



# RIVERSIDE PUBLIC UTILITIES

## Board Memorandum

**BOARD OF PUBLIC UTILITIES**

**DATE: OCTOBER 28, 2024**

**GENERAL MANAGER'S REPORT**

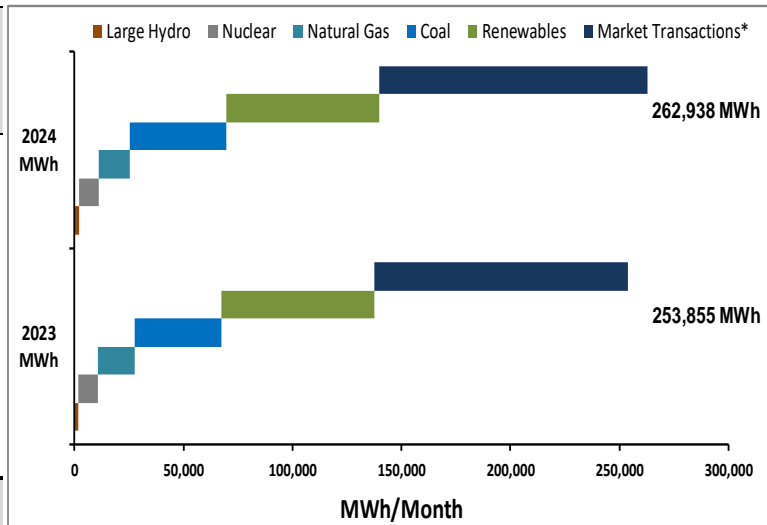
**SUBJECT: MONTHLY POWER SUPPLY REPORT – AUGUST 31, 2024**

### Monthly Power Usage:

The wholesale load (Vista Substation) for August was 262,938 MWh, an increase of 9,083 MWh compared to the same month in the previous year. Renewable generation served 26.62% or 69,987 MWh of Riverside's wholesale load. Coal generation served 16.92% or 44,495 MWh of the wholesale load. Nuclear energy covered 3.52% or 9,264 MWh. In August, internal natural gas generation served 5.36% or 14,085 MWh of wholesale load. Hydro generation represents 0.72% or 1,900 MWh of Riverside's wholesale load. Finally, the balance for August was covered by Market Transactions, which represented 46.86% or 123,207 MWh of the load.

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

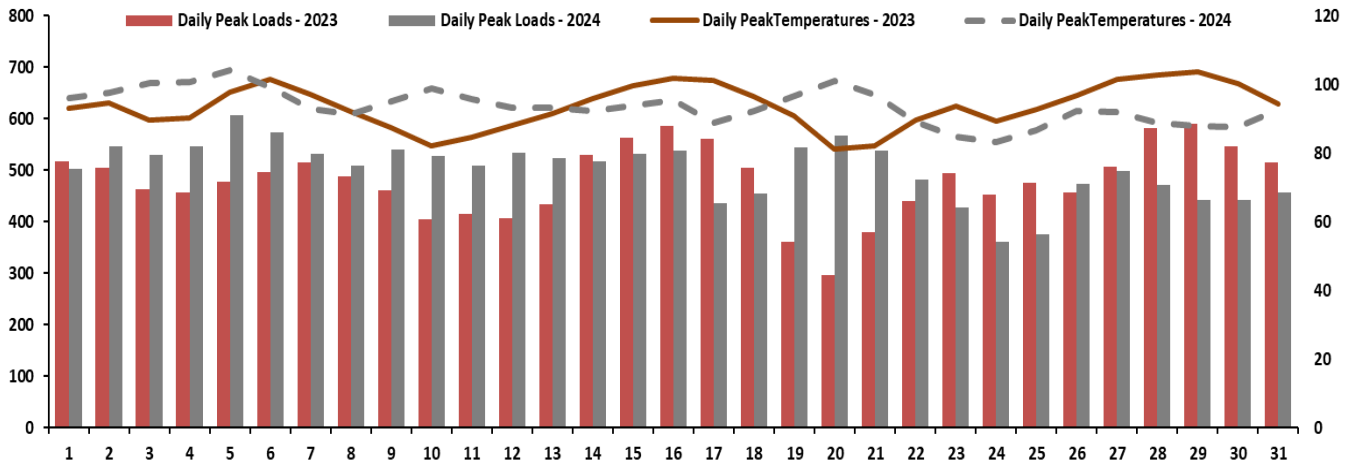
Energy	2023 MWh	2024 MWh	% Δ
Large Hydro	1,638	1,900	16.00%
Natural Gas	16,771	14,085	-16.02%
Nuclear	9,096	9,264	1.85%
Coal	40,031	44,495	11.15%
Market Transactions*	116,307	123,207	5.93%
Renewables	70,012	69,987	-0.03%
<b>Wholesale Load (Vista)</b>	<b>253,855</b>	<b>262,938</b>	<b>3.58%</b>



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

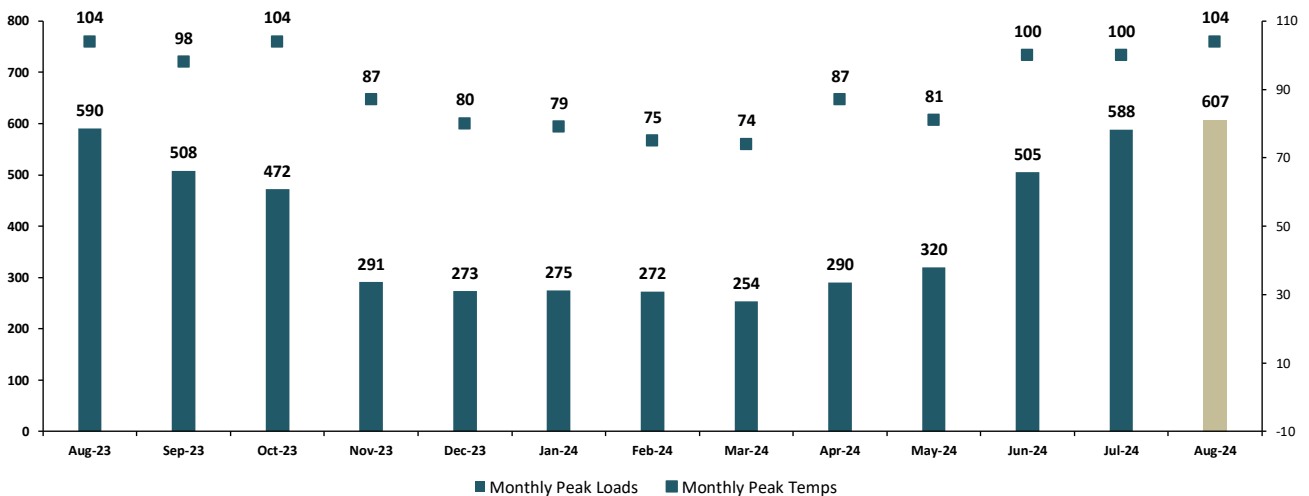
## Daily & Monthly Load & Temperature Trends

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 August 2024, average daily peak temperatures oscillated around 94 degrees. In August 2023, average daily peak temperatures similarly oscillated around 94 degrees. The monthly peak temperature in August 2024 was 104 degrees, while for comparison, the monthly peak temperature in August 2023 was also 104 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, on average, were similar in August 2024 to those in August 2023. However, it is worth noting that August 2023 experienced lower temperatures than August 2024, and the number of days with temperatures between 80 and 90 degrees was much higher in August 2024 (by 6 days). In August 2024, the average daily peak load was 501 MW, with the monthly peak load reaching 607 MW. The average daily peak load in August 2023 was 480 MW, with the monthly peak load reaching 590 MW. For the most part, prolonged warmer temperatures over consecutive days and elevated residual heat contributed to higher total system load and higher average load patterns compared to the same month last year. Lastly, the prolonged heat mainly occurred during weekdays, further contributing to the higher loads.

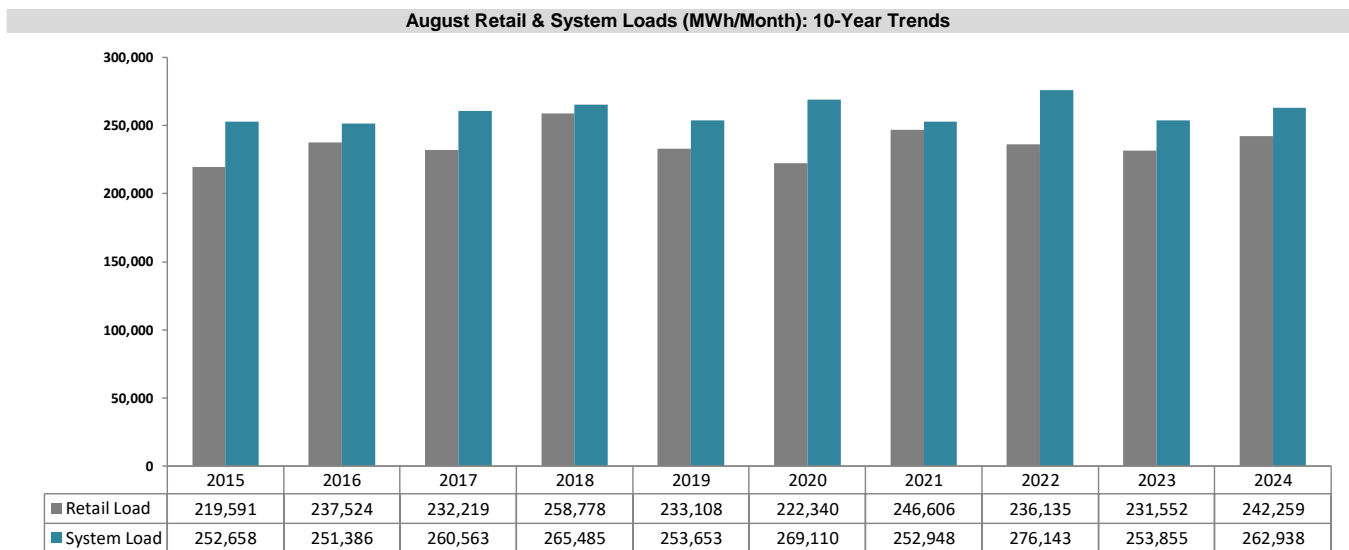
Monthly Peak Load and Temperature



Hourly demand peaked at 607 MW on 08/05/24 HE 17, an increase of 17 MW compared to a peak of 590 MW the same month last year. Riverside's resources covered 94% of the hourly peak demand on 08/05/24.

### **10-Year Retail Load Trends**

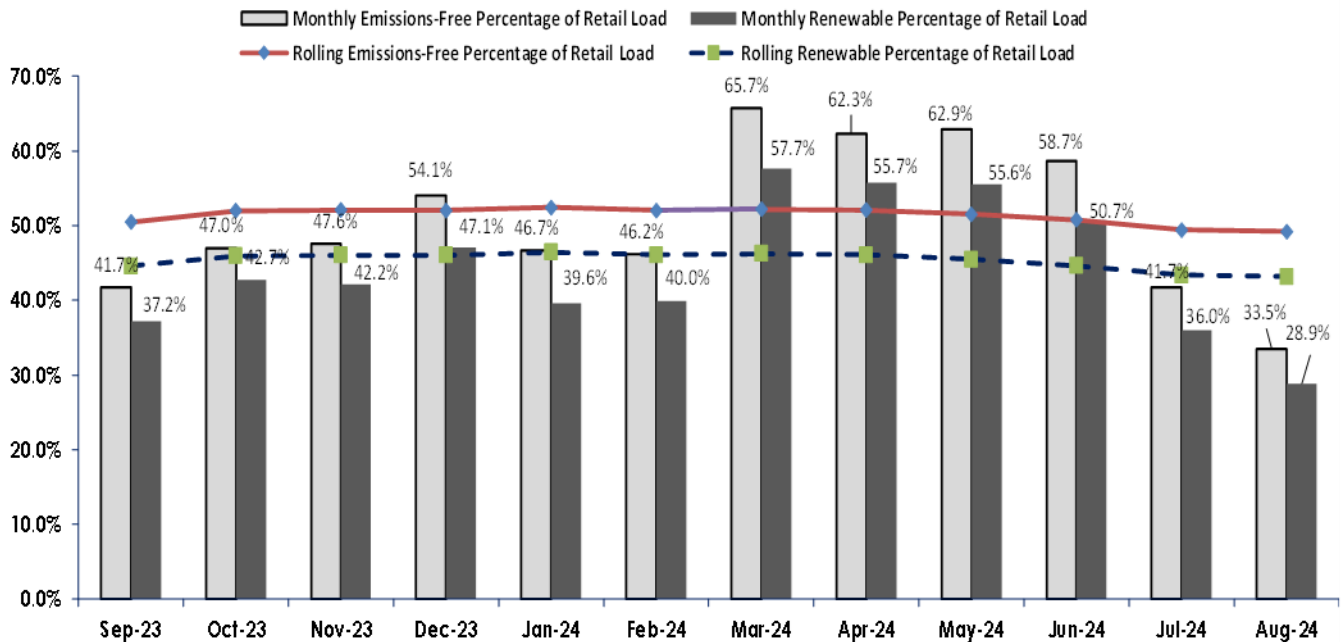
The retail load for August 2024 was 242,259 MWh, an increase of 10,707 MWh from the previous year's reading of 231,552 MWh. The System load for August 2024 was 262,938 MWh, an increase of 9,083 MWh from the prior year's reading of 253,855 MWh. Retail load values can be impacted by the significant adoption of residential PV solar, efficiency programs, adoption of energy-efficient appliances, available meter data, etc.



### **Renewable Generation Trends**

In August 2024, nuclear generation experienced a 0.5% decrease in production compared to July 2024 and an increase of 1.8% compared to August 2023. Total hydroelectric generation experienced a 24.0% decrease compared to July 2024 and an increase of 16.0% compared to August 2023. In August 2024 wind generation experienced an 82.1% increase in production compared to July 2024 and about an increase of 57% compared to August 2023. August 2024 solar generation experienced a decrease of 2.0% in production compared to July 2024 and an increase of 24% in production compared to August 2023. Lastly, in August 2024, geothermal generation experienced a decrease in production of 10.1% compared to July 2024 and a reduction of 11.0% of output compared to August 2023. In August 2024, renewable generation, as a percentage of retail load, decreased by about 7.1 percentage points from July 2024 and decreased by about 1 percentage points compared to August 2023. Lastly, in August 2024, Emissions-Free generation, as a percentage of retail load, decreased by about 8.0 percentage points from July 2024 and decreased 1 percentage point compared to August 2023. The driving factor for the decreased percentages in August 2024, compared to August 2023, are attributed to slight decreases in geothermal, wind, and solar hydro output combined with increases in total load over the month. 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

**August 2024 Resource Availability - Internal Generation**

- RERC's availability for the month was 99.92%.
- Springs's availability for the month was 100.00%.
- Clearwater's availability for the month was 100.00%.

**Resource Availability**

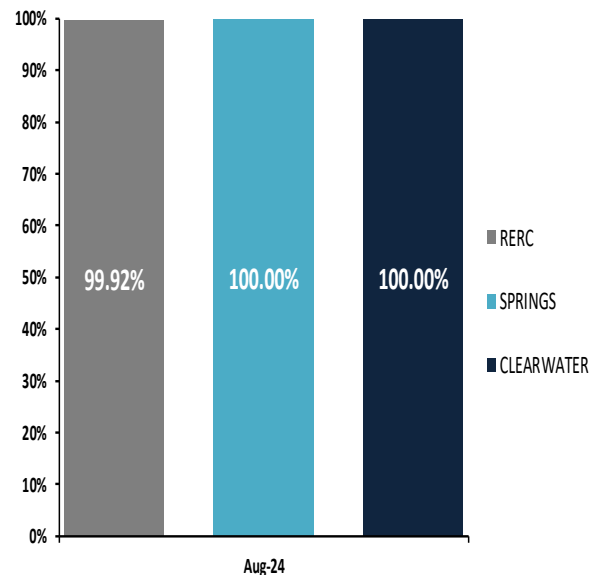
Aug-24	Total Outage Hours	Total Monthly Hrs.	Actual Available Hrs.	Availability %
RERC1	2.00	744.00	742.00	99.73%
RERC2	0.00	744.00	744.00	100.00%
RERC3	0.50	744.00	743.50	99.93%
RERC4	0.00	744.00	744.00	100.00%
<b>RERC</b>	<b>2.50</b>	<b>2976.00</b>	<b>2973.50</b>	<b>99.92%</b>

Aug-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>

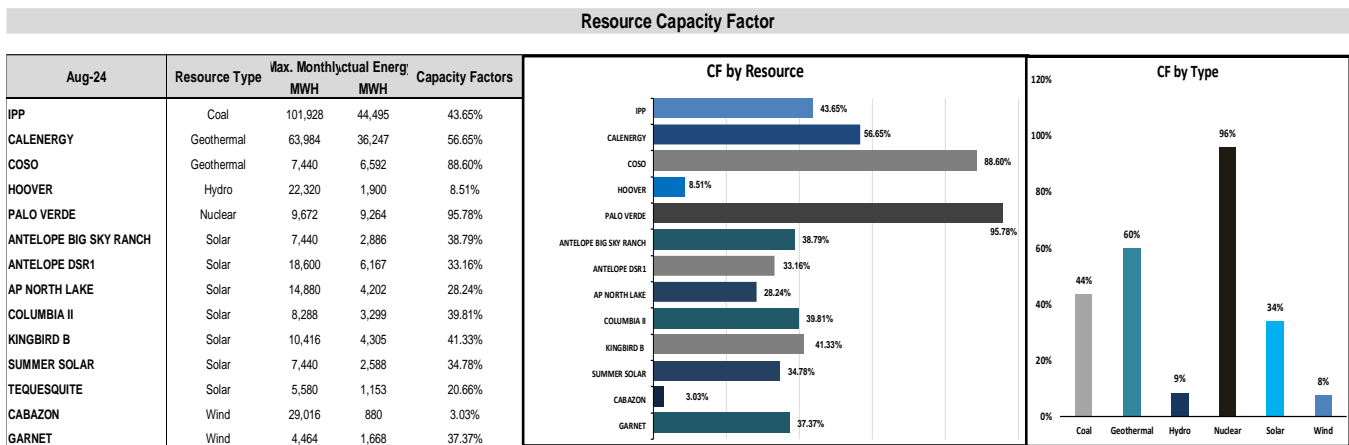
  

Aug-24	Total Outage Hrs.	Total Monthly Hrs.	Actual Available Hrs.	Availability %
<b>CLEARWATER</b>	<b>0</b>	<b>744</b>	<b>744</b>	<b>100.00%</b>



## August 2024 Resource Availability – External Resources

Solar resources had capacity factors ranging from 20.66% to 41.33%. Wind resources had capacity factors ranging from 3.03% to 37.37%. Riverside's Palo-Verde nuclear share had steady production with a capacity factor of 95.78%. Hoover is an energy-limited resource and continues to be affected by lake-level restrictions. The resource maintained an 8.51% capacity factor for the month. Riverside's monthly IPP coal resource maintained a capacity factor of 43.65%. Riverside's geothermal resources had capacity factors ranging from 56.65% to 88.60%, affected slightly by under generation. 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 packet inspection
  - RERC Unit 3 failed CEMS calibration
  
- SPRINGS
  - NONE
  
- CLEARWATER
  - NONE