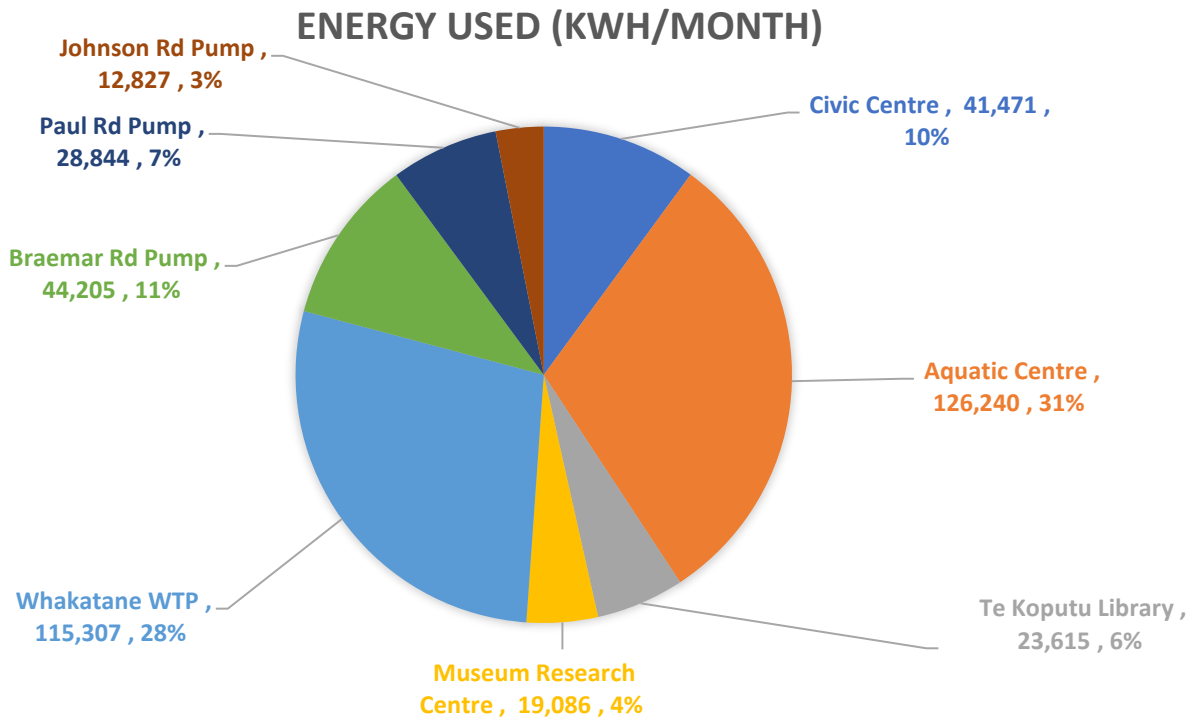


Whakatāne District Council Energy Performance Report

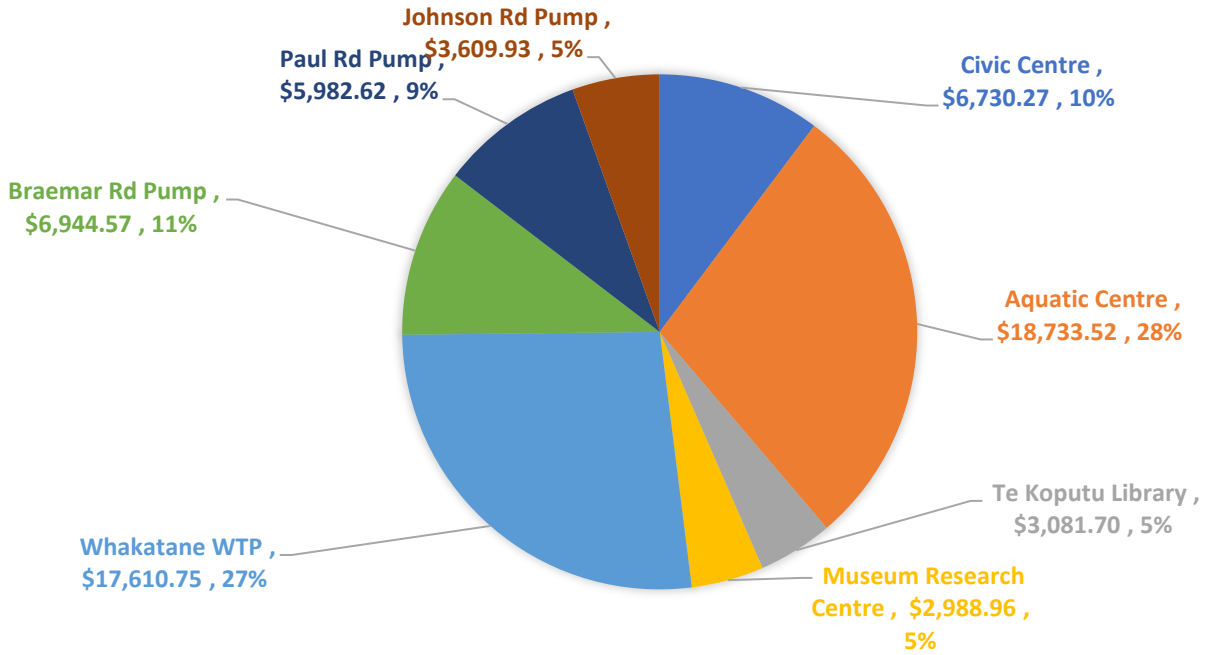
Summary

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

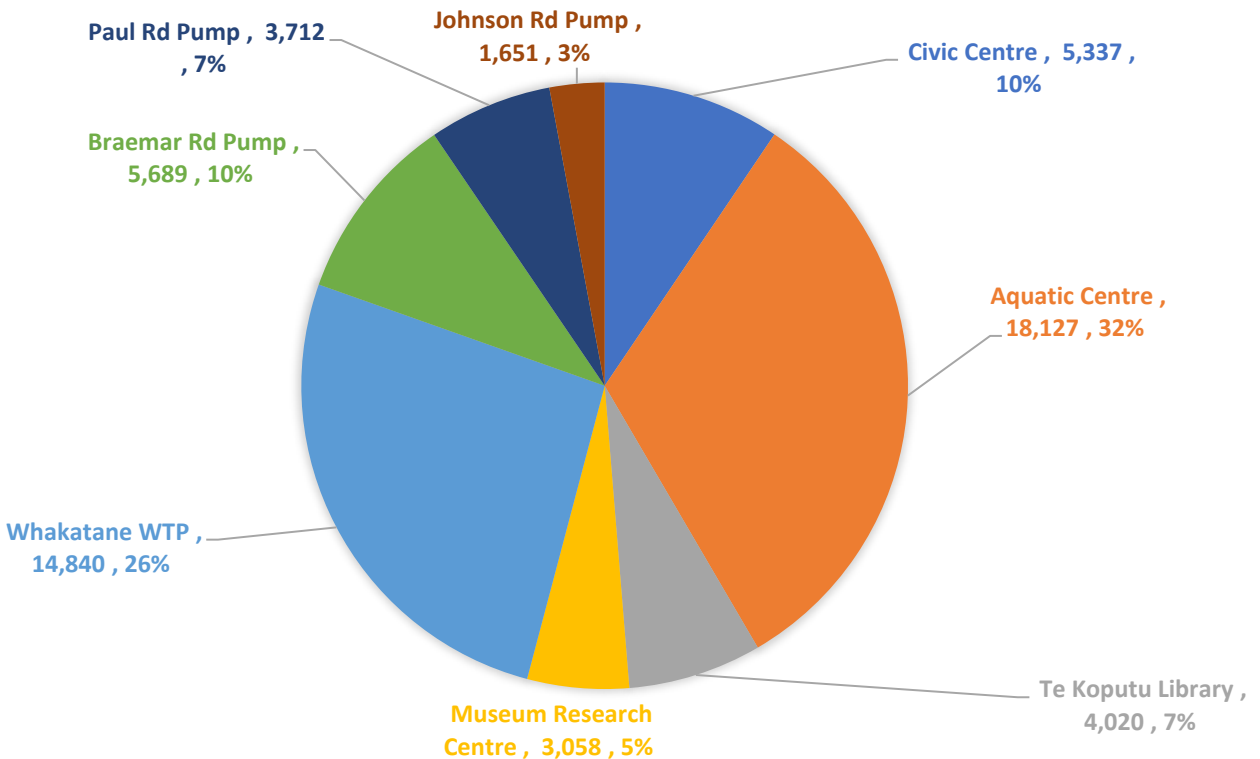
- Total energy cost savings for the month was \$4,600
- Total energy cost for the month was \$68,403
- Total energy used for the month was 423,685 kWh
- Total carbon emissions for the month were 57,991 kgCO₂e
- Rolling 12-month energy savings total 833,998 kWh
- Rolling 12-month energy cost savings total \$58,391
- Rolling 12-month carbon savings total 168,734 kgCO₂e



ENERGY COST (\$/MONTH)

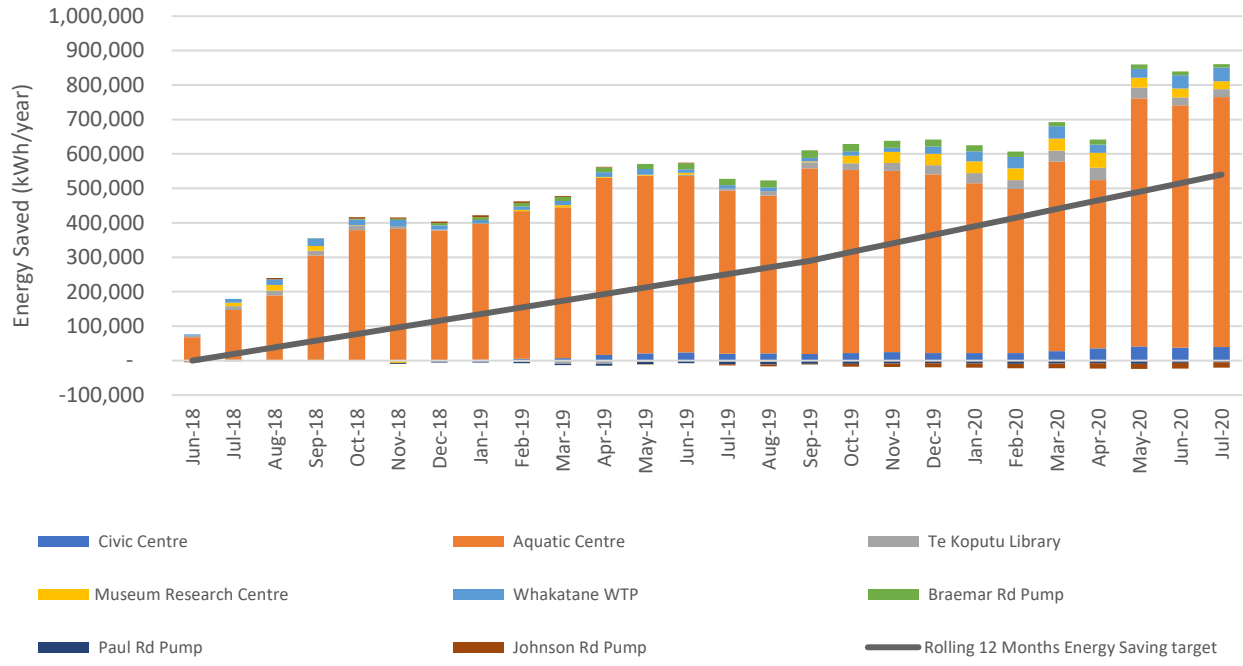


CARBON EMISSIONS (KGCO2E/MONTH)

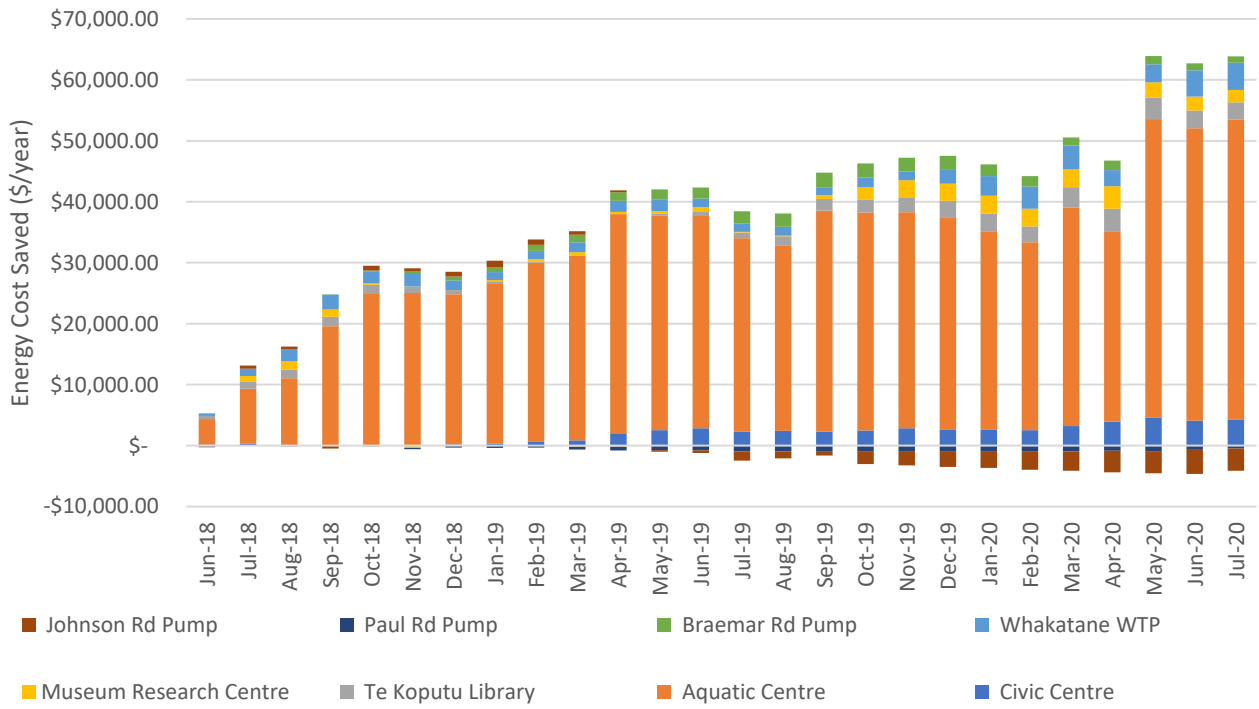




Rolling 12 month Energy Savings

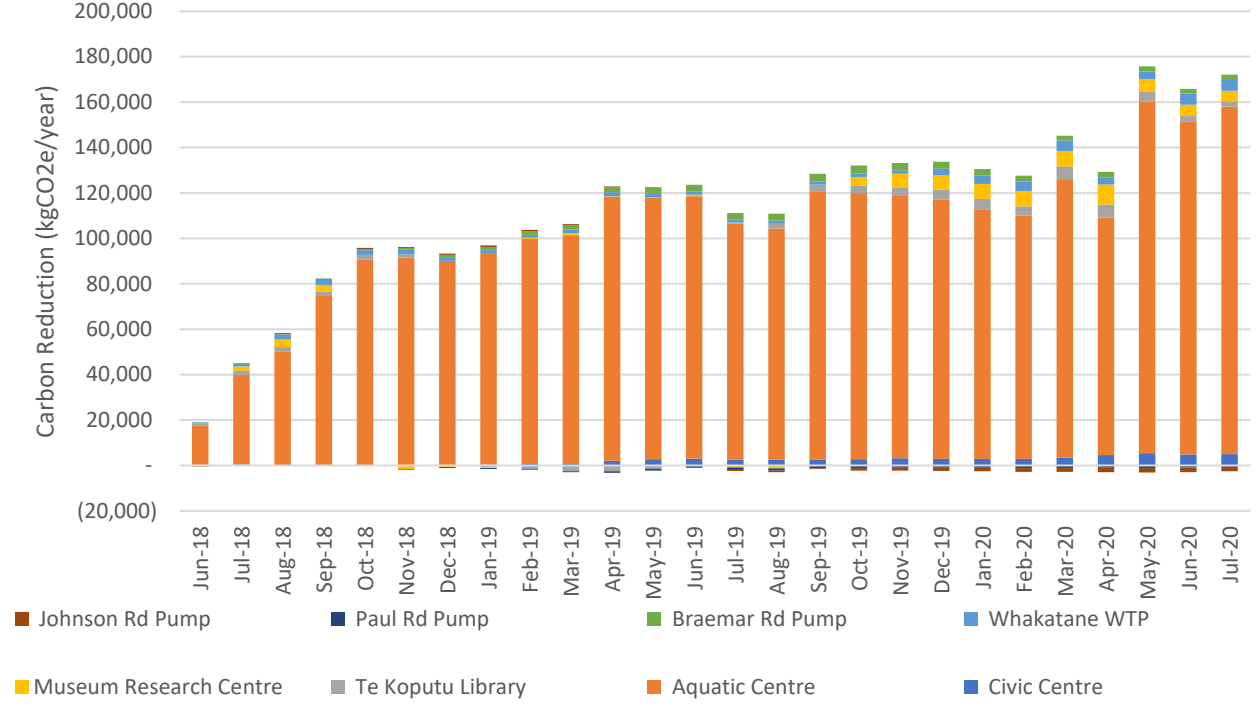


Rolling 12 month Energy Cost Savings





Rolling 12 month Carbon Savings





Civic Centre

Summary

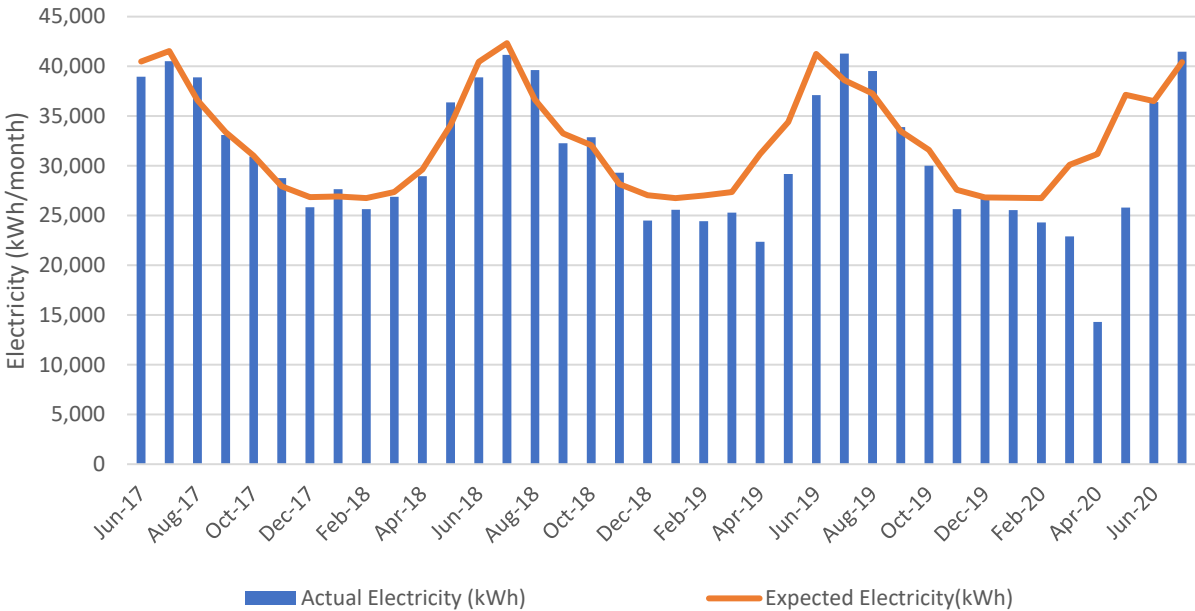
- Electricity savings for the month were -1,055kWh, an extra 2.6%.
- Energy cost savings for the month were -\$133, which is an increase.
- Carbon savings for the month were -136 kgCO2e, an extra 2.6%.
- Rolling 12-month electricity savings are 39,089 kWh, a saving of 10.1%.
- Rolling 12-month energy cost savings are \$4,281.
- Rolling 12-month carbon savings are 5,031 kgCO2e, a saving of 10.1%.

Comments

July 2020 electricity use at the Civic Centre was marginally higher than expected. July 2020 is the second month in which operations have returned to more familiar ways with Covid-19 alert level 1. Energy use in July 2020 is similar to July 2019, however it was a cooler month this year which means expected energy is higher, because more heating should have been required.

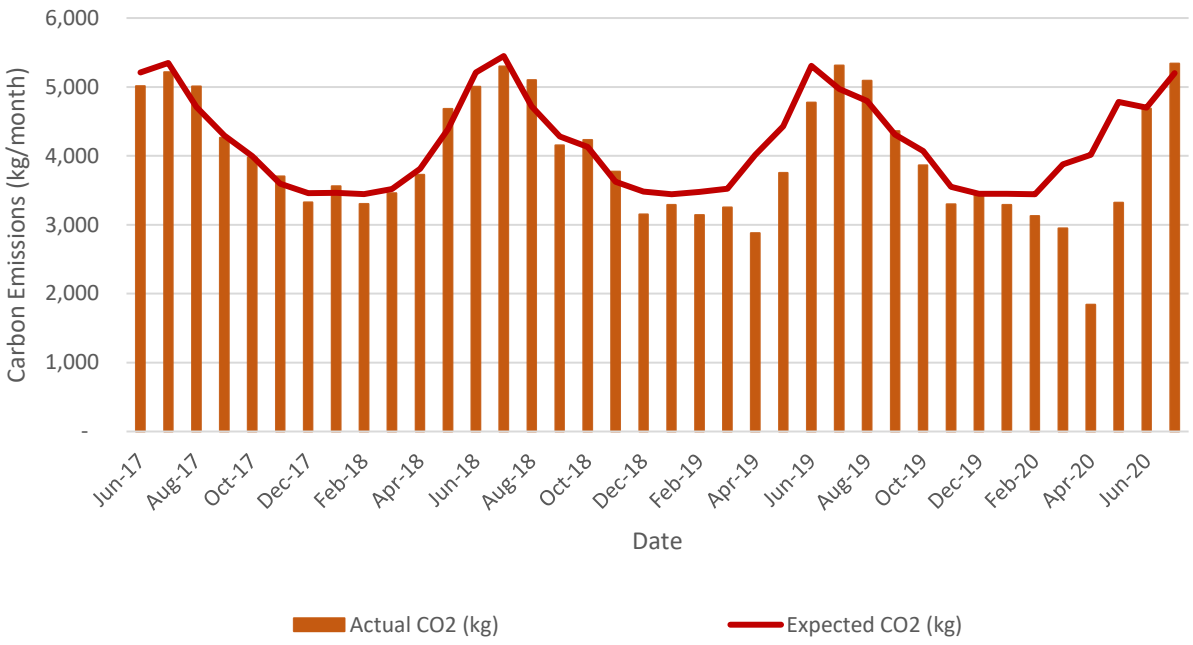
The baseline adjusts for heating degree days which is a measure of ambient temperature, however it does not adjust for occupancy because under normal circumstances this is relatively constant. It will be interesting to follow ongoing energy implications of any flexible working arrangements for staff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

Civic Centre Actual versus Expected Electricity

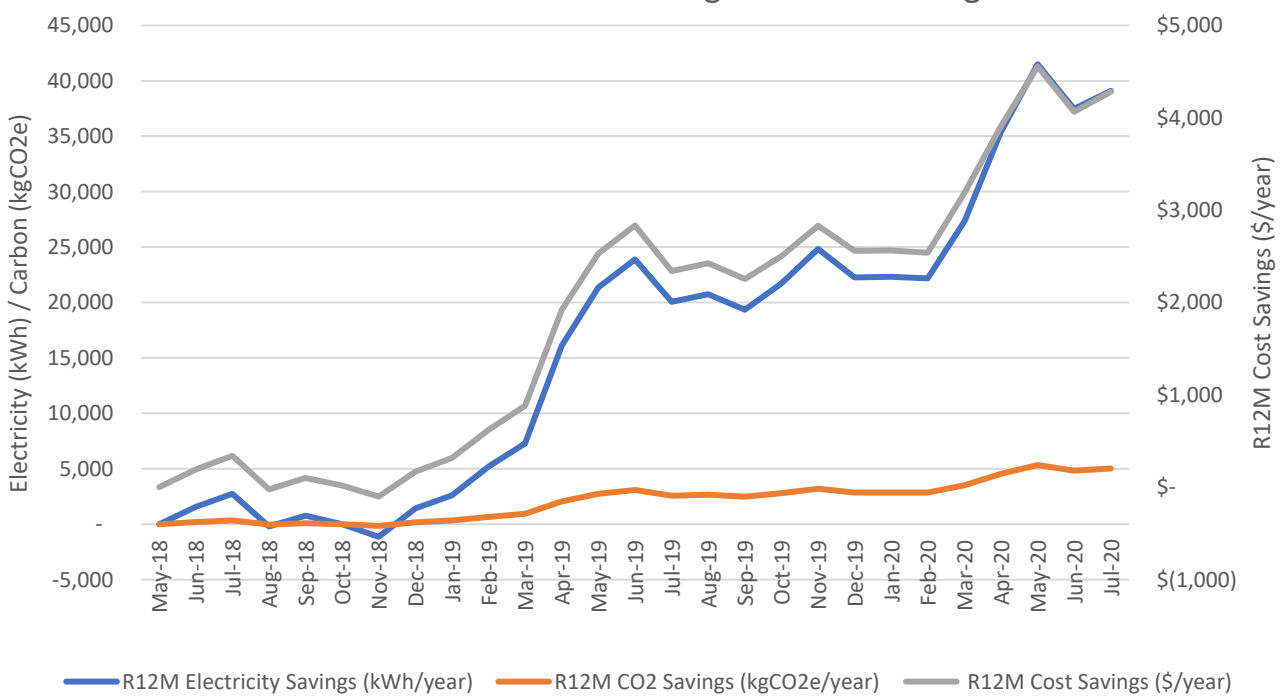




Civic Centre Actual versus Expected CO2



Civic Centre Cumulative Rolling 12 Month Savings





Aquatic Centre

Summary

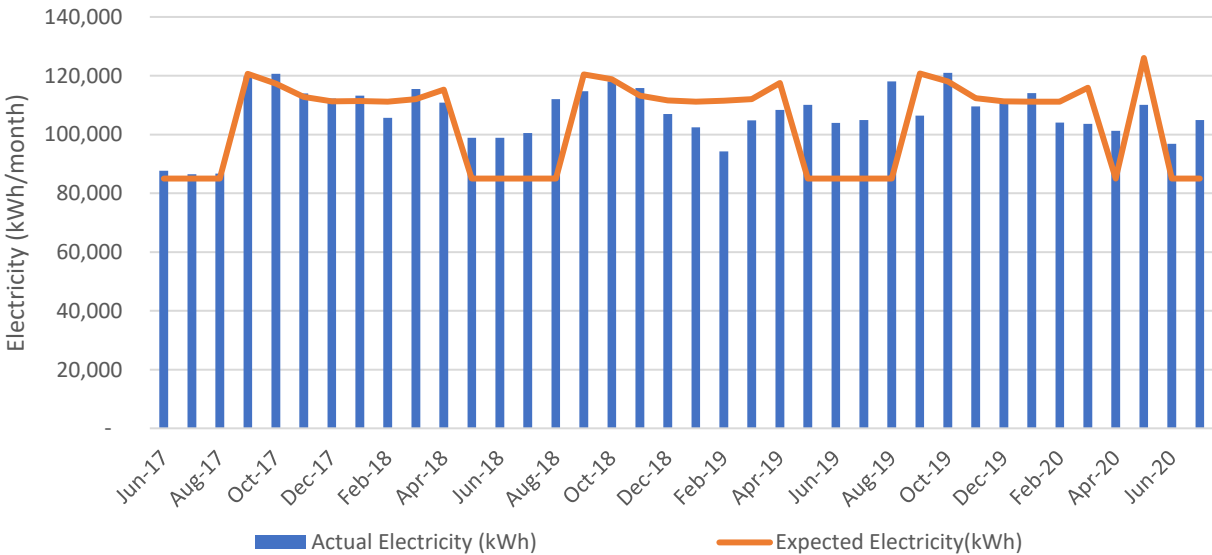
- Electricity savings for the month were -19,898kWh, an extra 23.4%.
- Natural gas savings for the month were 81,419 kWh, a saving of 79.2%
- Energy cost savings for the month were \$2,957.
- Carbon savings for the month were 16,976 kgCO2e, a saving of 48.4%.
- Rolling 12-month electricity savings are -34,857 kWh, an extra 2.8%.
- Rolling 12-month natural gas savings are 761,018 kWh, a saving of 63.4%
- Rolling 12-month energy cost savings are \$49,193.
- Rolling 12-month carbon savings are 153,047 kgCO2e, a saving of 36.8%.

Comments

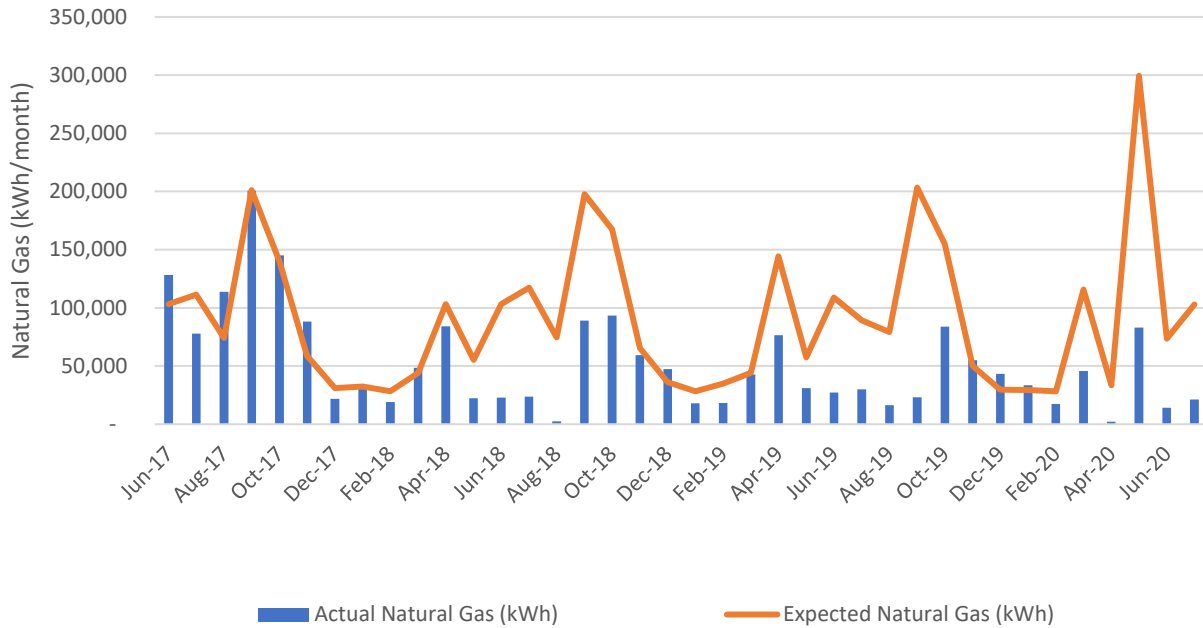
For the month of July the outdoor pool was not in use and a baseline was used which excludes outdoor pool use. When electricity use in July is compared to previous years at the Aquatic Centre, use in 2020 is approx. equal to 2019 and 4% higher than 2018. The Aquatic Centre has increased its use of heatpumps, 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 July 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. In the past 12 months, 153 tonnes of carbon emissions have been prevented, this translates to an approximate carbon savings of 12.75 tonnes CO2 per month. Rolling 12 month cost savings are at a record high or approximately \$49,200 per year.

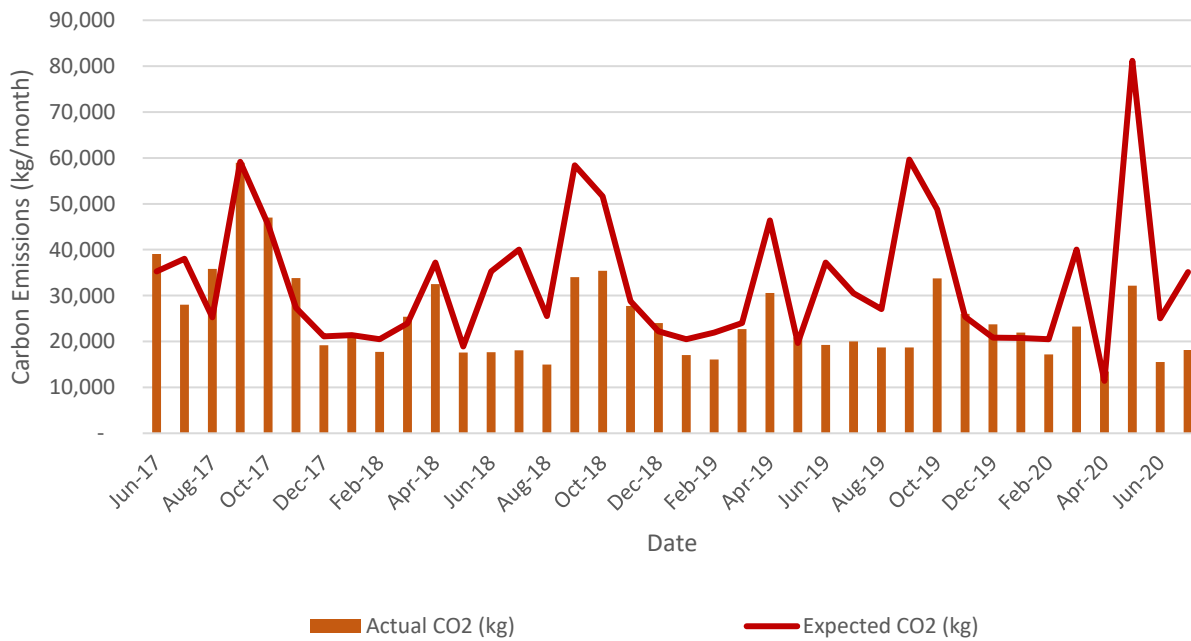
Aquatic Centre Actual versus Expected Electricity



Aquatic Centre Actual versus Expected Natural Gas

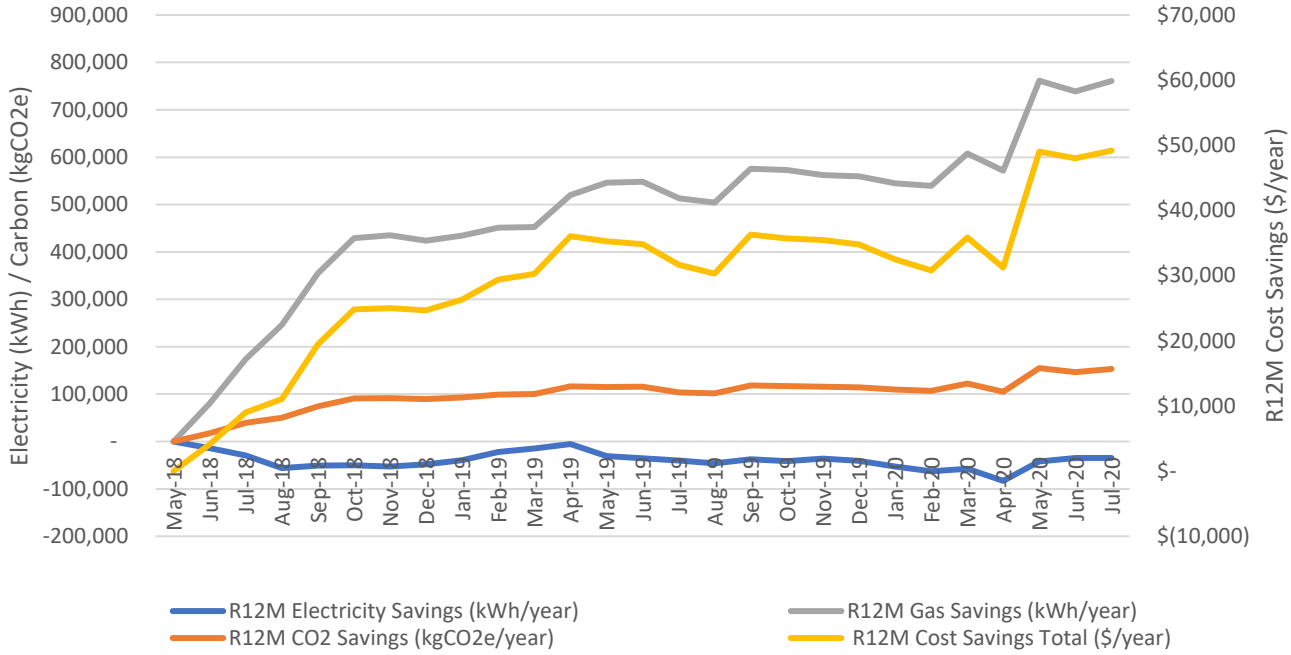


Aquatic Centre Actual versus Expected CO2





Aquatic Centre Cumulative Rolling 12 Month Savings





Te Koputu Library

Summary

- Electricity savings for the month were 3,843kWh, a saving of 23.5%.
- Natural gas savings for the month were 4,019 kWh, a saving of 26.5%
- Energy cost savings for the month were \$770.
- Carbon savings for the month were 1,371 kgCO₂e, a saving of 25.4%.
- Rolling 12-month electricity savings are 29,632 kWh, a saving of 16.1%
- Rolling 12-month natural gas savings are -7,193 kWh, an extra 6%
- Rolling 12-month energy cost savings are \$2,869.
- Rolling 12-month carbon savings are 2,307 kgCO₂e, a saving of 4.6%.

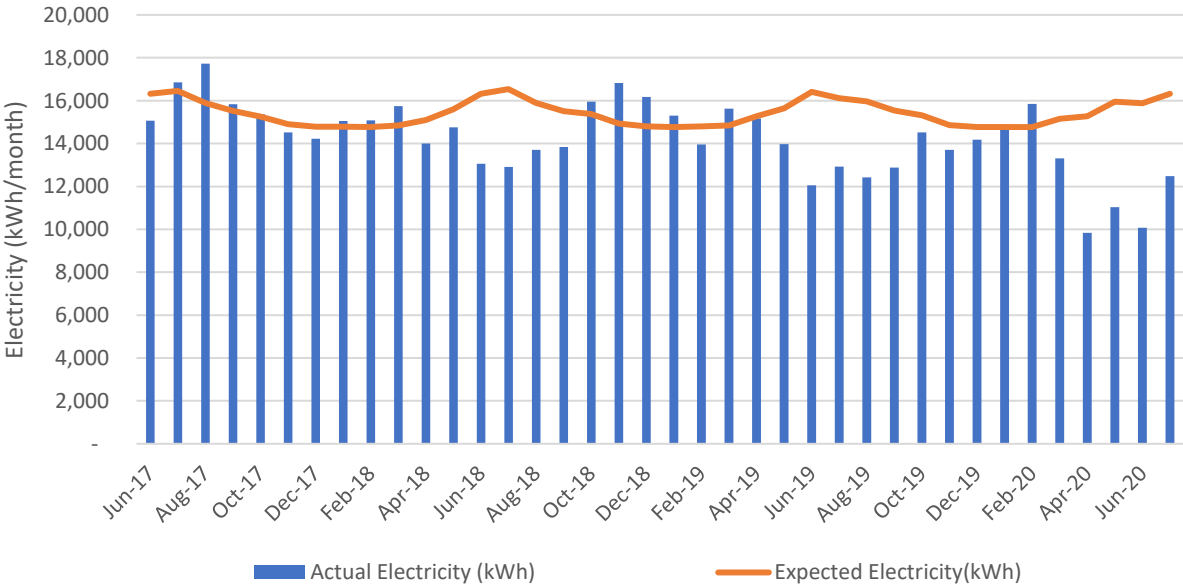
Comments

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. July 2020 broke this trend, having achieved savings for both natural gas and electricity.

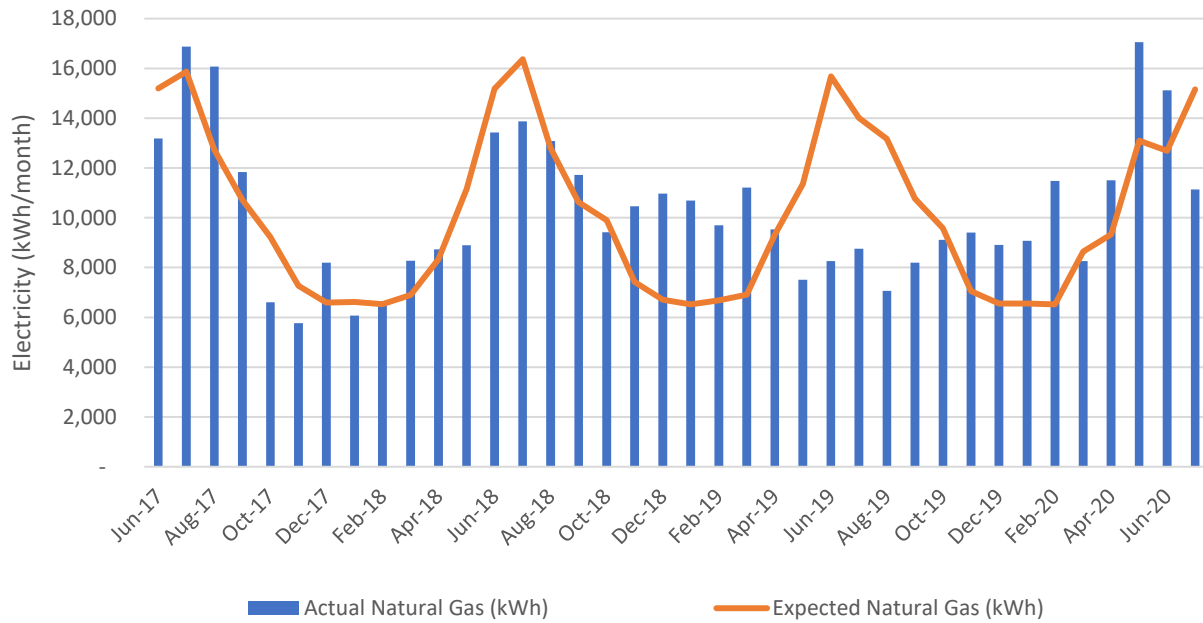
In 2019, a seasonal reversal trend for gas use was observed; colder months used less gas. July 2020 follows this trend, discontinuing the trend of above baseline gas use for May and June 2020.

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

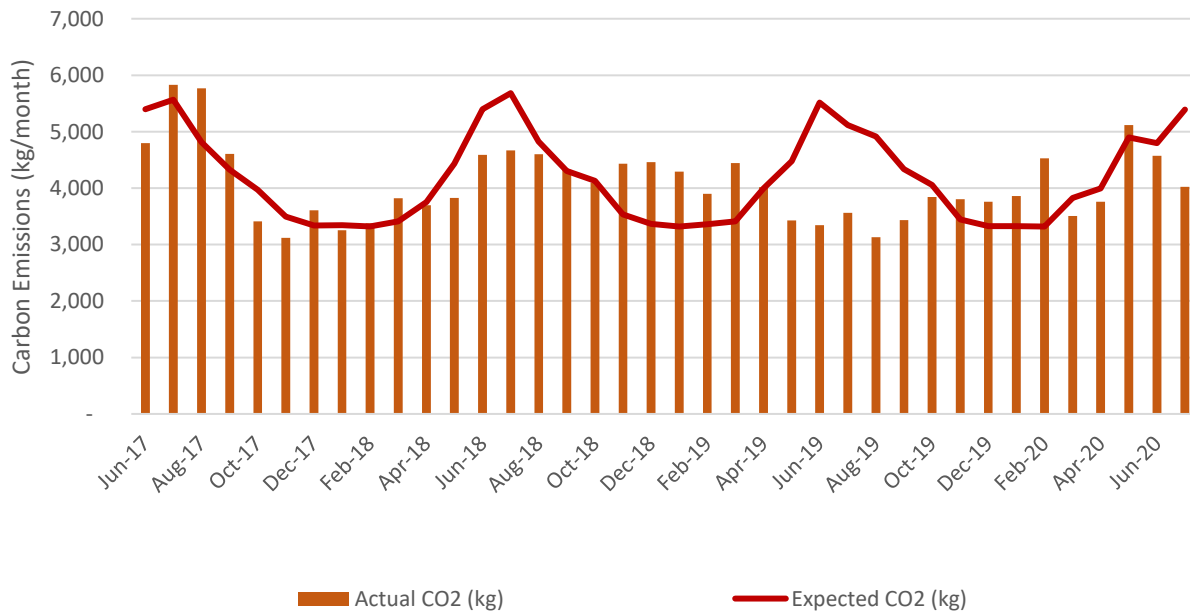
Te Koputu Library Actual versus Expected Electricity



Te Koputu Library Actual versus Expected Natural Gas

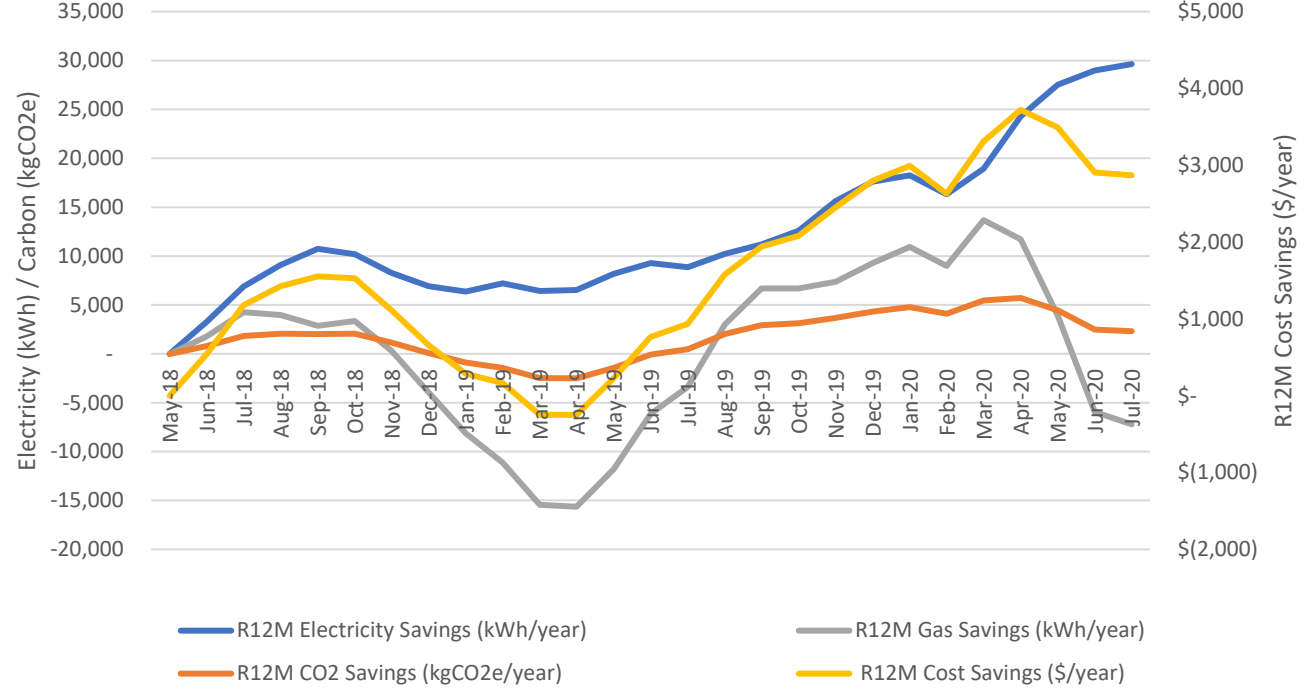


Te Koputu Library Actual versus Expected CO2





Te Koputu Library Cumulative Rolling 12 Month Savings





Museum Research Centre

Summary

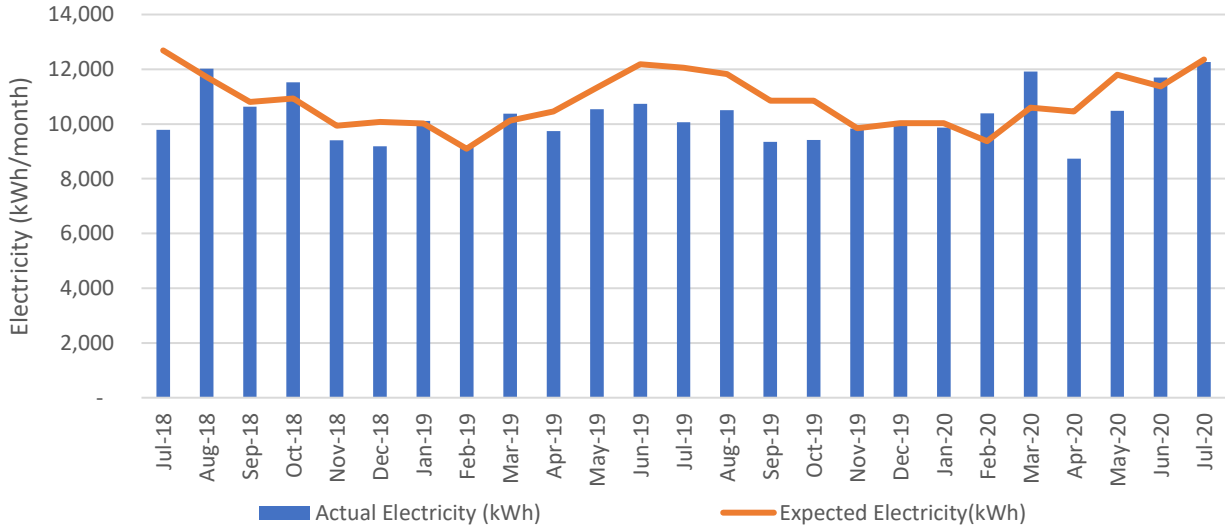
- Electricity savings for the month were 97kWh, a saving of 0.8%.
- Natural gas savings for the month were 306 kWh, a saving of 4.3%
- Energy cost savings for the month were \$34.
- Carbon savings for the month were 79 kgCO2e, a saving of 2.5%.
- Rolling 12-month electricity savings are 4,813 kWh, a saving of 3.7%
- Rolling 12-month natural gas savings are 18,713 kWh, a saving of 24.2%
- Rolling 12-month energy cost savings are \$1,983.
- Rolling 12-month carbon savings are 4,676 kgCO2e, a saving of 14%.

Comments

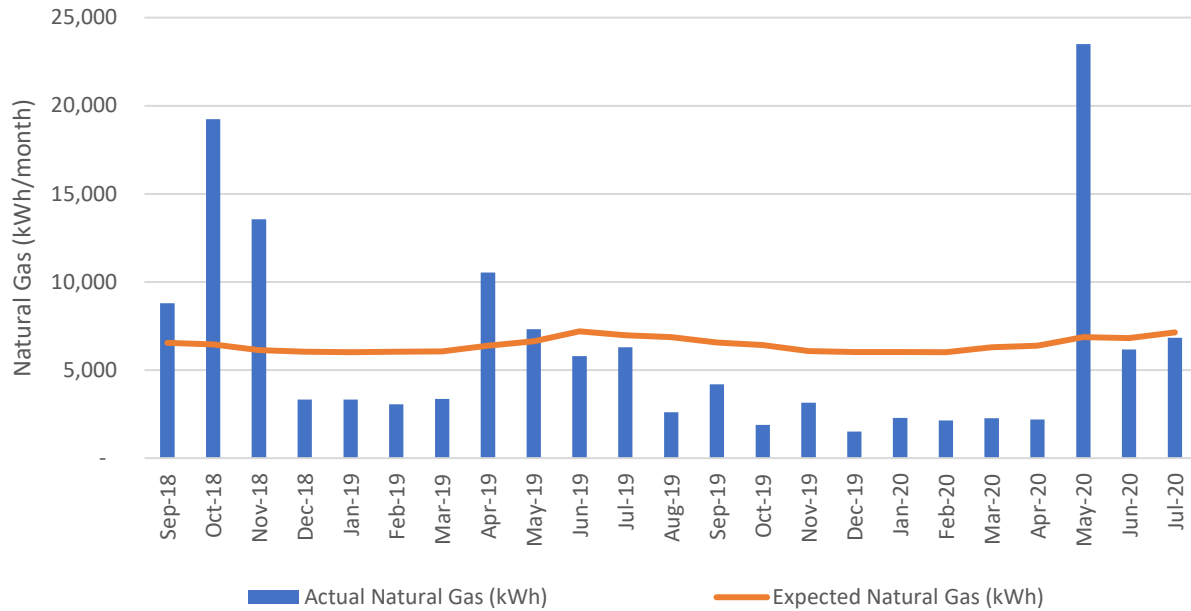
Electricity use at the Museum and Research Centre is below baseline for July 2020. Compared to 2019, electricity use has increased by 22% and more savings were achieved in 2019, however, July 2020 was a cooler month on average. July 2020 is the fourth month in a row that electricity use has increased, however April and May were affected by the lockdown.

Gas use for July 2020 is marginally less than baseline. Compared to 2019, 8% more gas was used in 2020. 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.

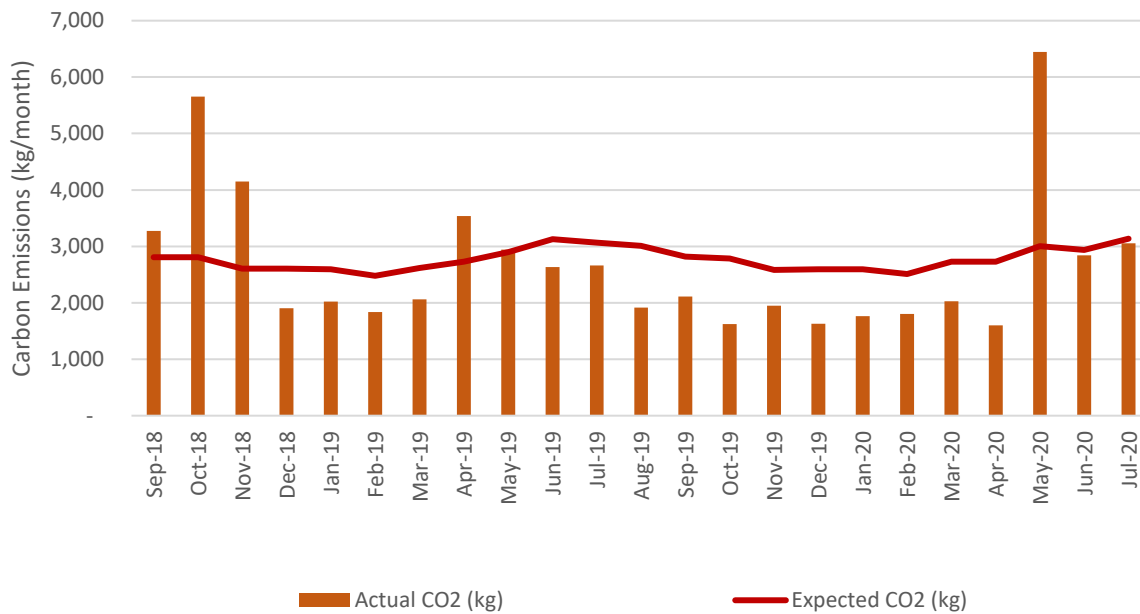
Museum Research Centre Actual versus Expected Electricity

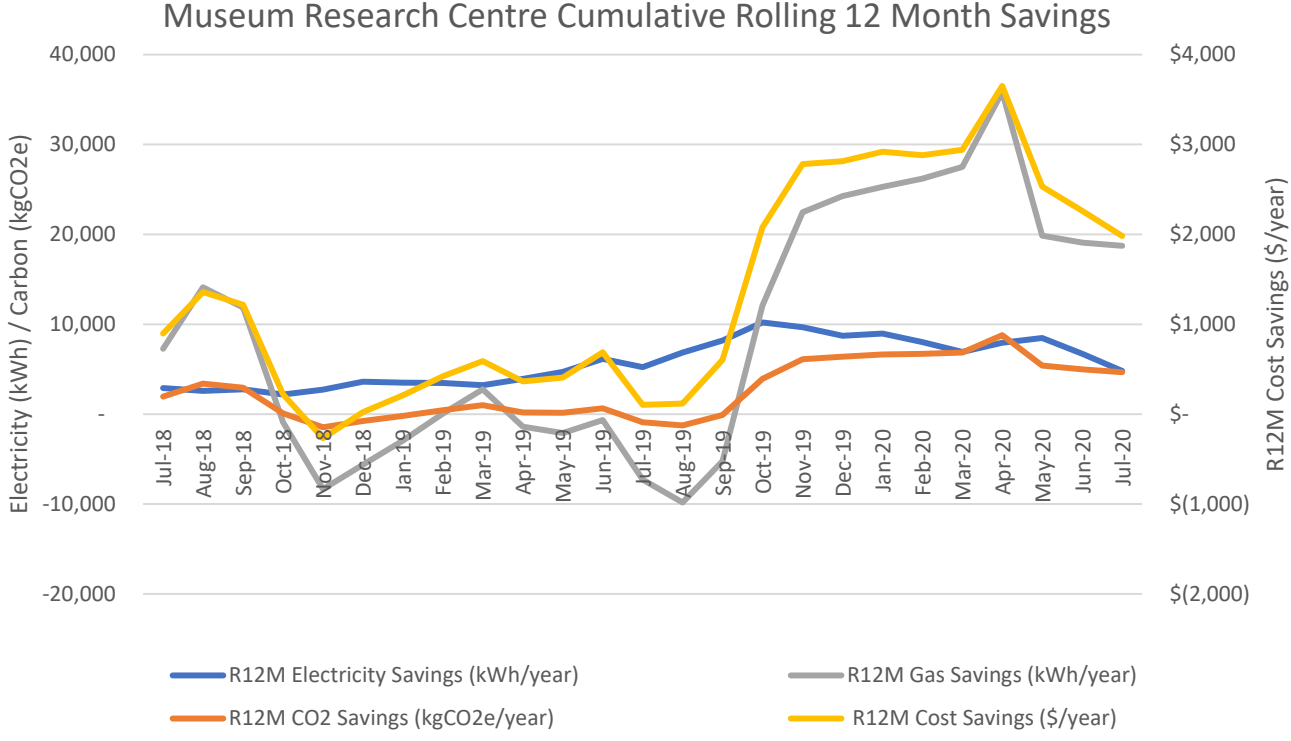


Museum Research Centre Actual versus Expected Natural Gas



Museum Research Centre Actual versus Expected CO2







Whakatāne Water Treatment Plant

Summary

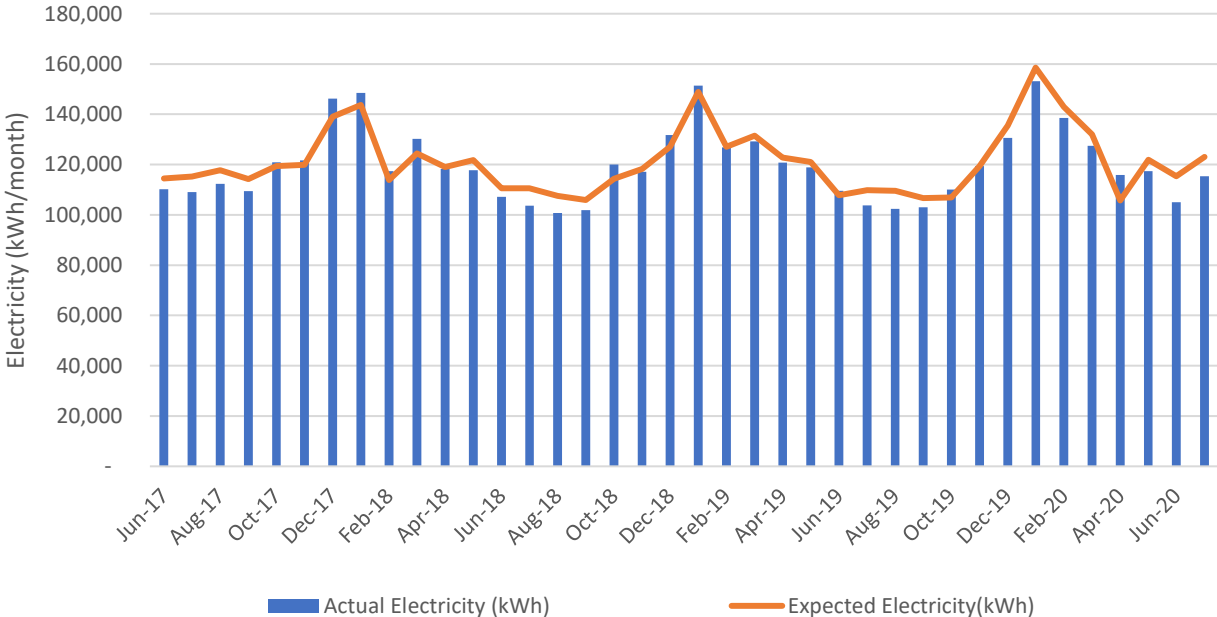
- Electricity savings for the month were 7,713kWh, a saving of 6.3%.
- Energy cost savings for the month were \$934.
- Carbon savings for the month were 993 kgCO2e, a saving of 6.3%.
- Rolling 12-month electricity savings are 39,732 kWh, a saving of 2.7%.
- Rolling 12-month energy cost savings are \$4,492.
- Rolling 12-month carbon savings are 5,114 kgCO2e, a saving of 2.7%.

Comments

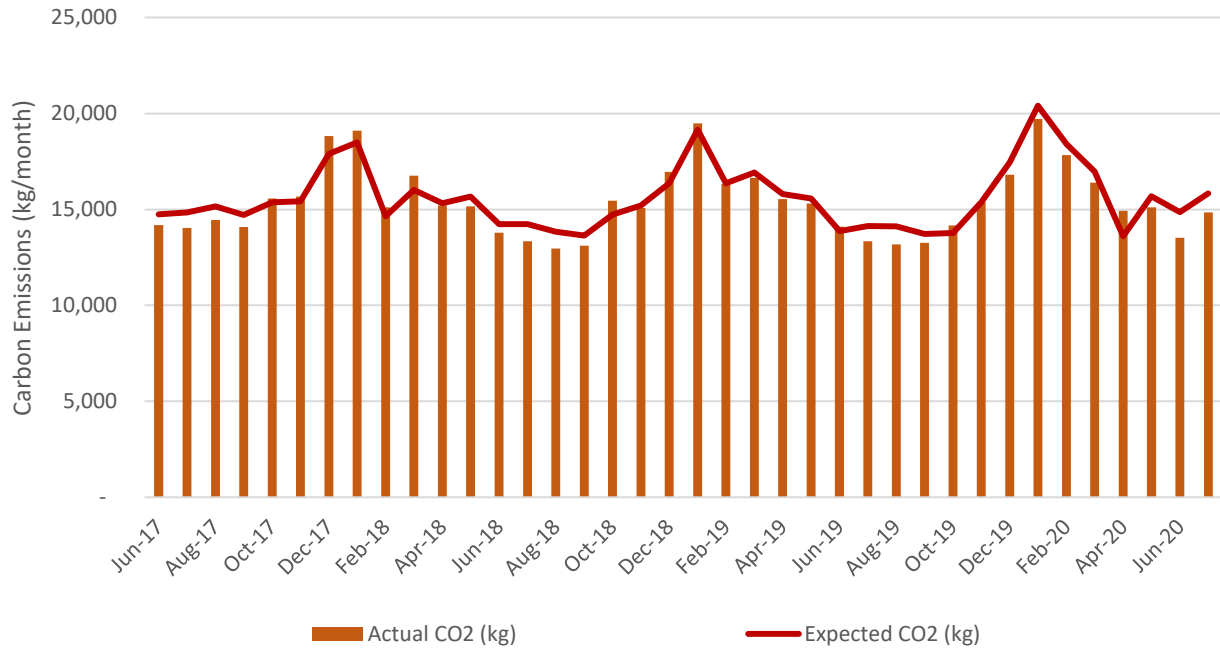
July has usually been a month that the WTP has achieved an electricity savings, July 2020 is no exception, using approx 6% less electricity compared to baseline. Electricity savings have been achieved at the Water Treatment Plant for seven of the last eight months; April 2020's increase in electricity was an anomaly due to a blocked pump.

Rolling 12 month savings are at the highest level yet. Rolling 12 month cost savings have reached a record high of approx. \$4,500 per year.

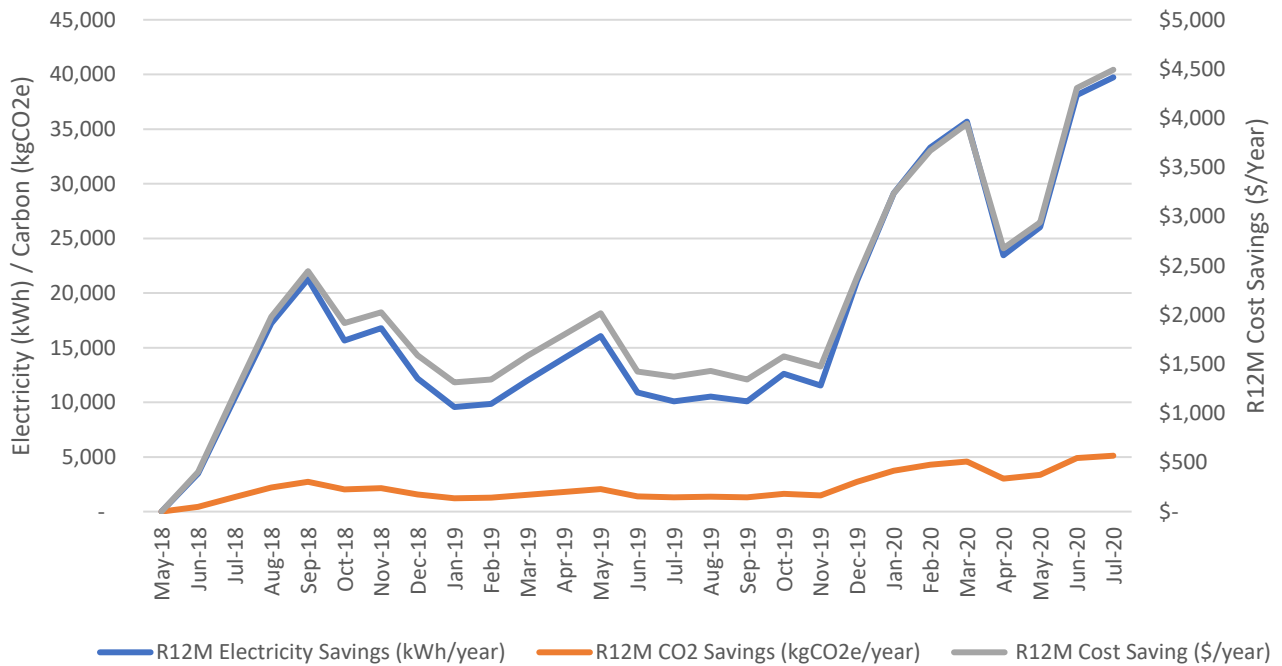
Water Treatment Plant Actual versus Expected Electricity



Water Treatment Plant Actual versus Expected CO2



Whakatane Water Treatment Plant Cumulative Rolling 12 Month Savings





Braemar Rd Pump Station

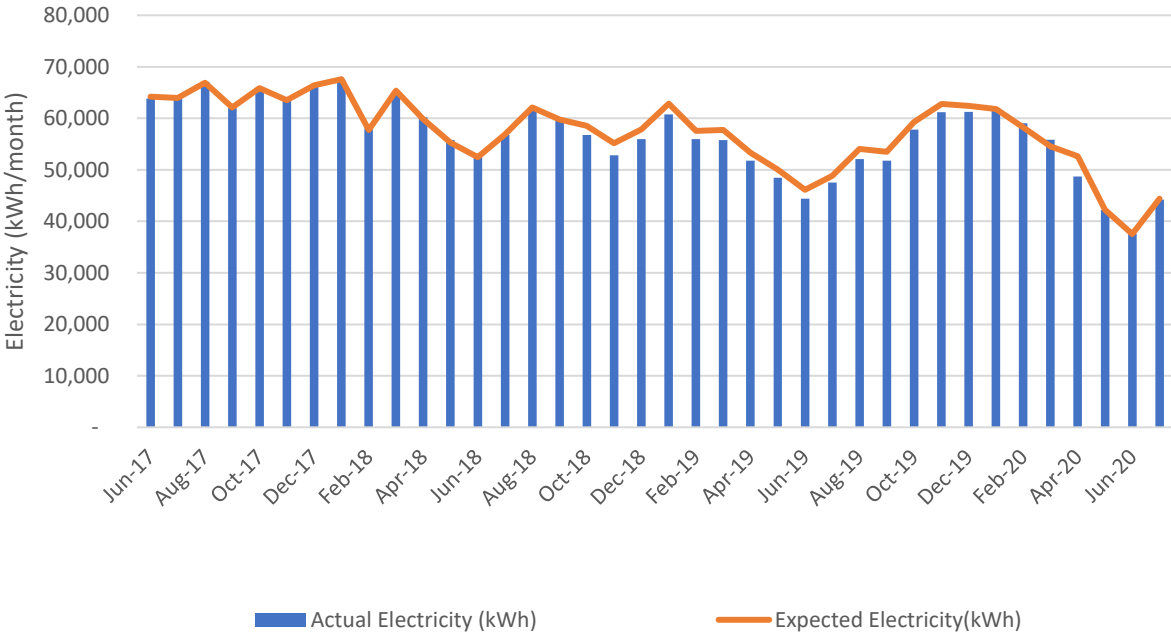
Summary

- Electricity savings for the month were 168kWh, a saving of 0.4%.
- Energy cost savings for the month were \$21.
- Carbon savings for the month were 140 kgCO2e, a saving of 0.4%.
- Rolling 12-month electricity savings are 9,889 kWh, a saving of 1.5%.
- Rolling 12-month energy cost savings are \$1,026.
- Rolling 12-month carbon savings are 1,992 kgCO2e, a saving of 1.5%.

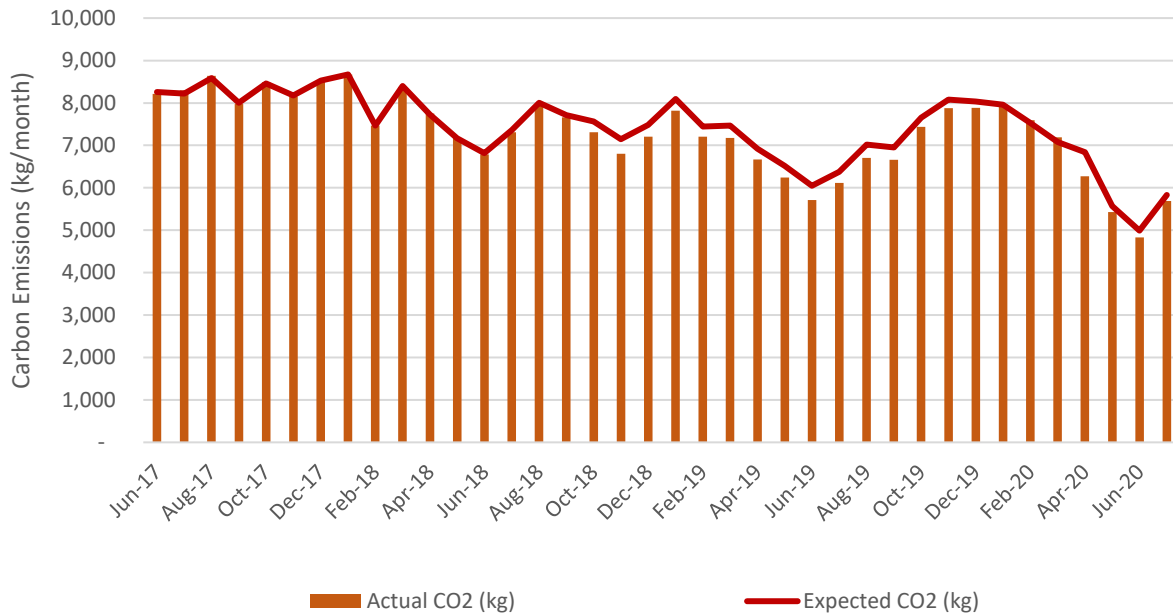
Comments

Braemar Rd. electricity use was close to expected for the month of July. Electricity used is 7% less than July 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 new pump does not appear to be more efficient than its replacement, however, the Johnson Road pump station's electricity use is much closer to baseline. In July 2020 Johnson Road was only 2.7% above baseline, down from 21% over baseline in June 2020.

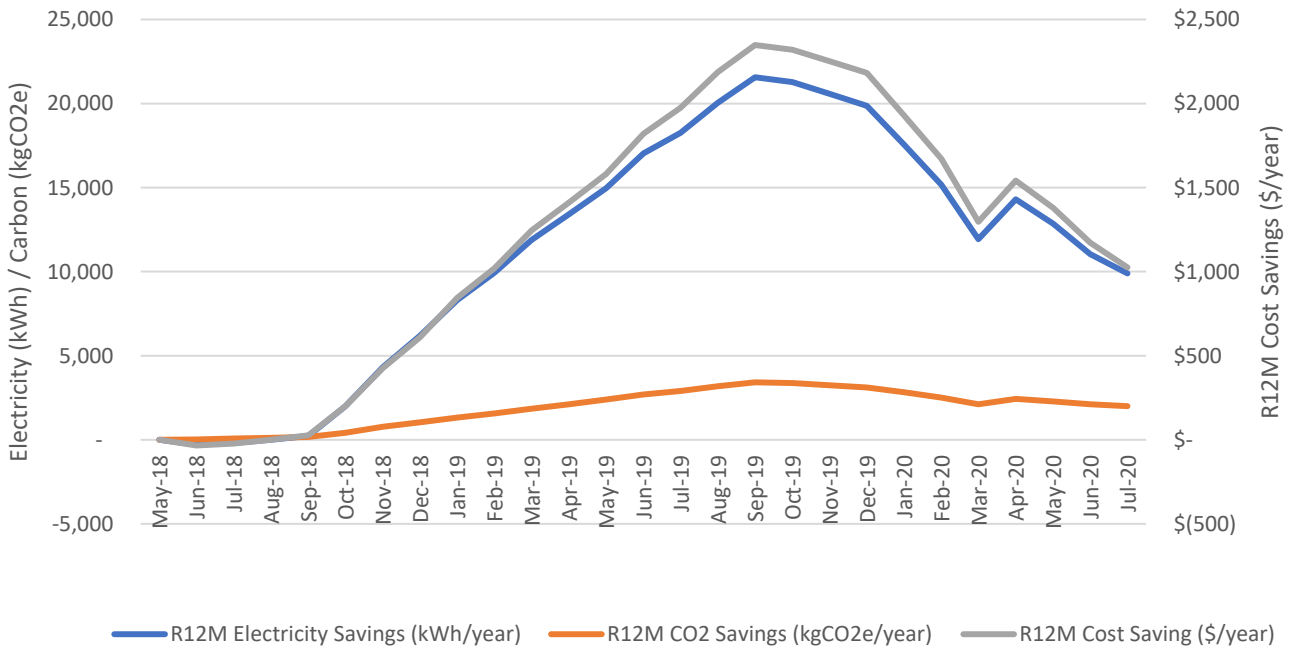
Braemar Rd Actual versus Expected Electricity



Braemar Rd Actual versus Expected CO2



Braemar Rd Pumps Cumulative Rolling 12 Month Savings





Paul Rd Pump Station

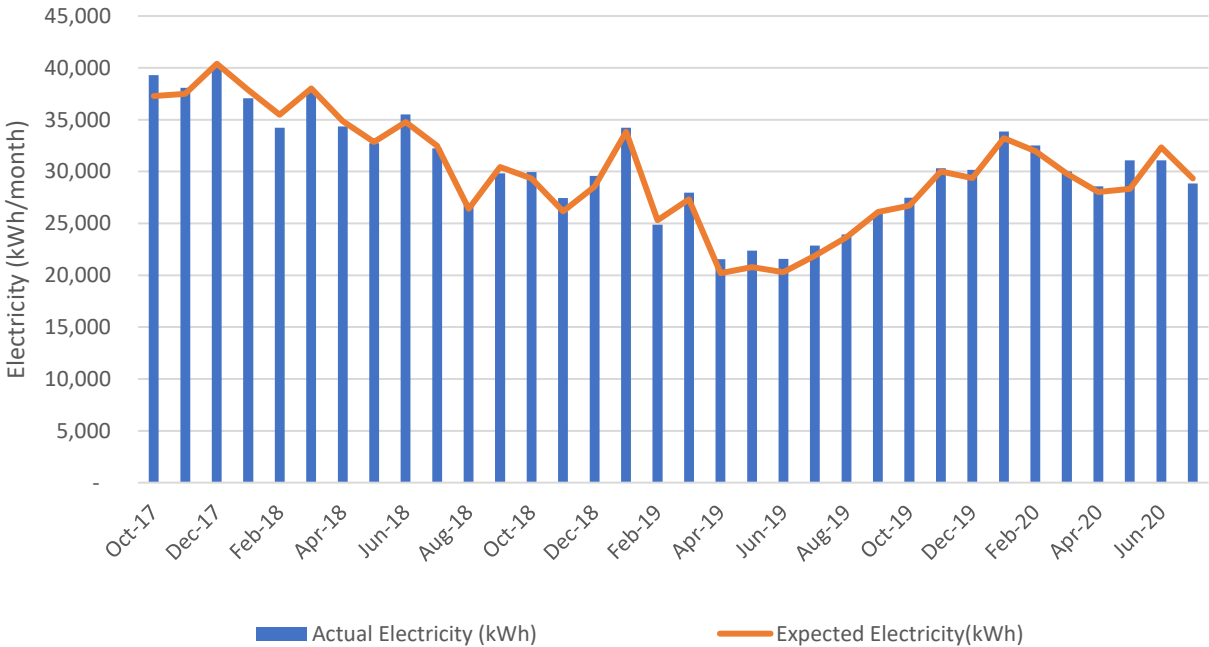
- Electricity savings for the month were 508kWh, a saving of 1.7%.
- Energy cost savings for the month were \$62.
- Carbon savings for the month were 66 kgCO₂e, a saving of 1.7%.
- Rolling 12-month electricity savings are -4,883 kWh, an extra 1.4%.
- Rolling 12-month energy cost savings are -\$496, which is an increase.
- Rolling 12-month carbon savings are -621 kgCO₂e, an extra 1.4%.

Comments

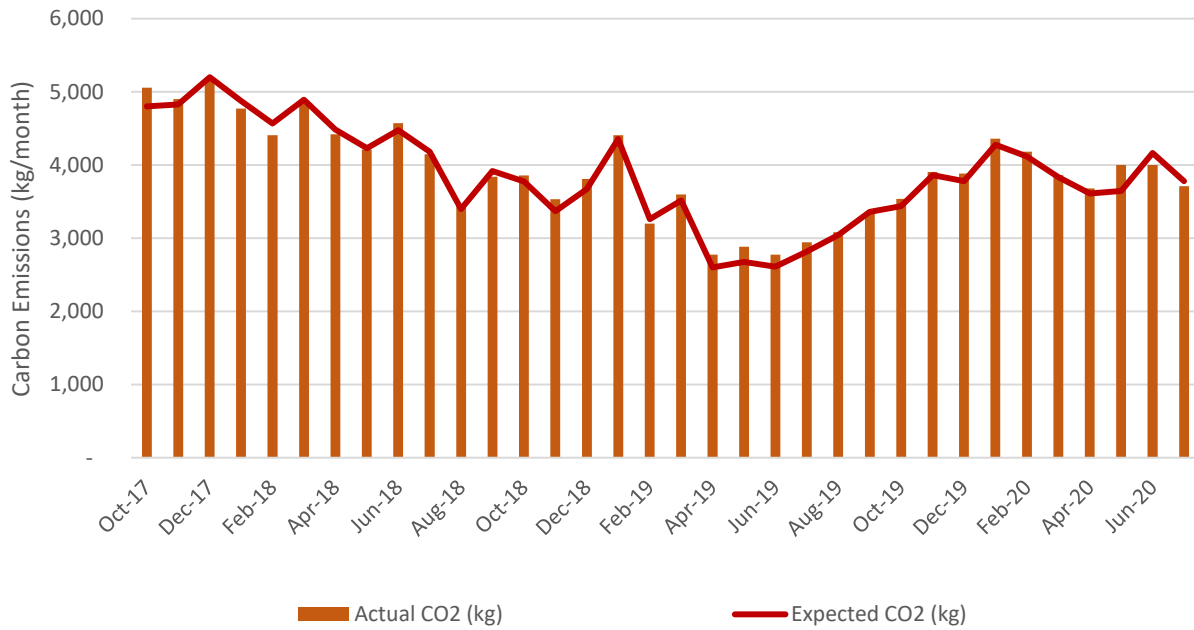
Total electricity use by the Paul Rd. pump station has increased by approximately 26% compared to July 2020.

Compared to April 2020, electricity use is similar; however, more water has been pumped in July, resulting in a savings for the month. This is the second month in a row that savings have been achieved, September 2019 to May 2020 used more electricity than expected.

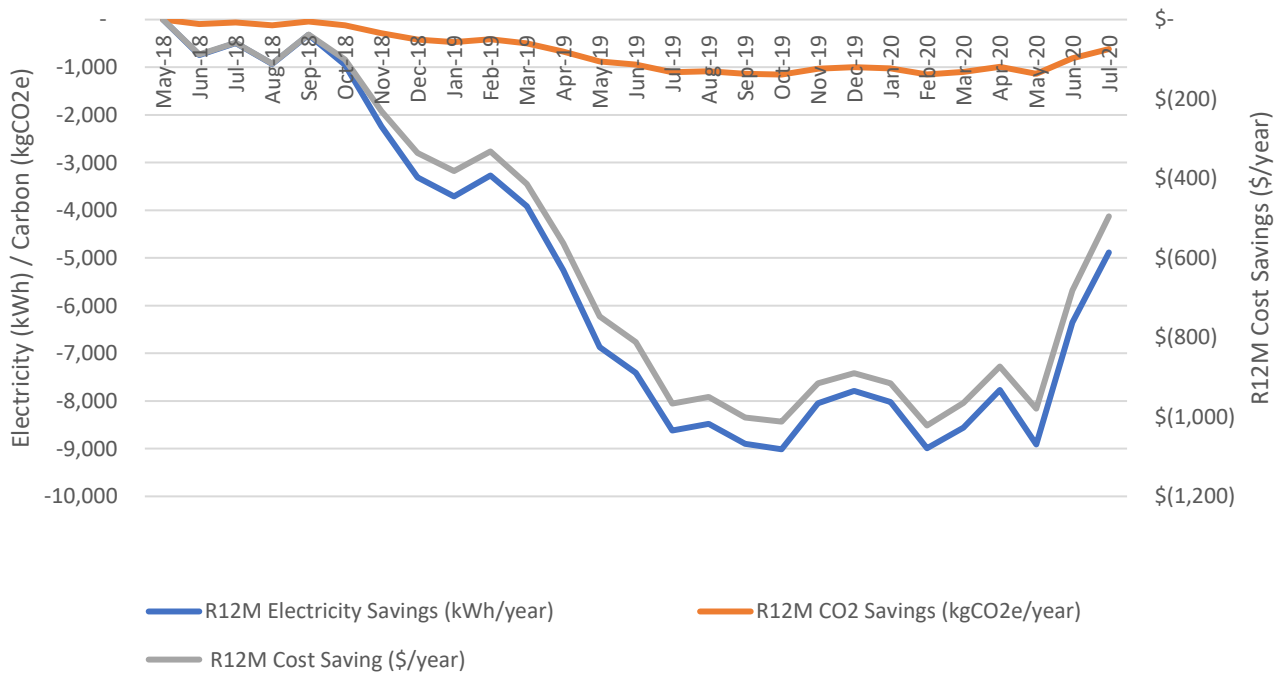
Paul Rd Pump Station Actual versus Expected Electricity



Paul Rd Pump Station Actual versus Expected CO2



Paul Rd Pumps Cumulative Rolling 12 Month Savings





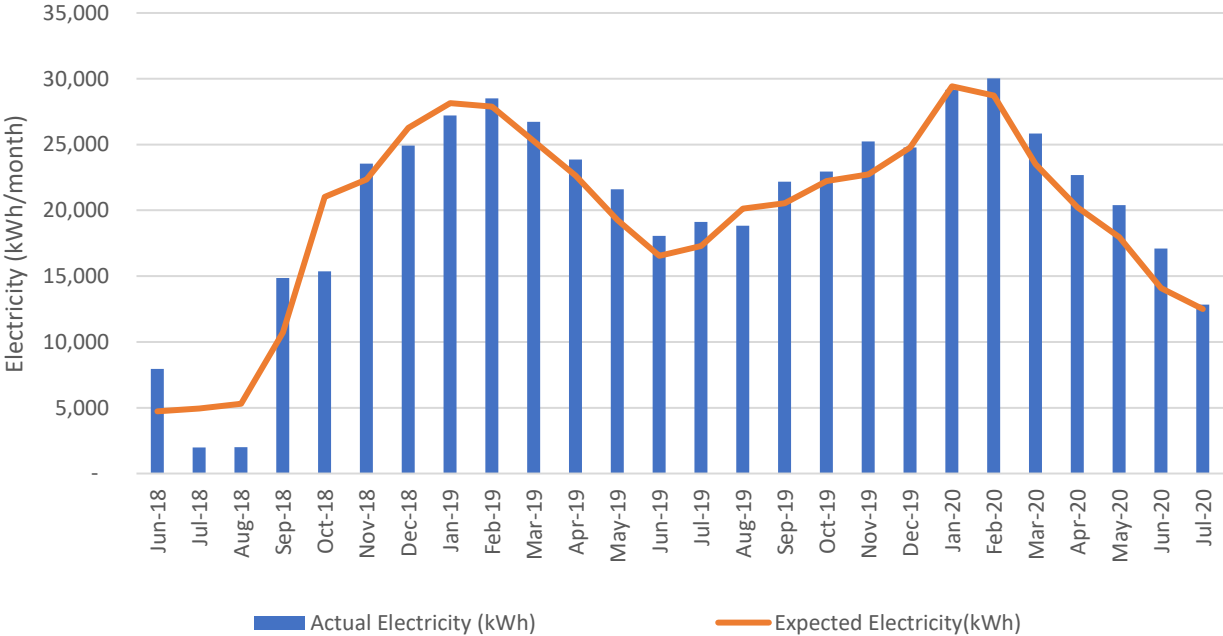
Johnson Rd Pump Station

- Electricity savings for the month were -334kWh, an extra 2.7%.
- Energy cost savings for the month were -\$73, which is an increase.
- Carbon savings for the month were -42 kgCO2e, an extra 2.7%.
- Rolling 12-month electricity savings are -15,067 kWh, an extra 5.9%.
- Rolling 12-month energy cost savings are -\$3,620, which is an increase.
- Rolling 12-month carbon savings are -1,926 kgCO2e, an extra 5.9%.

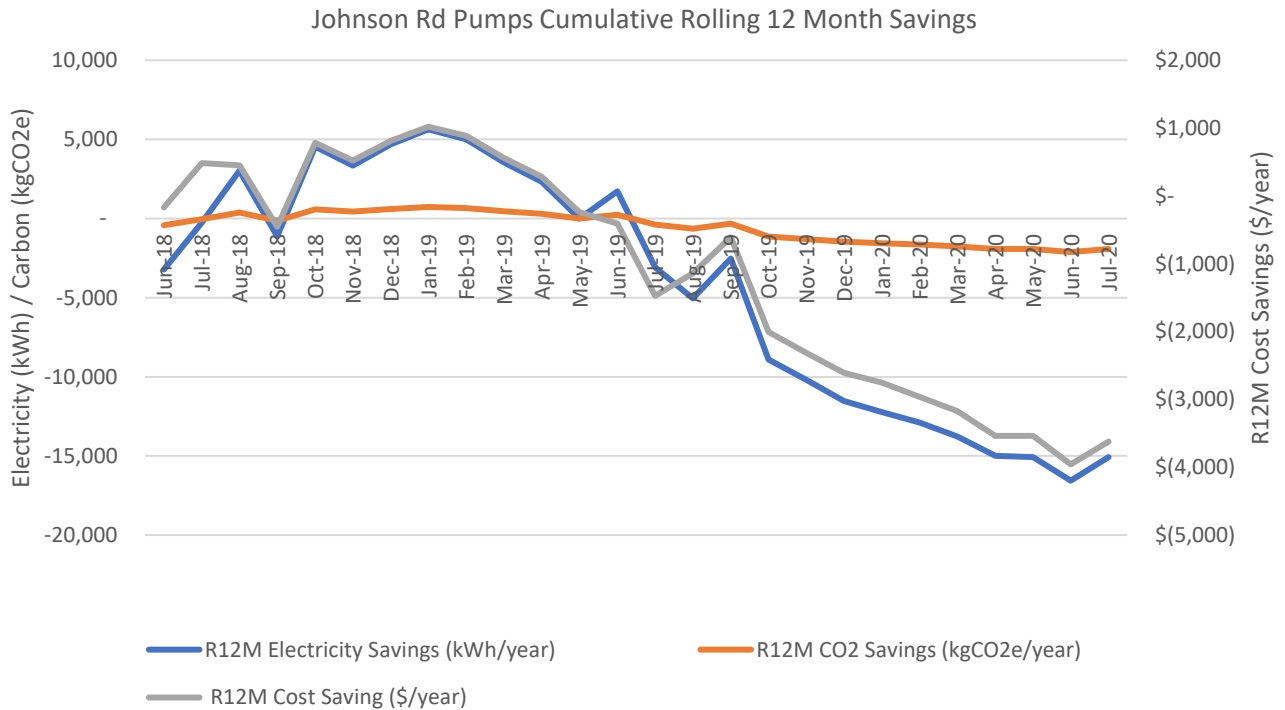
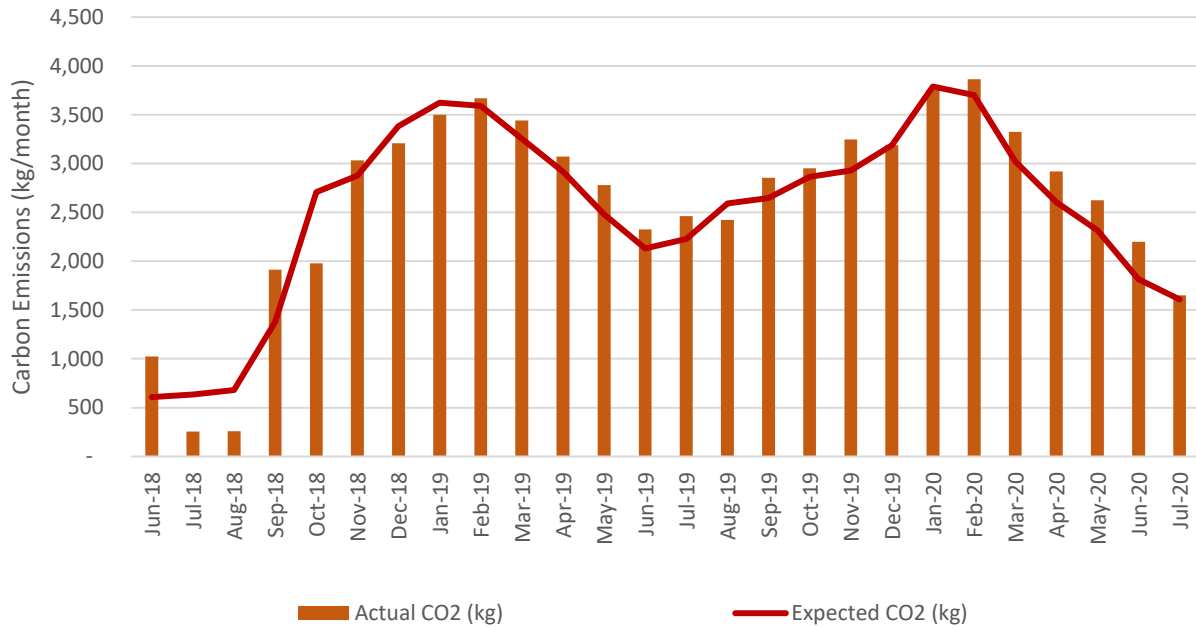
Comments

The month of July 2020 has recorded the lowest water pumped since September 2018. This is also the first month since January 2020 that electricity has not been significantly greater than baseline. This is likely related to a pump failure at Braemar which has increased the work done by Johnson Rd. pumps. The replacement for Braemar Rd. was due at the end of June 2020. Now that the replacement at Braemar Rd. has been completed, Johnson Rd pumps are operating more efficiently. Electricity use is approx. 2.7% above baseline in July 2020, down from 21% above baseline in June 2020.

Johnson Rd Pump Station Actual versus Expected Electricity



Johnson Rd Pump Station Actual versus Expected CO2





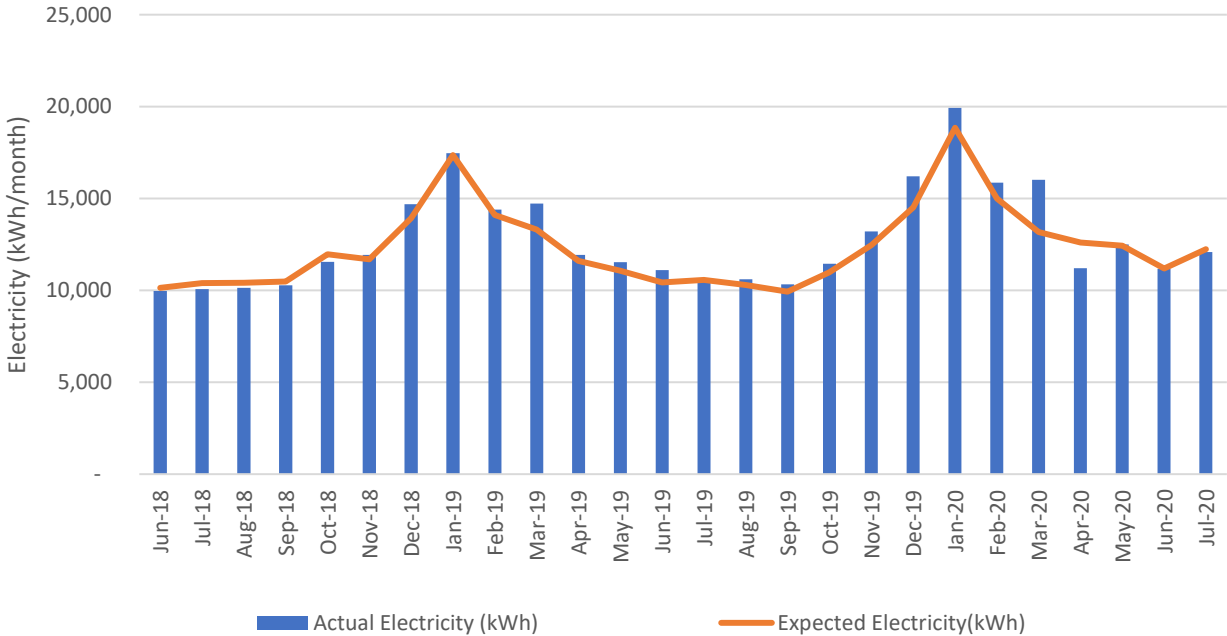
Bridger Glade Pump Station

- Electricity savings for the month were 150kWh, a saving of 1.2%.
- Energy cost savings for the month were \$27.
- Carbon savings for the month were 19 kgCO2e, a saving of 1.2%.
- Rolling 12-month electricity savings are -6,887 kWh, an extra 4.5%.
- Rolling 12-month energy cost savings are -\$1,337, which is an increase.
- Rolling 12-month carbon savings are -886 kgCO2e, an extra 4.5%.

Comments

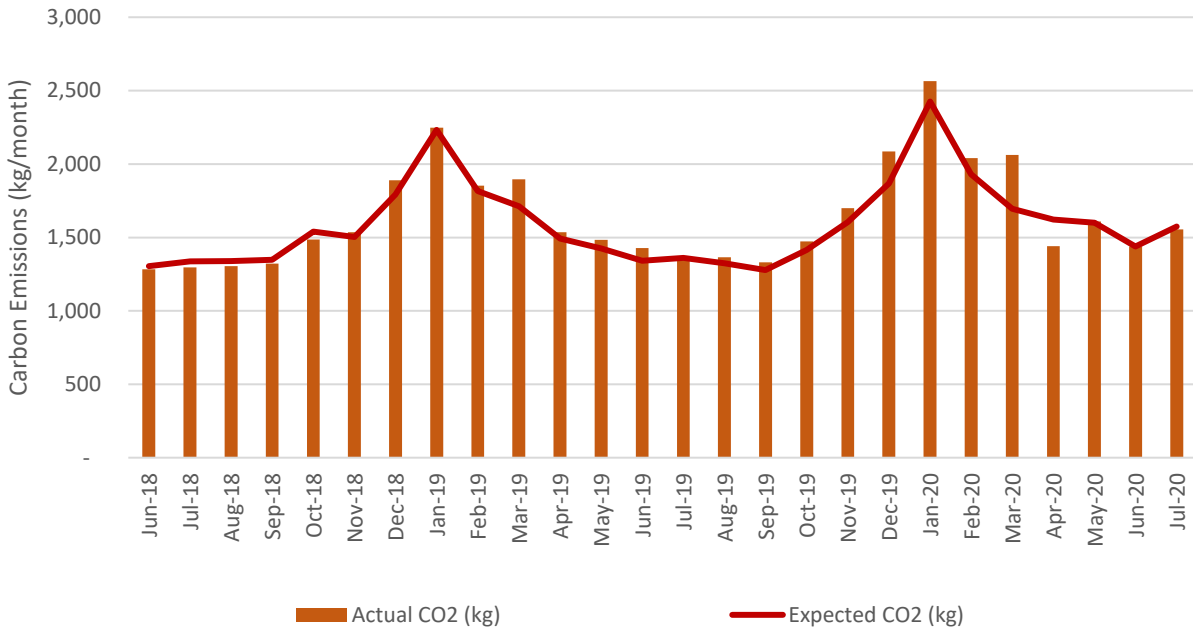
July 2020 is the fourth month in a row where electricity use has been almost equal to, or less than baseline. Compared to July 2019, Bridger Glade is using 13% more electricity but has also pumped 16% more water, resulting in a savings for July 2020.

Bridger Glade Pump Station Actual versus Expected Electricity





Bridger Glade Pump Station Actual versus Expected CO2



Bridger Glade Pumps Cumulative Rolling 12 Month Savings

