissions Free and Renewable Resources summary graph reflects a rolling 12-month trend line.

**Emission Free and Renewable Resources' Summary**



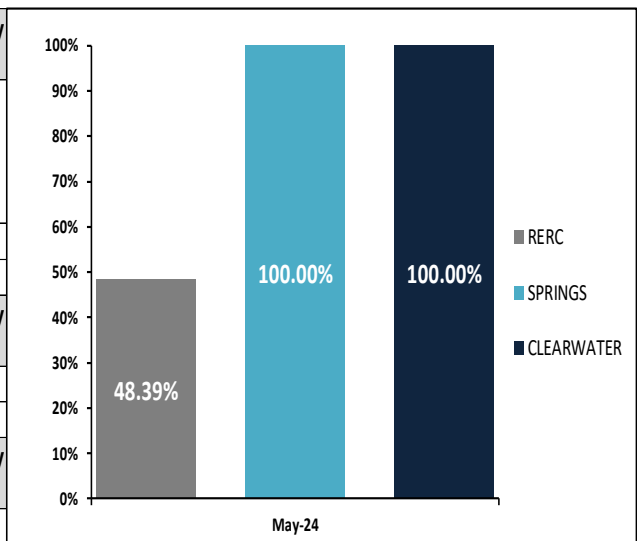
\*Riverside's emissions free resources are composed of renewables plus hydro and nuclear  
 \*Riverside's renewable resources are composed of solar, wind and geothermal.

**May 2024 Resource Availability - Internal Generation**

- RERC's availability for the month was 48.39%.
- Spring's availability for the month was 100.00%.
- Clearwater's availability for the month was 100.00%.

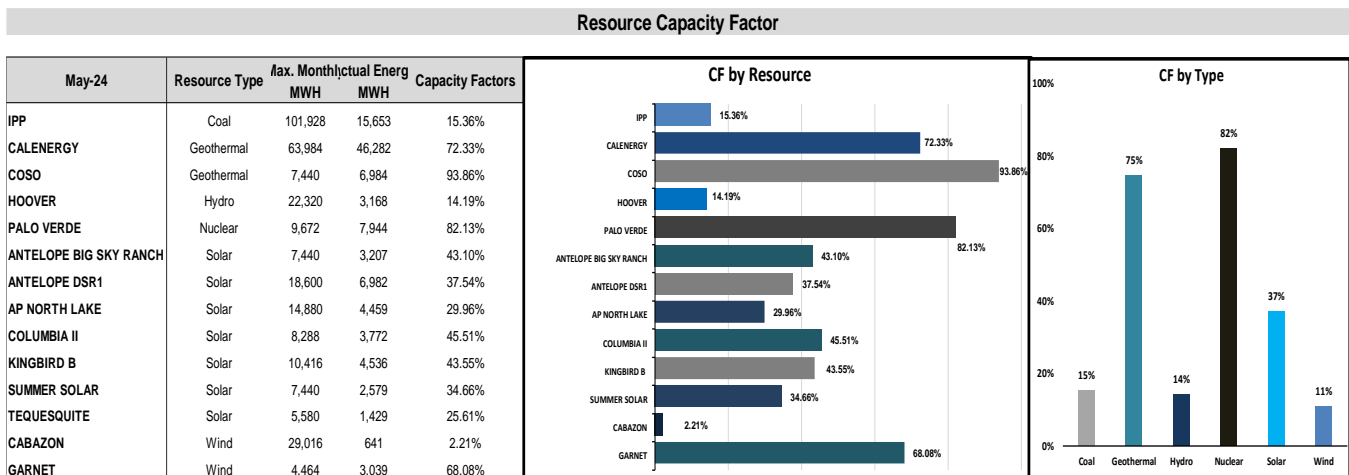
**Resource Availability**

May-24	Total Outage Hours	Total Monthly Hrs.	Actual Available Hrs.	Availability %
RERC1	528.00	744.00	216.00	29.03%
RERC2	528.00	744.00	216.00	29.03%
RERC3	240.00	744.00	504.00	67.74%
RERC4	240.00	744.00	504.00	67.74%
<b>RERC</b>	<b>1536.00</b>	<b>2976.00</b>	<b>1440.00</b>	<b>48.39%</b>
May-24	Total Outage Hours	Total Monthly Hrs.	Actual Available Hrs.	Availability %
<b>SPRINGS</b>	<b>0</b>	<b>2976</b>	<b>2976</b>	<b>100.00%</b>
May-24	Total Outage Hrs.	Total Monthly Hrs.	Actual Available Hrs.	Availability %
<b>CLEARWATER</b>	<b>0</b>	<b>744</b>	<b>744</b>	<b>100.00%</b>



## May 2024 Resource Availability – External Resources

Solar resources had capacity factors ranging from 25.61% to 45.51%. Wind resources had capacity factors ranging from 2.21% to 68.08%. Riverside's Palo-Verde nuclear share had steady production with a capacity factor of 82.13%. Hoover is an energy-limited resource and continues to be affected by lake-level restrictions. The resource maintained a 14.19% capacity factor for the month. An undersupply of coal currently impacts IPP, restricting generation output; thus, its capacity factor was 15.36%. Riverside's geothermal resources had capacity factors ranging from 72.33% to 93.86%, affected slightly by undergeneration. It is worth noting that intermittent renewable resources, including wind and solar, have capacity factors that are affected by natural factors such as cloud cover, blowing wind, etc.



## Resource Outages and Transmission Constraints

- RERC
  - RERC Unit 1 various maintenance tasks
  - RERC Unit 2 various maintenance tasks
  - RERC Unit 3 various maintenance tasks
  - RERC Unit 3 perform control system updates
  - RERC Unit 4 perform control system updates
  - RERC Unit 4 various maintenance tasks
- SPRINGS
  - None
- CLEARWATER
  - None