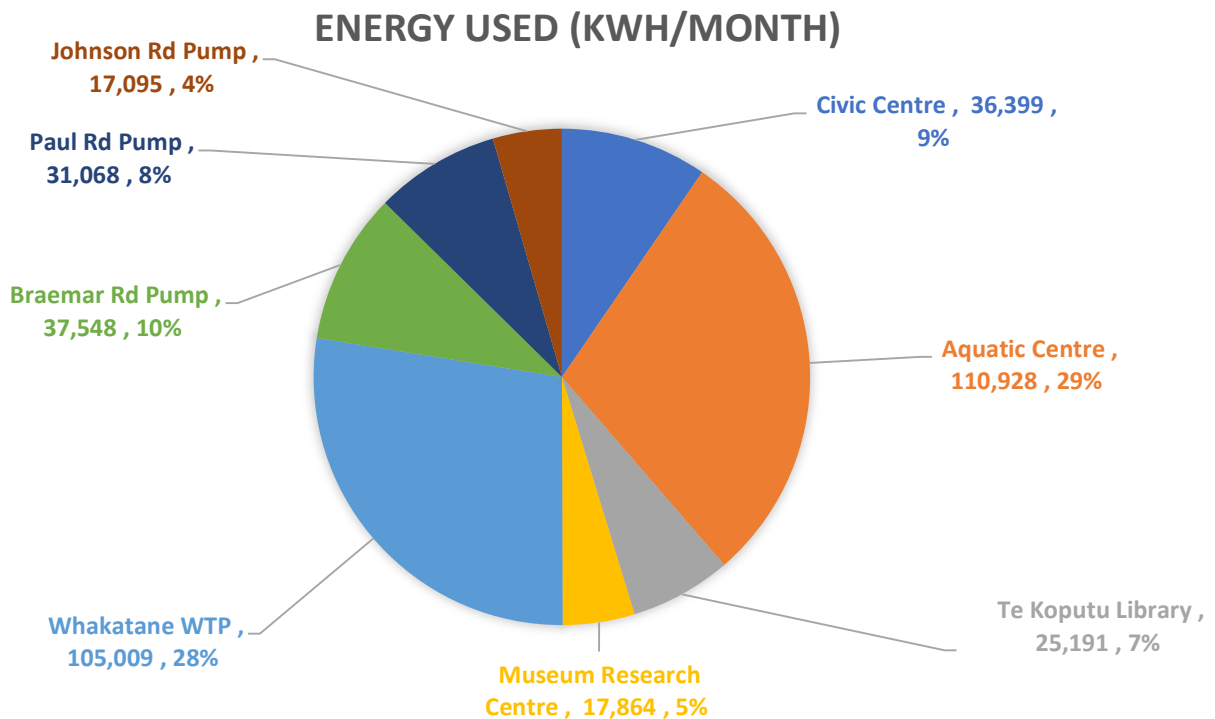


Whakatāne District Council Energy Performance Report

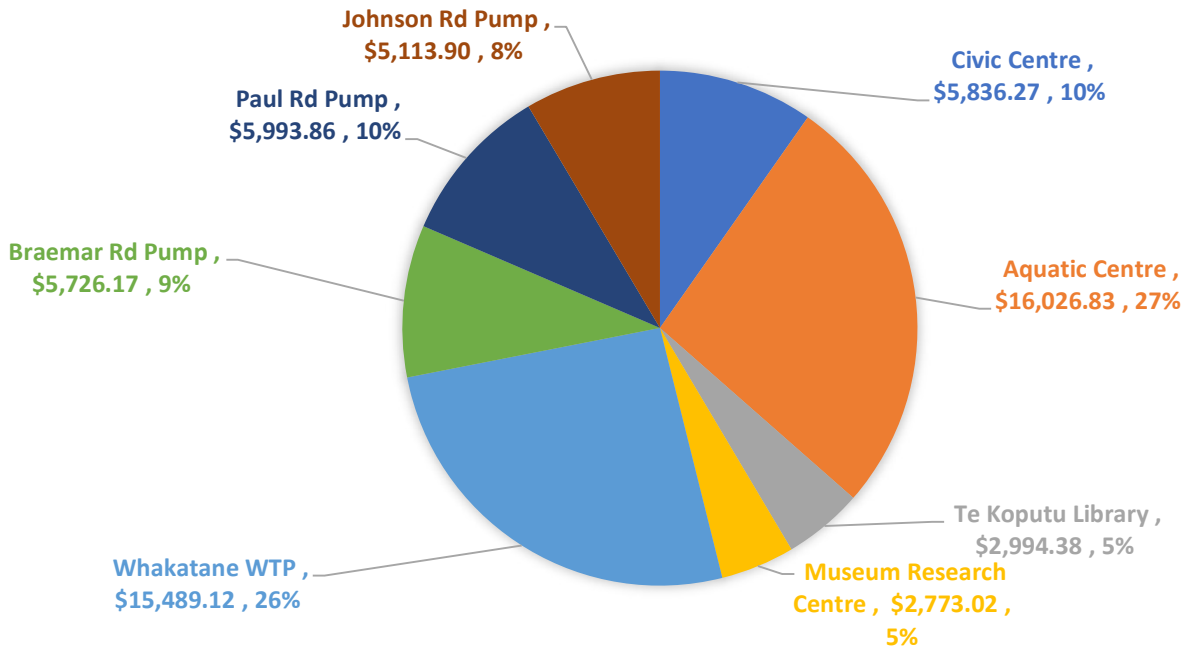
Summary

For Eight of Whakatāne District Council’s largest energy using sites:

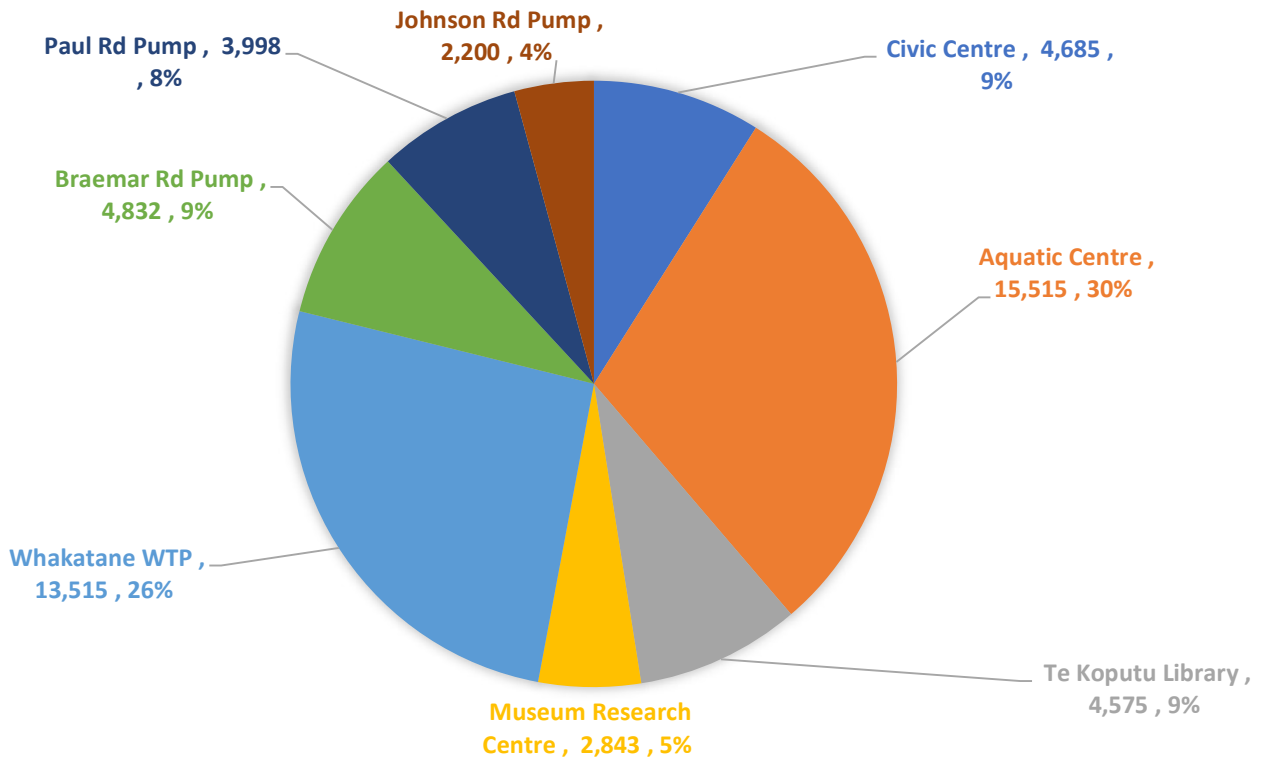
- Total energy used for the month was 392,282 kWh
- Total energy cost for the month was \$63,170
- Total carbon emissions for the month were 53,601 kgCO₂e
- Rolling 12-month energy savings total 809,364 kWh
- Rolling 12-month energy cost savings total \$56,693
- Rolling 12-month carbon savings total 162,030 kgCO₂e



ENERGY COST (\$/MONTH)

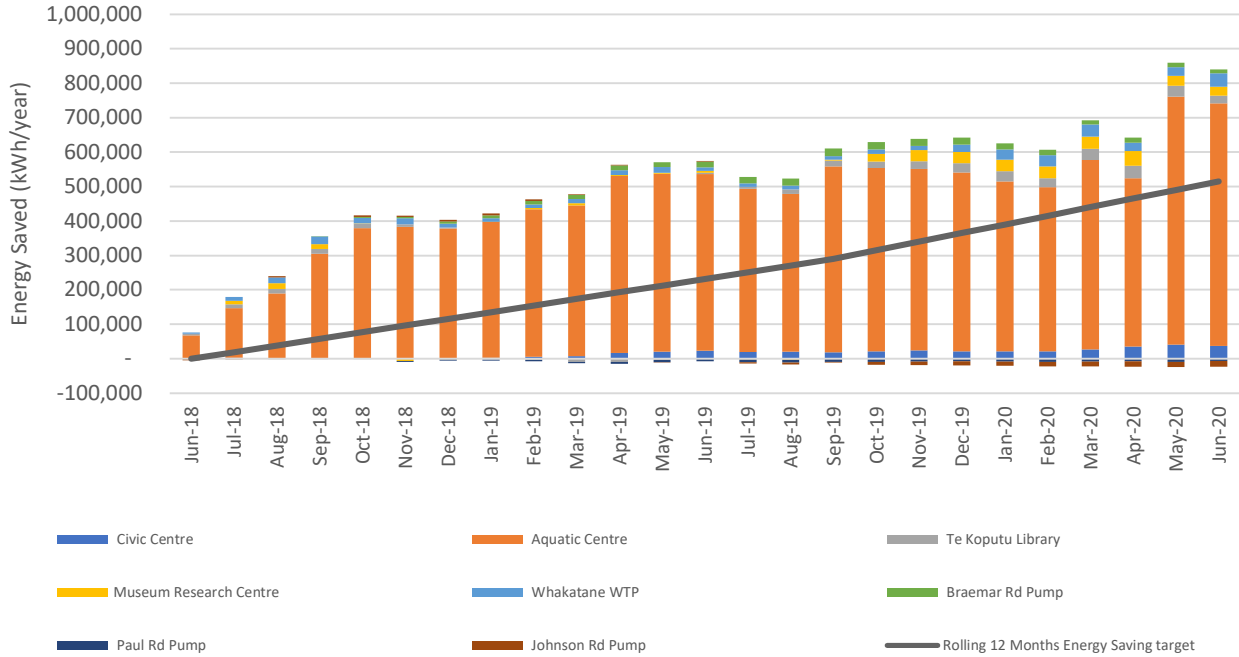


CARBON EMISSIONS (KGCO2E/MONTH)

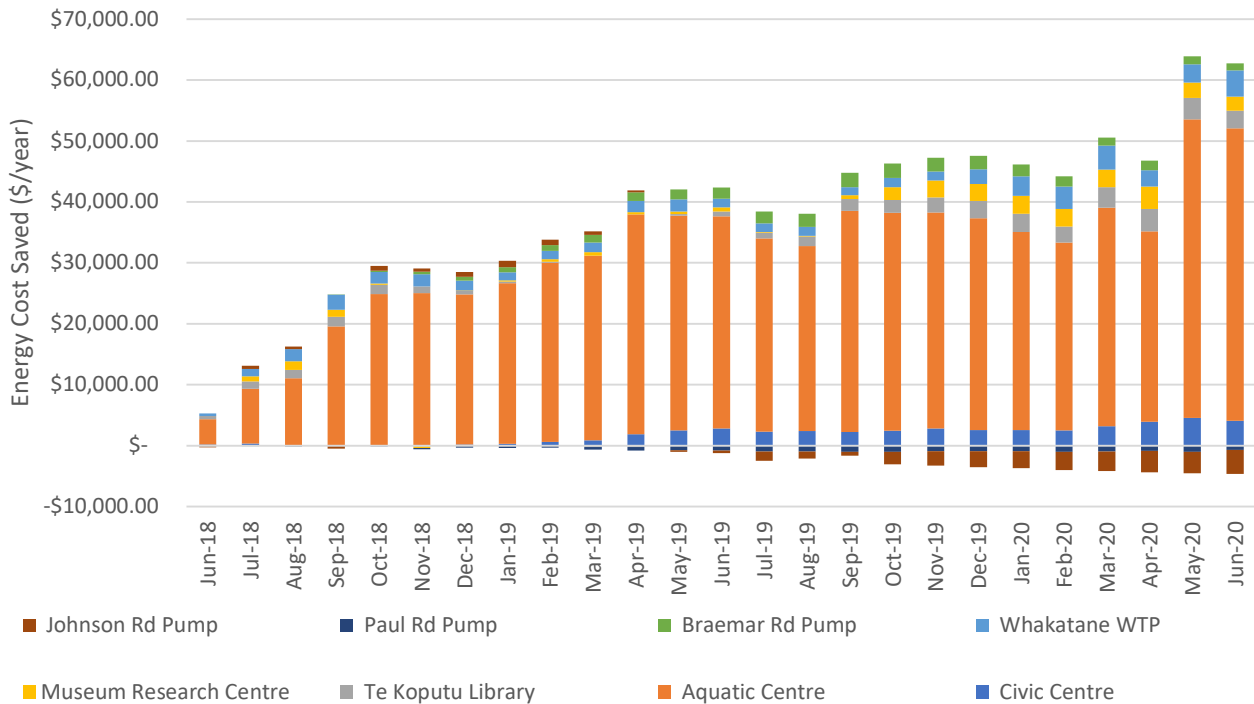




Rolling 12 month Energy Savings

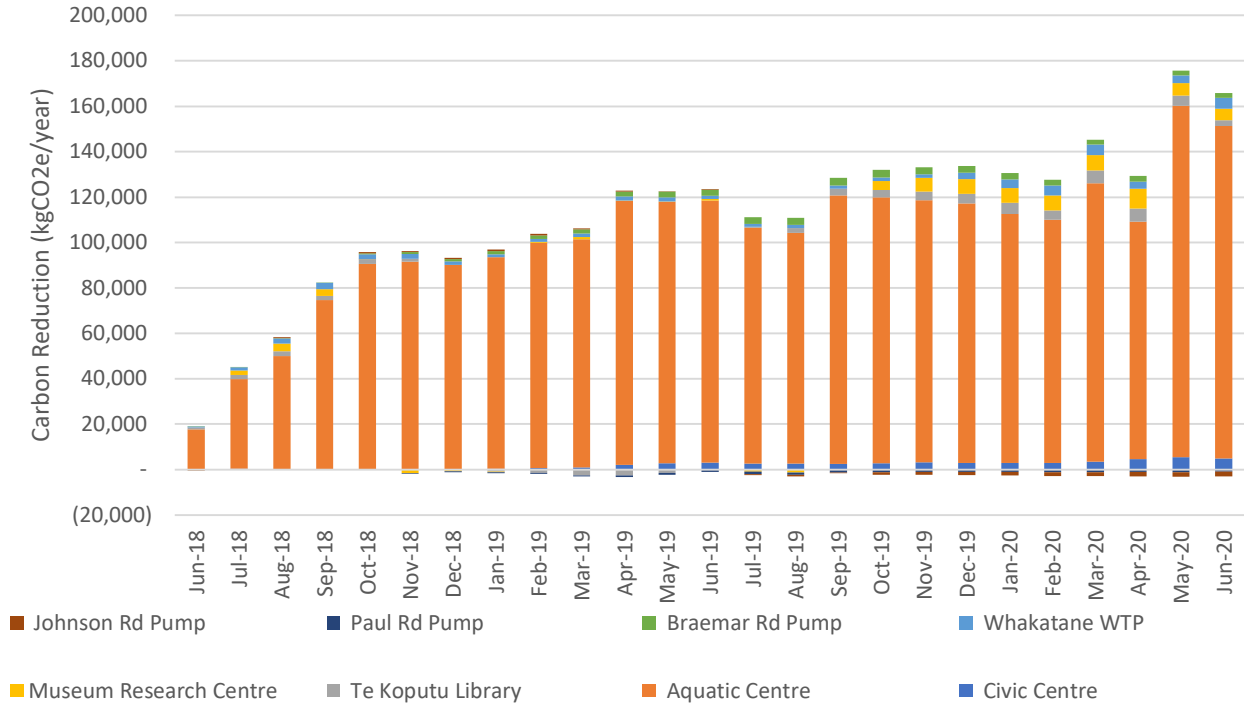


Rolling 12 month Energy Cost Savings





Rolling 12 month Carbon Savings





Civic Centre

Summary

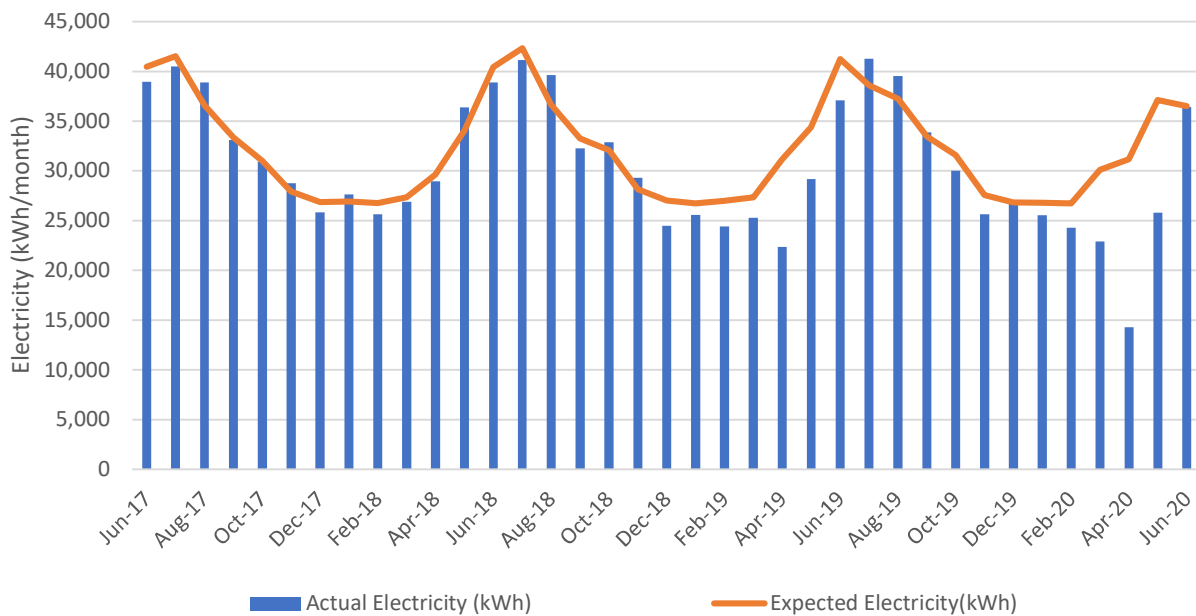
- Electricity savings for the month were 109kWh, a saving of 0.3%.
- Energy cost savings for the month were \$13.
- Carbon savings for the month were 14 kgCO₂e, a saving of 0.3%.
- Rolling 12-month electricity savings are 37,475 kWh, a saving of 9.8%.
- Rolling 12-month energy cost savings are \$4,066.
- Rolling 12-month carbon savings are 4,823 kgCO₂e, a saving of 9.8%.

Comments

June 2020 electricity use at the Civic Centre was marginally less than expected. June 2020 is one of the first months in which operations can return to more familiar ways, with the Covid-19 alert level 1. Energy use in June 2020 is similar to June 2019, although it was a warmer month this year which means expected energy is lower, because less heating should have been required.

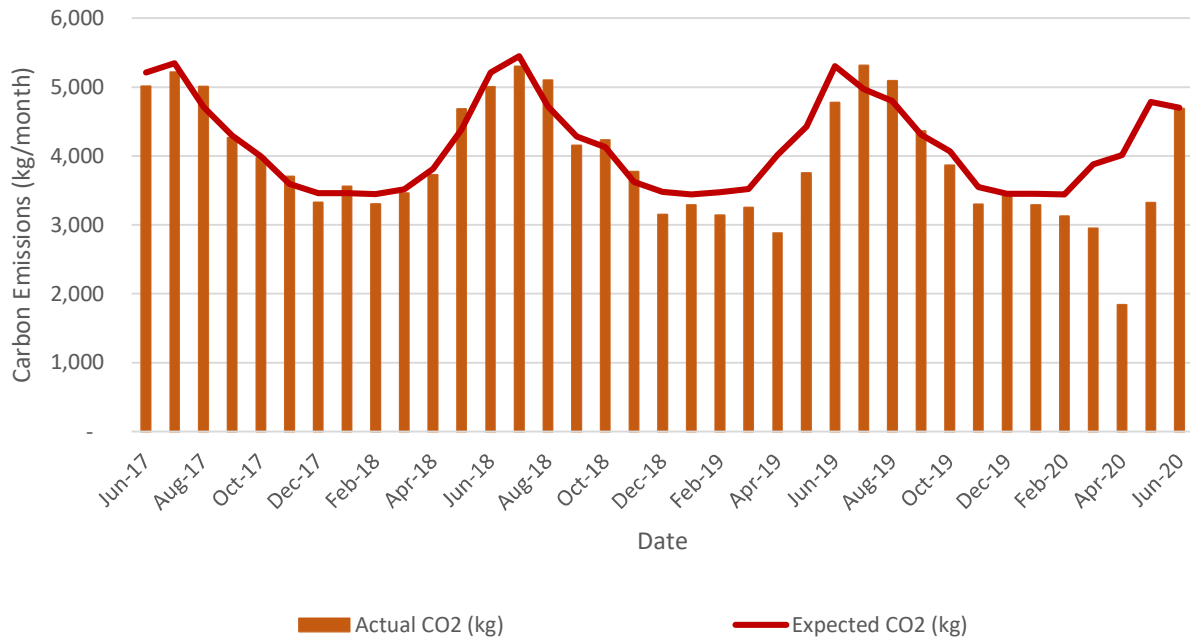
The baseline adjusts for heating degree days which is a measure of ambient temperature, however it does not adjust for occupancy because under normal circumstances this is relatively constant. It will be interesting to follow ongoing energy implications of any flexible working arrangements for staff continuing to work part time from home.

Civic Centre Actual versus Expected Electricity

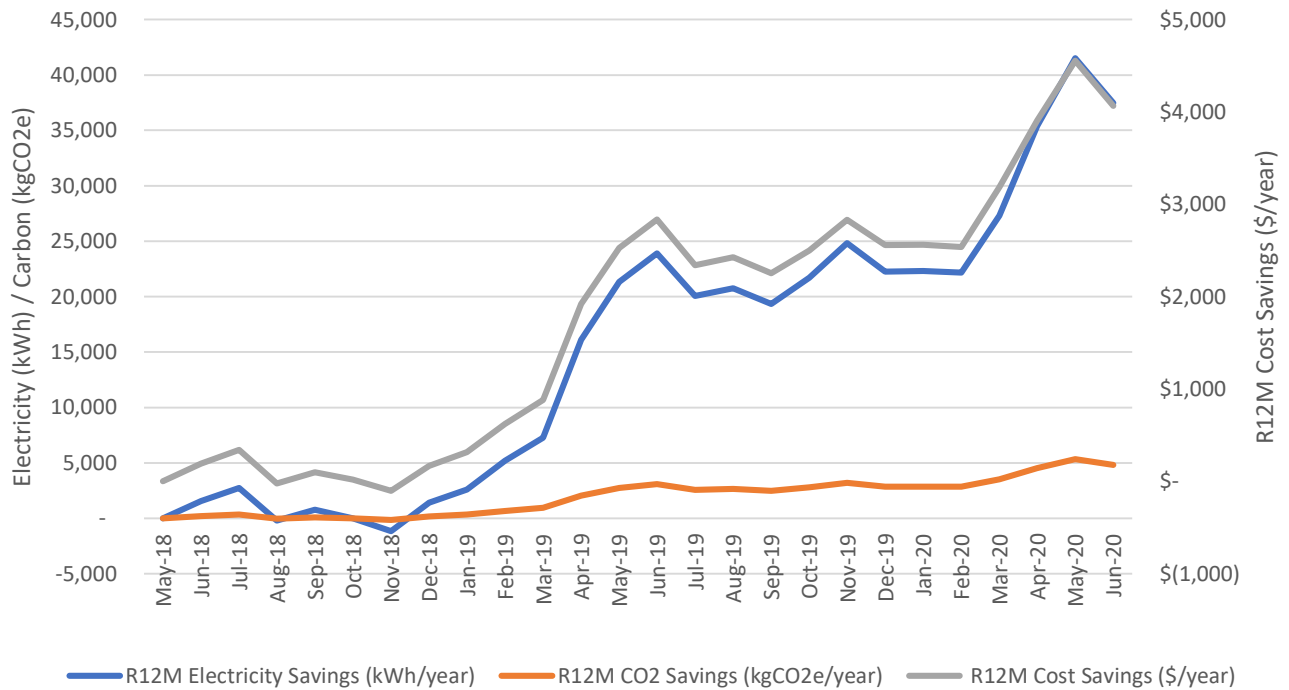




Civic Centre Actual versus Expected CO2



Civic Centre Cumulative Rolling 12 Month Savings





Aquatic Centre

Summary

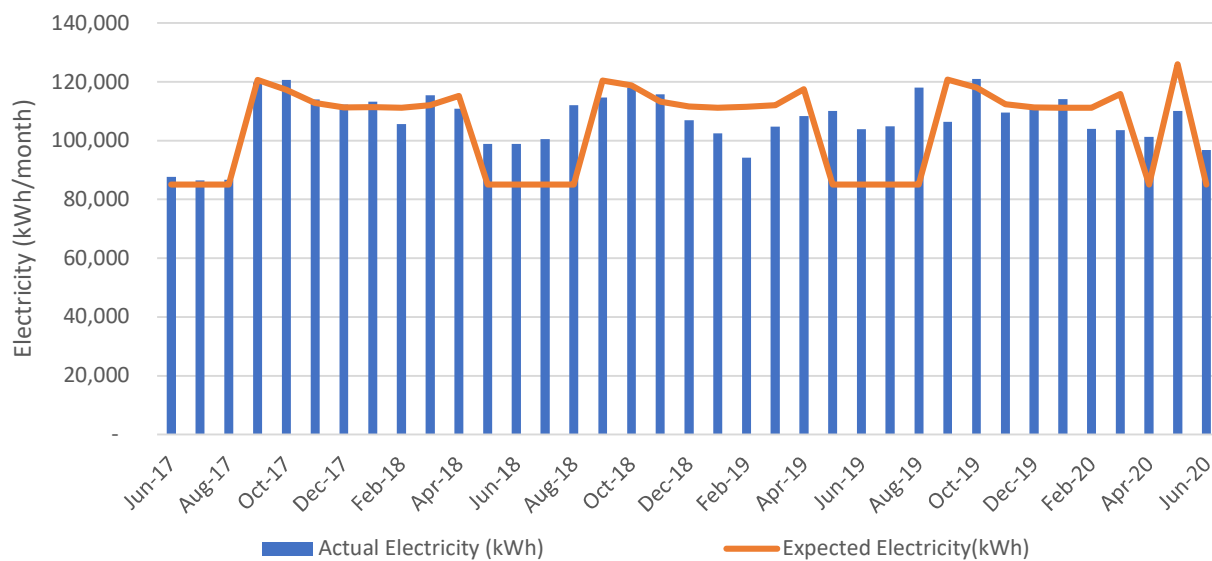
- Electricity savings for the month were -11,870kWh, an extra 14%.
- Natural gas savings for the month were 59,317 kWh, a saving of 80.8%
- Energy cost savings for the month were \$2,657.
- Carbon savings for the month were 9,550 kgCO₂e, a saving of 38.1%.
- Rolling 12-month electricity savings are -34,857 kWh, an extra 2.8%.
- Rolling 12-month natural gas savings are 738,795 kWh, a saving of 62.3%
- Rolling 12-month energy cost savings are \$48,001.
- Rolling 12-month carbon savings are 146,538 kgCO₂e, a saving of 35.6%.

Comments

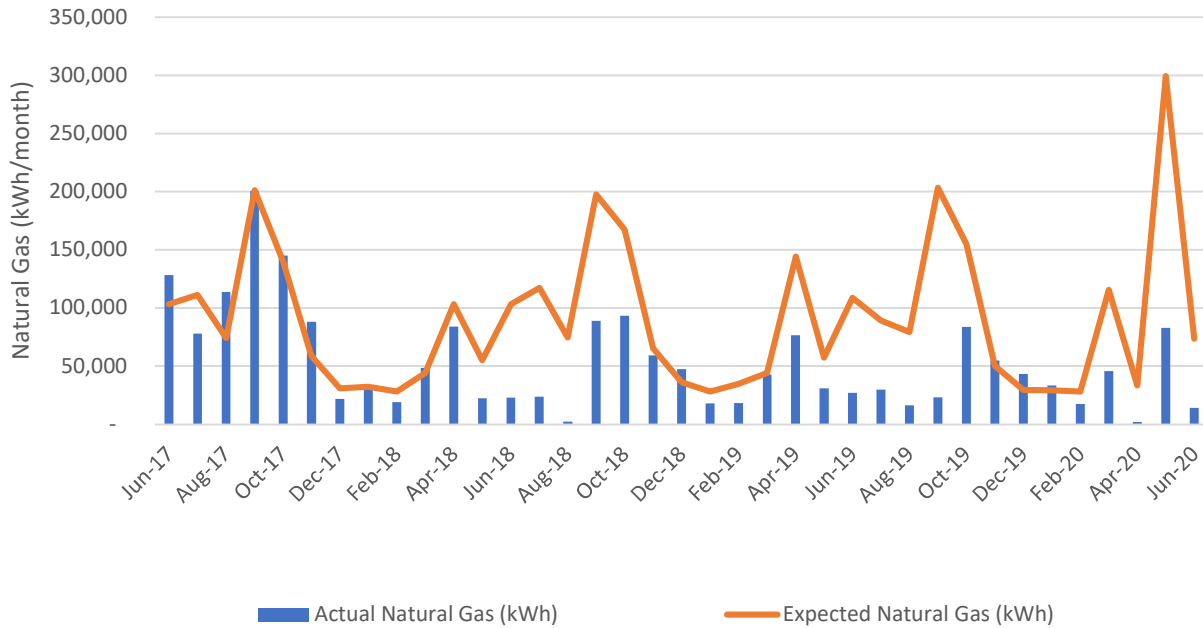
For the month of June the outdoor pool was not in use and a baseline was used which excludes outdoor pool use. When electricity use in June is compared to previous years at the Aquatic Centre, use in 2020 is approx 8% lower than 2019 and 2% lower than 2018. The Aquatic Centre has increased its use of heatpumps, however in June 2020, VSDs on lift pumps were also in use which has offset additional heatpump electricity.

Gas use was substantially lower than expected in June 2020. Prioritising heat pumps over boilers decreases natural gas use while increasing the amount of electricity used. One major benefit overall is to CO₂ emissions. For this month alone, approx 9.5 tonnes of CO₂e emissions have been prevented. In the past 12 months, 146.5 tonnes of Carbon emissions have been prevented.

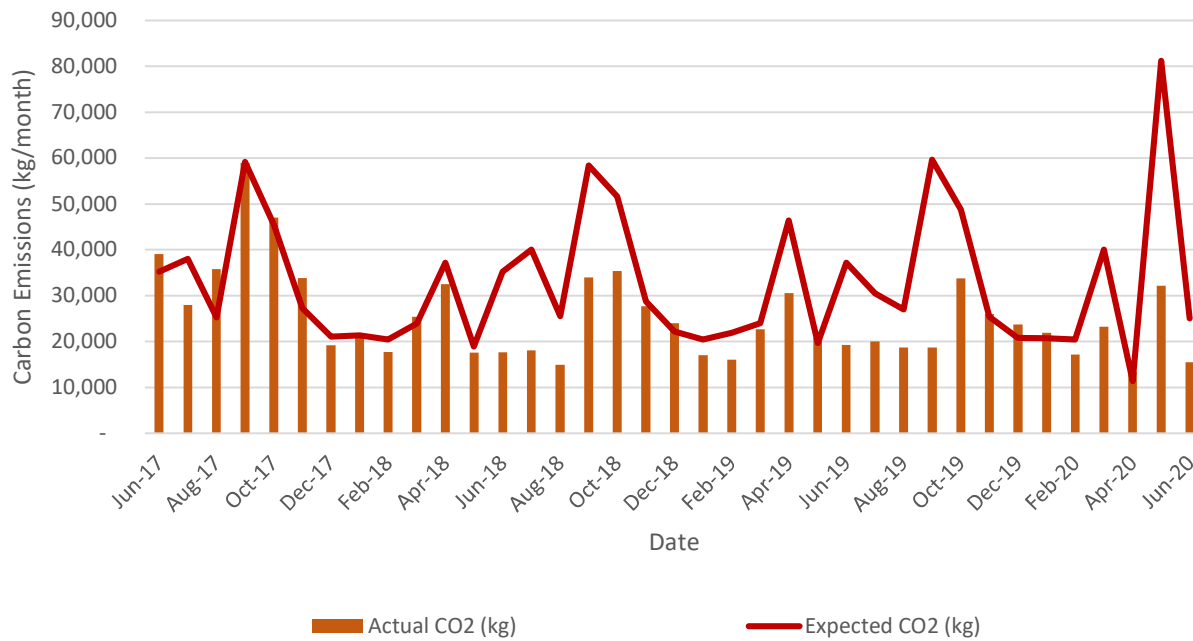
Aquatic Centre Actual versus Expected Electricity



Aquatic Centre Actual versus Expected Natural Gas

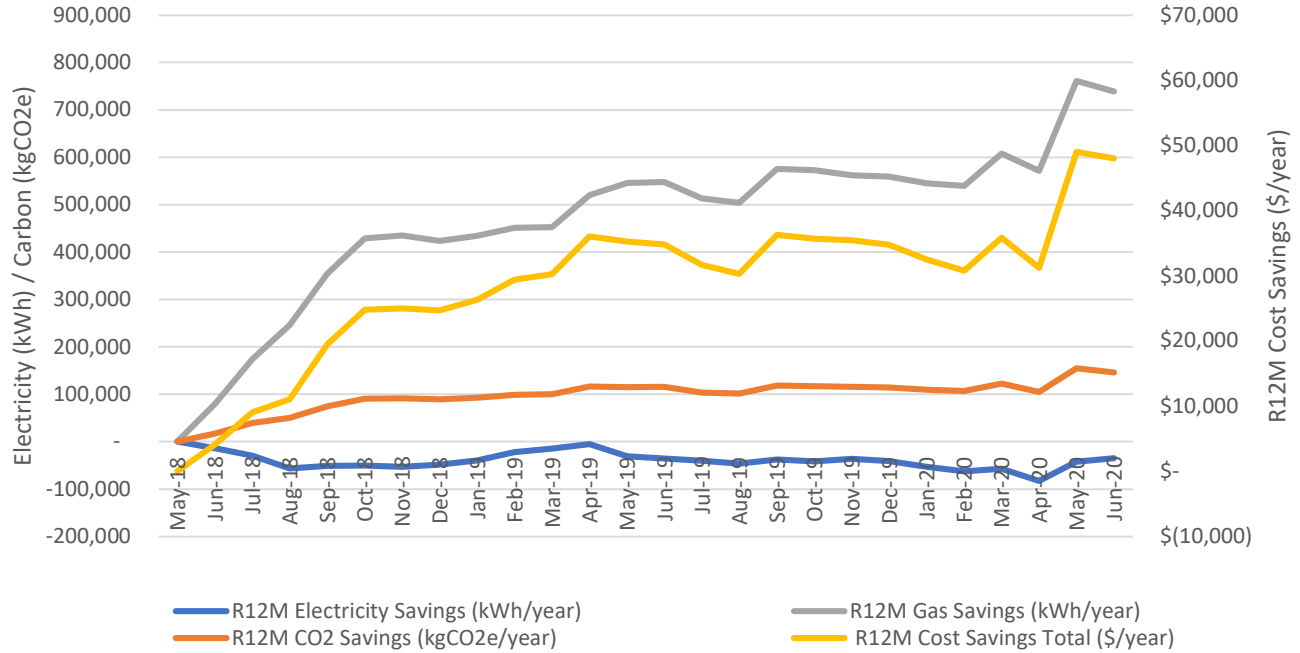


Aquatic Centre Actual versus Expected CO2





Aquatic Centre Cumulative Rolling 12 Month Savings





Te Koputu Library

Summary

- Electricity savings for the month were 5,811kWh, a saving of 36.6%.
- Natural gas savings for the month were -2,438 kWh, an extra 19.2%
- Energy cost savings for the month were \$496.
- Carbon savings for the month were 224 kgCO₂e, a saving of 4.7%.
- Rolling 12-month electricity savings are 28,988 kWh, a saving of 15.7%
- Rolling 12-month natural gas savings are -5,955 kWh, an extra 5%
- Rolling 12-month energy cost savings are \$2,907.
- Rolling 12-month carbon savings are 2,493 kgCO₂e, a saving of 5.1%.

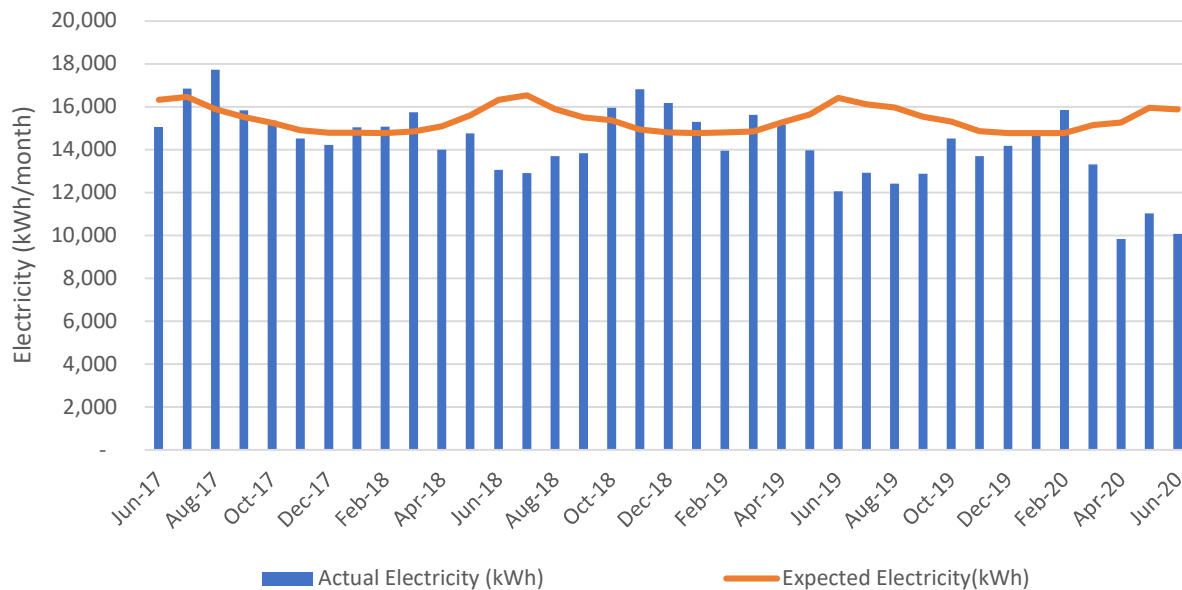
Comments

The library achieved significant electricity savings in May and June 2020; however, this has been accompanied by an increase in natural gas use for these months.

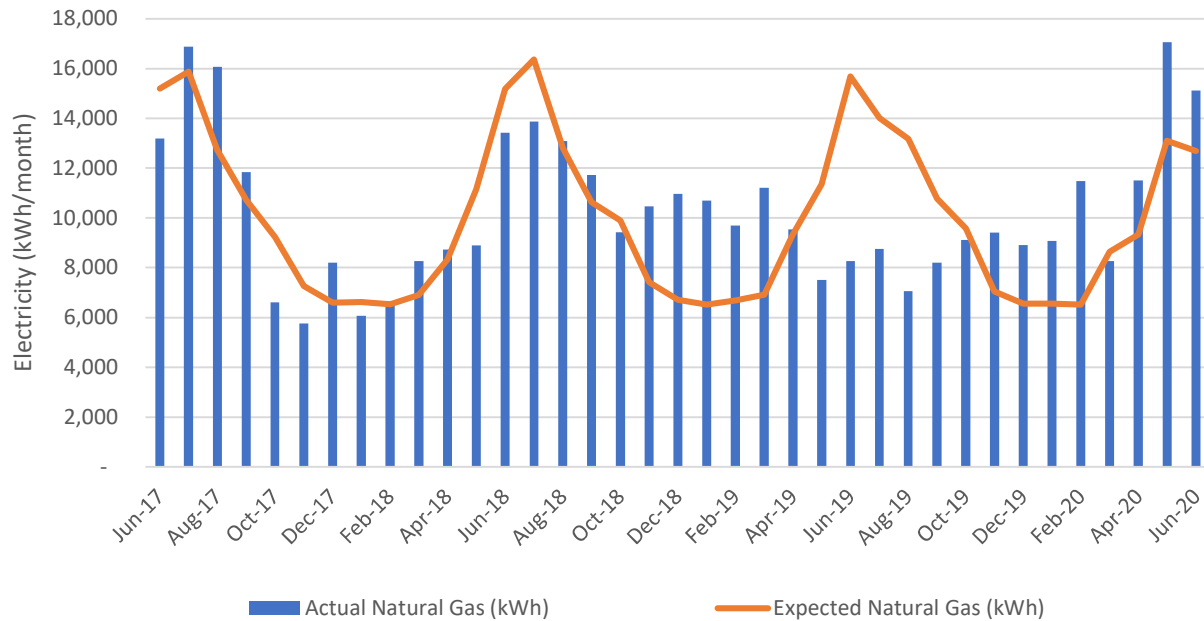
In 2017 and 2018 winters, gas use was at its peak. In 2019, winter gas use was lower than in summer. May and June 2020 more closely resemble baseline figures. Compared to June 2018, June 2020 gas use is approximately 9% higher and it was also a warmer month.

The HVAC system at the library continues to be an area of erratic performance.

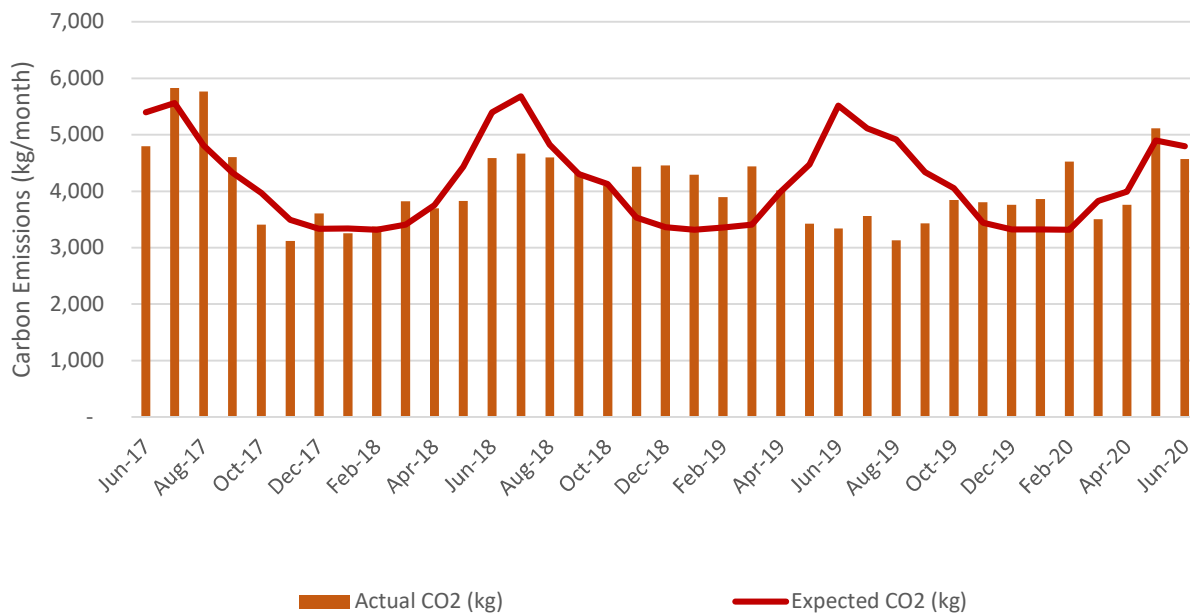
Te Koputu Library Actual versus Expected Electricity



Te Koputu Library Actual versus Expected Natural Gas

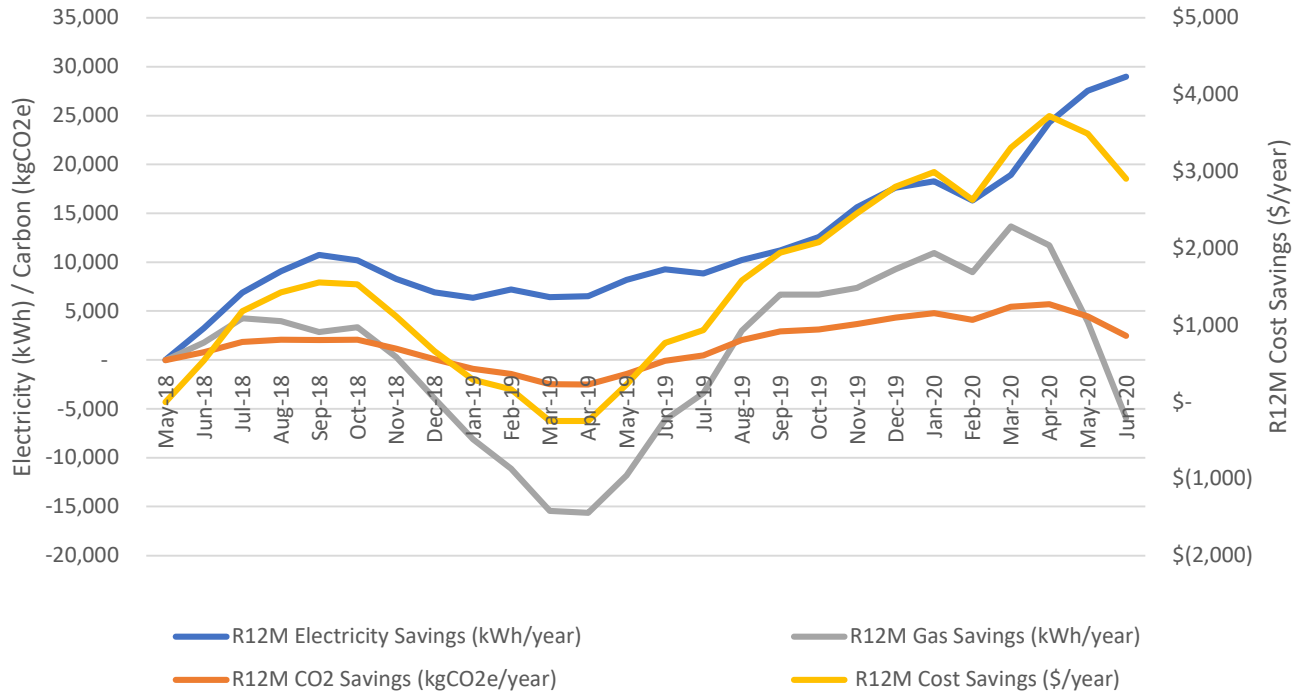


Te Koputu Library Actual versus Expected CO2





Te Koputu Library Cumulative Rolling 12 Month Savings





Museum Research Centre

Summary

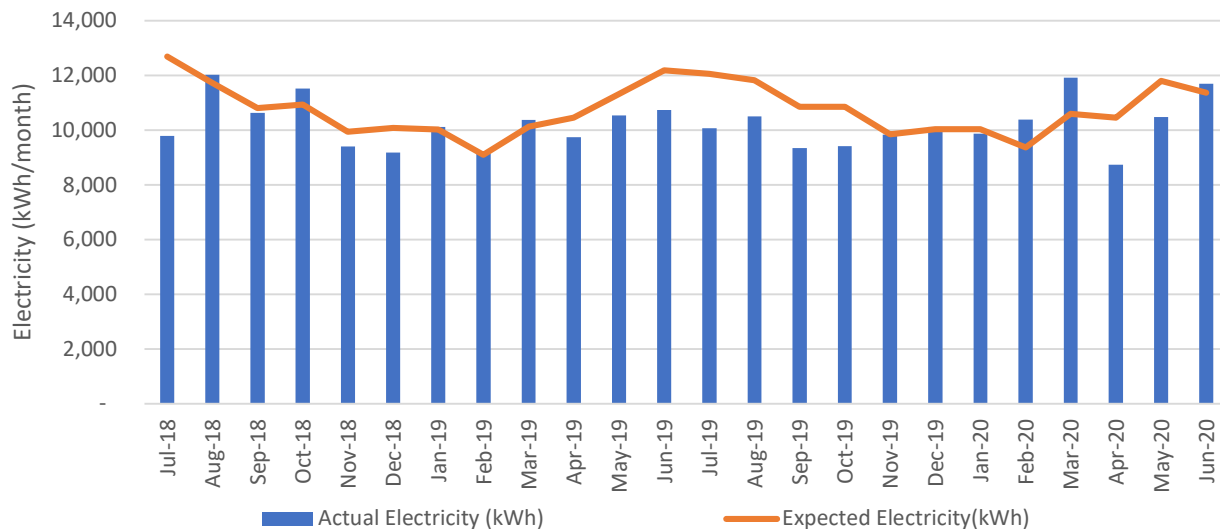
- Electricity savings for the month were -324kWh, an extra 2.9%.
- Natural gas savings for the month were 638 kWh, a saving of 9.4%
- Energy cost savings for the month were \$9.
- Carbon savings for the month were 97 kgCO₂e, a saving of 3.3%.
- Rolling 12-month electricity savings are 6,699 kWh, a saving of 5.2%
- Rolling 12-month natural gas savings are 19,095 kWh, a saving of 24.7%
- Rolling 12-month energy cost savings are \$2,262.
- Rolling 12-month carbon savings are 5,002 kgCO₂e, a saving of 15%.

Comments

Electricity use at the Museum and Research Centre is above baseline for June and up by 9% compared to June 2019, despite it being a warmer month. June 2020 is the third month in a row that electricity use has increased, however April and May were affected by the lockdown.

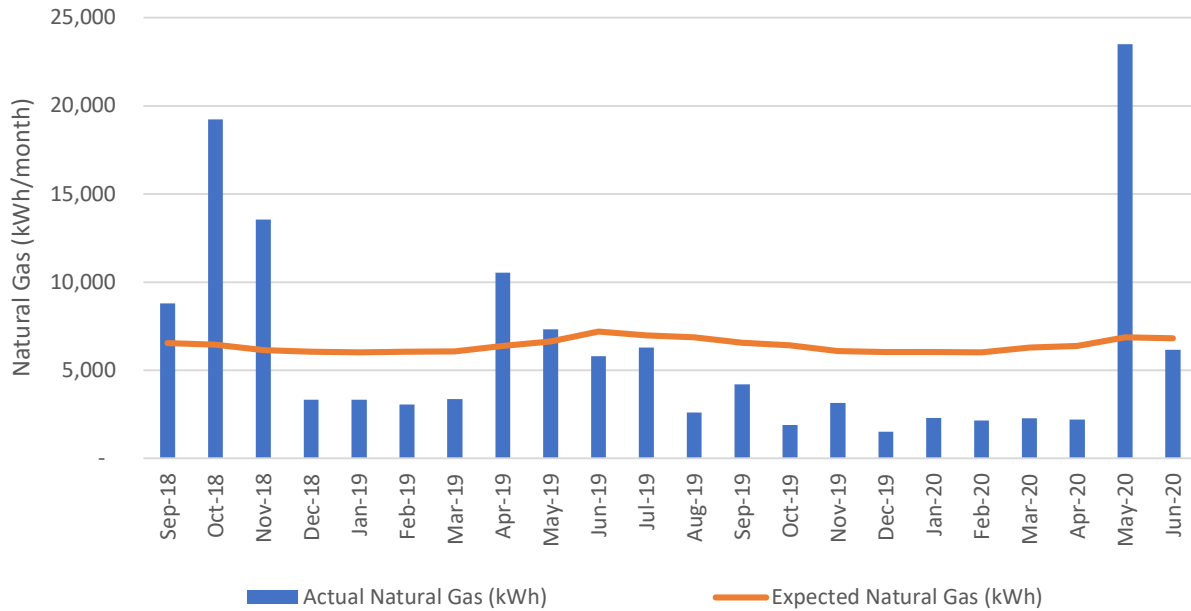
Gas use for June 2020 has decreased by 74% compared to May 2020 and are approx 9% below baseline. to better understand gas use at the museum, daily readings of the meter could be taken manually. Daily gas use could help to identify factors associated with gas use and would also help to avoid retailer estimated months, which can be substantially different to actual use.

Museum Research Centre Actual versus Expected Electricity

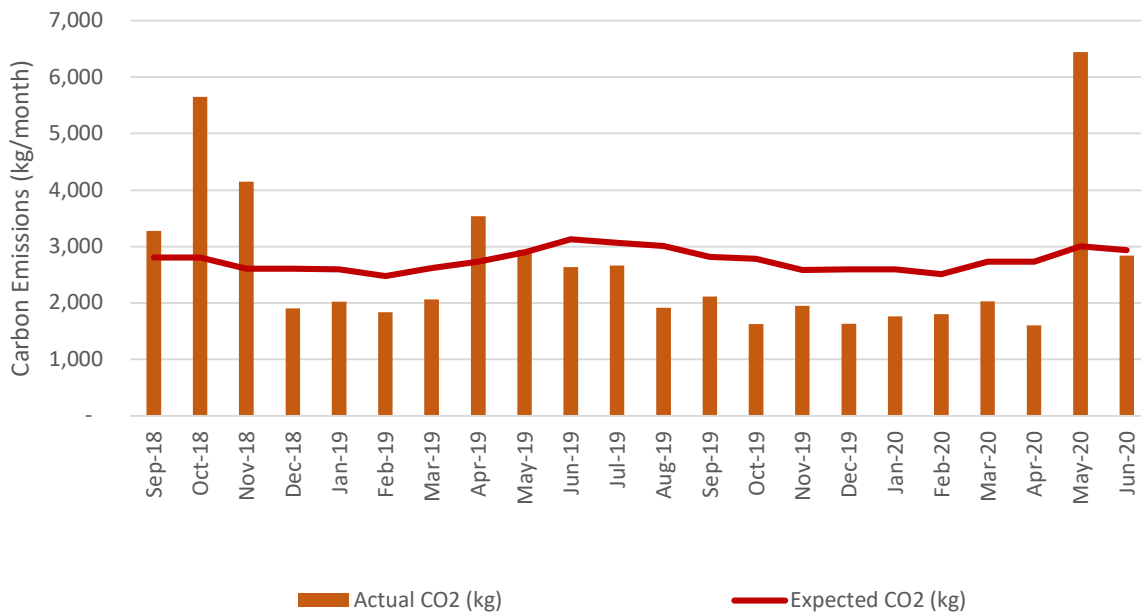


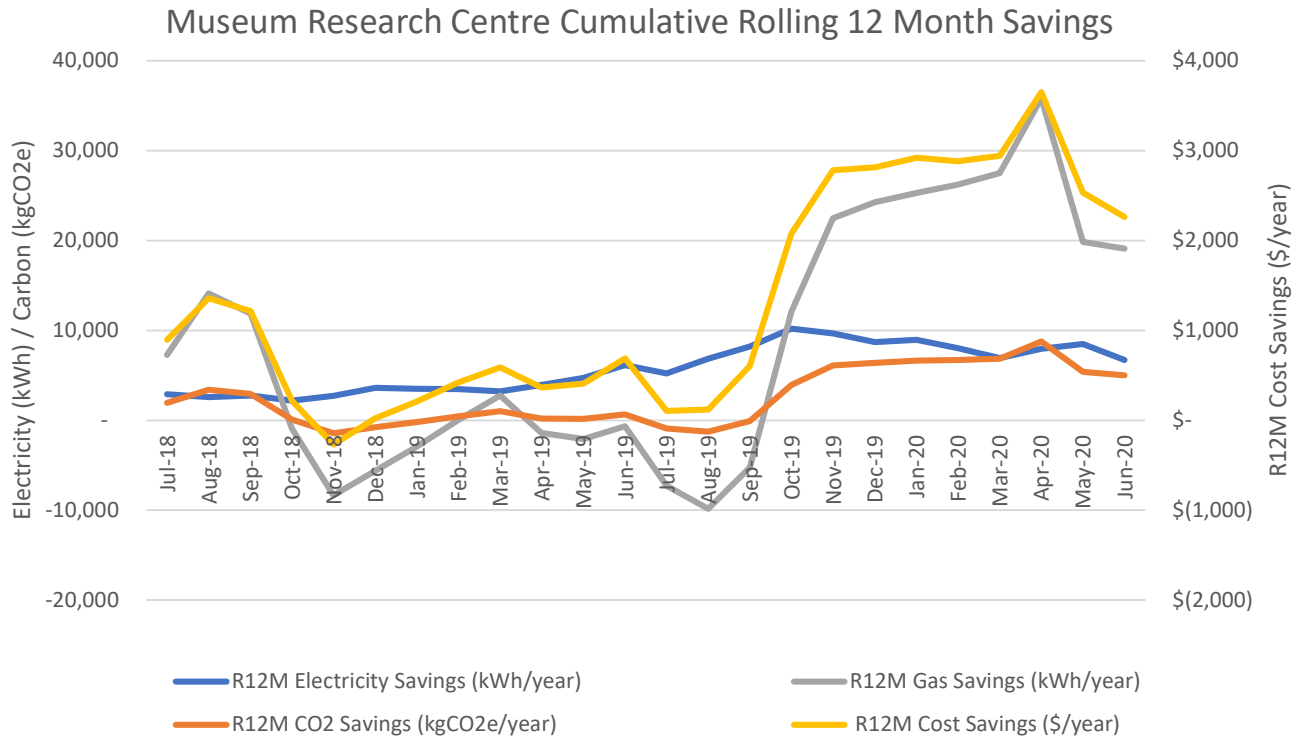


Museum Research Centre Actual versus Expected Natural Gas



Museum Research Centre Actual versus Expected CO2







Whakatāne Water Treatment Plant

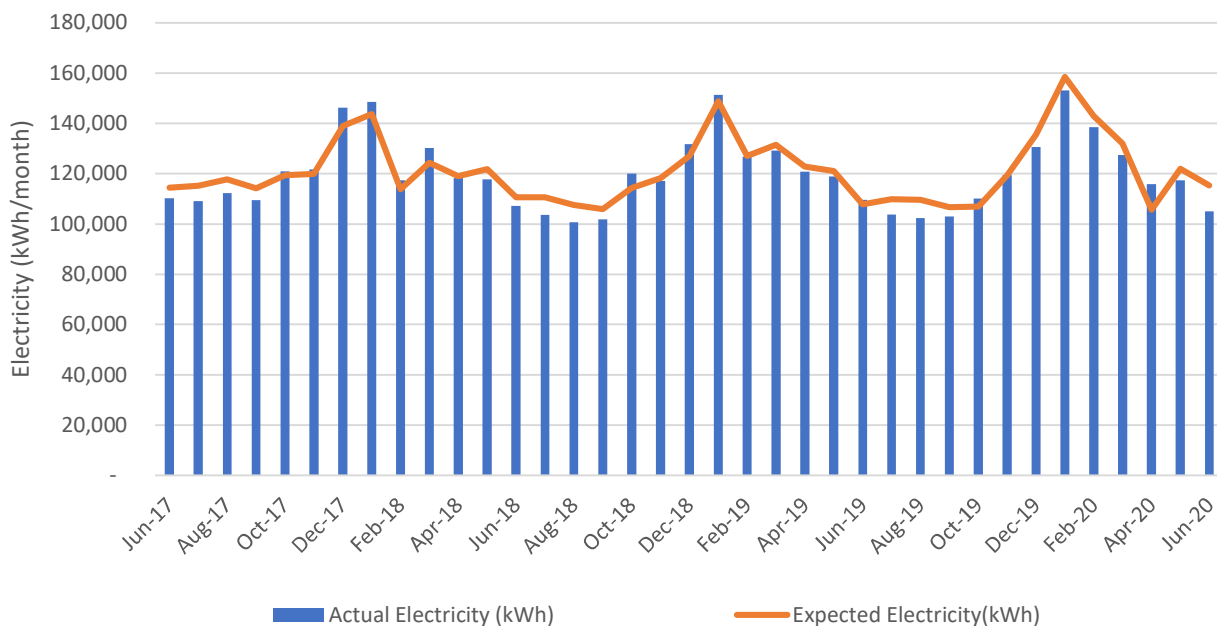
Summary

- Electricity savings for the month were 10,409kWh, a saving of 9%.
- Energy cost savings for the month were \$1,175.
- Carbon savings for the month were 1,340 kgCO2e, a saving of 9%.
- Rolling 12-month electricity savings are 38,115 kWh, a saving of 2.6%.
- Rolling 12-month energy cost savings are \$4,306.
- Rolling 12-month carbon savings are 4,905 kgCO2e, a saving of 2.6%.

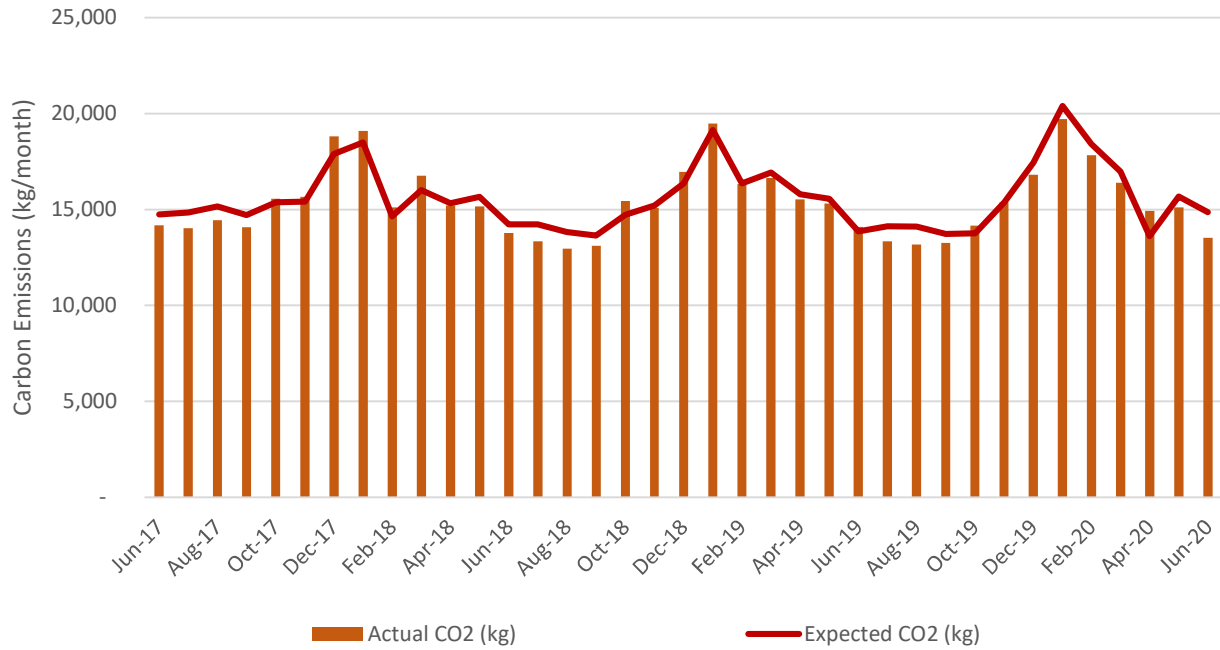
Comments

The water treatment plant achieved approx 9% in electricity savings for the month of June 2020 which is its largest monthly saving to date. Electricity savings have been achieved at the Water Treatment Plant for six of the last seven months; April 2020's increase in electricity was an anomaly due to a blocked pump.

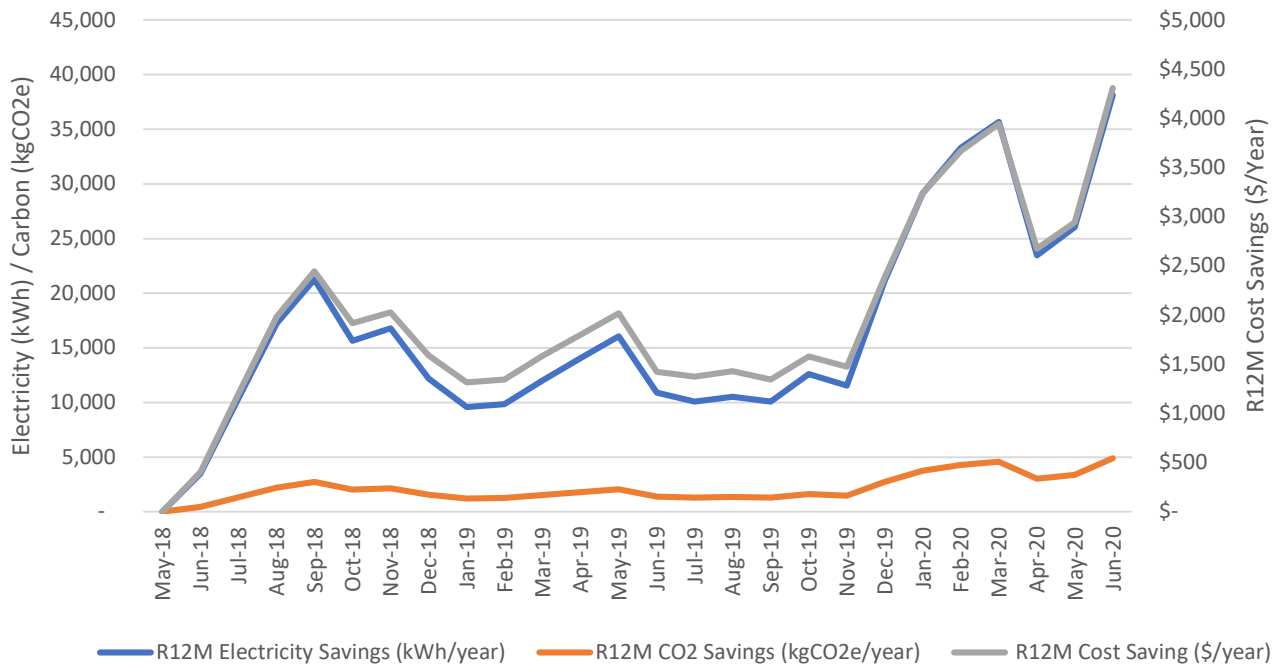
Water Treatment Plant Actual versus Expected Electricity



Water Treatment Plant Actual versus Expected CO2



Whakatane Water Treatment Plant Cumulative Rolling 12 Month Savings





Braemar Rd Pump Station

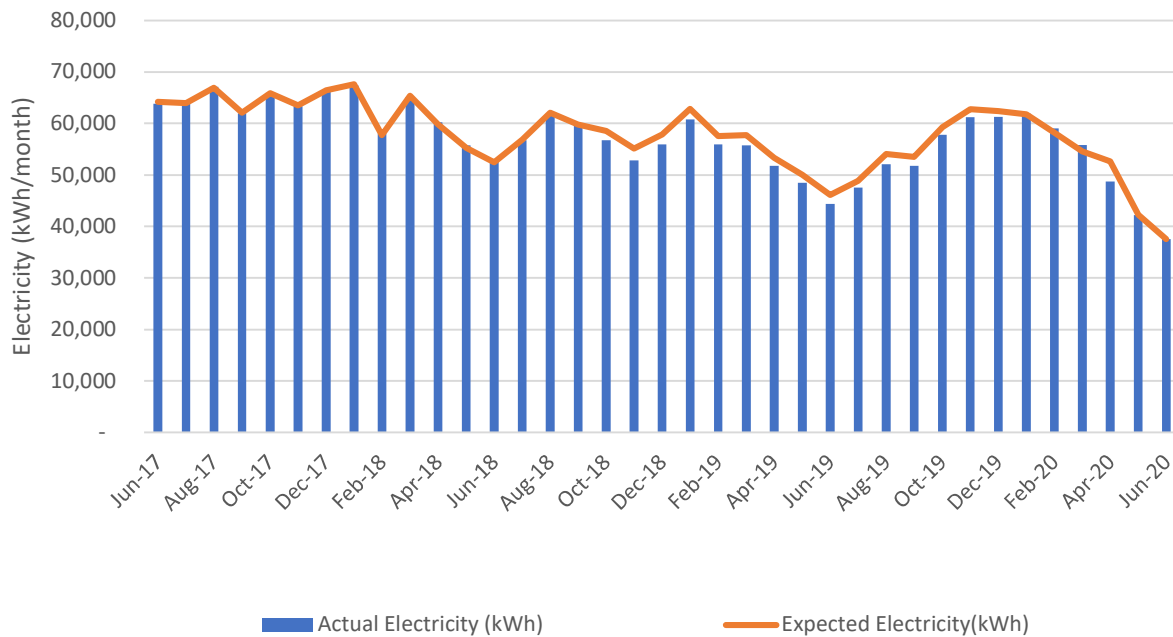
Summary

- Electricity savings for the month were -22kWh, an extra 0.1%.
- Energy cost savings for the month were -\$2, which is an increase.
- Carbon savings for the month were 158 kgCO₂e, a saving of 0.1%.
- Rolling 12-month electricity savings are 11,053 kWh, a saving of 1.7%.
- Rolling 12-month energy cost savings are \$1,172.
- Rolling 12-month carbon savings are 2,114 kgCO₂e, a saving of 1.7%.

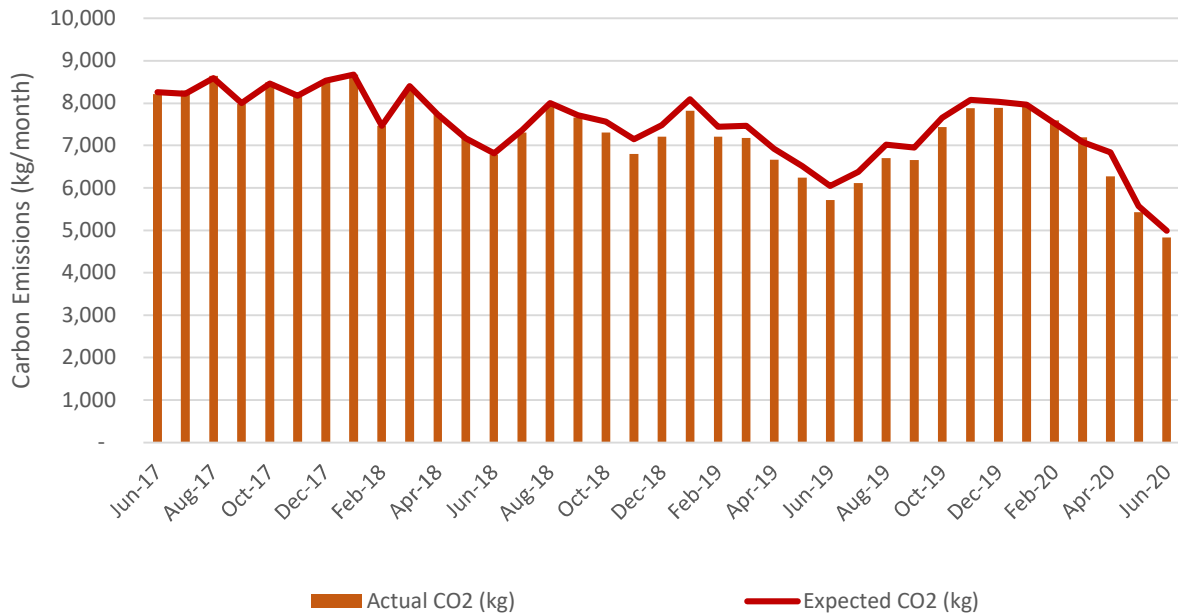
Comments

Braemar Rd electricity use was close to expected for the month of June. Electricity used is 15% less than June 2019 which is due to lower demand for water. Compared to last year, pumped water has decreased at Braemar Road and increased at Paul Road Pump Station. Braemar Rd was due to have a new pump system installed at the end of June, the effect of which will be picked up in July monitoring.

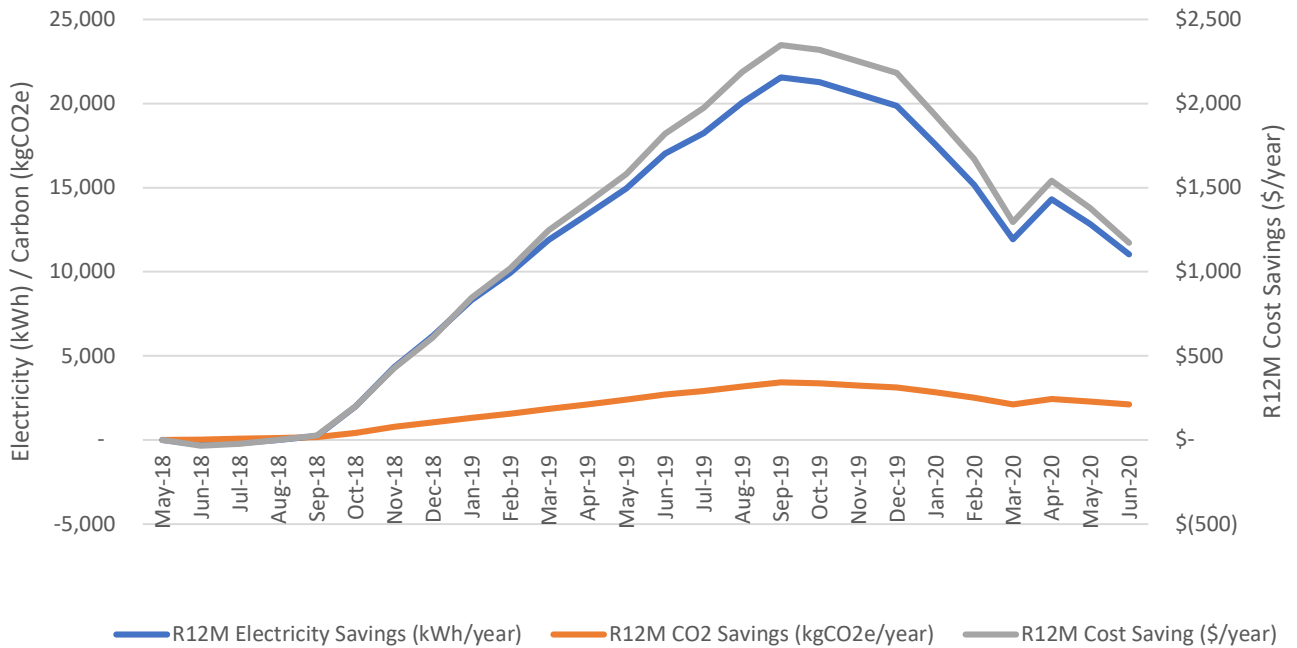
Braemar Rd Actual versus Expected Electricity



Braemar Rd Actual versus Expected CO2



Braemar Rd Pumps Cumulative Rolling 12 Month Savings





Paul Rd Pump Station

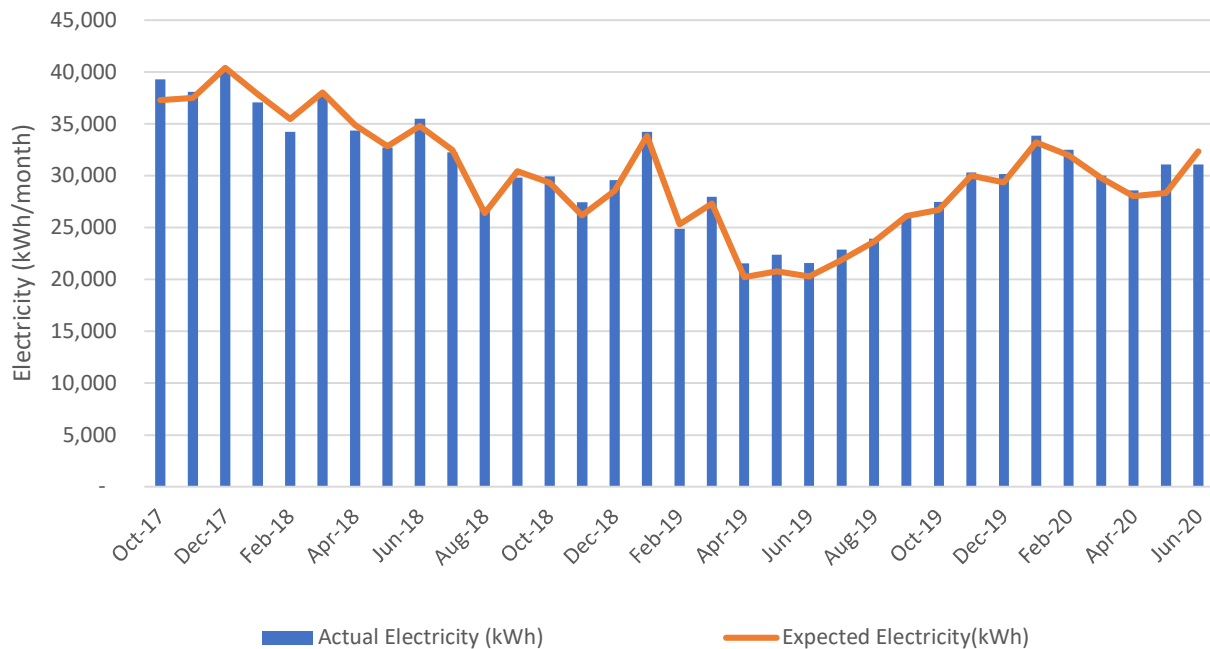
- Electricity savings for the month were 1,280kWh, a saving of 4%.
- Energy cost savings for the month were \$145.
- Carbon savings for the month were 165 kgCO₂e, a saving of 4%.
- Rolling 12-month electricity savings are -6,353 kWh, an extra 1.9%.
- Rolling 12-month energy cost savings are -\$682, which is an increase.
- Rolling 12-month carbon savings are -810 kgCO₂e, an extra 1.9%.

Comments

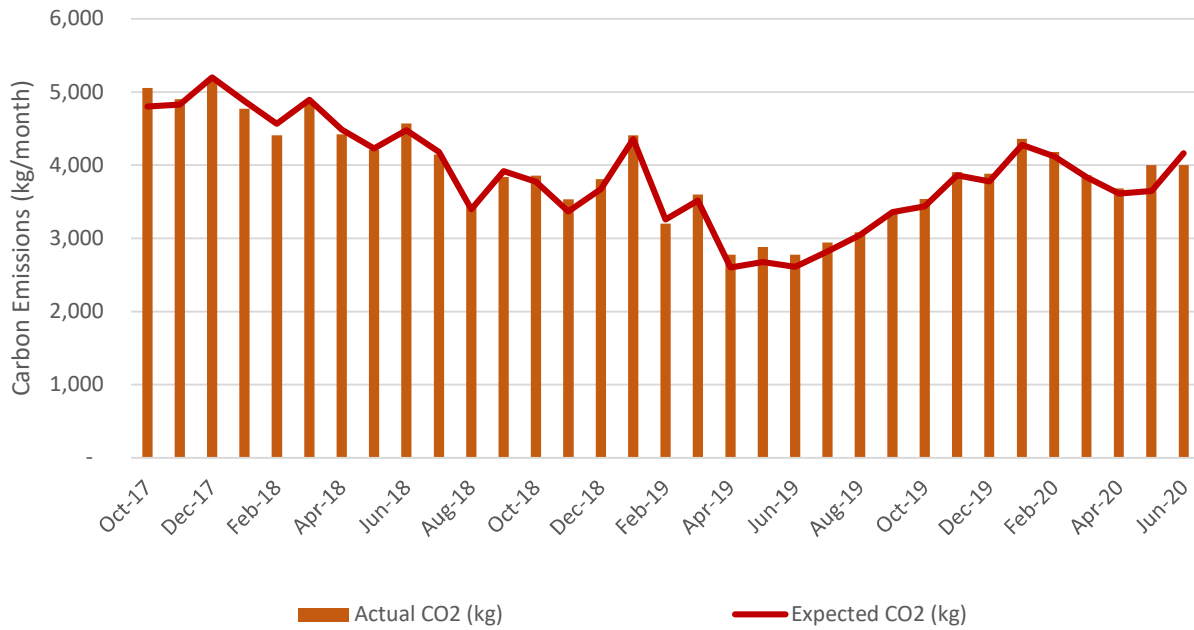
Total electricity used by the Paul Rd pump station has increased by approximately 44% compared to June 2019, which was a historic minimum.

Compared to May 2020, electricity use is almost identical; however, more water has been pumped in June, resulting in a savings for the month. This is the first month since September 2019 that a savings has been achieved.

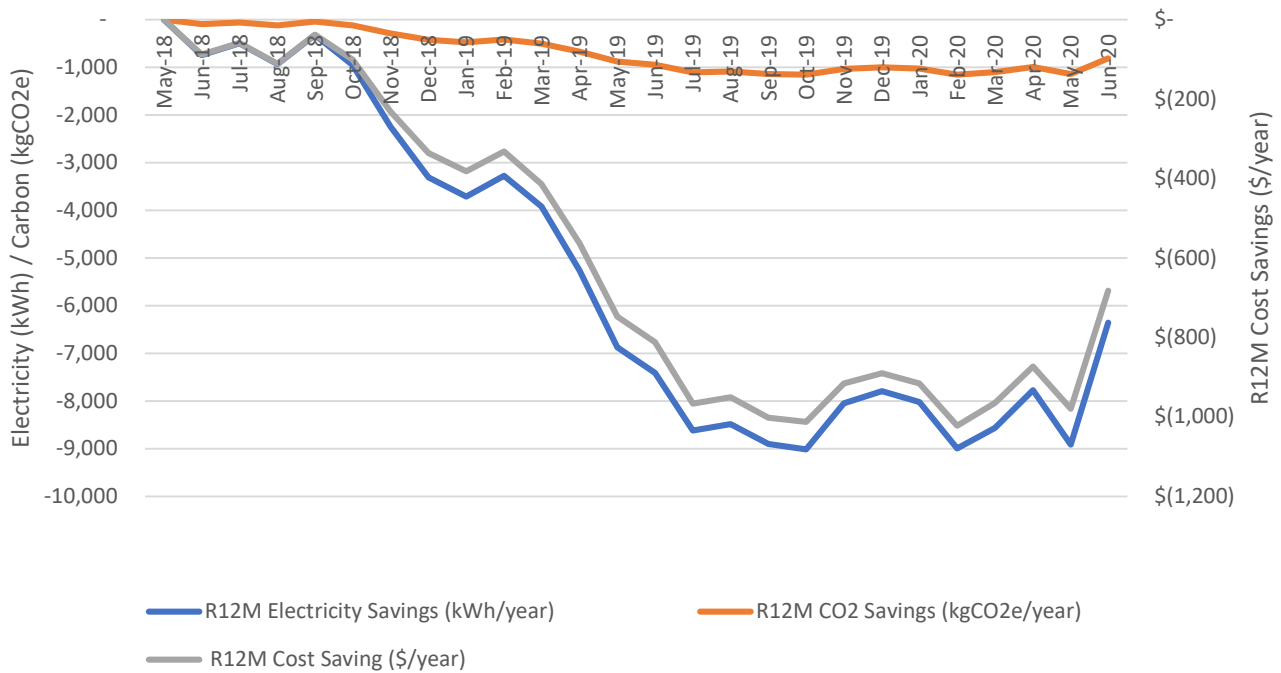
Paul Rd Pump Station Actual versus Expected Electricity



Paul Rd Pump Station Actual versus Expected CO2



Paul Rd Pumps Cumulative Rolling 12 Month Savings





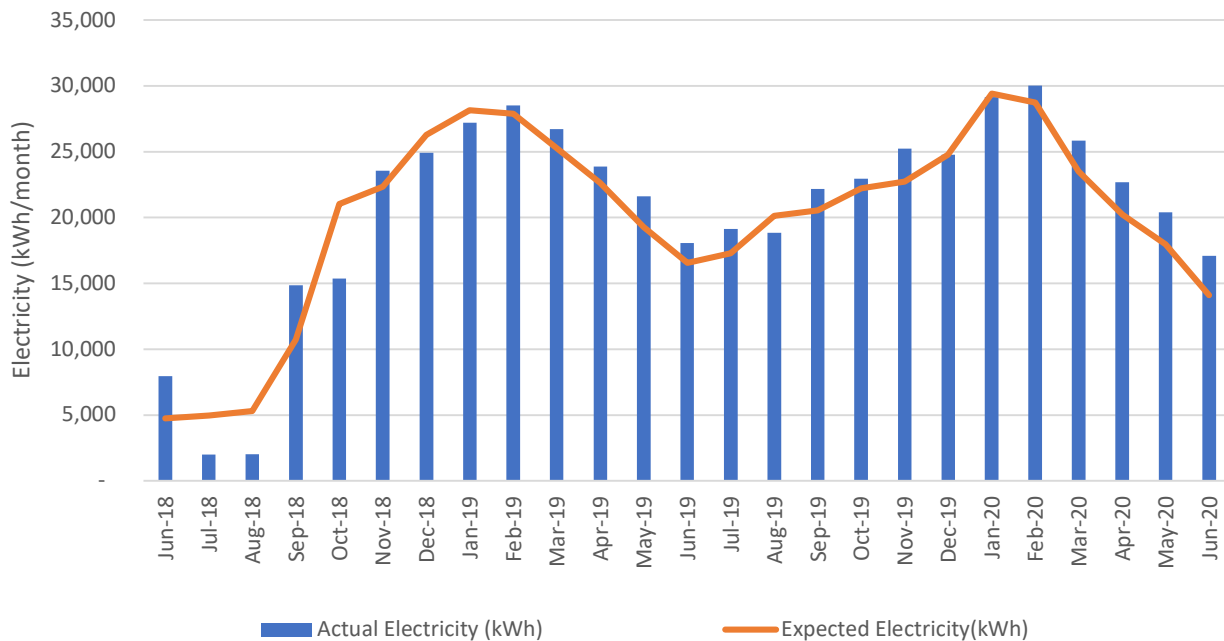
Johnson Rd Pump Station

- Electricity savings for the month were -2,998kWh, an extra 21.3%.
- Energy cost savings for the month were -\$758, which is an increase.
- Carbon savings for the month were -385 kgCO2e, an extra 21.3%.
- Rolling 12-month electricity savings are -16,564 kWh, an extra 6.3%.
- Rolling 12-month energy cost savings are -\$3,958, which is an increase.
- Rolling 12-month carbon savings are -2,118 kgCO2e, an extra 6.3%.

Comments

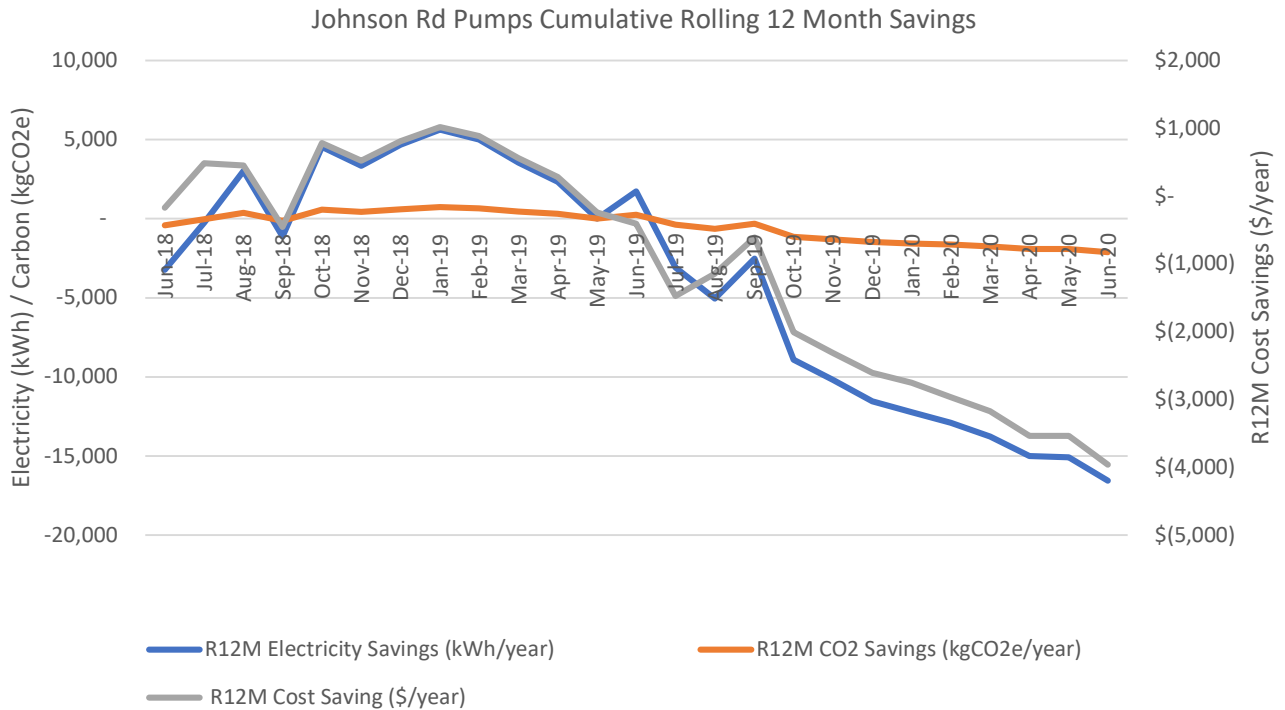
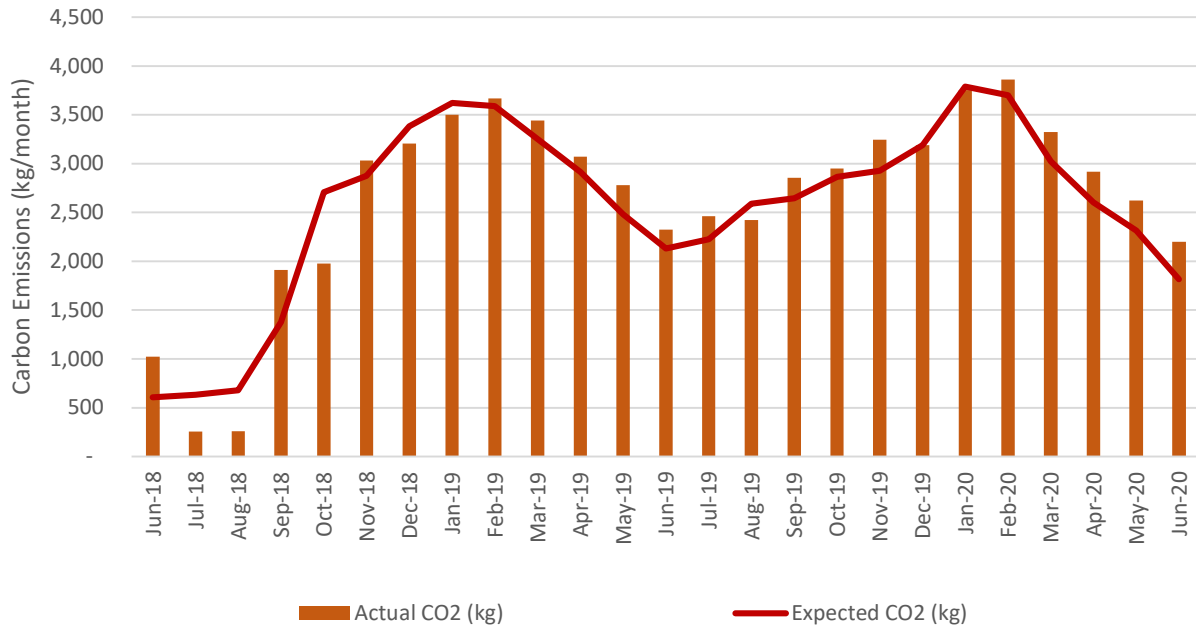
Compared to June 2019, electricity use is approx 5% lower in June 2020. Electricity used by the Johnson Rd pump station in June 2020 continues to be higher than expected for the month (adjusted for volume of water pumped). This is similar to results from Feb to May where electricity use was higher than expected each margin by approximately the same margin. This may be related to a pump failure at Braemar which has increased the work done by Johnson Rd pumps.

Johnson Rd Pump Station Actual versus Expected Electricity





Johnson Rd Pump Station Actual versus Expected CO2





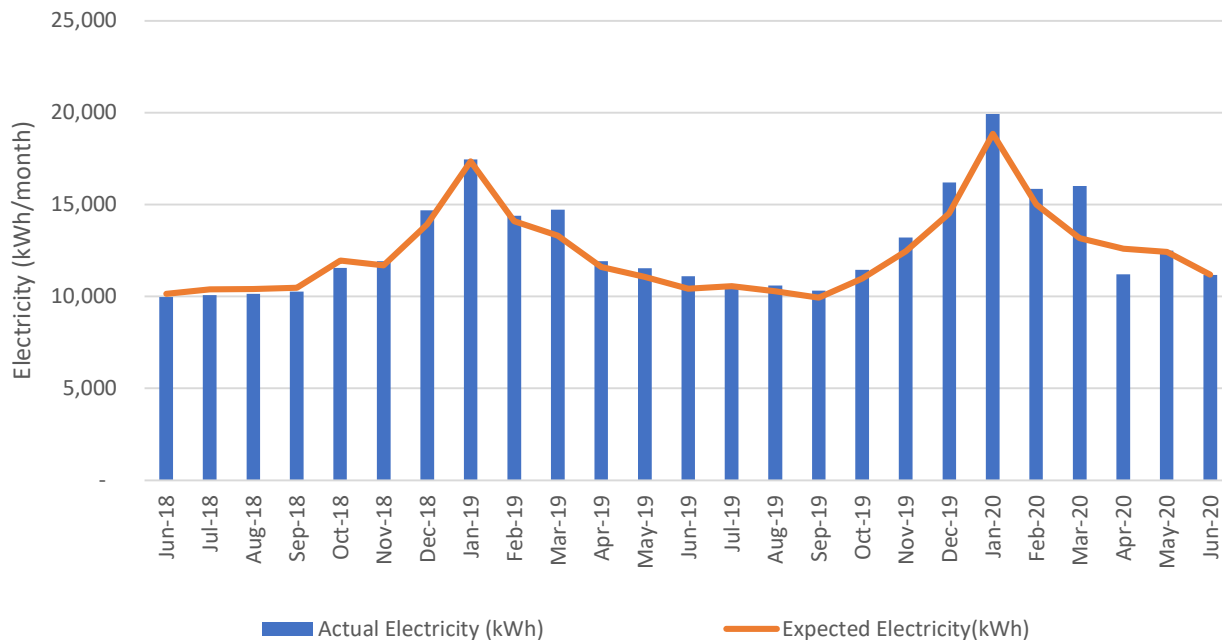
Bridger Glade Pump Station

- Electricity savings for the month were 7kWh, a saving of 0.1%.
- Energy cost savings for the month were \$2.
- Carbon savings for the month were 1 kgCO2e, a saving of 0.1%.
- Rolling 12-month electricity savings are -7,128 kWh, an extra 4.7%.
- Rolling 12-month energy cost savings are -\$1,381, which is an increase.
- Rolling 12-month carbon savings are -917 kgCO2e, an extra 4.7%.

Comments

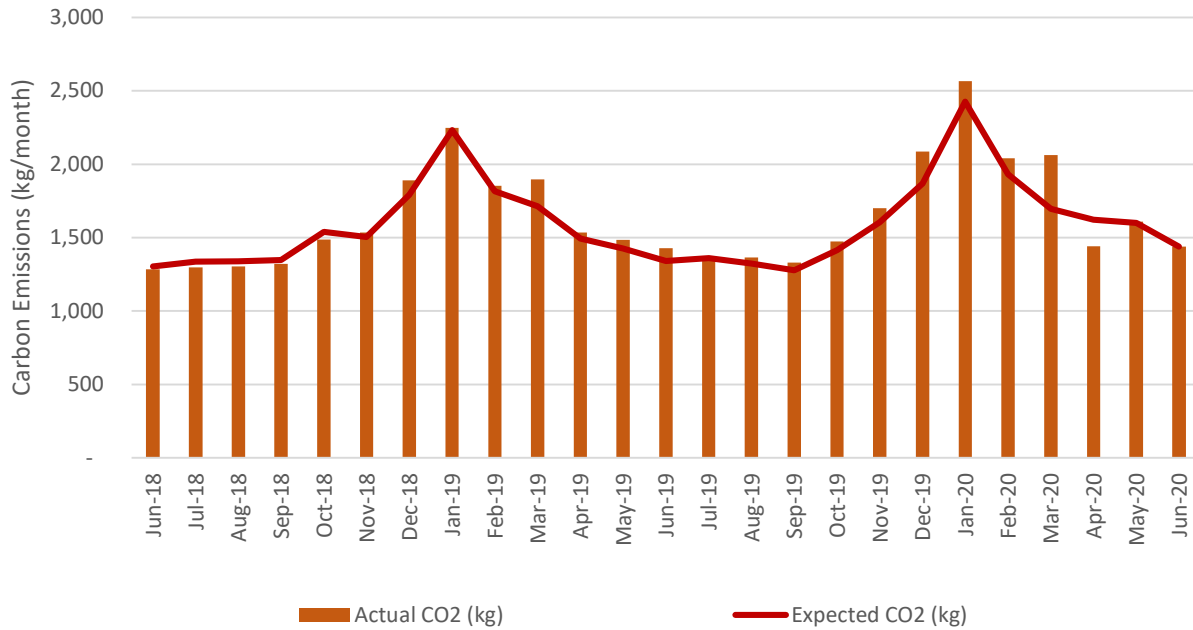
Electricity use at Bridger Glade has been at or above baseline for the since November 2018,with the exception of April 2020.In May and June 2020, electricity was virtually identical to expected electricity.

Bridger Glade Pump Station Actual versus Expected Electricity





Bridger Glade Pump Station Actual versus Expected CO2



Bridger Glade Pumps Cumulative Rolling 12 Month Savings

