

RIVERSIDE PUBLIC UTILITIES

Board Memorandum

BOARD OF PUBLIC UTILITIES

DATE: JUNE 10, 2024

GENERAL MANAGER'S REPORT

SUBJECT: MONTHLY POWER SUPPLY REPORT – MARCH 31, 2024

Monthly Power Usage:

The wholesale load (Vista Substation) for March was 154,202 MWh, a decrease of 2,786 MWh compared to the same month in the previous year. Renewable generation served 55.72% or 85,924 MWh of Riverside's wholesale load. Coal generation served 10.28% or 15,848 MWh of the wholesale load. Nuclear energy covered 6.19% or 9,539 MWh. In March, internal natural gas generation served 0.45% or 691 MWh of wholesale load. Hydro generation represents 1.69% or 2,604 MWh of Riverside's wholesale load. Riverside's emissions free and renewable resources generation increased in March 2024 compared to March 2023. Finally, the balance for March was covered by Market Transactions, which represented 25.68% or 39,596 MWh of the load.



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

Daily & Monthly Load & Temperature Trends

Weather has a significant impact on electricity demand, especially the variable temperature. Typically, as temperatures increase, electricity demand will also increase, and vice versa. The charts below graphically extrapolate the correlation between weather and electricity demand. March 2024 average daily peak temperatures oscillated around 64 degrees. While in March 2023, average daily peak temperatures were in the same range of 62 degrees. The monthly peak temperature in March 2024 was 74 degrees. For comparison, the monthly peak temperature in March 2023 was 74 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 March 2024 and March 2023, with slight differences arising between the 19th and 22nd day of the month. In March 2024, the average daily peak load was 236 MW, with the monthly peak load reaching 254 MW. The average daily peak load in March 2023 was 239 MW, with the monthly peak load reaching 279 MW. In March 2024, Riverside observed a similar average peak temperature of 64 degrees compared to March 2023. 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 March.



Hourly demand peaked at 254 MW on 03/06/24 HE 19, a decrease of 25 MW compared to a peak of 279 MW the same month last year. Riverside's resources covered 98% of the hourly peak demand on 03/06/24.

10-Year Retail Load Trends

The retail load for March 2024 was 150,843 MWh, a decrease of 2,462 MWh from the previous year's reading of 153,306 MWh. The System load for March 2024 was 154,202 MWh, a decrease of 2,786 MWh from the prior year's reading of 156,988 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 March 2024, nuclear generation experienced an 8.0% increase in production compared to February 2024 and an increase of 2.3% compared to March 2023. Total hydroelectric generation experienced a 126.0% increase compared to February 2024 and an increase of 16.0% compared to March 2023. March 2024 wind generation experienced a 118.20% increase in output compared to February 2024 and about an increase of 8% compared to March 2023. March 2024 and about an increase of 8% compared to March 2023. March 2024 and about an increase of 47.0% in production compared to February 2024 and an increase of 15% in output compared to March 2023. Lastly, in March 2024, geothermal generation experienced an increase in production of 29.1% compared to February 2024 and a reduction of 2% of output compared to March 2023.

In March 2024, renewable generation, as a percentage of retail load, increased by about 19% percentage points from February 2024 and increased by 2% percentage points compared to March 2023. Lastly, in March 2024, Emissions-Free generation, as a percentage of retail load, increased by about 17.2% percentage points from February 2024 and increased by about 2% percentage points compared to March 2023. The driving factors for the increased percentages in March 2024, compared to March 2023, are steady geothermal and increased wind, solar, and hydro output. The Emissions Free and Renewable Resources summary graph reflects a rolling 12-month trend line.



Emission Free and Renewable Resources' Summary

Notes: * CAISO Market Purchases are calculated as CAISO metered system load ("MLAP_RVSD_RVSD") minus sum of all energy purchases.

March 2024 Resource Availability - Internal Generation

- RERC's availability for the month was 99.87%. •
- Spring's availability for the month was 100.00%. •
- Clearwater's availability for the month was 100.00%. •

			Res	source Avai	nomity				
Mar-24	Total Outage Hours	Total Monthly Hrs.	Actual Available Hrs.	Availability %	100%				
RERC1	0.00	744.00	744.00	100.00%	90% -				
RERC2	0.00	744.00	744.00	100.00%	80% -				
RERC3	4.00	744.00	740.00	99.46%	70% -				
RERC4	0.00	744.00	744.00	100.00%	600/				
RERC	4.00	2976.00	2972.00	99.87%	60% -				
					50% -	99.87%	100.00%	100.00%	
Mar-24	Total	Total Monthly	Actual Available	Availability	40% -				
	Outage Hours	Hrs.	Hrs.	%	30% -				
SPRINGS	0	2976	2976	100.00%					
					20% -				
Mar-24	Total Outage	Total Monthly	Actual Available	Availability	10% -				
war-24	Hrs.	Hrs.	Hrs.	%	0%				Ļ
CLEARWATER	0	744	744	100.00%			Mar-24		

March 2024 Resource Availability – External Resources

Solar resources had capacity factors ranging from 19.62% to 30.54%. Wind resources had capacity factors ranging from 1.89% to 42.51%. Riverside's Palo-Verde nuclear share had steady production with a capacity factor of 98.62%. Hoover is an energy-limited resource and continues to be affected by lake-level restrictions. The resource maintained an 11.67% capacity factor for the month. An undersupply of coal currently impacts IPP, restricting generation output; thus, its capacity factor was 15.55%. Riverside's geothermal resources had capacity factors ranging from 85.38% to 92.29%, 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 3 CEMS issues
- SPRINGS
 - None
- CLEARWATER
 - o None