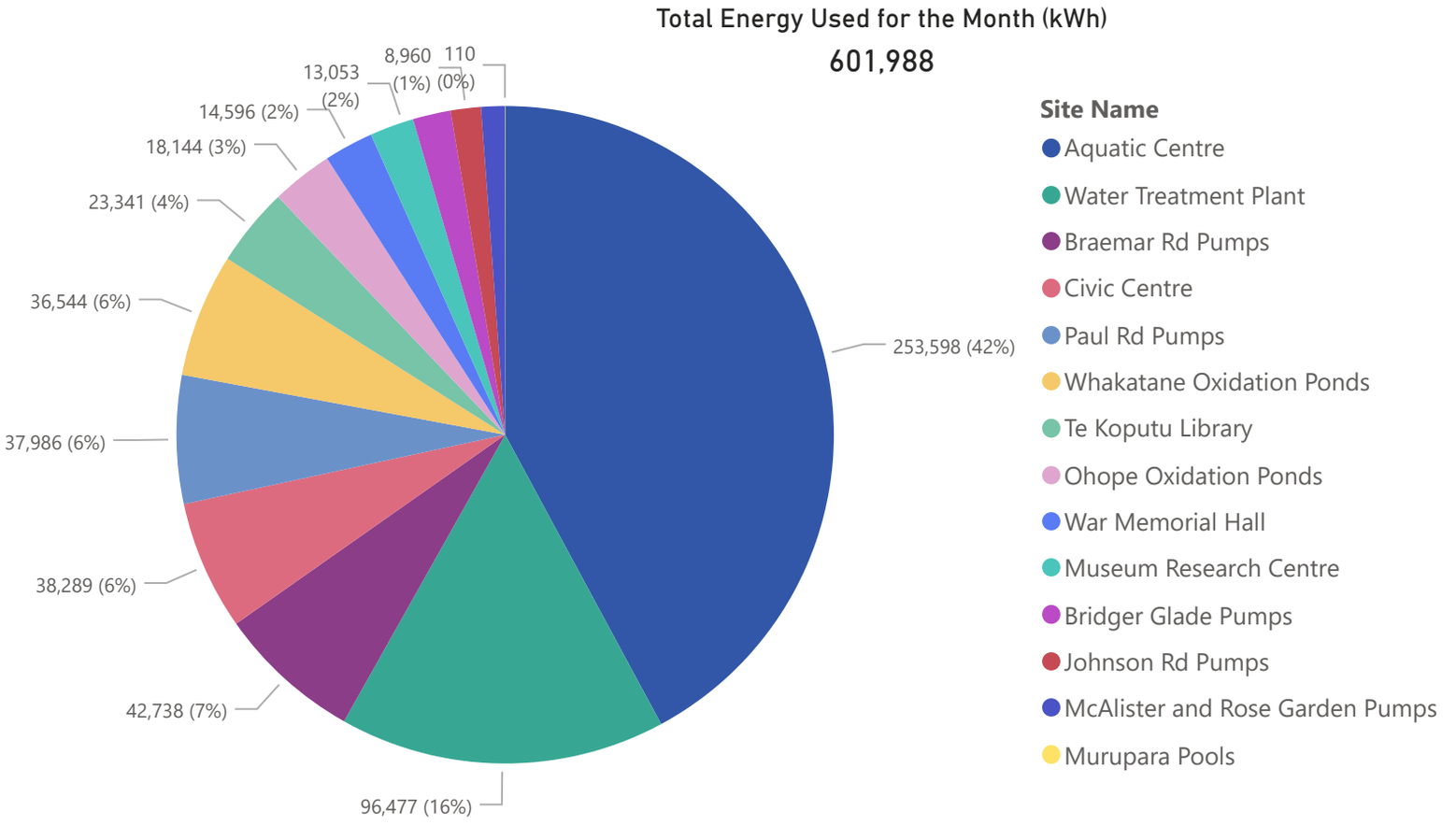
July 2023

Whakatane District Council

Summary

$11,682 Monthly Energy Cost Savings	88,497 Elec. Savings (kWh/mo)	17% Elec. Savings (%)	582,155 R12M Electricity Savings (kWh/yr)	-5,206 CO2e Savings (kg/mo)
$106,656 R12M Energy Cost Savings	-81,156 Gas. Savings (kWh/mo)	-81% Gas. Savings (%)	-57,188 R12M Gas Savings (kWh/yr)	64,424 R12M CO2e Savings (kg/yr)

Total Energy (kWh/Month)



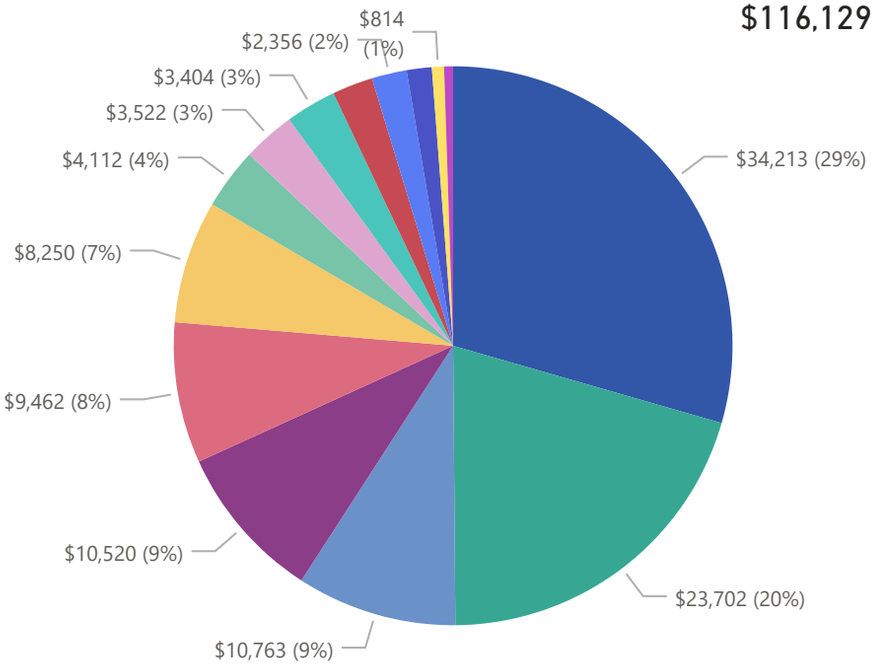
Whakatane District Council

Summary

Energy Cost ($/Month)

Energy Cost for the Month ($)

$116,129



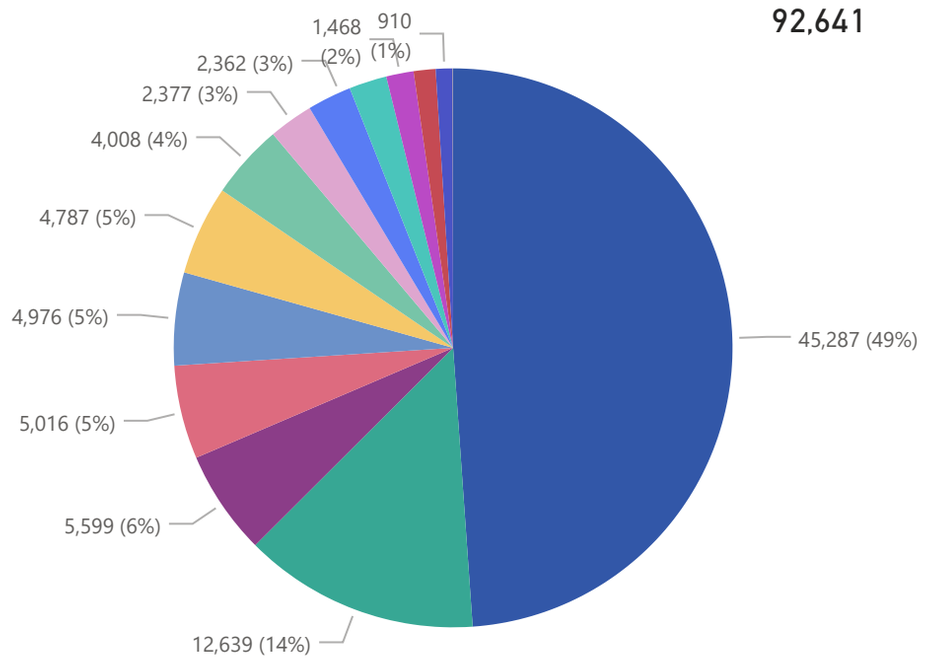
Site Name

- Aquatic Centre
- Water Treatment Plant
- Paul Rd Pumps
- Braemar Rd Pumps
- Civic Centre
- Whakatane Oxidation Ponds
- Te Koputu Library
- Ohope Oxidation Ponds
- Museum Research Centre
- Johnson Rd Pumps
- War Memorial Hall
- McAlister and Rose Garden Pumps
- Murupara Pools
- Bridger Glade Pumps

Carbon Emissions (kgCO2e/Month)

Carbon Emissions for the Month (kgCO2e)

92,641



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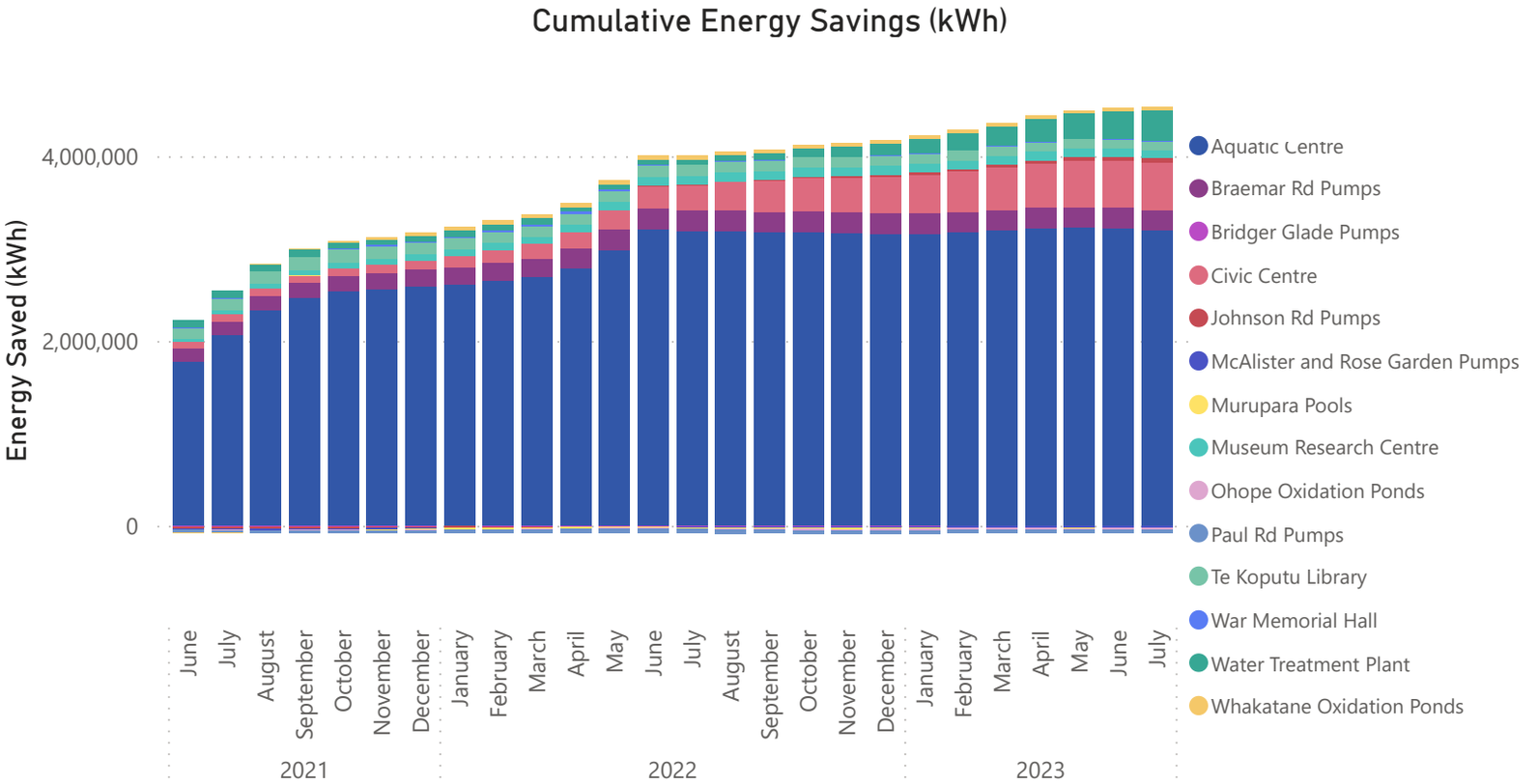
Whakatane District Council

Summary



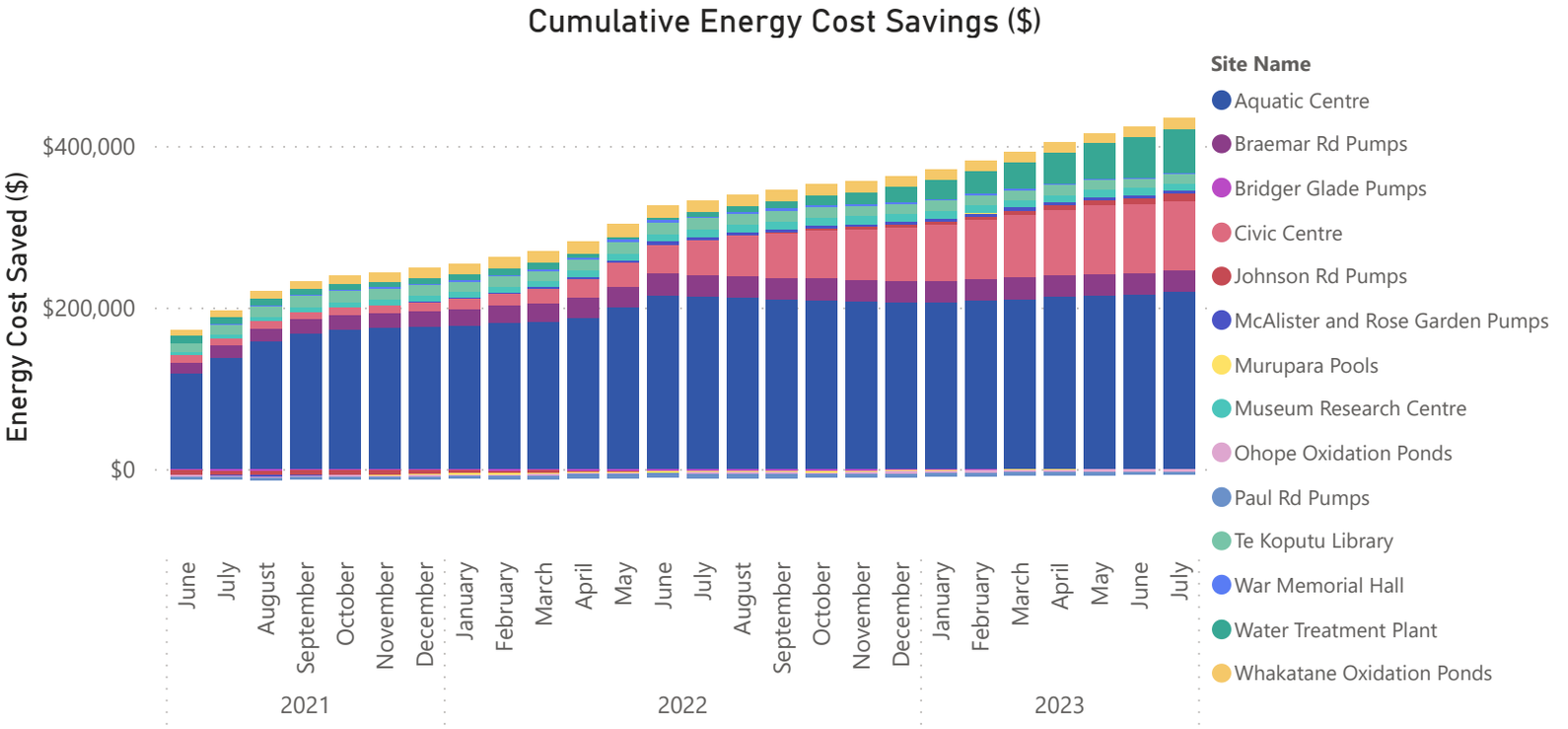
Note, cumulative savings are calculated starting July 2018

Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

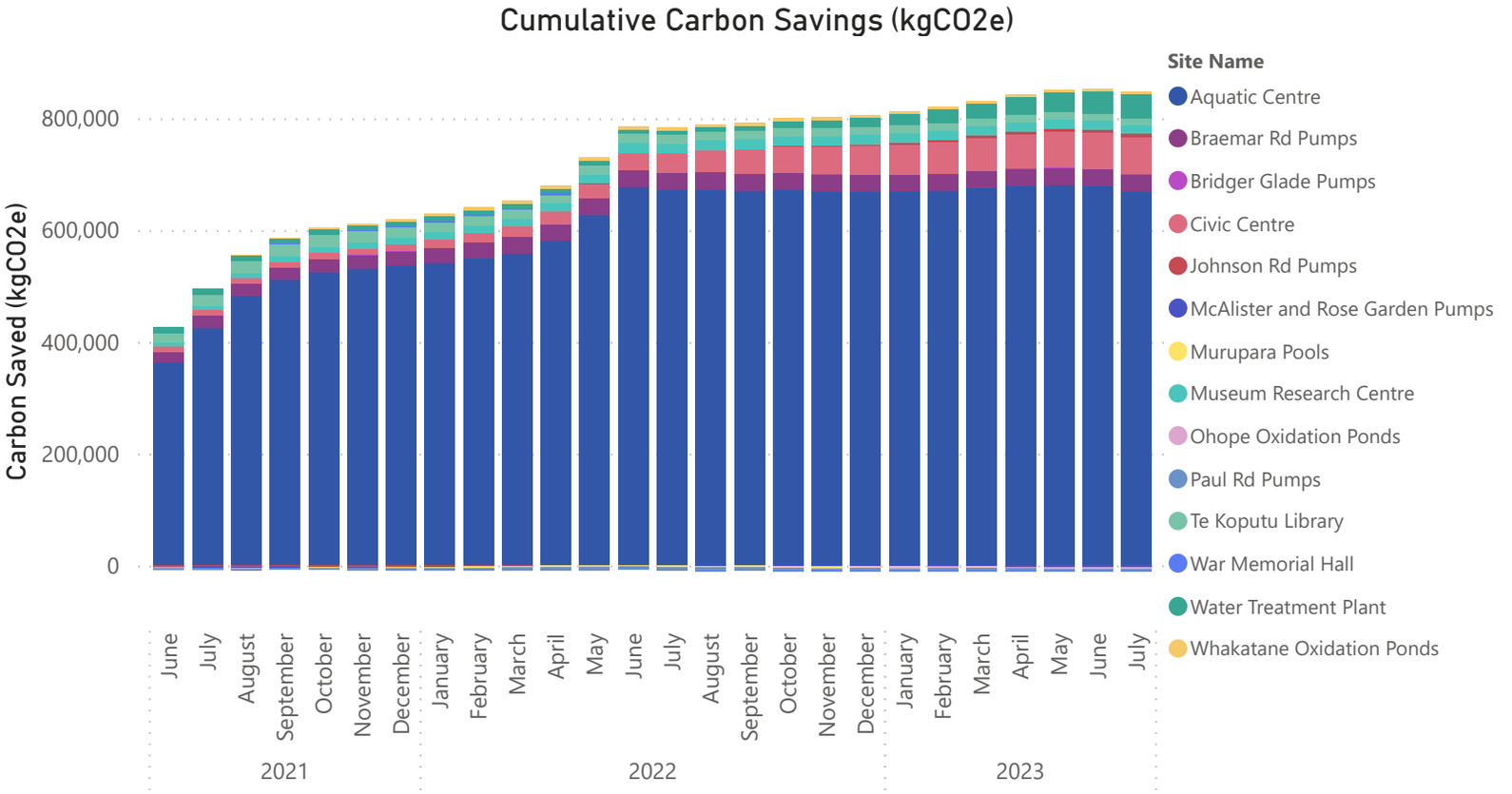
Baselines were updated for all sites from July 2022.

Whakatane District Council

Summary



Note, cumulative savings are calculated starting July 2018



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Whakatane District Council

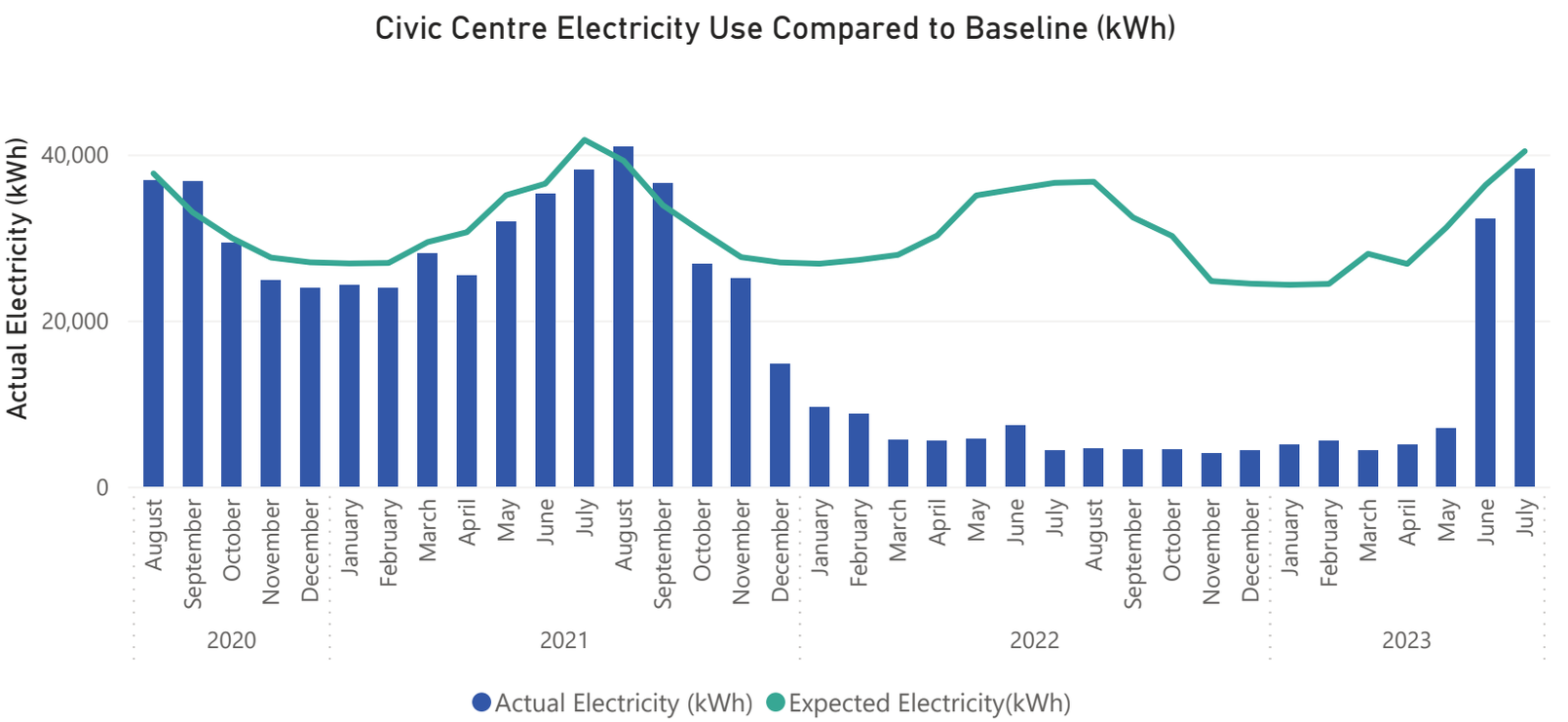
Civic Centre

$425 Monthly Energy Cost Savings	2,110 Elec. Savings (kWh/mo)	5% Elec. Savings (%)	240,378 R12M Electricity Savings (kWh/yr)	276 CO2e Savings (kg/mo)
$43,519 R12M Energy Cost Savings				31,489 R12M CO2e Savings (kg/yr)

Comments:

Electricity use has increased in June and July 2023. Energy use gradually increased from 19 May, through June. The pattern of electricity use has changed when comparing the Civic Centre in July 2023 to July 2021: Peak demand has decreased and afterhours demand has increased by approximately 150%. In July 2021 the baseline was approximately 20kW and in July 2023, electricity demand was frequently around 50kW after hours. The electricity use profile may be related to re-commissioning of the building and equipment being left on.

Electric vehicle charging stations have been in use from March 2021, non-routine adjustments are on-going to account for the increased electricity use.



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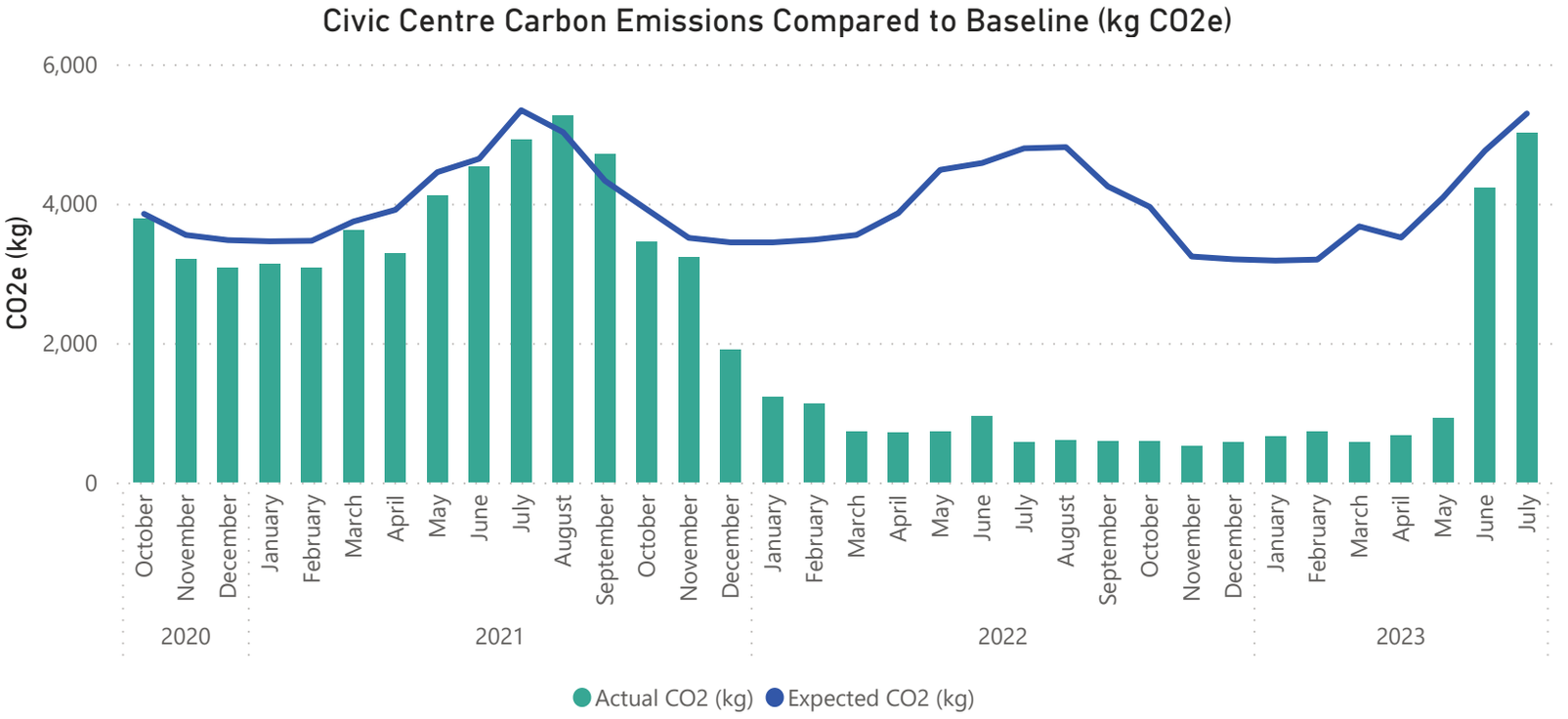
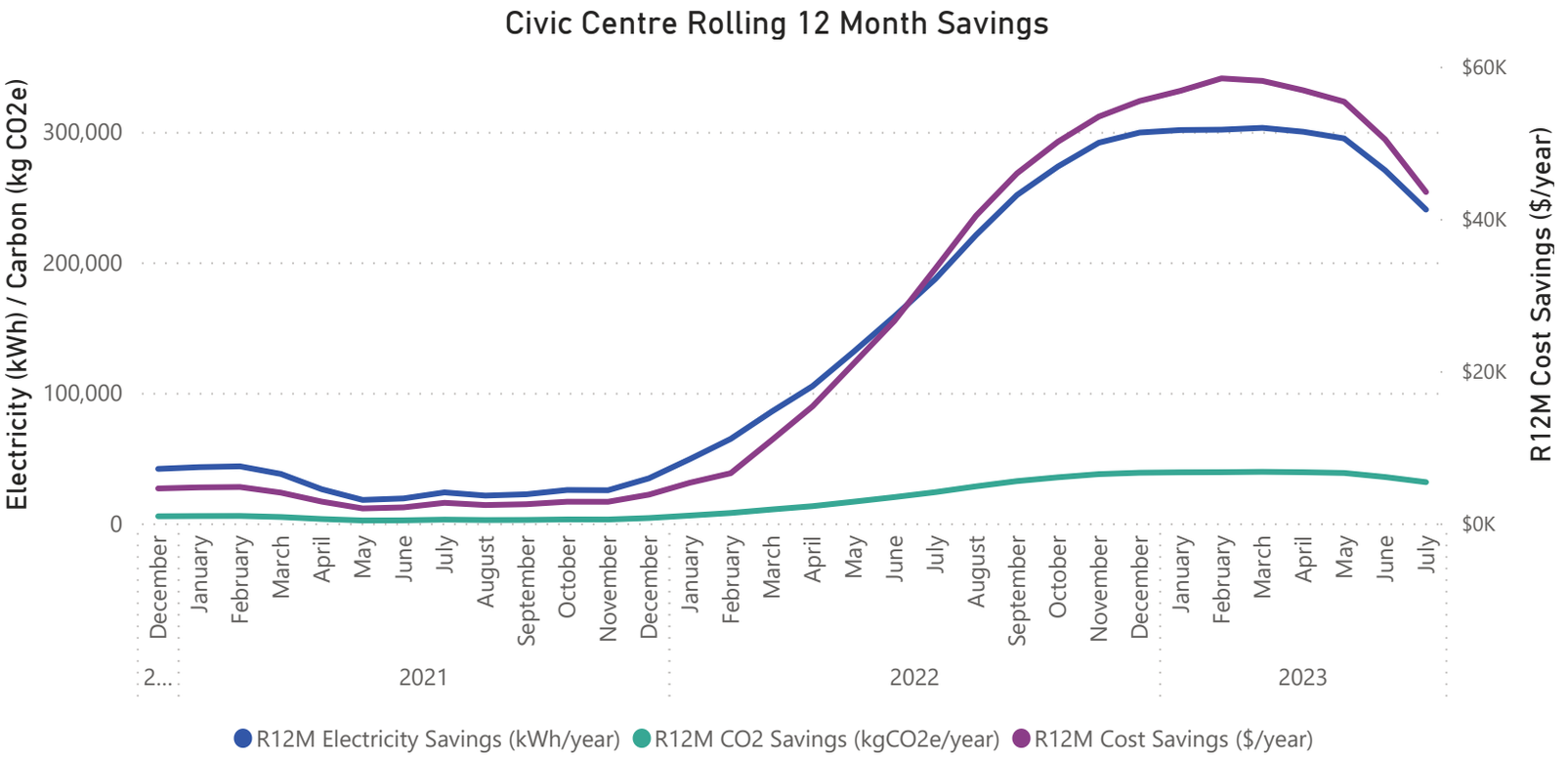
Whakatane District Council

Civic Centre





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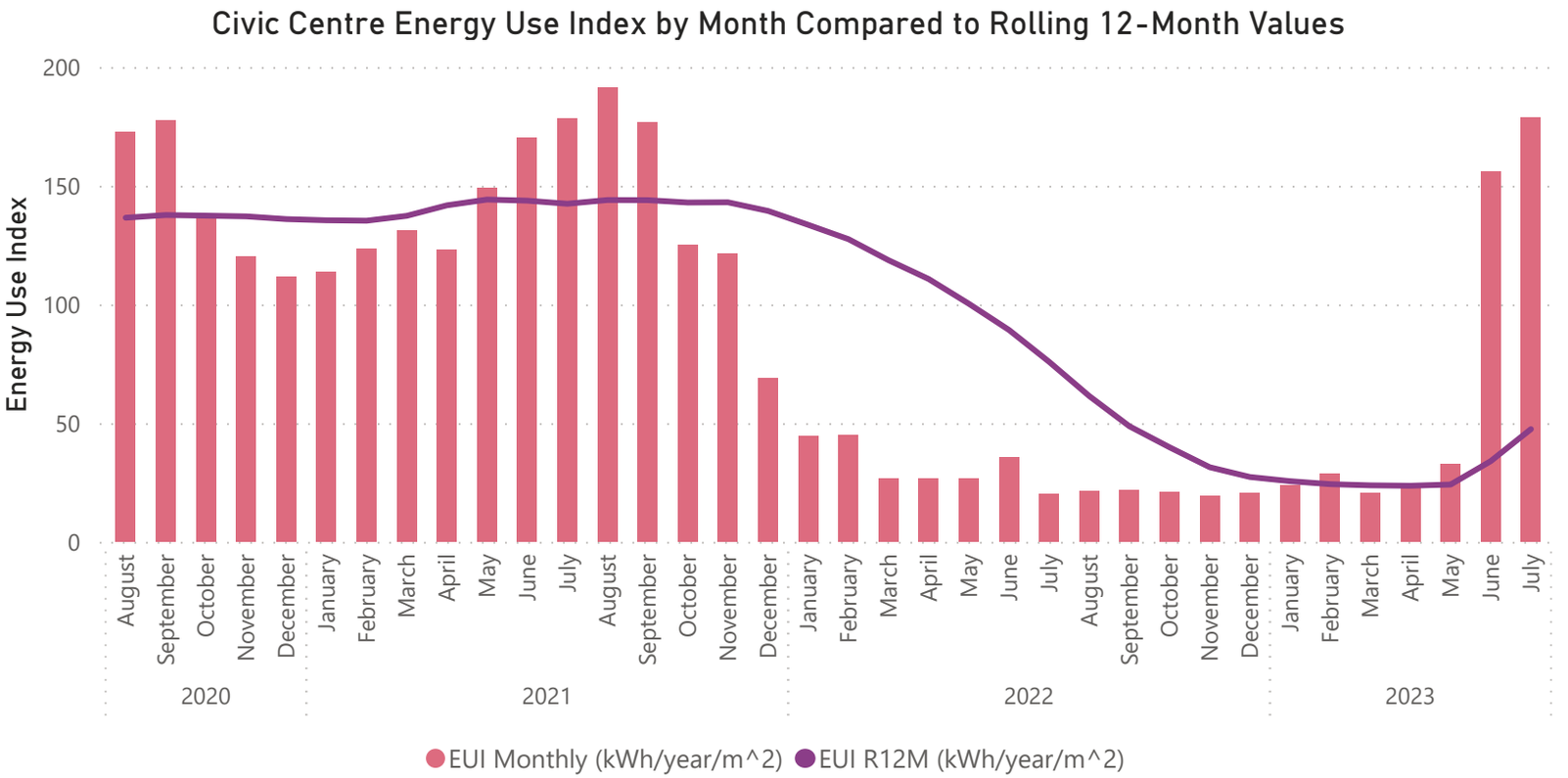
Whakatane District Council

Civic Centre



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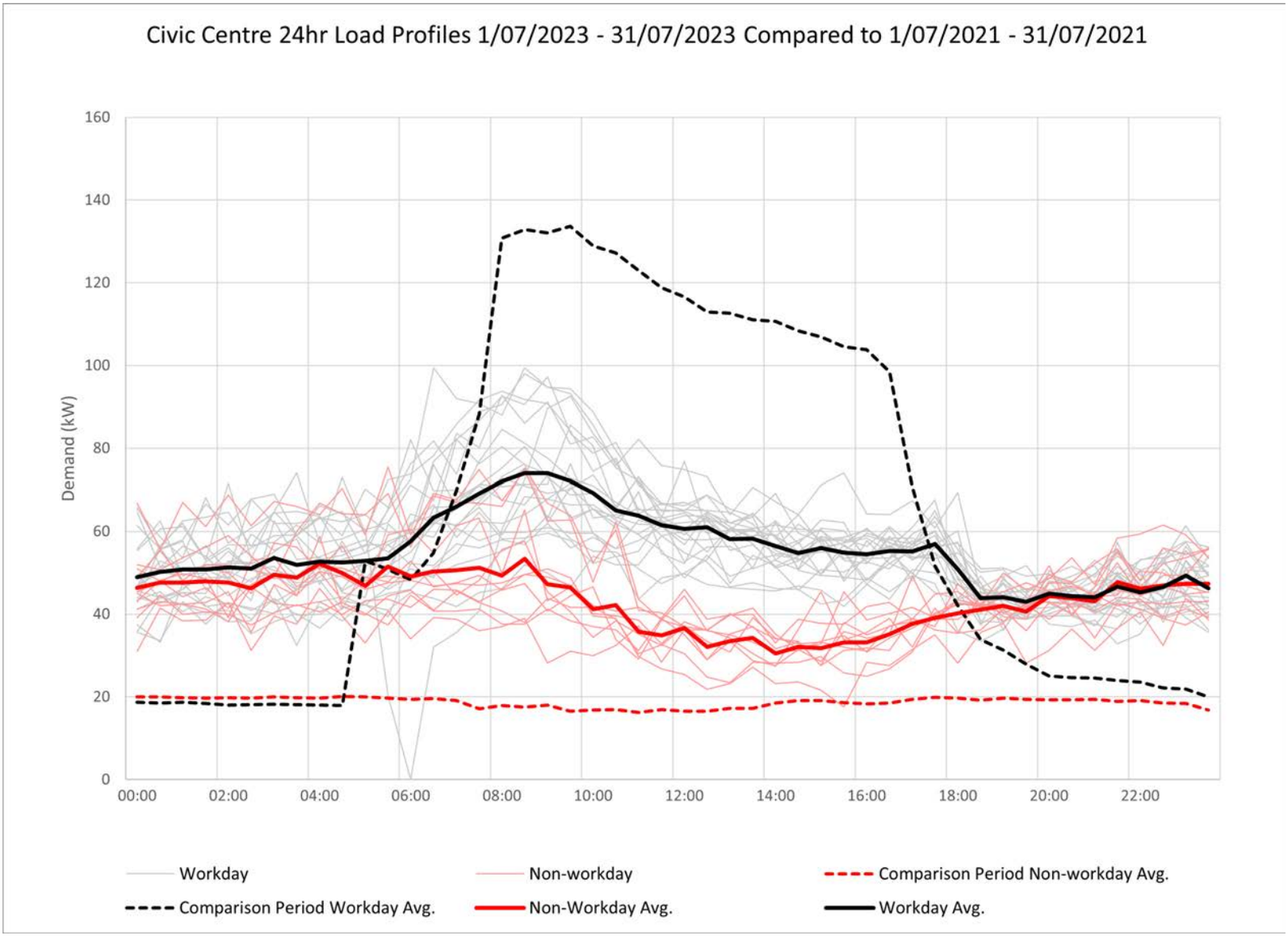
Whakatane District Council

Civic Centre



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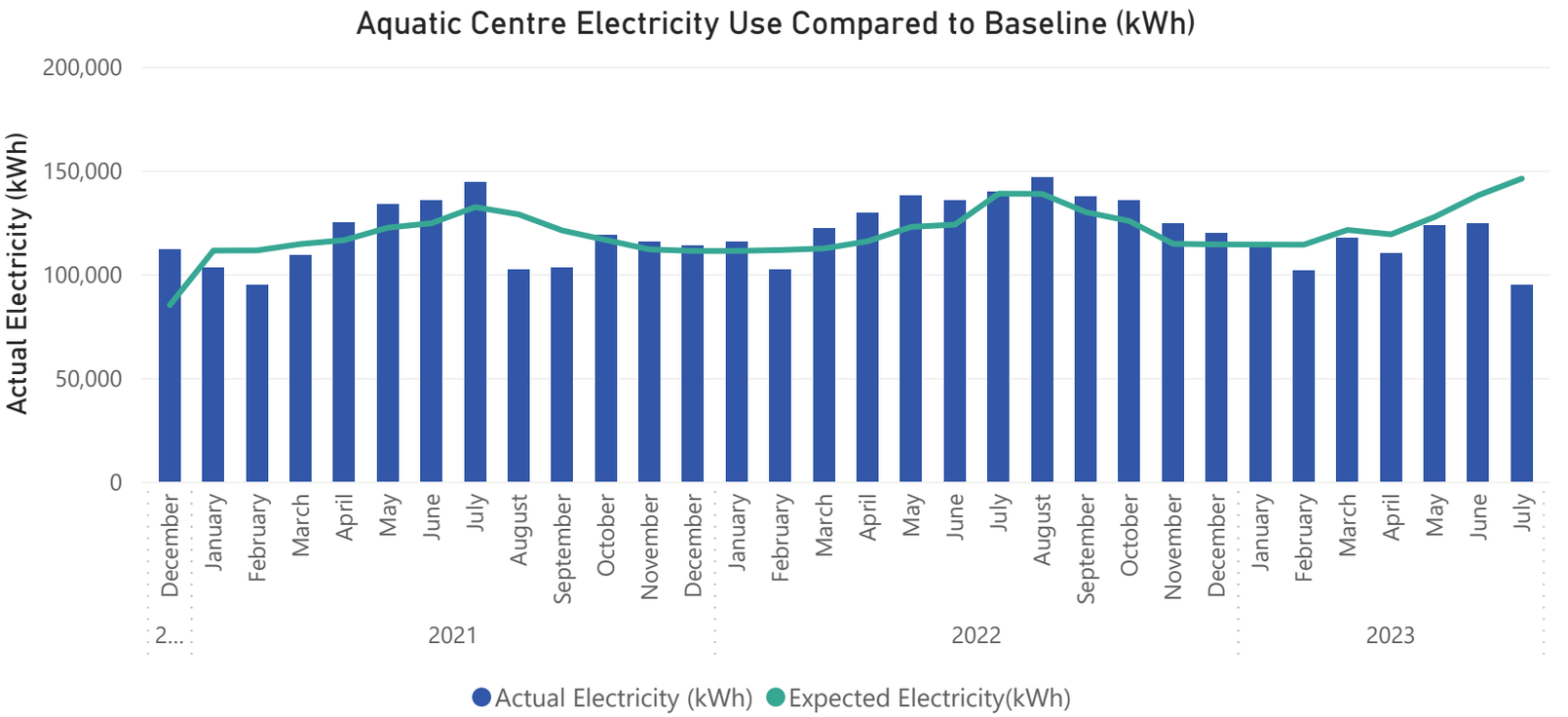
Whakatane District Council

Aquatic Centre

$4,294 Monthly Energy Cost Savings	51,179 Elec. Savings (kWh/mo)	35% Elec. Savings (%)	53,595 R12M Electricity Savings (kWh/yr)	-8,912 CO2e Savings (kg/mo)
$7,245 R12M Energy Cost Savings	-75,441 Gas. Savings (kWh/mo)	-91% Gas. Savings (%)	-42,532 R12M Gas Savings (kWh/yr)	-1,783 R12M CO2e Savings (kg/yr)

Comments:

Electricity use was less than baseline in July 2023 and gas was higher than baseline. The Aquatic Centre is using the gas boilers as a temporary solution for six weeks while heat pump and plant equipment are being repaired and redeveloped. Previously gas was switched off from 17 December 2022 to 6 May 2023. The EUI for the month has increased, as would be expected with more use of the gas boilers, heat pumps use energy more efficiently.



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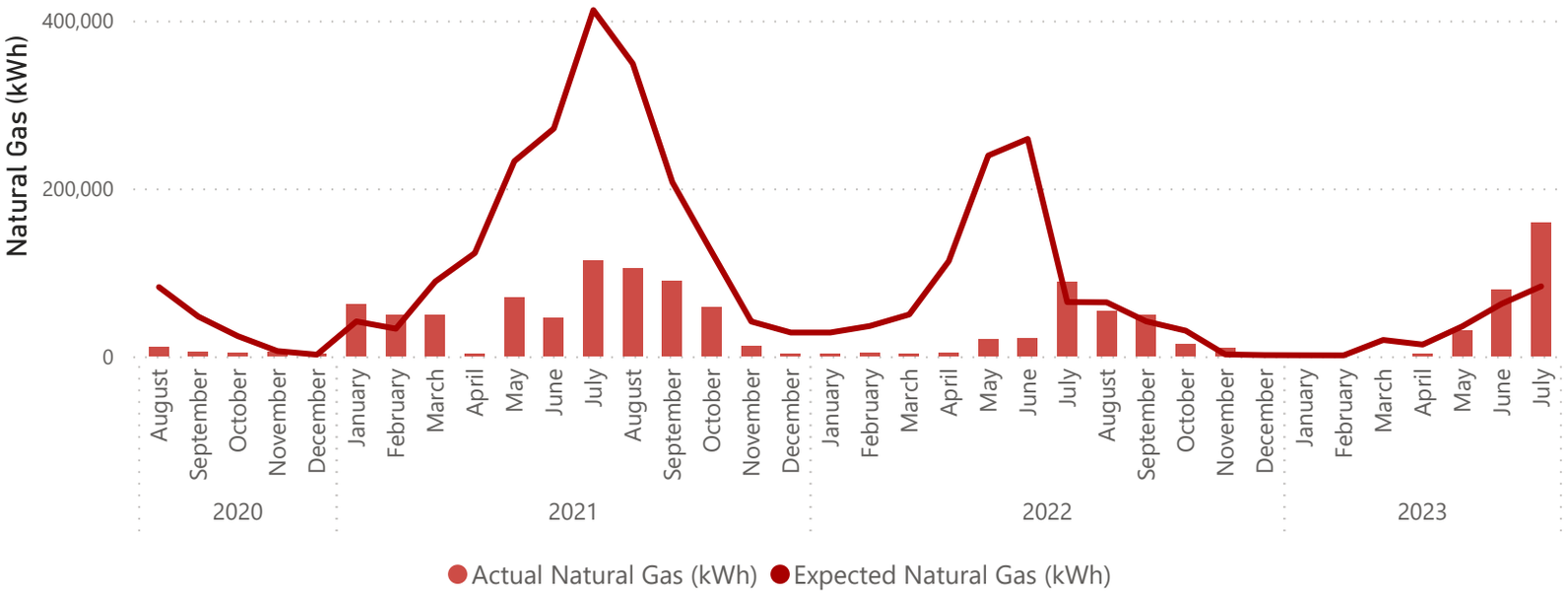
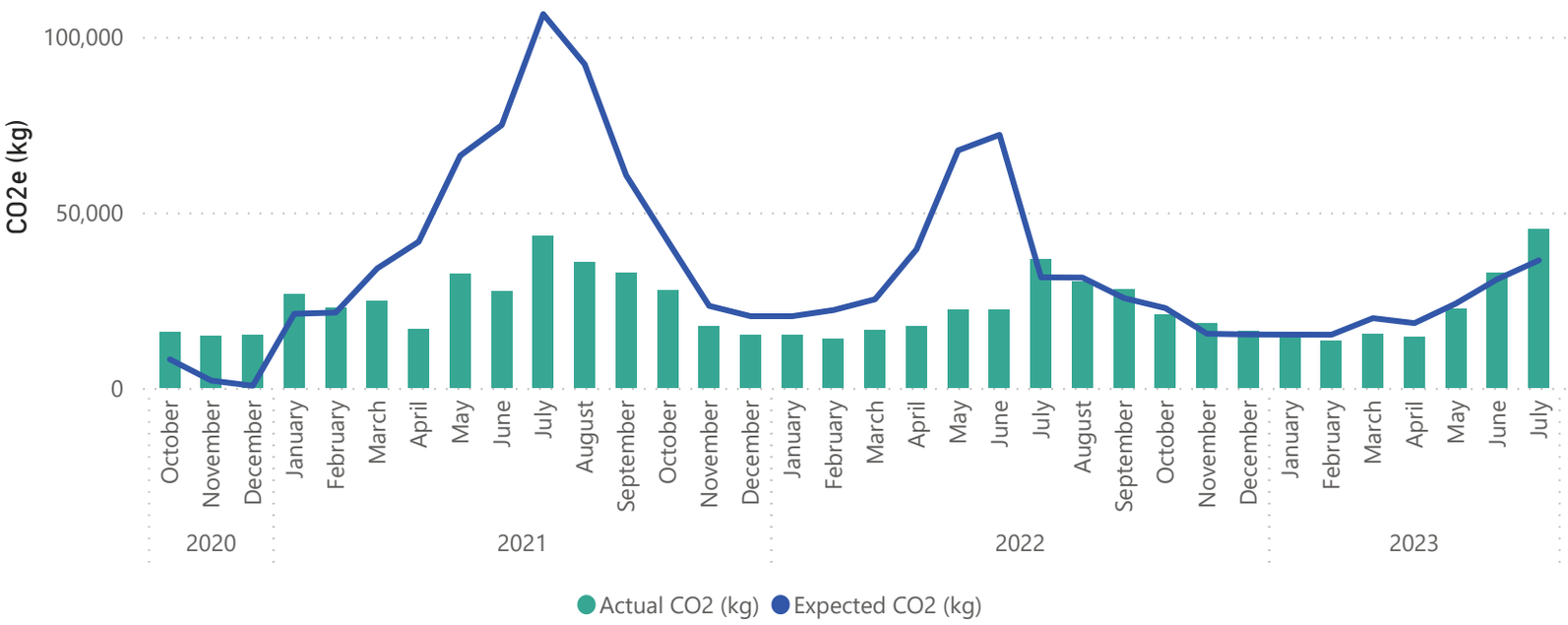
Whakatane District Council

Aquatic Centre

Aquatic Centre Natural Gas Compared to Baseline (kWh)



Aquatic Centre Carbon Emissions Compared to Baseline (kg CO2e)



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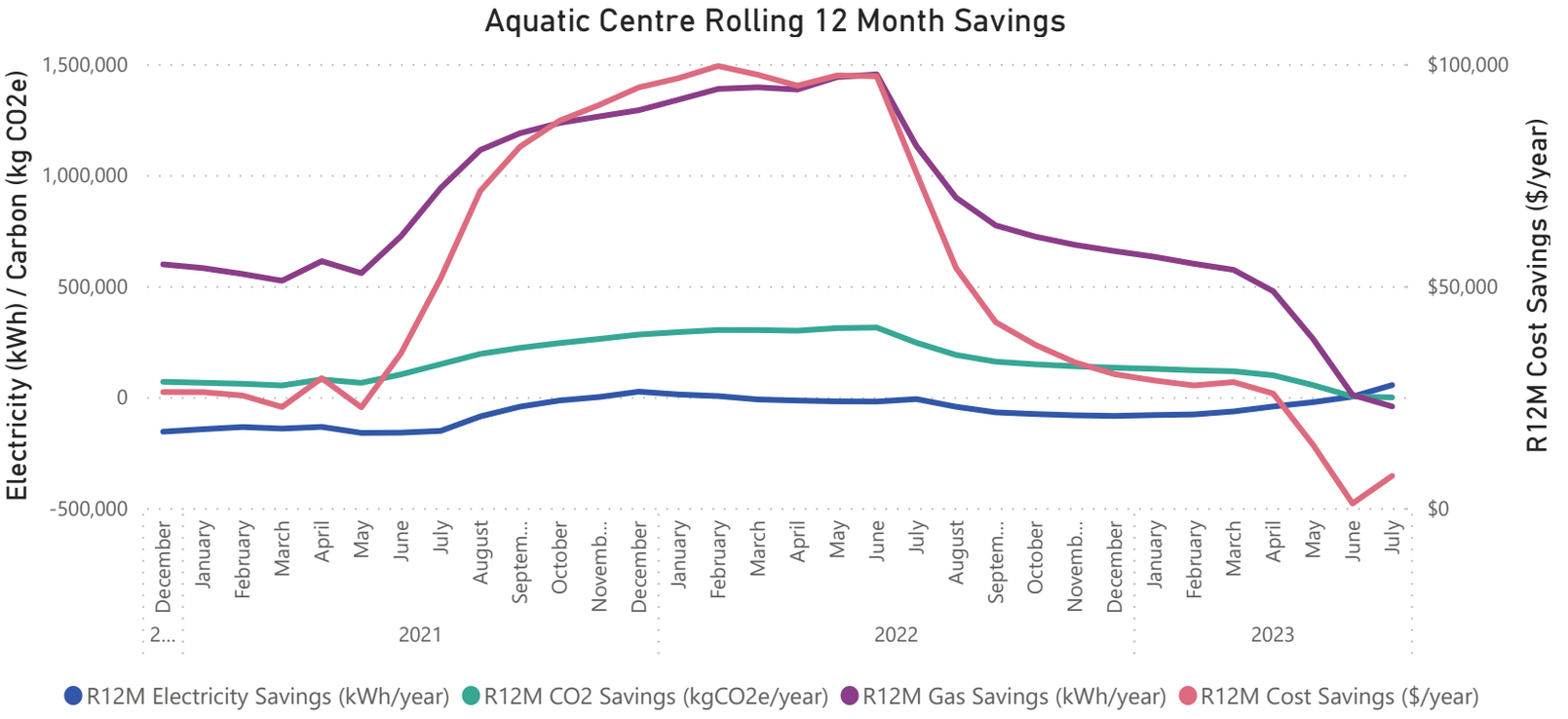
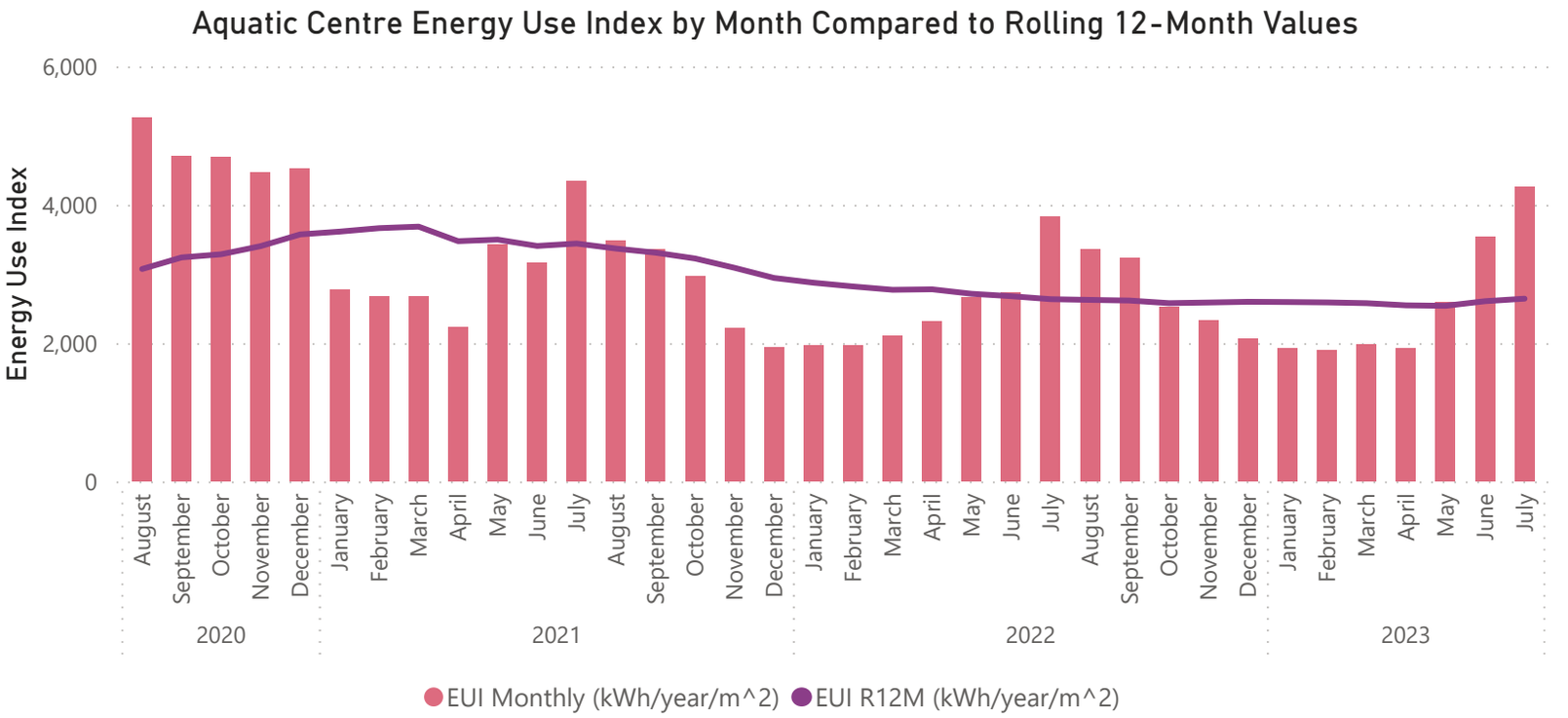
Whakatane District Council

Aquatic Centre





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July 2023

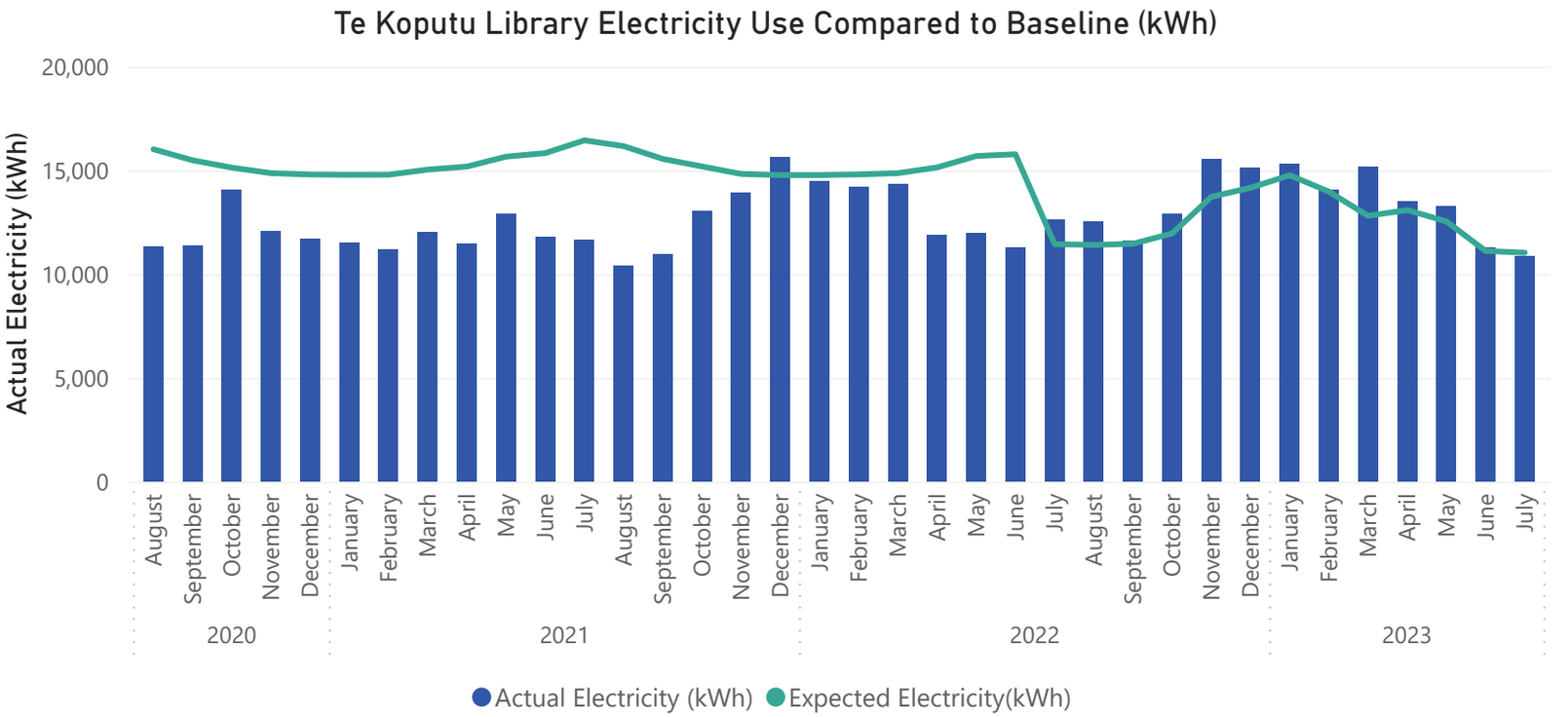
Whakatane District Council

Te Koputu Library

-$202	193	2%	-9,120	-600
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
-$2,737	-3,022	-32%	-13,488	-3,987
R12M Energy Cost Savings	Gas. Savings (kWh/mo)	Gas. Savings (%)	R12M Gas Savings (kWh/yr)	R12M CO2e Savings (kg/yr)

Comments:

Electricity use was slightly less than expected for the month, natural gas use was significantly more than expected. Natural gas use has been relatively flat from January 2023 to July 2023, even though temperature has changed significantly from January to July.

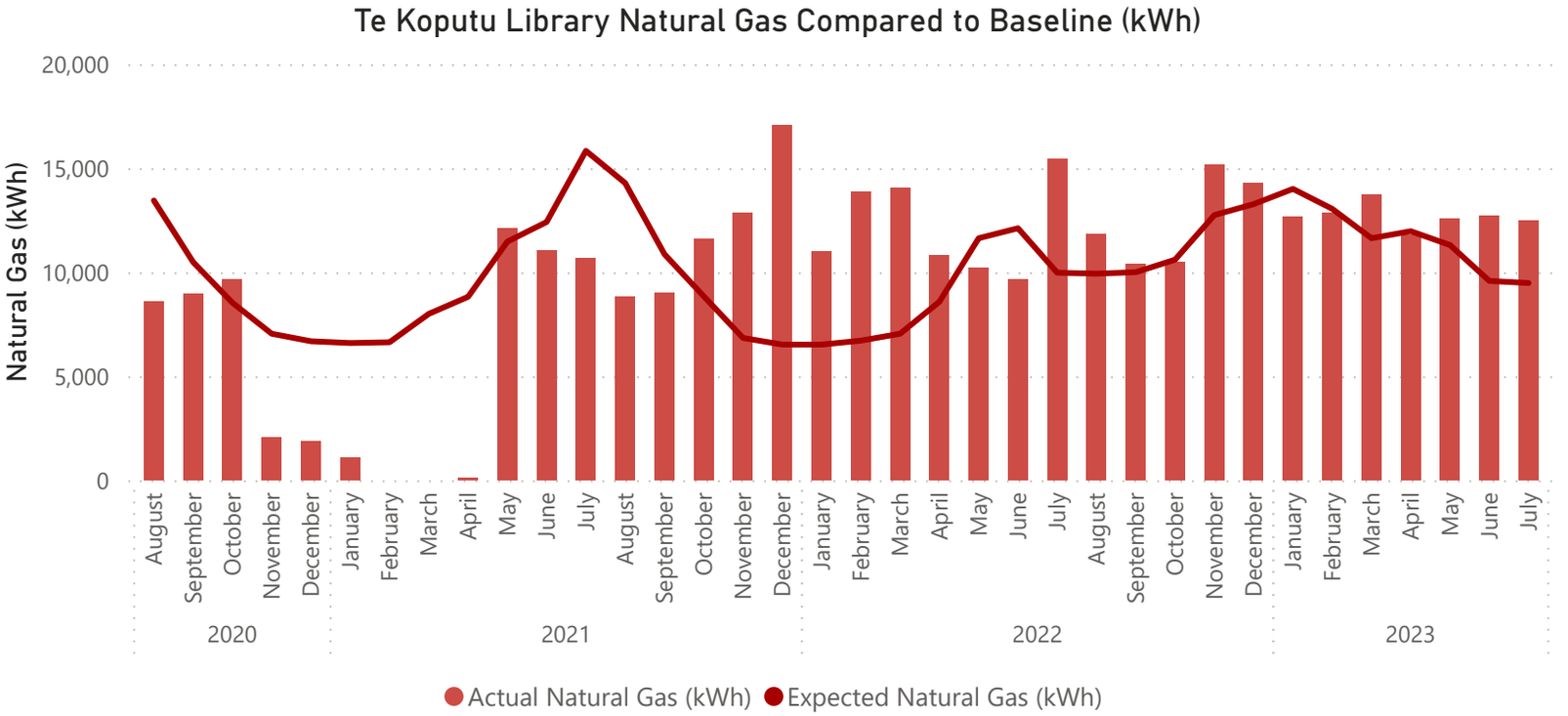


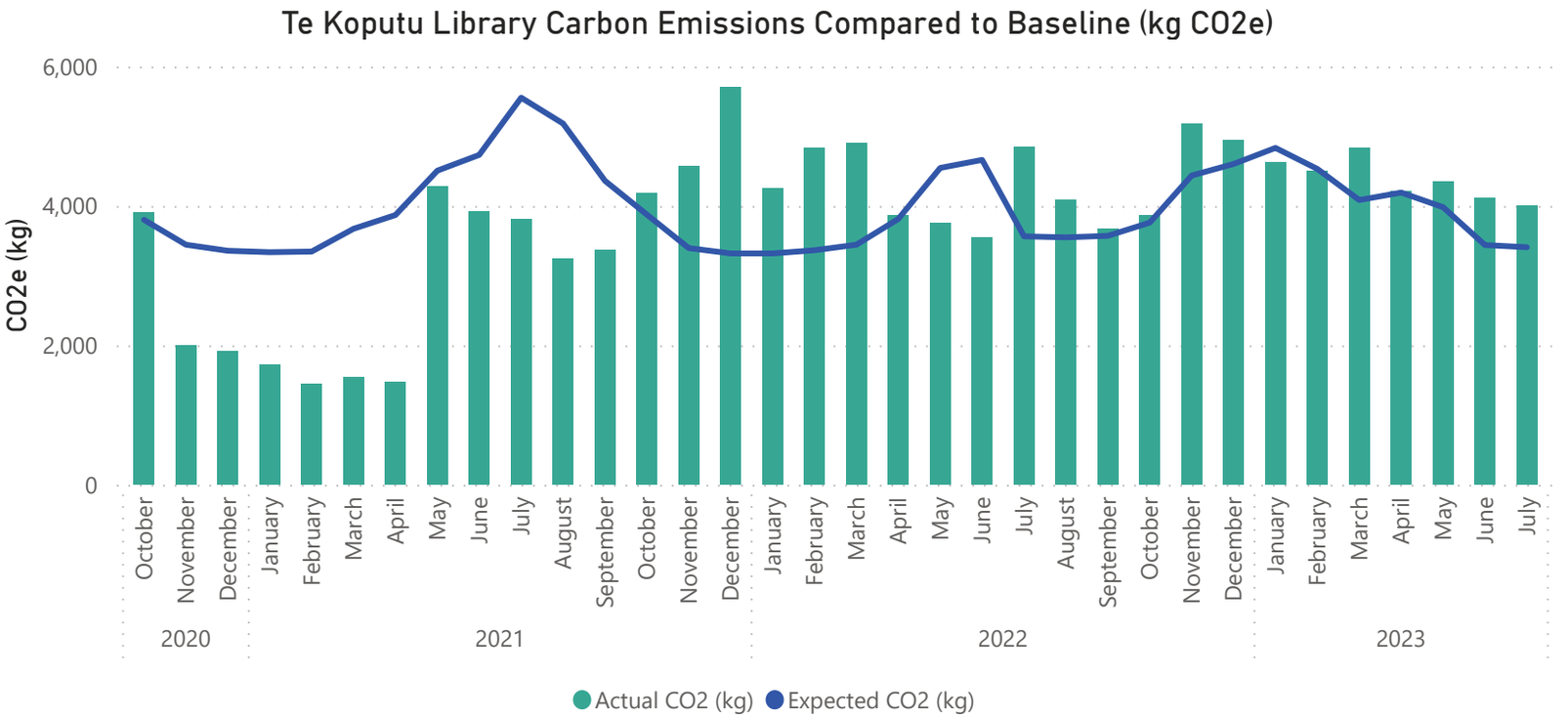
Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

Baselines were updated for all sites from July 2022.

Whakatane District Council

Te Koputu Library





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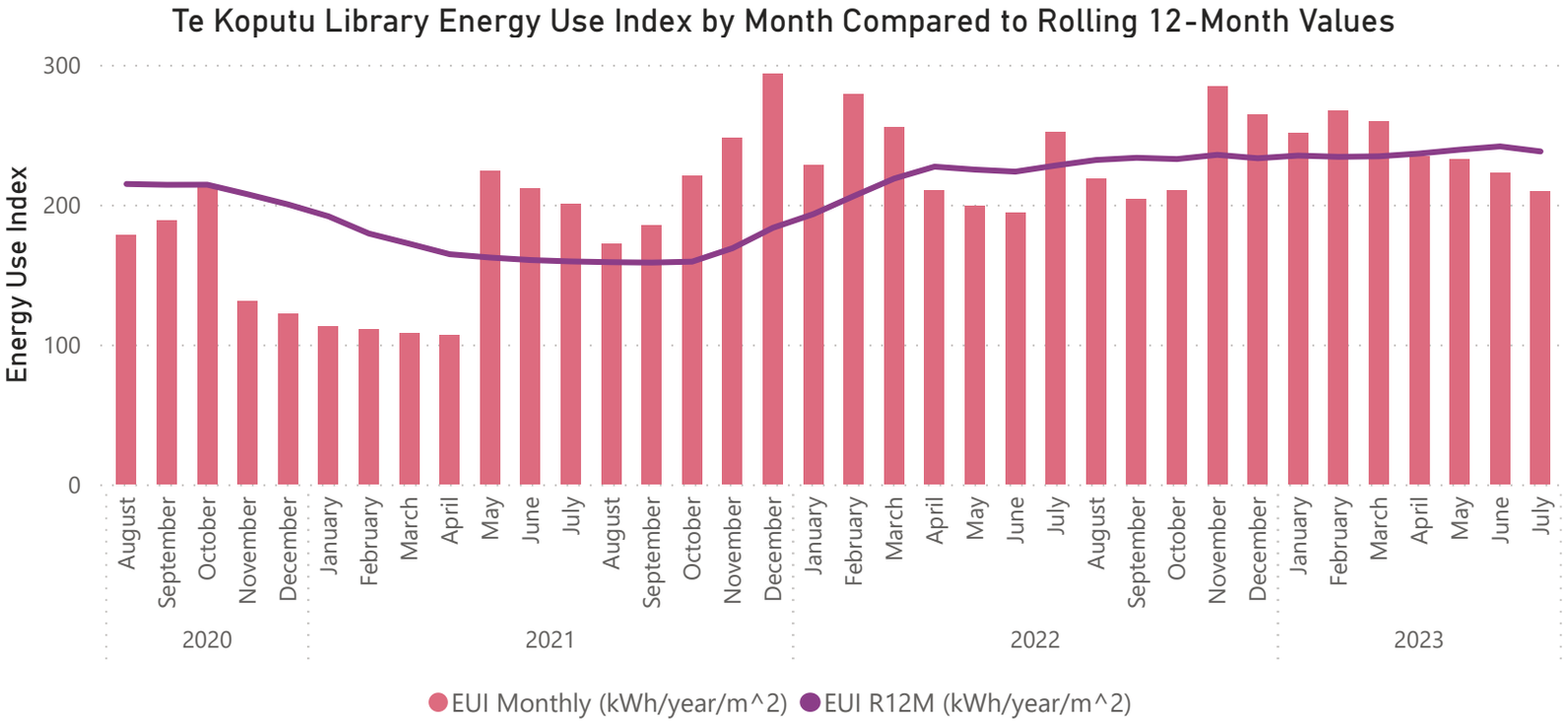
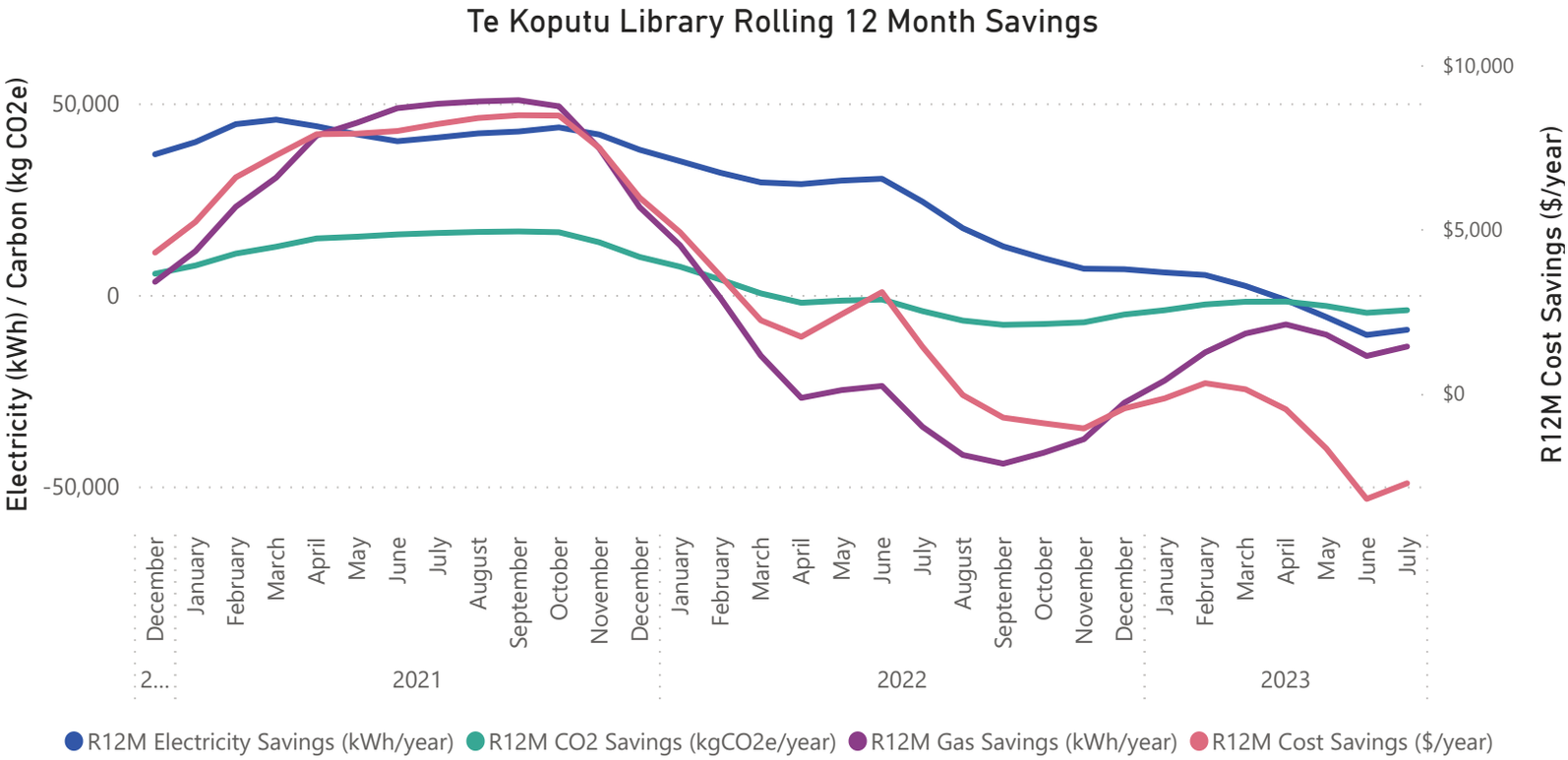
Whakatane District Council

Te Koputu Library





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July 2023

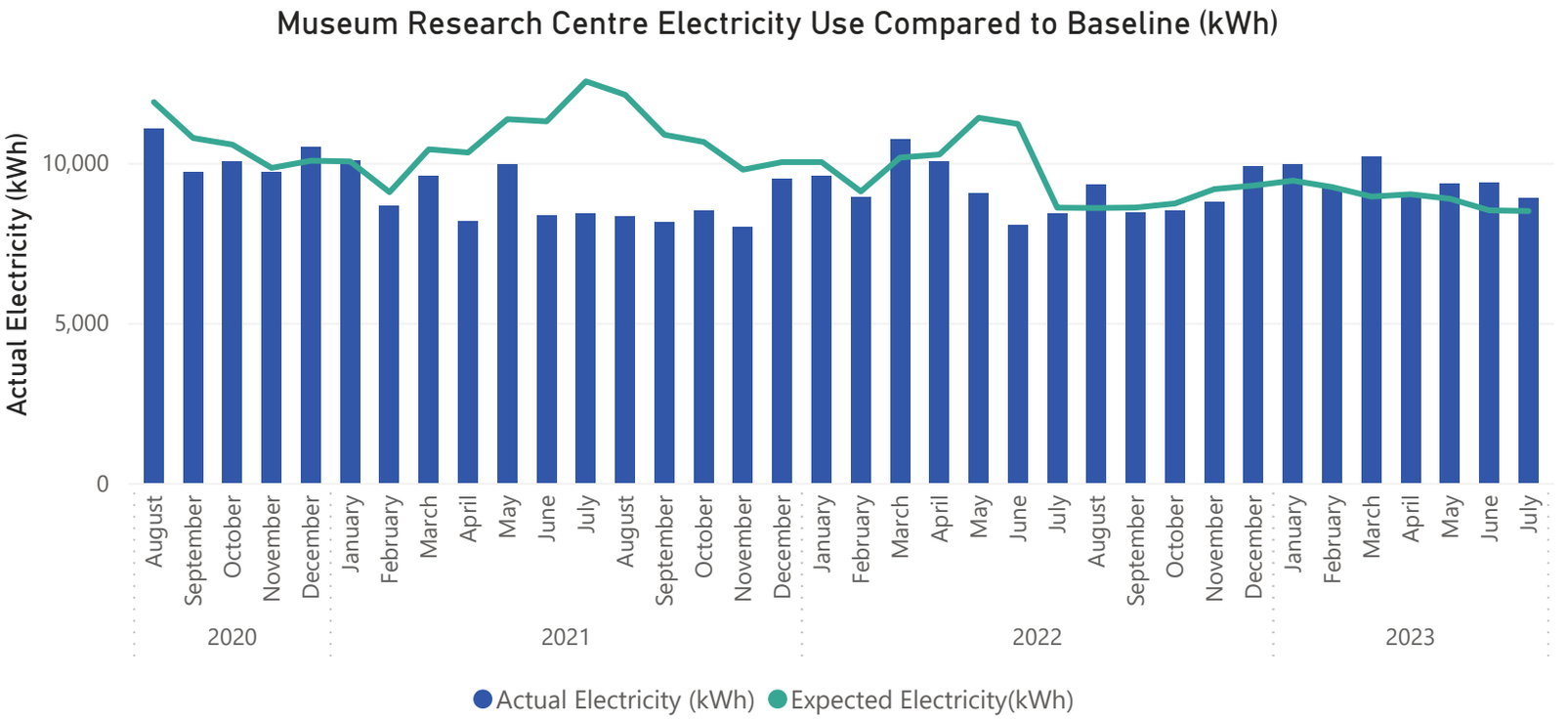
Whakatane District Council

Museum and Research Centre

-$166	-411	-5%	-3,982	-265
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
-$1,076	-1,021	-33%	-3,717	-1,291
R12M Energy Cost Savings	Gas. Savings (kWh/mo)	Gas. Savings (%)	R12M Gas Savings (kWh/yr)	R12M CO2e Savings (kg/yr)

Comments:

Natural gas use was 33% higher than expected and electricity use was 5% higher than expected. Natural gas use has remained relatively flat from December 2022. Energy use index for the month is close to average over the last 12 months.



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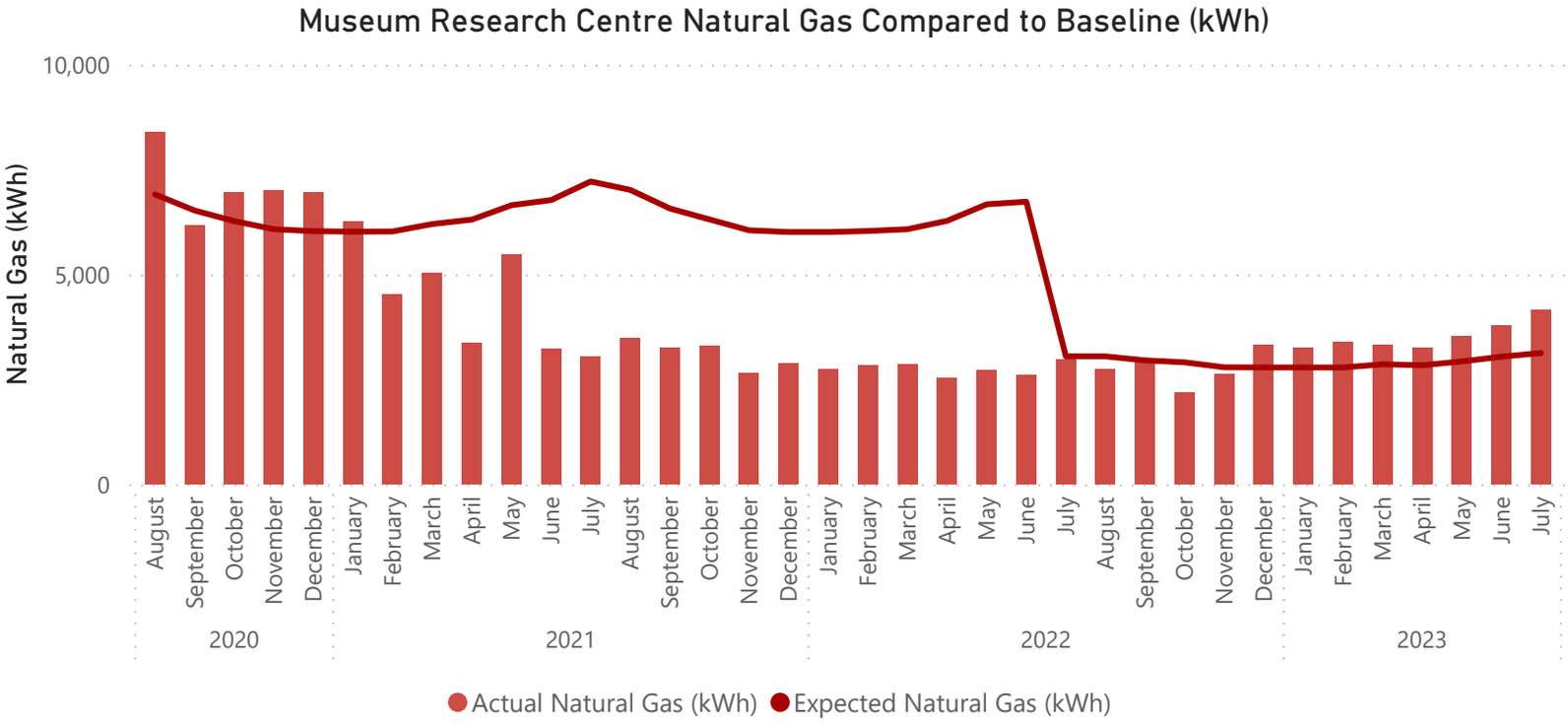
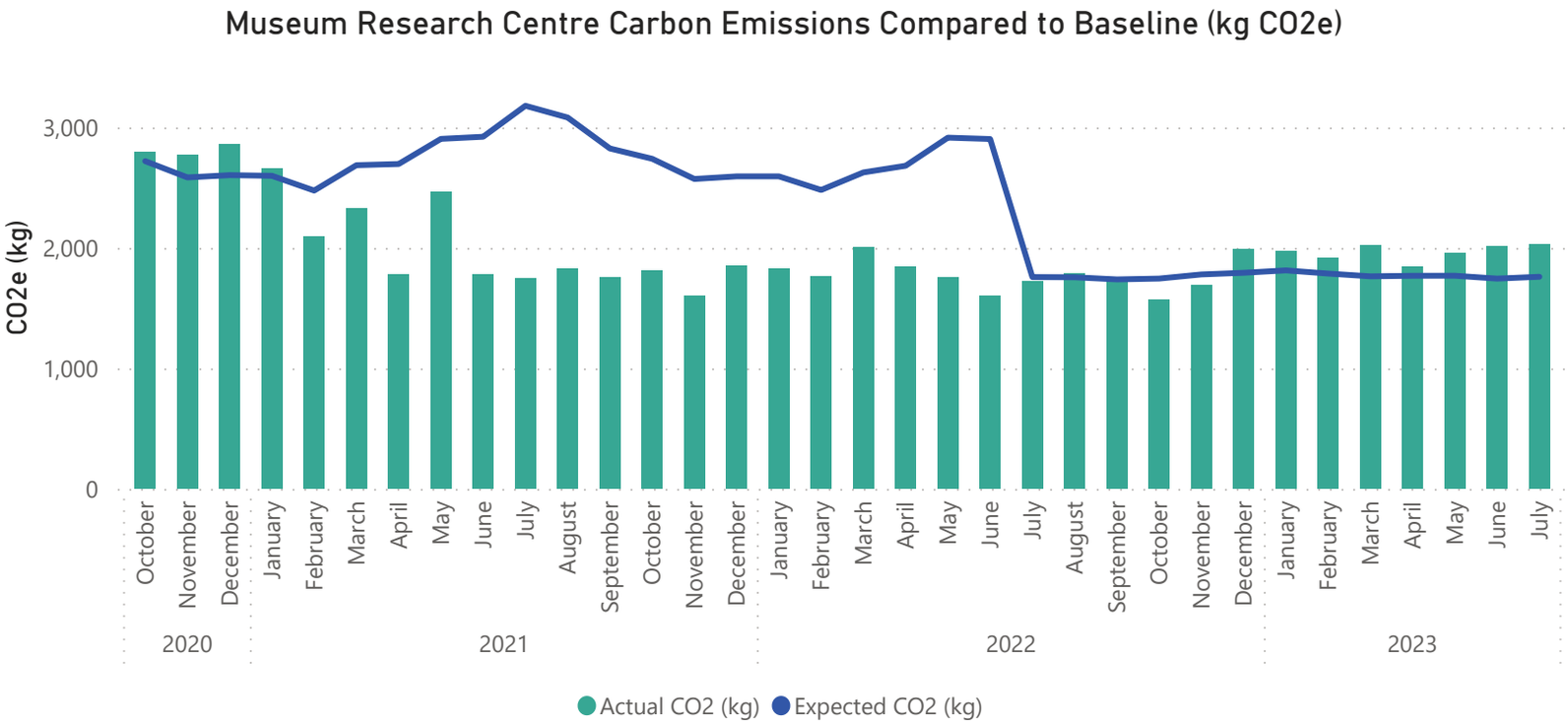
Whakatane District Council

Museum and Research Centre





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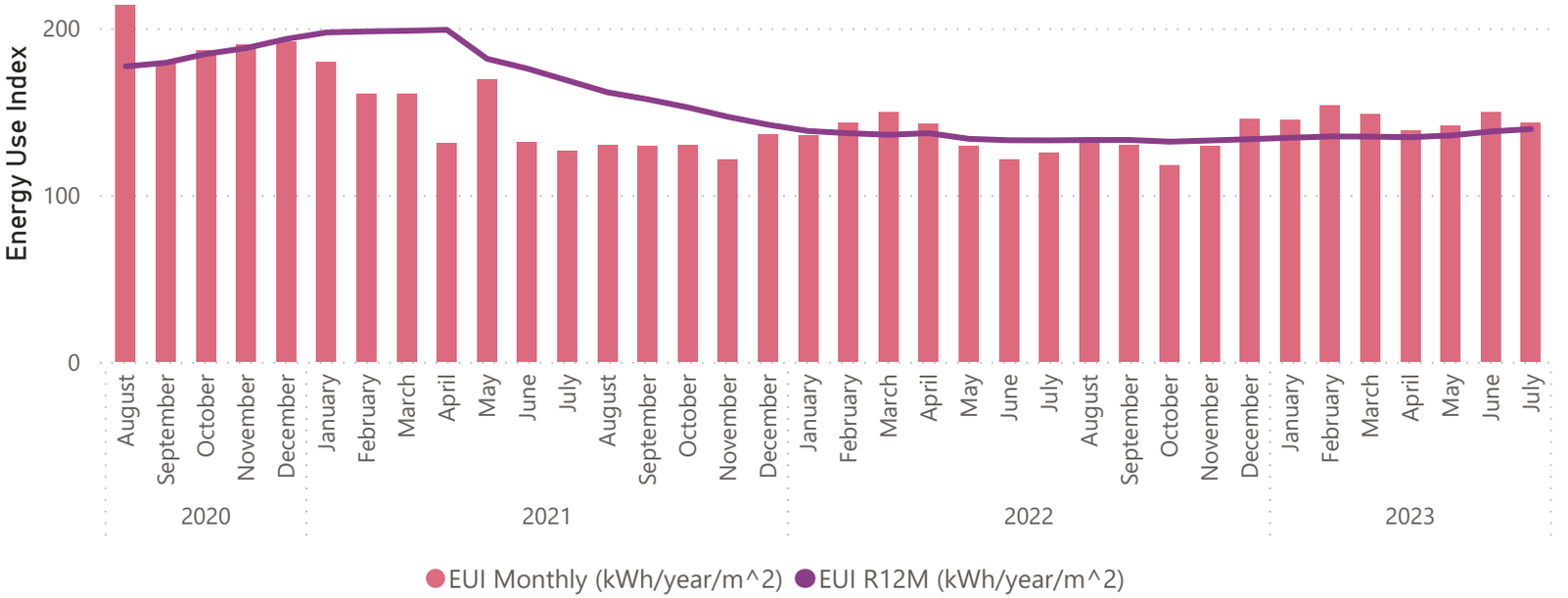
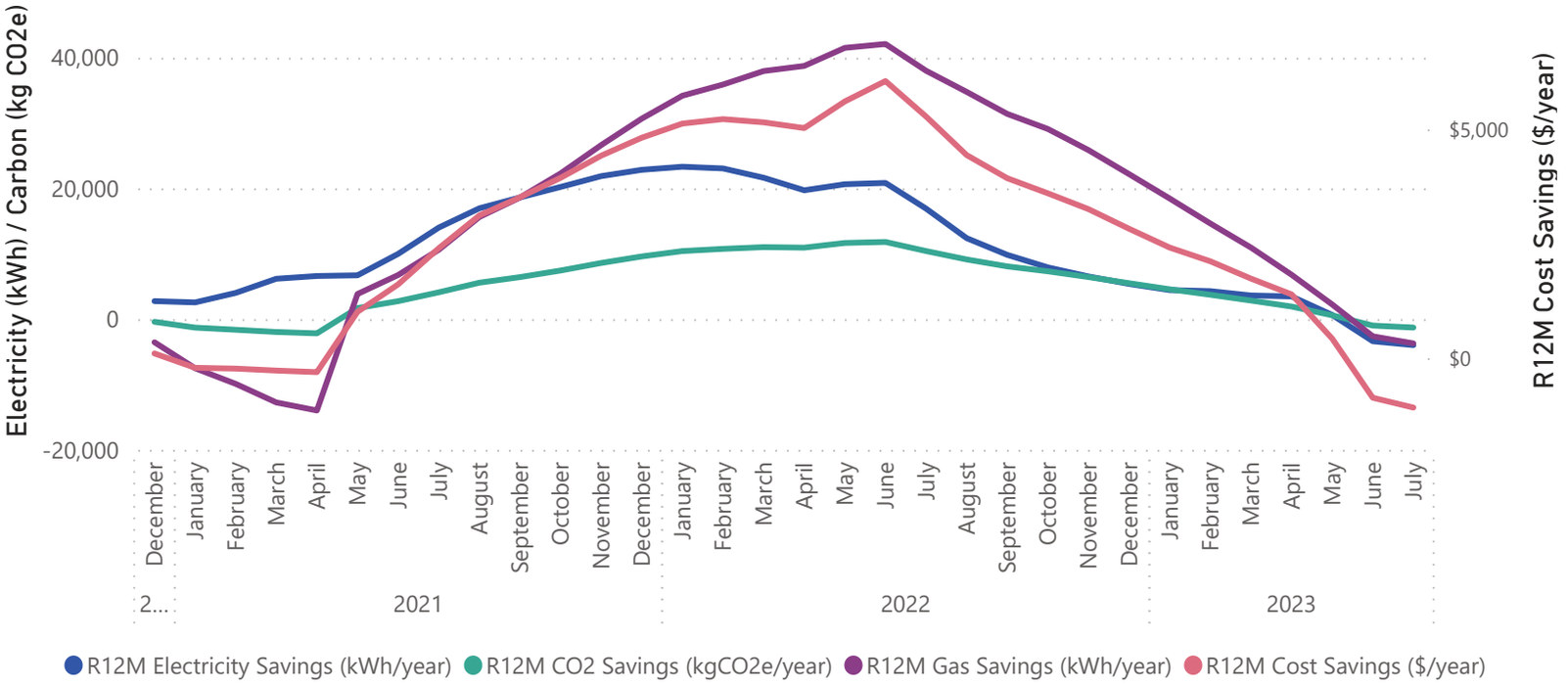
Whakatane District Council

Museum and Research Centre

Museum Research Centre Energy Use Index by Month Compared to Rolling 12-Month Values



Museum Research Centre Rolling 12 Month Savings



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Whakatane District Council

War Memorial Hall

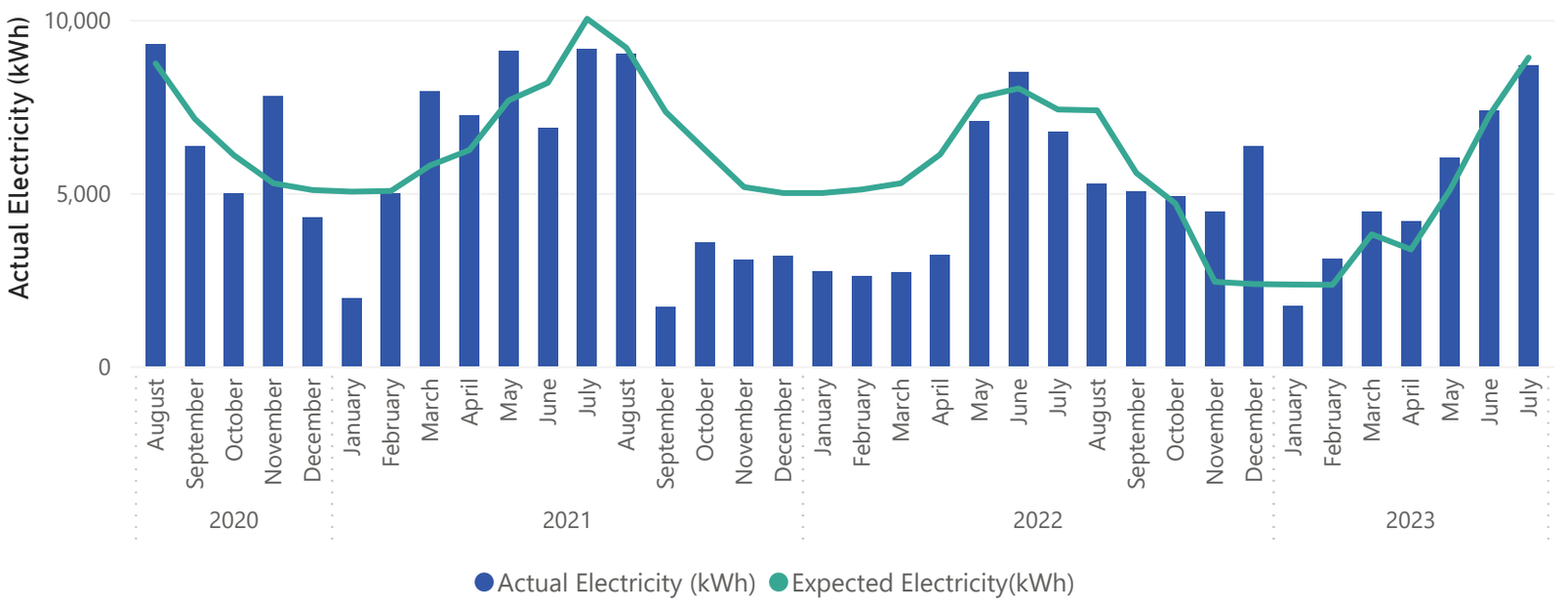
-$86 Monthly Energy Cost Savings	231 Elec. Savings (kWh/mo)	3% Elec. Savings (%)	-5,982 R12M Electricity Savings (kWh/yr)	-316 CO2e Savings (kg/mo)
-$747 R12M Energy Cost Savings	-1,673 Gas. Savings (kWh/mo)	-39% Gas. Savings (%)	2,549 R12M Gas Savings (kWh/yr)	-256 R12M CO2e Savings (kg/yr)

Comments:

The War Memorial Hall made a small electricity saving for the month of July 2023. Previously the building had used about 20% more electricity than expected from February to May 2023.

The hall has used more natural gas than expected in July, previously less gas has been used than expected since October 2022, which was excellent.

War Memorial Hall Electricity Use Compared to Baseline (kWh)



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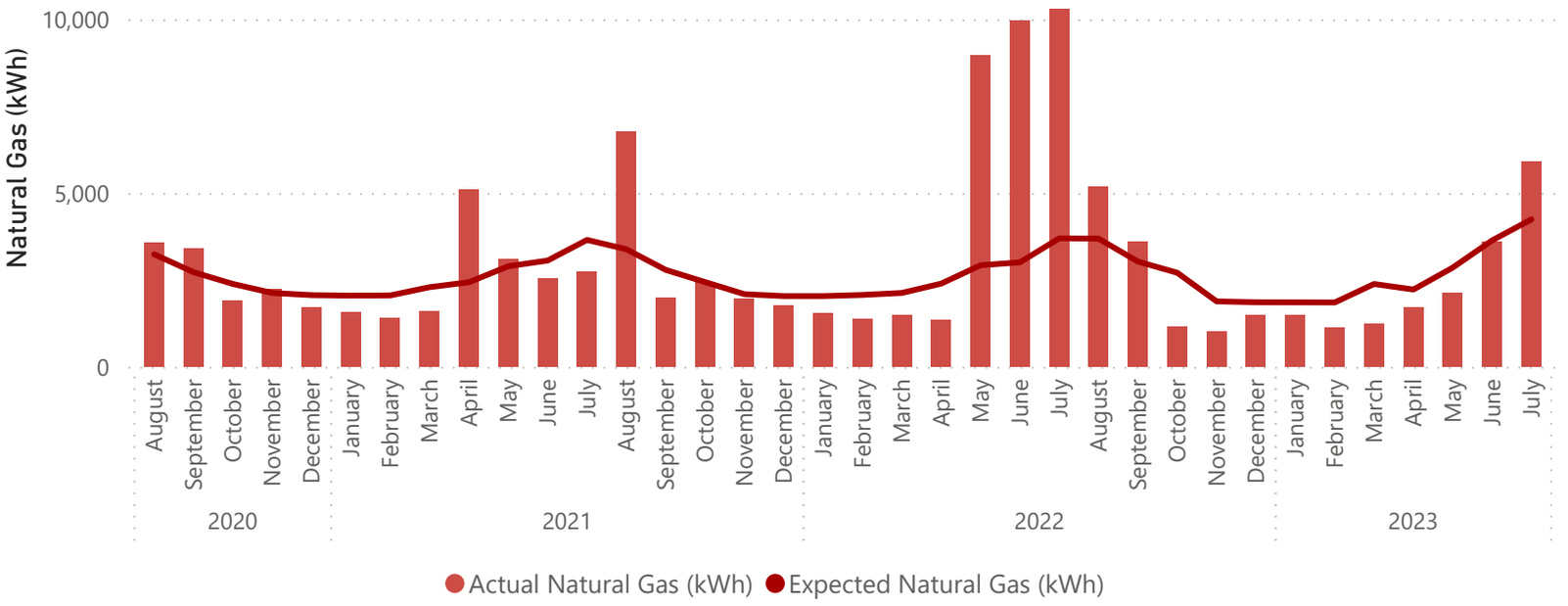
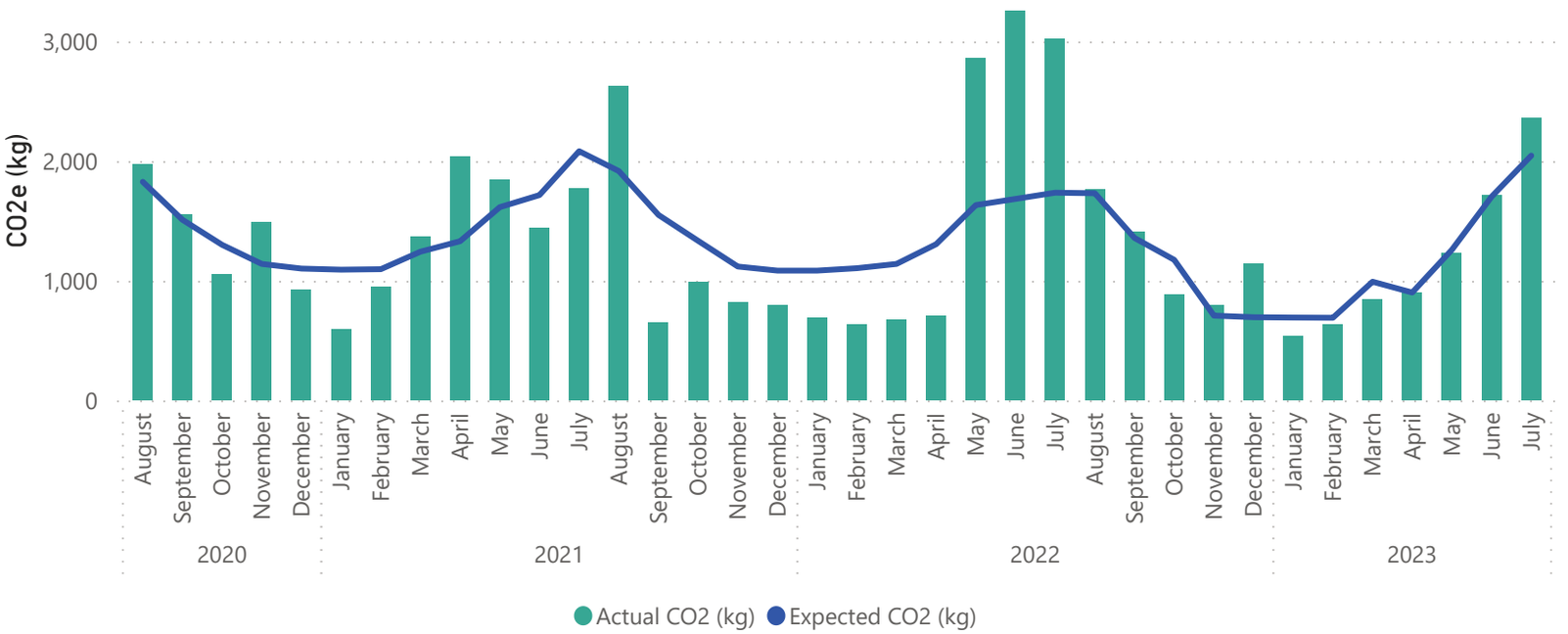
Whakatane District Council

War Memorial Hall

War Memorial Hall Natural Gas Compared to Baseline (kWh)



War Memorial Hall Carbon Emissions Compared to Baseline (kg CO2e)



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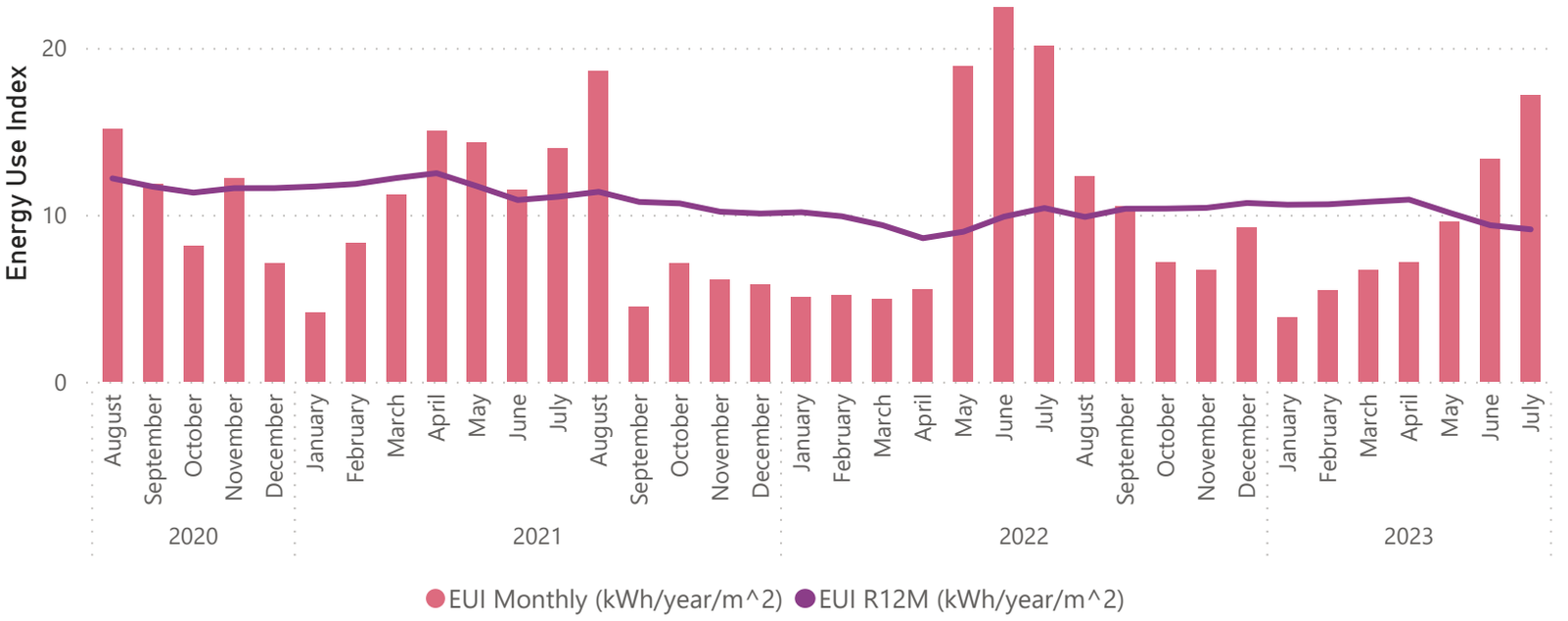
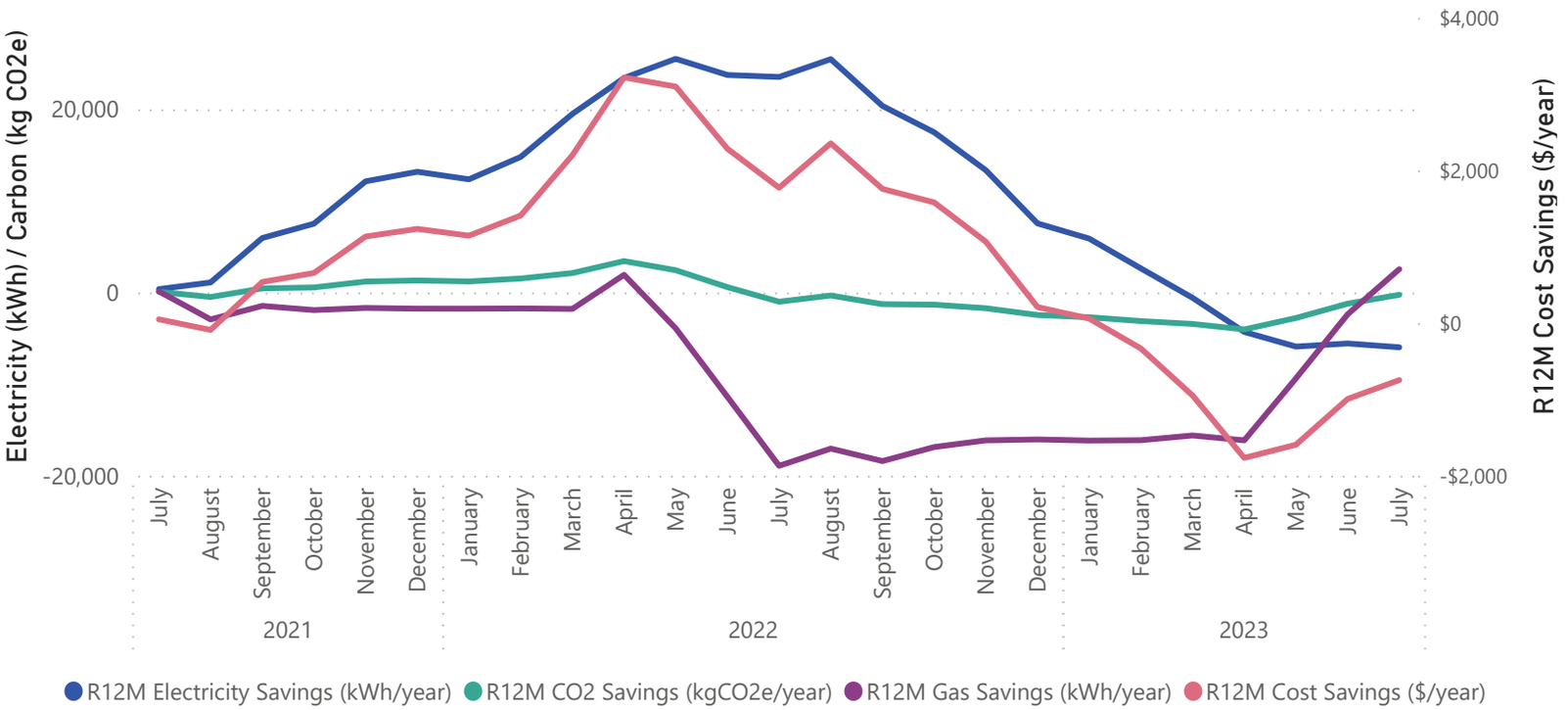
Whakatane District Council

War Memorial Hall

War Memorial Hall Energy Use Index by Month Compared to Rolling 12-Month Values



War Memorial Hall Rolling 12 Month Savings



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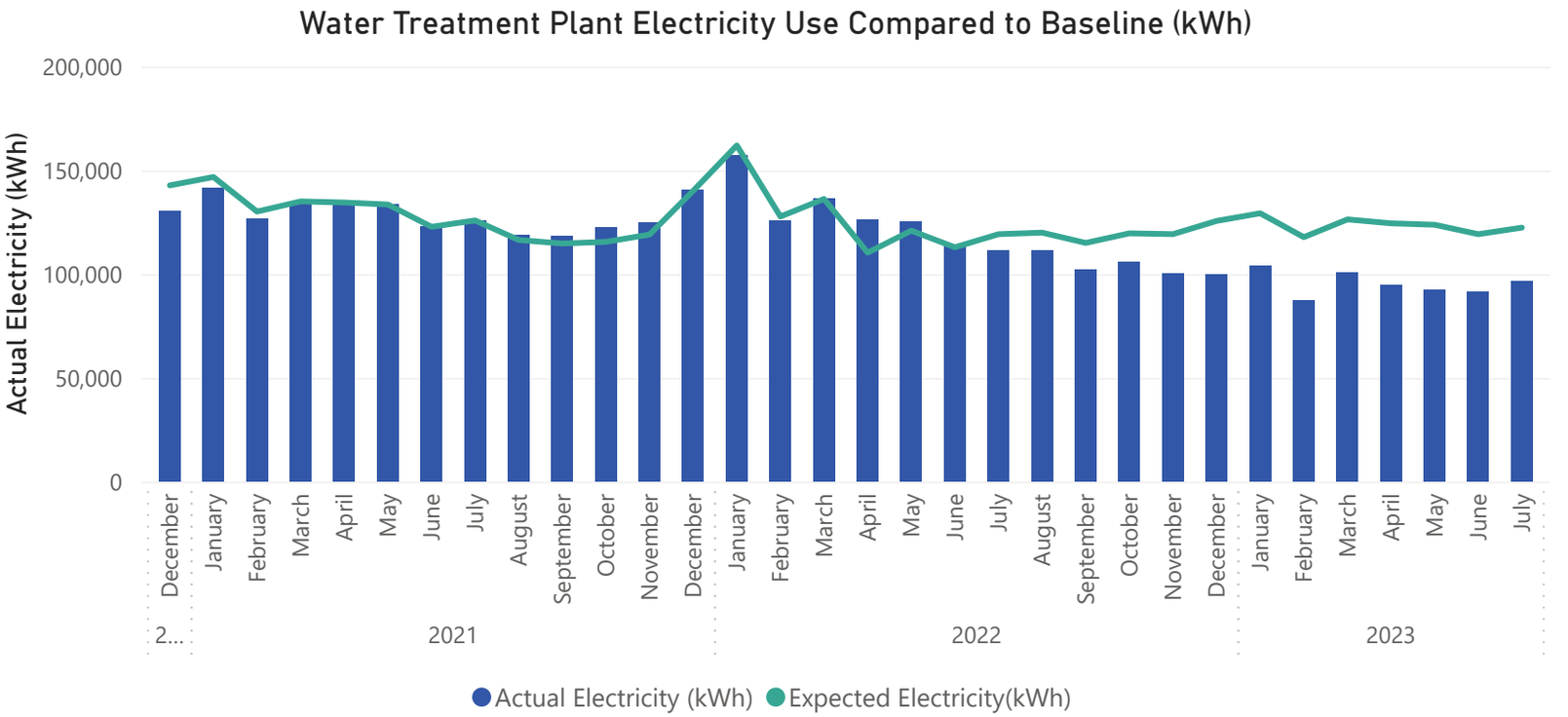
Whakatane District Council

Water Treatment Plant

$5,164 Monthly Energy Cost Savings	25,893 Elec. Savings (kWh/mo)	21% Elec. Savings (%)	276,535 R12M Electricity Savings (kWh/yr)	3,392 CO2e Savings (kg/mo)
$49,598 R12M Energy Cost Savings				36,226 R12M CO2e Savings (kg/yr)

Comments:

Another month of savings has been achieved at the WTP in July 2023. Consistent savings between 15-25% have been observed since November 2022. Rolling 12 month savings have been increasing, with approximately $50,000 and 276,000 kWh saved in the past 12 months, which is excellent.



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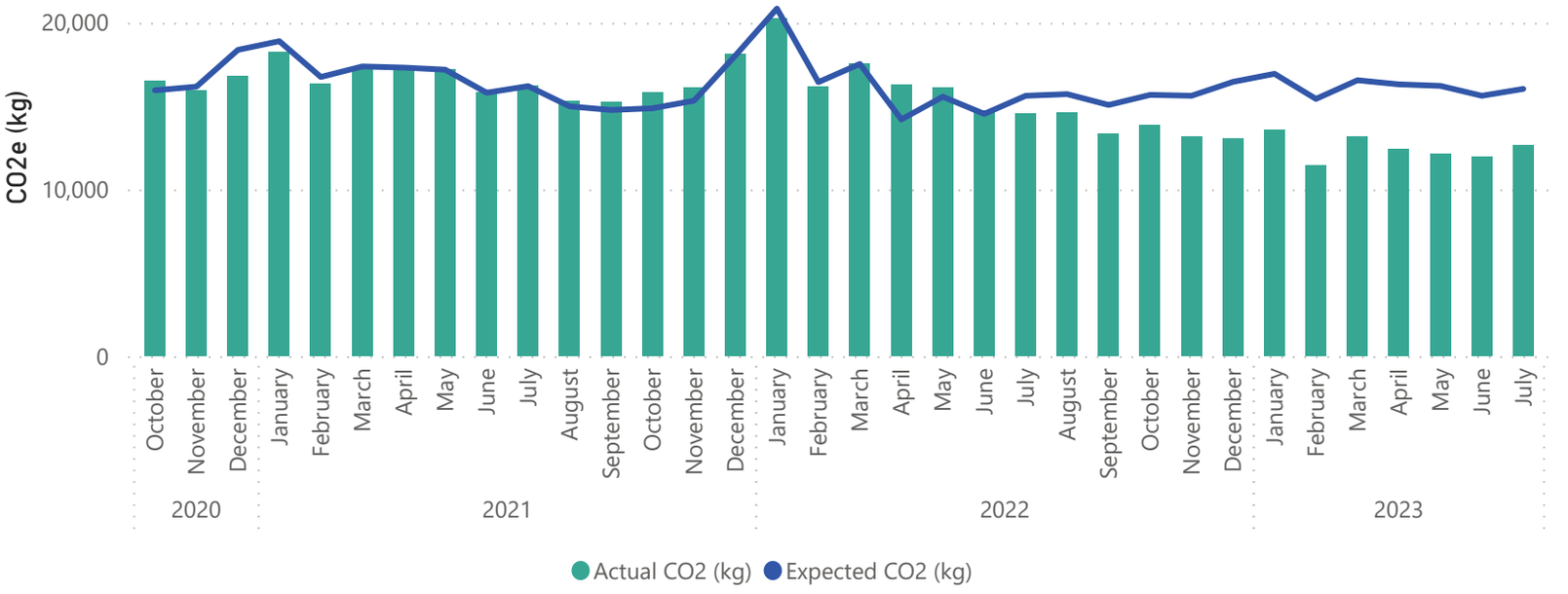
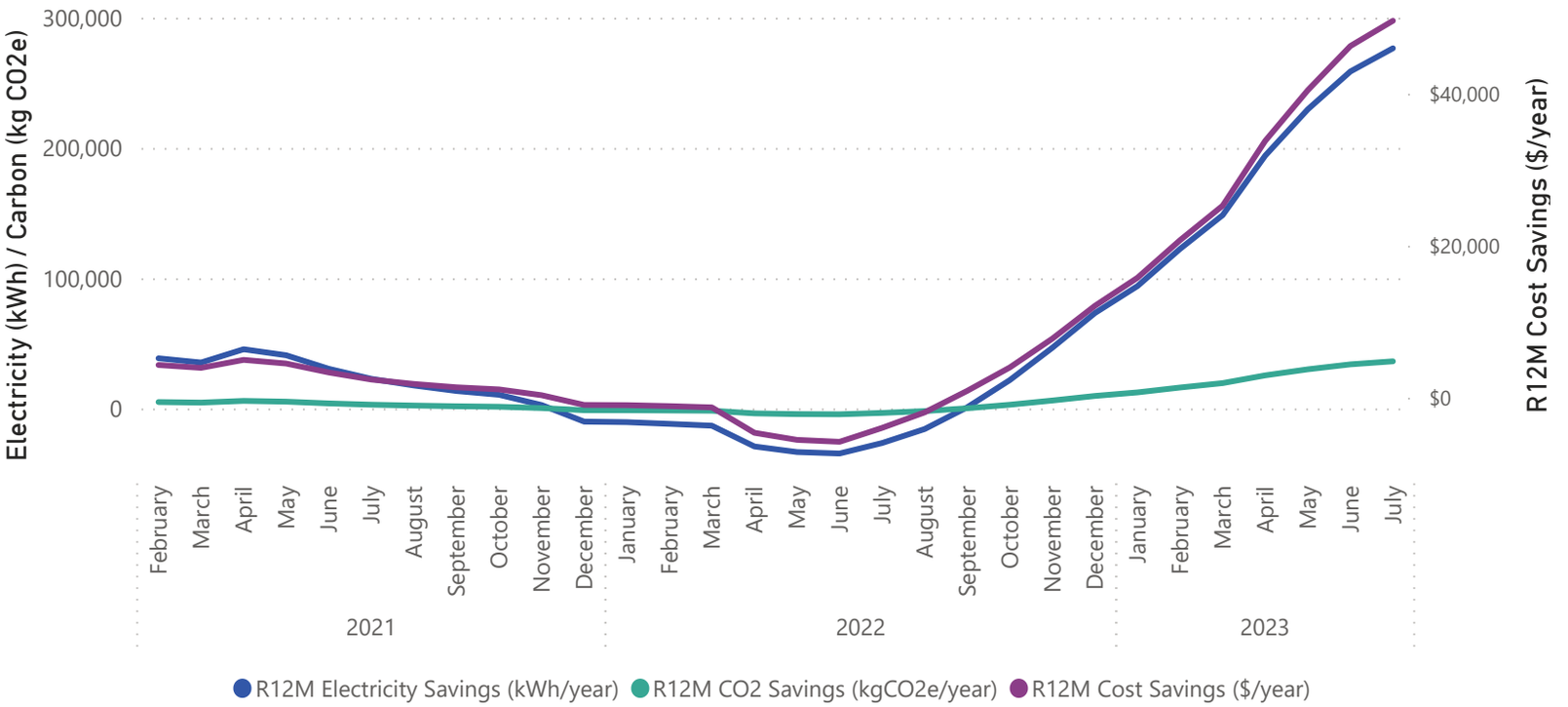
Whakatane District Council

Water Treatment Plant

Water Treatment Plant Carbon Emissions Compared to Baseline (kg CO2e)



Water Treatment Plant Rolling 12 Month Savings



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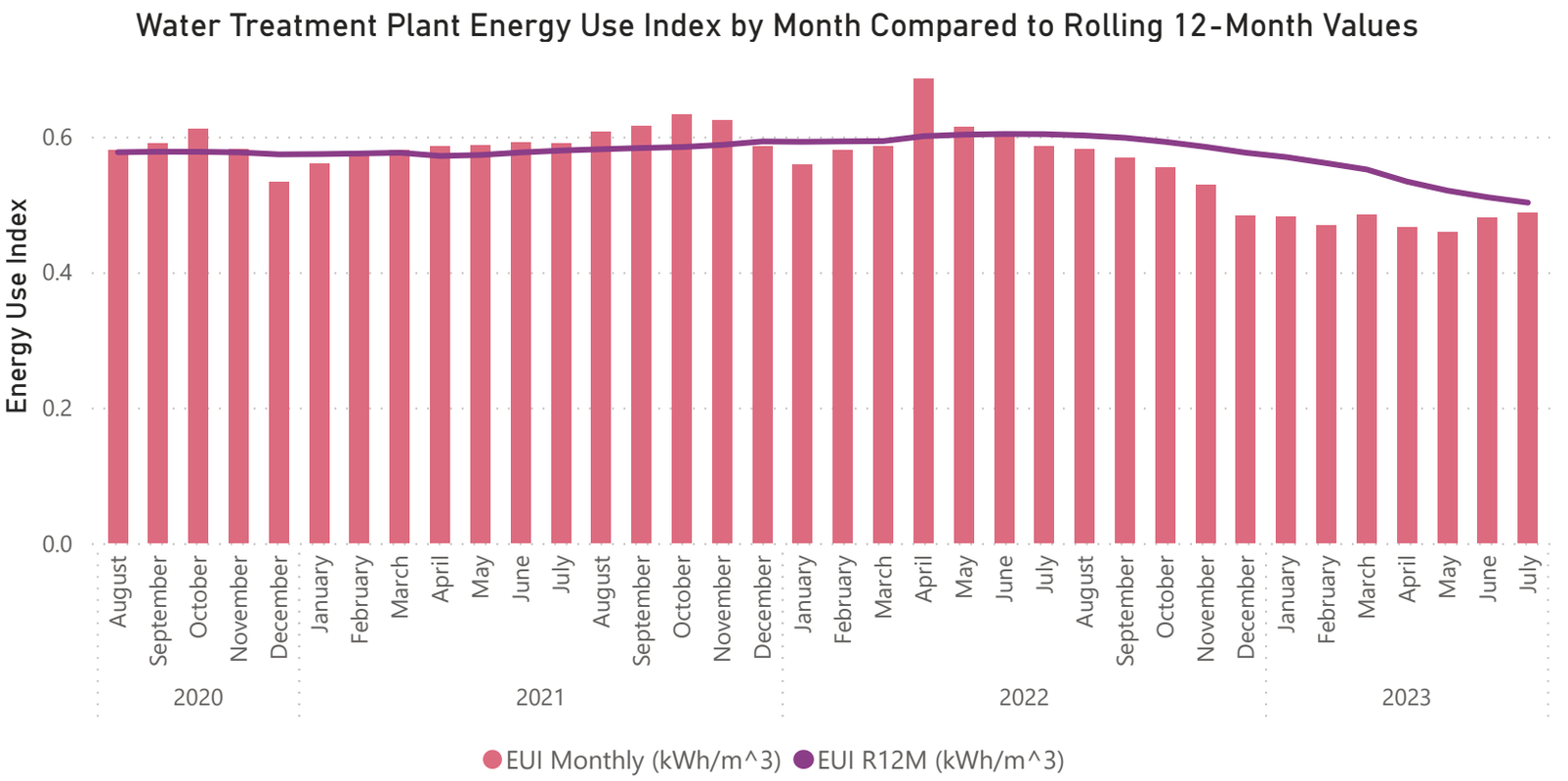
Whakatane District Council

Water Treatment Plant



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July 2023

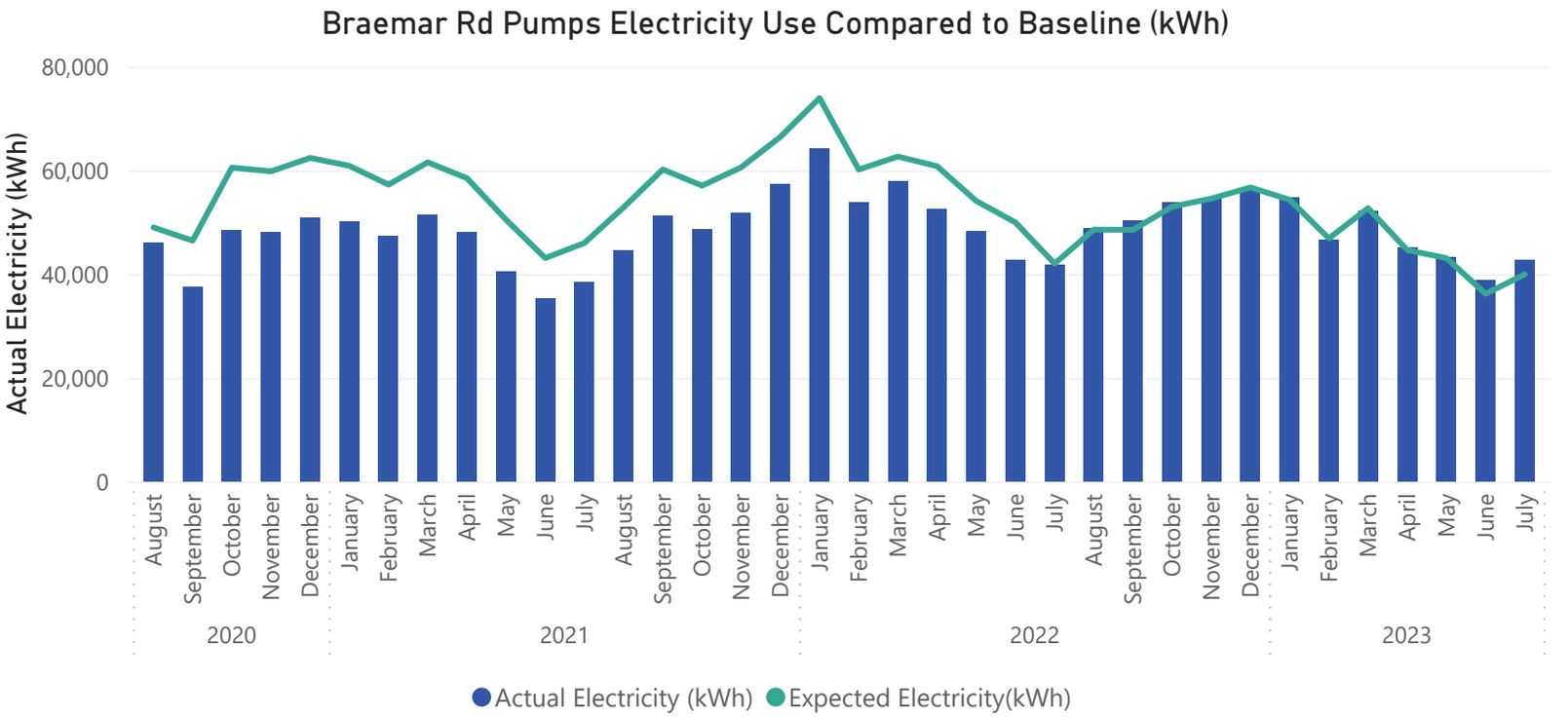
Whakatane District Council

Braemar Road Pump Station

-$564	-2,805	-7%	-8,457	-367
Monthly Energy Cost Savings	Elec. Savings (kWh/mo)	Elec. Savings (%)	R12M Electricity Savings (kWh/yr)	CO2e Savings (kg/mo)
-$1,665				-1,108
R12M Energy Cost Savings				R12M CO2e Savings (kg/yr)

Comments:

Work has been completed at Braemar Rd which added filters and new low lift pumps. Water usage has been estimated for the month, new tags will be added to SCADA in future which will capture water metering. It is expected that more electricity was used in July 2023 as part of testing and commissioning process.



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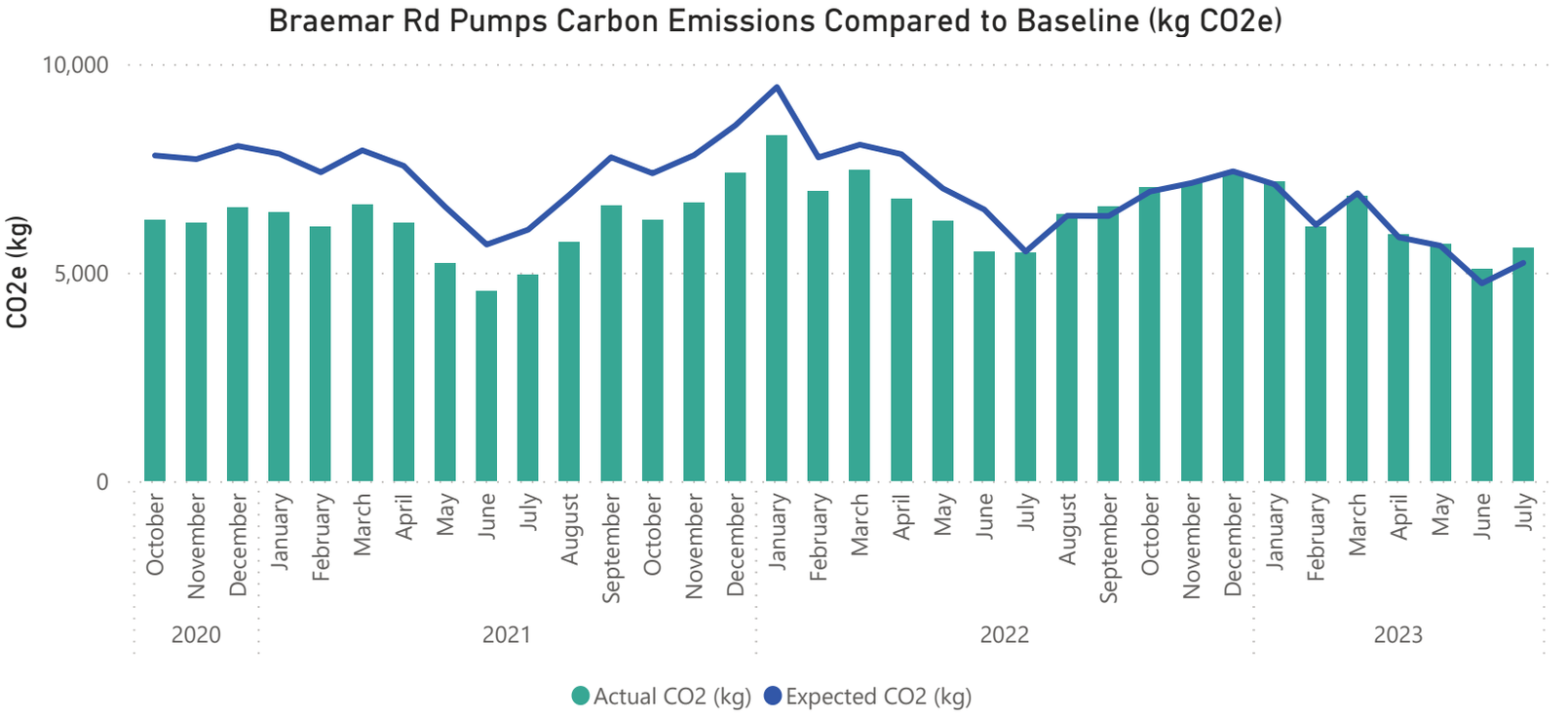
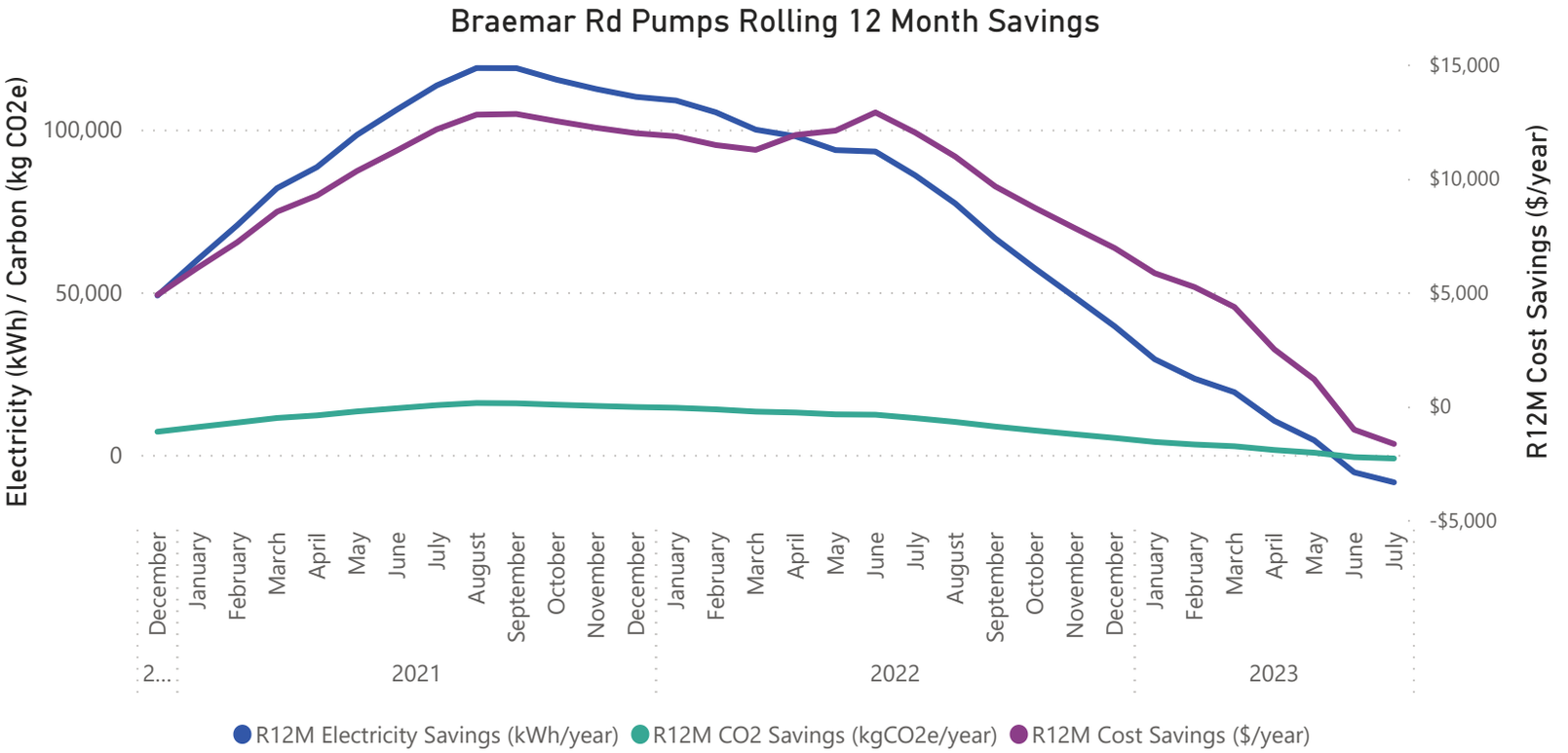
Whakatane District Council

Braemar Road Pump Station



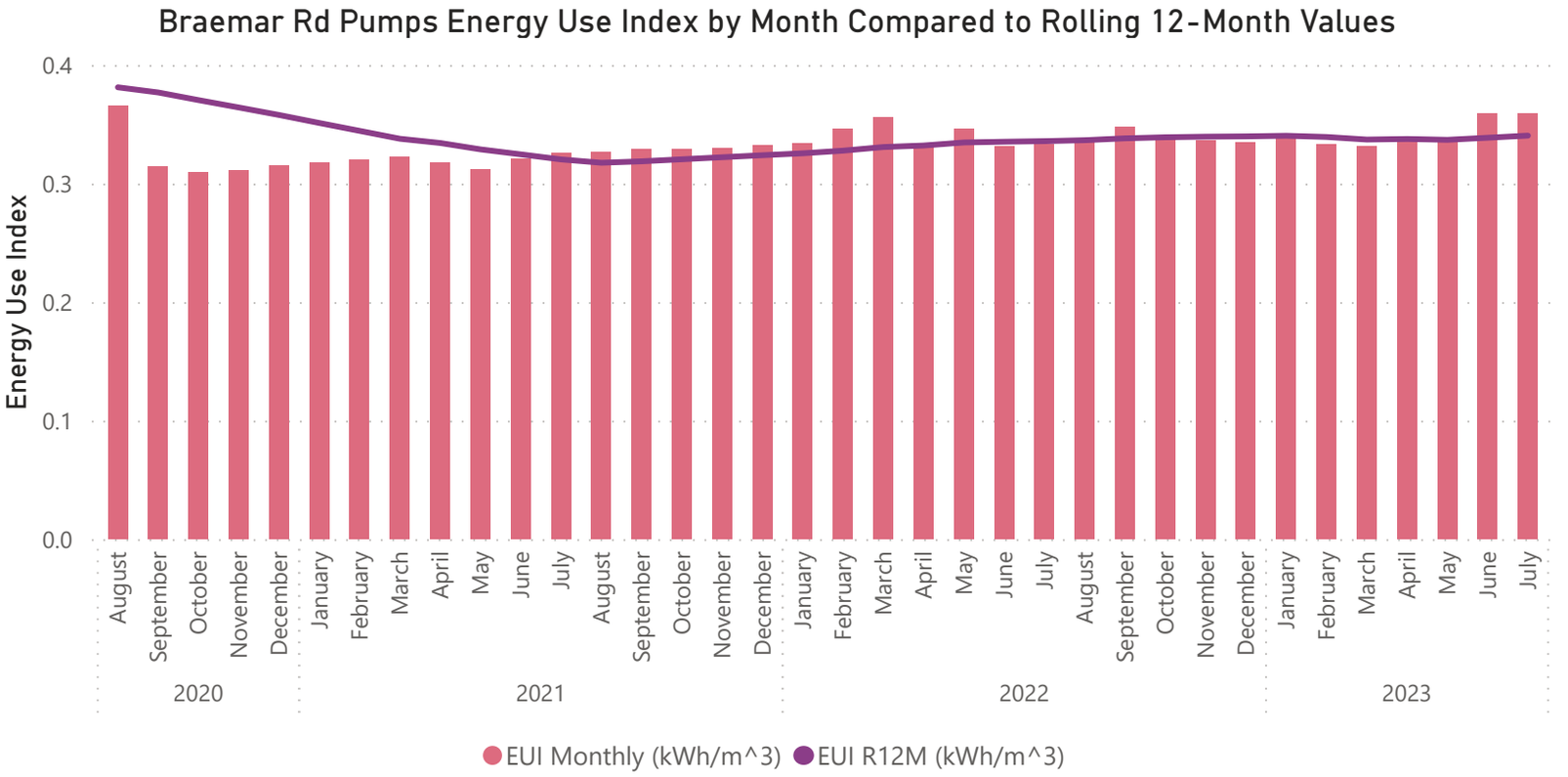


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time

Baselines were updated for all sites from July 2022.

Whakatane District Council

Braemar Road Pump Station



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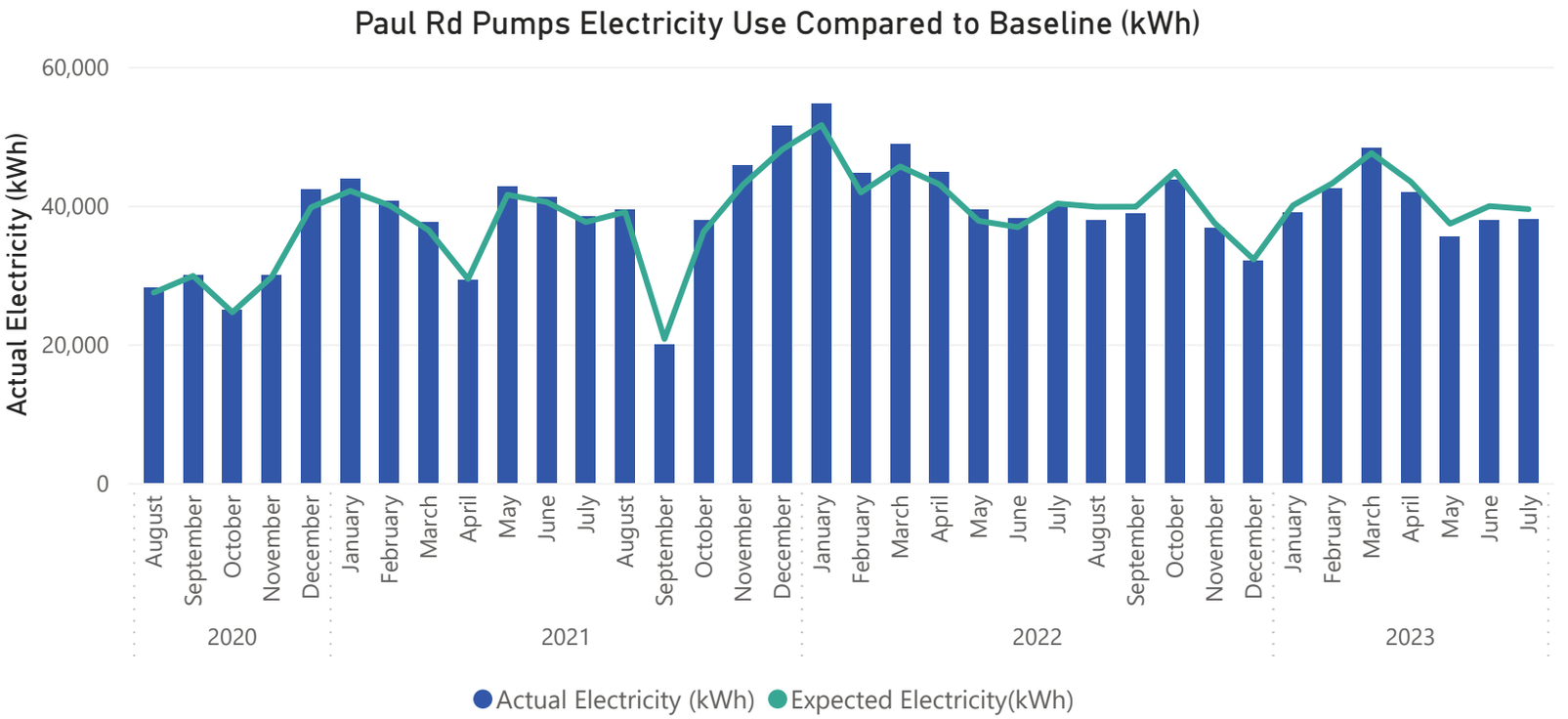
Whakatane District Council

Paul Road Pump Station

$301 Monthly Energy Cost Savings	1,480 Elec. Savings (kWh/mo)	4% Elec. Savings (%)	13,008 R12M Electricity Savings (kWh/yr)	194 CO2e Savings (kg/mo)
$2,505 R12M Energy Cost Savings				1,704 R12M CO2e Savings (kg/yr)

Comments:

Electricity use was less than expected at Paul Road Pump Station. The monthly EUI is below average over the past 12 months. Rolling 12 month savings are increasing and from March 2023 are positive. In the past 12 months 13,000 kWh and $2,500, and 1,700 kgCO2e were saved.



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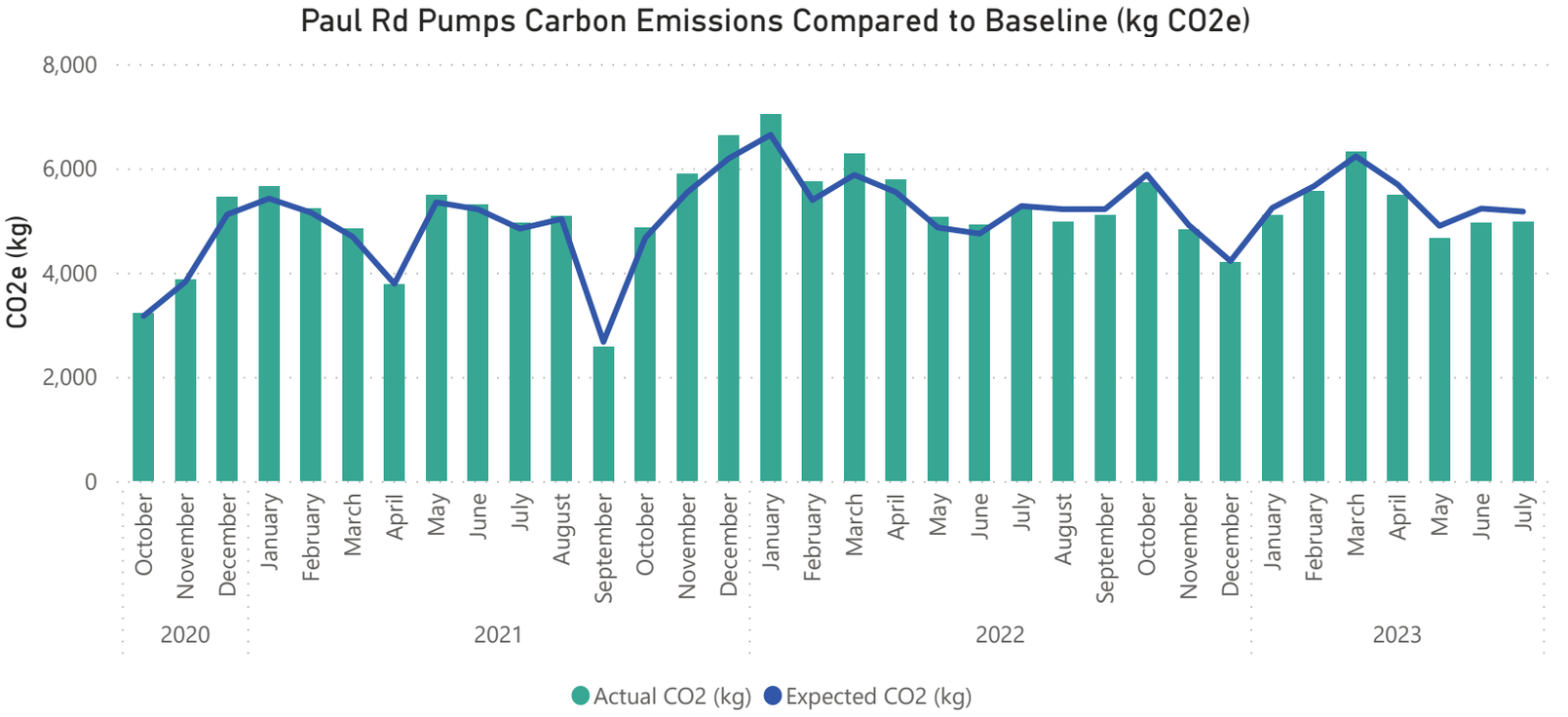
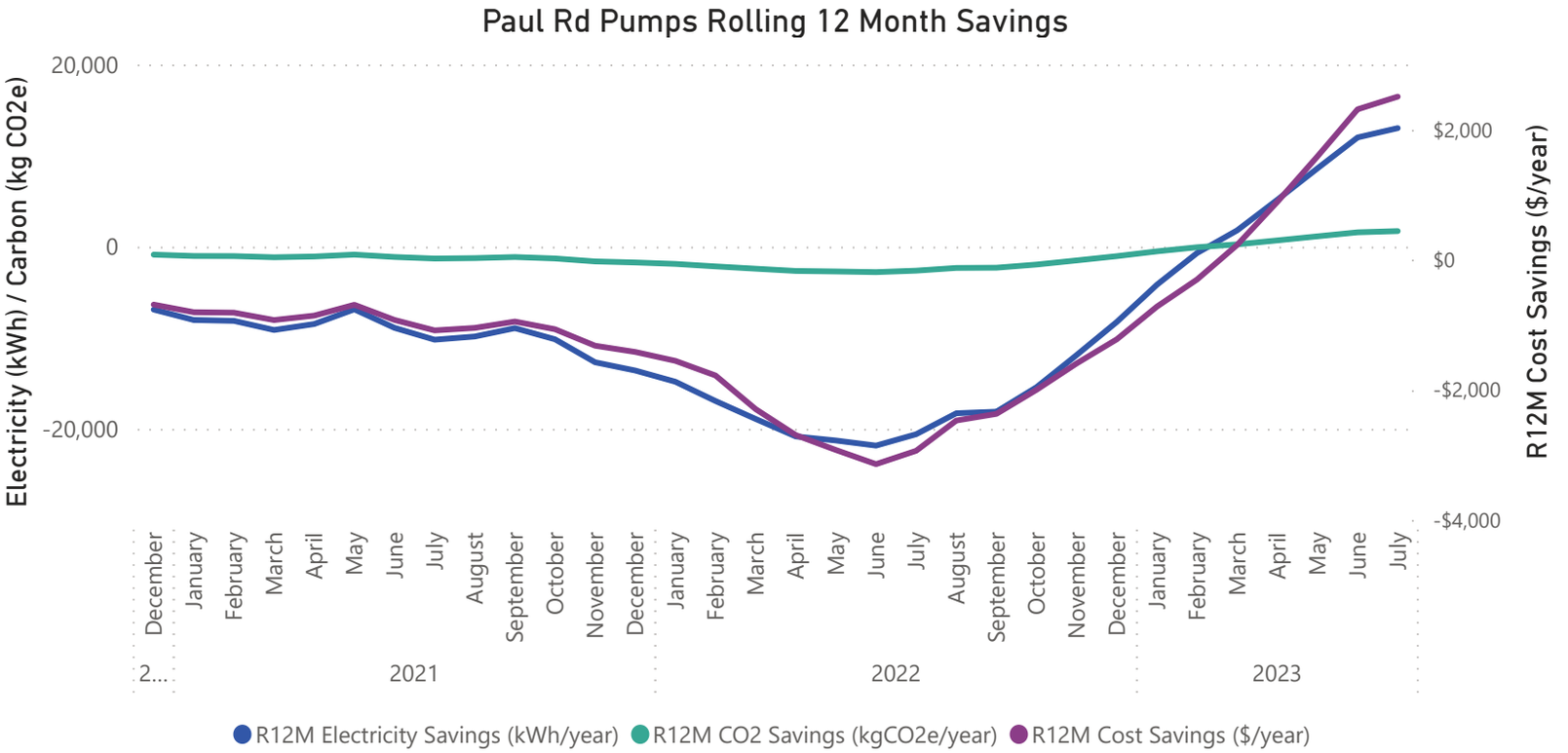
Whakatane District Council

Paul Road Pump Station





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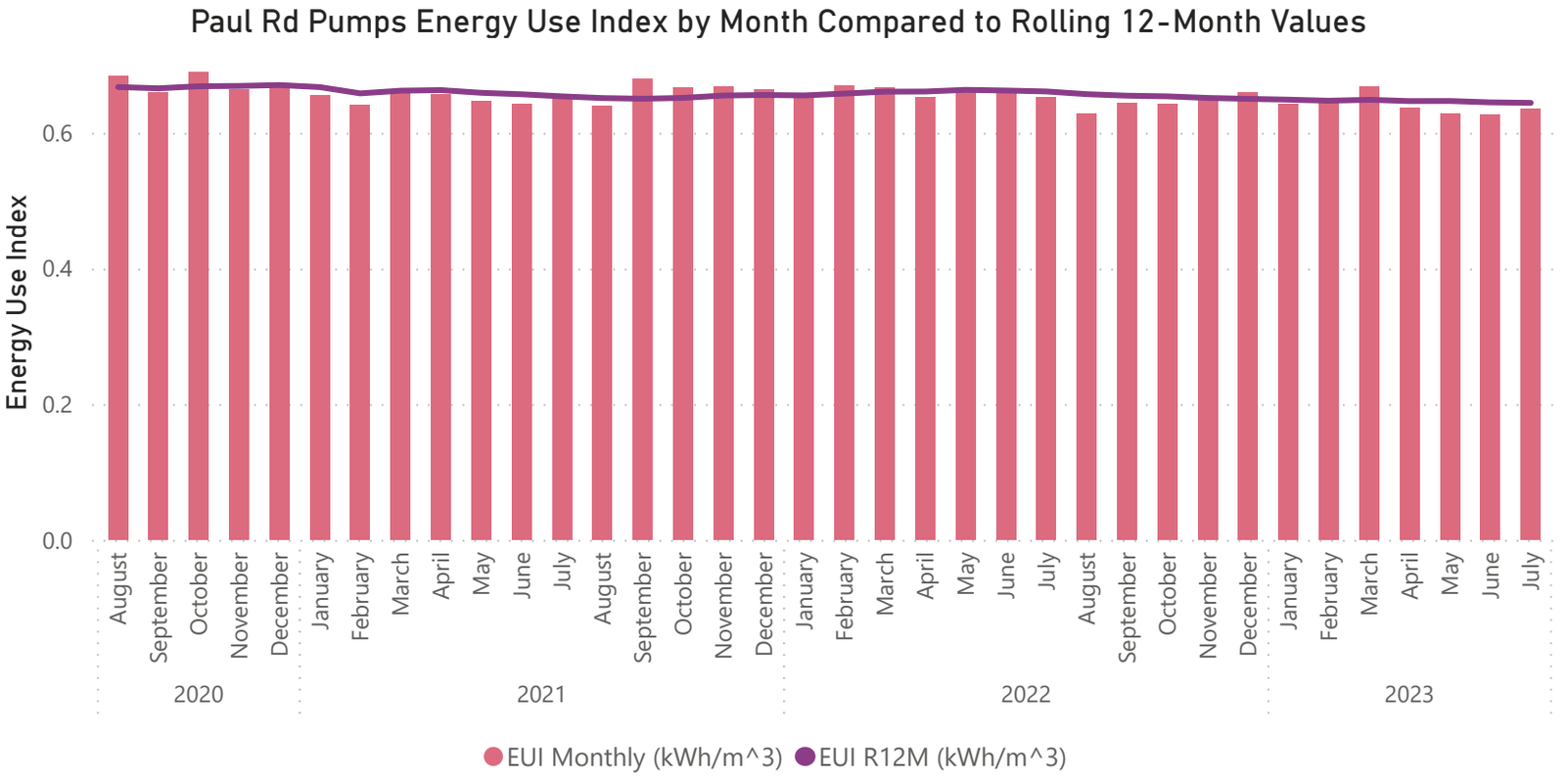
Whakatane District Council

Paul Road Pump Station



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Baselines were updated for all sites from July 2022.

July 2023

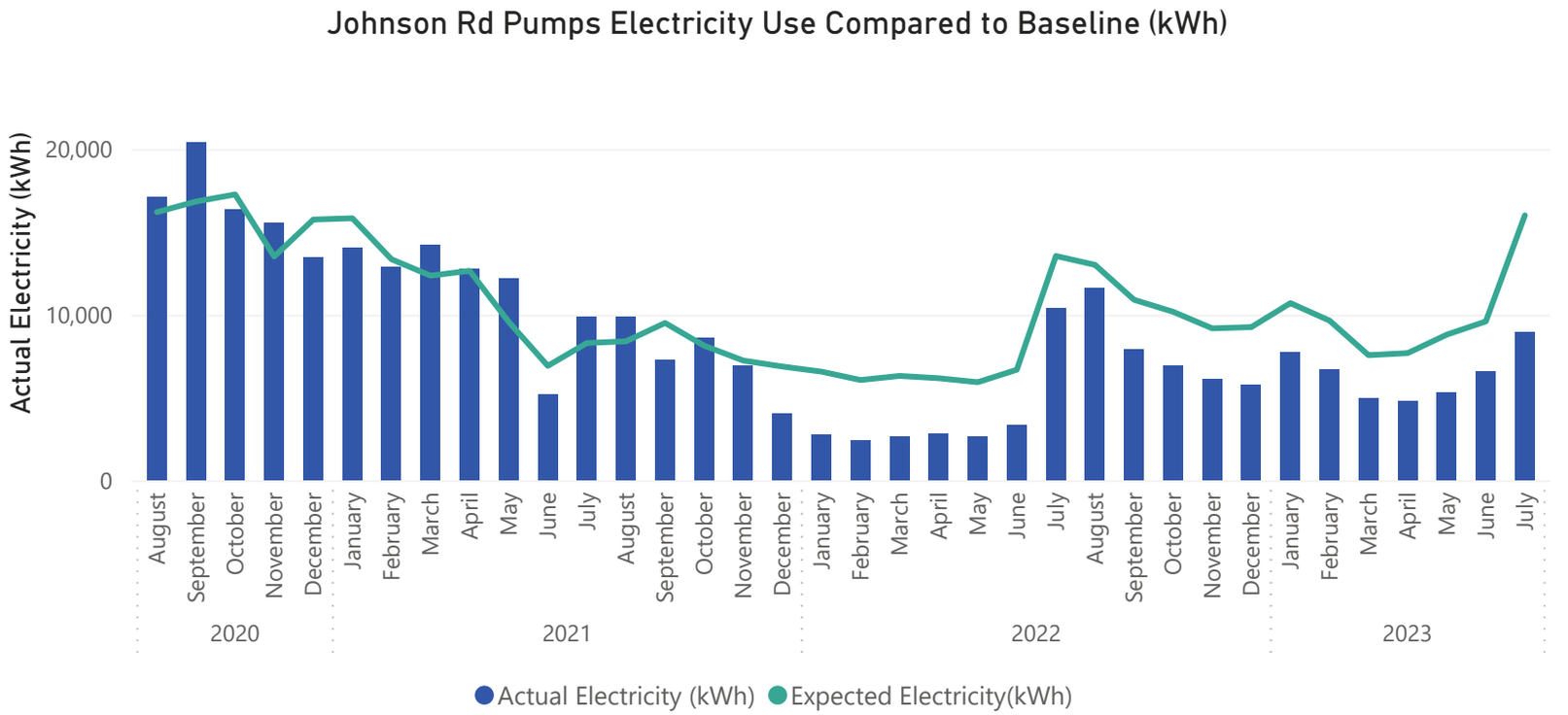
Whakatane District Council

Johnson Road Pump Station

$1,516 Monthly Energy Cost Savings	7,043 Elec. Savings (kWh/mo)	44% Elec. Savings (%)	39,159 R12M Electricity Savings (kWh/yr)	923 CO2e Savings (kg/mo)
$8,427 R12M Energy Cost Savings				5,130 R12M CO2e Savings (kg/yr)

Comments:

Another good month of savings for the month at Johnson Rd Pump Station, using 40% less electricity than expected. The pump has been operating more than typical to compensate for work being done at Braemar Rd. Savings have been greater than 27% each month for the past ten months, which is excellent.



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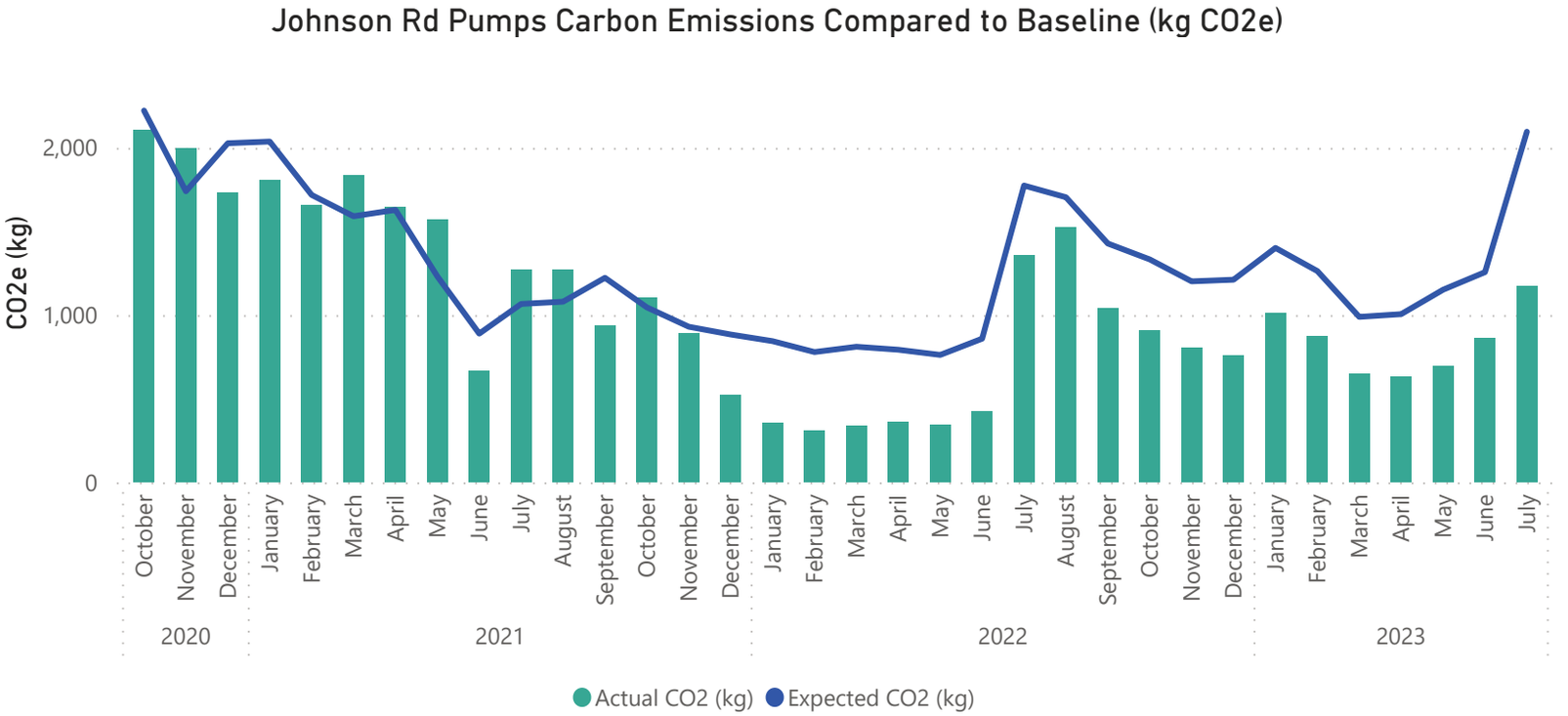
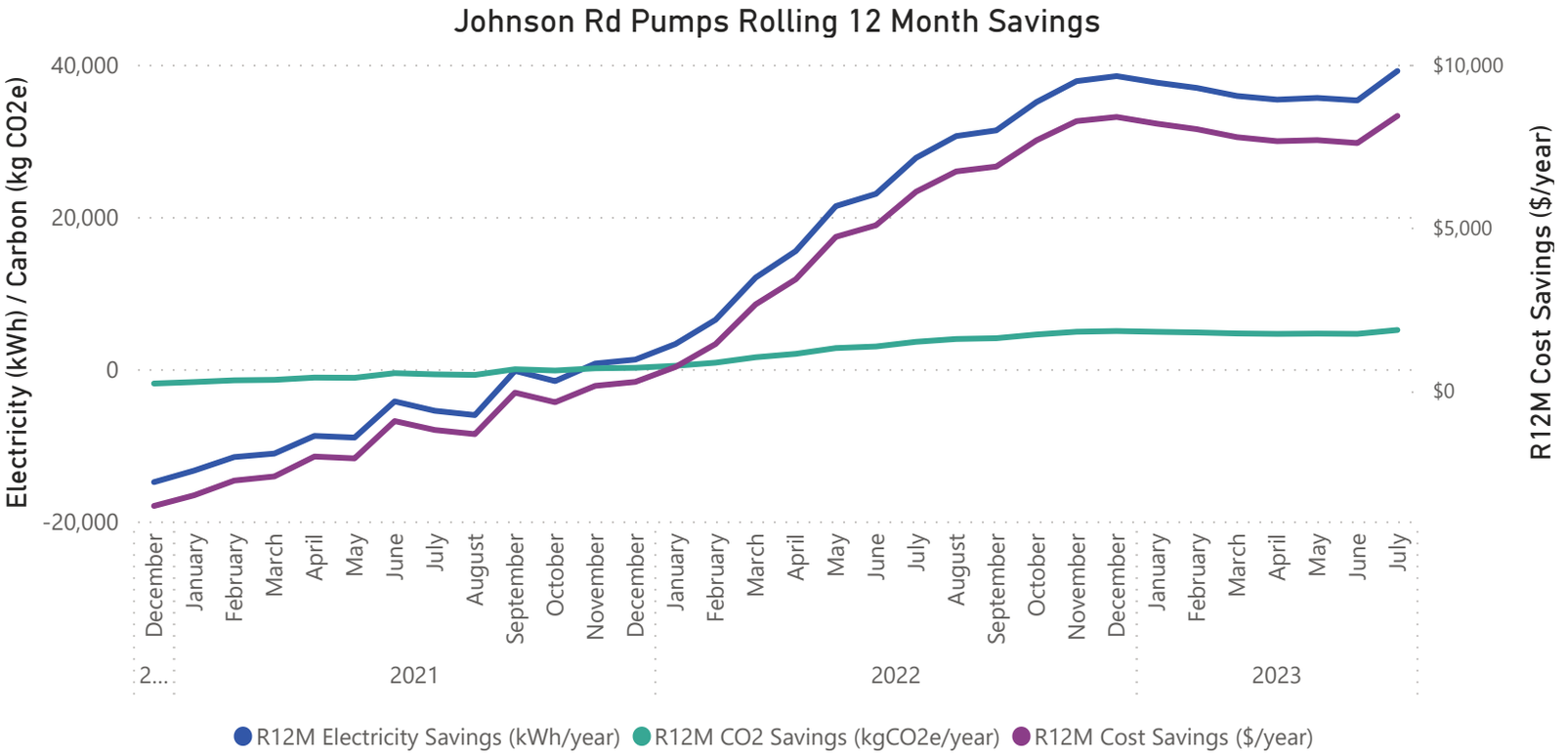
Whakatane District Council

Johnson Road Pump Station





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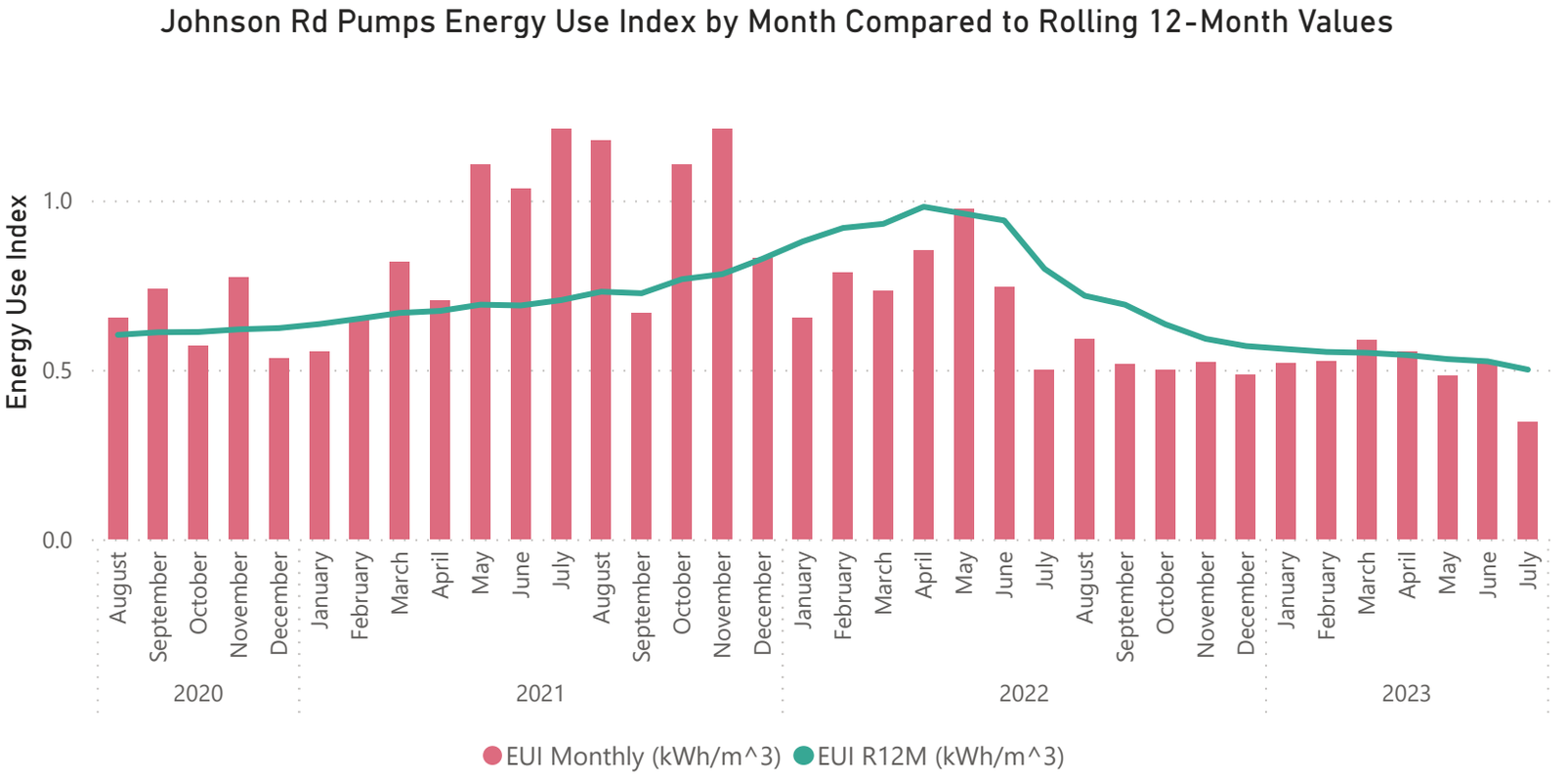
Whakatane District Council

Johnson Road Pump Station



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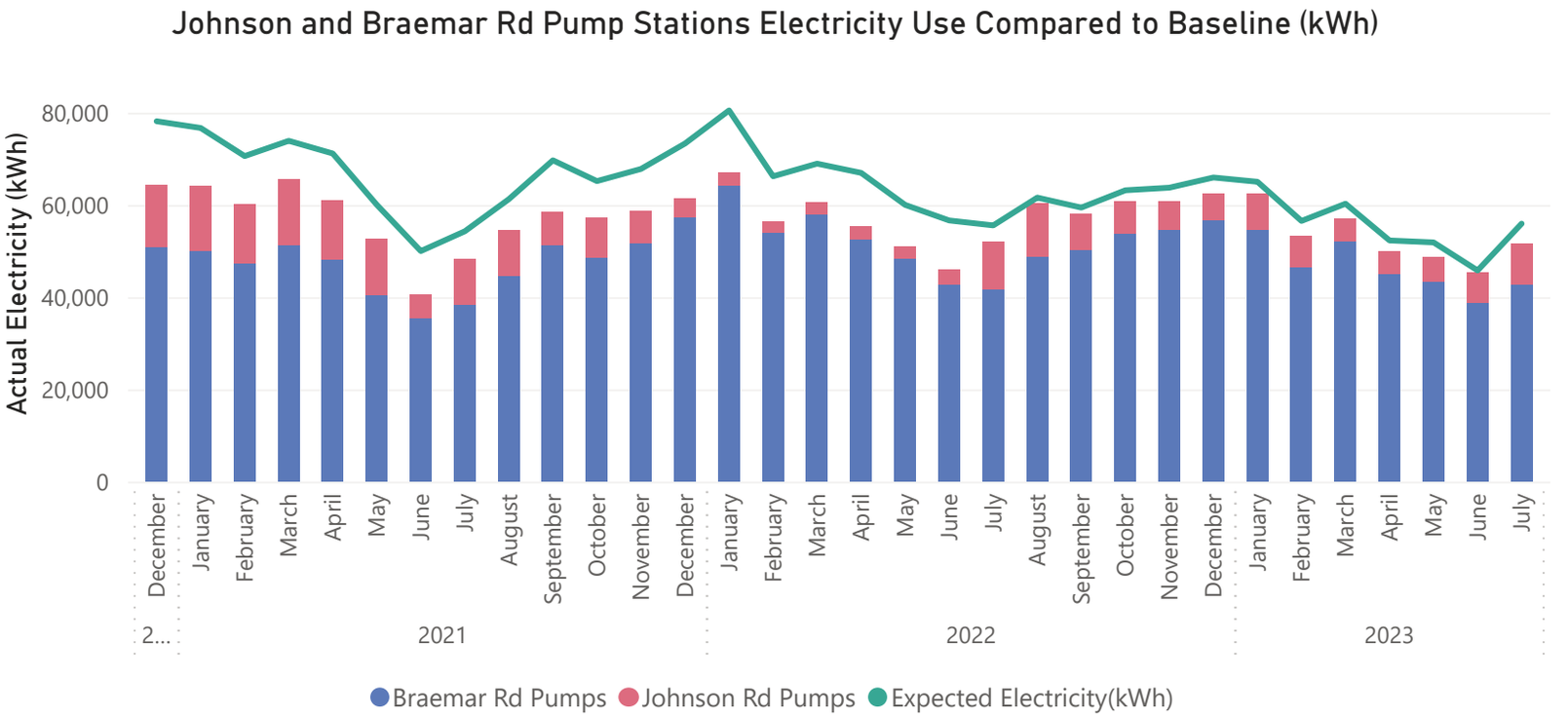
July 2023

Whakatane District Council

Johnson and Braemar Rd Pump Stations

$952 Monthly Energy Cost Savings	4,238 Elec. Savings (kWh/mo)	8% Elec. Savings (%)	30,702 R12M Electricity Savings (kWh/yr)	555 CO2e Savings (kg/mo)
$6,763 R12M Energy Cost Savings				4,022 R12M CO2e Savings (kg/yr)

Comments:
Johnson Rd achieved savings in July 2023, Braemar Rd pump station's electricity use was more than expected for the month. Overall, the EUI has decreased for July compared to June 2023.



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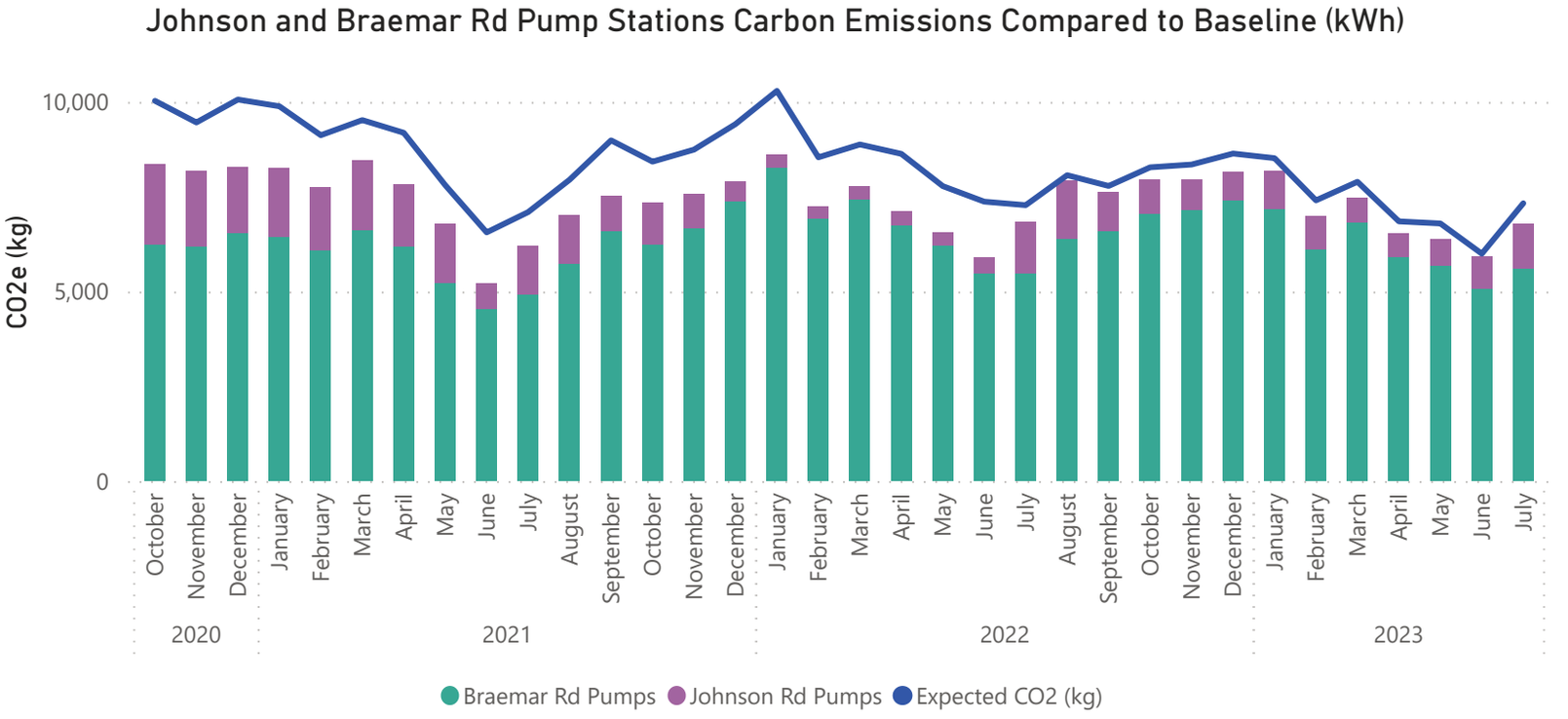
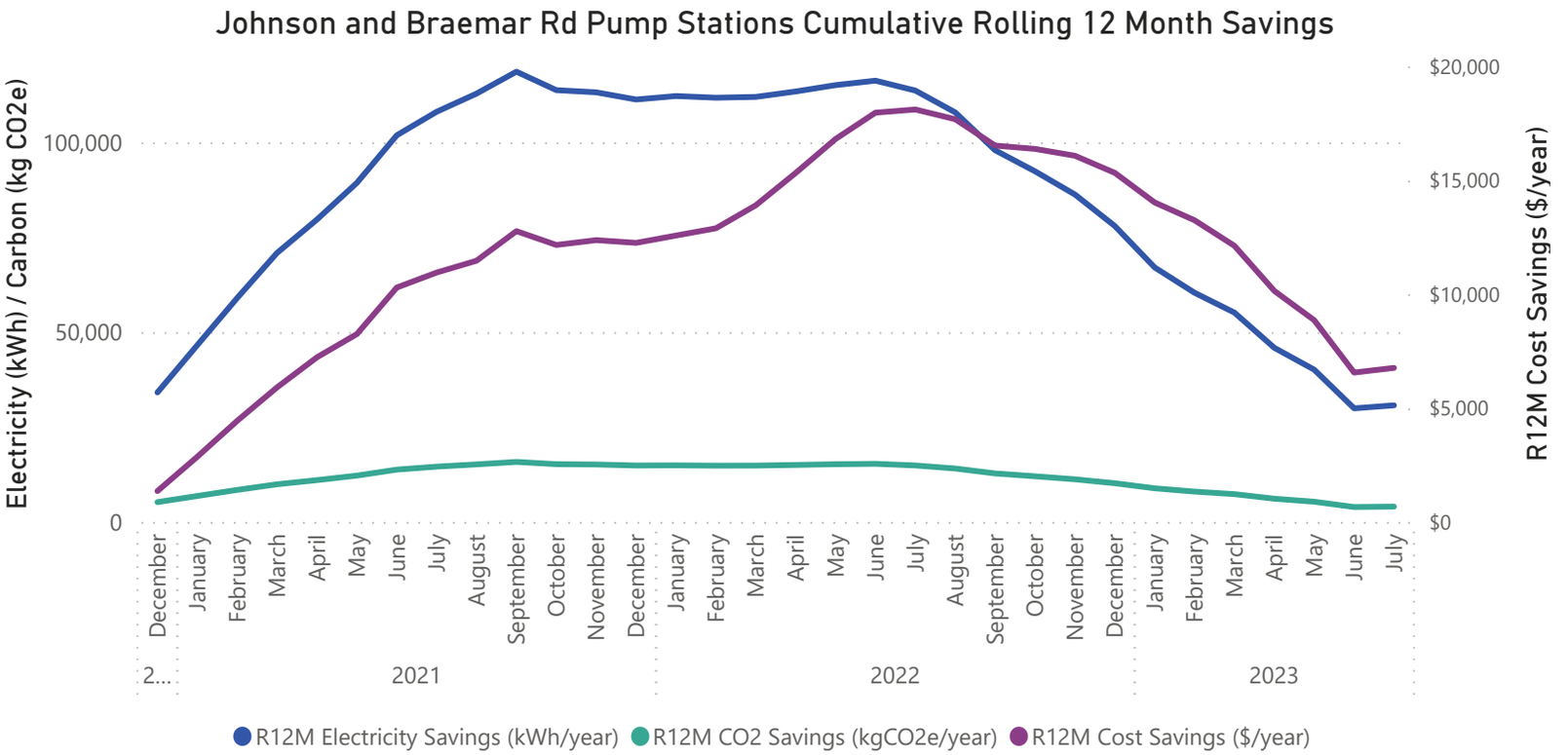
Whakatane District Council

Johnson and Braemar Rd Pump Stations





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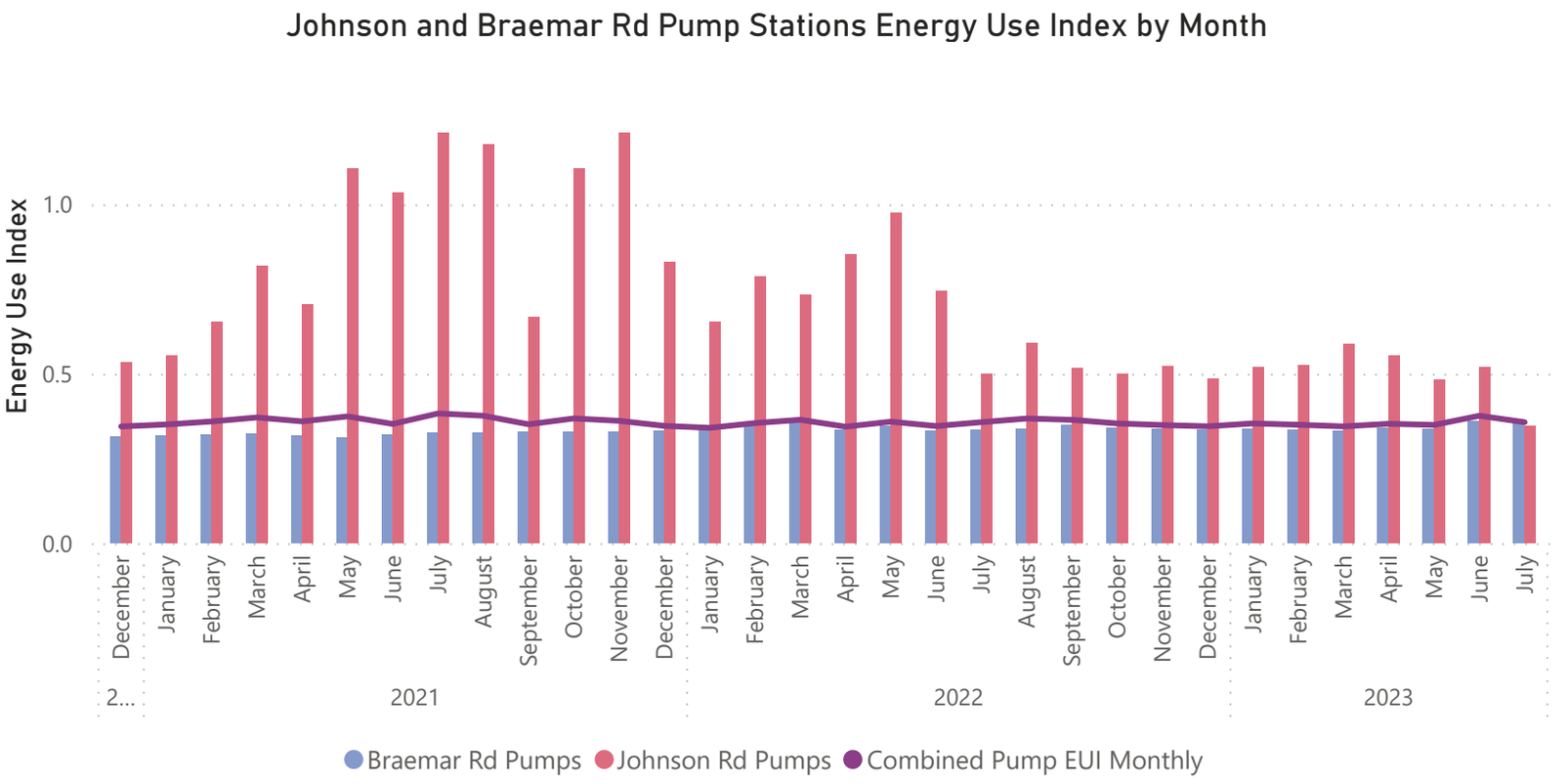
Whakatane District Council

Johnson and Braemar Rd Pump Stations



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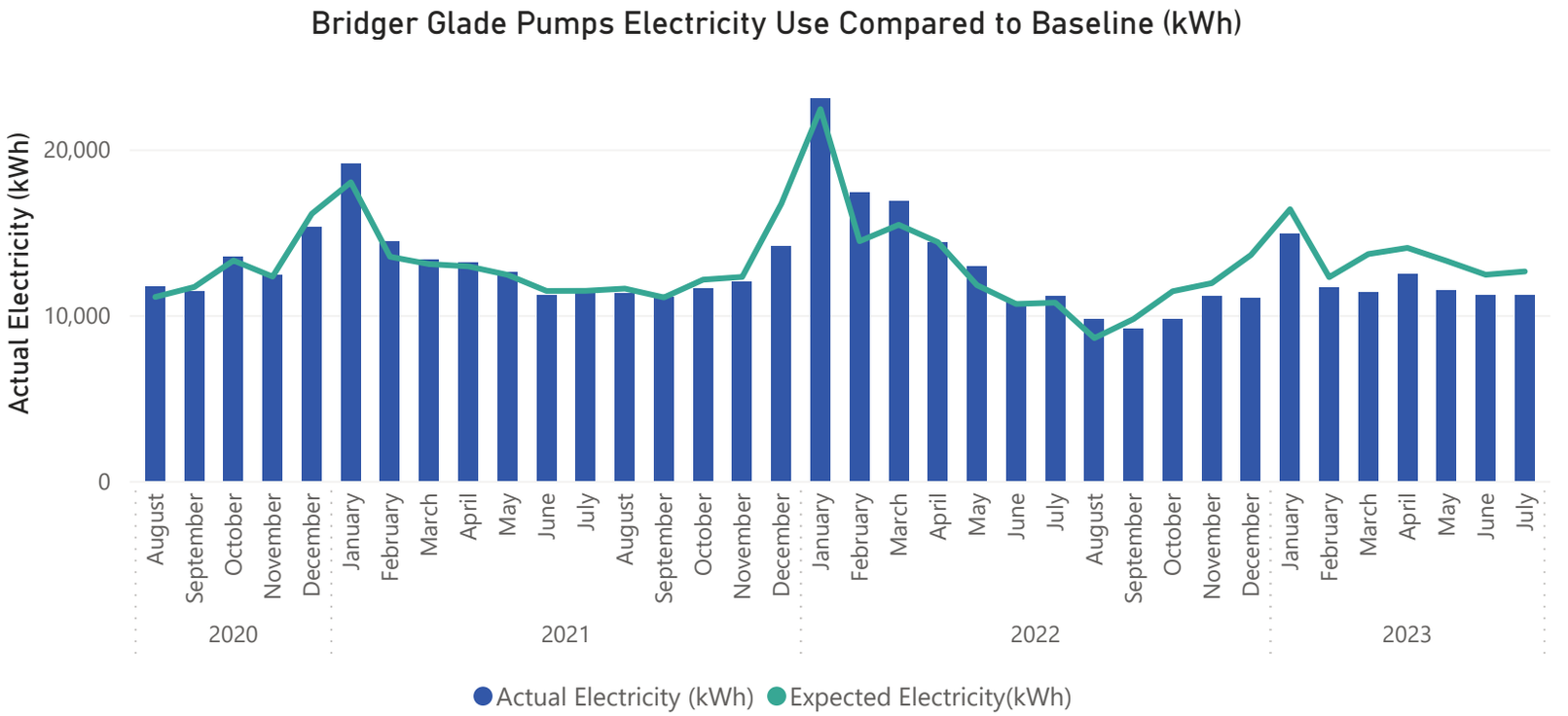
Whakatane District Council

Bridger Glade Pump Station

$252 Monthly Energy Cost Savings	1,430 Elec. Savings (kWh/mo)	11% Elec. Savings (%)	15,006 R12M Electricity Savings (kWh/yr)	187 CO2e Savings (kg/mo)
$2,647 R12M Energy Cost Savings				1,966 R12M CO2e Savings (kg/yr)

Comments:
July 2023 is the 11th month in a row that the Bridger Glade Pump Station has used less electricity than expected, this is due to new supply pumps that were installed in late August 2022. The monthly EUI is less than average over the last 12 months.



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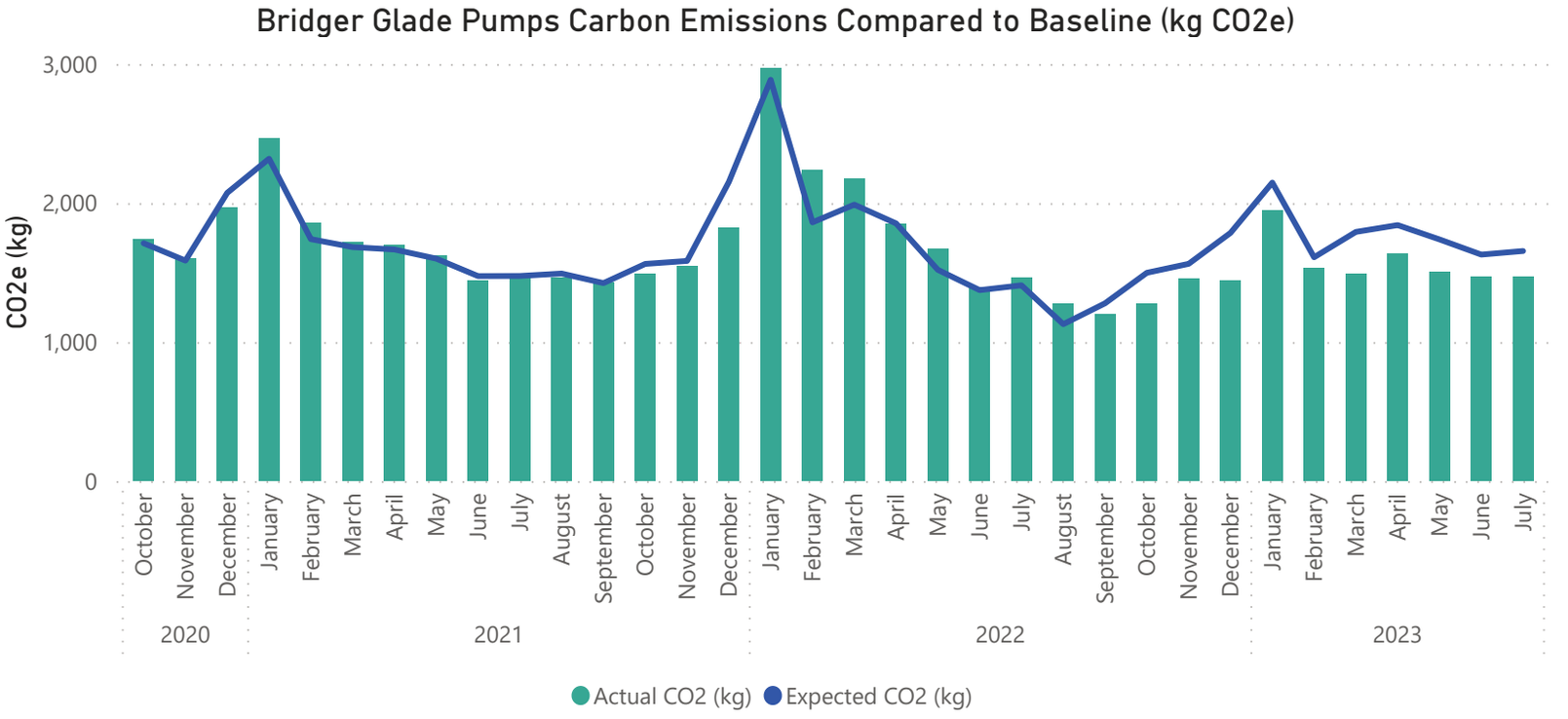
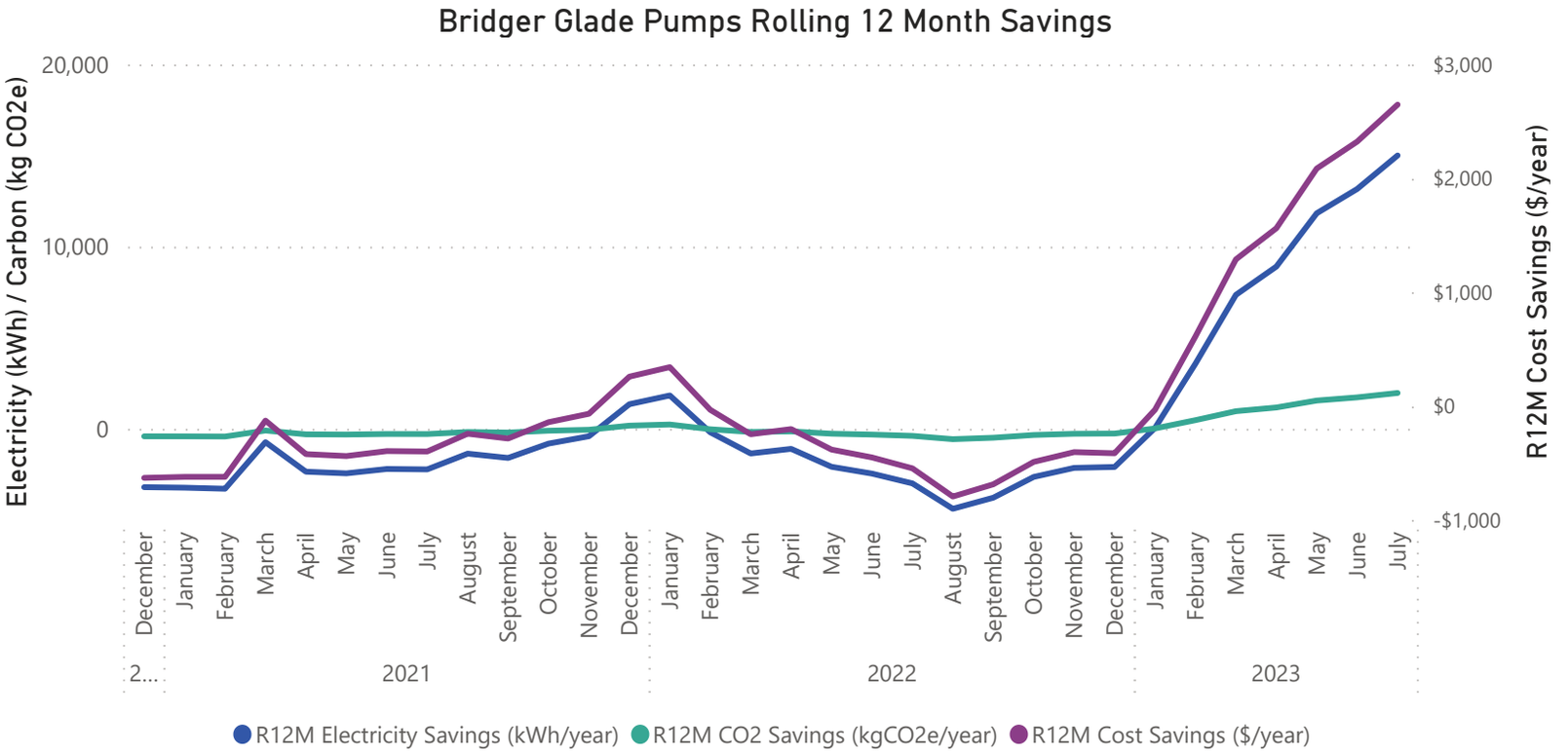
Whakatane District Council

Bridger Glade Pump Station





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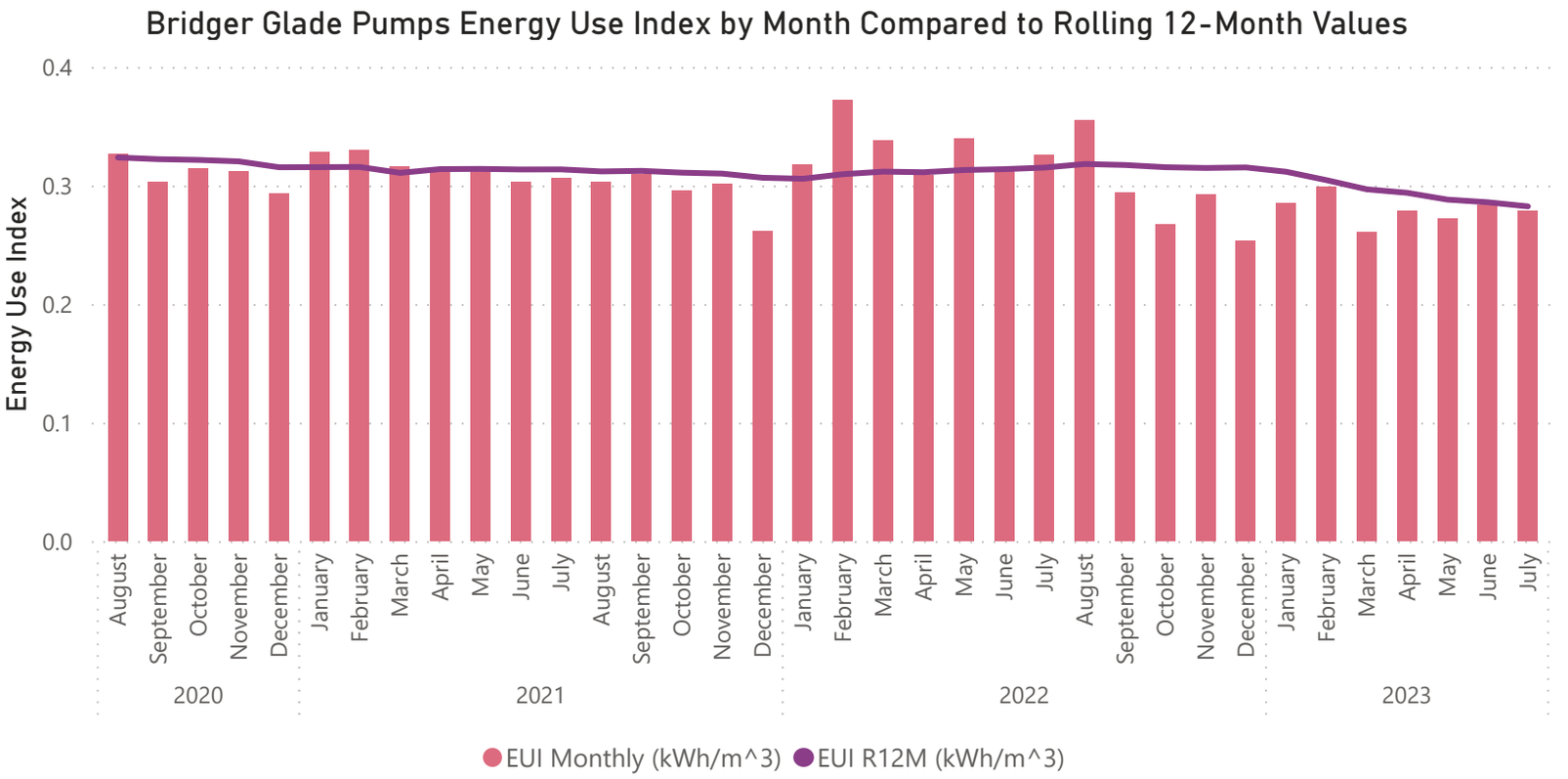
Whakatane District Council

Bridger Glade Pump Station



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Baselines were updated for all sites from July 2022.

July 2023

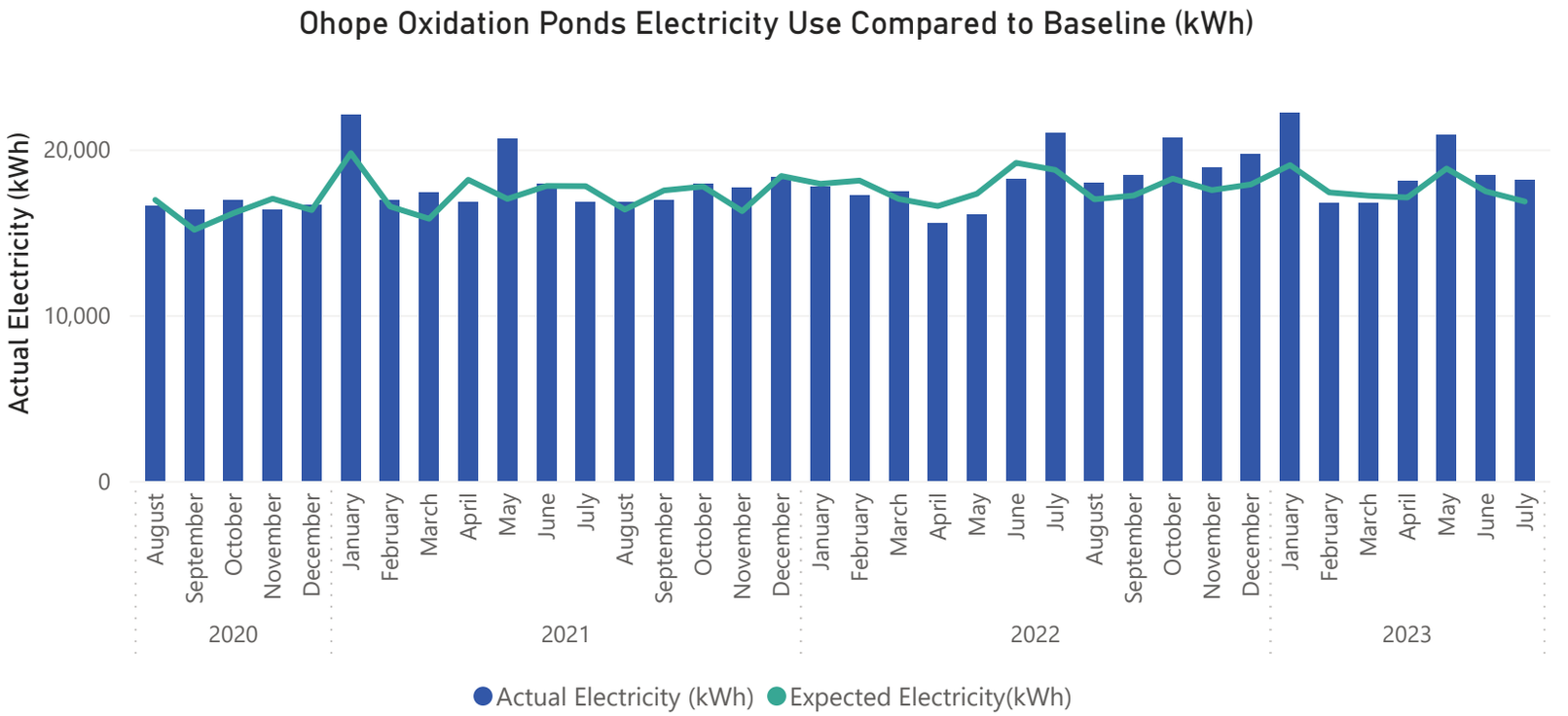
Whakatane District Council

Ohope Oxidation Ponds

-$227 Monthly Energy Cost Savings	-1,291 Elec. Savings (kWh/mo)	-8% Elec. Savings (%)	-15,242 R12M Electricity Savings (kWh/yr)	-169 CO2e Savings (kg/mo)
-$2,683 R12M Energy Cost Savings				-1,997 R12M CO2e Savings (kg/yr)

Comments:

Ohope Oxidation Ponds have used more electricity than expected in 10 of the last 12 months. Rainfall has generally been higher than usual, which may contribute to higher electricity usage. The monthly EUI is higher than average for the past 12 months.



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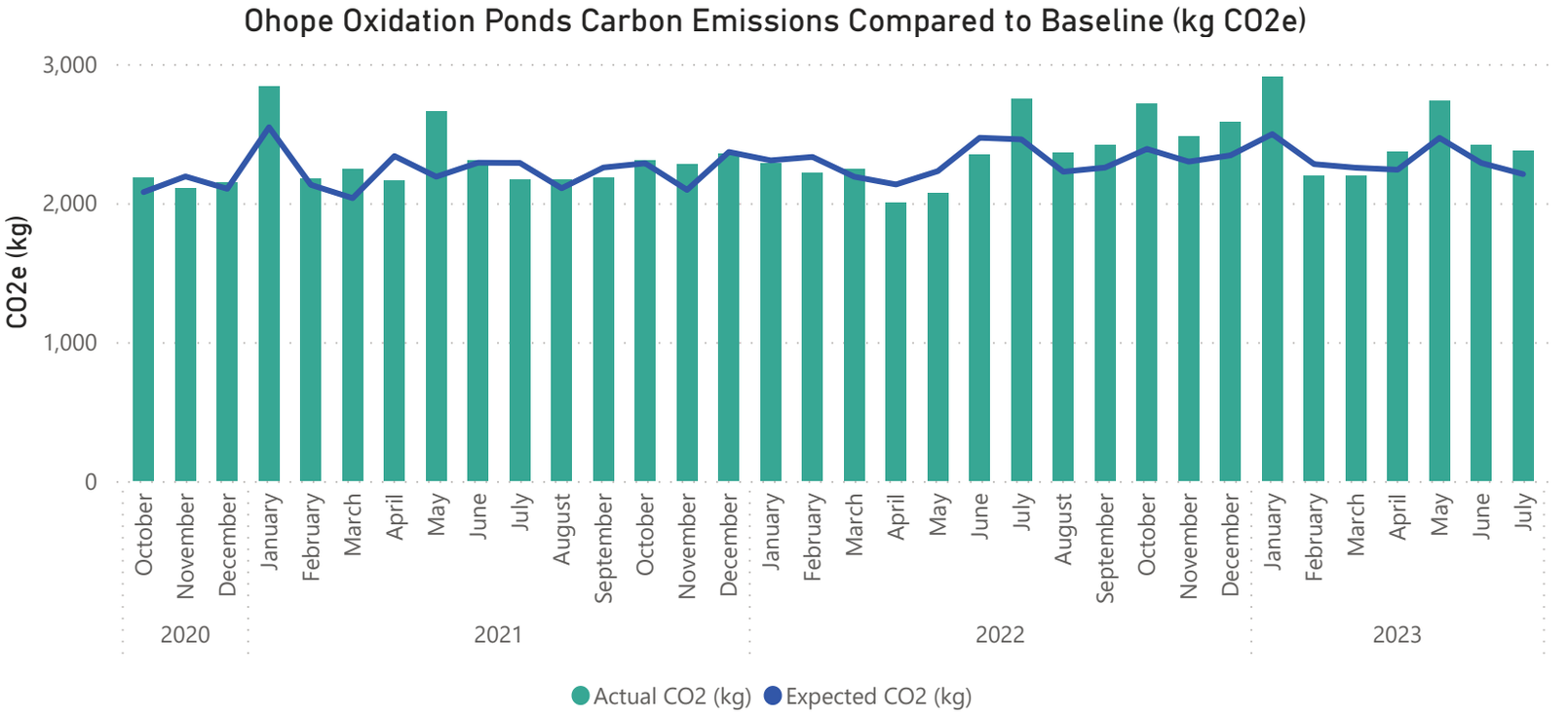
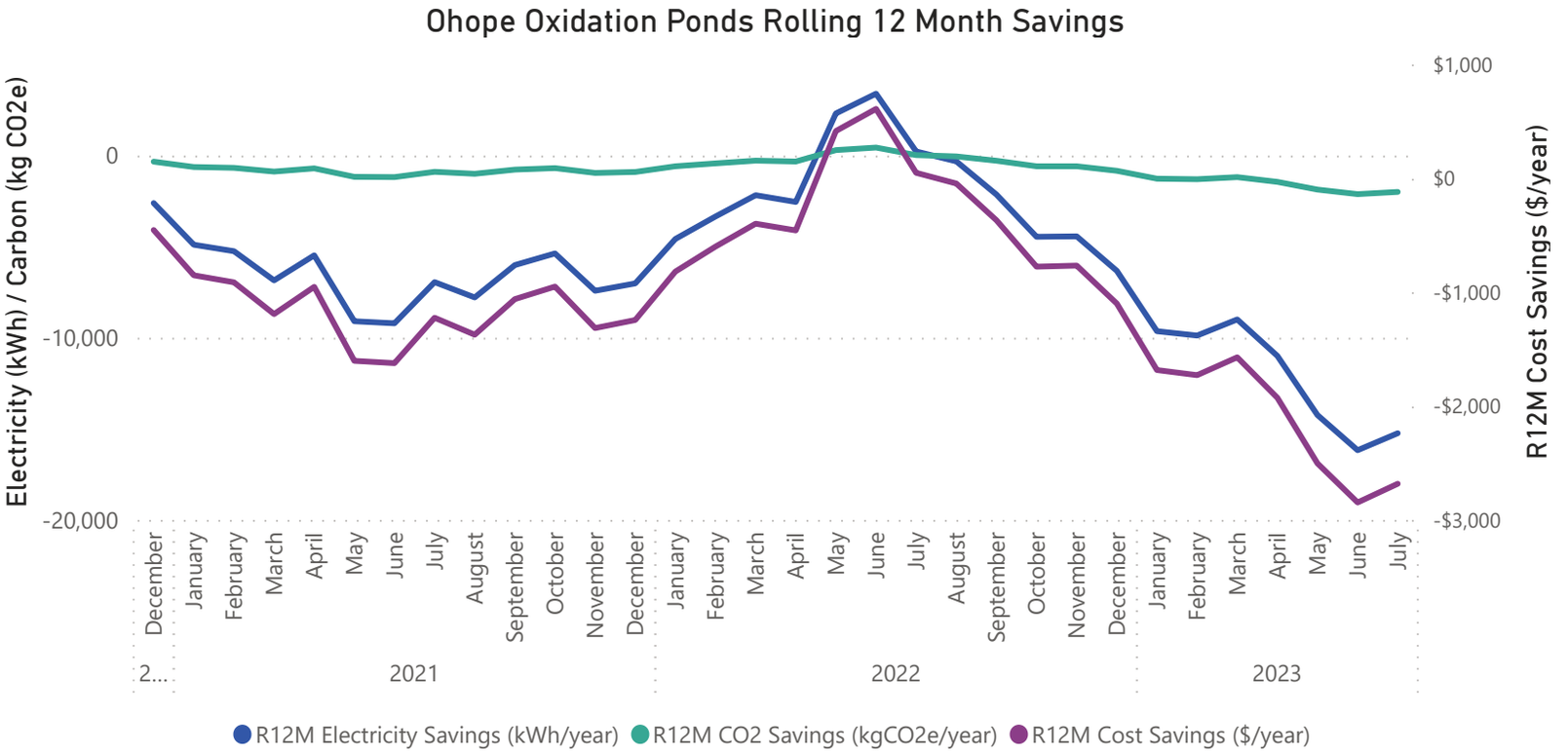
Whakatane District Council

Ohope Oxidation Ponds





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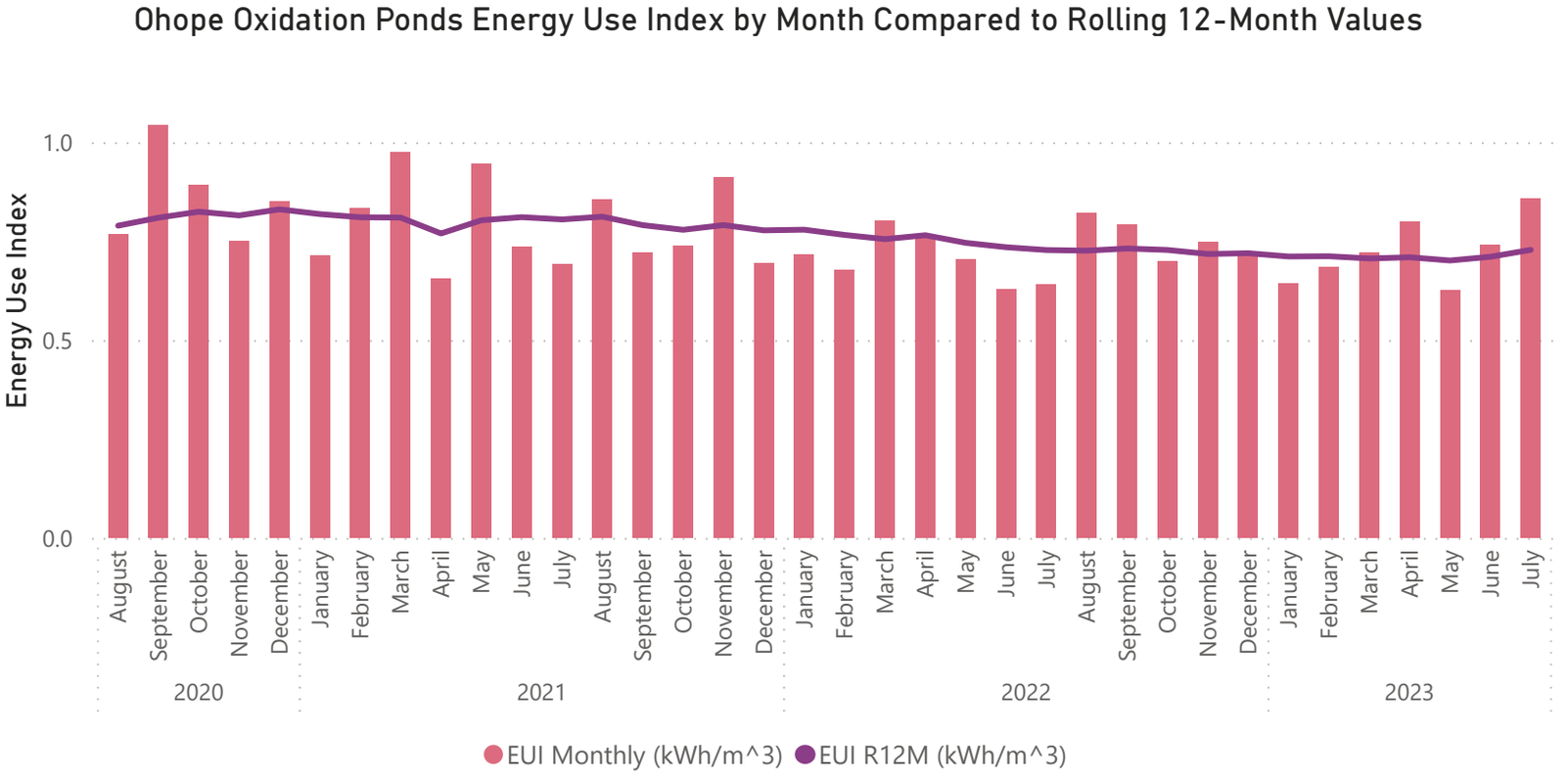
Whakatane District Council

Ohope Oxidation Ponds



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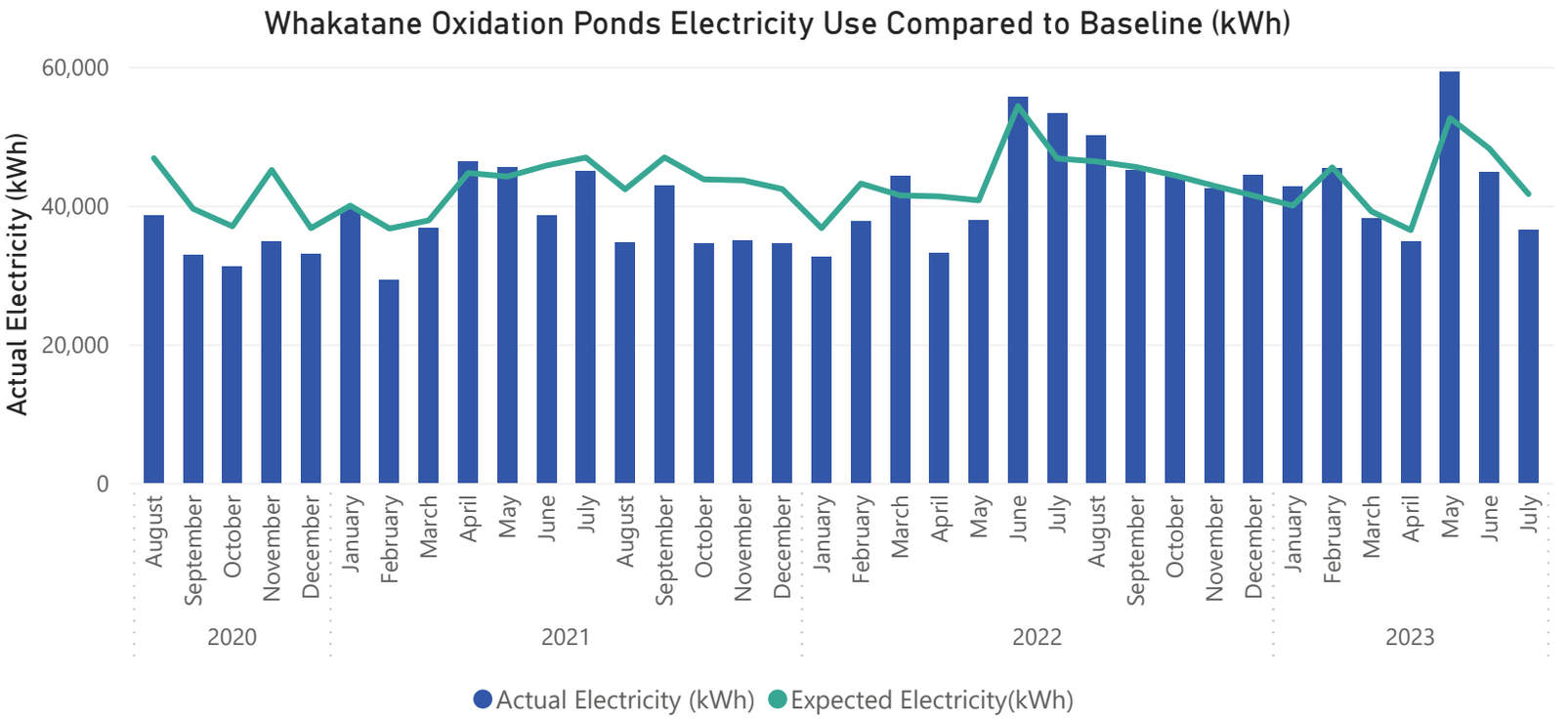
Whakatane District Council

Whakatane Oxidation Ponds

$998 Monthly Energy Cost Savings	5,100 Elec. Savings (kWh/mo)	12% Elec. Savings (%)	-4,138 R12M Electricity Savings (kWh/yr)	668 CO2e Savings (kg/mo)
-$629 R12M Energy Cost Savings				-542 R12M CO2e Savings (kg/yr)

Comments:
The oxidation ponds used 12% less electricity than expected in July 2023. July 2023 was a month of lower than average rainfall, approximately 55mm of rain recorded for the month. EUI is trending downwards, which is good.



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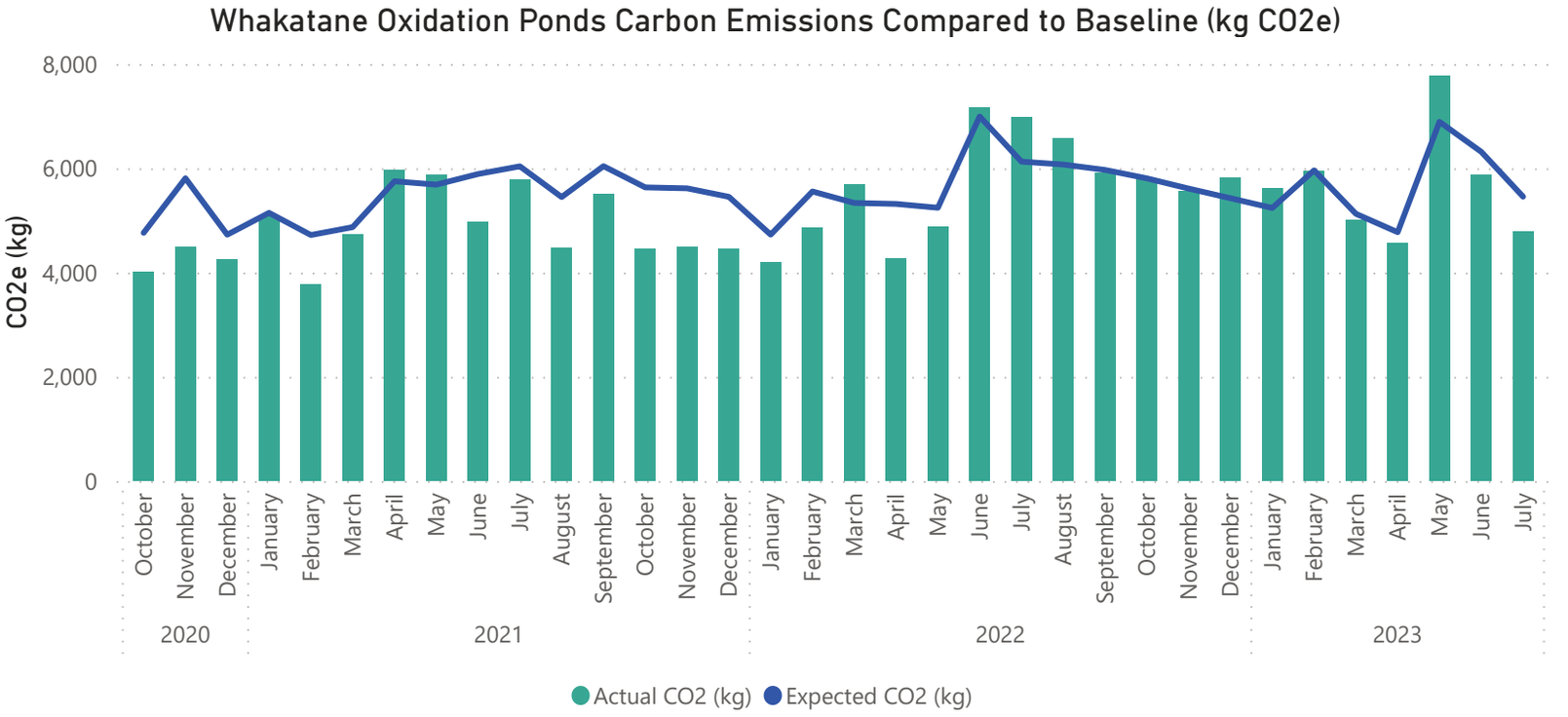
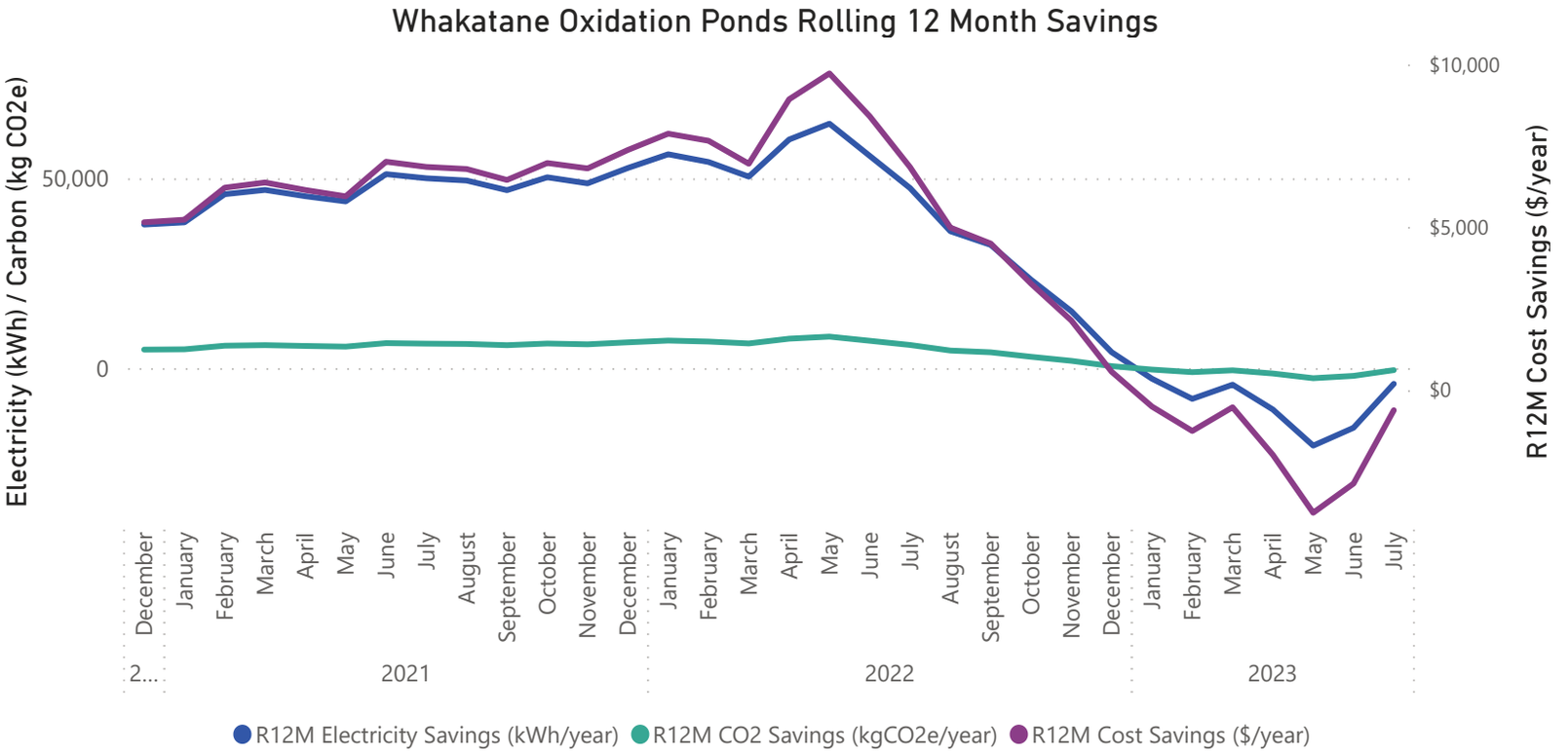
Whakatane District Council

Whakatane Oxidation Ponds





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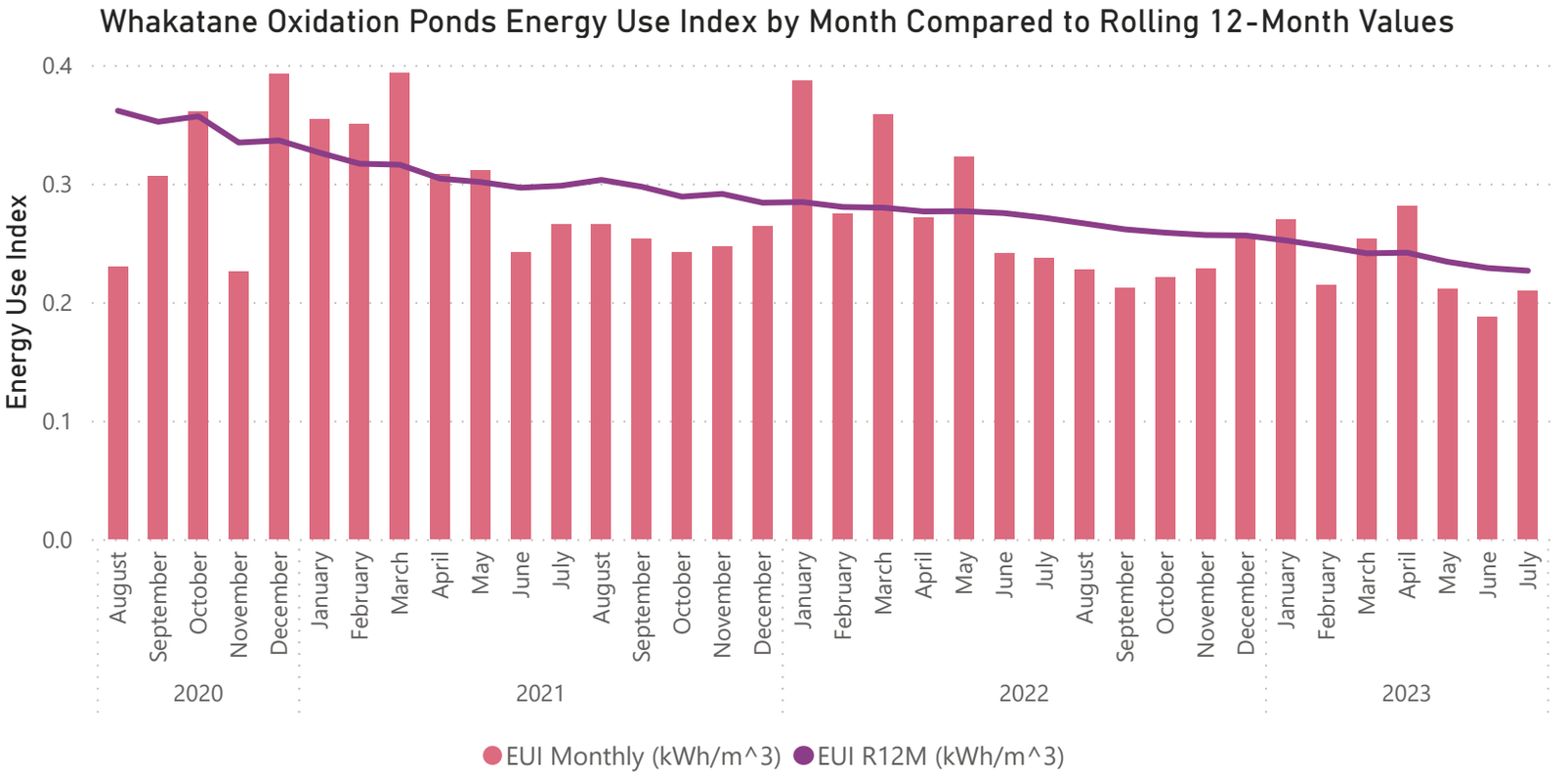
Whakatane District Council

Whakatane Oxidation Ponds



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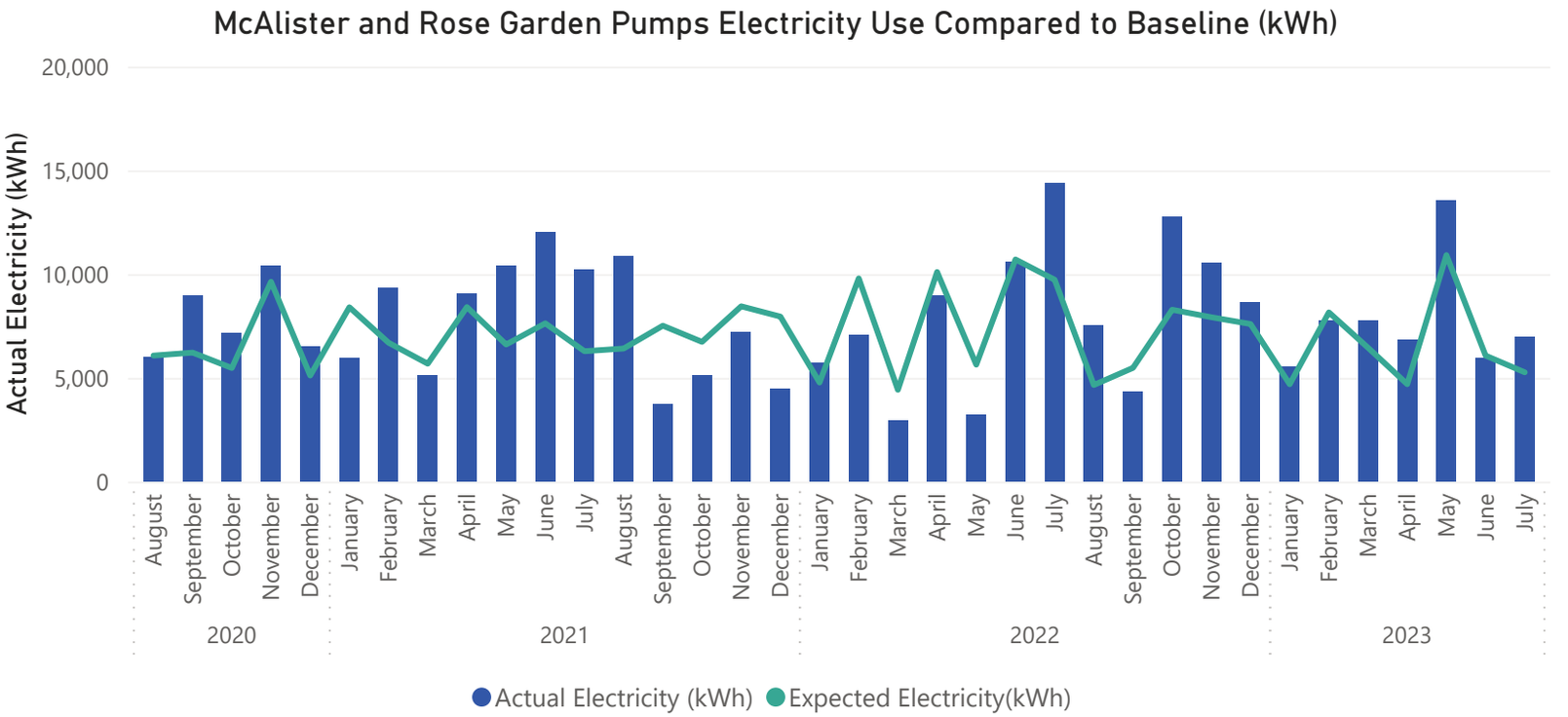
Whakatane District Council

McAlister Street and Rose Garden Pump Stations

-$29 Monthly Energy Cost Savings	-1,685 Elec. Savings (kWh/mo)	-32% Elec. Savings (%)	-17,968 R12M Electricity Savings (kWh/yr)	-221 CO2e Savings (kg/mo)
$624 R12M Energy Cost Savings				-2,354 R12M CO2e Savings (kg/yr)

Comments:
The pump stations used 32% more electricity than expected this month. July 2023 was a month of below average rainfall, approximately 95mm of rain coincided within the billing period.



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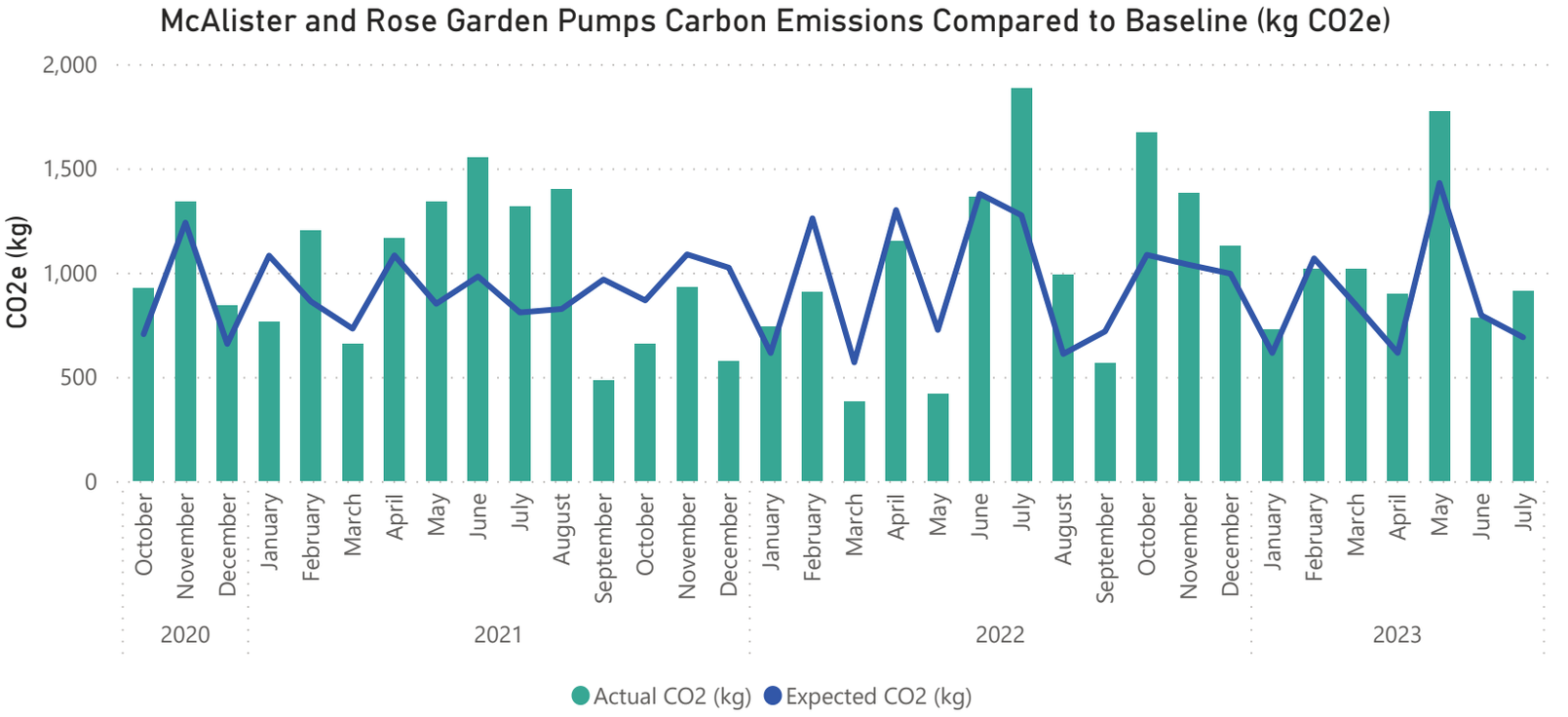
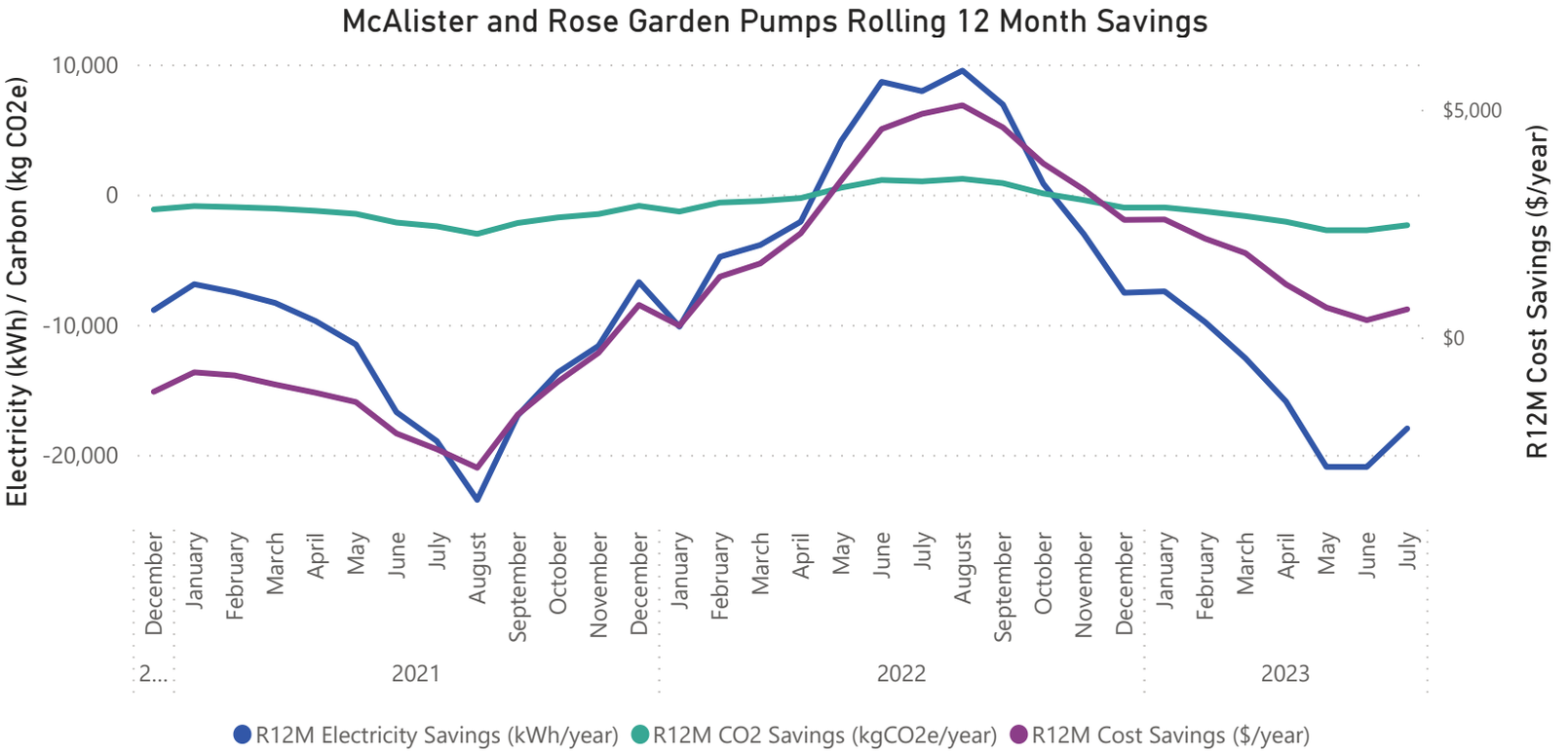
Whakatane District Council

McAlister Street and Rose Garden Pump Stations





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Whakatane District Council

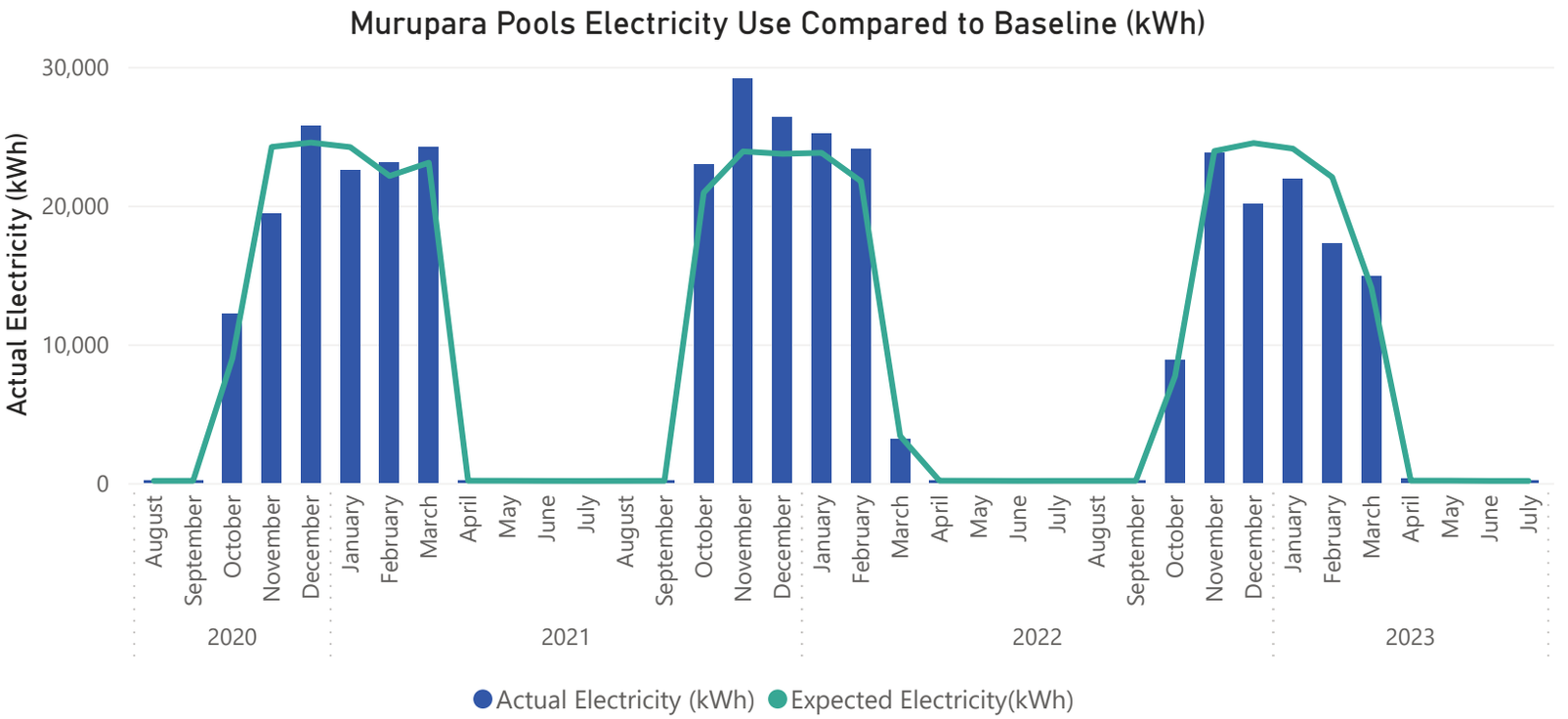
Murupara Pools

$7 Monthly Energy Cost Savings	31 Elec. Savings (kWh/mo)	22% Elec. Savings (%)	9,363 R12M Electricity Savings (kWh/yr)	4 CO2e Savings (kg/mo)
$1,626 R12M Energy Cost Savings				1,227 R12M CO2e Savings (kg/yr)

Comments:

Murupara Pools have been added to reporting in December 2022. The baseline period uses data from July 2021 to June 2022 and adjusts for ambient temperature as well as how many days in the month the pool is open or closed.

The pools are now closed for the season and are using a few kWh per day.



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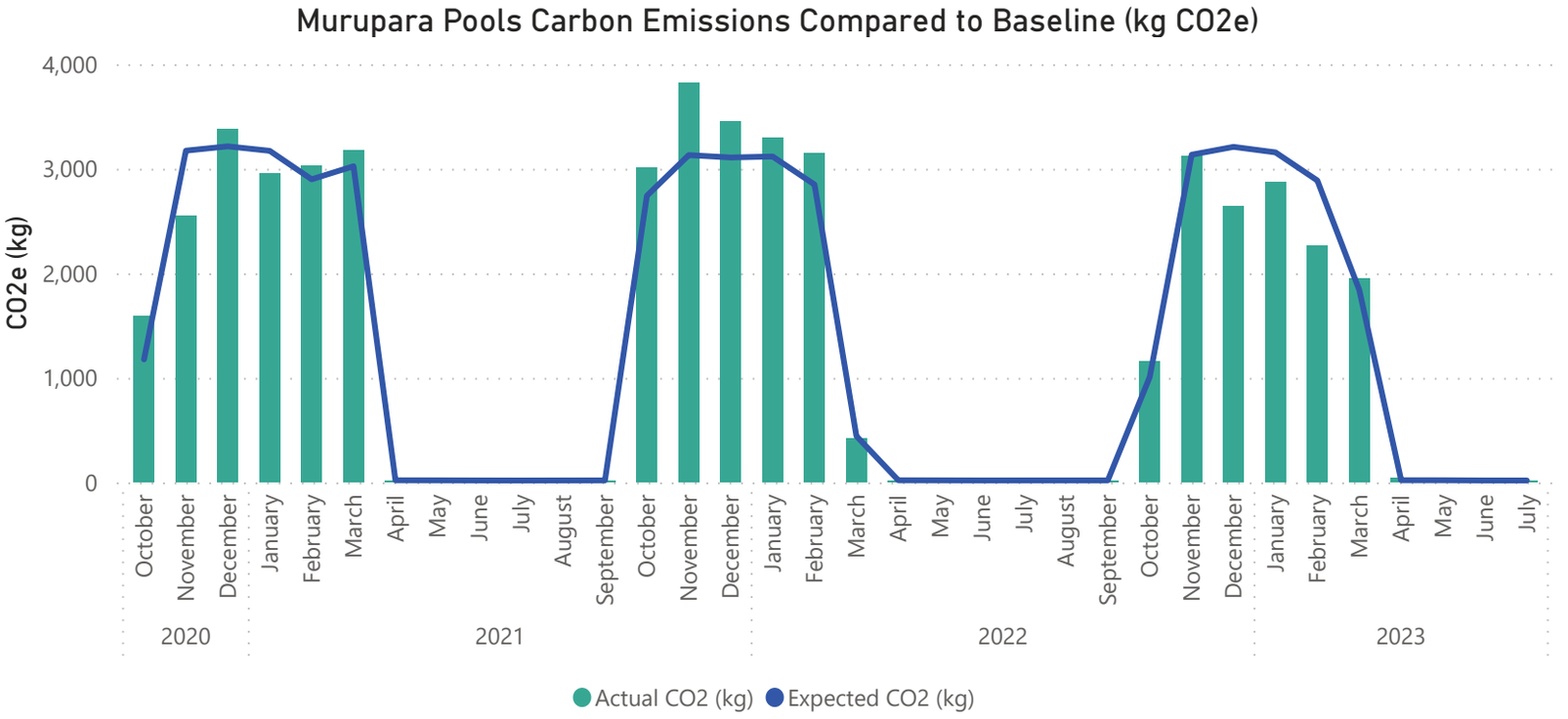
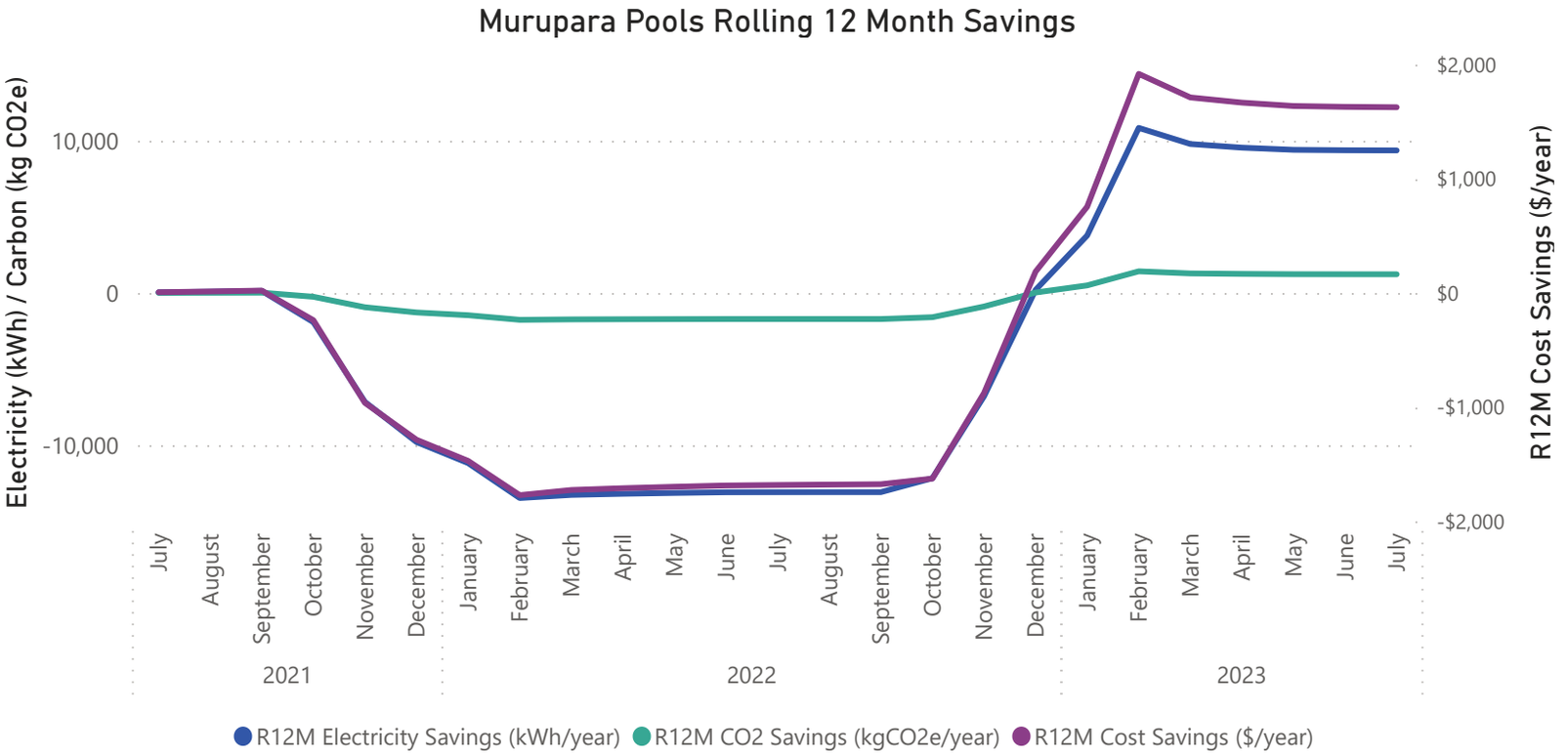
Whakatane District Council

Murupara Pools





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