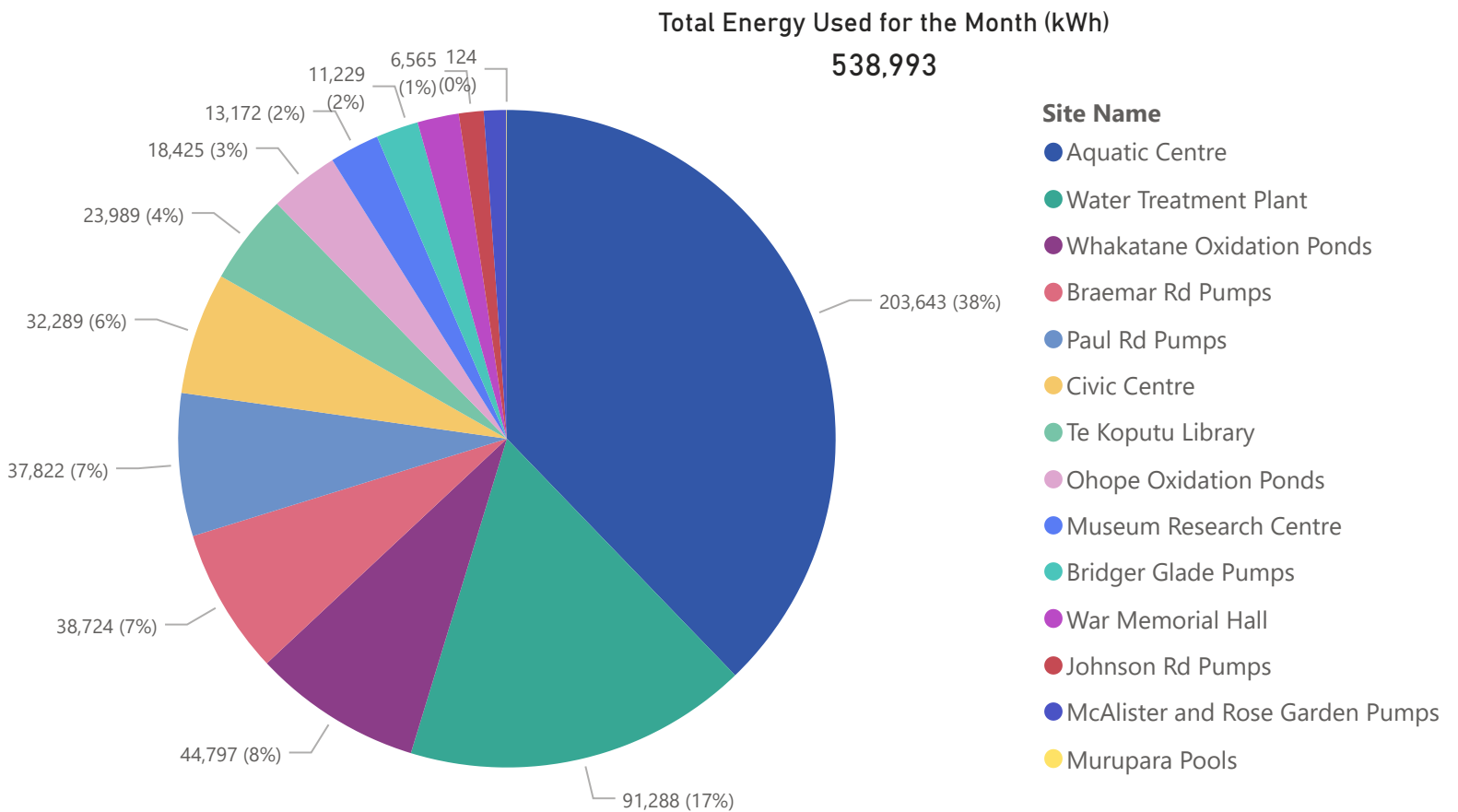


Whakatane District Council

Summary

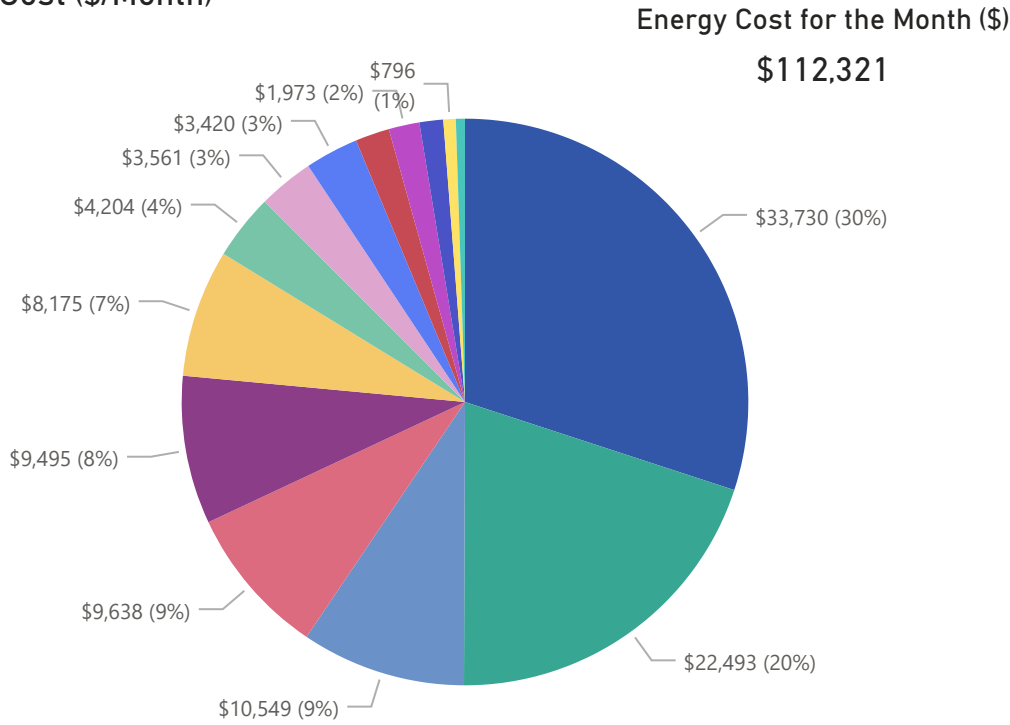
\$8,683 Monthly Energy Cost Savings	50,536 Elec. Savings (kWh/mo)	10% Elec. Savings (%)	522,671 R12M Electricity Savings (kWh/yr)	2,379 CO2e Savings (kg/mo)
\$100,058 R12M Energy Cost Savings	-20,489 Gas. Savings (kWh/mo)	-26% Gas. Savings (%)	-11,945 R12M Gas Savings (kWh/yr)	65,997 R12M CO2e Savings (kg/yr)

Total Energy (kWh/Month)



Whakatane District Council Summary

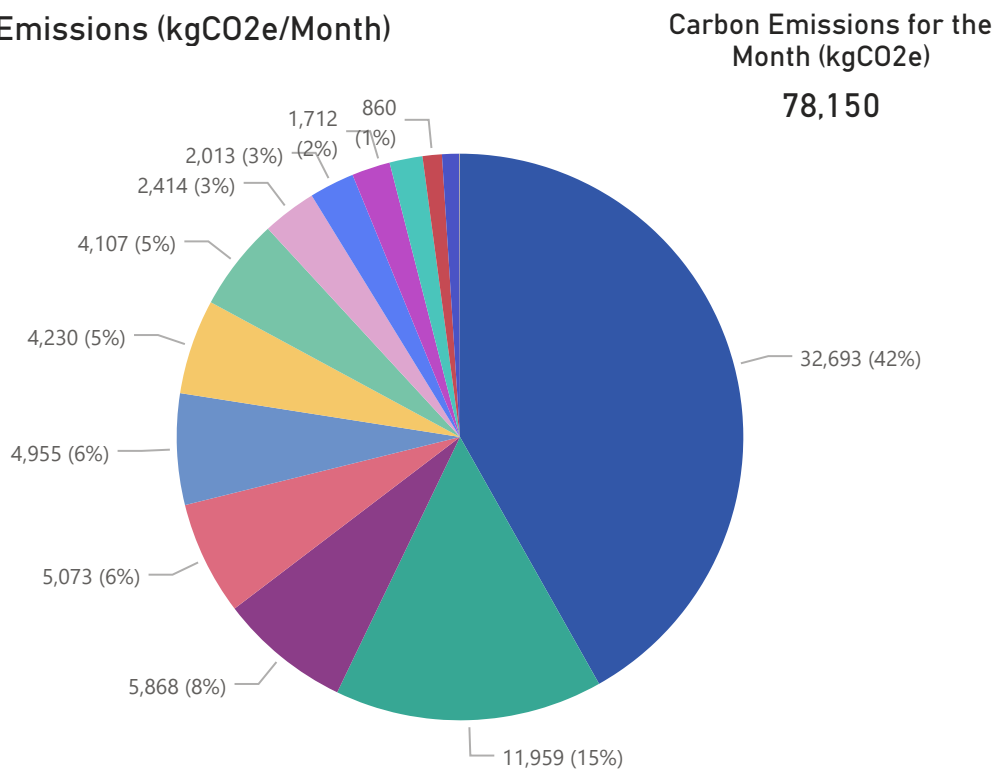
Energy Cost (\$/Month)



Site Name

- Aquatic Centre
- Water Treatment Plant
- Paul Rd Pumps
- Braemar Rd Pumps
- Whakatane Oxidation Ponds
- Civic Centre
- 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)



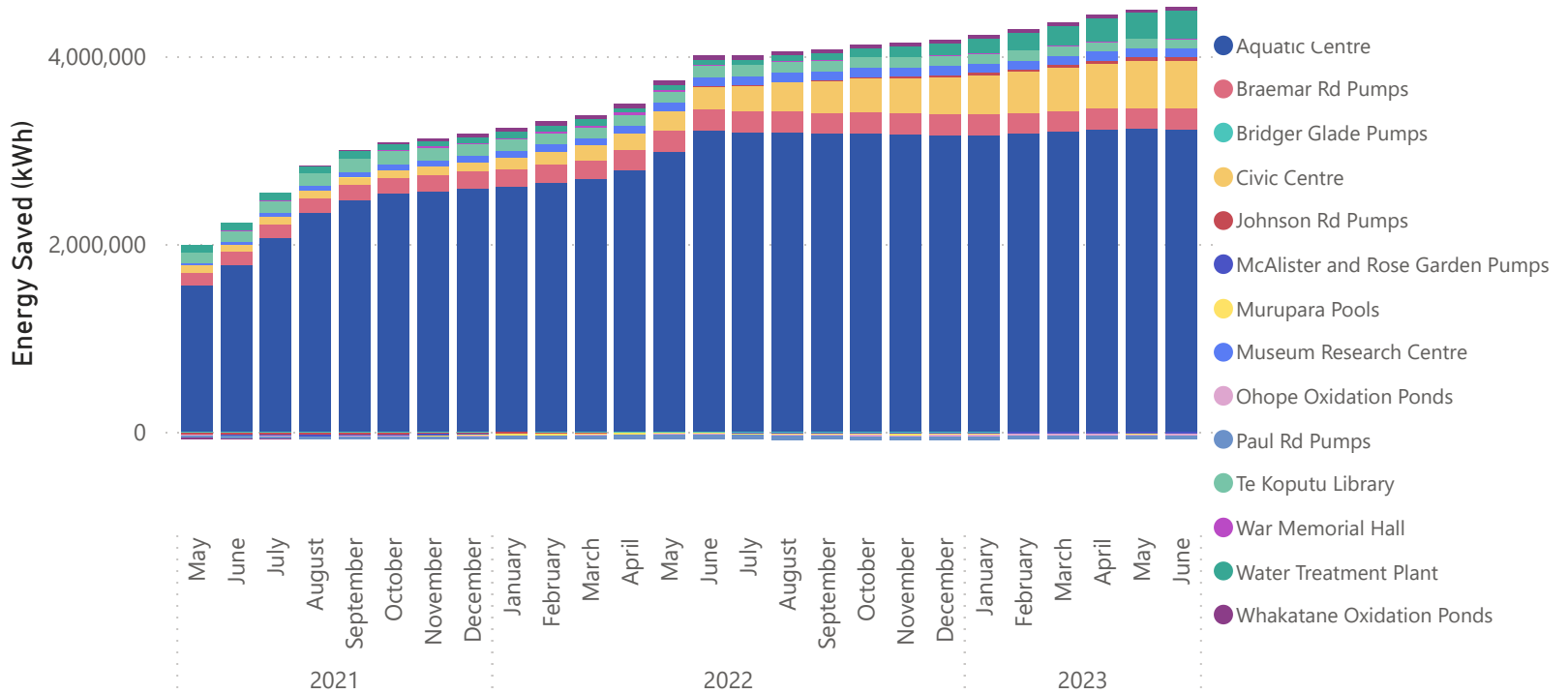
Site Name

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

Whakatane District Council

Summary

Cumulative Energy Savings (kWh)



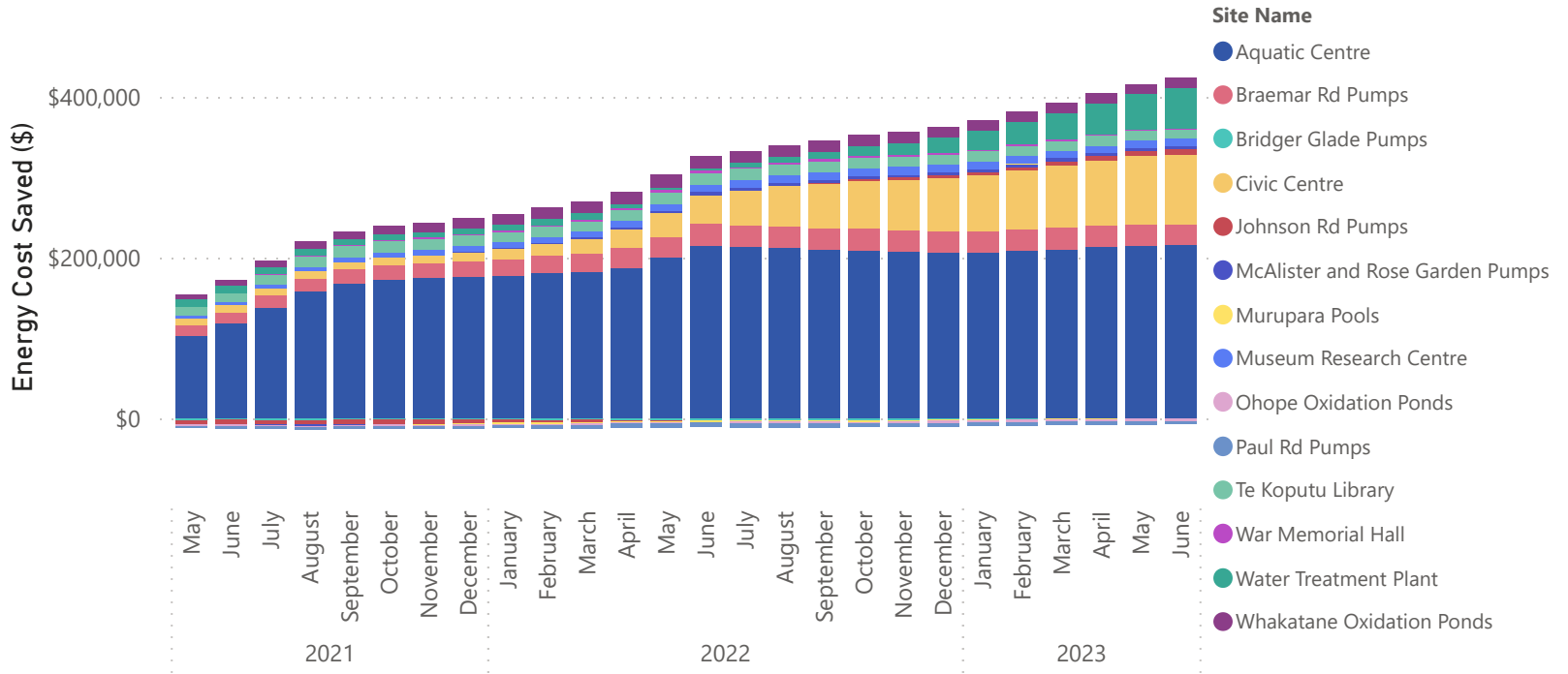
Note, cumulative savings are calculated starting July 2018

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

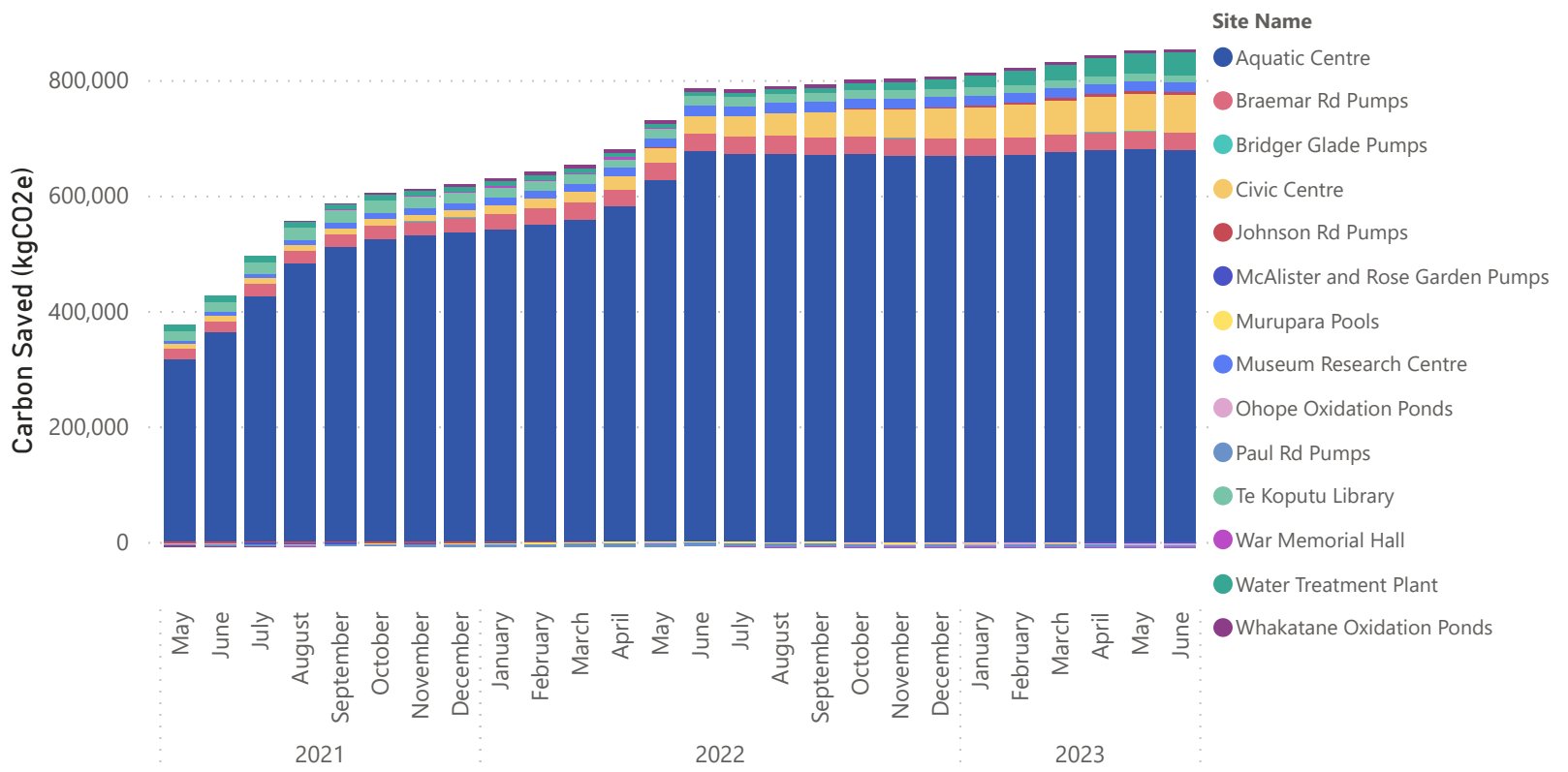
Summary

Cumulative Energy Cost Savings (\$)



Note, cumulative savings are calculated starting July 2018

Cumulative Carbon Savings (kgCO2e)



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

Civic Centre

<p>\$796 Monthly Energy Cost Savings</p>	<p>3,967 Elec. Savings (kWh/mo)</p>	<p>11% Elec. Savings (%)</p>	<p>270,260 R12M Electricity Savings (kWh/yr)</p>	<p>520 CO2e Savings (kg/mo)</p>
<p>\$50,382 R12M Energy Cost Savings</p>				<p>35,404 R12M CO2e Savings (kg/yr)</p>

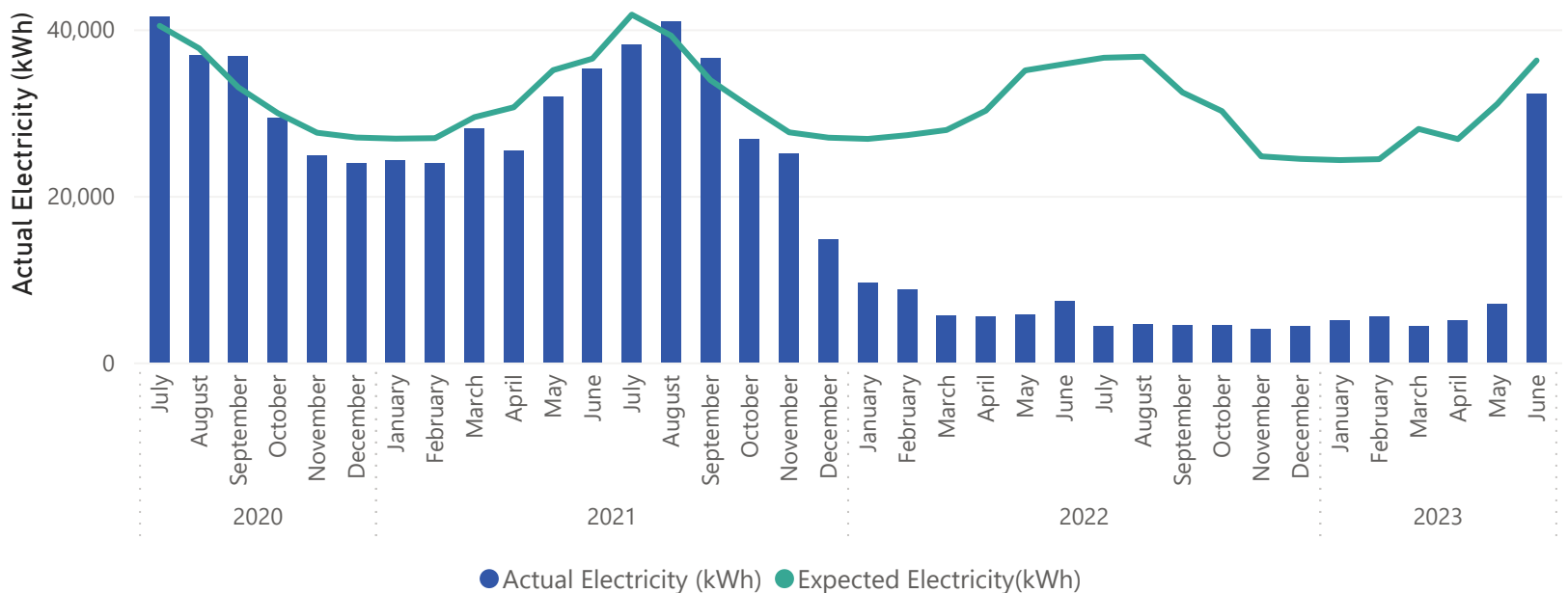
Comments:

The baseline for the Civic Centre has been updated, the baseline period was selected as Dec-2020 to Nov-2021, in order to exclude months where refurbishment was taking place.

Electricity use has increased in June 2023. Energy use gradually increased from 19 May, through June. The pattern of electricity use has changed compared with June 2021. A clear daily or weekly pattern does not exist and electricity is not returning to baseline after hours. In June 2021 the baseline was approximately 20kW, for the second half of June 2023, electricity demand was frequently around 50kW after hours. The electricity use profile may be related to re-commissioning of the building.

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

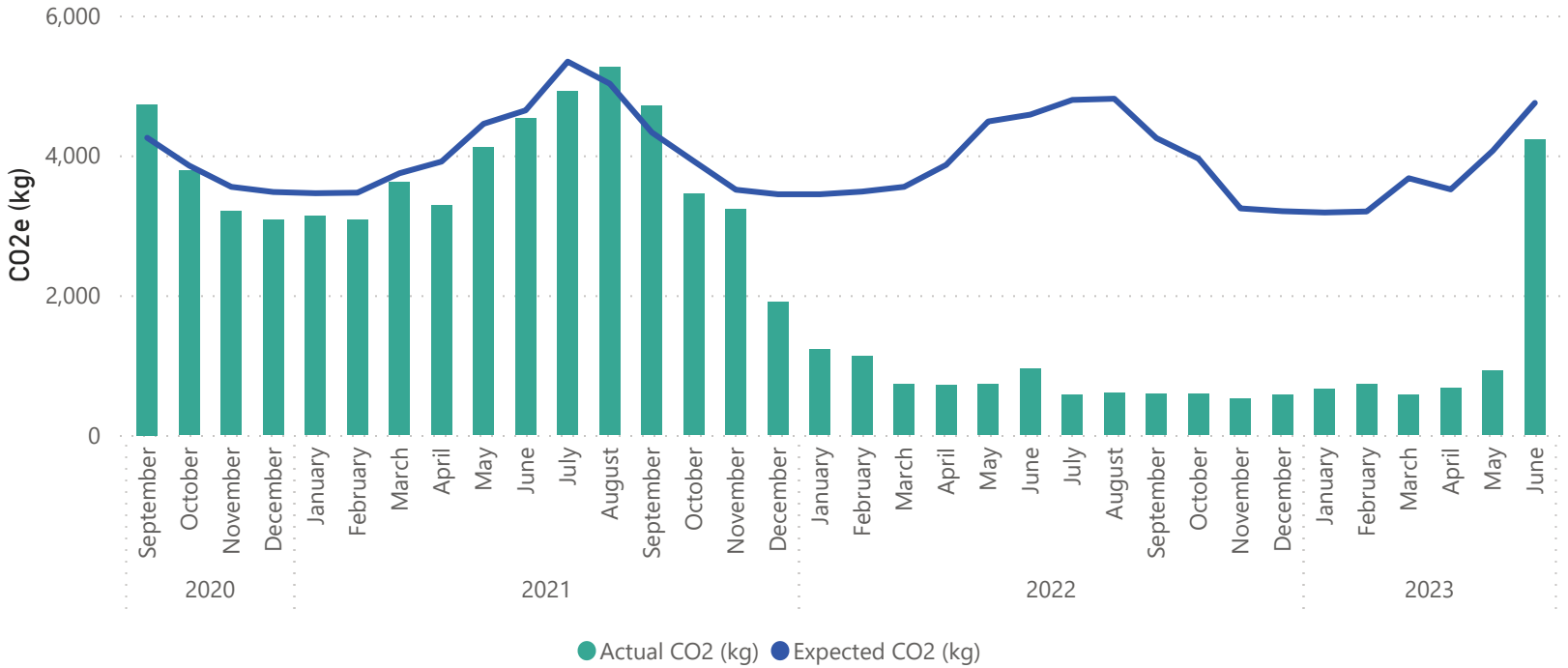
Civic Centre Electricity Use Compared to Baseline (kWh)



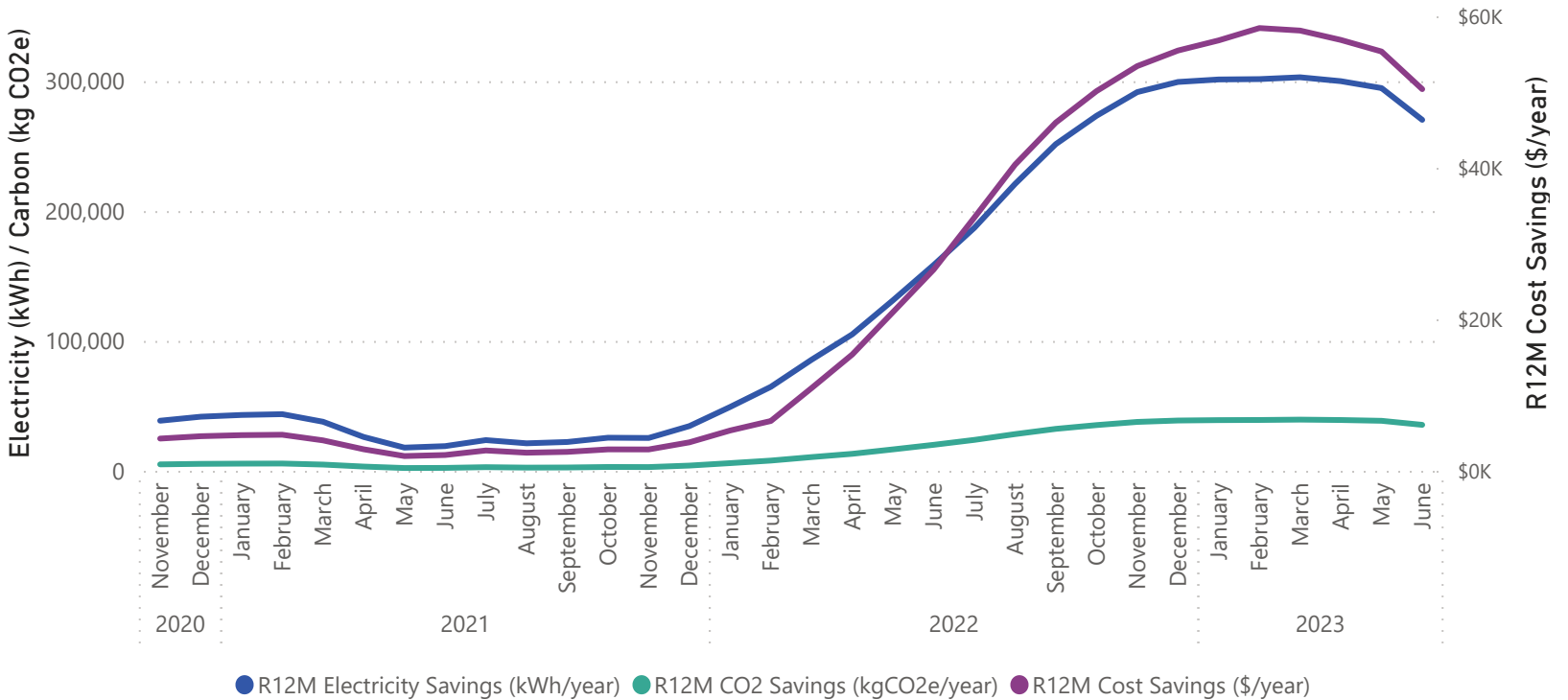
Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

Whakatane District Council Civic Centre

Civic Centre Carbon Emissions Compared to Baseline (kg CO2e)



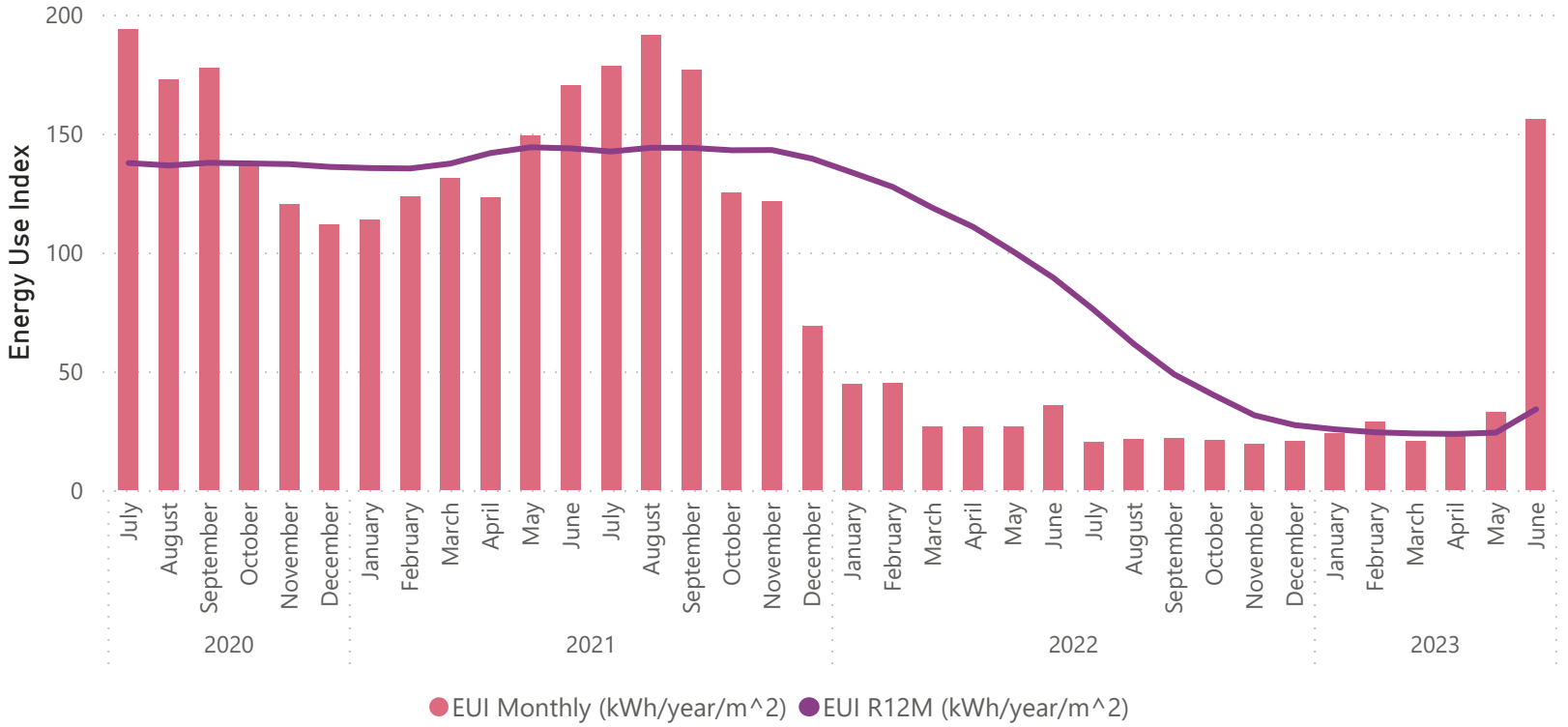
Civic Centre Rolling 12 Month Savings



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 Civic Centre

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



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

Aquatic Centre

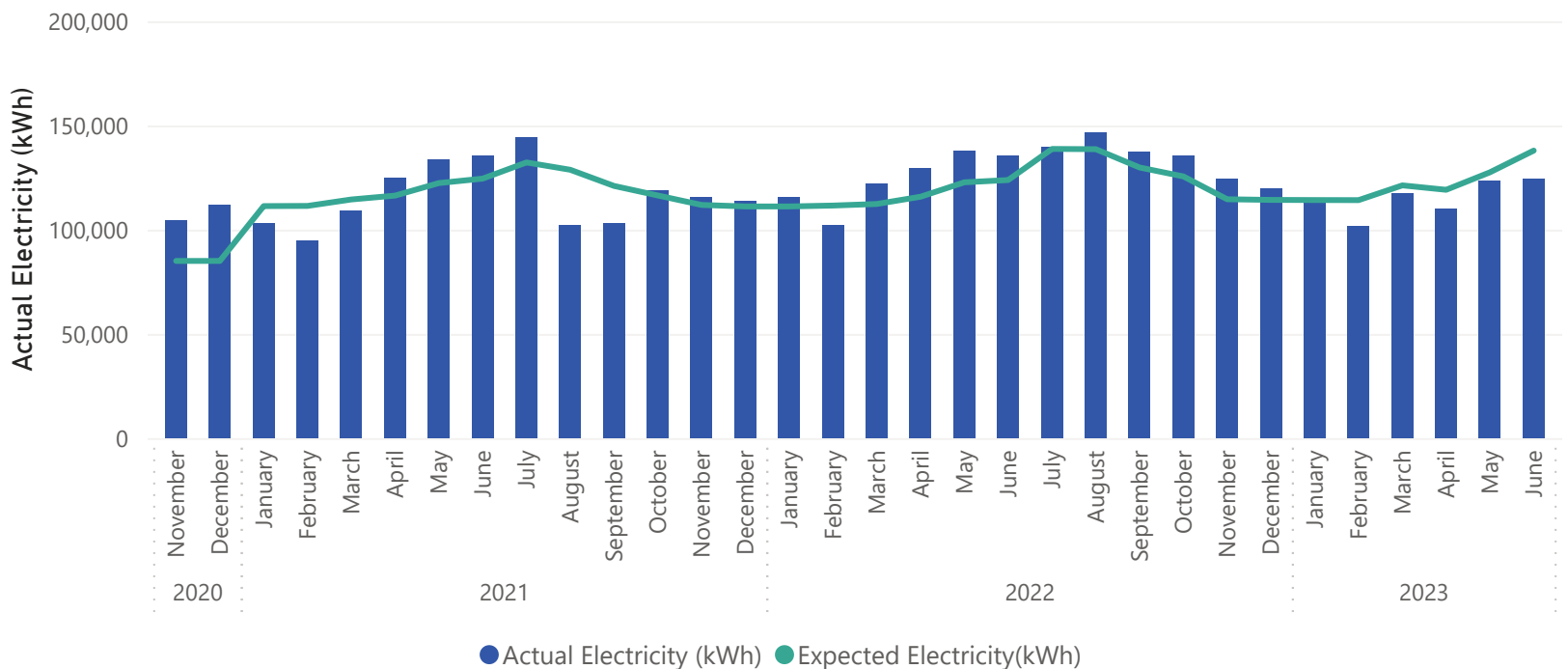
<p>\$1,375</p> <p>Monthly Energy Cost Savings</p>	<p>13,459</p> <p>Elec. Savings (kWh/mo)</p>	<p>10%</p> <p>Elec. Savings (%)</p>	<p>1,546</p> <p>R12M Electricity Savings (kWh/yr)</p>	<p>-1,687</p> <p>CO2e Savings (kg/mo)</p>
<p>\$1,005</p> <p>R12M Energy Cost Savings</p>	<p>-16,668</p> <p>Gas. Savings (kWh/mo)</p>	<p>-27%</p> <p>Gas. Savings (%)</p>	<p>9,024</p> <p>R12M Gas Savings (kWh/yr)</p>	<p>2,071</p> <p>R12M CO2e Savings (kg/yr)</p>

Comments:

Electricity and natural gas baselines have been updated for the Aquatic Centre, the baseline period is May 2021 to June 2022. The outdoor pool is open year-round and the baseline reflects this change.

Electricity use was less than baseline in June 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.

Aquatic Centre Electricity Use Compared to Baseline (kWh)

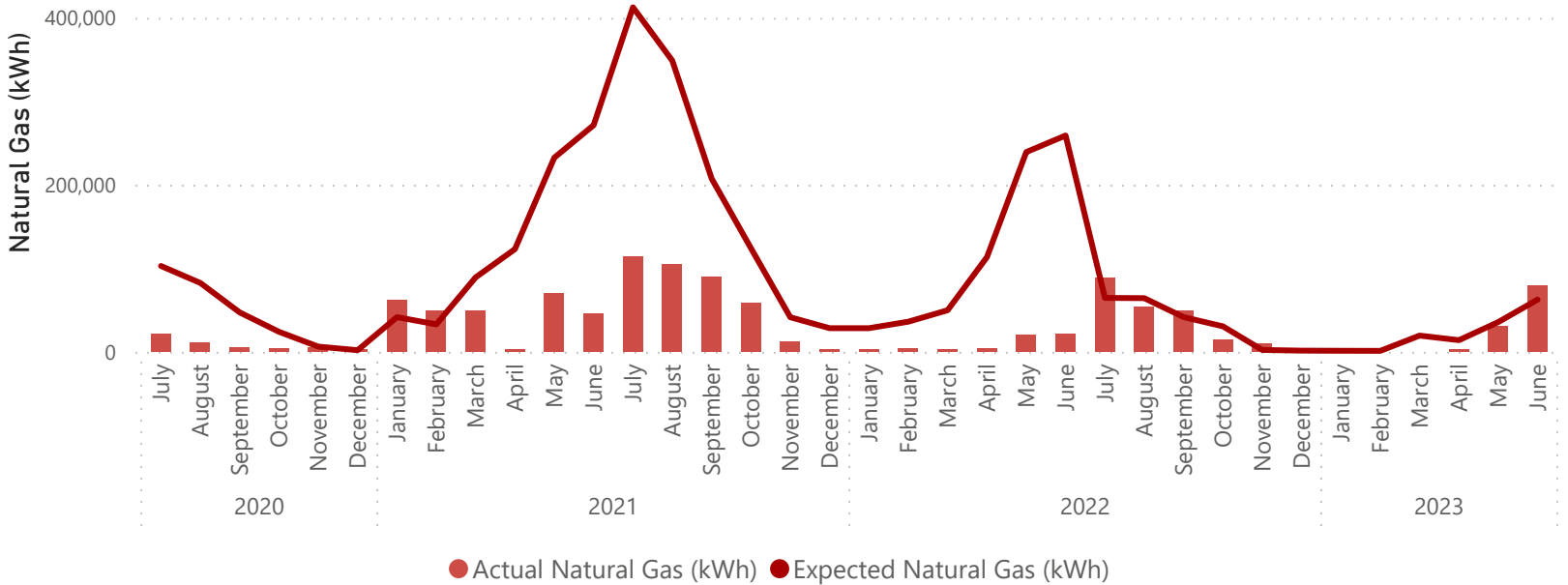


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

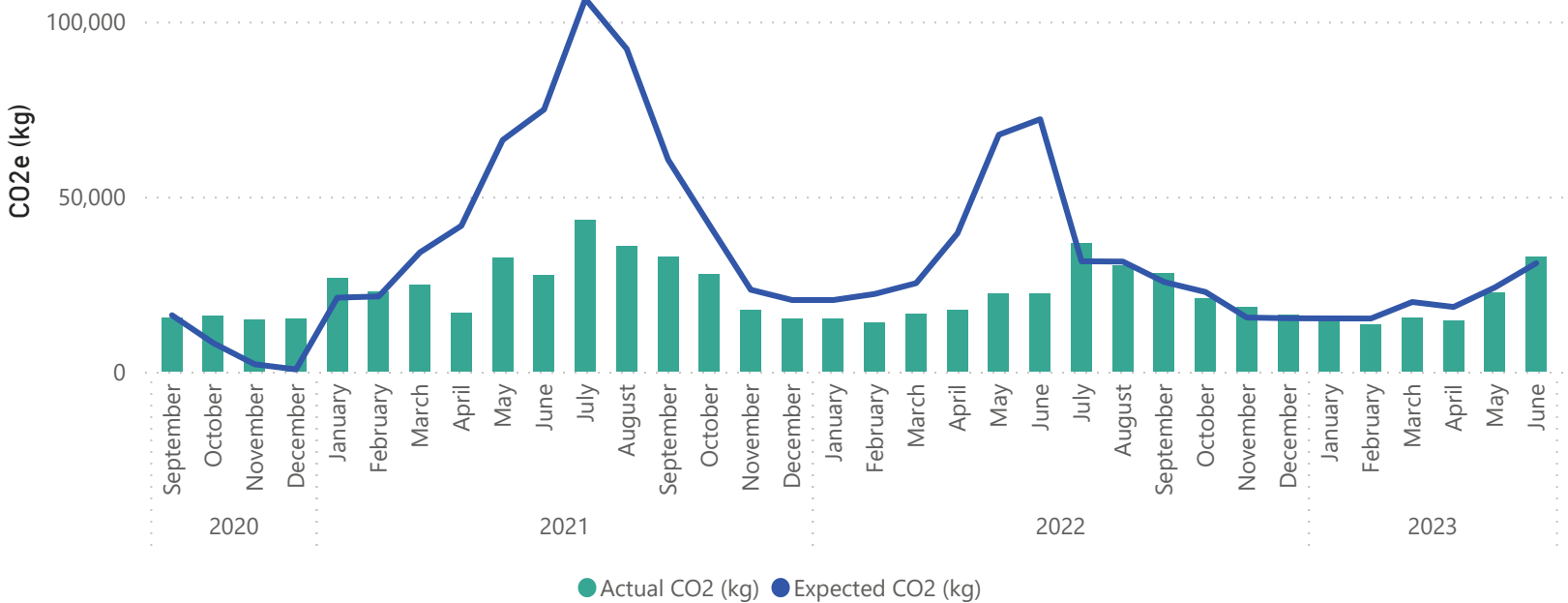
Whakatane District Council

Aquatic Centre

Aquatic Centre Natural Gas Compared to Baseline (kWh)



Aquatic Centre Carbon Emissions Compared to Baseline (kg CO2e)

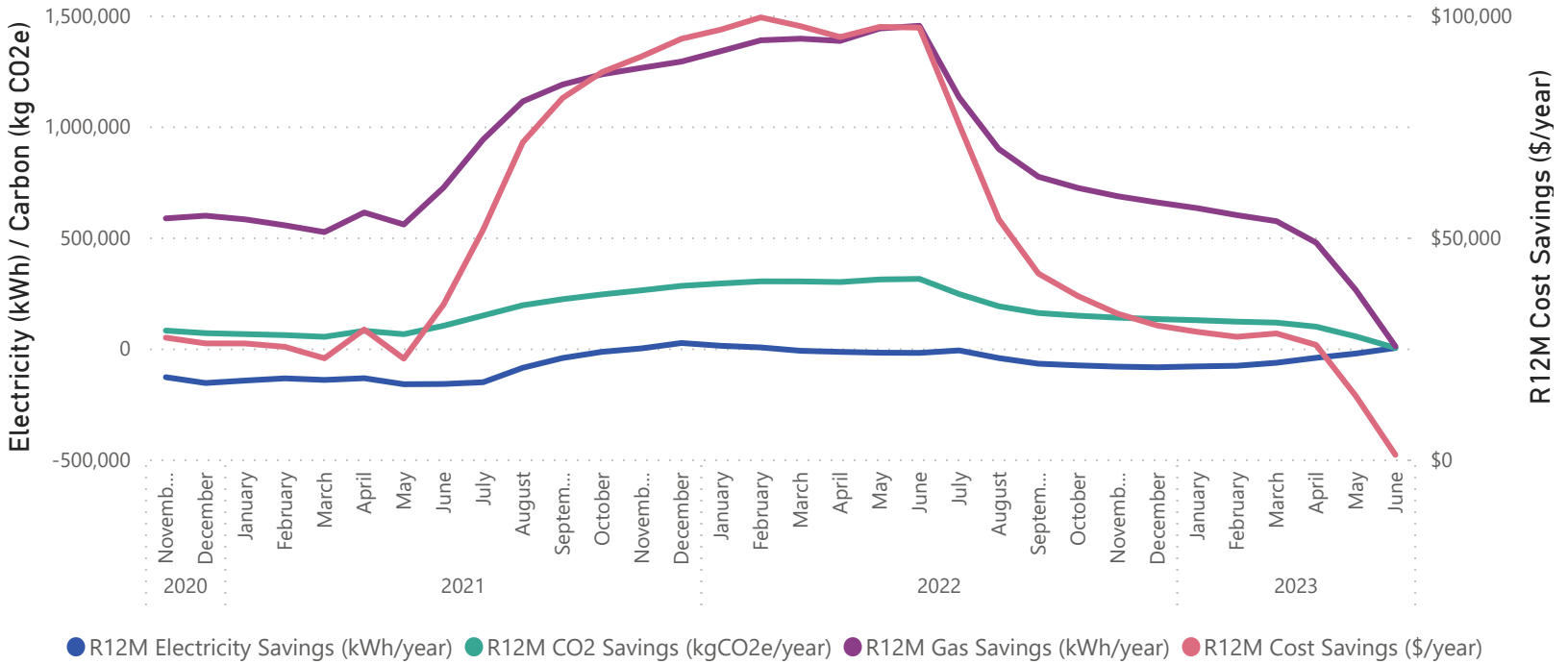


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

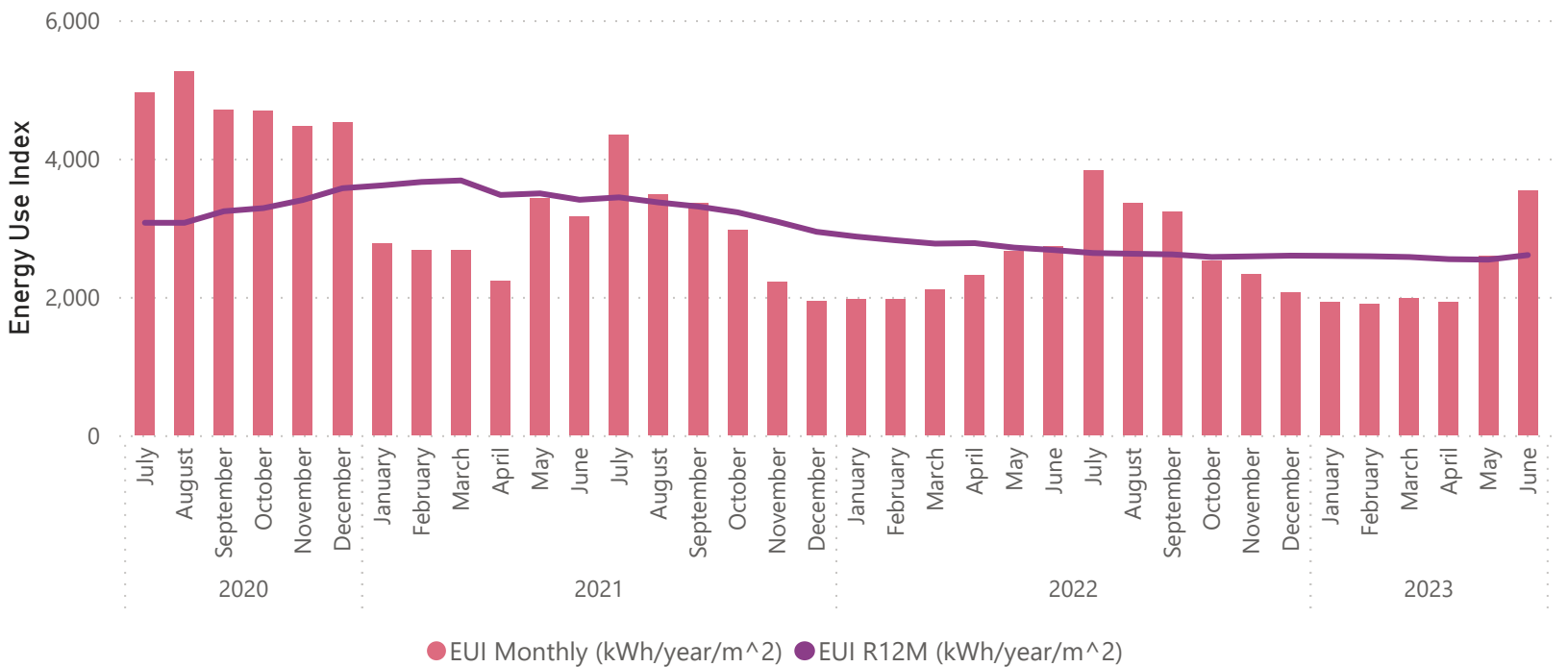
Whakatane District Council

Aquatic Centre

Aquatic Centre Rolling 12 Month Savings



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



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

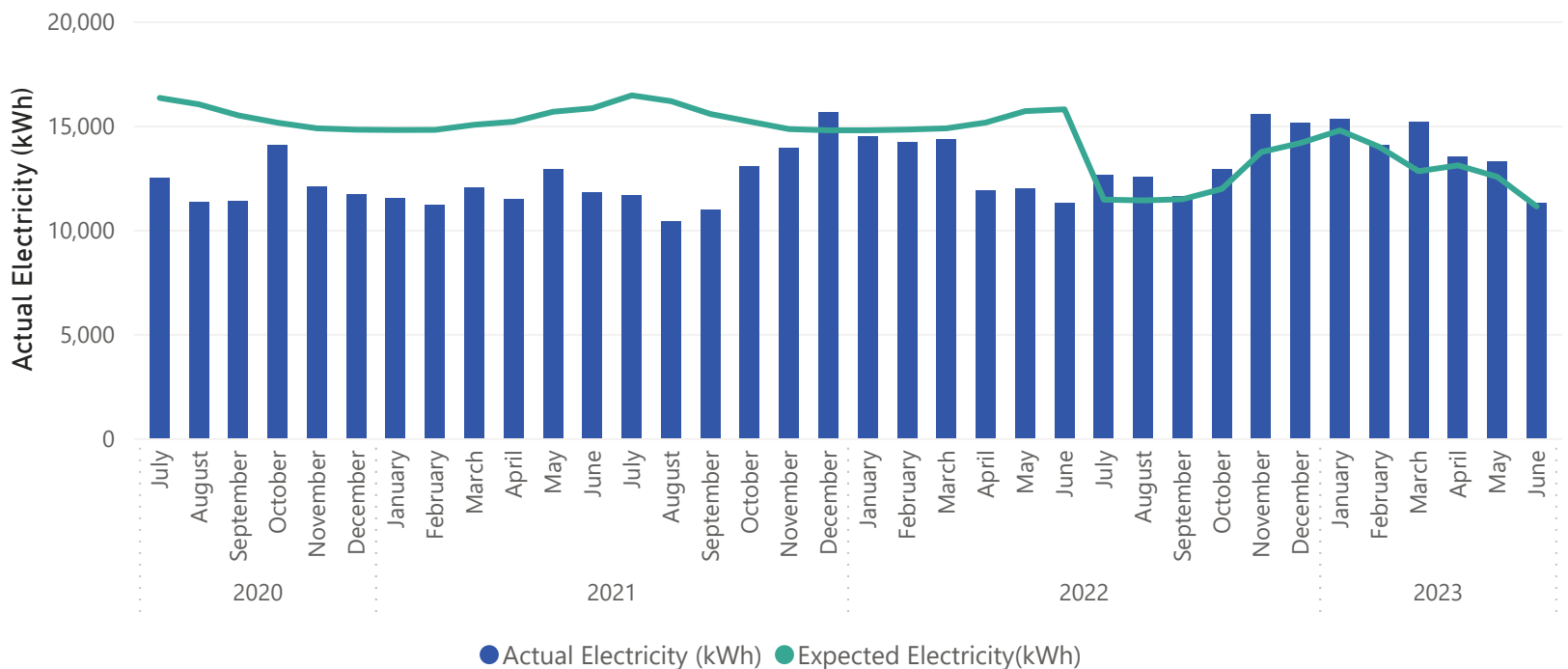
<p>-\$286 Monthly Energy Cost Savings</p>	<p>-181 Elec. Savings (kWh/mo) -2% Elec. Savings (%) -10,476 R12M Electricity Savings (kWh/yr)</p>			<p>-668 CO2e Savings (kg/mo)</p>
<p>-\$3,215 R12M Energy Cost Savings</p>	<p>-3,112 Gas. Savings (kWh/mo) -32% Gas. Savings (%) -15,955 R12M Gas Savings (kWh/yr)</p>			<p>-4,675 R12M CO2e Savings (kg/yr)</p>

Comments:

New baselines were established for electricity and natural gas at the Library, the baseline period is July 2021 to June 2022 and use cooling degree days as the independent variable.

Electricity use was slightly more than expected for the month, natural gas use was also more than expected. The average daily temperature in June 2023 was approximately one degree cooler than June 2022. June 2023 was also a month of above average rainfall and high humidity which would have increased dehumidification loads.

Te Koputu Library Electricity Use Compared to Baseline (kWh)

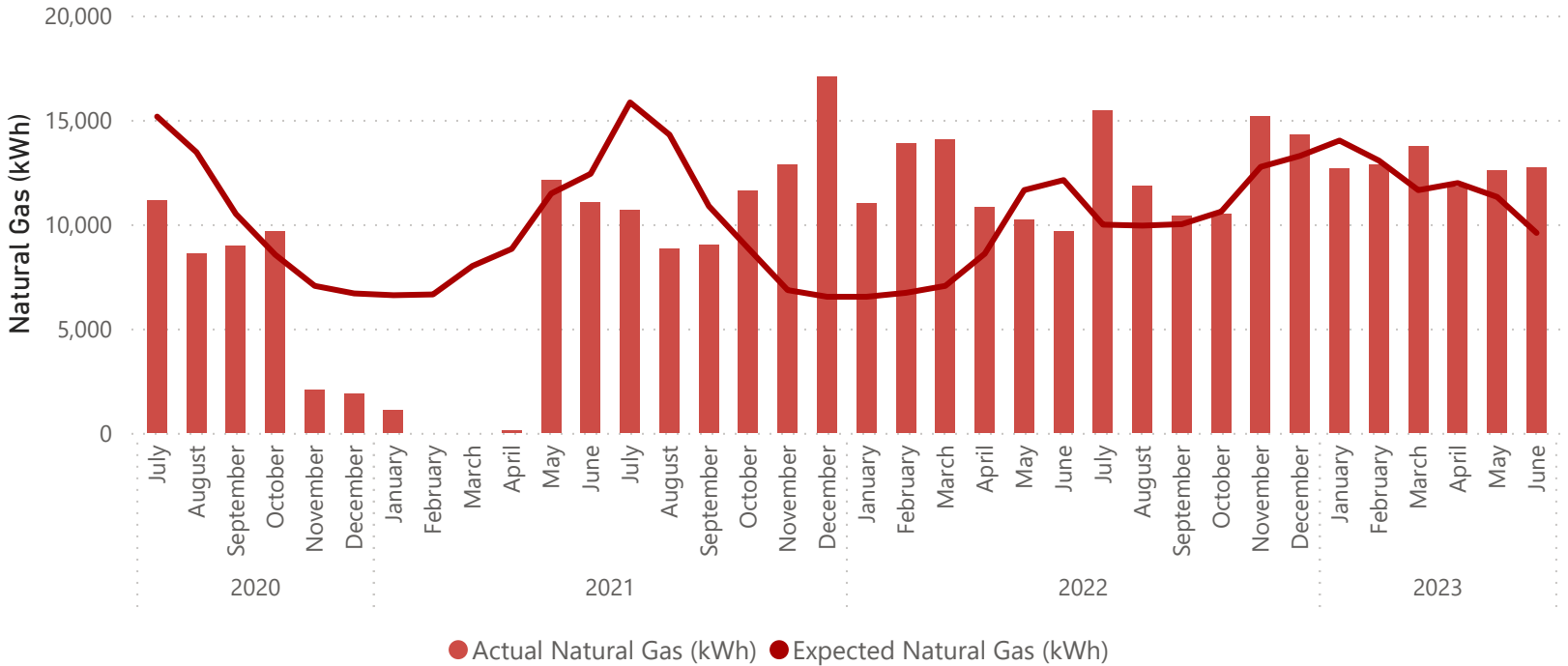


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

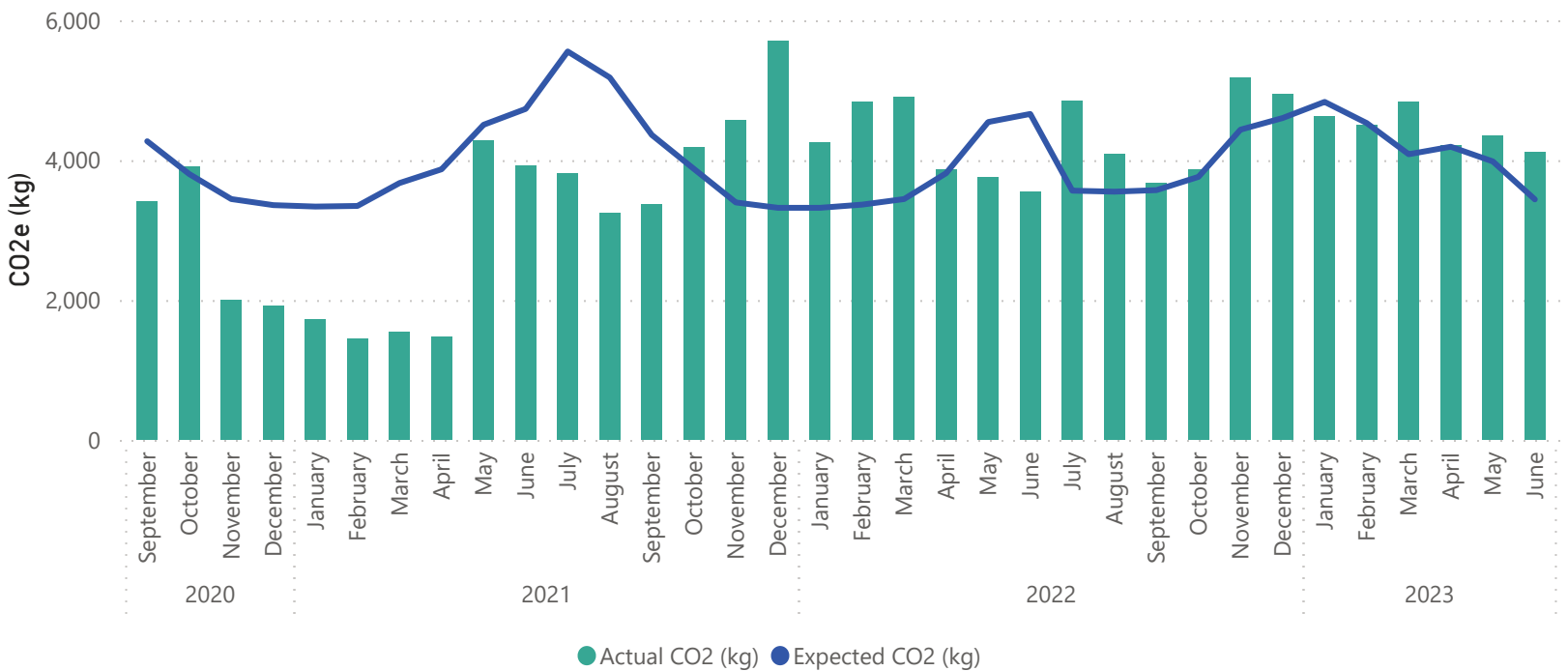
Whakatane District Council

Te Koputu Library

Te Koputu Library Natural Gas Compared to Baseline (kWh)



Te Koputu Library Carbon Emissions Compared to Baseline (kg CO2e)

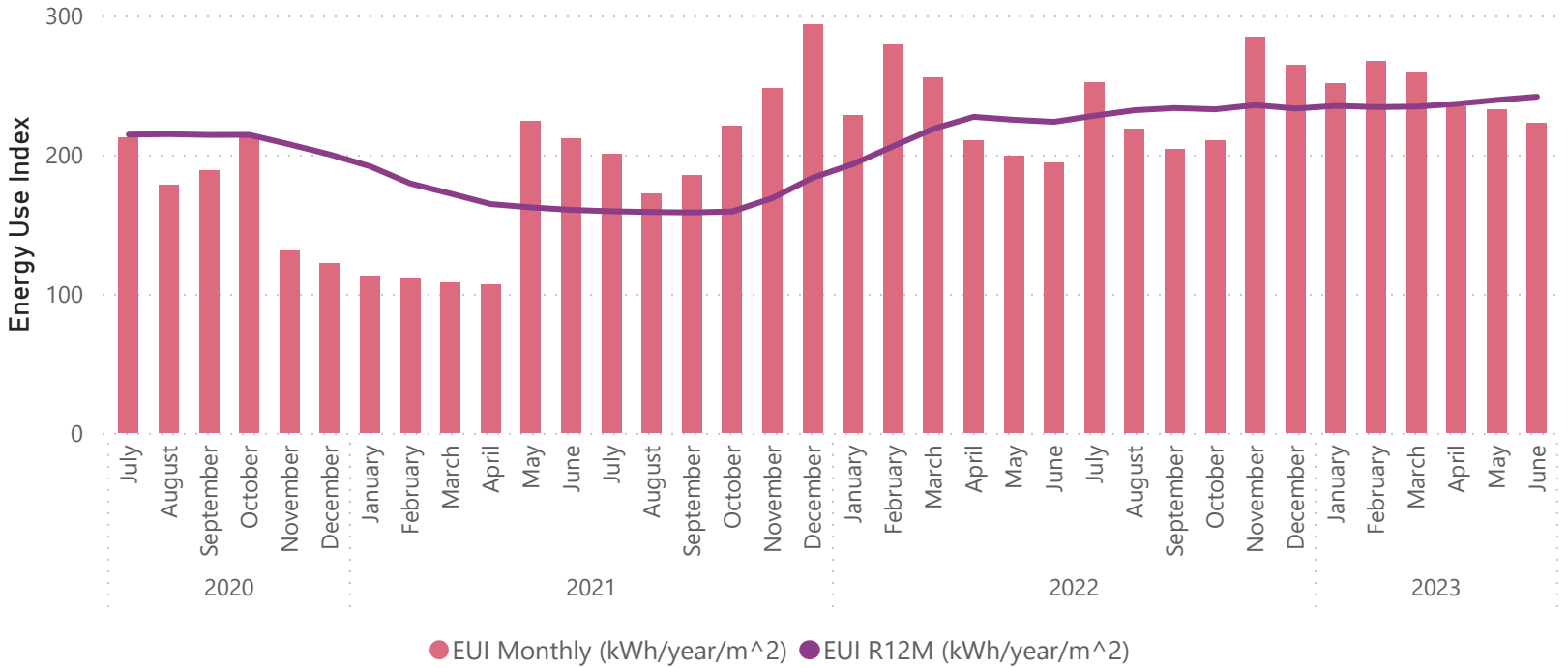


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

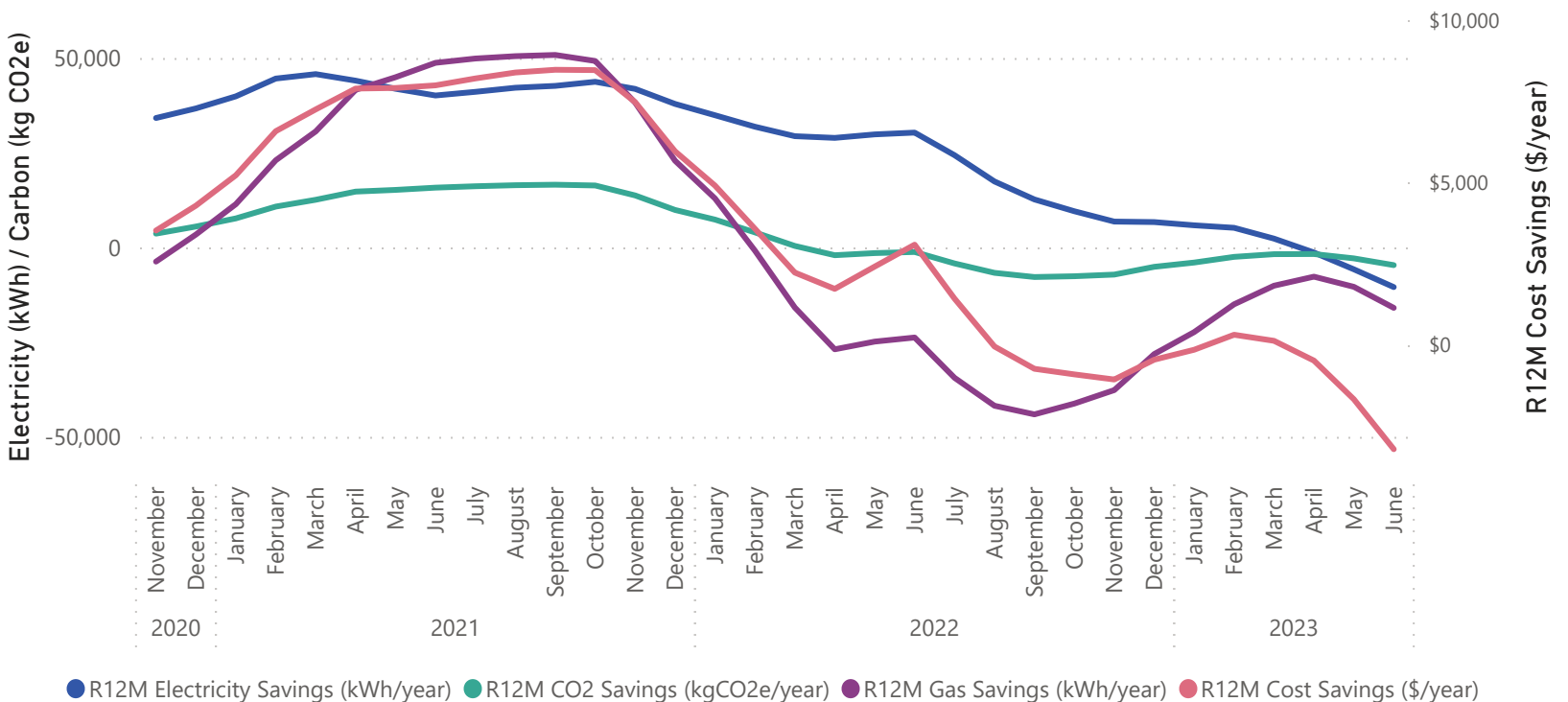
Whakatane District Council

Te Koputu Library

Te Koputu Library Energy Use Index by Month Compared to Rolling 12-Month Values



Te Koputu Library Rolling 12 Month Savings



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

Museum and Research Centre

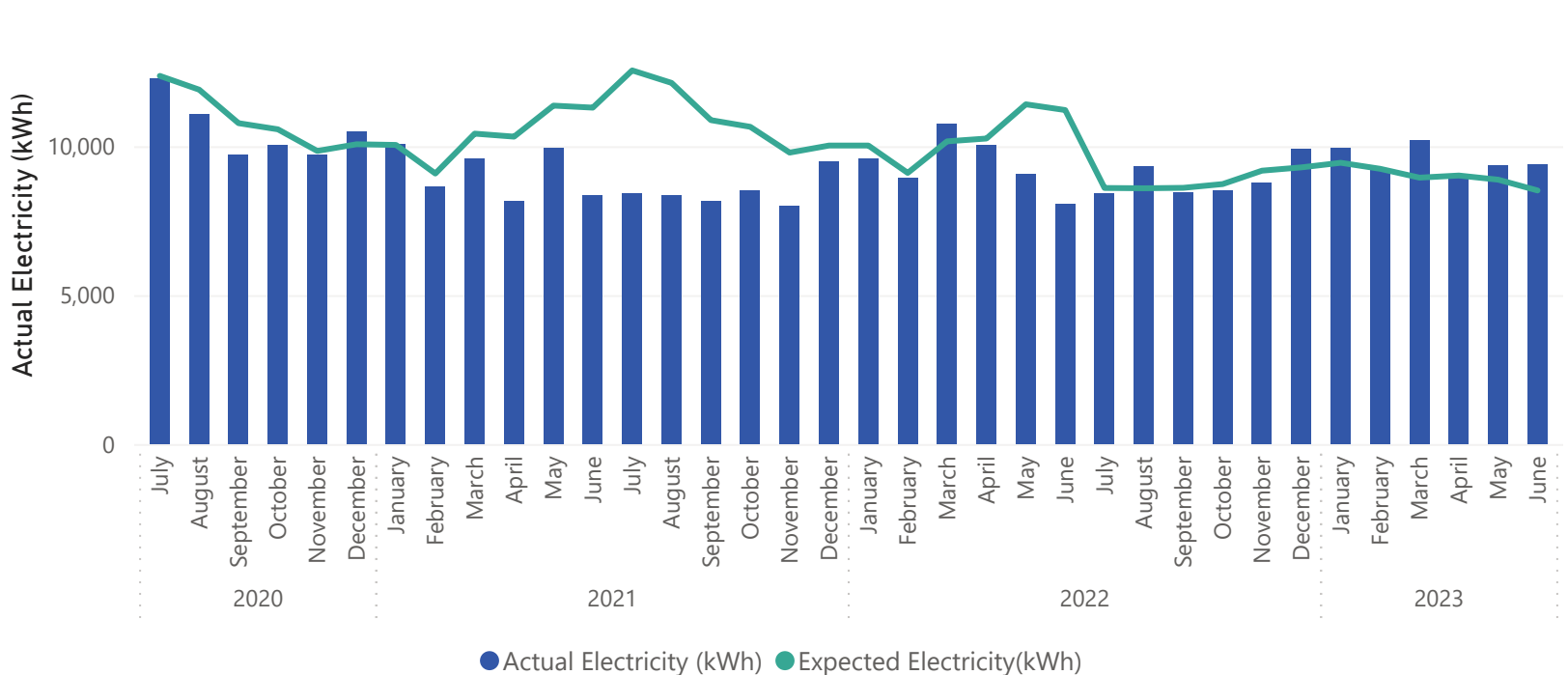
<p>-\$240</p> <p>Monthly Energy Cost Savings</p>	<p>-876</p> <p>Elec. Savings (kWh/mo)</p>	<p>-10%</p> <p>Elec. Savings (%)</p>	<p>-3,387</p> <p>R12M Electricity Savings (kWh/yr)</p>	<p>-268</p> <p>CO2e Savings (kg/mo)</p>
<p>-\$862</p> <p>R12M Energy Cost Savings</p>	<p>-740</p> <p>Gas. Savings (kWh/mo)</p>	<p>-24%</p> <p>Gas. Savings (%)</p>	<p>-2,630</p> <p>R12M Gas Savings (kWh/yr)</p>	<p>-988</p> <p>R12M CO2e Savings (kg/yr)</p>

Comments:

New baselines were established for electricity and natural gas at the Museum and Research Centre, the baseline period is July 2021 to June 2022. The electricity baseline uses cooling degree days as the independent variable and the natural gas baseline uses heating degree days as the independent variable.

Natural gas use was 24% higher than expected and electricity use was 10% higher than expected which may be due to dehumidification requirements and lower temperatures. 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.

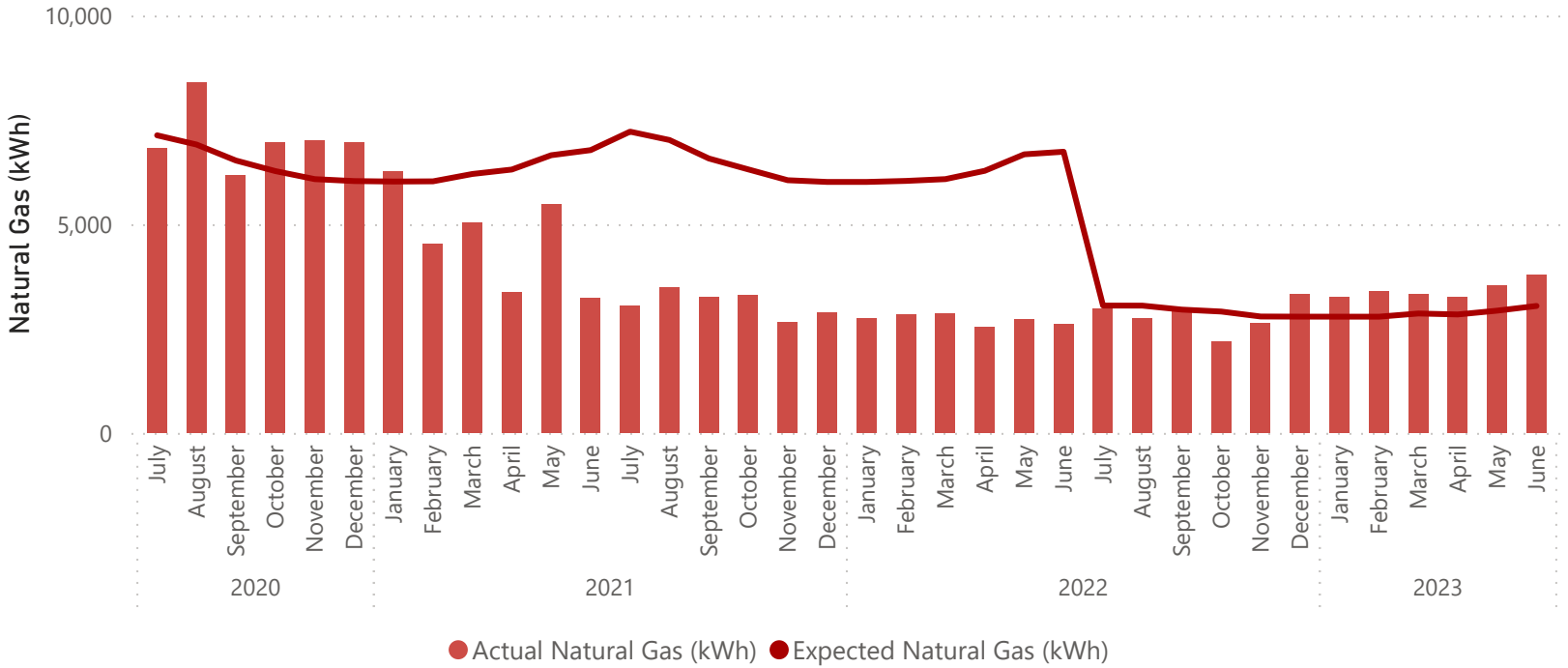
Museum Research Centre Electricity Use Compared to Baseline (kWh)



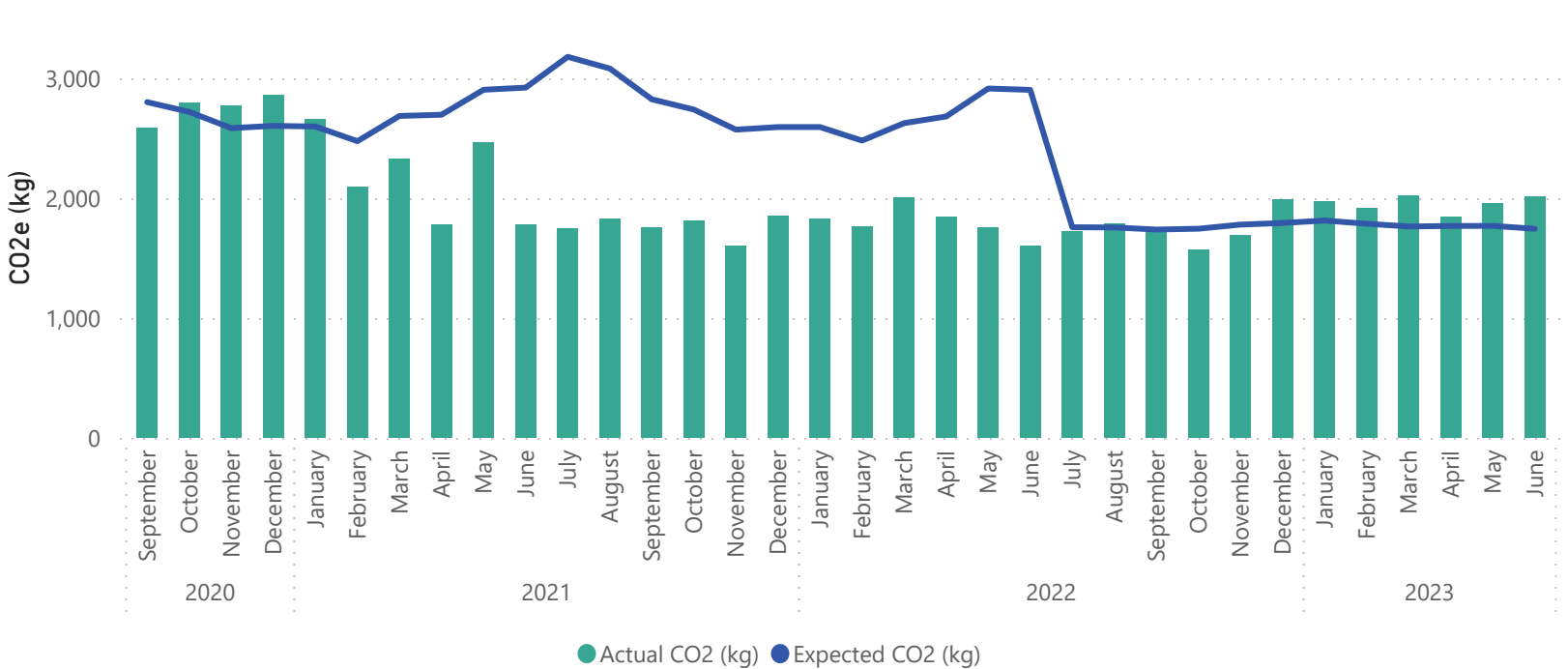
Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

Whakatane District Council Museum and Research Centre

Museum Research Centre Natural Gas Compared to Baseline (kWh)



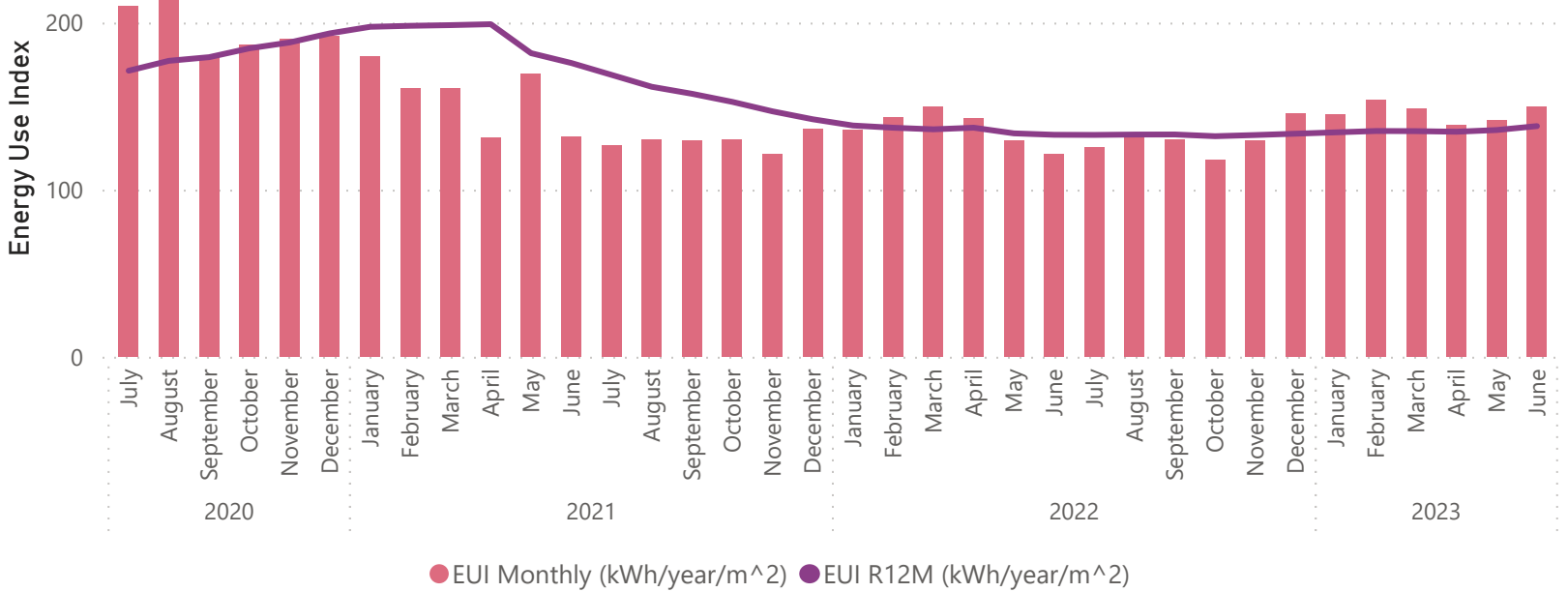
Museum Research Centre Carbon Emissions Compared to Baseline (kg CO2e)



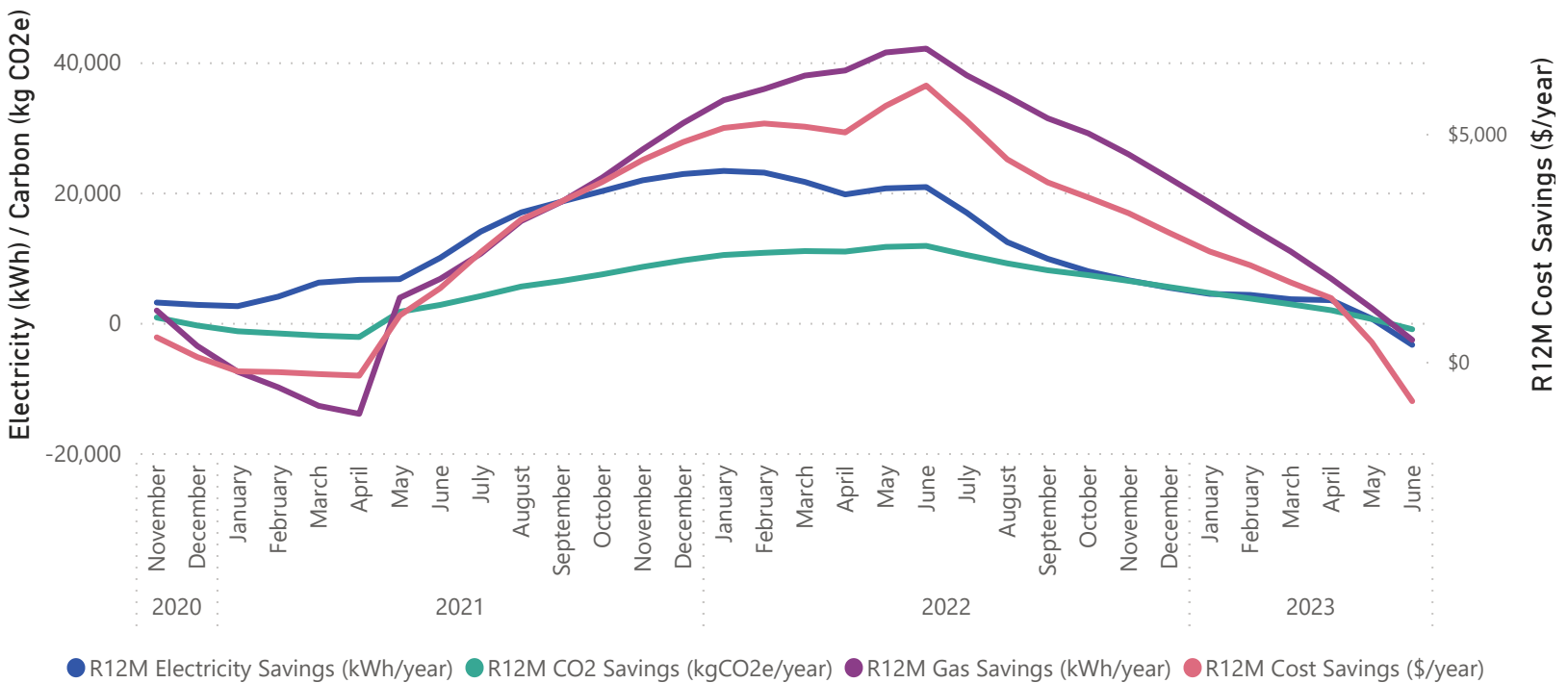
Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

Whakatane District Council 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



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

War Memorial Hall

<p>-\$24</p> <p>Monthly Energy Cost Savings</p>	<p>-126 -2% -5,567</p> <p>Elec. Savings (kWh/mo) Elec. Savings (%) R12M Electricity Savings (kWh/yr)</p>			<p>-10</p> <p>CO2e Savings (kg/mo)</p>
<p>-\$995</p> <p>R12M Energy Cost Savings</p>	<p>31 1% -2,384</p> <p>Gas. Savings (kWh/mo) Gas. Savings (%) R12M Gas Savings (kWh/yr)</p>			<p>-1,223</p> <p>R12M CO2e Savings (kg/yr)</p>

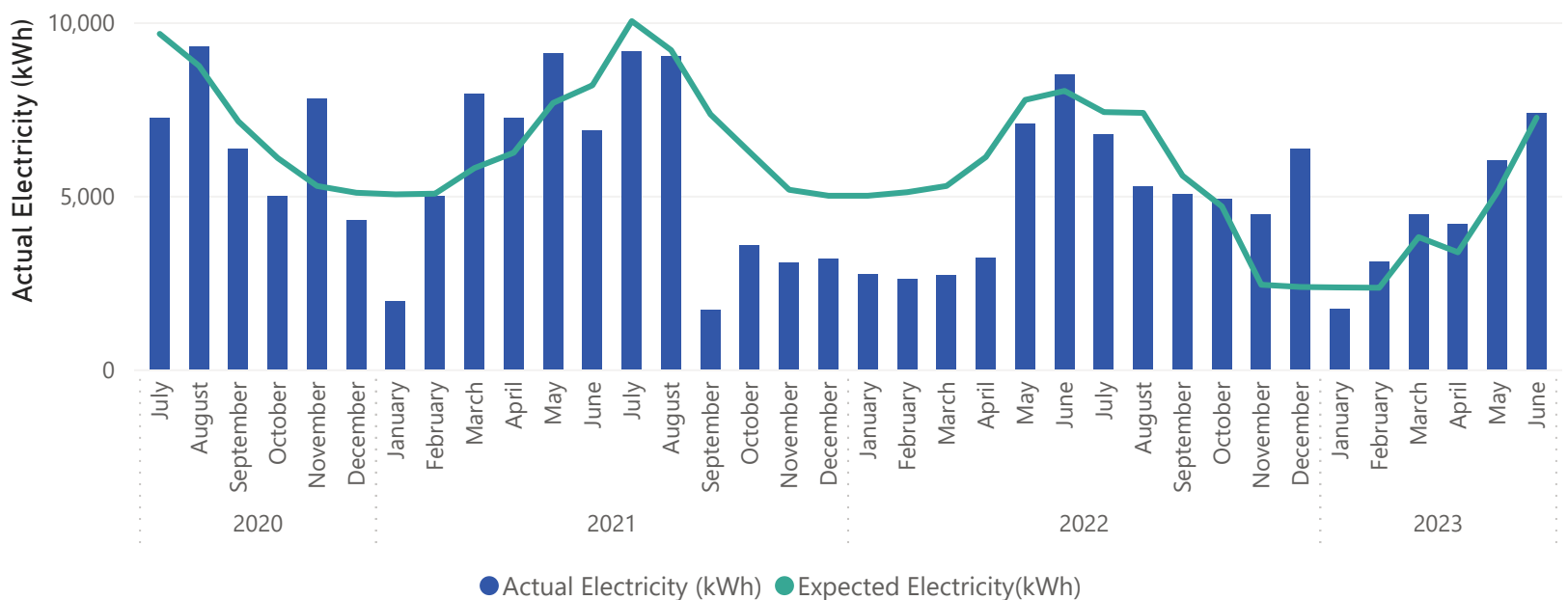
Comments:

The baseline was updated for War Memorial Hall, the baseline adjusts for ambient temperature. The baseline period is July 2021 to June 2022. The War Memorial Hall uses more electricity and gas in winter months, the change in baseline can be observed in monitoring starting July 2022.

The War Memorial Hall's energy use was close to expected for the month of June 2023. Previously the building had used about 20% more electricity than expected in the past four months.

The hall has used less natural gas than expected since October 2022, which is excellent. However, natural gas has increased steadily in the previous four months.

War Memorial Hall Electricity Use Compared to Baseline (kWh)

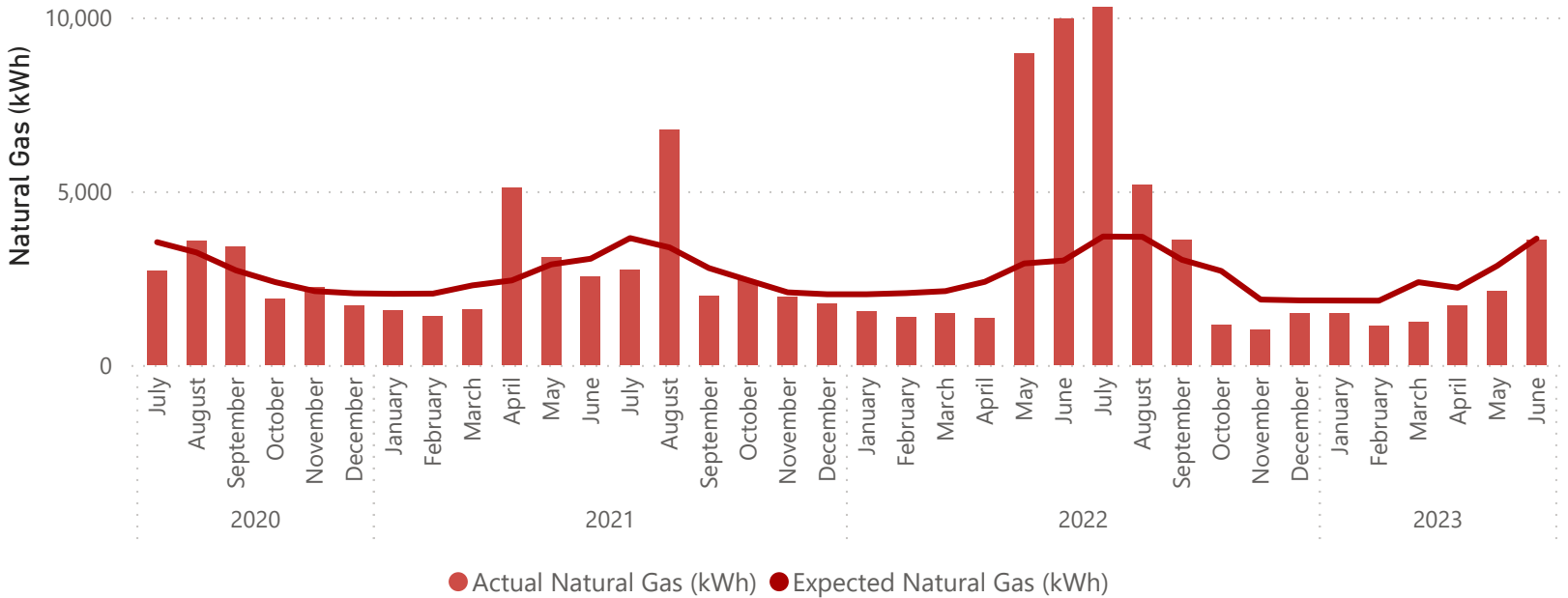


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

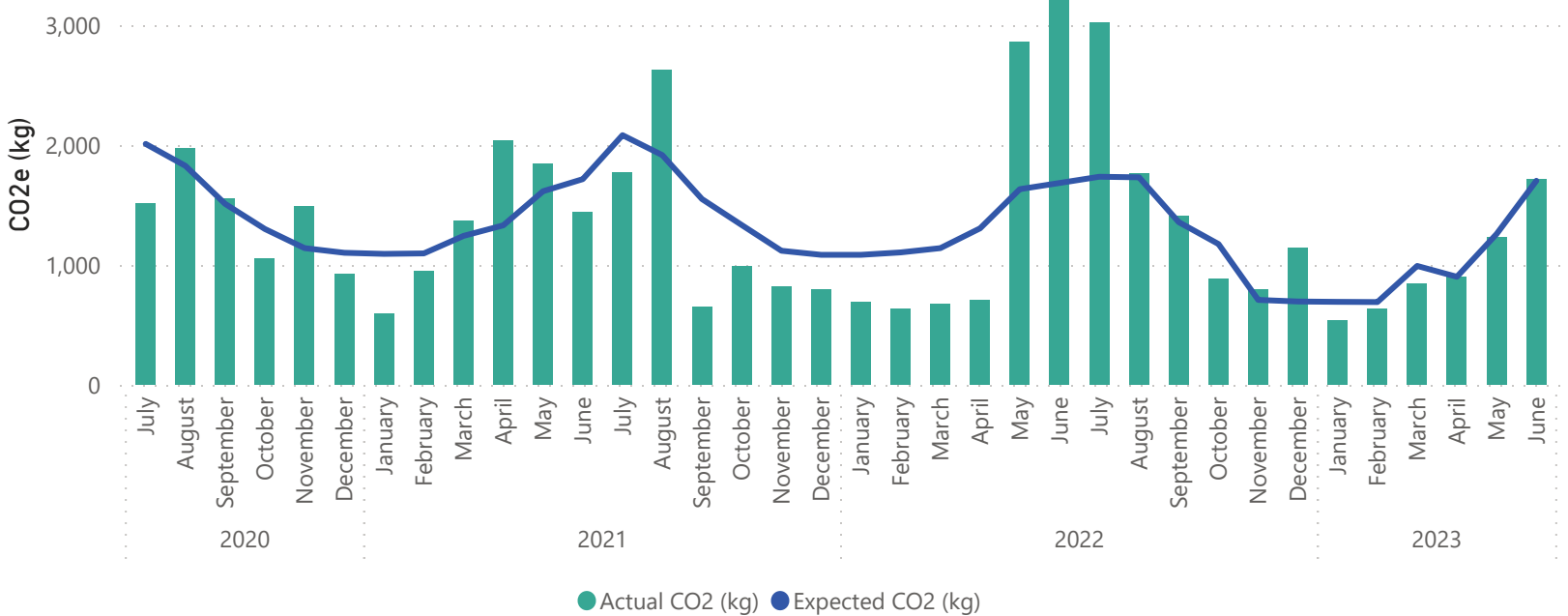
Whakatane District Council

War Memorial Hall

War Memorial Hall Natural Gas Compared to Baseline (kWh)



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

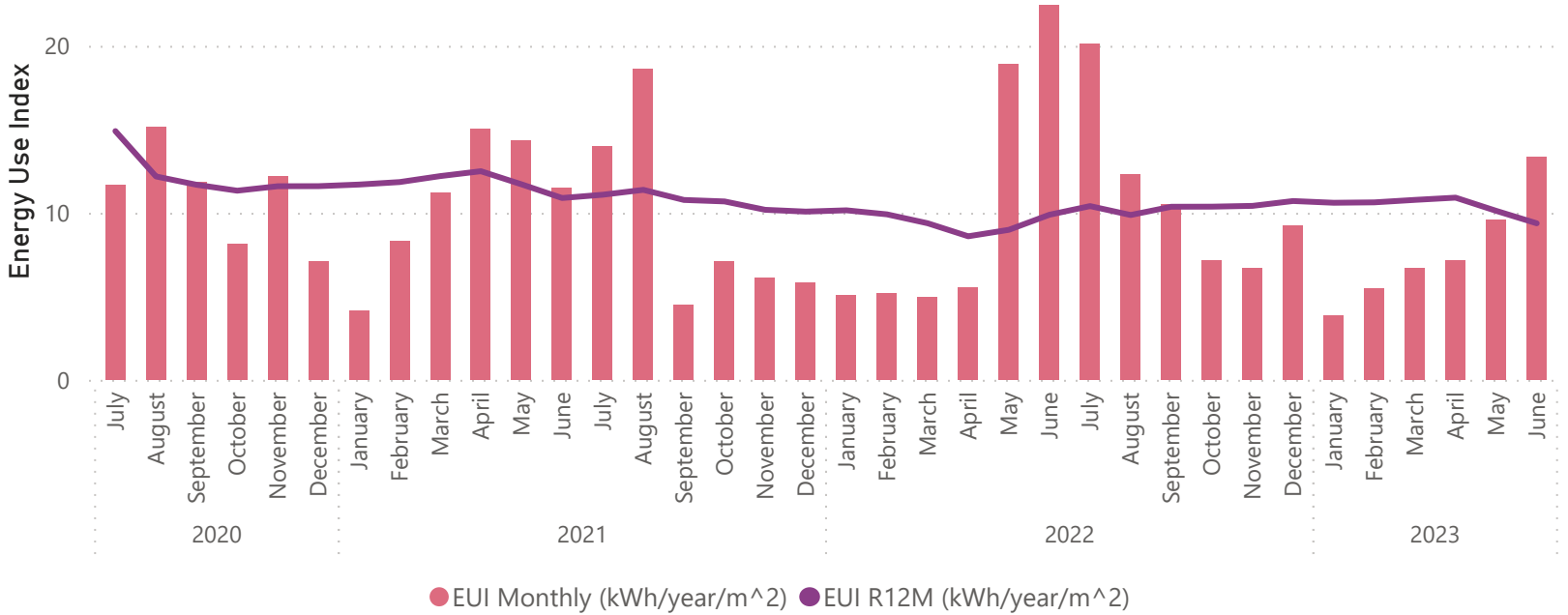


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

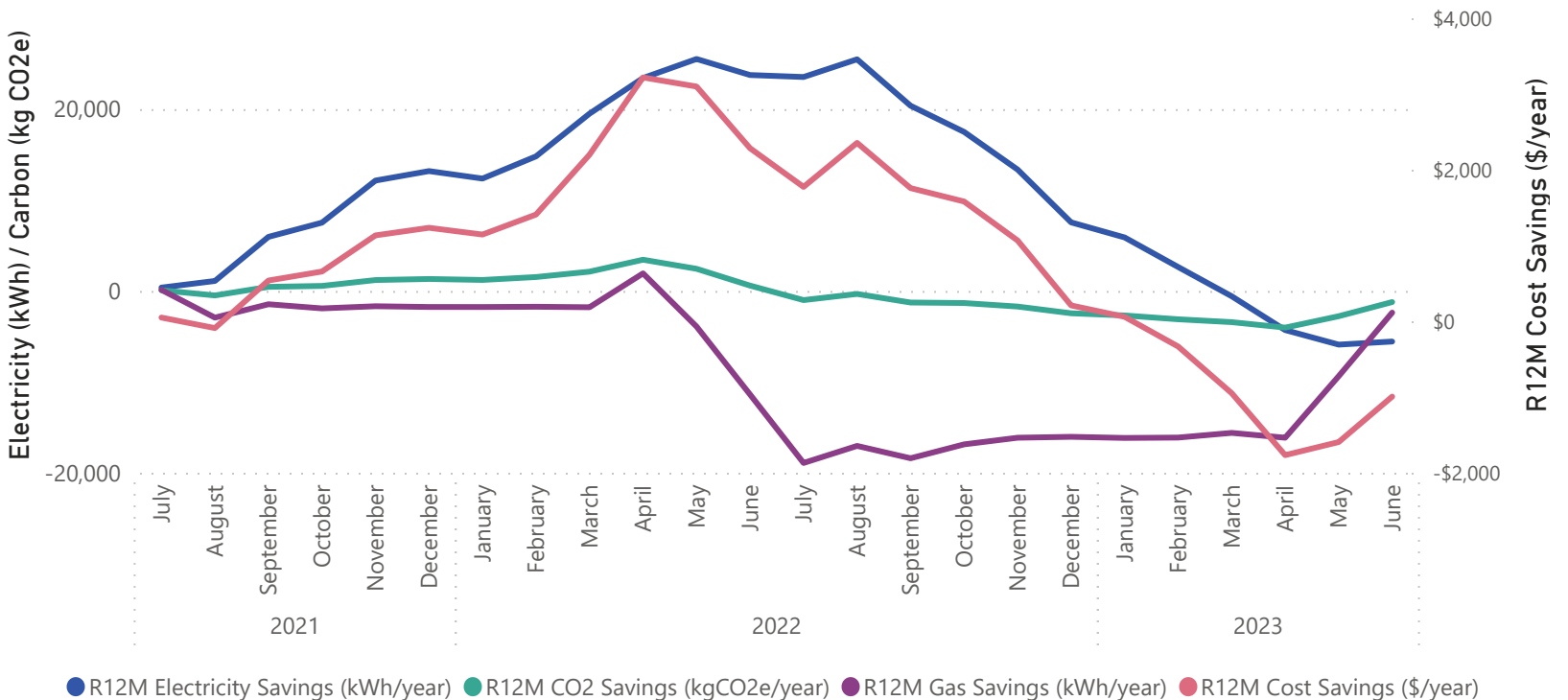
Whakatane District Council

War Memorial Hall

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



War Memorial Hall Rolling 12 Month Savings



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

Water Treatment Plant

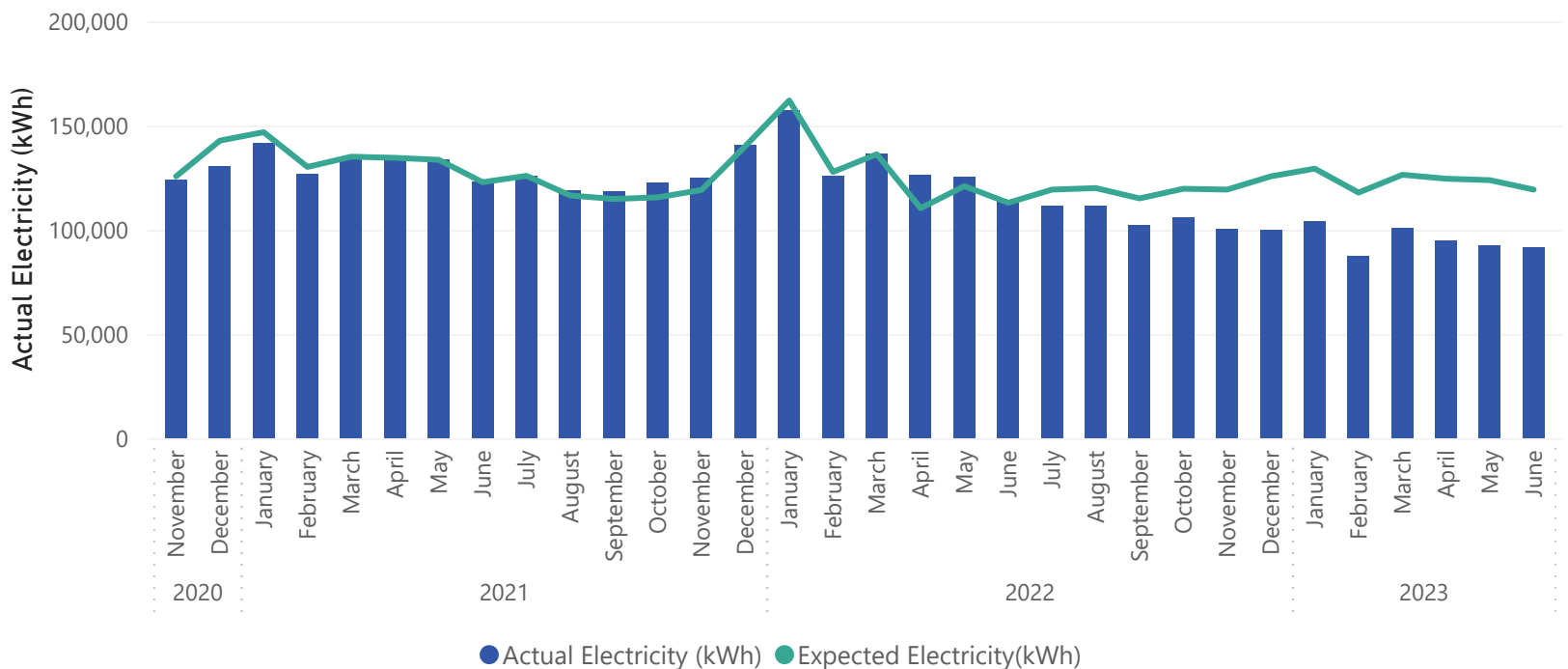
<p>\$5,560 Monthly Energy Cost Savings</p>	<p>27,931 Elec. Savings (kWh/mo)</p>	<p>23% Elec. Savings (%)</p>	<p>258,696 R12M Electricity Savings (kWh/yr)</p>	<p>3,659 CO2e Savings (kg/mo)</p>
<p>\$46,269 R12M Energy Cost Savings</p>				<p>33,889 R12M CO2e Savings (kg/yr)</p>

Comments:

The electricity use baseline was updated for the Water Treatment Plant, the baseline period is July 2021 to June 2022. The electricity baseline uses the amount of water pumped (m³) as the independent variable.

Another month of savings has been achieved at the WTP in May 2023. Consistent savings between 15-25% have been observed since November 2022. Rolling 12 month savings have been increasing, with \$46,000 saved in the past 12 months.

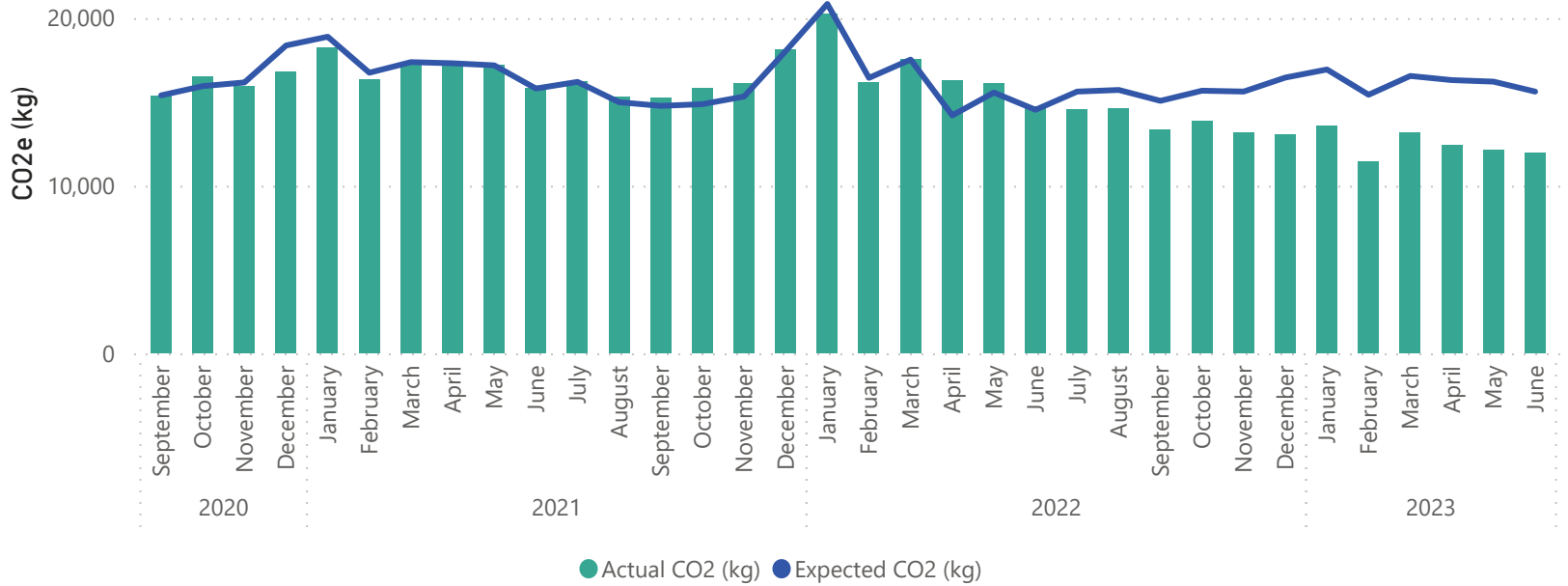
Water Treatment Plant Electricity Use Compared to Baseline (kWh)



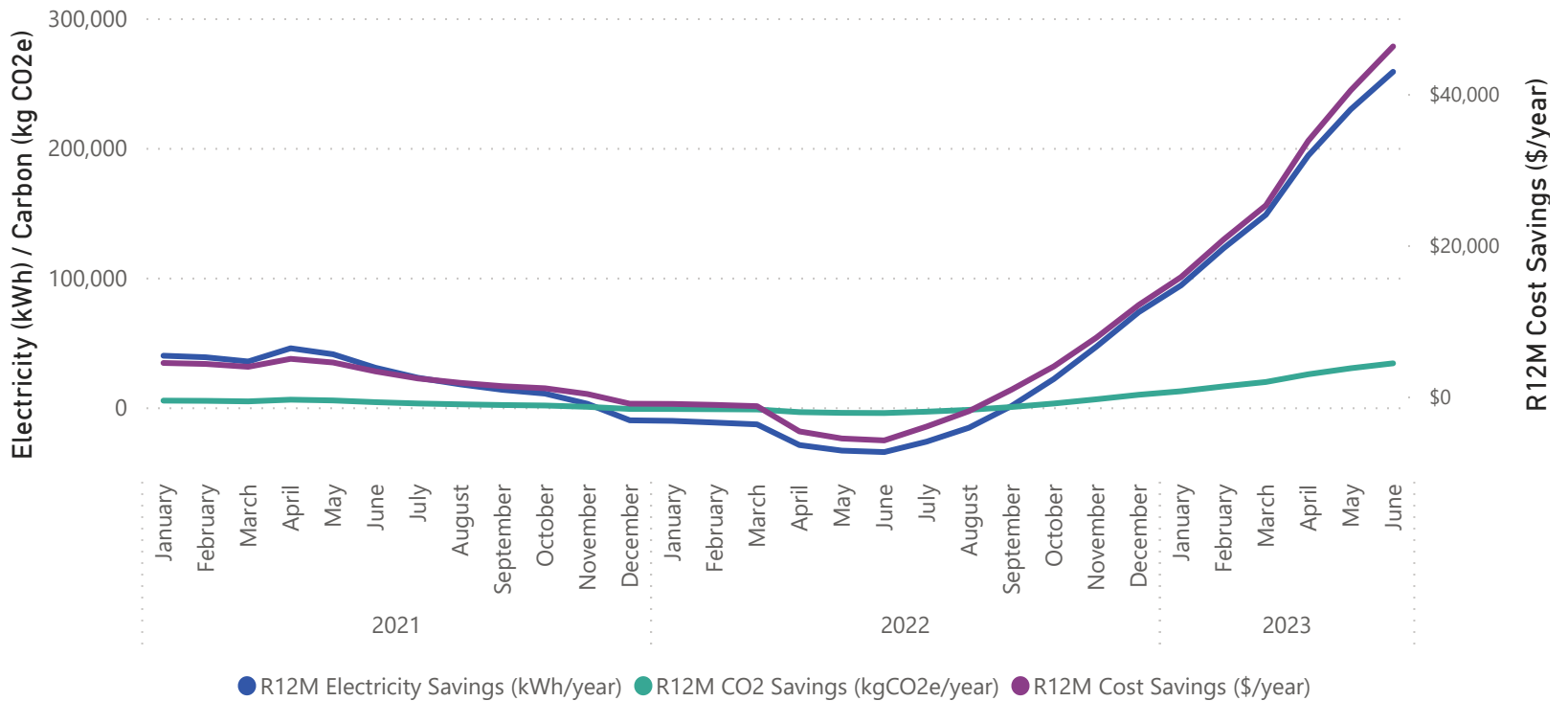
Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

Whakatane District Council Water Treatment Plant

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



Water Treatment Plant Rolling 12 Month Savings

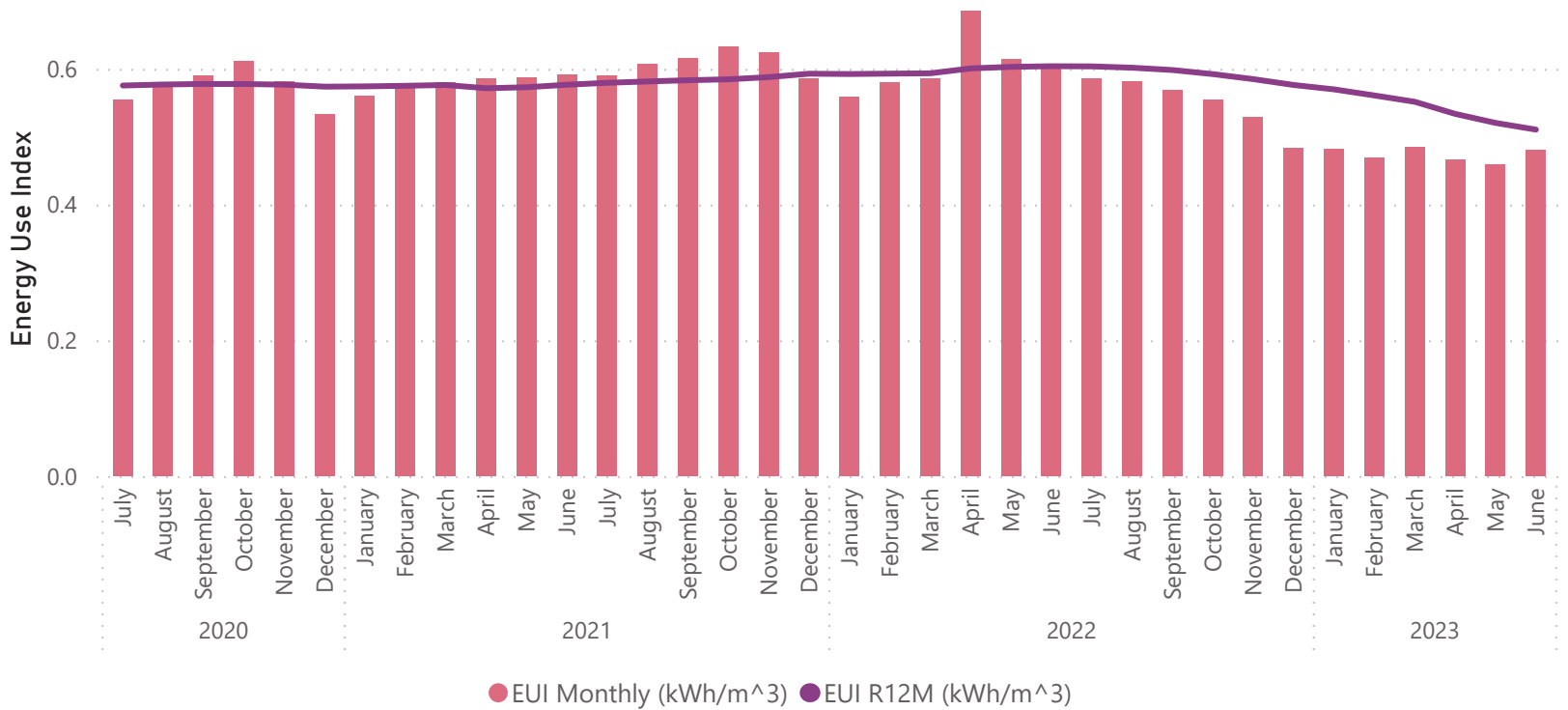


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

Whakatane District Council

Water Treatment Plant

Water Treatment Plant Energy Use Index by Month Compared to Rolling 12-Month Values



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

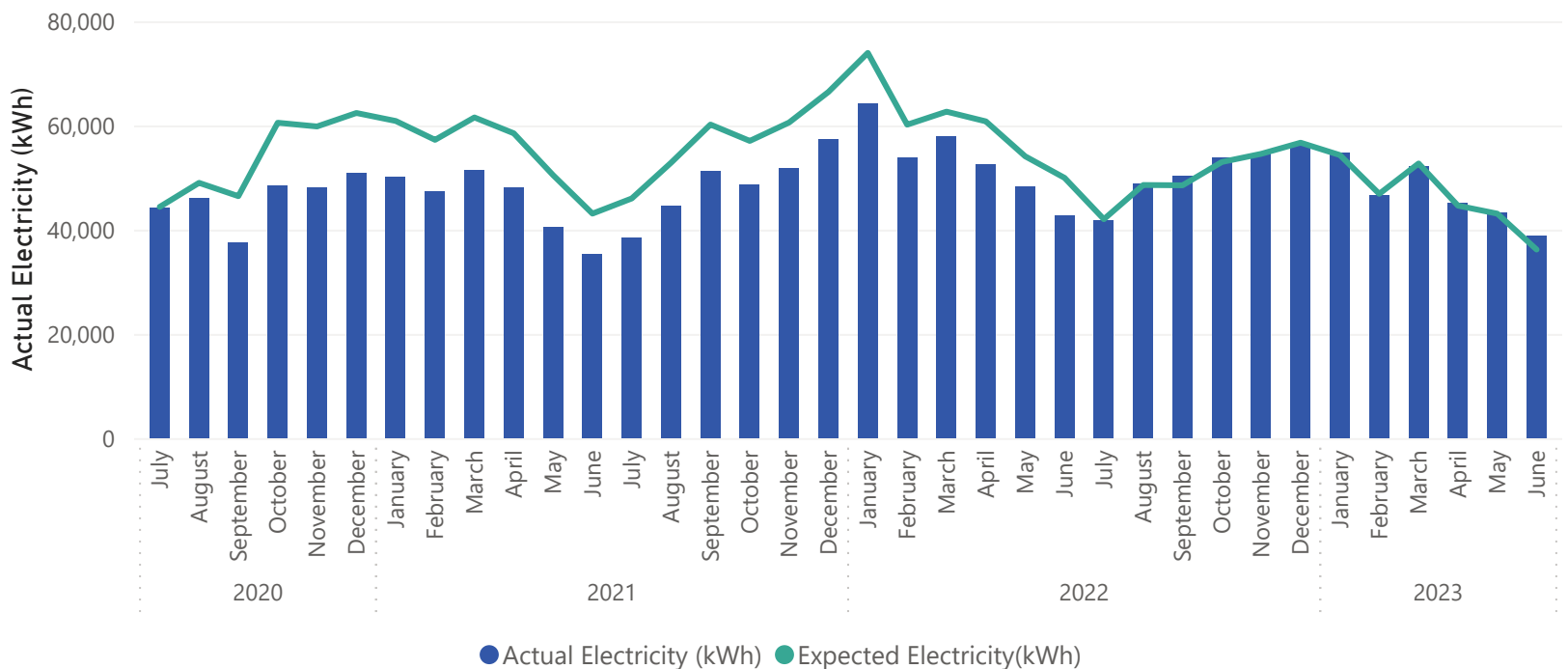
<p>-\$510 Monthly Energy Cost Savings</p>	<p>-2,541 Elec. Savings (kWh/mo)</p>	<p>-7% Elec. Savings (%)</p>	<p>-5,382 R12M Electricity Savings (kWh/yr)</p>	<p>-333 CO2e Savings (kg/mo)</p>
<p>-\$1,038 R12M Energy Cost Savings</p>				<p>-705 R12M CO2e Savings (kg/yr)</p>

Comments:

The electricity use baseline was updated for the Braemar Road Pump Station, the baseline period is July 2021 to June 2022. The electricity baseline uses the amount of water pumped (m³) as the independent variable.

Electricity use in June 2023 has increased compared to baseline. The pump was offline for approximately 12 hours on 29 June. On 28 June the pump cycled more times each day, switching off and on more frequently. It is likely that the departure from the usual mode of operation contributed to electricity use which was more than expected.

Braemar Rd Pumps Electricity Use Compared to Baseline (kWh)

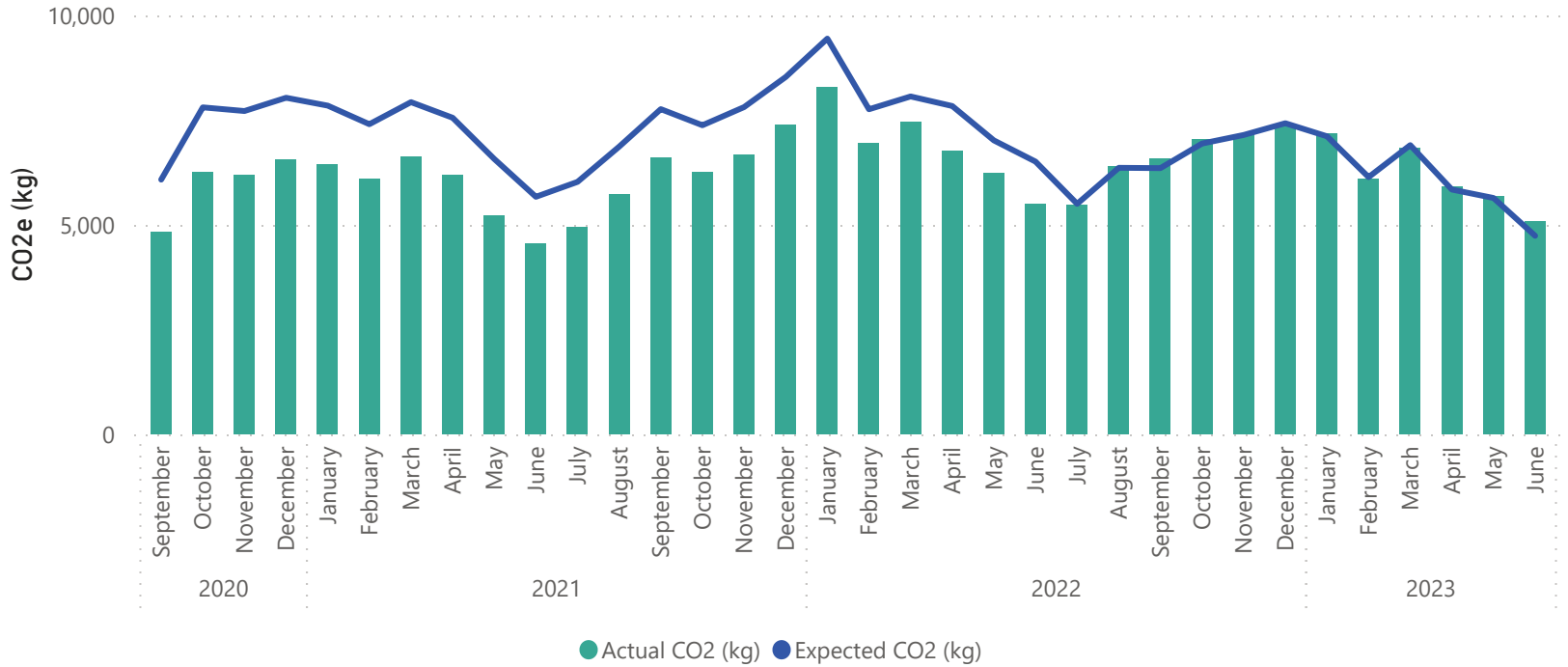


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

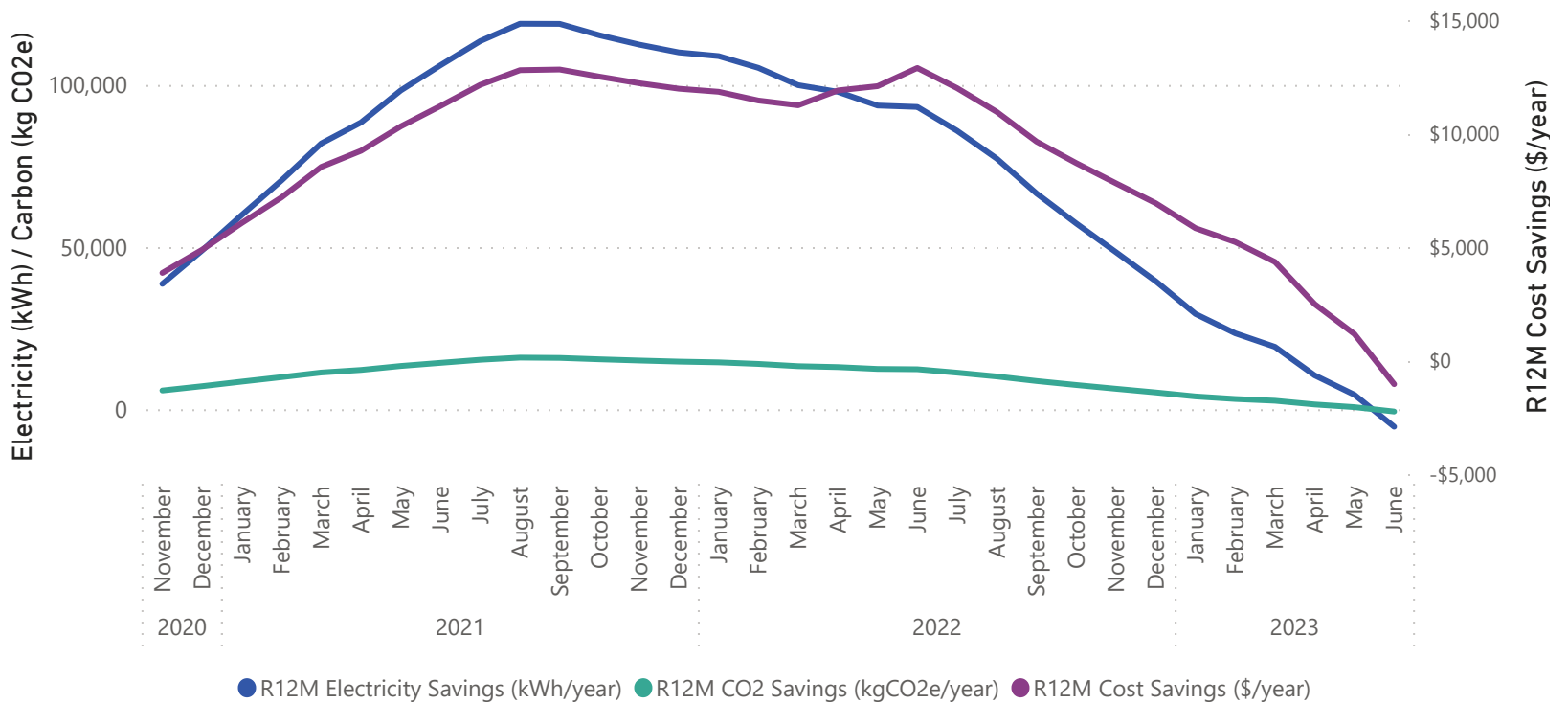
Whakatane District Council

Braemar Road Pump Station

Braemar Rd Pumps Carbon Emissions Compared to Baseline (kg CO2e)



Braemar Rd Pumps Rolling 12 Month Savings



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

Braemar Rd Pumps Energy Use Index by Month Compared to Rolling 12-Month Values



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

Paul Road Pump Station

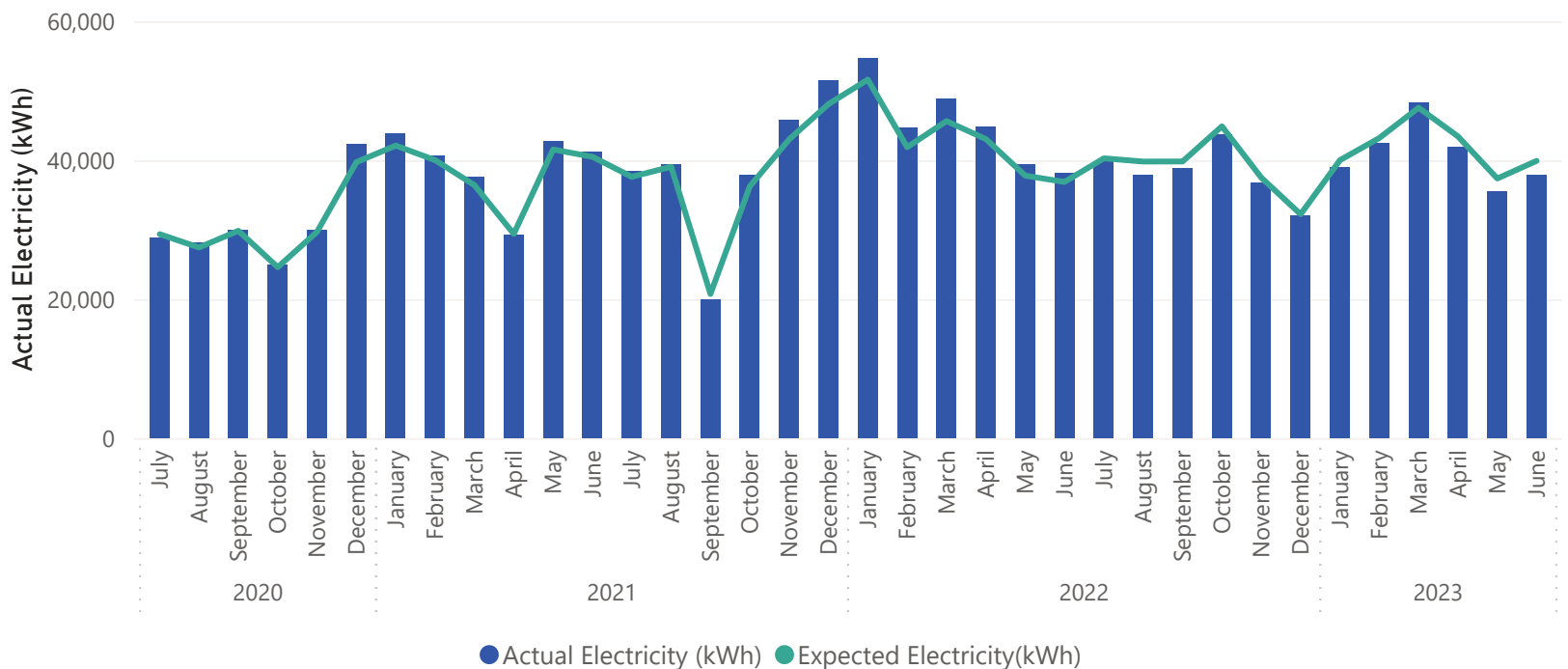
<p>\$419 Monthly Energy Cost Savings</p>	<p>2,082 Elec. Savings (kWh/mo)</p>	<p>5% Elec. Savings (%)</p>	<p>11,985 R12M Electricity Savings (kWh/yr)</p>	<p>273 CO2e Savings (kg/mo)</p>
<p>\$2,311 R12M Energy Cost Savings</p>				<p>1,570 R12M CO2e Savings (kg/yr)</p>

Comments:

The electricity use baseline was updated for the Paul Road Pump Station, the baseline period is July 2021 to June 2022. The electricity baseline uses the amount of water pumped (m³) as the independent variable. The updated baseline has a smaller baseload factor and a larger variable component.

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 12,000 kWh and \$2,300, and 1,570 kgCO₂e were saved.

Paul Rd Pumps Electricity Use Compared to Baseline (kWh)

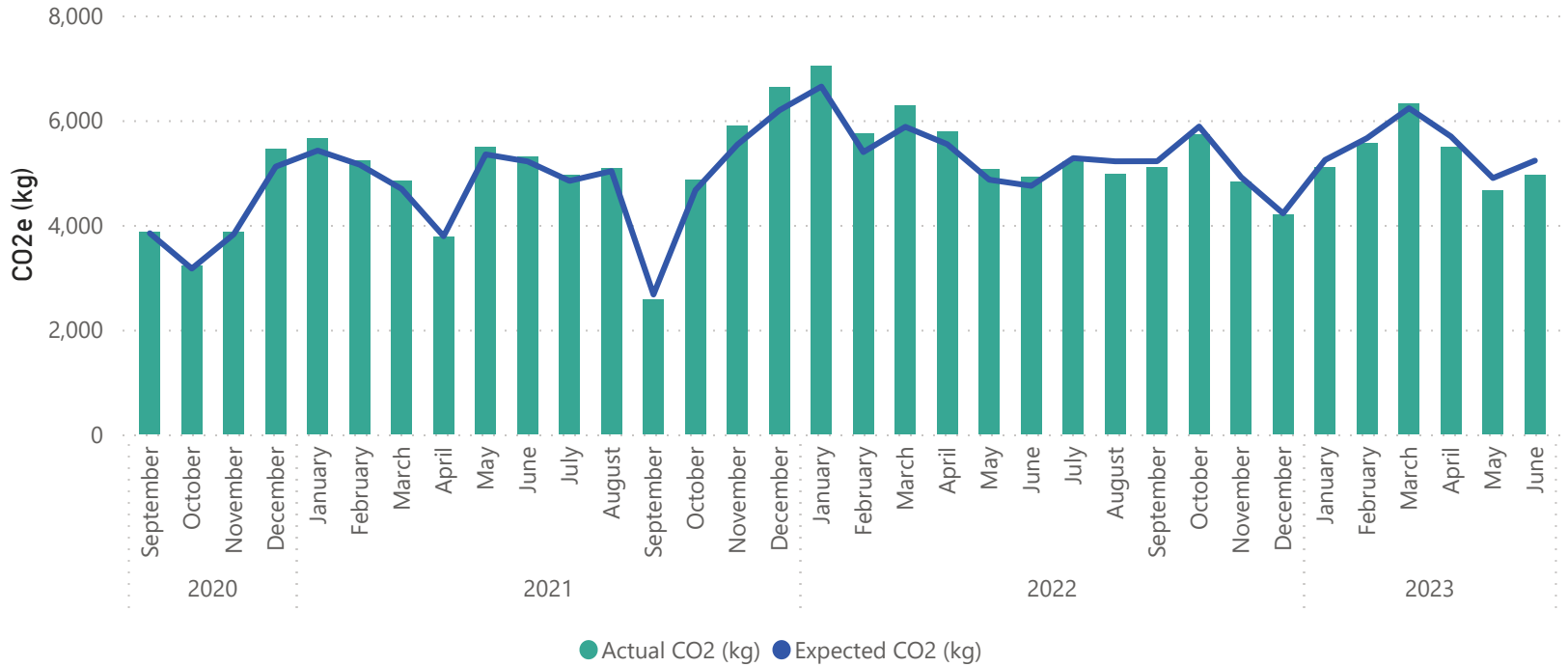


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time
Baselines were updated for all sites from July 2022.

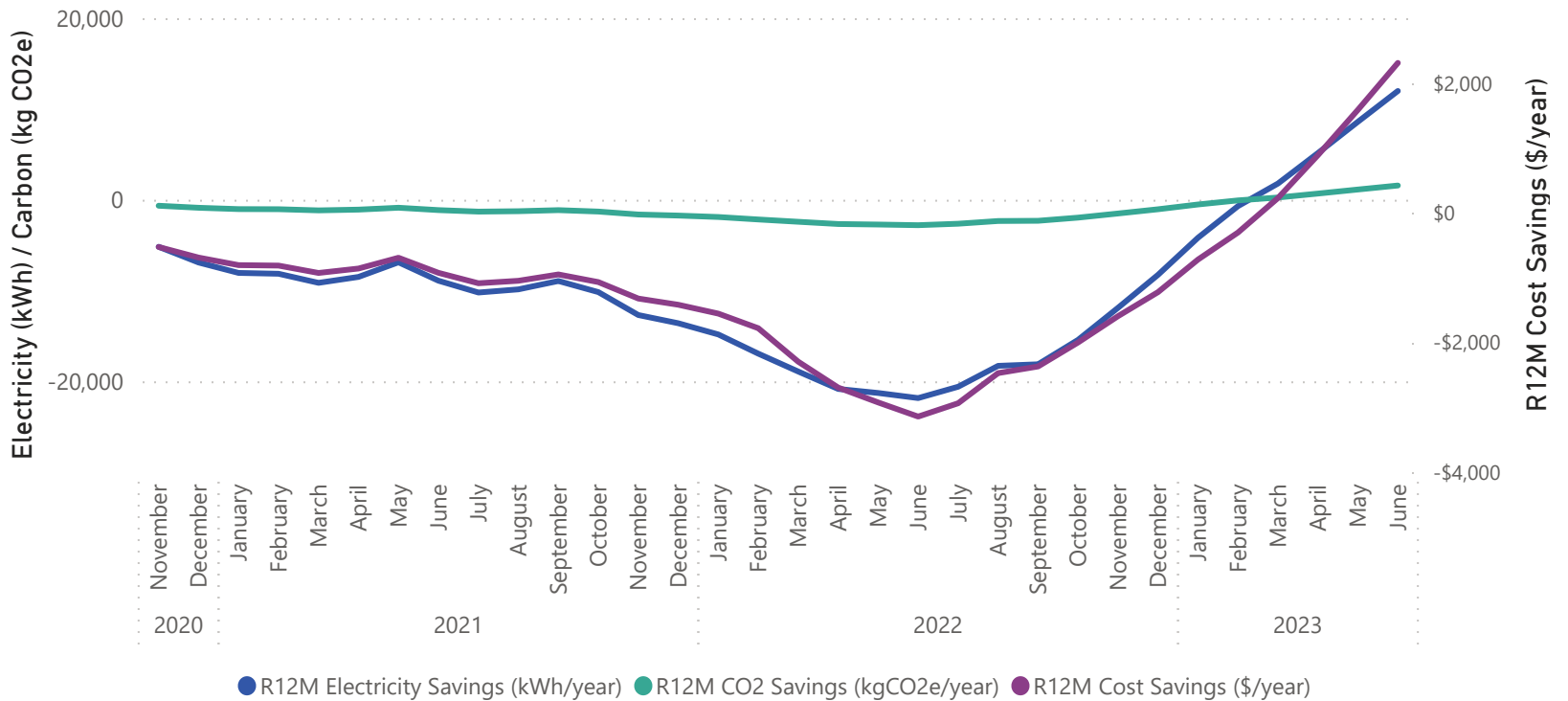
Whakatane District Council

Paul Road Pump Station

Paul Rd Pumps Carbon Emissions Compared to Baseline (kg CO2e)



Paul Rd Pumps Rolling 12 Month Savings

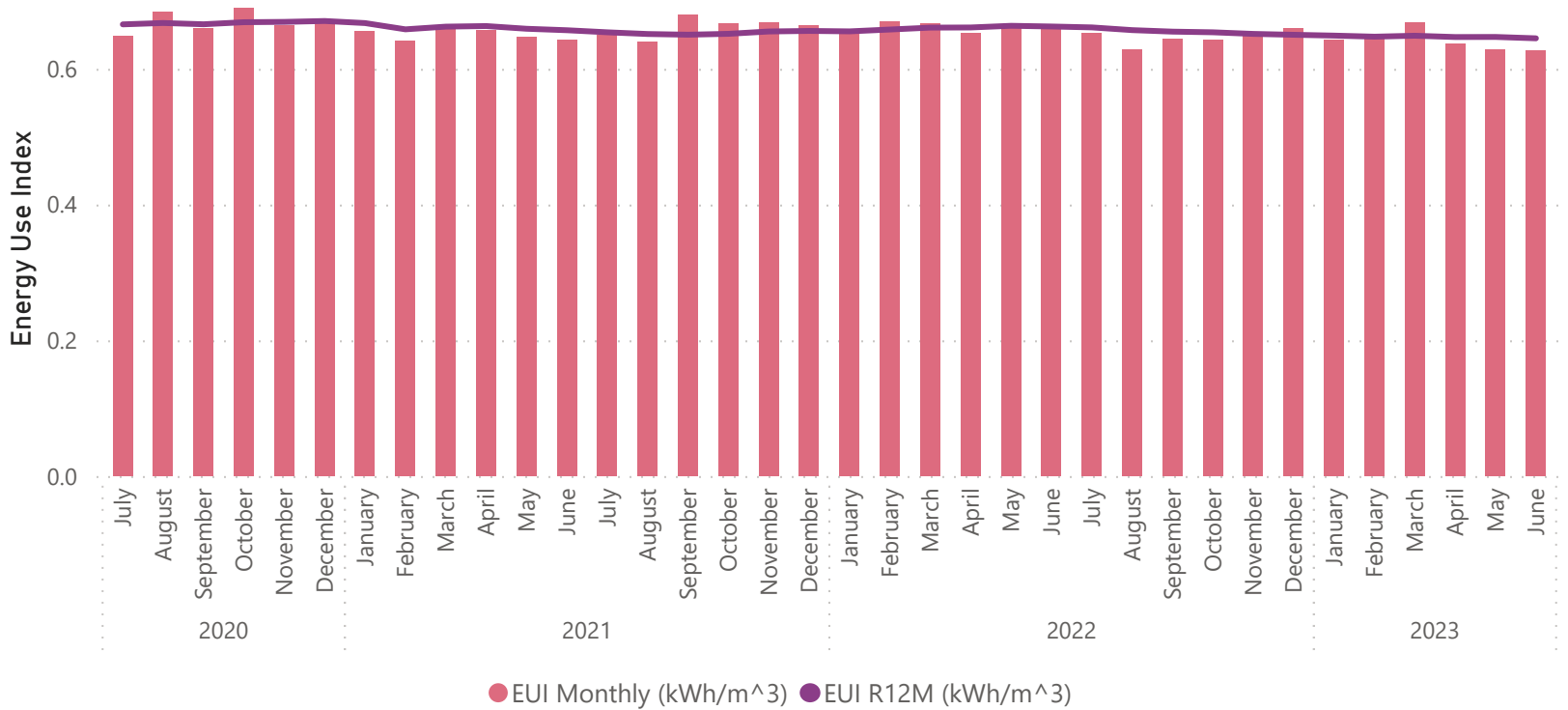


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

Whakatane District Council

Paul Road Pump Station

Paul Rd Pumps Energy Use Index by Month Compared to Rolling 12-Month Values



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

Johnson Road Pump Station

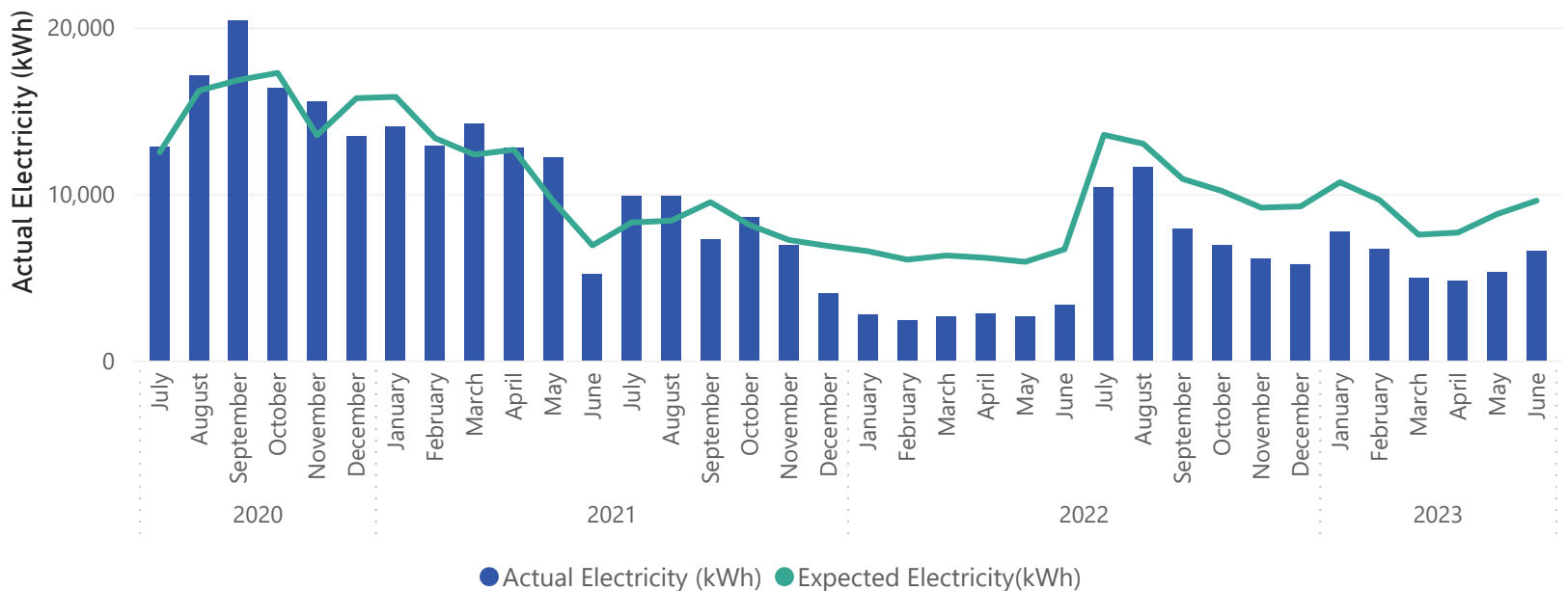
<p>\$652 Monthly Energy Cost Savings</p>	<p>3,028 Elec. Savings (kWh/mo)</p>	<p>32% Elec. Savings (%)</p>	<p>35,290 R12M Electricity Savings (kWh/yr)</p>	<p>397 CO2e Savings (kg/mo)</p>
<p>\$7,594 R12M Energy Cost Savings</p>				<p>4,623 R12M CO2e Savings (kg/yr)</p>

Comments:

The electricity use baseline was updated for the Johnson Road Pump Station, the baseline period is Aug 2018 to June 2022. The electricity baseline uses the amount of water pumped (m³) as the independent variable. The updated baseline has a smaller baseload factor and a larger variable component.

Another good month of savings for the month at Johnson Rd Pump Station, using 40% less electricity than expected. Savings have been greater than 27% each month for the past ten months, which is excellent.

Johnson Rd Pumps Electricity Use Compared to Baseline (kWh)

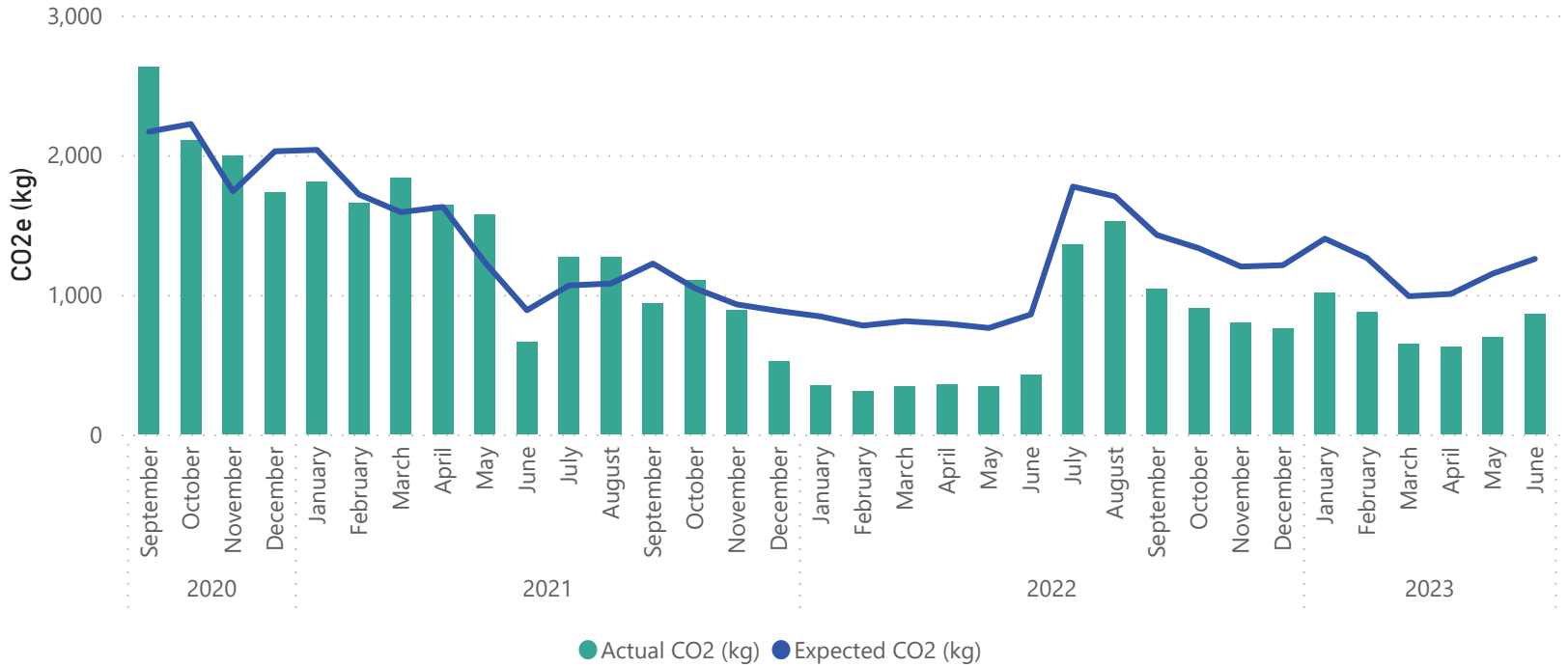


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time
Baselines were updated for all sites from July 2022.

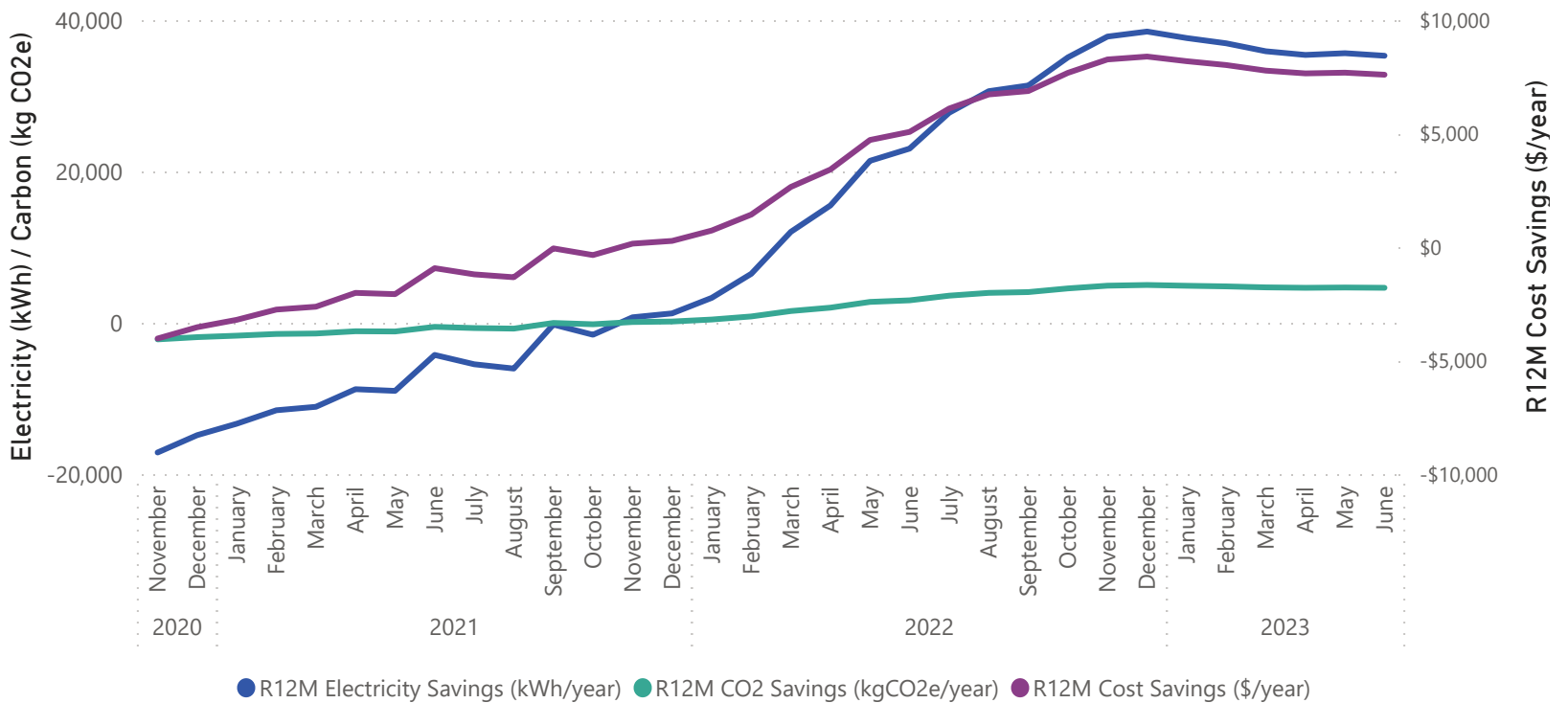
Whakatane District Council

Johnson Road Pump Station

Johnson Rd Pumps Carbon Emissions Compared to Baseline (kg CO2e)



Johnson Rd Pumps Rolling 12 Month Savings

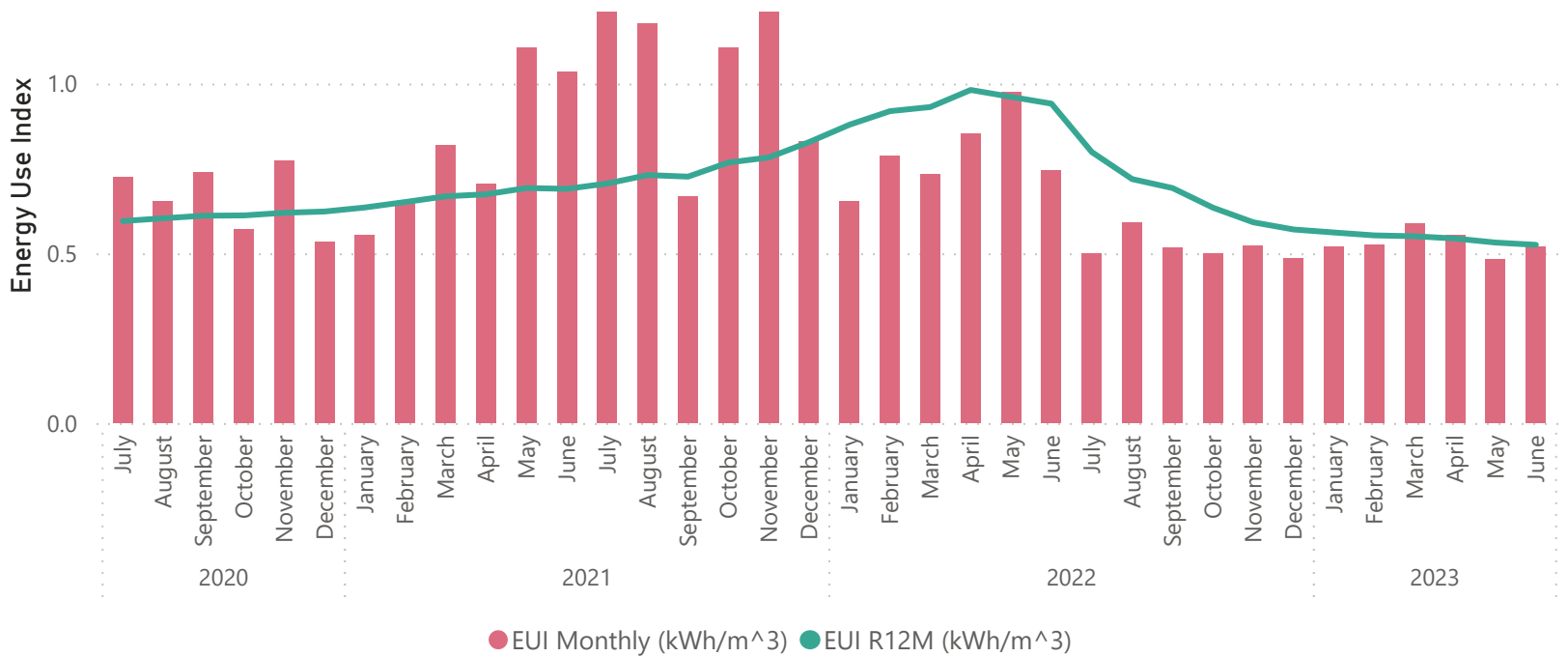


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

Whakatane District Council

Johnson Road Pump Station

Johnson Rd Pumps Energy Use Index by Month Compared to Rolling 12-Month Values



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

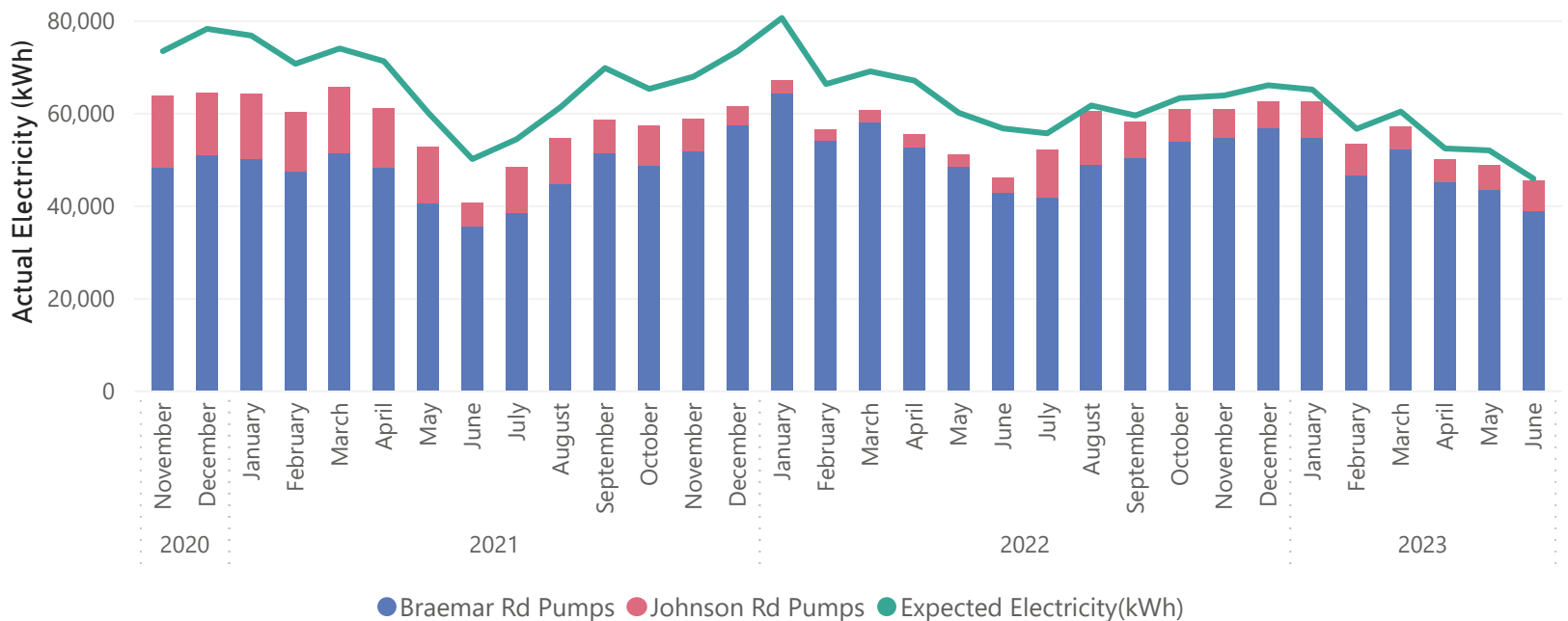
Johnson and Braemar Rd Pump Stations

<p>\$142 Monthly Energy Cost Savings</p>	<p>486 Elec. Savings (kWh/mo)</p>	<p>1% Elec. Savings (%)</p>	<p>29,908 R12M Electricity Savings (kWh/yr)</p>	<p>64 CO2e Savings (kg/mo)</p>
<p>\$6,556 R12M Energy Cost Savings</p>				<p>3,918 R12M CO2e Savings (kg/yr)</p>

Comments:

Johnson Rd achieved savings in June 2023, Braemar Rd pump station's electricity use was more than expected for the month.

Johnson and Braemar Rd Pump Stations Electricity Use Compared to Baseline (kWh)

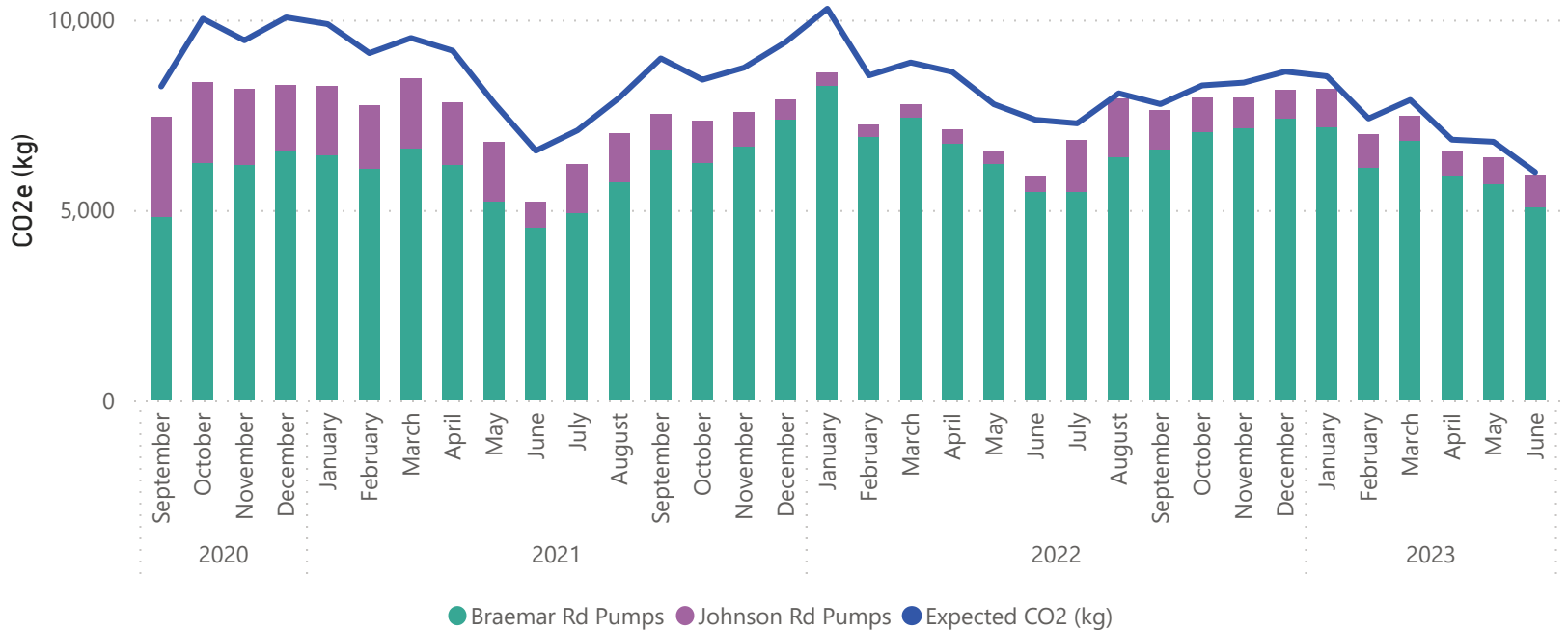


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

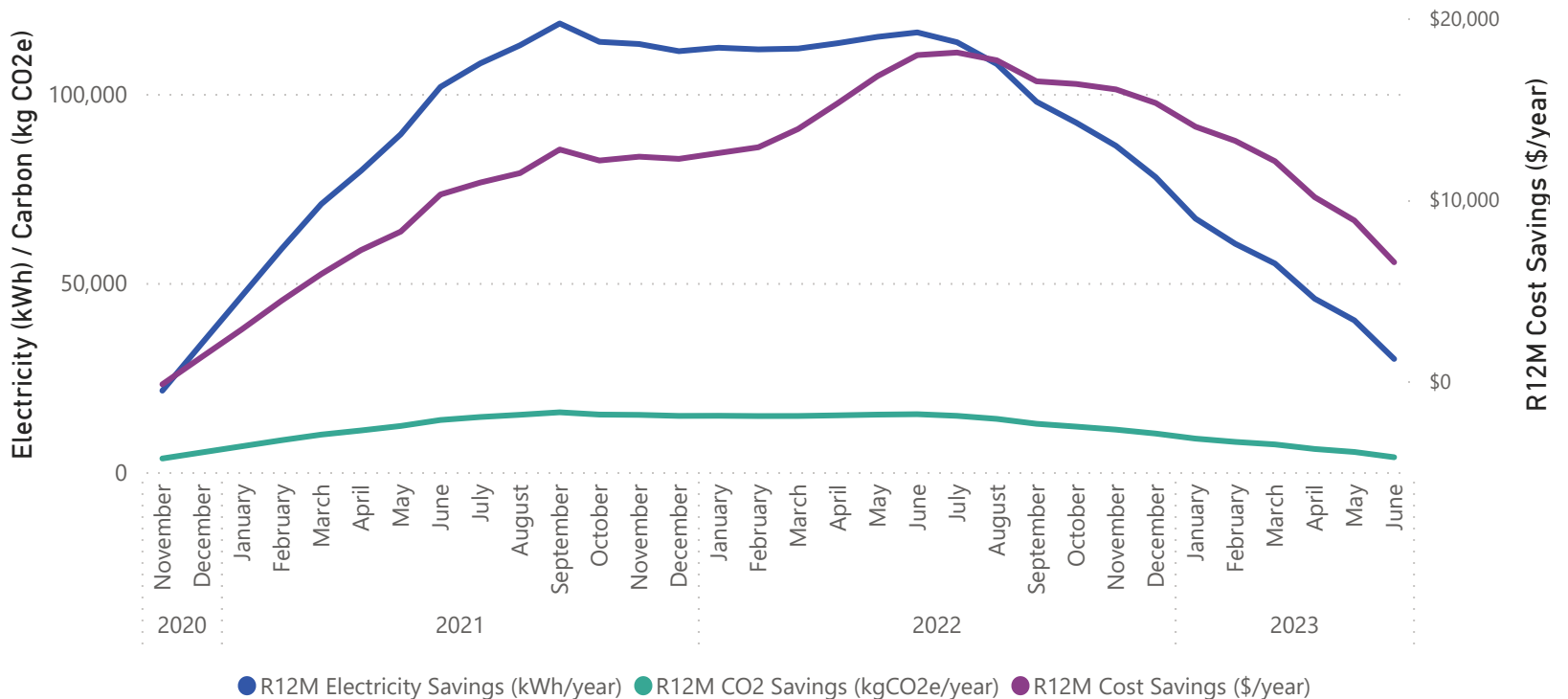
Whakatane District Council

Johnson and Braemar Rd Pump Stations

Johnson and Braemar Rd Pump Stations Carbon Emissions Compared to Baseline (kWh)



Johnson and Braemar Rd Pump Stations Cumulative Rolling 12 Month Savings

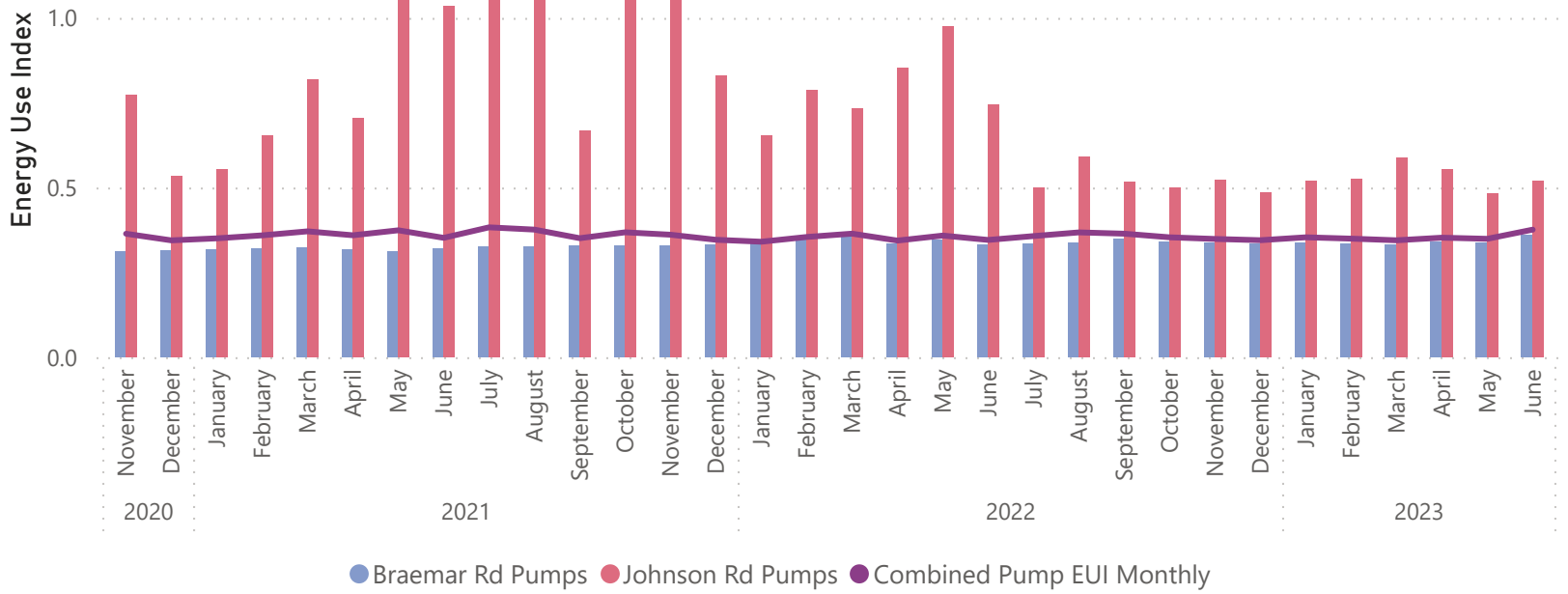


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

Whakatane District Council

Johnson and Braemar Rd Pump Stations

Johnson and Braemar Rd Pump Stations Energy Use Index by Month



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

Bridger Glade Pump Station

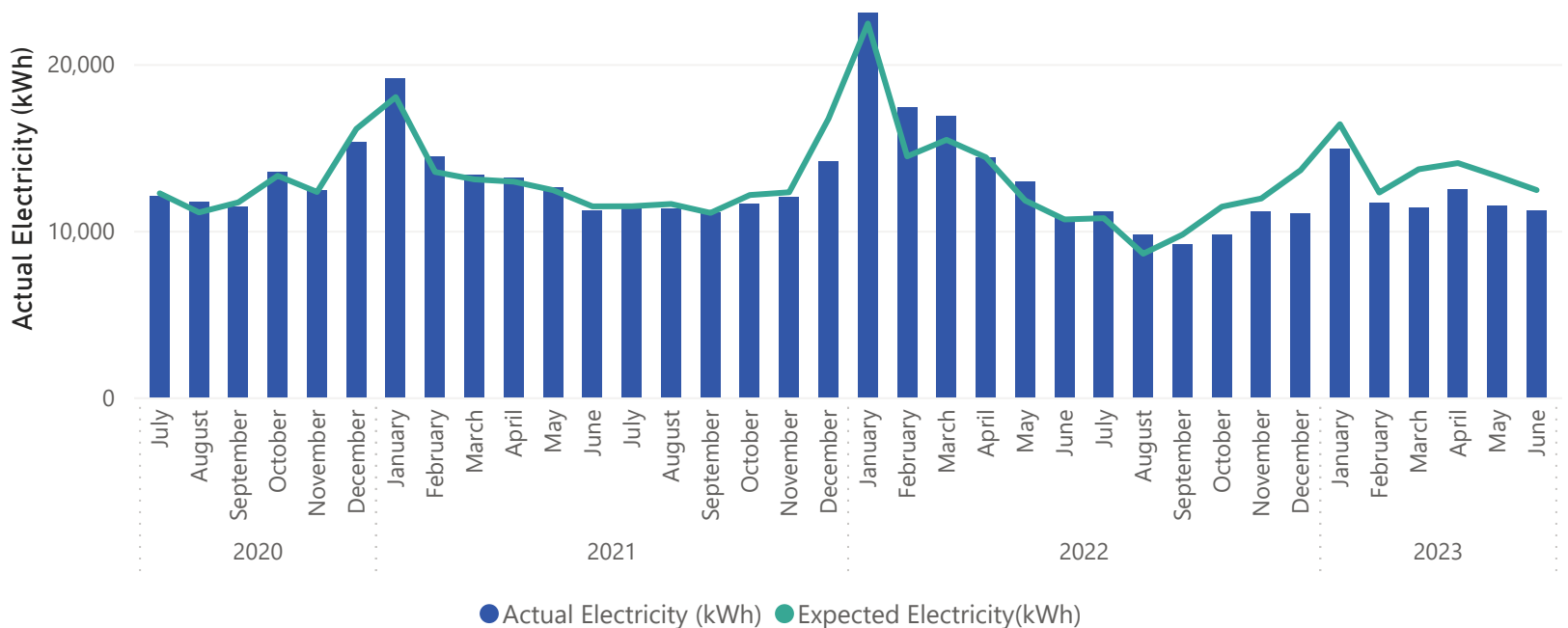
<p>\$213</p> <p>Monthly Energy Cost Savings</p>	<p>1,206</p> <p>Elec. Savings (kWh/mo)</p>	<p>10%</p> <p>Elec. Savings (%)</p>	<p>13,165</p> <p>R12M Electricity Savings (kWh/yr)</p>	<p>158</p> <p>CO2e Savings (kg/mo)</p>
<p>\$2,322</p> <p>R12M Energy Cost Savings</p>				<p>1,725</p> <p>R12M CO2e Savings (kg/yr)</p>

Comments:

The electricity use baseline was updated for the Bridger Glade Pump Station, the baseline period is July 2021 to June 2022. The electricity baseline uses the amount of water pumped (m³) as the independent variable. The updated baseline has no baseload factor and a marginally larger variable component.

June 2023 is the 10th 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.

Bridger Glade Pumps Electricity Use Compared to Baseline (kWh)

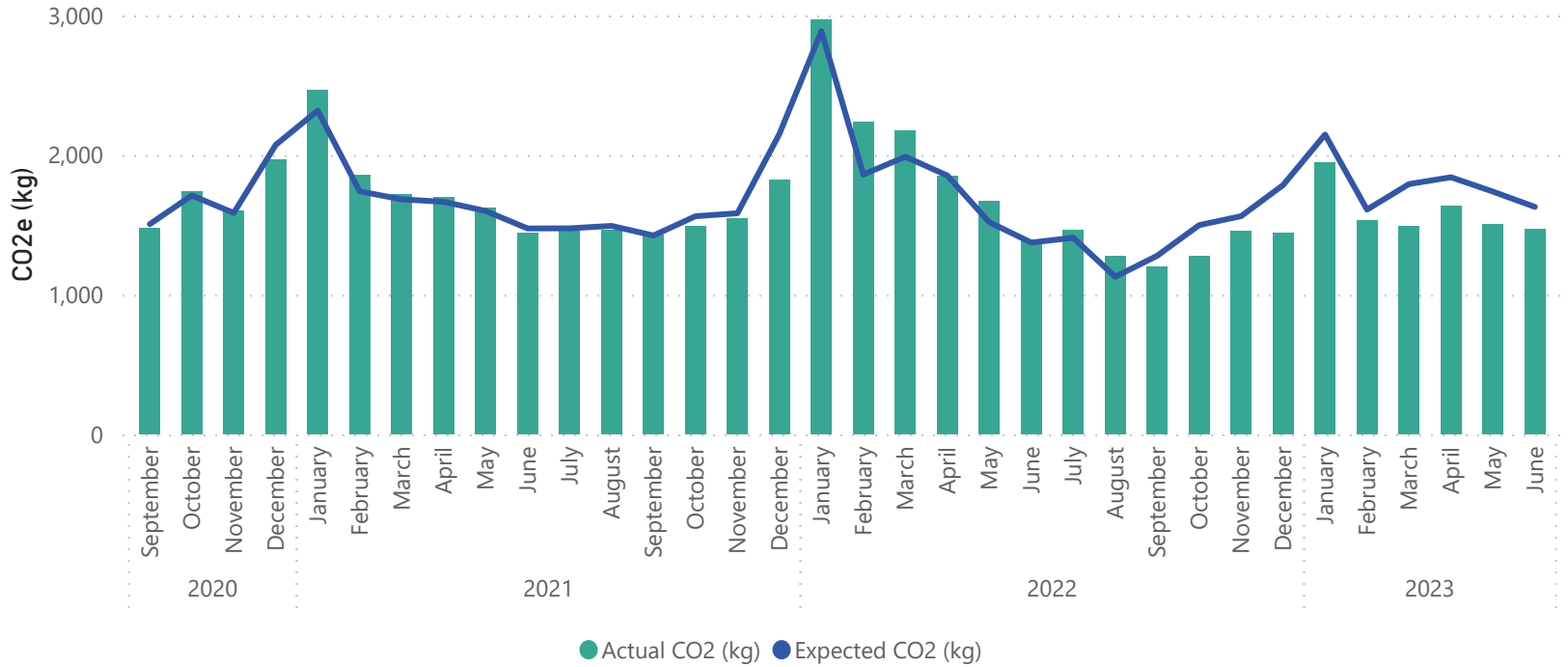


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time
Baselines were updated for all sites from July 2022.

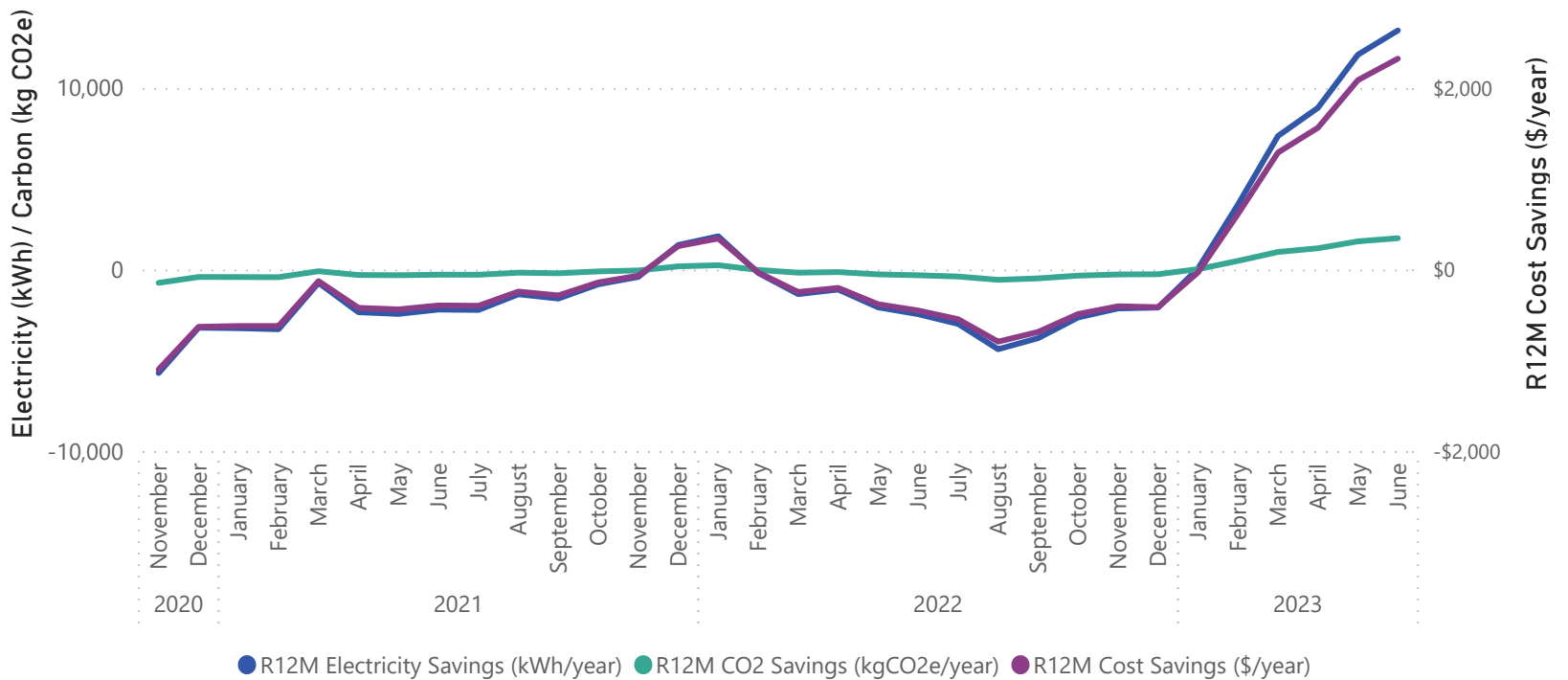
Whakatane District Council

Bridger Glade Pump Station

Bridger Glade Pumps Carbon Emissions Compared to Baseline (kg CO2e)



Bridger Glade Pumps Rolling 12 Month Savings

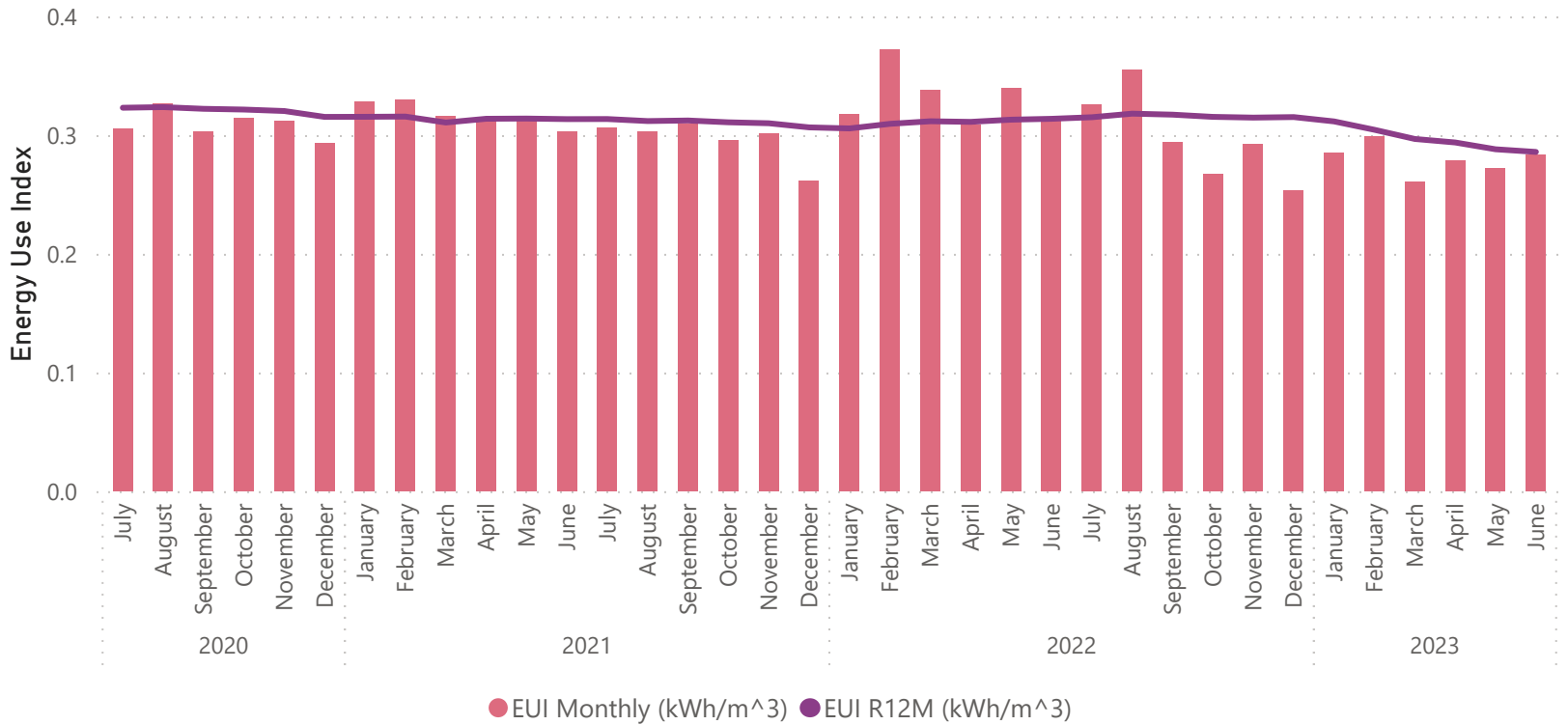


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

Whakatane District Council

Bridger Glade Pump Station

Bridger Glade Pumps Energy Use Index by Month Compared to Rolling 12-Month Values



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

Ohope Oxidation Ponds

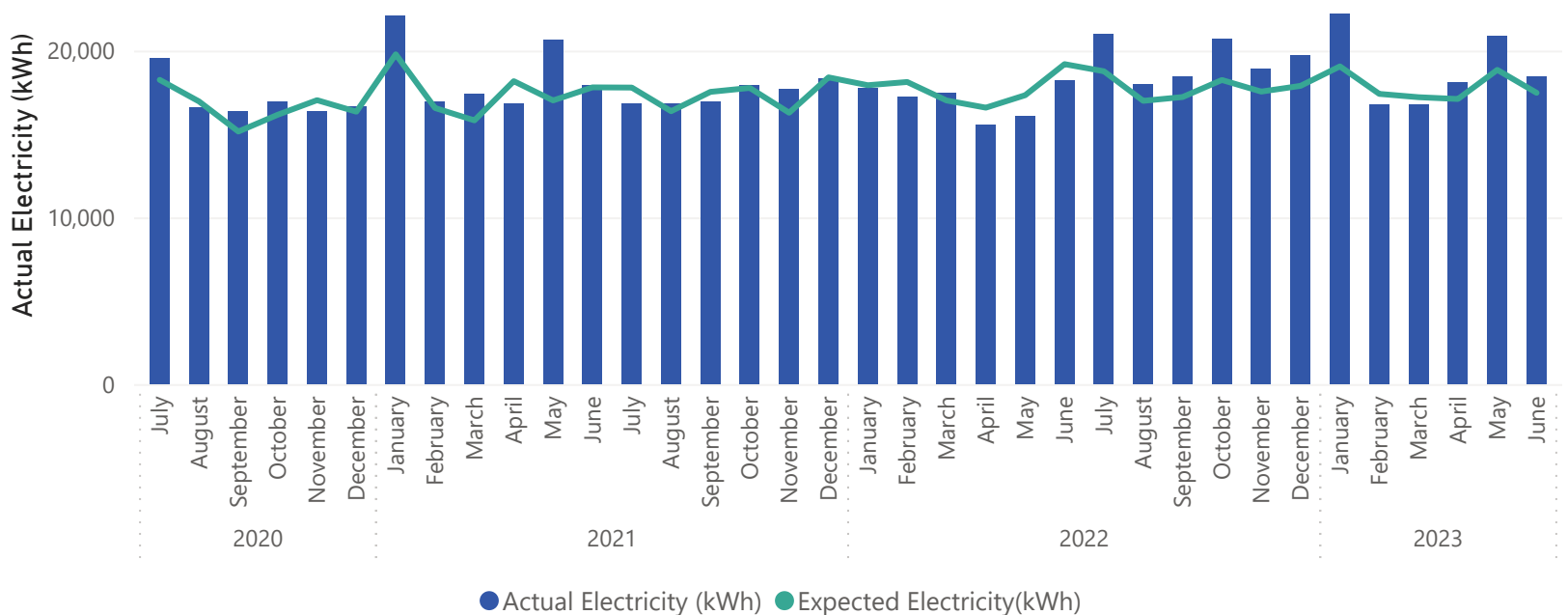
<p>-\$169 Monthly Energy Cost Savings</p>	<p>-960 Elec. Savings (kWh/mo)</p>	<p>-5% Elec. Savings (%)</p>	<p>-16,176 R12M Electricity Savings (kWh/yr)</p>	<p>-126 CO2e Savings (kg/mo)</p>
<p>-\$2,847 R12M Energy Cost Savings</p>				<p>-2,119 R12M CO2e Savings (kg/yr)</p>

Comments:

The baseline for electricity use was updated for the Ohope Oxidation Ponds, the baseline period is July 2021 to June 2022. The electricity baseline uses the amount of effluent pumped (m³) as the independent variable. The updated baseline has a larger baseload factor and a smaller variable component.

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.

Ohope Oxidation Ponds Electricity Use Compared to Baseline (kWh)

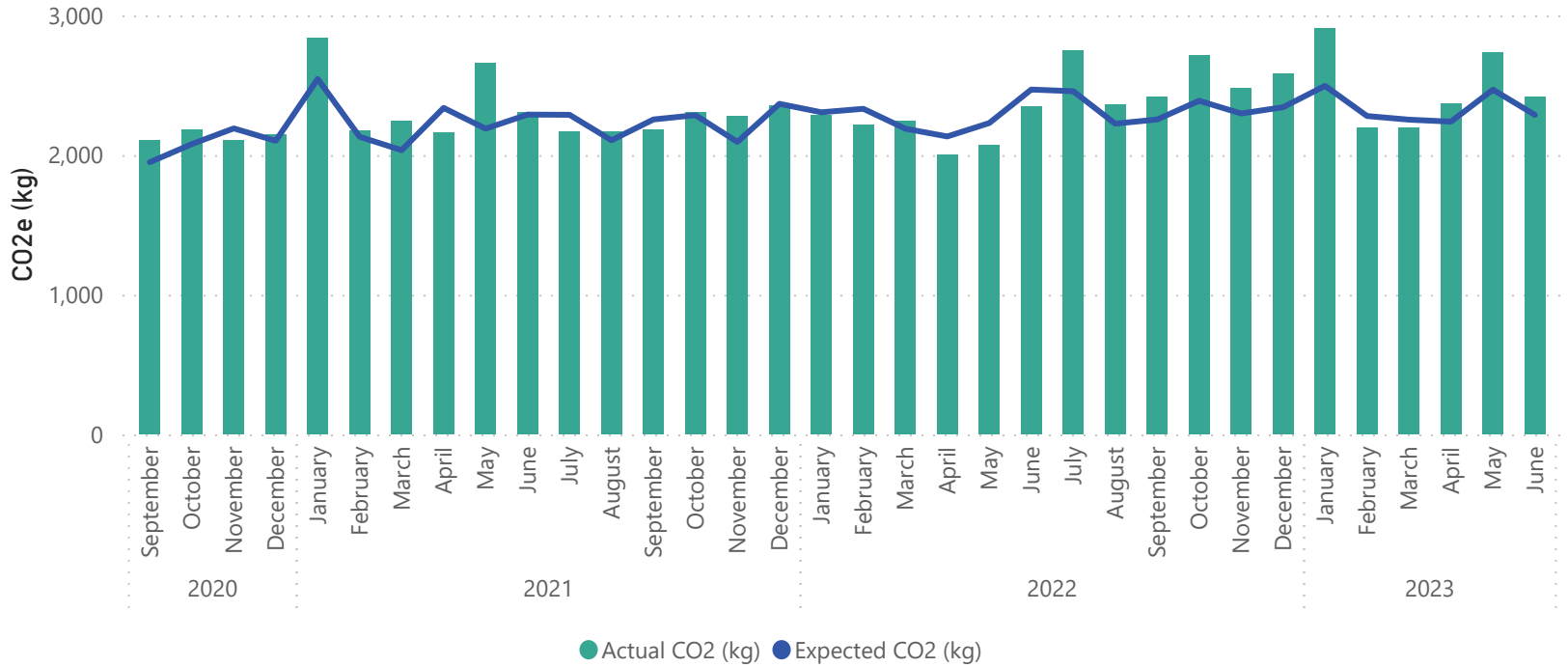


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

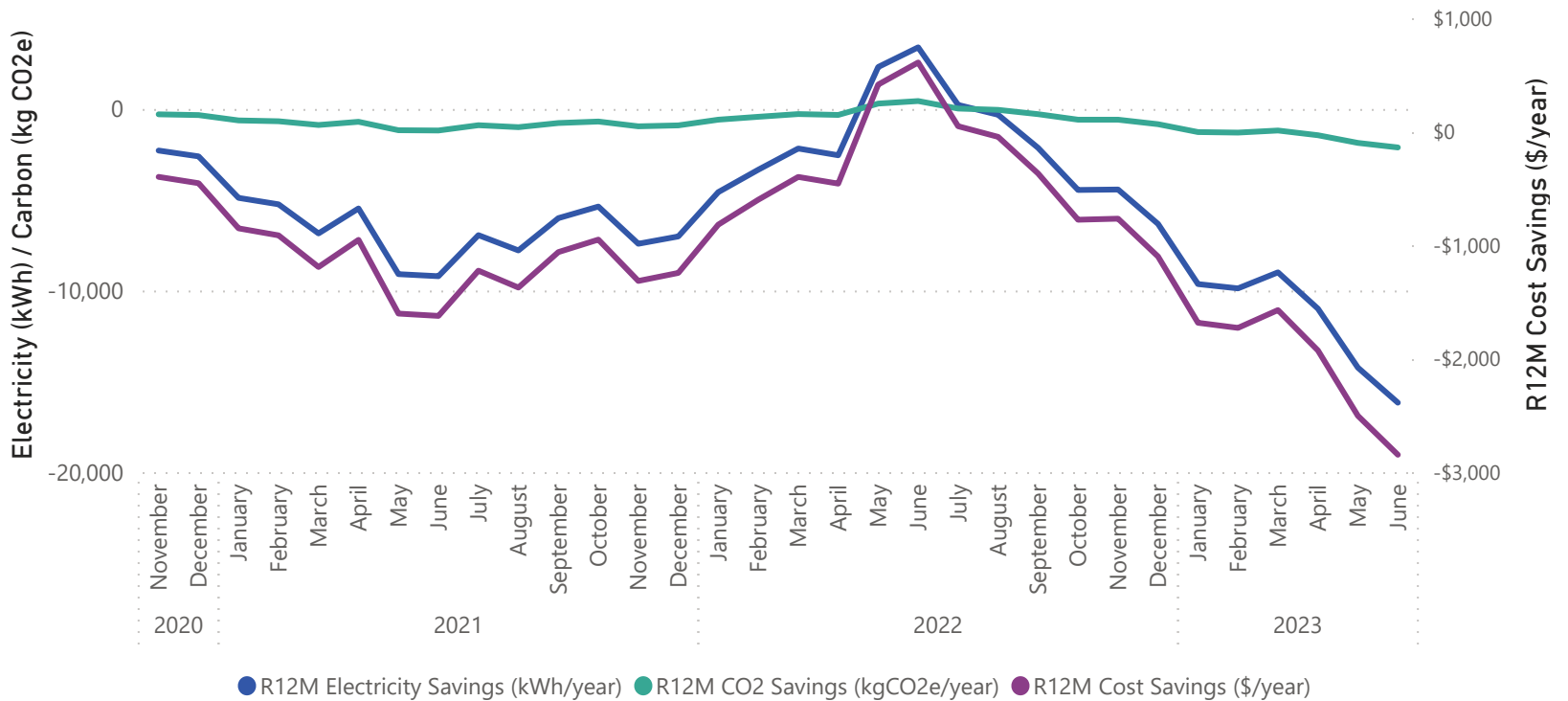
Whakatane District Council

Ohope Oxidation Ponds

Ohope Oxidation Ponds Carbon Emissions Compared to Baseline (kg CO2e)



Ohope Oxidation Ponds Rolling 12 Month Savings

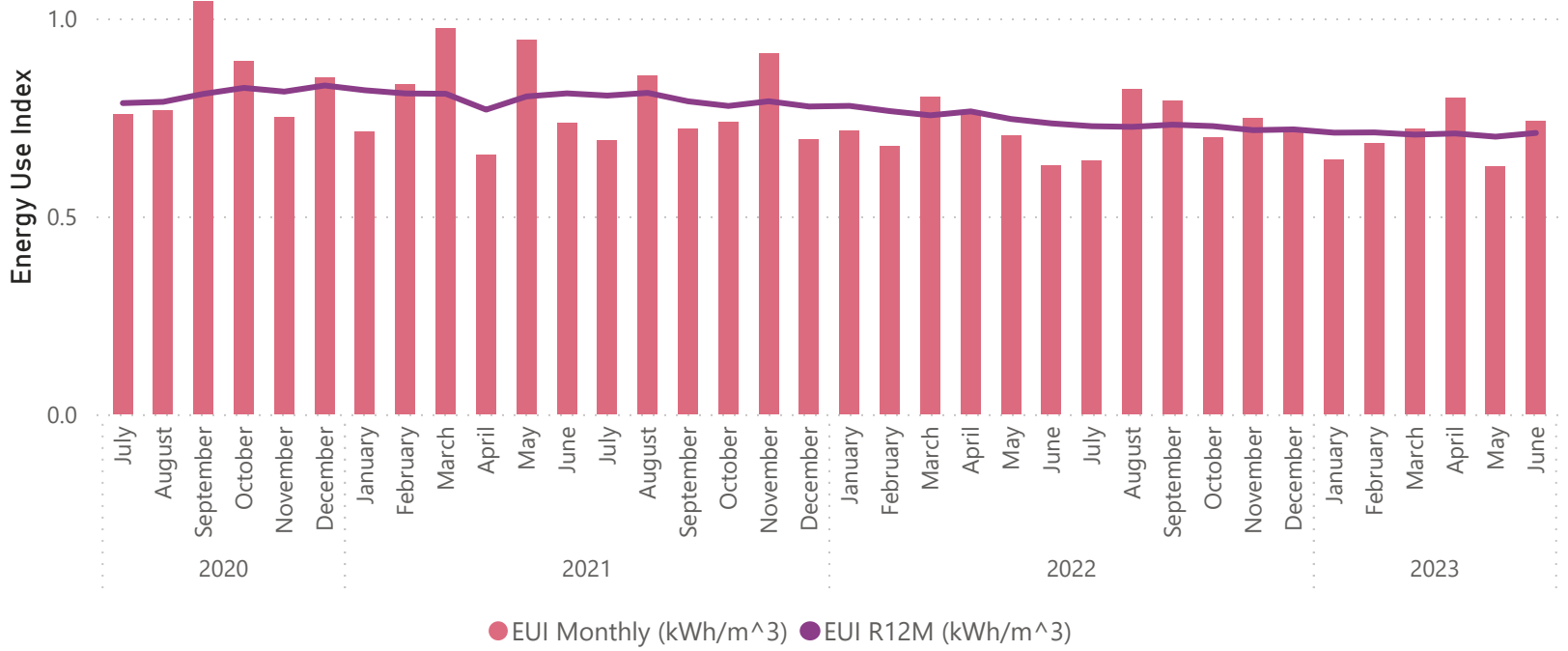


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

Whakatane District Council

Ohope Oxidation Ponds

Ohope Oxidation Ponds Energy Use Index by Month Compared to Rolling 12-Month Values



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

Whakatane Oxidation Ponds

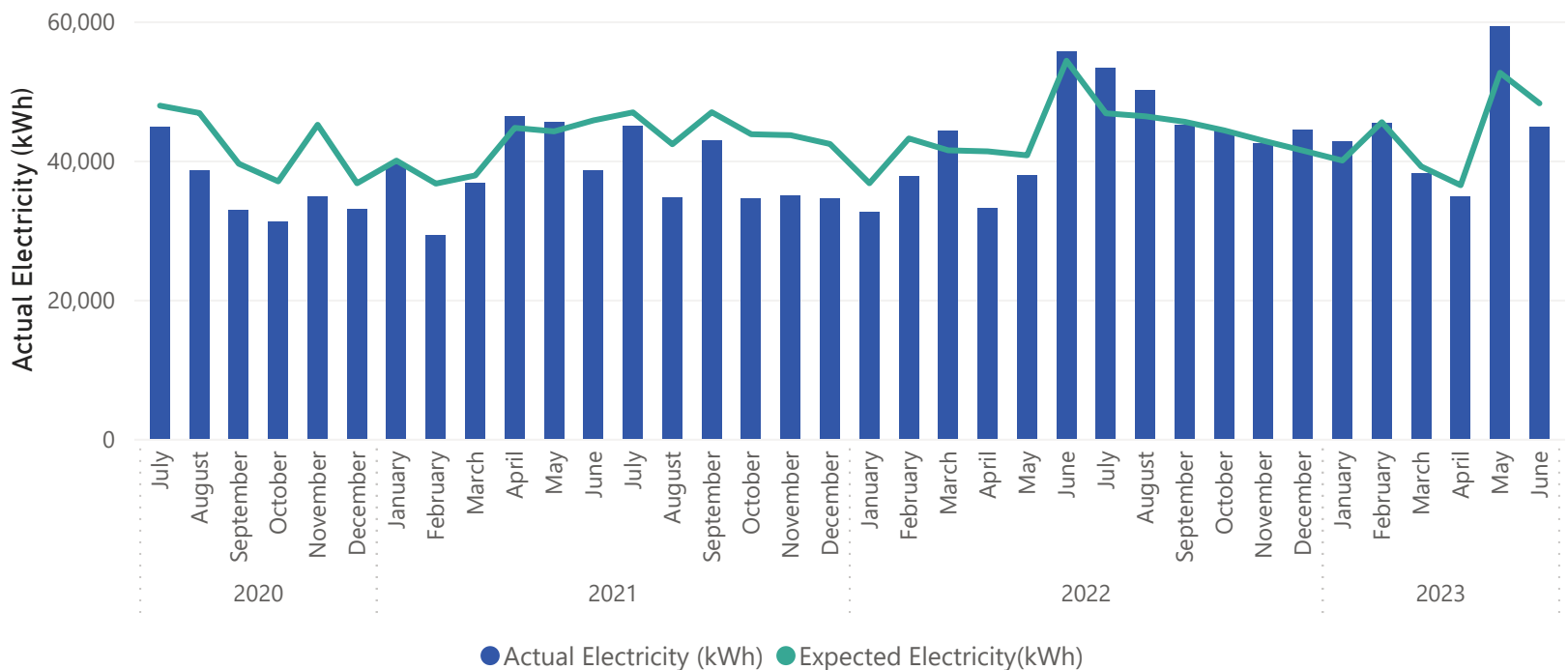
<p>\$641 Monthly Energy Cost Savings</p>	<p>3,409 Elec. Savings (kWh/mo)</p>	<p>7% Elec. Savings (%)</p>	<p>-15,729 R12M Electricity Savings (kWh/yr)</p>	<p>447 CO2e Savings (kg/mo)</p>
<p>-\$2,884 R12M Energy Cost Savings</p>				<p>-2,060 R12M CO2e Savings (kg/yr)</p>

Comments:

The electricity use baseline was updated for the Whakatane Oxidation Ponds, the baseline period is July 2021 to June 2022. The electricity baseline combines electricity use for the NHH and TOU account and uses the effluent volumes each month (m³) as the independent variable. The updated baseline has a smaller baseload factor and a smaller variable component.

The oxidation ponds used 7% less electricity than expected in June 2023. June 2023 was a month of above average rainfall, approximately 150mm of rain recorded for the month. EUI is trending downwards, which is good.

Whakatane Oxidation Ponds Electricity Use Compared to Baseline (kWh)

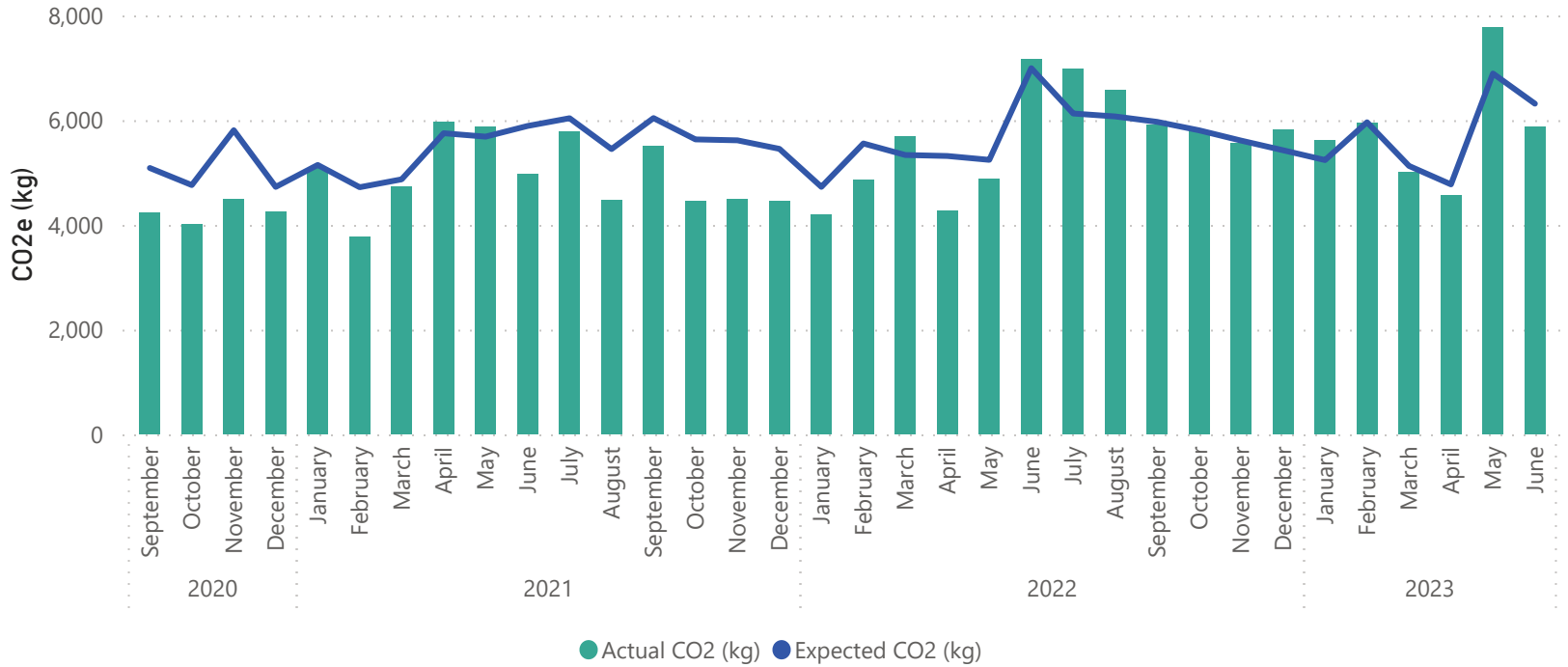


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

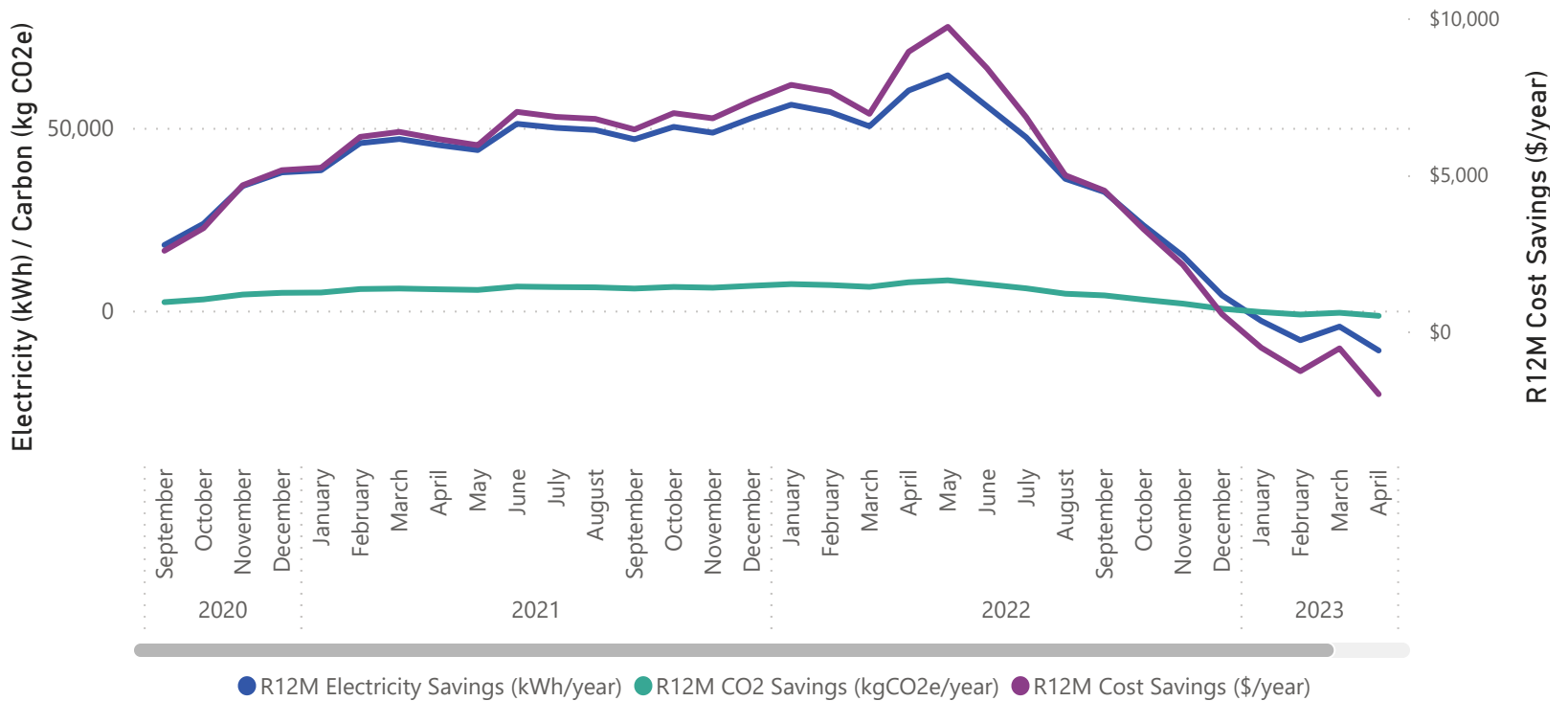
Whakatane District Council

Whakatane Oxidation Ponds

Whakatane Oxidation Ponds Carbon Emissions Compared to Baseline (kg CO2e)



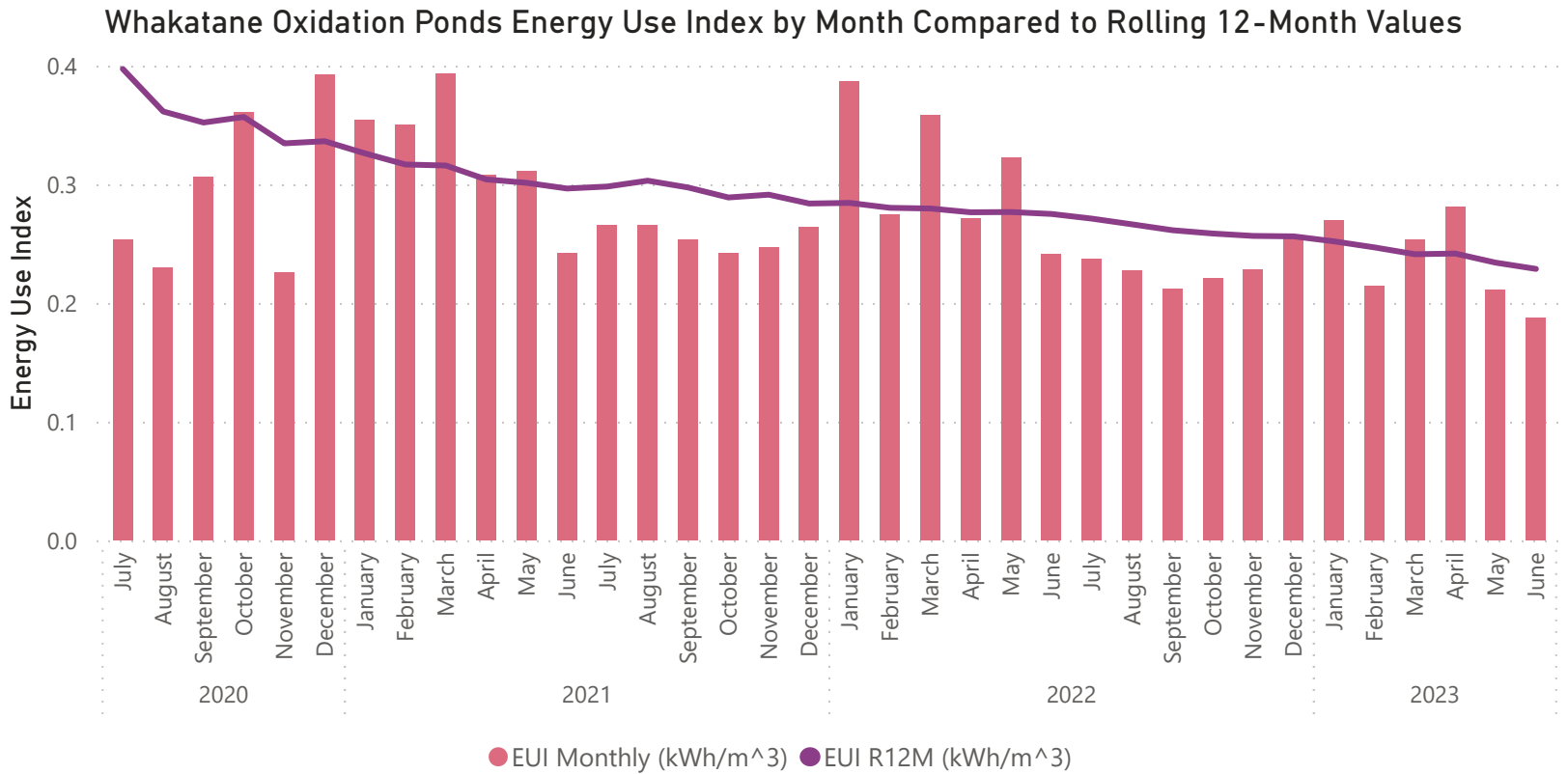
Whakatane Oxidation Ponds Rolling 12 Month Savings



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

Whakatane Oxidation Ponds



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

McAlister Street and Rose Garden Pump Stations

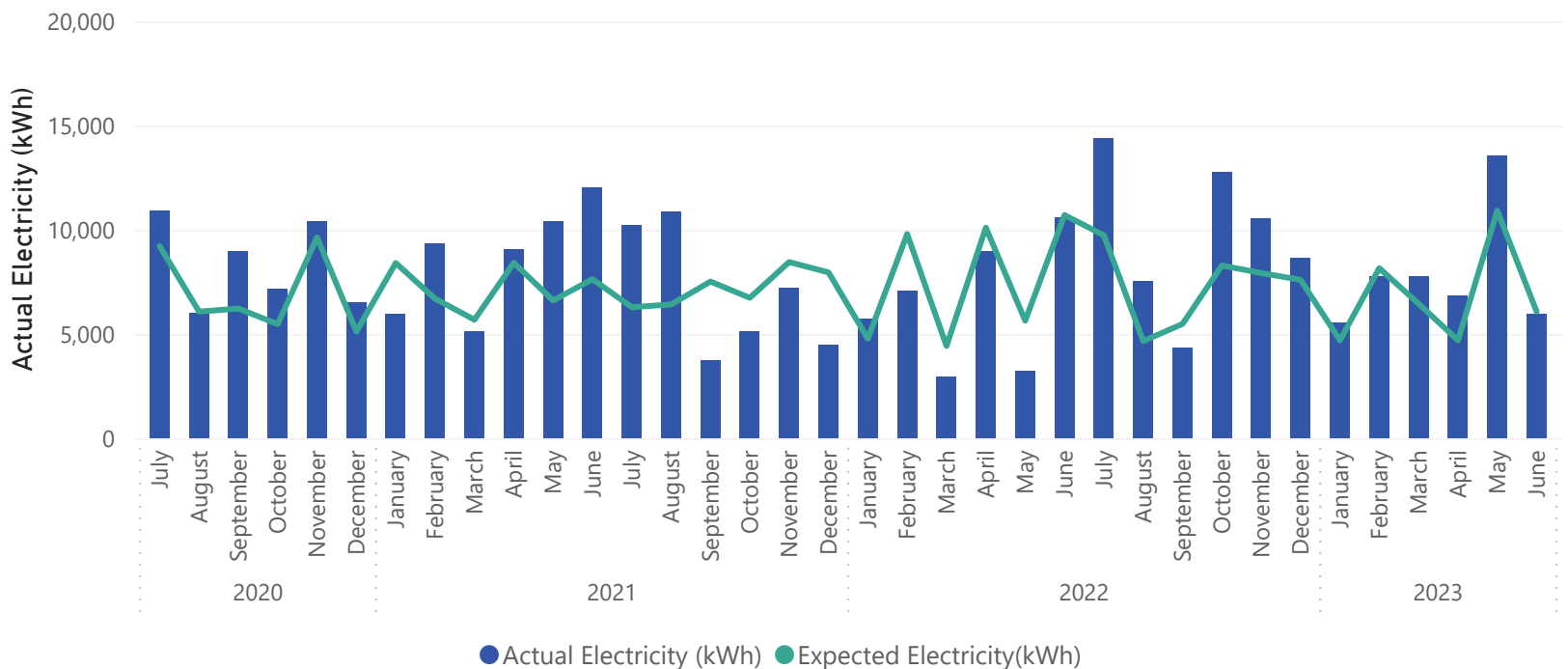
<p>\$251 Monthly Energy Cost Savings</p>	<p>122 Elec. Savings (kWh/mo)</p>	<p>2% Elec. Savings (%)</p>	<p>-20,928 R12M Electricity Savings (kWh/yr)</p>	<p>16 CO2e Savings (kg/mo)</p>
<p>\$385 R12M Energy Cost Savings</p>				<p>-2,742 R12M CO2e Savings (kg/yr)</p>

Comments:

The baseline for McAlister St and Rose Garden Pumps was updated, the baseline adjusts for the amount of rainfall at the Kopeopeo weather station. Expected electricity is for McAlister St and Rose Gardens combined. The baseline period uses data from July 2021 to June 2022. The updated baseline uses a smaller baseload and a marginally smaller variable component.

The pump stations used 2% less electricity than expected this month. June 2023 was a month of above average rainfall, approximately 130 mm of rain coincided within the billing period.

McAlister and Rose Garden Pumps Electricity Use Compared to Baseline (kWh)

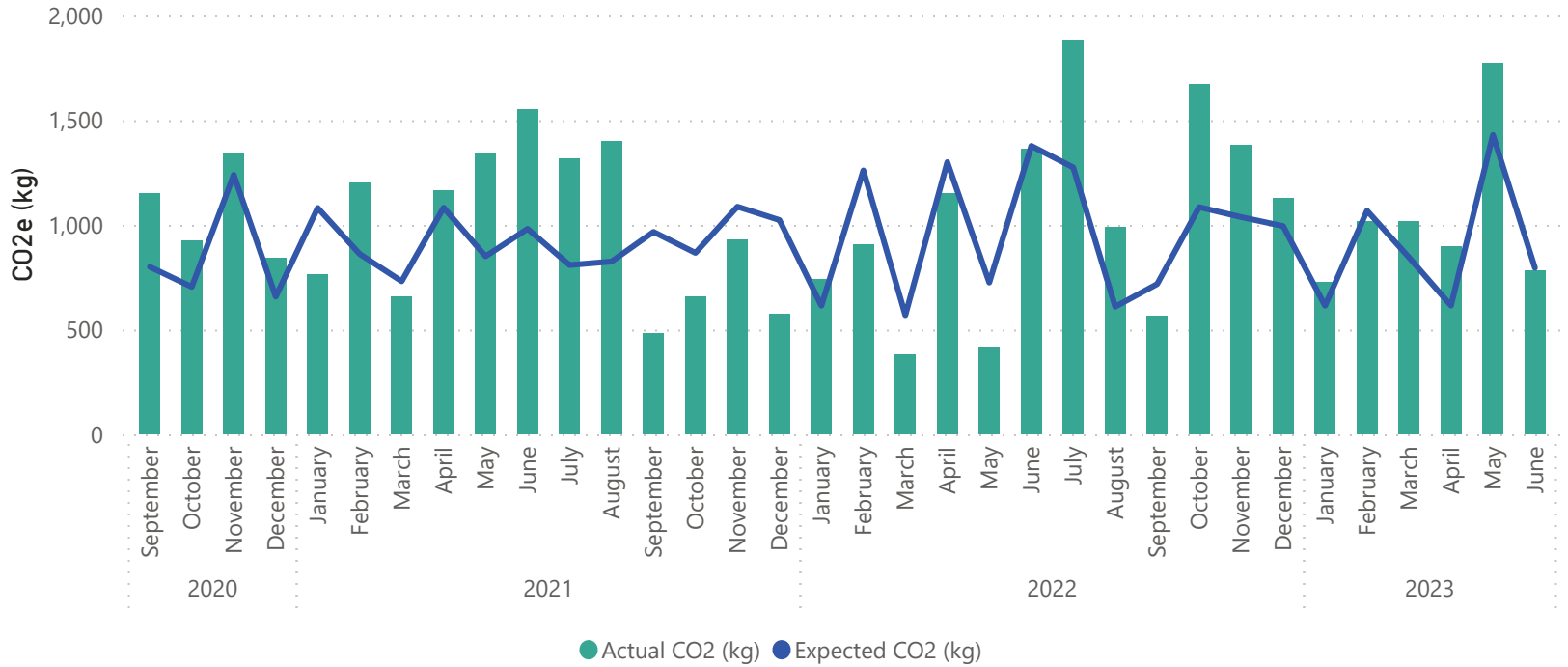


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

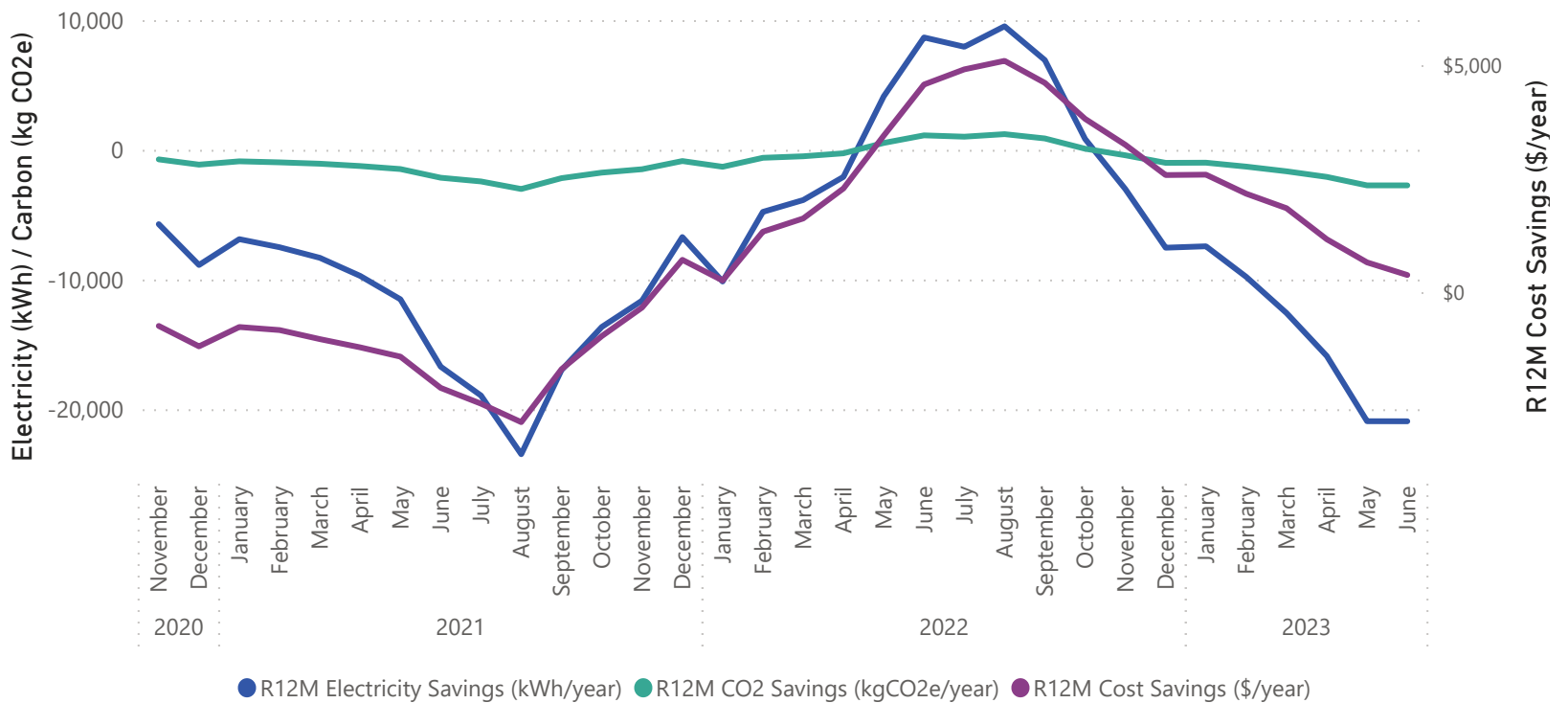
Whakatane District Council

McAlister Street and Rose Garden Pump Stations

McAlister and Rose Garden Pumps Carbon Emissions Compared to Baseline (kg CO2e)



McAlister and Rose Garden Pumps Rolling 12 Month Savings



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

Murupara Pools

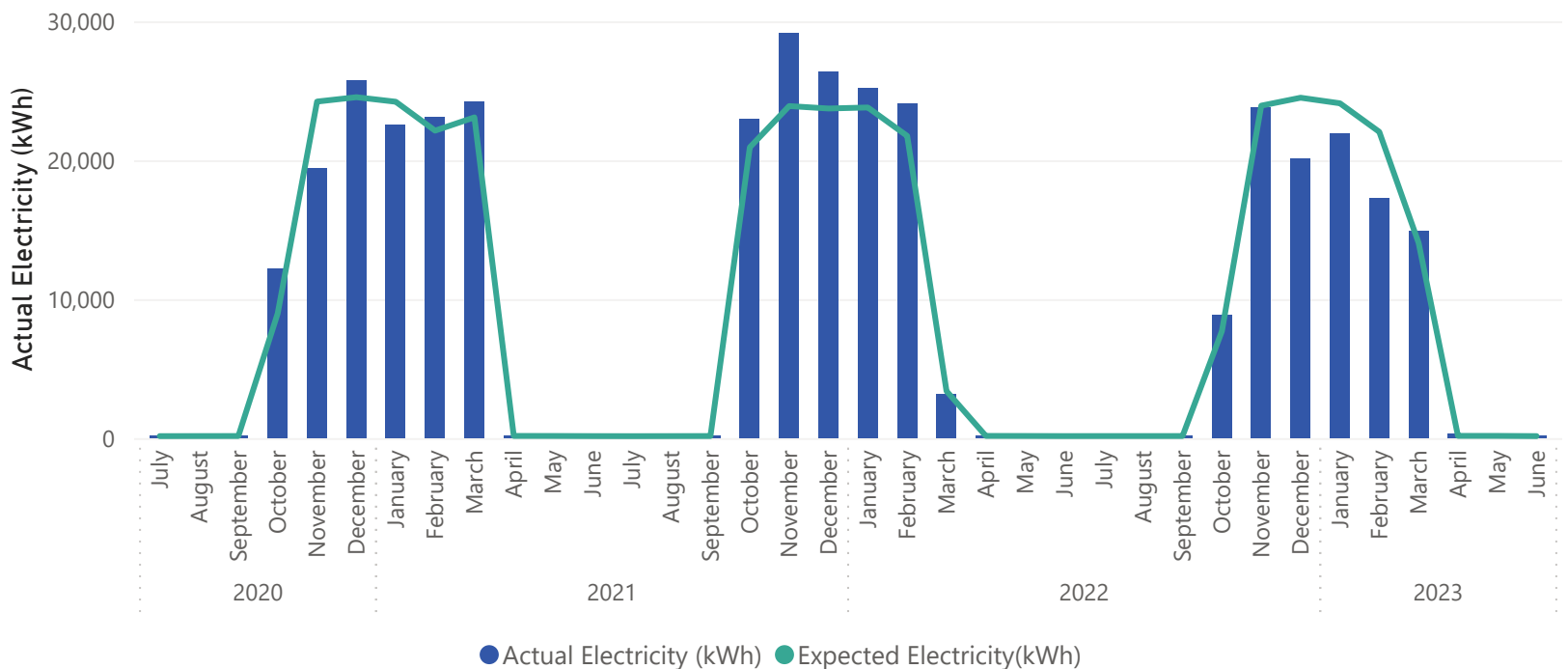
<p>\$4 Monthly Energy Cost Savings</p>	<p>18 Elec. Savings (kWh/mo)</p>	<p>13% Elec. Savings (%)</p>	<p>9,374 R12M Electricity Savings (kWh/yr)</p>	<p>2 CO2e Savings (kg/mo)</p>
<p>\$1,630 R12M Energy Cost Savings</p>				<p>1,228 R12M CO2e Savings (kg/yr)</p>

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.

Murupara Pools Electricity Use Compared to Baseline (kWh)

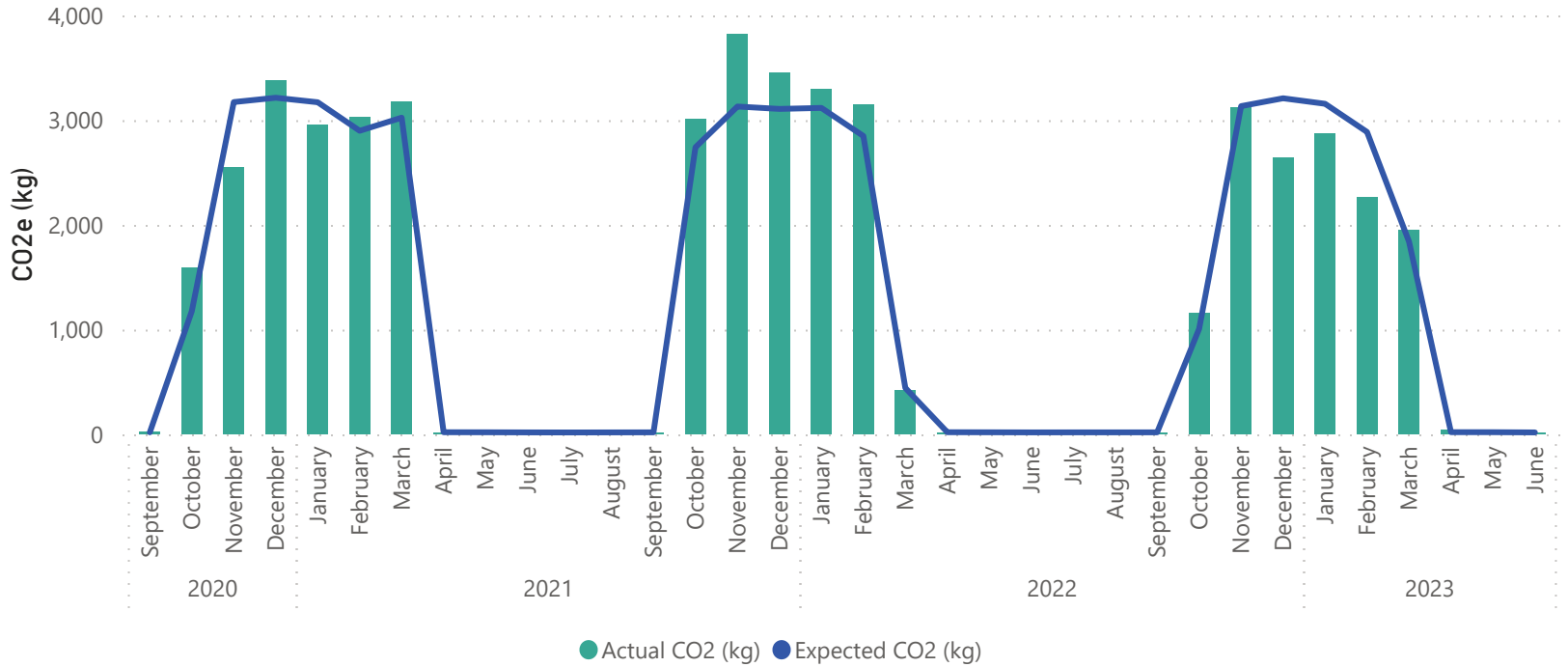


Note: New Zealand was in Covid-19 alert levels 3 and 4 from 23 March until 12 May, 2020. Energy use may have been impacted during this time **Baselines were updated for all sites from July 2022.**

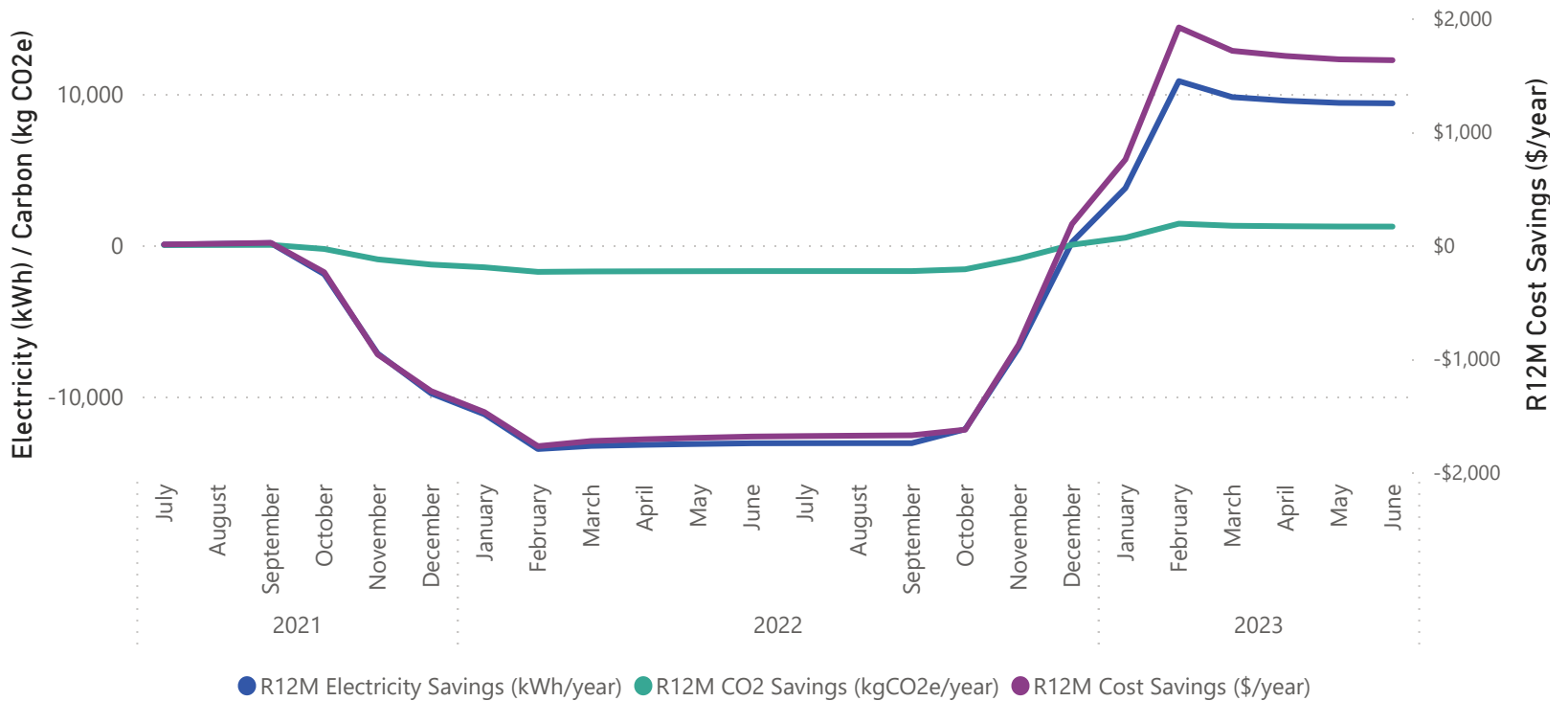
Whakatane District Council

Murupara Pools

Murupara Pools Carbon Emissions Compared to Baseline (kg CO2e)



Murupara Pools Rolling 12 Month Savings



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.**