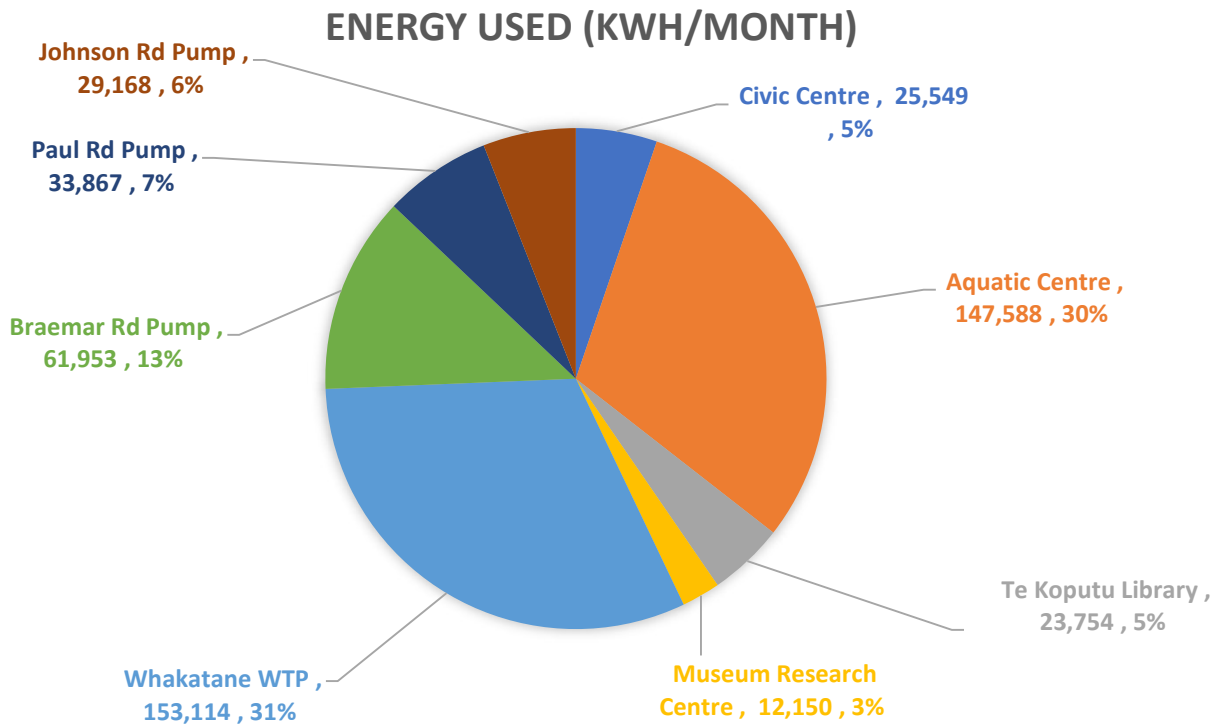


## Whakatāne District Council Energy Performance Report

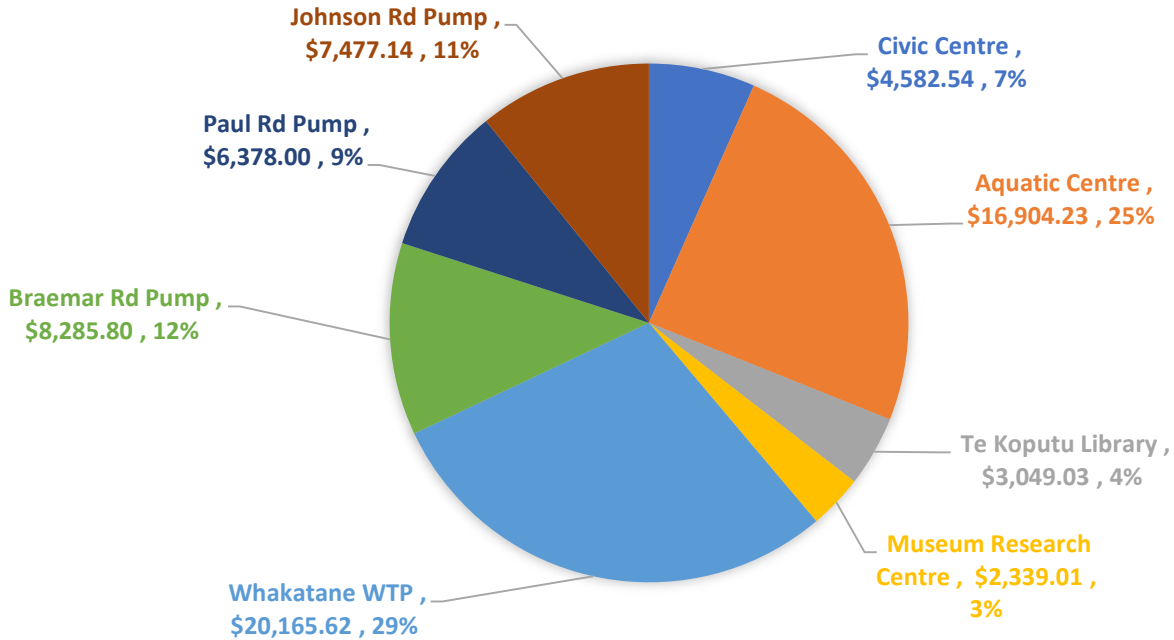
### Summary

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

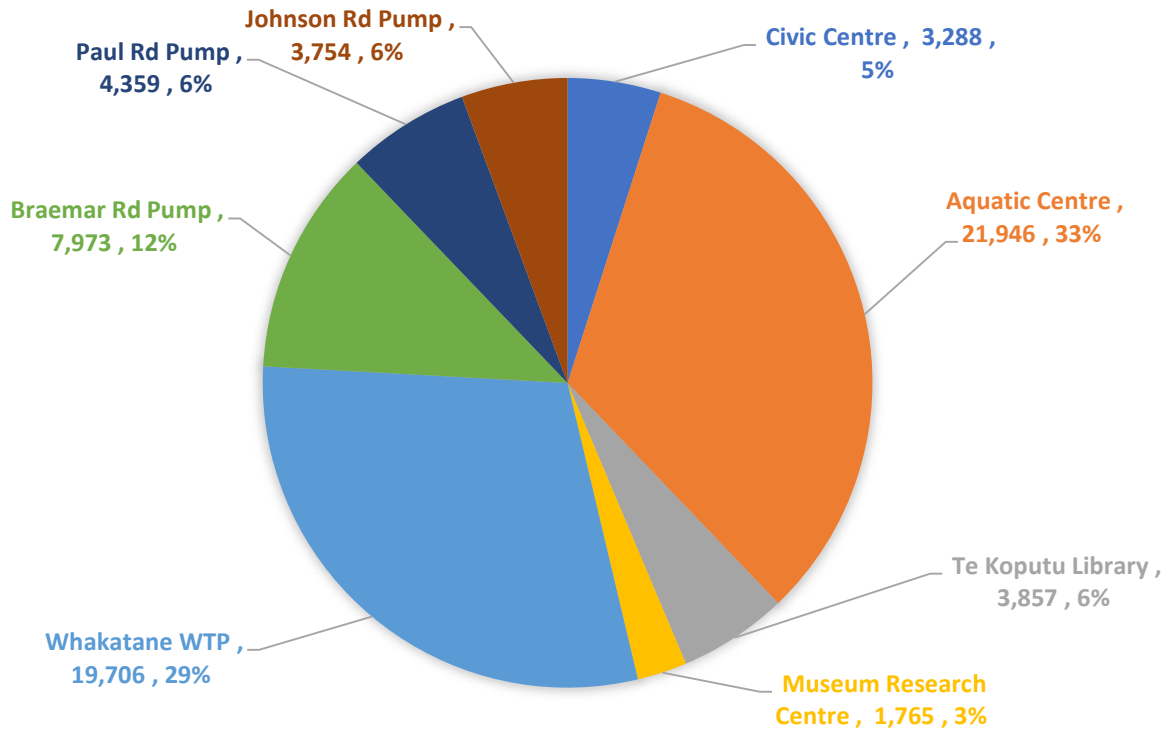
- Total energy used for the month was 487,143 kWh
- Total energy cost for the month was \$69,181
- Total carbon emissions for the month were 66,648 kgCO<sub>2</sub>e
- Rolling 12-month energy savings total 604,865 kWh
- Rolling 12-month energy cost savings total \$43,850
- Rolling 12-month carbon savings total 128,005 kgCO<sub>2</sub>e



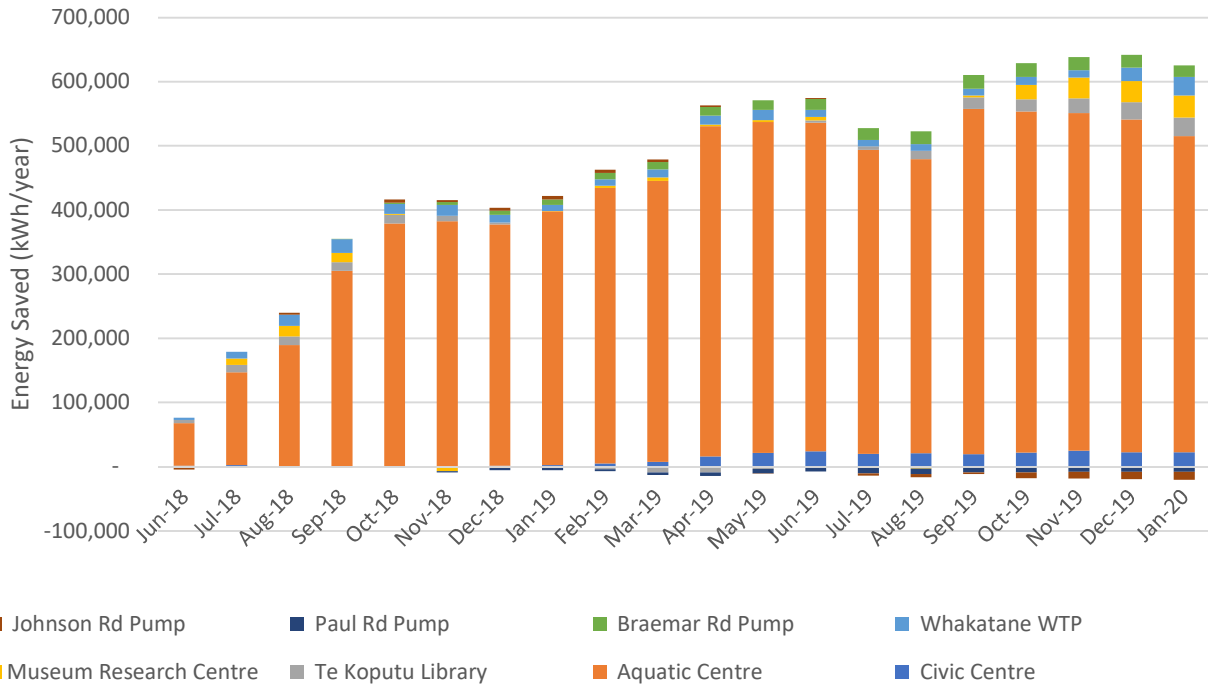
### ENERGY COST (\$/MONTH)



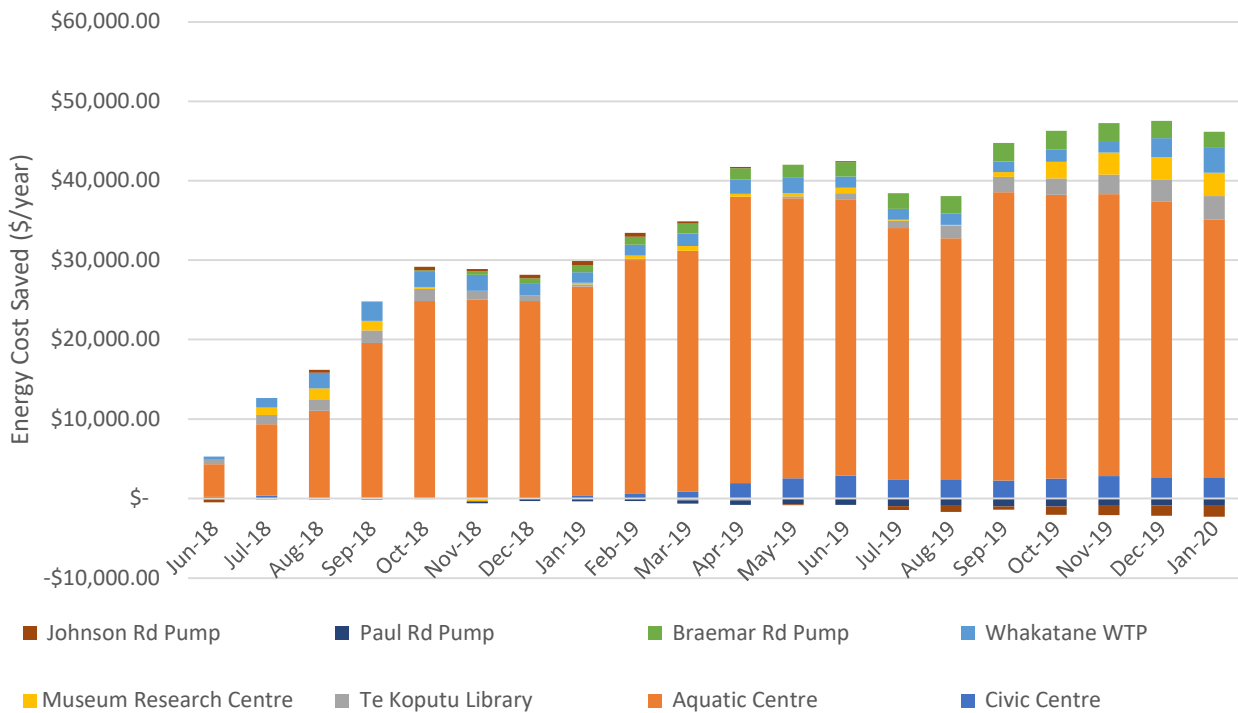
### CARBON EMISSIONS (KGCO2E/MONTH)



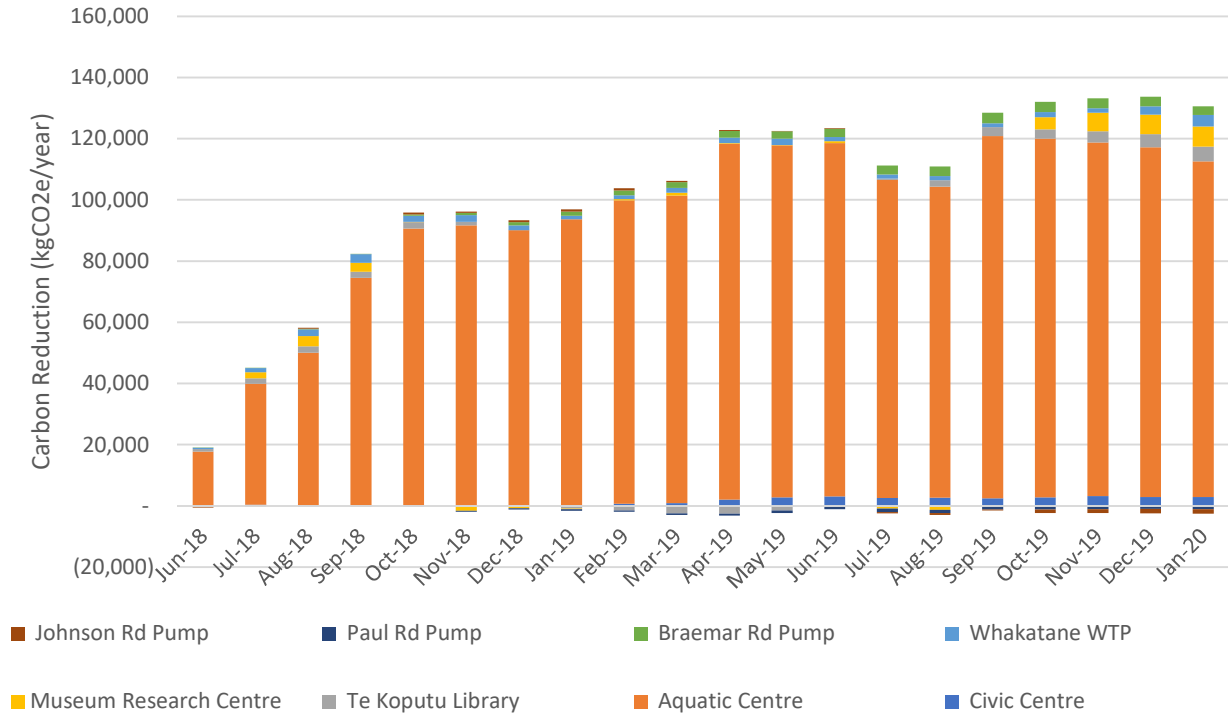
### Rolling 12 month Energy Savings



### Rolling 12 month Energy Cost Savings



### Rolling 12 month Carbon Savings



## Civic Centre

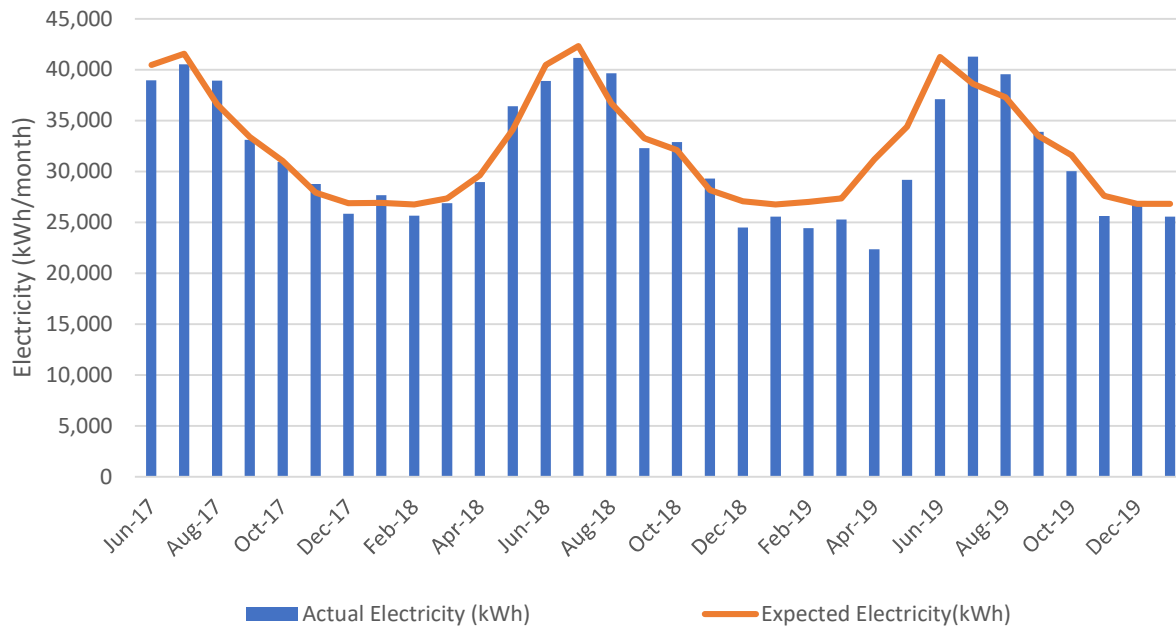
### Summary

- Electricity savings for the month were 1,250kWh, a saving of 4.7%.
- Energy cost savings for the month were \$149.
- Carbon savings for the month were 161 kgCO<sub>2</sub>e, a saving of 4.7%.
- Rolling 12-month electricity savings are 22,327 kWh, a saving of 5.8%.
- Rolling 12-month energy cost savings are \$2,563.
- Rolling 12-month carbon savings are 2,874 kgCO<sub>2</sub>e, a saving of 5.8%.

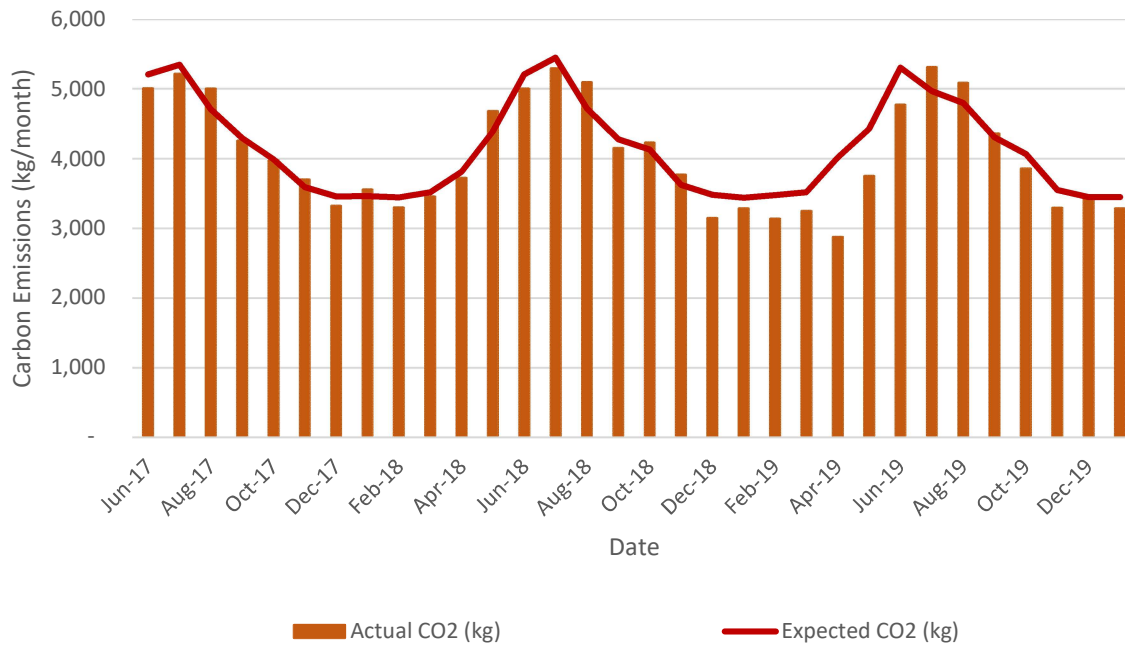
### Comments

Electricity use at the Civic Centre was 1250kWh less than expected in January 2020. The baseline adjusts for heating degree days which is a measure of ambient temperature. Electricity use in January 2020 was approximately equal to January 2019, both months' electricity use was less than baseline. Electricity use reduced in January 2020 compared to December 2019, however Dec 2019 usage was distorted by the Civic centre being used as an emergency relief centre during the white island crisis.

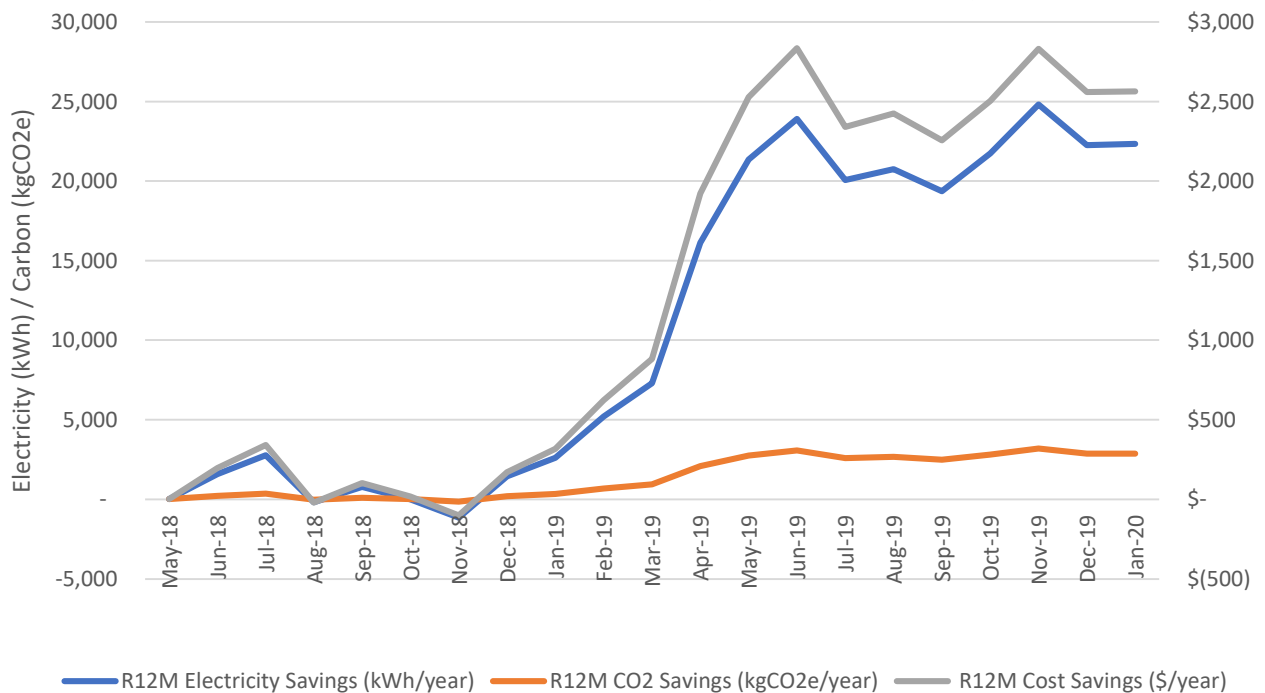
Civic Centre Actual versus Expected Electricity



### Civic Centre Actual versus Expected CO2



### Civic Centre Cumulative Rolling 12 Month Savings



## Aquatic Centre

### Summary

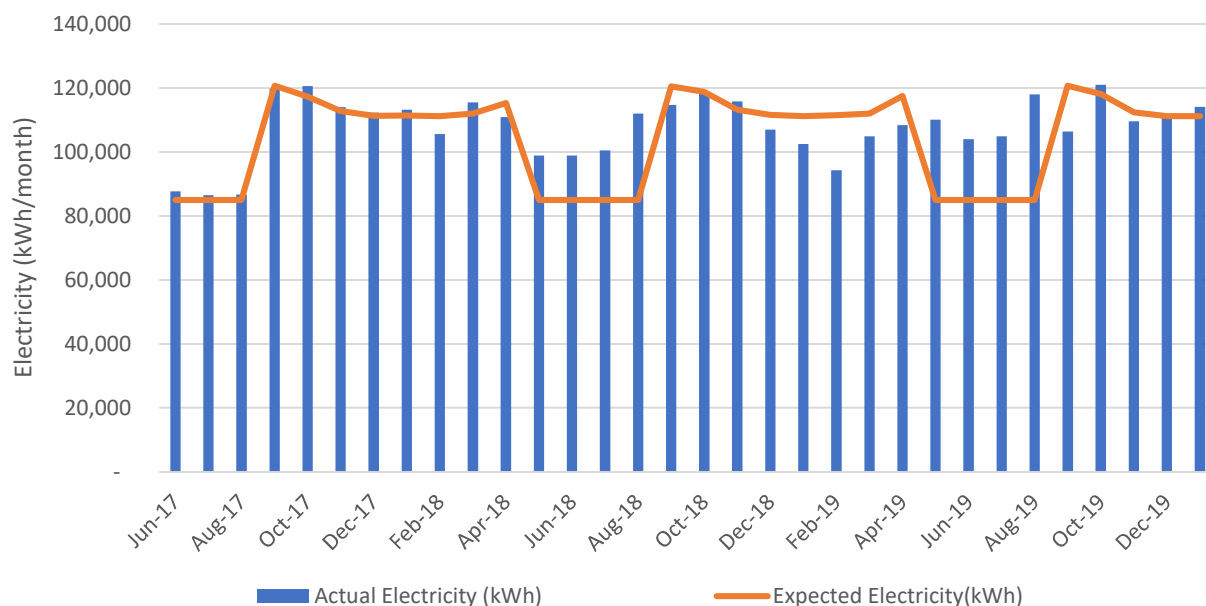
- Electricity savings for the month were -2,874kWh, an extra 2.6%.
- Natural gas savings for the month were -4,024 kWh, an extra 13.6%
- Energy cost savings for the month were -\$611, which is an increase.
- Carbon savings for the month were -1,209 kgCO2e, an extra 5.8%.
- Rolling 12-month electricity savings are -52,524 kWh, an extra 4.2%.
- Rolling 12-month natural gas savings are 545,179 kWh, a saving of 53.2%
- Rolling 12-month energy cost savings are \$32,504.
- Rolling 12-month carbon savings are 109,731 kgCO2e, a saving of 28.7%.

### Comments

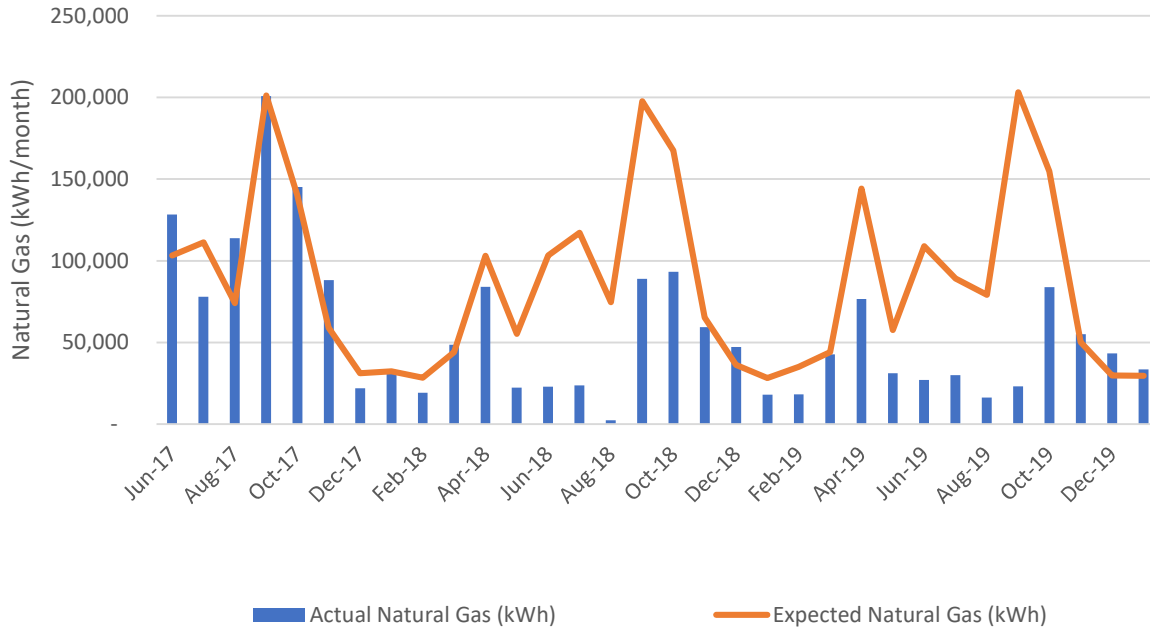
Electricity use at the Aquatic Centre was slightly higher than the baseline in January 2020. Electricity use was approx. 2900 kWh higher than expected which is an increase of just 2.6%. Total Electricity for the month was similar to January 2017, however it was approximately 12,000kWh higher than January 2018.

Natural Gas use in January 2020 is slightly higher than expected; however, natural gas use has decreased compared to December. The baseline adjusts for heating degree days (ambient temperature). Gas use was highest on Jan 7th, and also spiked on Jan 15th and 16th, these days were slightly cooler than most days in January 2020.

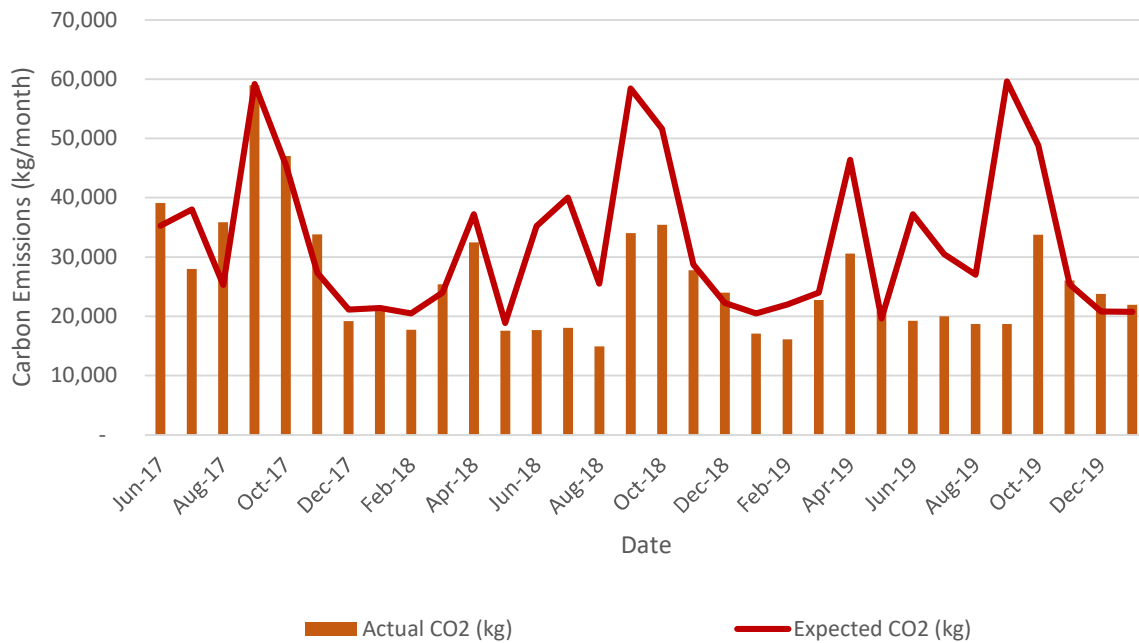
Aquatic Centre Actual versus Expected Electricity



### Aquatic Centre Actual versus Expected Natural Gas

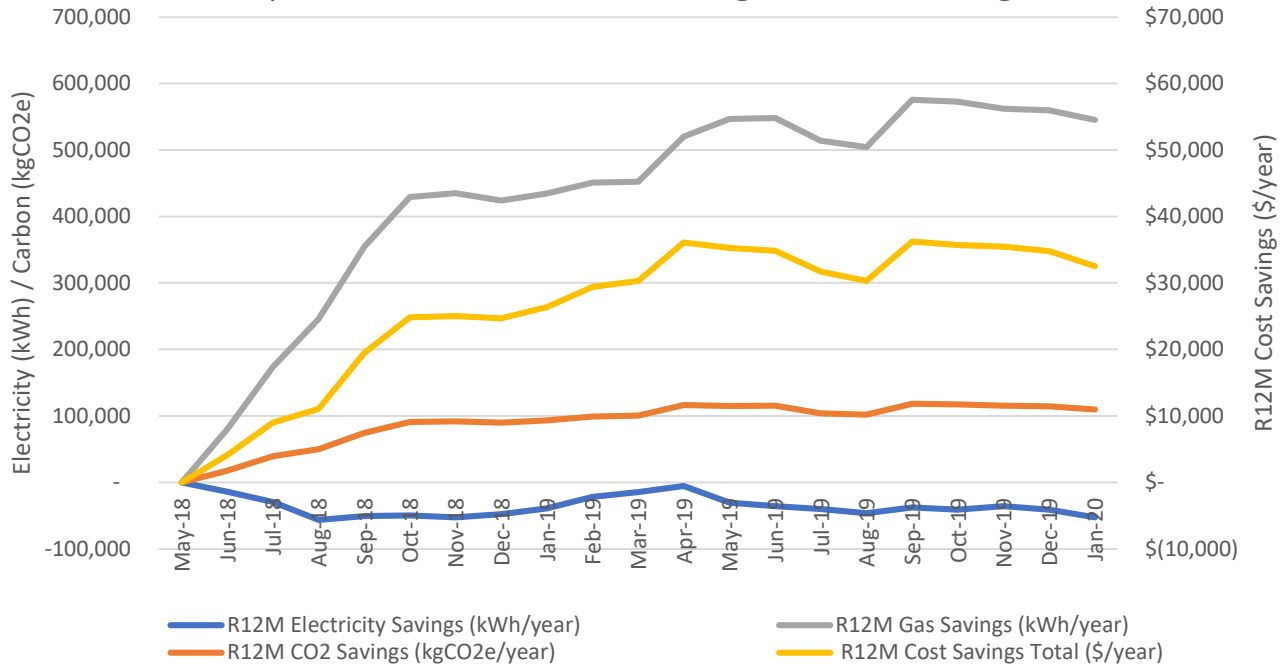


### Aquatic Centre Actual versus Expected CO2





Aquatic Centre Cumulative Rolling 12 Month Savings



## Te Koputu Library

### Summary

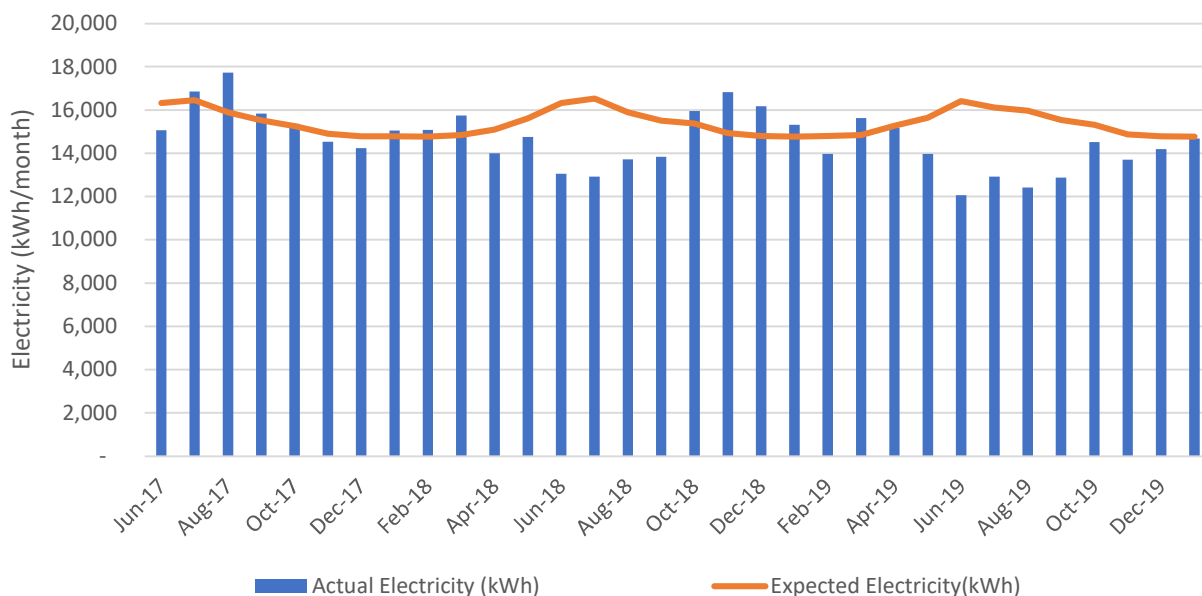
- Electricity savings for the month were 99kWh, a saving of 0.7%.
- Natural gas savings for the month were -2,527 kWh, an extra 38.6%
- Energy cost savings for the month were -\$173, which is an increase.
- Carbon savings for the month were -531 kgCO<sub>2</sub>e, an extra 16%.
- Rolling 12-month electricity savings are 18,244 kWh, a saving of 9.9%
- Rolling 12-month natural gas savings are 10,919 kWh, a saving of 9.3%
- Rolling 12-month energy cost savings are \$2,994.
- Rolling 12-month carbon savings are 4,768 kgCO<sub>2</sub>e, a saving of 9.7%.

### Comments

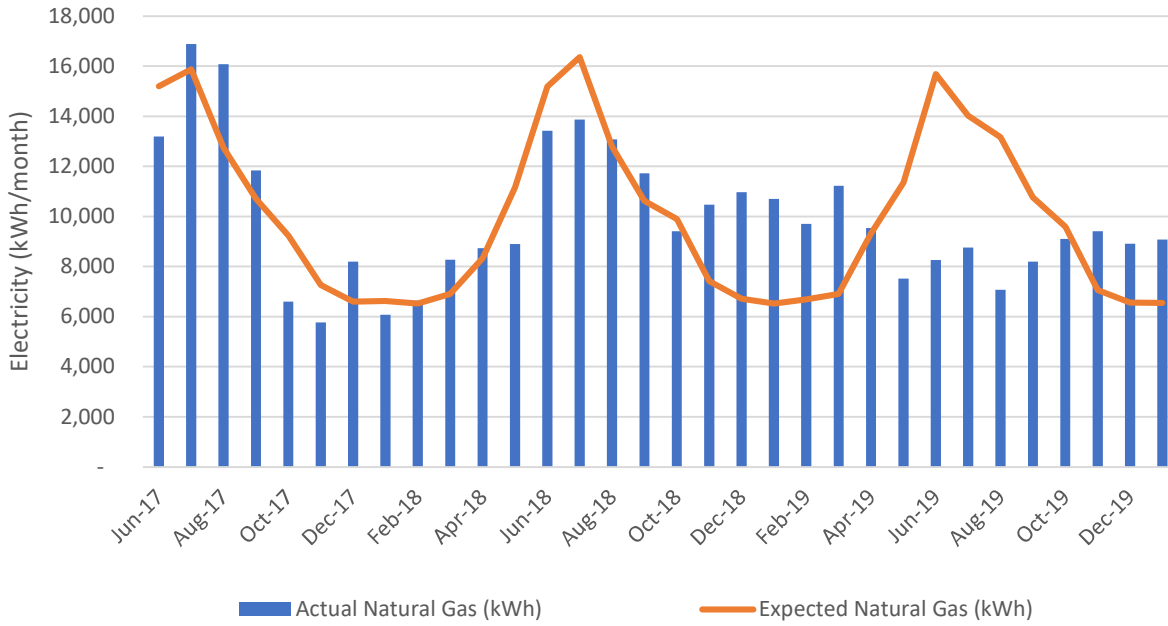
Electricity use at the Library was slightly lower, 99kWh less, than expected for the month, a saving of 0.7%. Electricity use has been lower than expected for the last 10 months at the Library. There has also been a reversal of the seasonal trend, with electricity use at its highest in summer, whereas this used to occur in the winter.

Gas use at the library was higher than expected in January 2020. This has also seen a reversal of seasonal trends, with gas use at its highest in summer months; this is due to dehumidification and reheat. Gas use was lower in Jan 2020 than in Jan 2019, however both are significantly higher than Jan 2018.

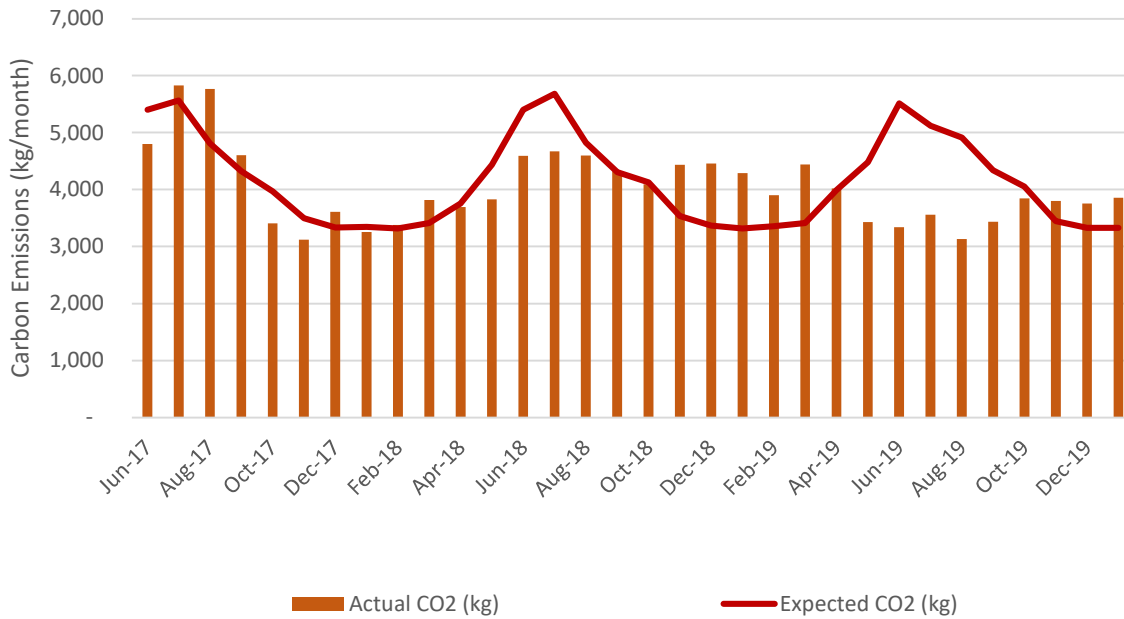
Te Koputu Library Actual versus Expected Electricity



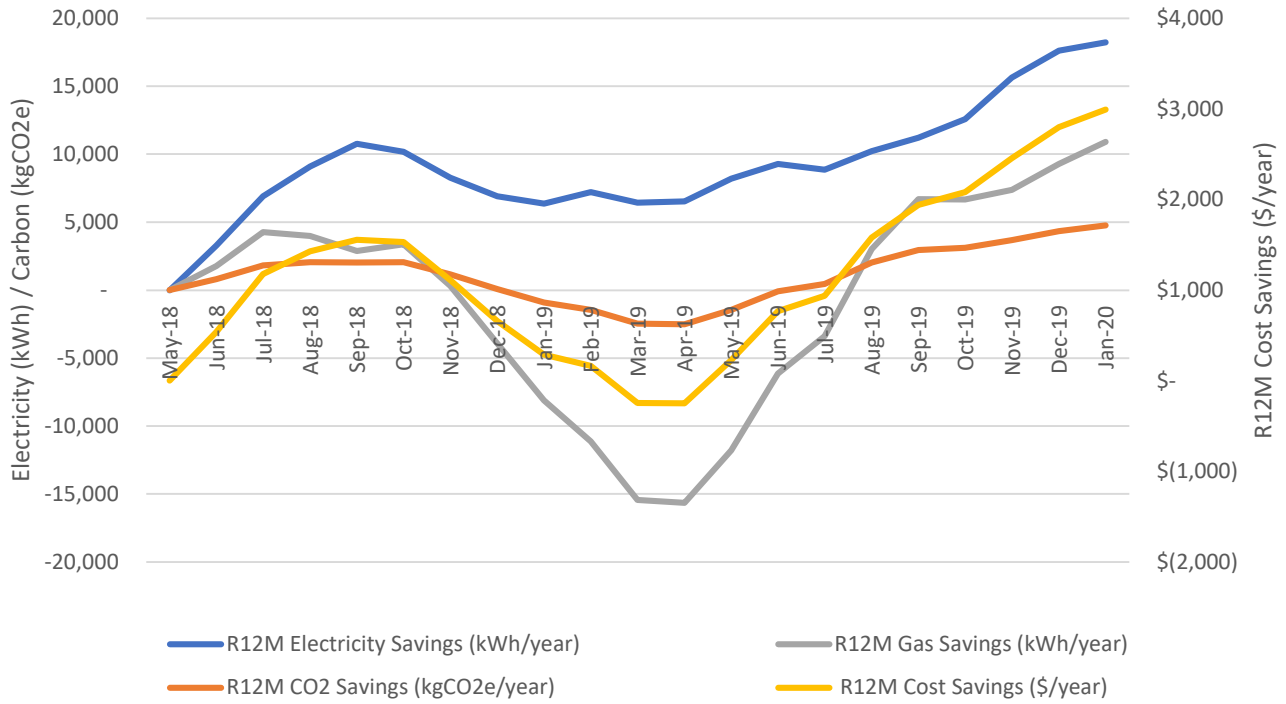
Te Koputu Library Actual versus Expected Natural Gas



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 160kWh, a saving of 1.6%.
- Natural gas savings for the month were 3,736 kWh, a saving of 62.1%
- Energy cost savings for the month were \$292.
- Carbon savings for the month were 831 kgCO<sub>2</sub>e, a saving of 32%.
- Rolling 12-month electricity savings are 8,966 kWh, a saving of 7%
- Rolling 12-month natural gas savings are 25,292 kWh, a saving of 32.7%
- Rolling 12-month energy cost savings are \$2,921.
- Rolling 12-month carbon savings are 6,637 kgCO<sub>2</sub>e, a saving of 19.9%.

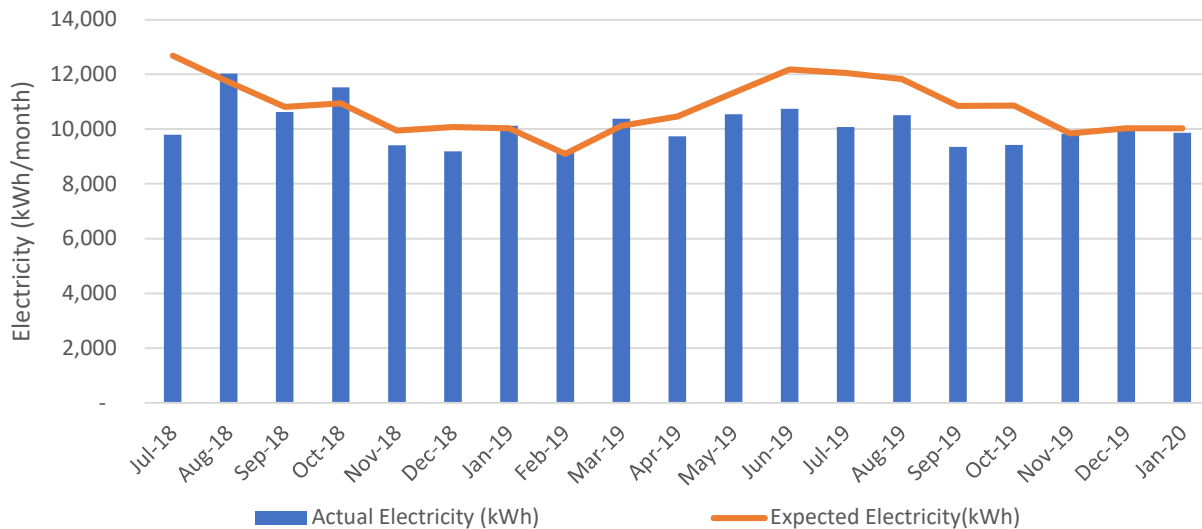
### Comments

The Museum and Research Centre is a new addition to monthly reporting. The Museum and Research Centre's electricity and natural gas baseline is based on heating degree days (ambient temperature). The natural gas baseline has a weaker correlation with ambient temperature and suggests that there is another factor that contributes to natural gas usage. The variability in gas use can be seen between October 2018 and October 2019. Both months had similar ambient temperatures, however, gas use in October 2018 was approximately 9 times higher than 2019.

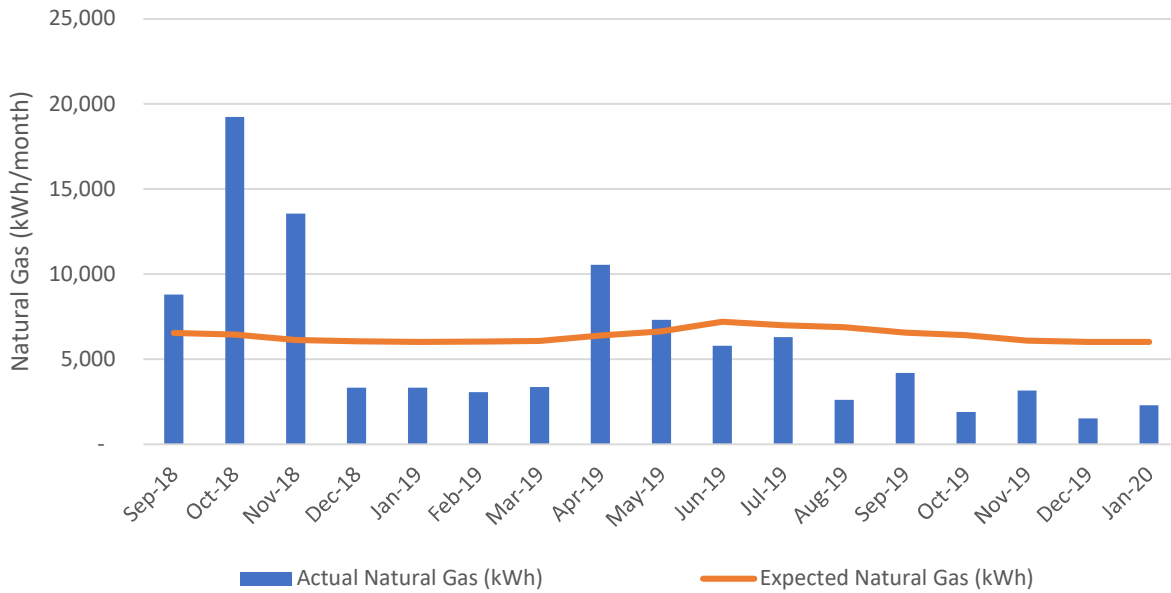
The Electricity use at the Museum and Research Centre was 160kWh less than expected. for the month, a saving of 1.6%. Electricity use was similar to the previous year.

Gas use at the Museum and Research Centre was significantly lower than expected in January 2020, a savings of 62.1%.

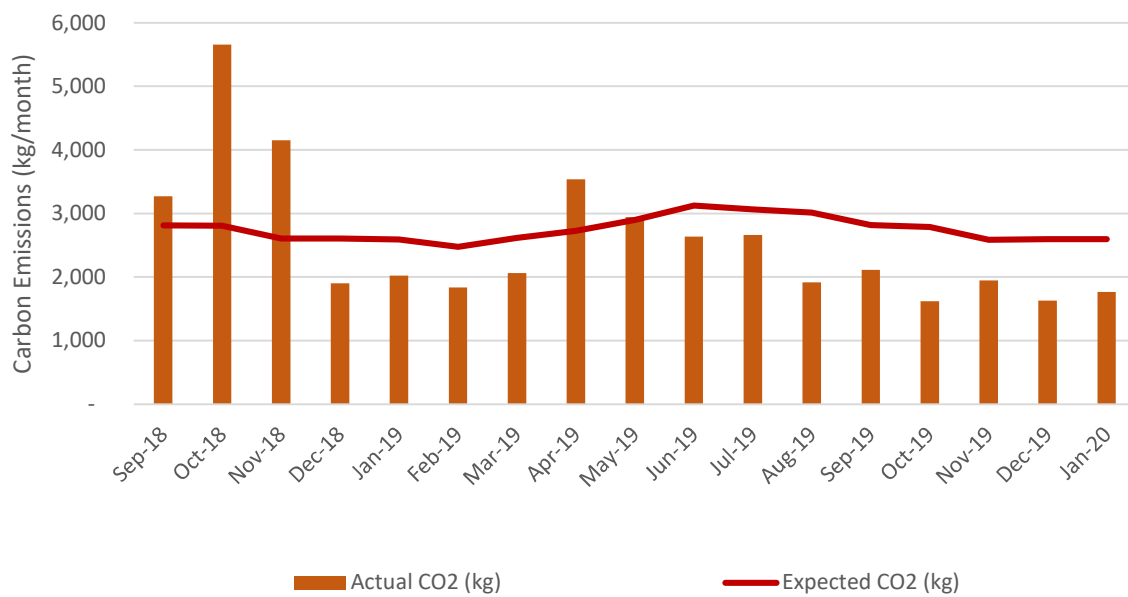
Museum Research Centre Actual versus Expected Electricity

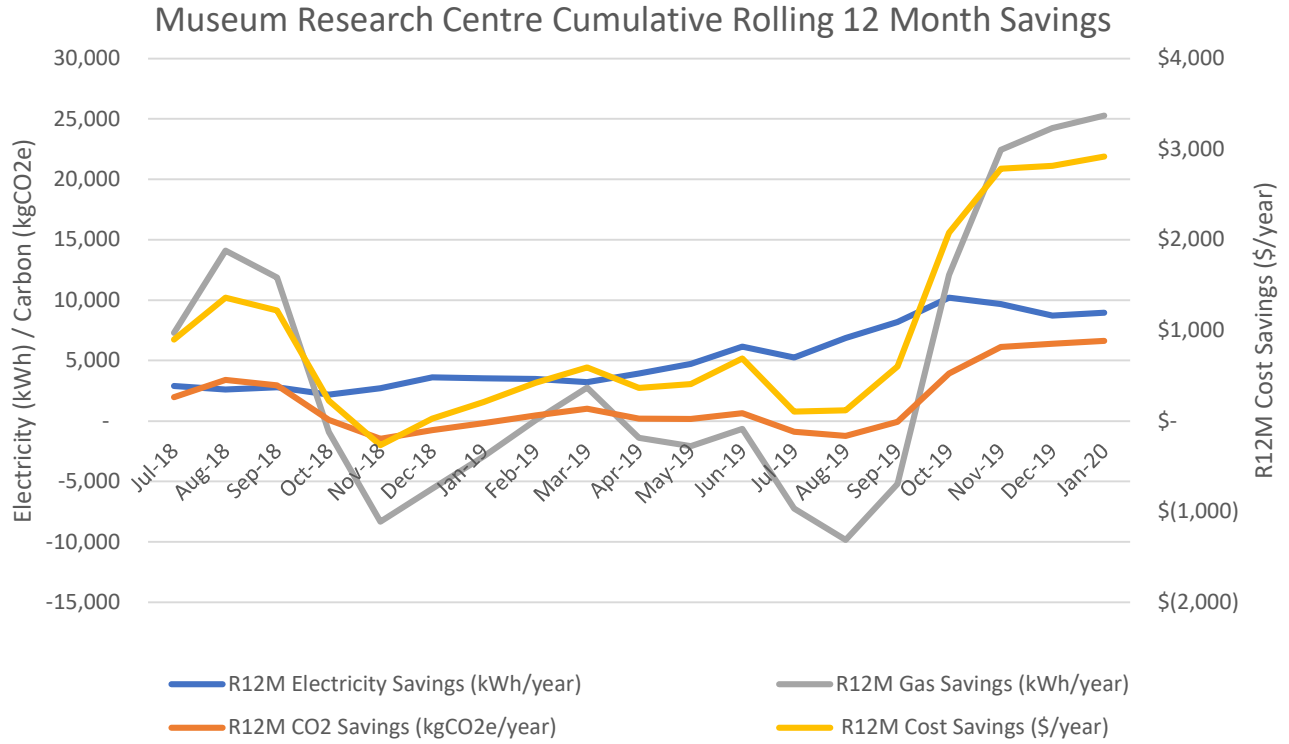


### Museum Research Centre Actual versus Expected Natural Gas



### Museum Research Centre Actual versus Expected CO2





## Whakatāne Water Treatment Plant

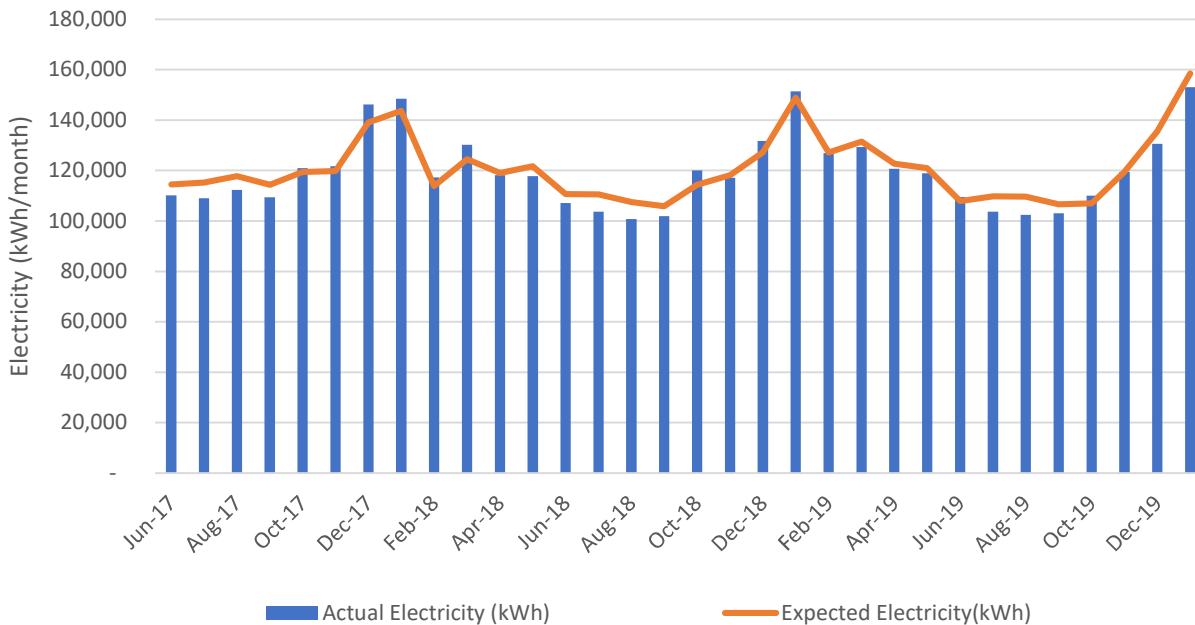
### Summary

- Electricity savings for the month were 5,436kWh, a saving of 3.4%.
- Energy cost savings for the month were \$576.
- Carbon savings for the month were 700 kgCO<sub>2</sub>e, a saving of 3.4%.
- Rolling 12-month electricity savings are 29,134 kWh, a saving of 2%.
- Rolling 12-month energy cost savings are \$3,236.
- Rolling 12-month carbon savings are 3,750 kgCO<sub>2</sub>e, a saving of 2%.

### Comments

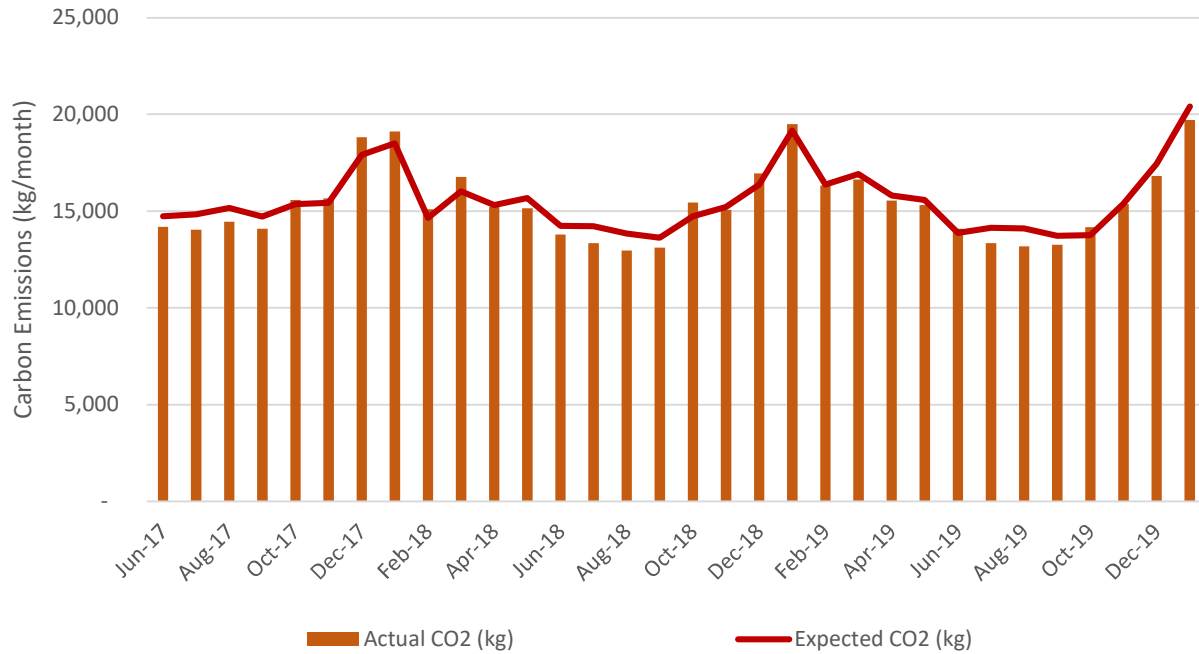
Electricity use was 3.4% less than expected at the water treatment plant in January 2020. The baseline adjusts for water supplied, and January has historically been a the month with the highest demand. Months of high demand have typically been accompanied by a decrease in efficiency, possibly due to the use of a 24-7 pump dedicated to supplying a duck pond. January 2020 water demand was higher than the previous 2 years in January, however this time an electricity saving was achieved.

Water Treatment Plant Actual versus Expected Electricity

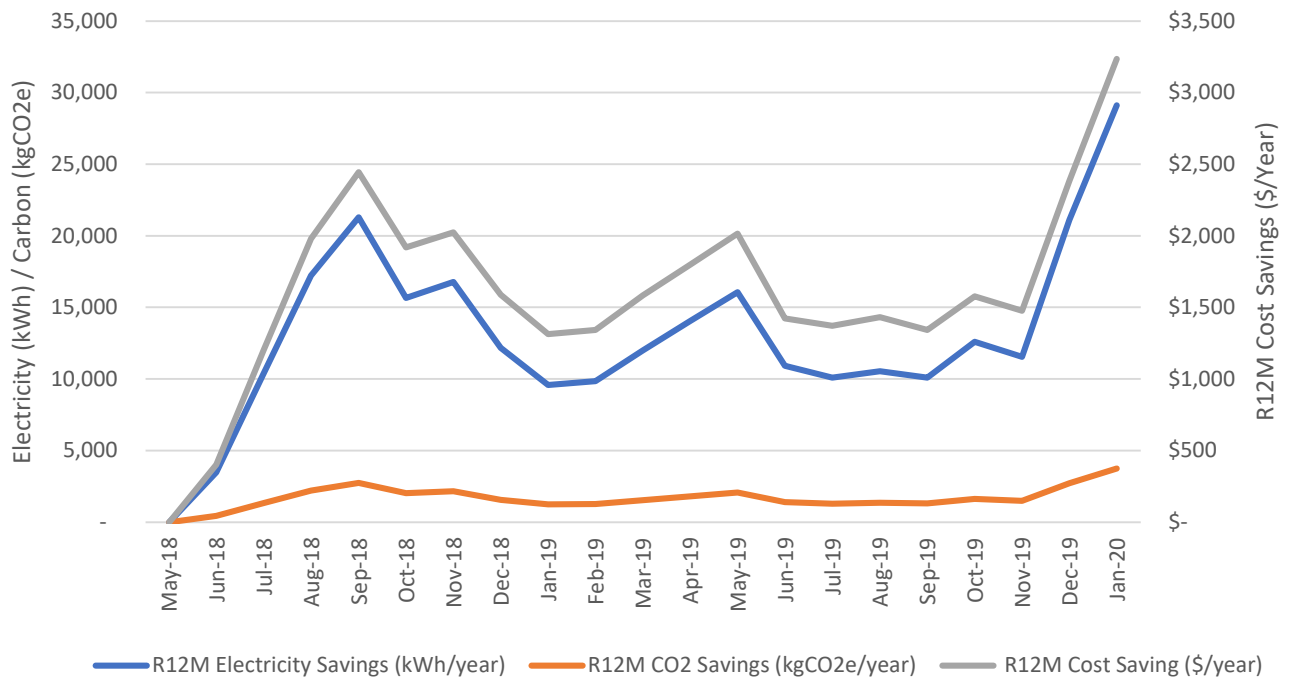




### Water Treatment Plant Actual versus Expected CO2



### Whakatane Water Treatment Plant Cumulative Rolling 12 Month Savings



## Braemar Rd Pump Station

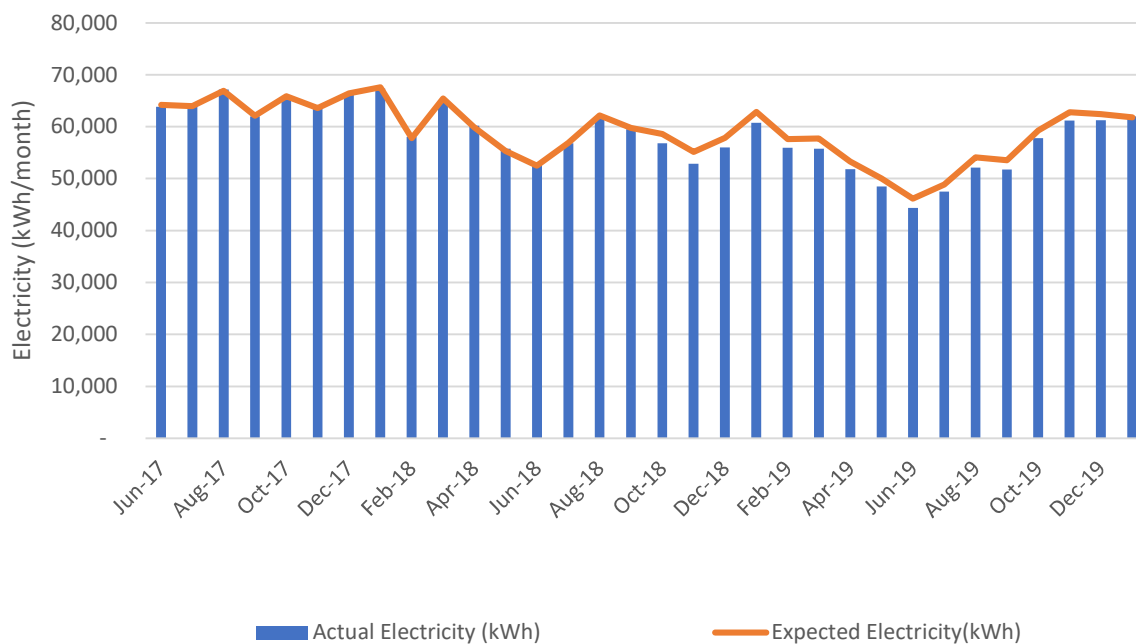
### Summary

- Electricity savings for the month were -171kWh, an extra 0.3%.
- Energy cost savings for the month were -\$19, which is an increase.
- Carbon savings for the month were -13 kgCO<sub>2</sub>e, an extra 0.3%.
- Rolling 12-month electricity savings are 17,570 kWh, a saving of 2.6%.
- Rolling 12-month energy cost savings are \$1,931.
- Rolling 12-month carbon savings are 2,830 kgCO<sub>2</sub>e, a saving of 2.6%.

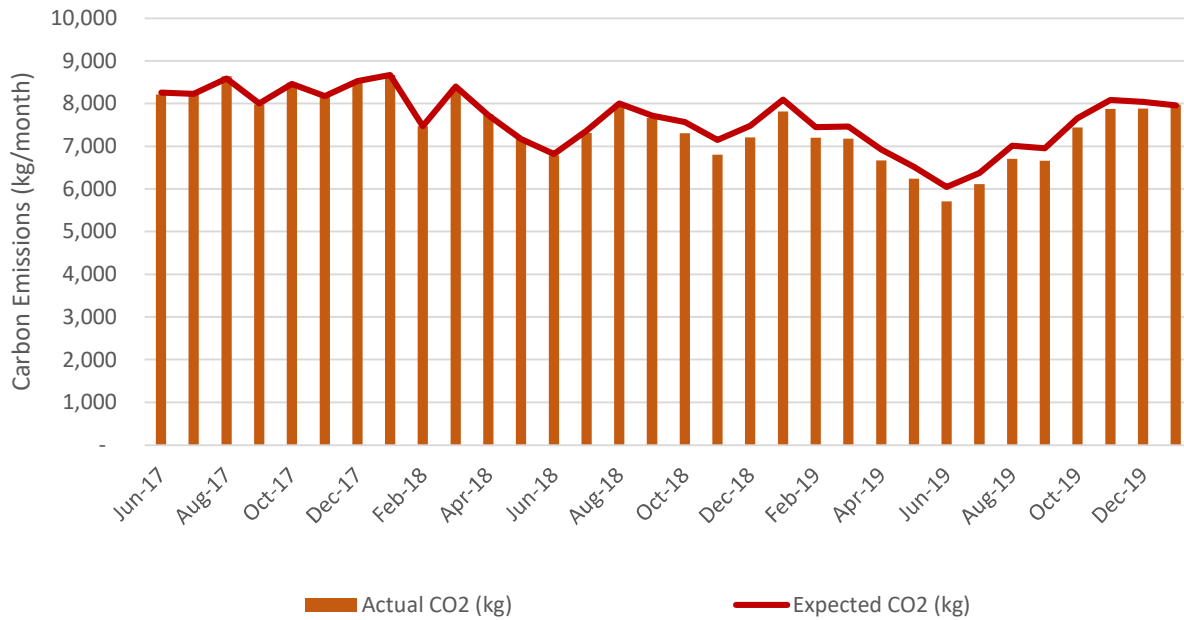
### Comments

Braemar Rd used an extra 171 kWh in January 2020, which is different than the past trend of using approx. 2-3% less electricity than expected. Savings in the last 12 months savings are still 2.6%. Typically, the 2-3% energy saving trend was met by electricity use above baseline for Johnson Rd. An increase in energy use from Braemar Rd in January 2020 has decreased the energy use and resulted in a savings for Johnson Rd pump station.

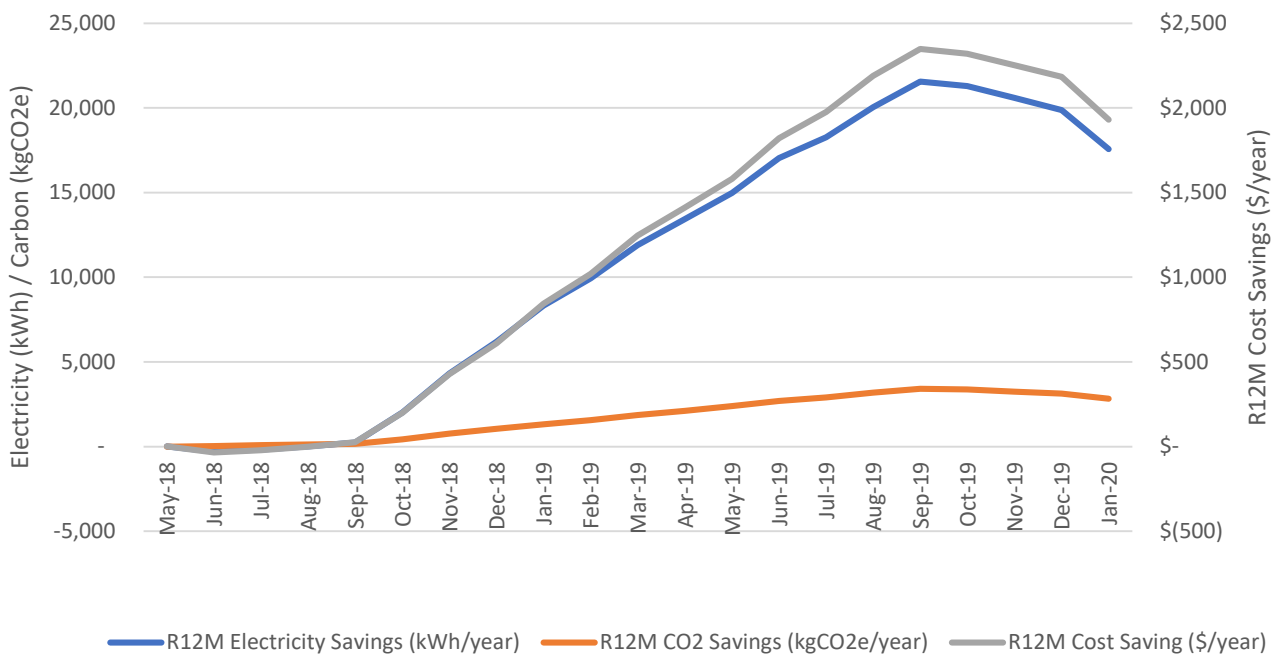
Braemar Rd Actual versus Expected Electricity



### Braemar Rd Actual versus Expected CO2



### Braemar Rd Pumps Cumulative Rolling 12 Month Savings



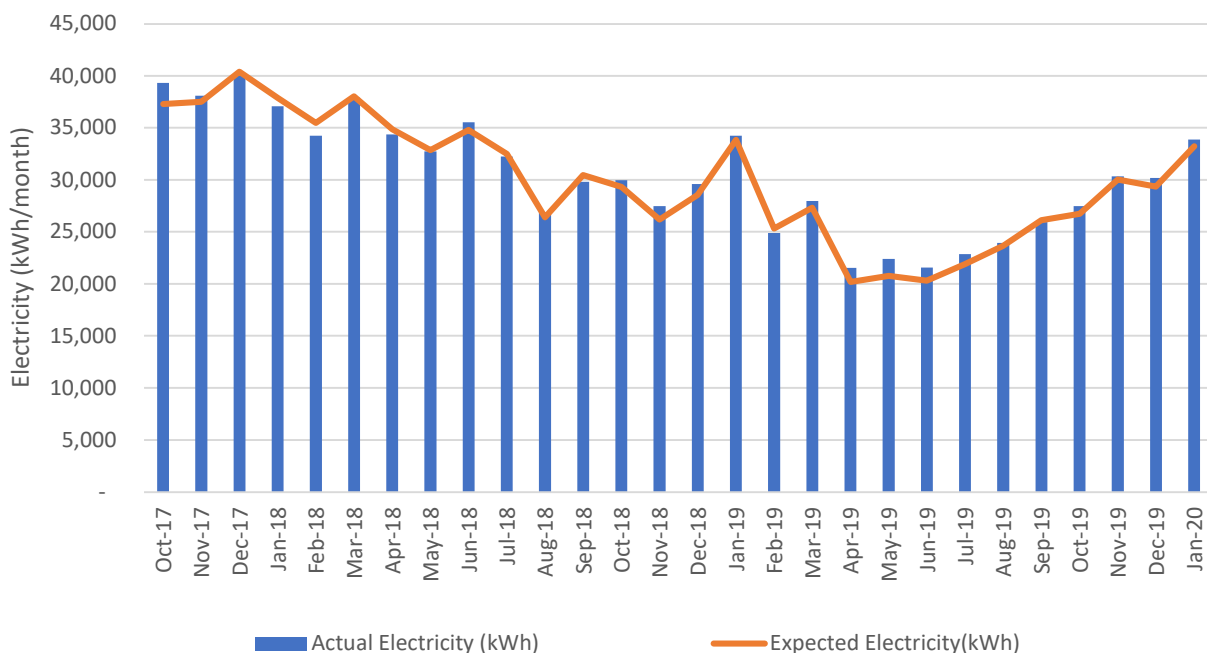
## Paul Rd Pump Station

- Electricity savings for the month were -636kWh, an extra 1.9%.
- Energy cost savings for the month were -\$70, which is an increase.
- Carbon savings for the month were -81 kgCO<sub>2</sub>e, an extra 1.9%.
- Rolling 12-month electricity savings are -8,018 kWh, an extra 2.6%.
- Rolling 12-month energy cost savings are -\$915, which is an increase.
- Rolling 12-month carbon savings are -1,026 kgCO<sub>2</sub>e, an extra 2.6%.

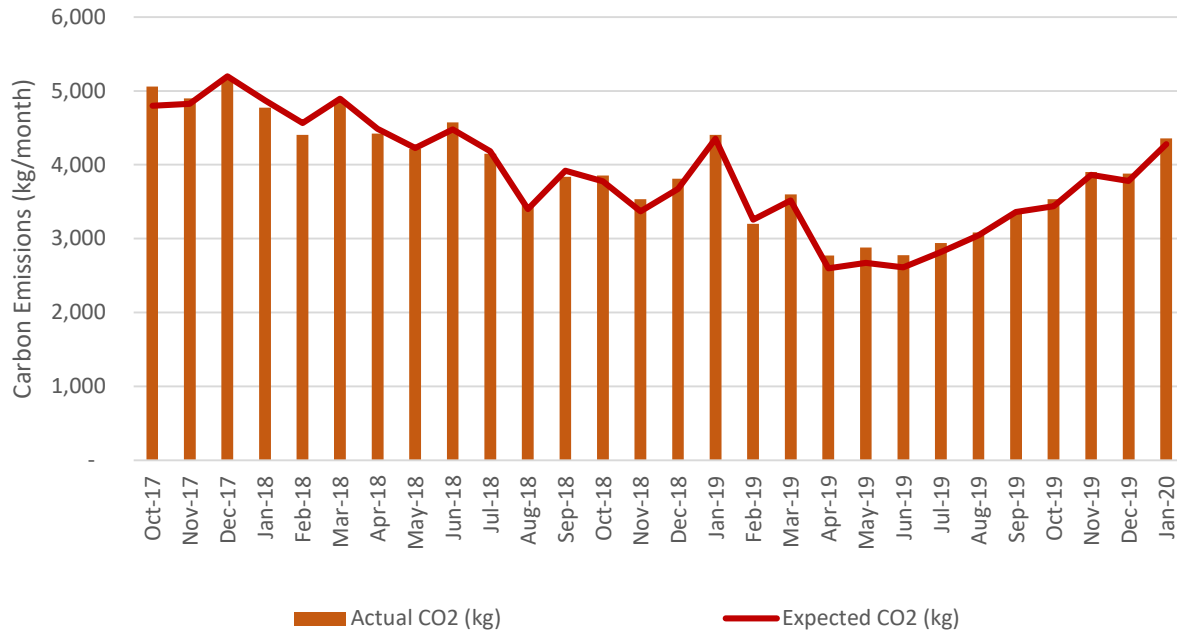
### Comments

Electricity used by the Paul Rd pump station in January 2020 was 1.9% higher than expected for the month. The baseline adjusts for the volume of water supplied by the pump station. This increased electricity used in January is consistent with a rolling 12 month increase of 2.5% which has occurred most months since Oct 2018.

Paul Rd Pump Station Actual versus Expected Electricity

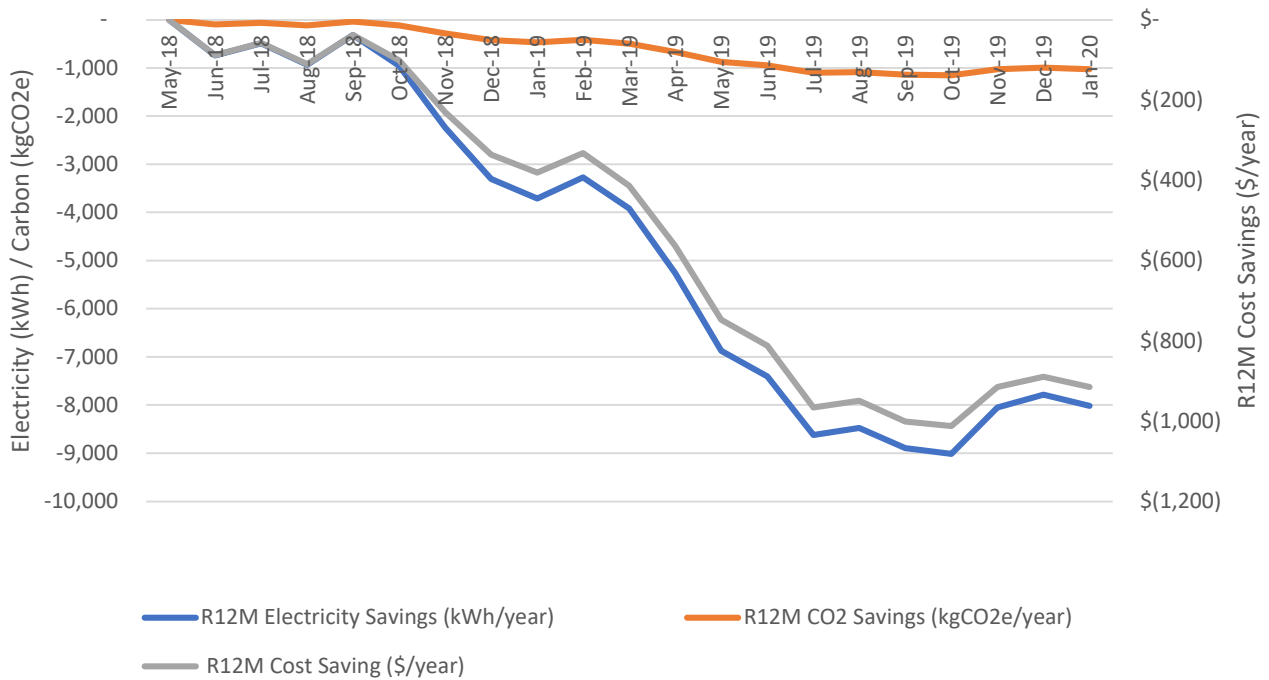


### Paul Rd Pump Station Actual versus Expected CO2



Actual CO2 (kg) Expected CO2 (kg)

### Paul Rd Pumps Cumulative Rolling 12 Month Savings



R12M Electricity Savings (kWh/year) R12M CO2 Savings (kgCO2e/year) R12M Cost Saving (\$/year)

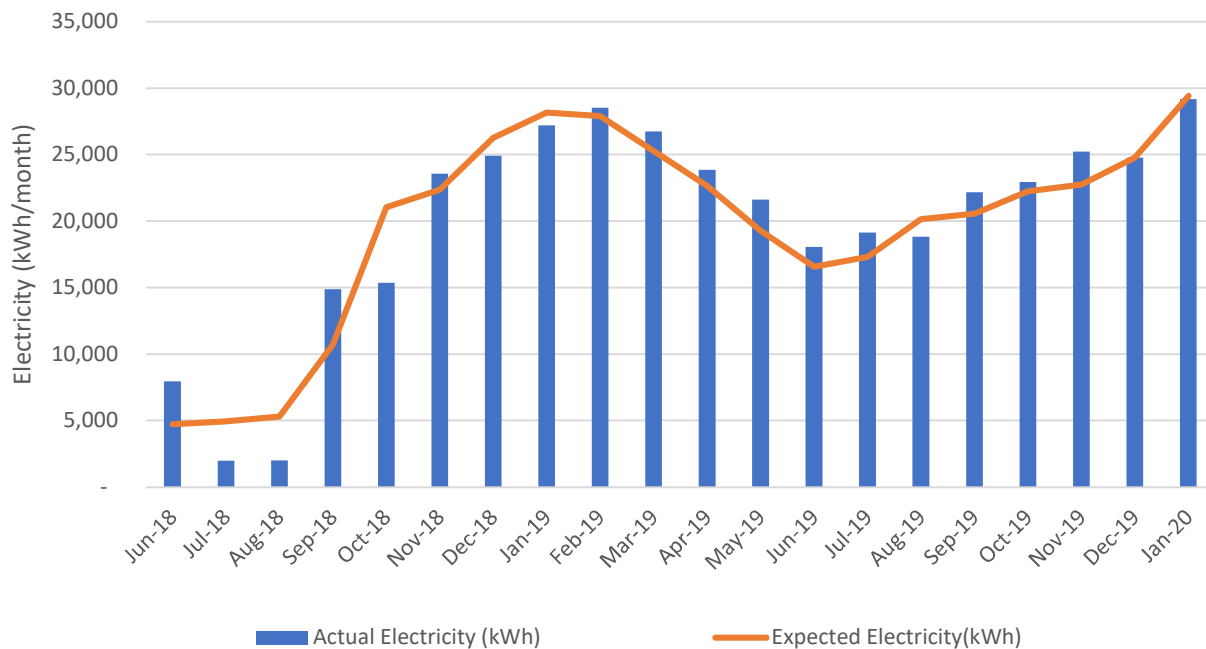
## Johnson Rd Pump Station

- Electricity savings for the month were 259kWh, a saving of 0.9%.
- Energy cost savings for the month were \$29.
- Carbon savings for the month were 35 kgCO<sub>2</sub>e, a saving of 0.9%.
- Rolling 12-month electricity savings are -12,224 kWh, an extra 4.5%.
- Rolling 12-month energy cost savings are -\$1,383, which is an increase.
- Rolling 12-month carbon savings are -1,559 kgCO<sub>2</sub>e, an extra 4.5%.

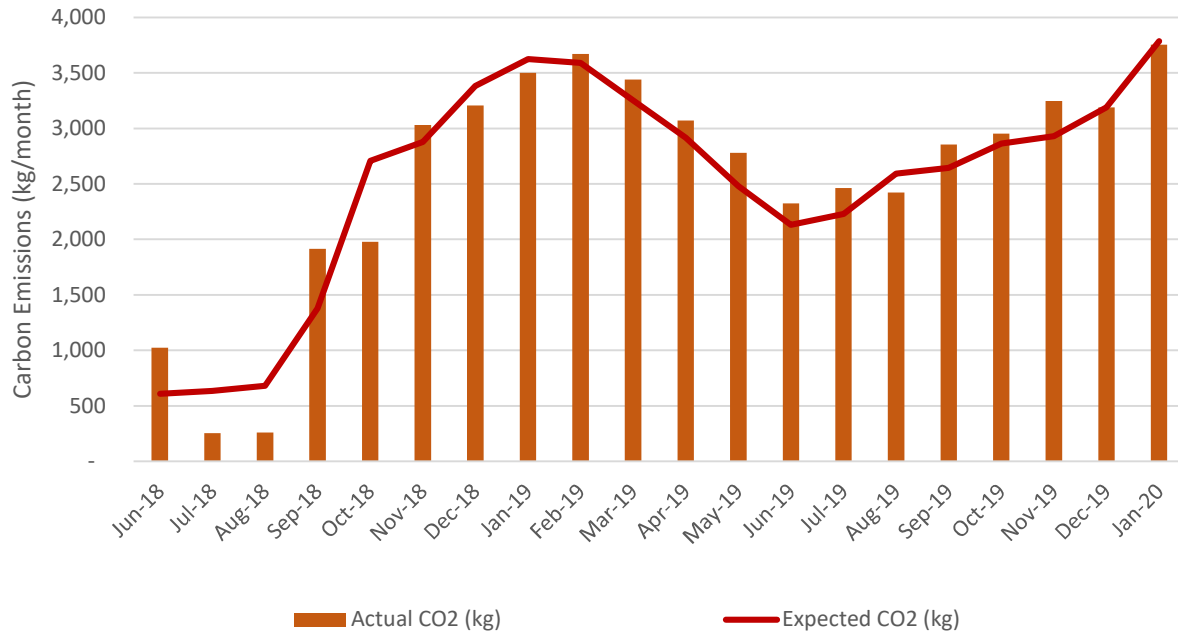
### Comments

Electricity used by the Johnson Rd pump station in January 2020 was 0.9% lower than expected for the month. The electricity savings are contrary to the previous trend of above baseline use since Feb 2019. The rolling 12-month electricity use is 4.5% higher than baseline. The baseline adjusts for the volume of water supplied by the pump station. The decrease in electricity use for January 2020 has been facilitated by slightly higher electricity use by Braemar Rd pump station than previous months.

Johnson Rd Pump Station Actual versus Expected Electricity



### Johnson Rd Pump Station Actual versus Expected CO2



### Johnson Rd Pumps Cumulative Rolling 12 Month Savings

