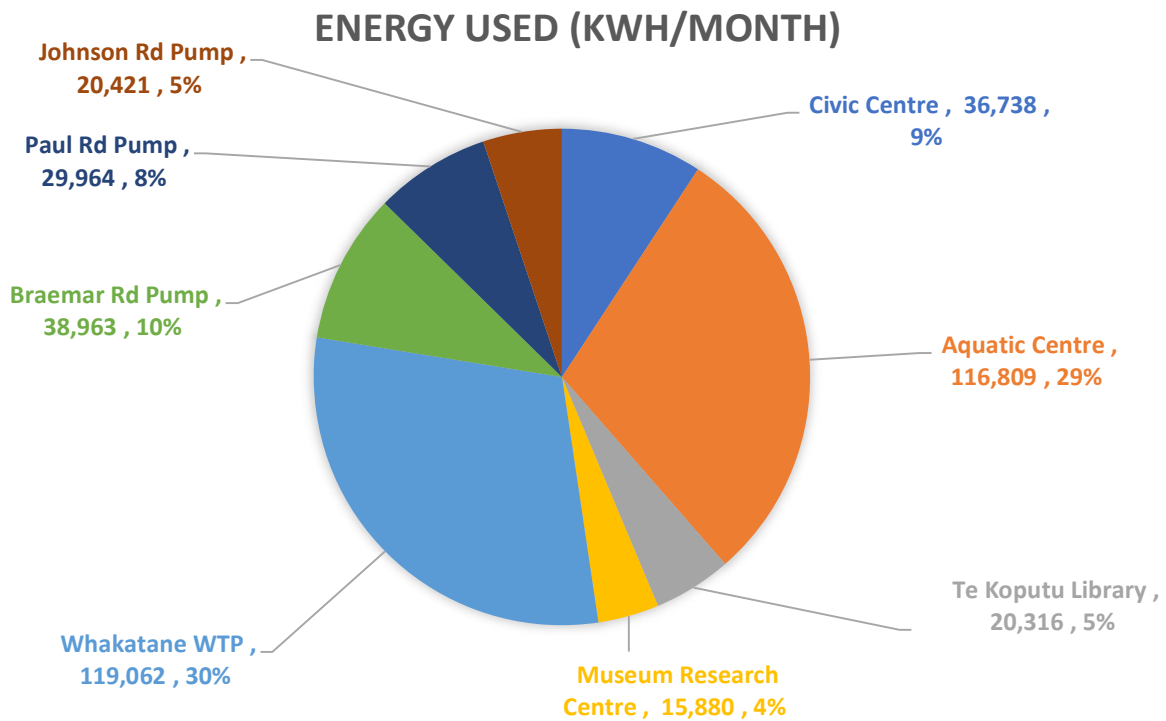


## Whakatāne District Council Energy Performance Report

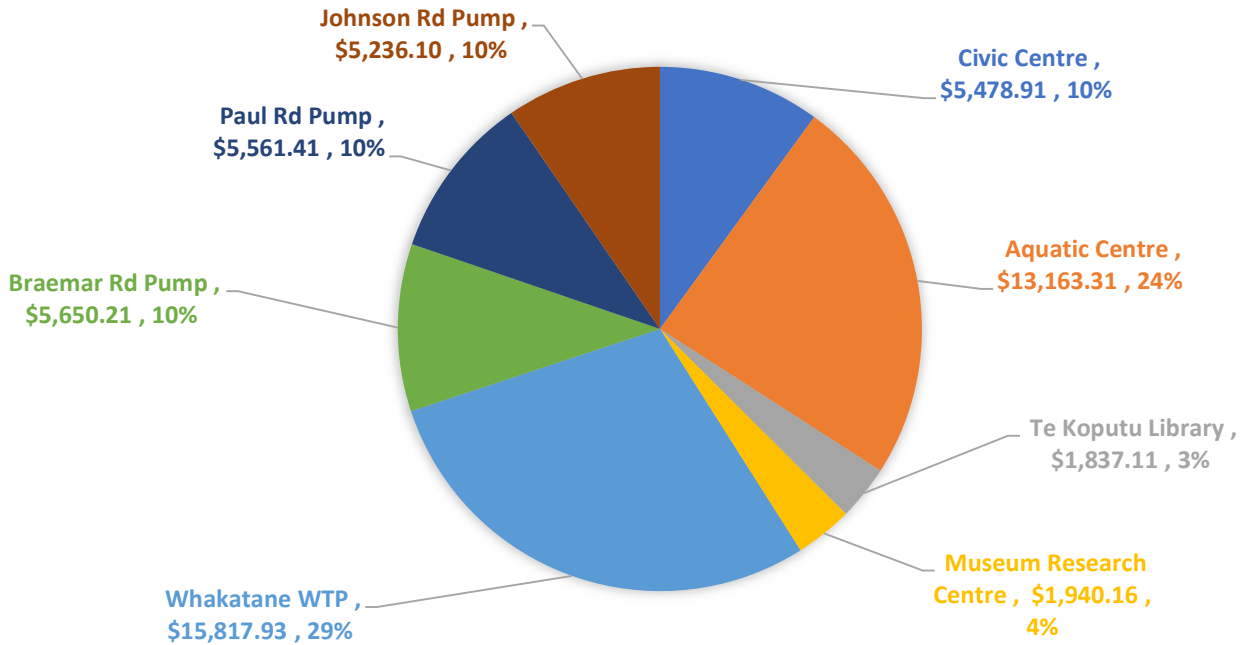
### Summary

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

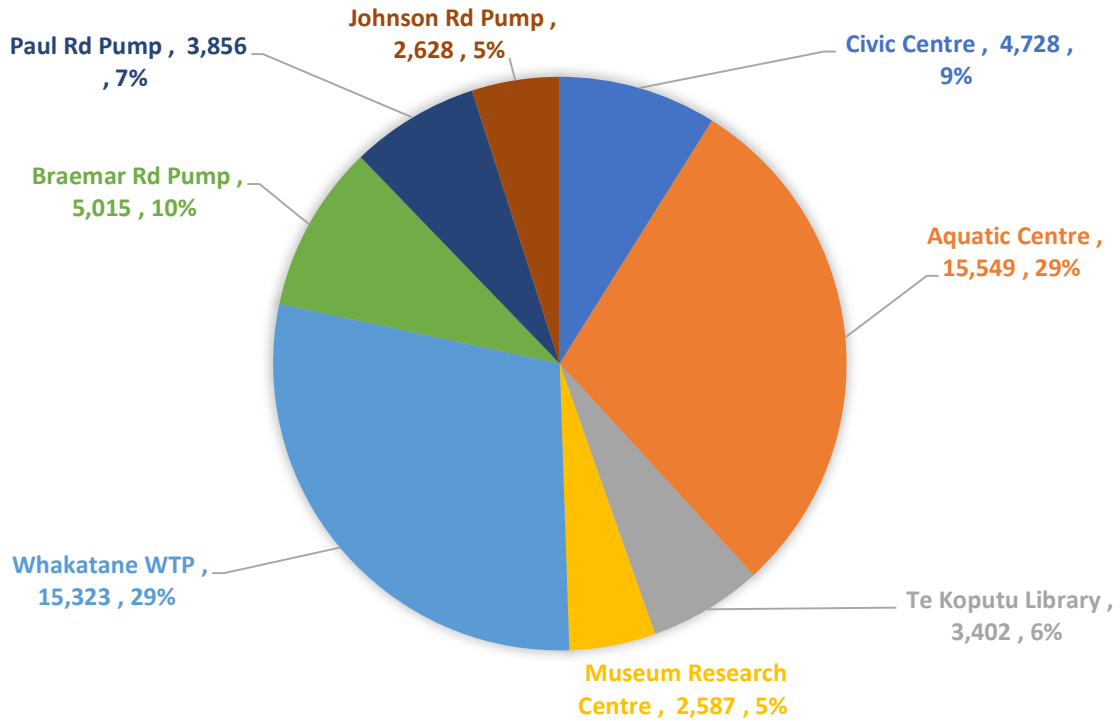
- Total energy cost savings for the month was -\$2,415
- Total energy cost for the month was \$57,276
- Total energy used for the month was 409,614 kWh
- Total carbon emissions for the month were 54,564 kgCO<sub>2</sub>e
- Rolling 12-month energy savings total 644,315 kWh
- Rolling 12-month energy cost savings total \$39,716
- Rolling 12-month carbon savings total 127,393 kgCO<sub>2</sub>e



### ENERGY COST (\$/MONTH)

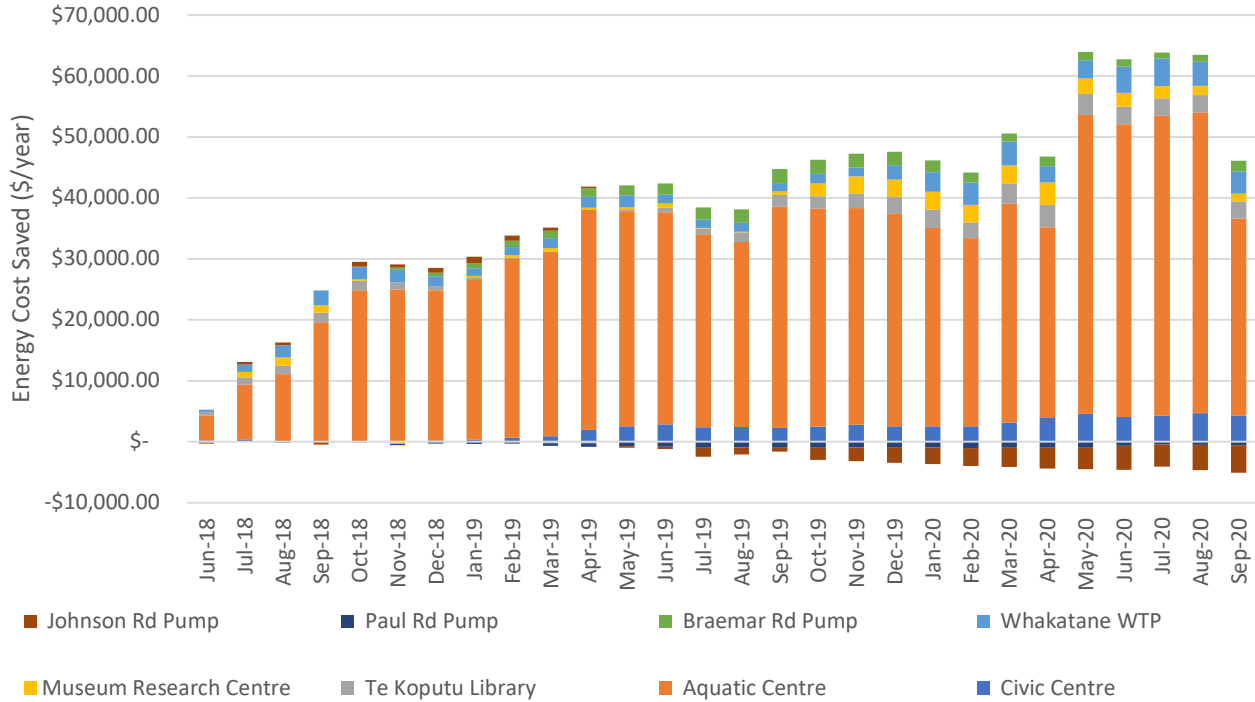


### CARBON EMISSIONS (KGCO2E/MONTH)

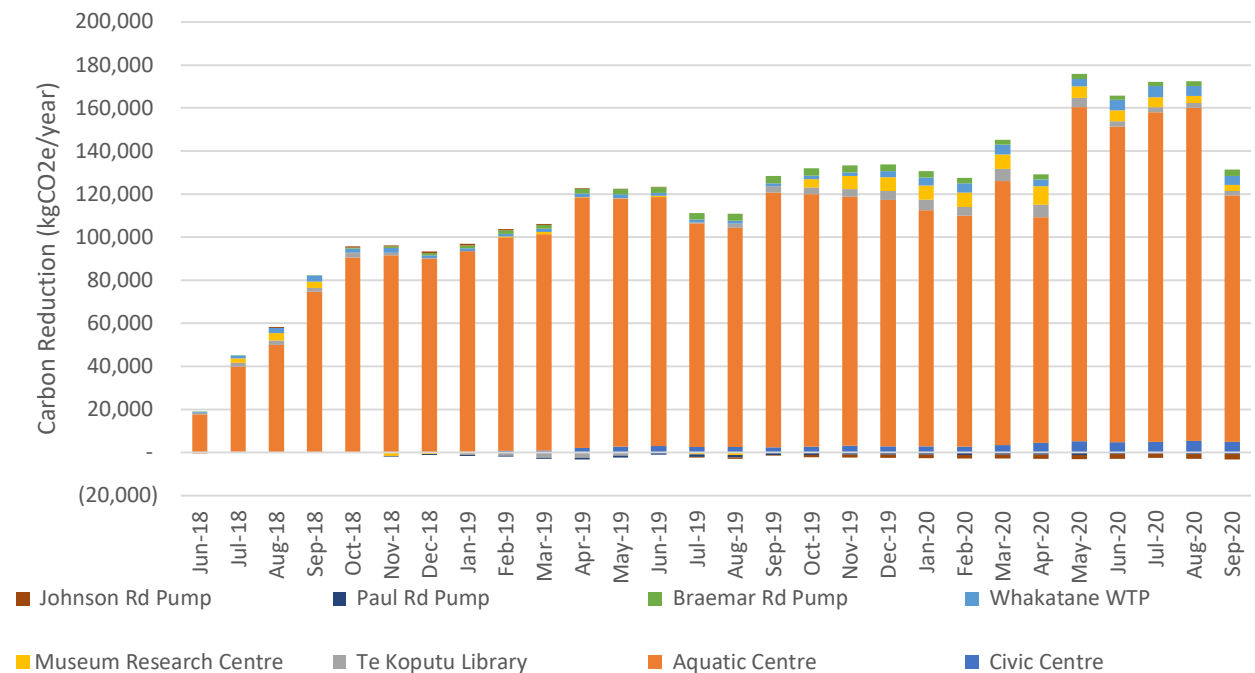




### Rolling 12 month Energy Cost Savings



### Rolling 12 month Carbon Savings



## Civic Centre

### Summary

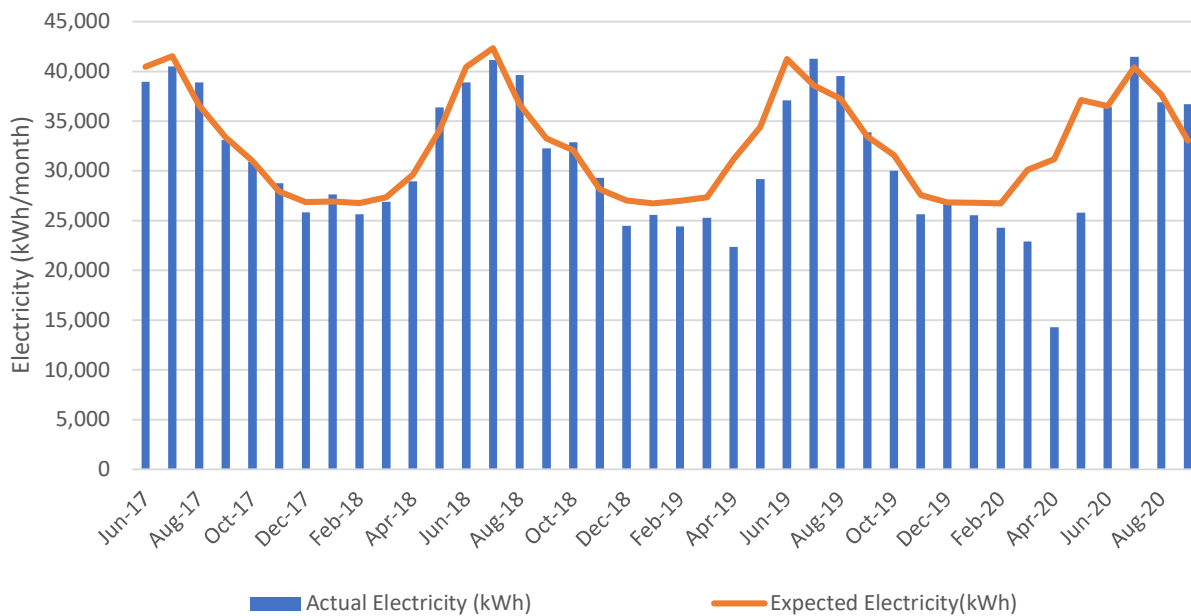
- Electricity savings for the month were -3,709kWh, an extra 11.2%.
- Energy cost savings for the month were -\$401, which is an increase.
- Carbon savings for the month were -477 kgCO<sub>2</sub>e, an extra 11.2%.
- Rolling 12-month electricity savings are 38,854 kWh, a saving of 10.1%.
- Rolling 12-month energy cost savings are \$4,300.
- Rolling 12-month carbon savings are 5,001 kgCO<sub>2</sub>e, a saving of 10.1%.

### Comments

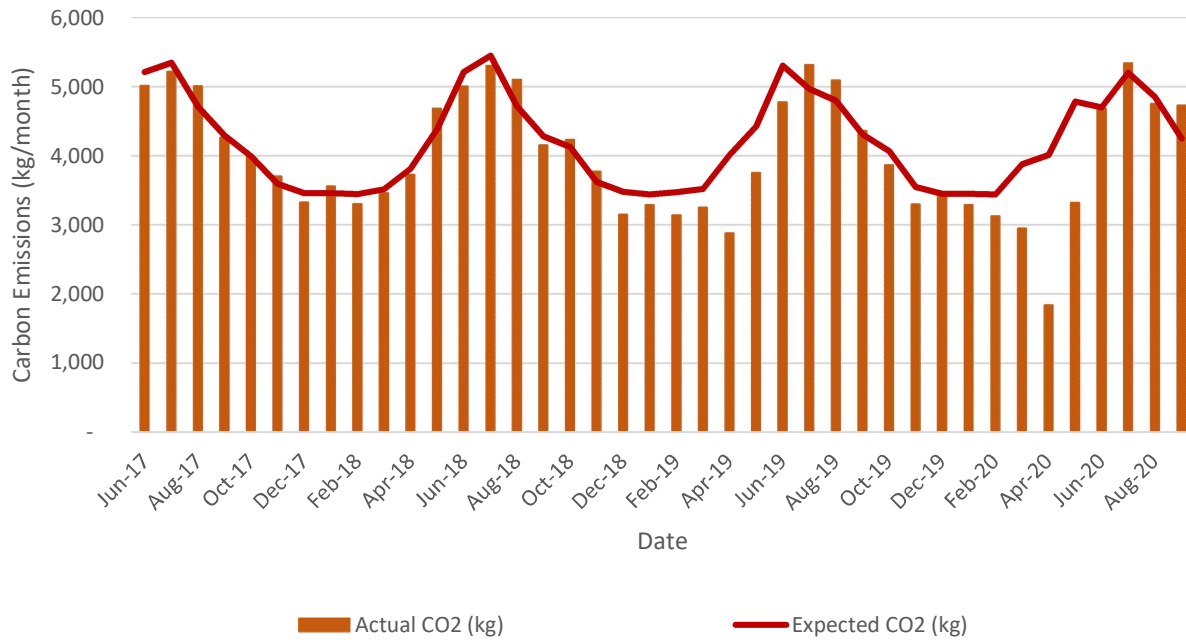
The Civic Centre has used more electricity in September 2020, likely related to a change in the electricity use profile for the month. Energy use in September 2020 is approx. 8% higher compared to September 2019, and it was a warmer month, which normally requires less electricity because less heating should have been required.

Rolling 12 month savings have declined from record levels in August, due to September's above baseline electricity use.

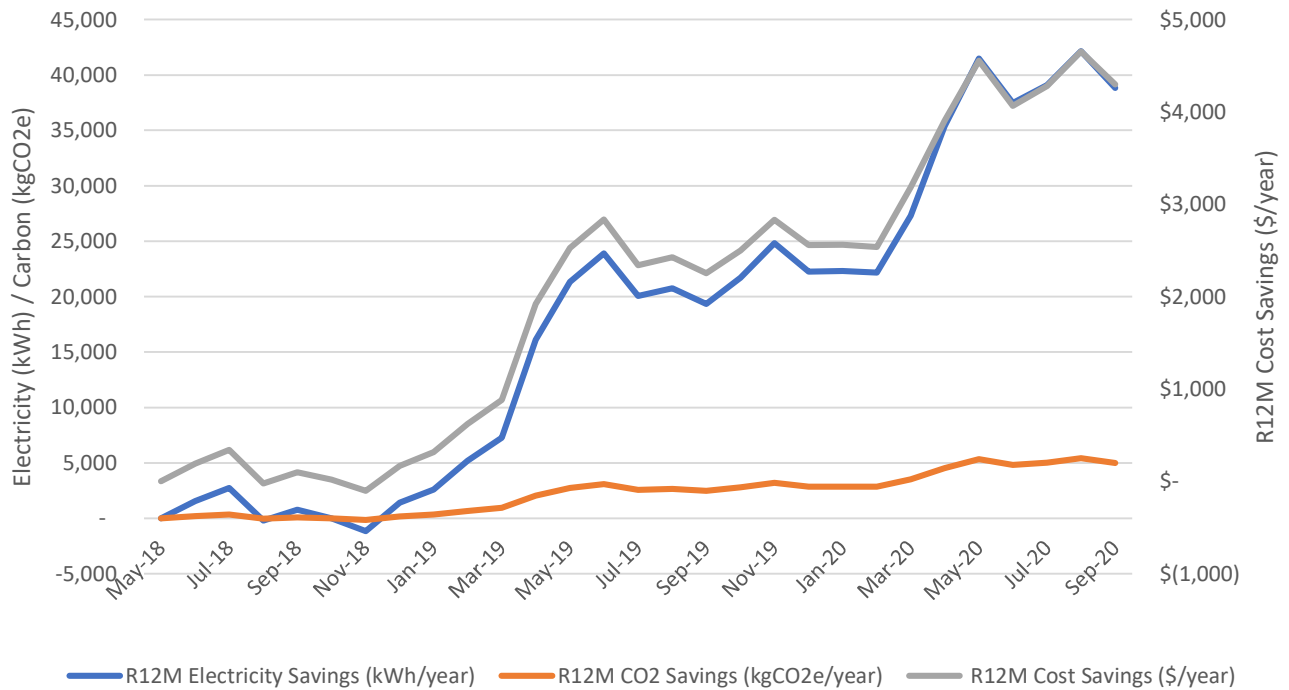
Civic Centre Actual versus Expected Electricity



### Civic Centre Actual versus Expected CO2



### Civic Centre Cumulative Rolling 12 Month Savings



## Aquatic Centre

### Summary

- Electricity savings for the month were -25,951kWh, an extra 30.5%.
- Natural gas savings for the month were 41,343 kWh, a saving of 87.6%
- Energy cost savings for the month were -\$2,656, which is an increase.
- Carbon savings for the month were 575 kgCO<sub>2</sub>e, a saving of 3.6%.
- Rolling 12-month electricity savings are -80,574 kWh, an extra 6.5%.
- Rolling 12-month natural gas savings are 631,053 kWh, a saving of 60.3%
- Rolling 12-month energy cost savings are \$32,308.
- Rolling 12-month carbon savings are 114,315 kgCO<sub>2</sub>e, a saving of 30.6%.

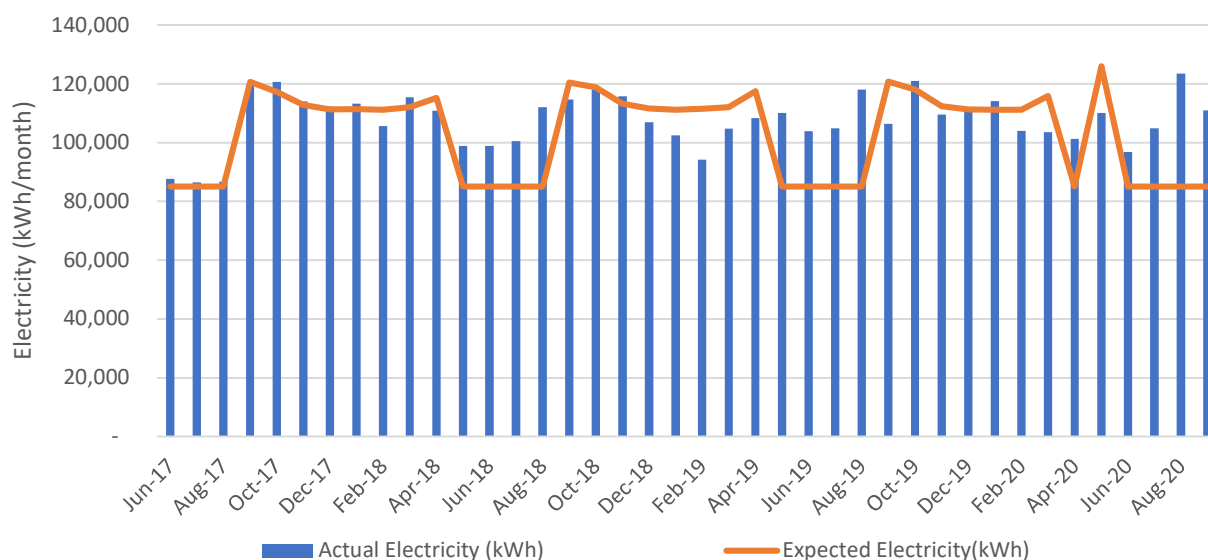
### Comments

For the month of September the outdoor pool was not in use and a baseline was used which excludes outdoor pool use.

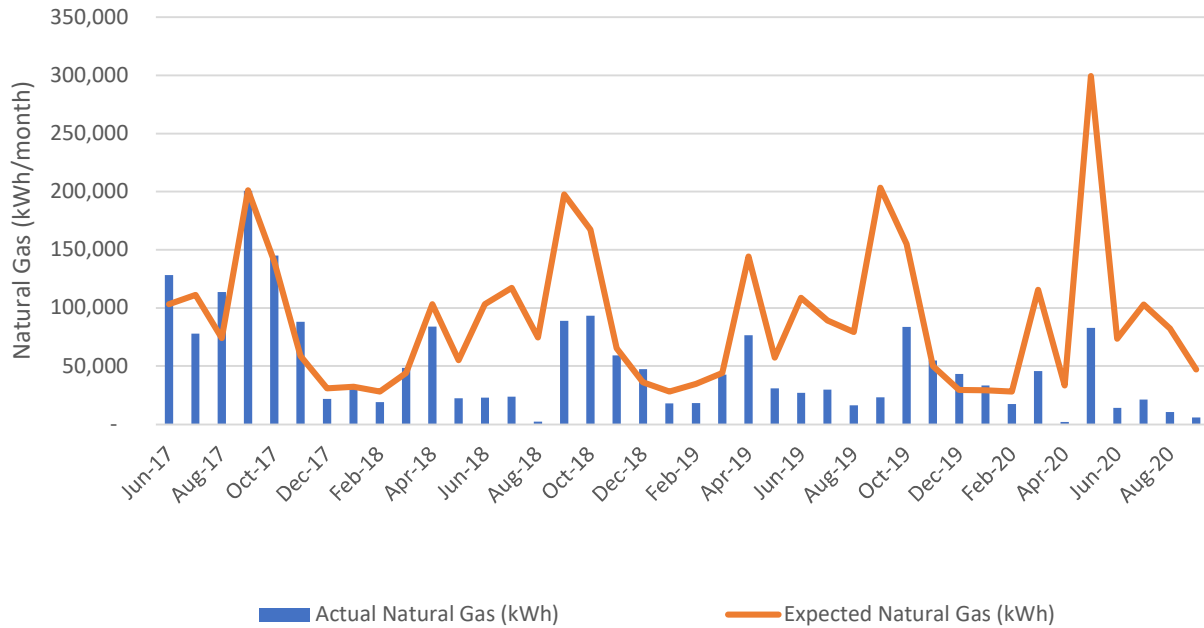
Historically, the outdoor pool has been open during September, however, this month it is closed due to upgrades being completed. On a kWh basis, electricity has increased compared to last year by 4%.

Natural gas use was well below baseline this month, which can be attributed to the outdoor pool being closed. Total CO<sub>2</sub> emissions were lower than baseline, which is good.

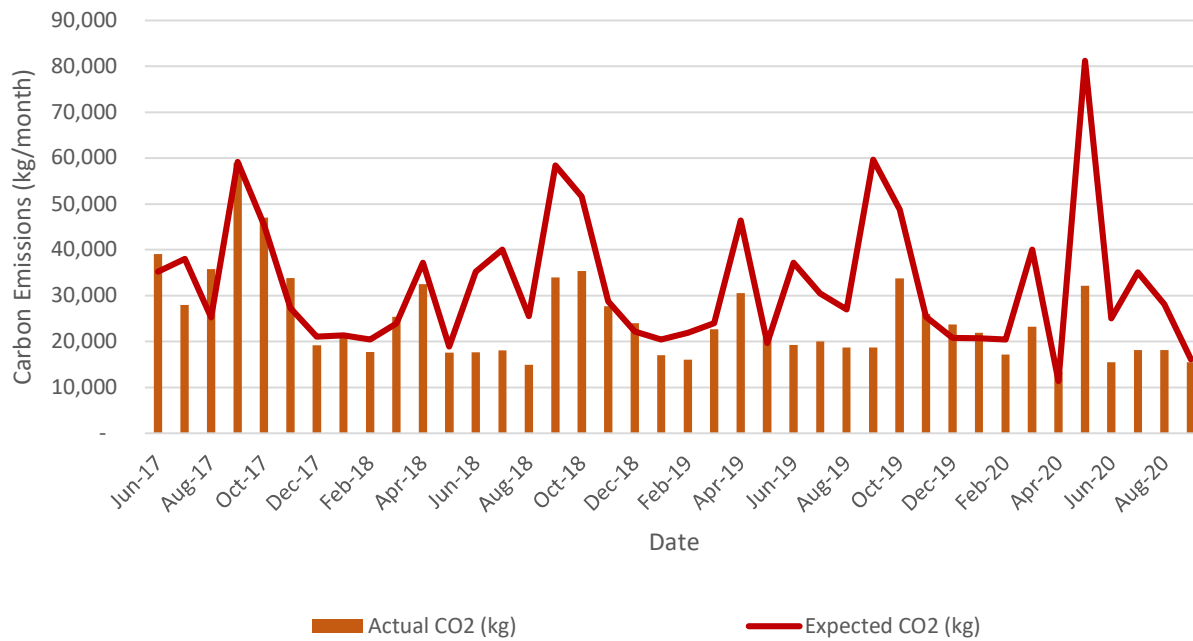
Aquatic Centre Actual versus Expected Electricity



### Aquatic Centre Actual versus Expected Natural Gas

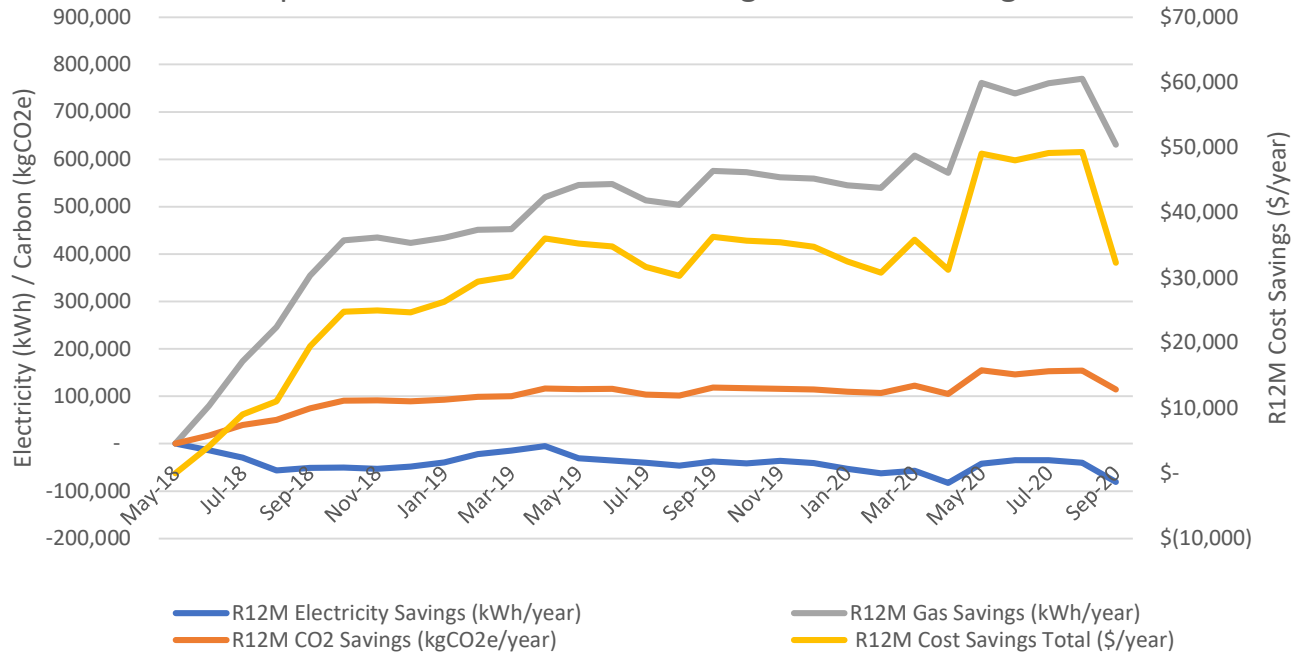


### Aquatic Centre Actual versus Expected CO2





### Aquatic Centre Cumulative Rolling 12 Month Savings



## Te Koputu Library

### Summary

- Electricity savings for the month were 4,107kWh, a saving of 26.5%.
- Natural gas savings for the month were 1,547 kWh, a saving of 14.7%
- Energy cost savings for the month were \$430.
- Carbon savings for the month were 868 kgCO<sub>2</sub>e, a saving of 20.3%.
- Rolling 12-month electricity savings are 32,239 kWh, a saving of 17.5%
- Rolling 12-month natural gas savings are -9,460 kWh, an extra 7.9%
- Rolling 12-month energy cost savings are \$2,820.
- Rolling 12-month carbon savings are 2,152 kgCO<sub>2</sub>e, a saving of 4.3%.

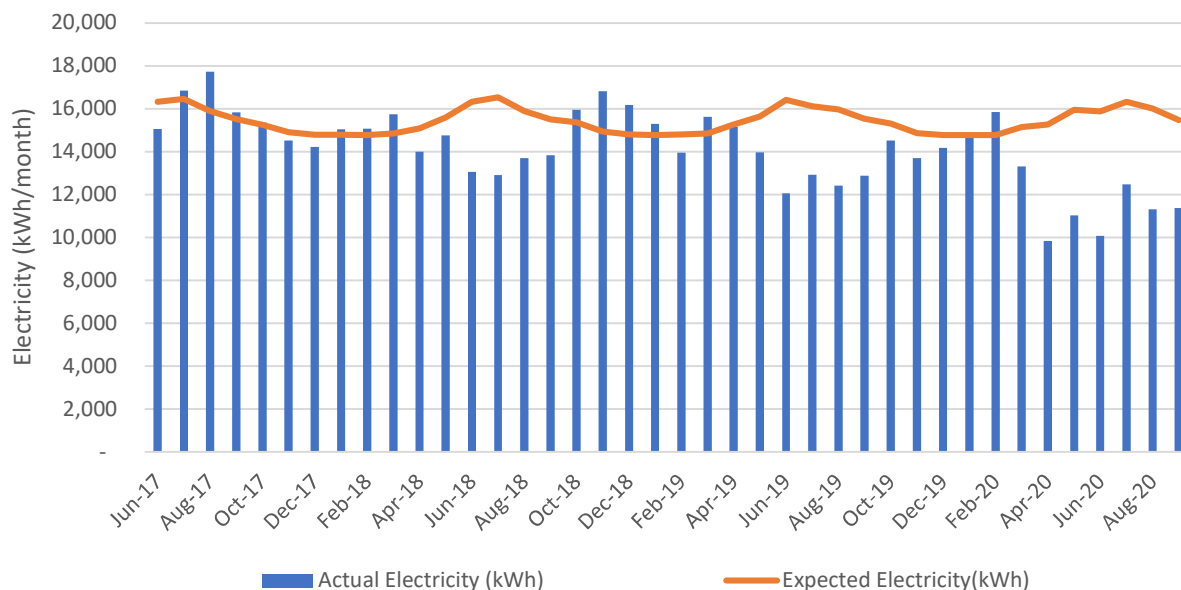
### Comments

The Library has achieved significant savings for electricity and natural gas for the third month in a row. A seasonal reversal trend was observed for both gas and electricity: colder months used less energy. August 2020 follows this trend.

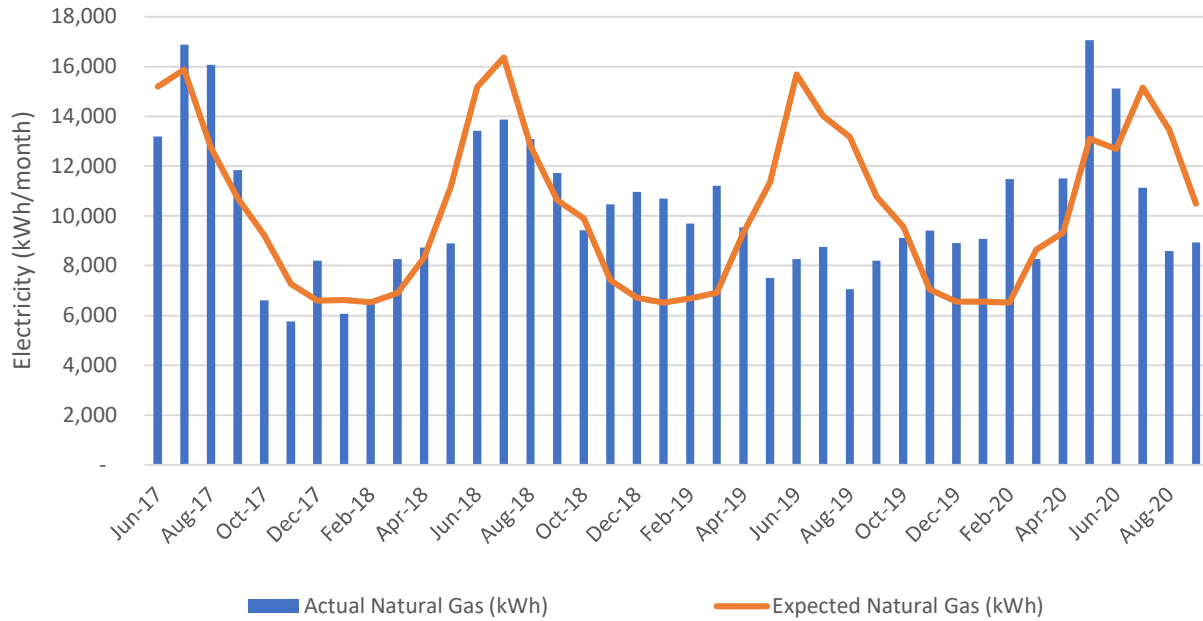
Electricity is following a seasonal reversal trend from 2019; however, electricity savings in 2020 are larger. Rolling 12-month electricity savings are at a record high.

In 2019, a seasonal reversal trend for gas use was observed; colder months used less gas. July, August, and September follow this trend in 2020, while May and June do not. The HVAC system at the library continues to be an area of erratic performance.

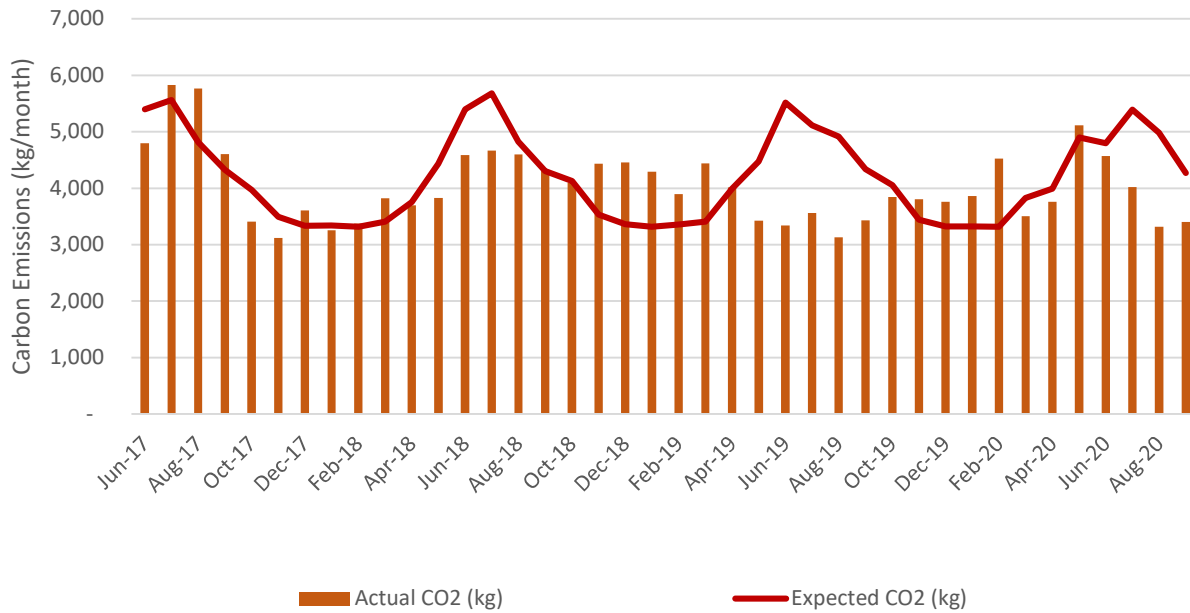
Te Koputu Library Actual versus Expected Electricity



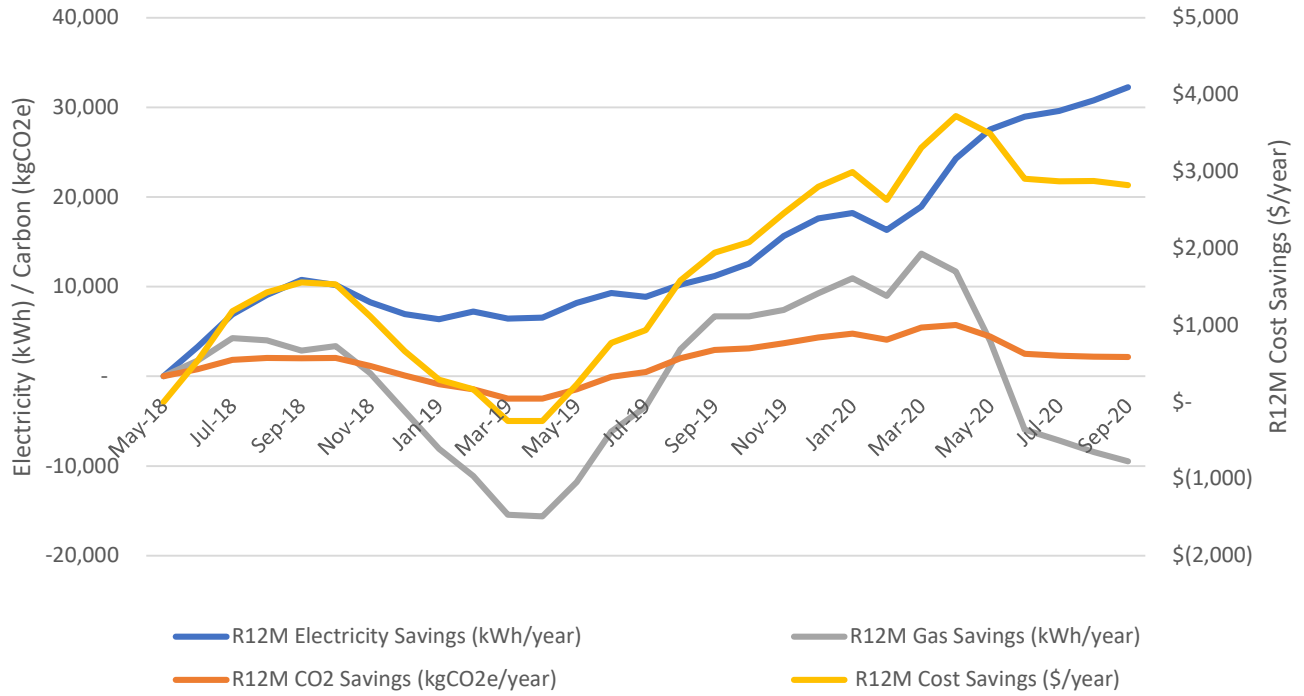
Te Koputu Library Actual versus Expected Natural Gas



Te Koputu Library Actual versus Expected CO2



### Te Koputu Library Cumulative Rolling 12 Month Savings



## Museum Research Centre

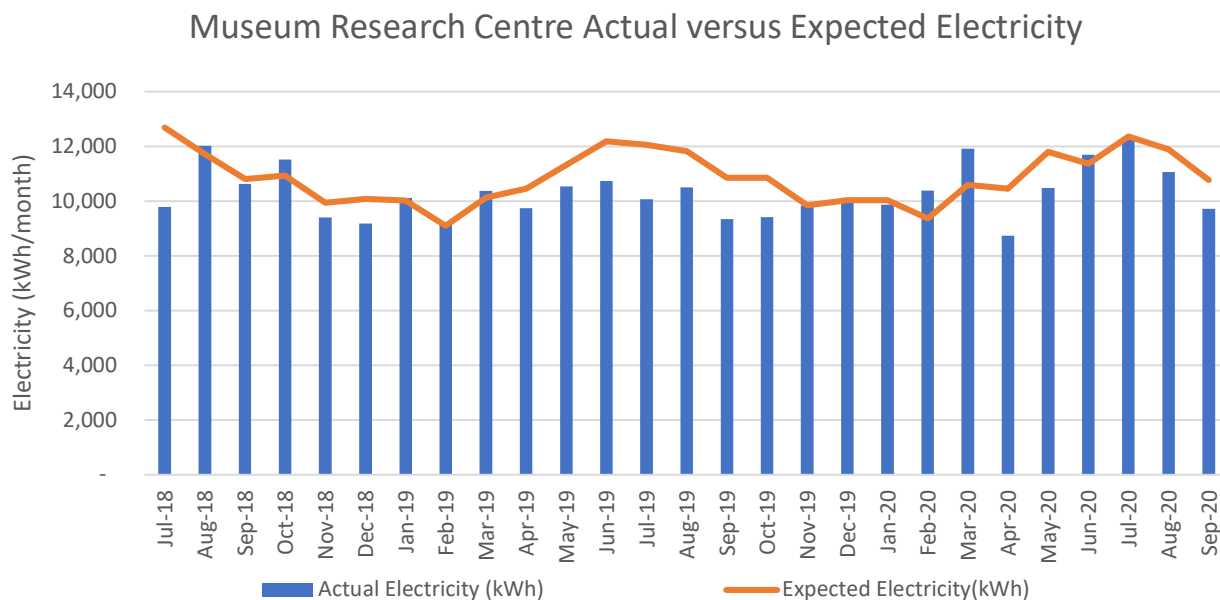
### Summary

- Electricity savings for the month were 1,058kWh, a saving of 9.8%.
- Natural gas savings for the month were 360 kWh, a saving of 5.5%
- Energy cost savings for the month were \$111.
- Carbon savings for the month were 214 kgCO<sub>2</sub>e, a saving of 7.7%.
- Rolling 12-month electricity savings are 3,896 kWh, a saving of 3%
- Rolling 12-month natural gas savings are 10,954 kWh, a saving of 14.1%
- Rolling 12-month energy cost savings are \$1,263.
- Rolling 12-month carbon savings are 2,876 kgCO<sub>2</sub>e, a saving of 8.6%.

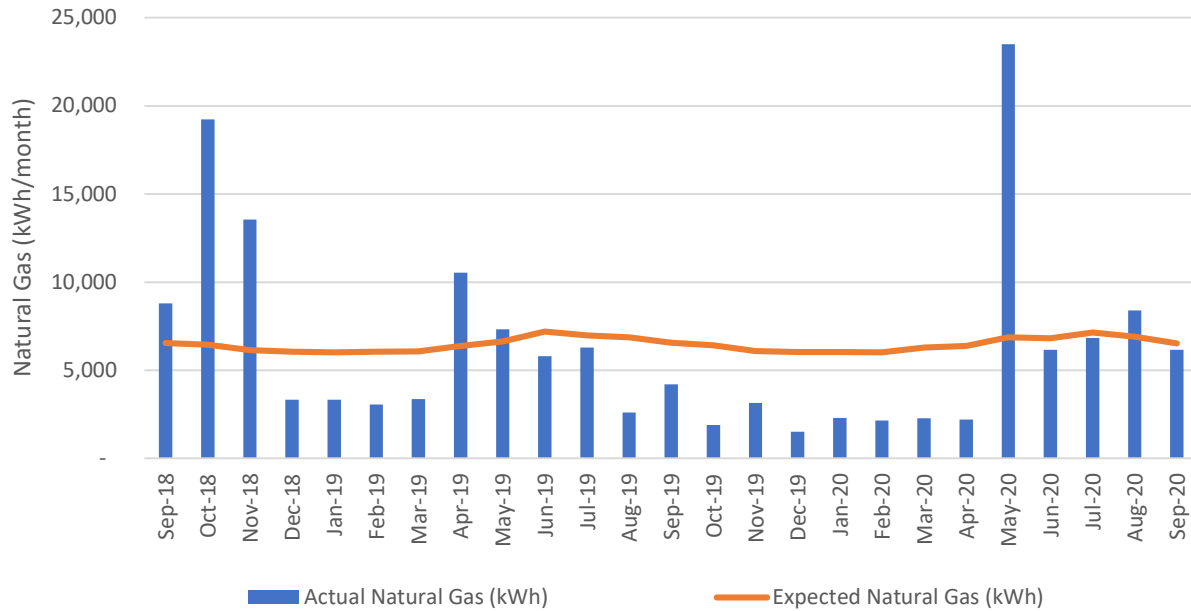
### Comments

Electricity use at the Museum and Research Centre is below baseline for September 2020. Compared to 2019, electricity use has increased by 4%; September 2020 was also a warmer month on average, which typically requires less energy for heating.

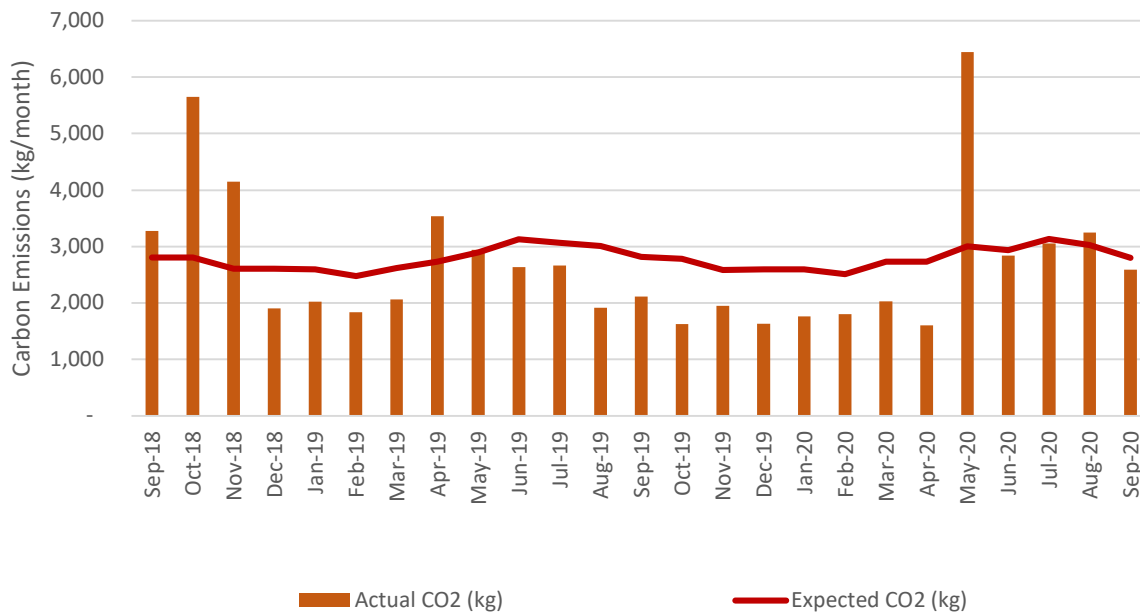
The Museum and Research Centre has achieved a savings for natural gas in September. However, compared to September 2019, September 2020 used 47% more gas.

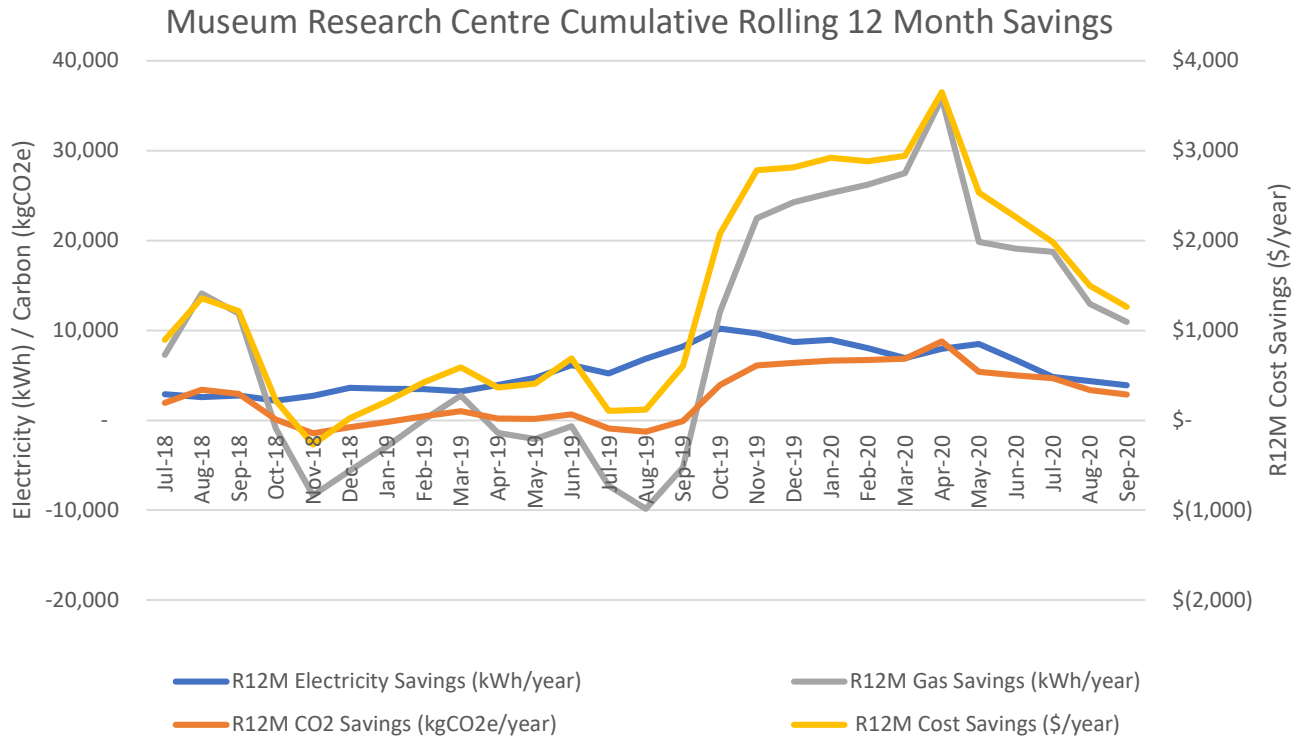


### Museum Research Centre Actual versus Expected Natural Gas



### Museum Research Centre Actual versus Expected CO2





## Whakatāne Water Treatment Plant

### Summary

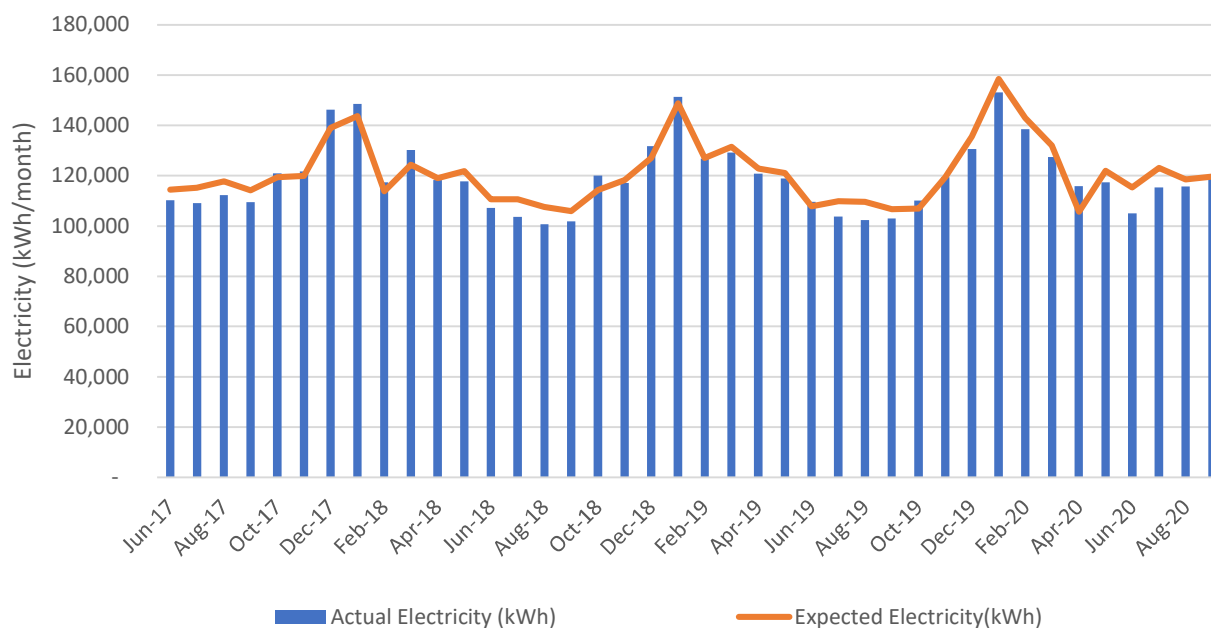
- Electricity savings for the month were 554kWh, a saving of 0.5%.
- Energy cost savings for the month were \$57.
- Carbon savings for the month were 71 kgCO<sub>2</sub>e, a saving of 0.5%.
- Rolling 12-month electricity savings are 32,158 kWh, a saving of 2.1%.
- Rolling 12-month energy cost savings are \$3,649.
- Rolling 12-month carbon savings are 4,139 kgCO<sub>2</sub>e, a saving of 2.1%.

### Comments

Historically, a seasonal savings trend can be observed for the months of July, August and September. September 2020 has followed this trend, using marginally less electricity compared to baseline. Electricity savings have been achieved at the Water Treatment Plant for nine of the last ten months; April 2020's increase in electricity was an anomaly due to a blocked pump.

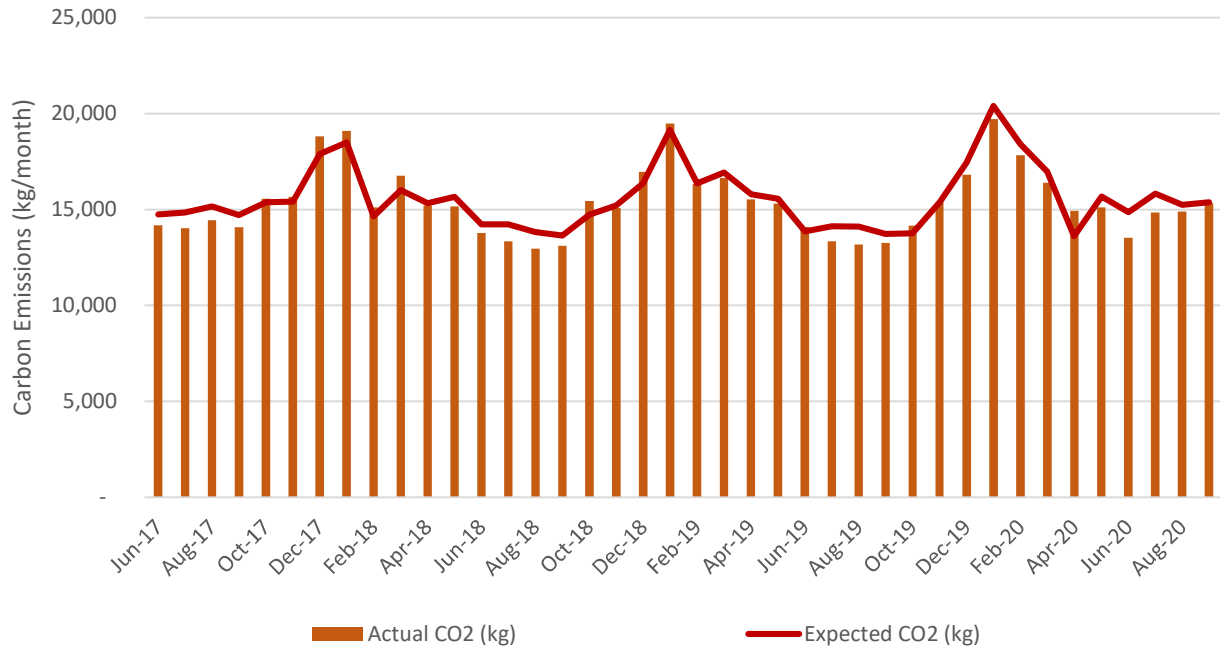
Rolling 12 month savings have declined slightly, to approx. \$3,650, due to larger savings in September 2019, compared to September 2020.

Water Treatment Plant Actual versus Expected Electricity

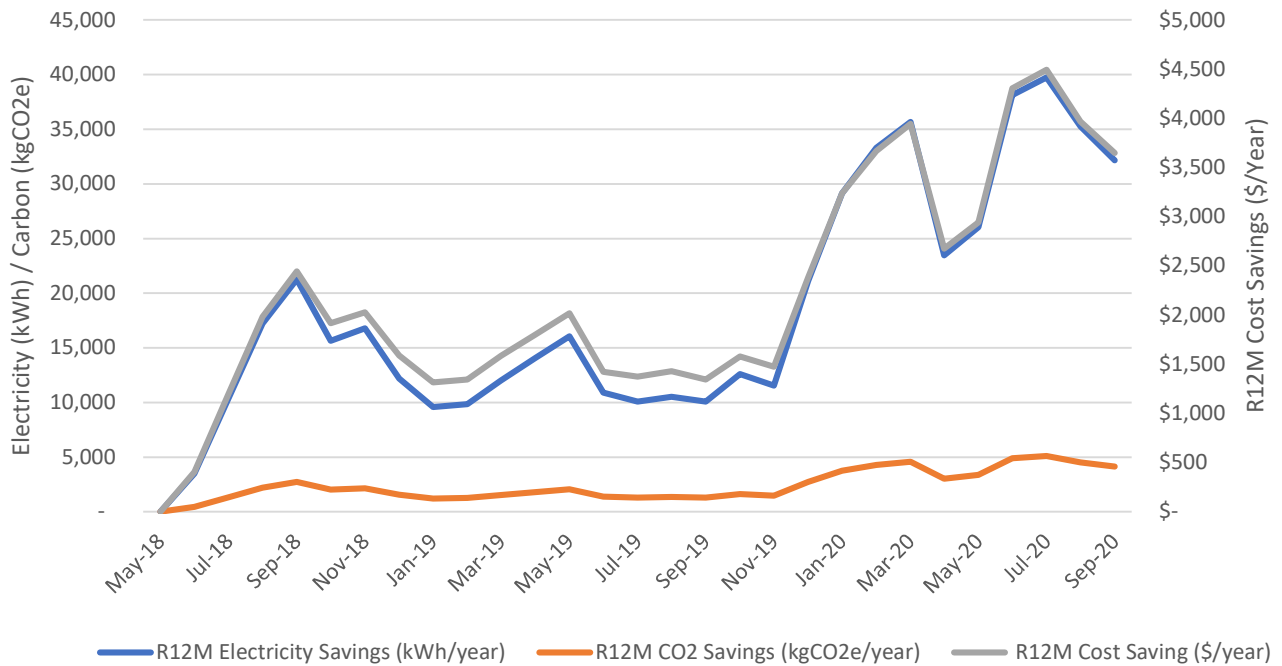




### Water Treatment Plant Actual versus Expected CO2



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



## Braemar Rd Pump Station

### Summary

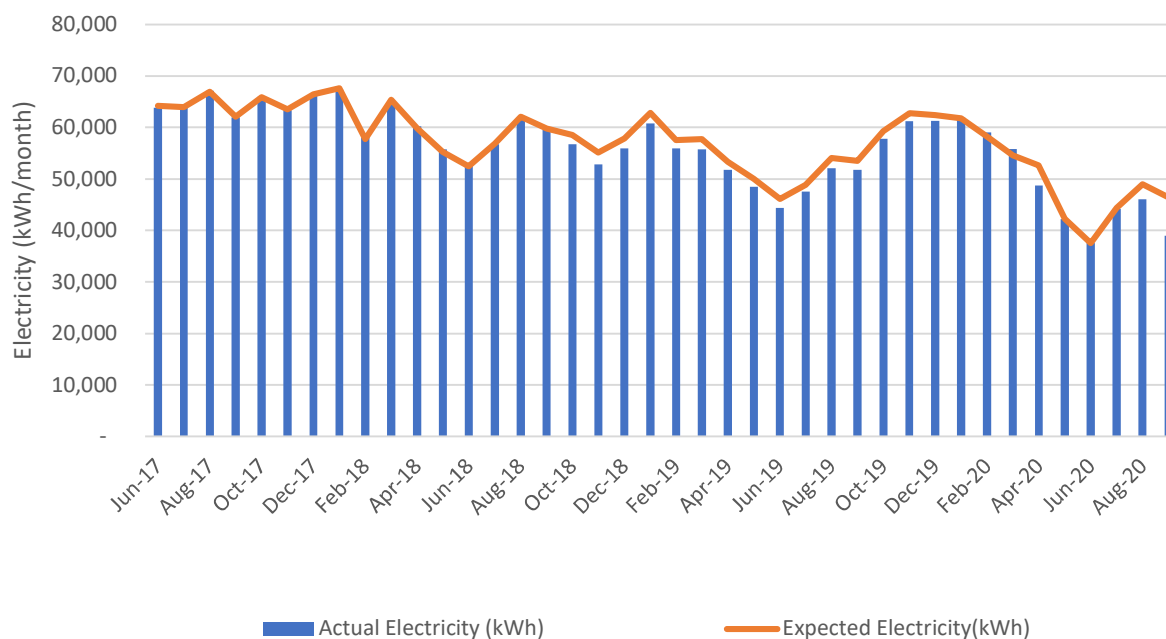
- Electricity savings for the month were 7,469kWh, a saving of 16.1%.
- Energy cost savings for the month were \$796.
- Carbon savings for the month were 1,066 kgCO<sub>2</sub>e, a saving of 16.1%.
- Rolling 12-month electricity savings are 16,599 kWh, a saving of 2.6%.
- Rolling 12-month energy cost savings are \$1,740.
- Rolling 12-month carbon savings are 2,932 kgCO<sub>2</sub>e, a saving of 2.6%.

### Comments

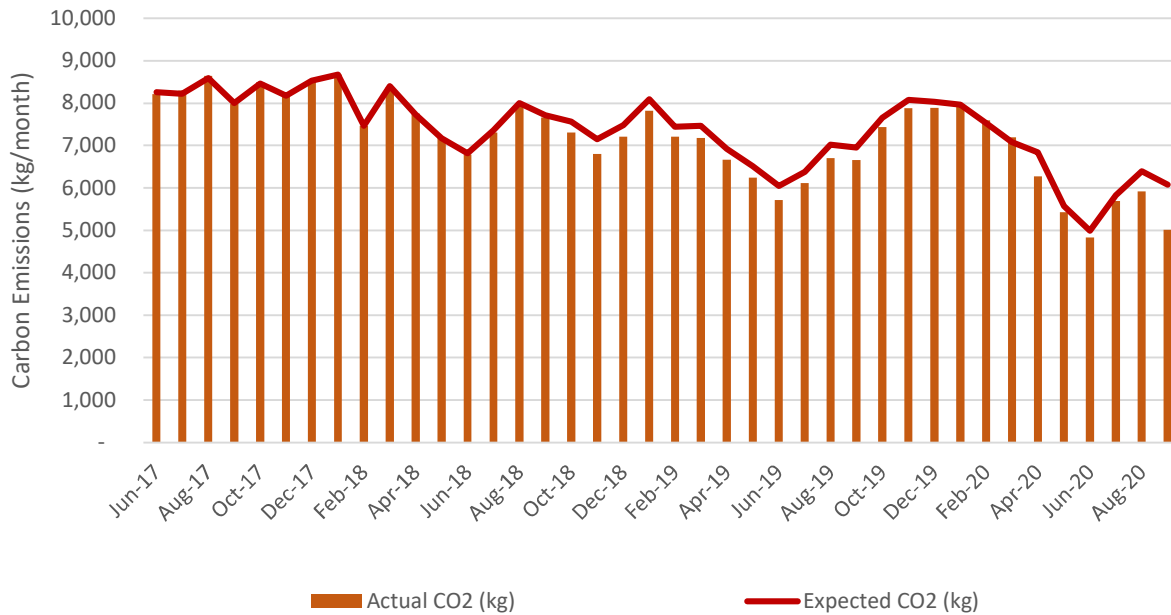
Compared to baseline, Braemar Rd. achieved a 16% savings for September 2020. New, more efficient pumps were installed late in August, which reduce demand by approx. 10 kW.

September 2020, compared to last year, used approx 25% less electricity but also pumped 14% less water.

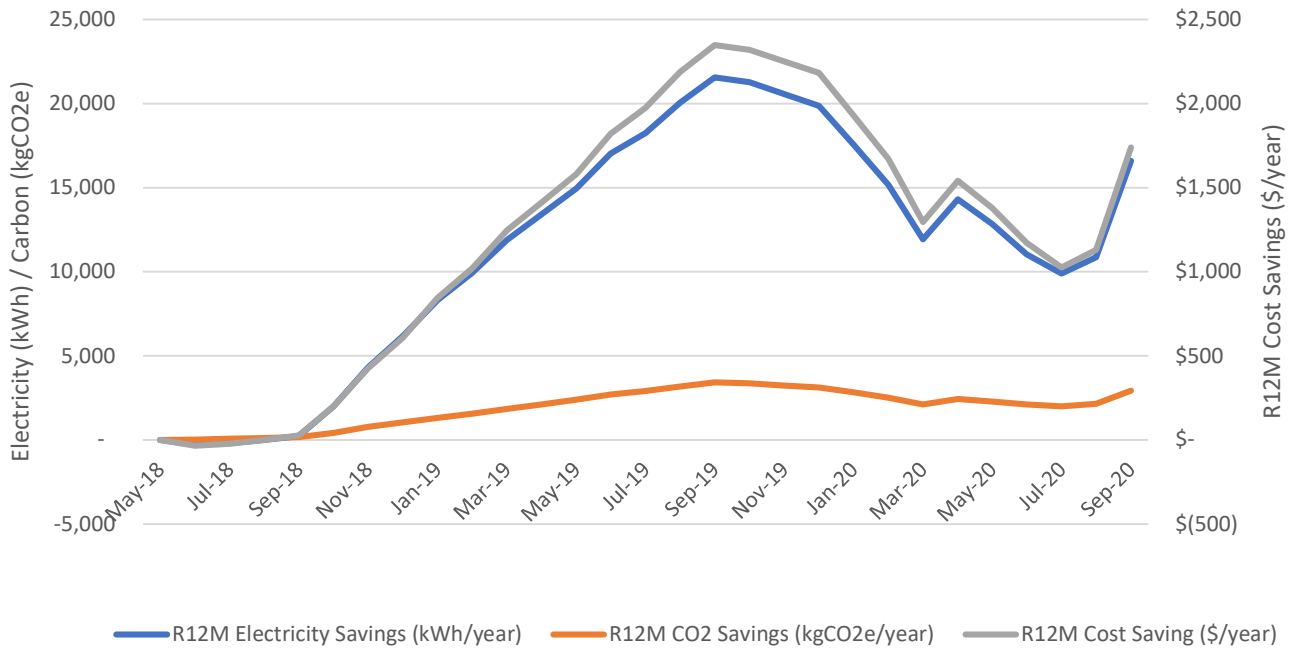
Braemar Rd Actual versus Expected Electricity



### Braemar Rd Actual versus Expected CO2



### Braemar Rd Pumps Cumulative Rolling 12 Month Savings



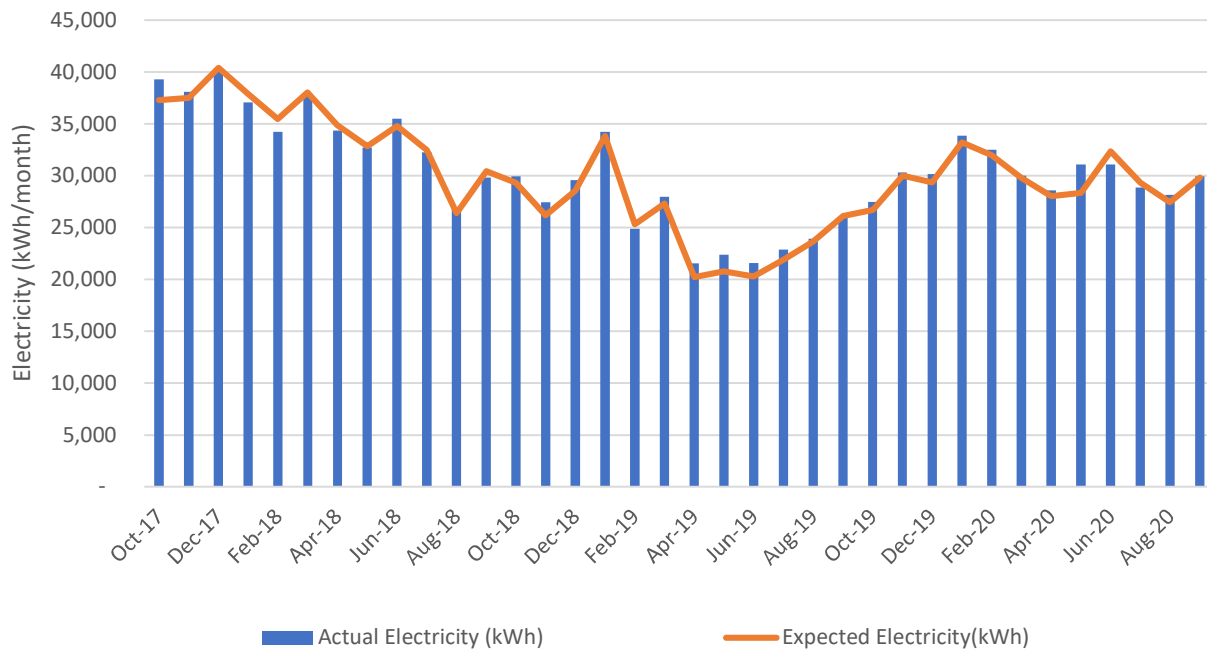
## Paul Rd Pump Station

- Electricity savings for the month were -121kWh, an extra 0.4%.
- Energy cost savings for the month were -\$12, which is an increase.
- Carbon savings for the month were -15 kgCO<sub>2</sub>e, an extra 0.4%.
- Rolling 12-month electricity savings are -5,606 kWh, an extra 1.6%.
- Rolling 12-month energy cost savings are -\$574, which is an increase.
- Rolling 12-month carbon savings are -714 kgCO<sub>2</sub>e, an extra 1.6%.

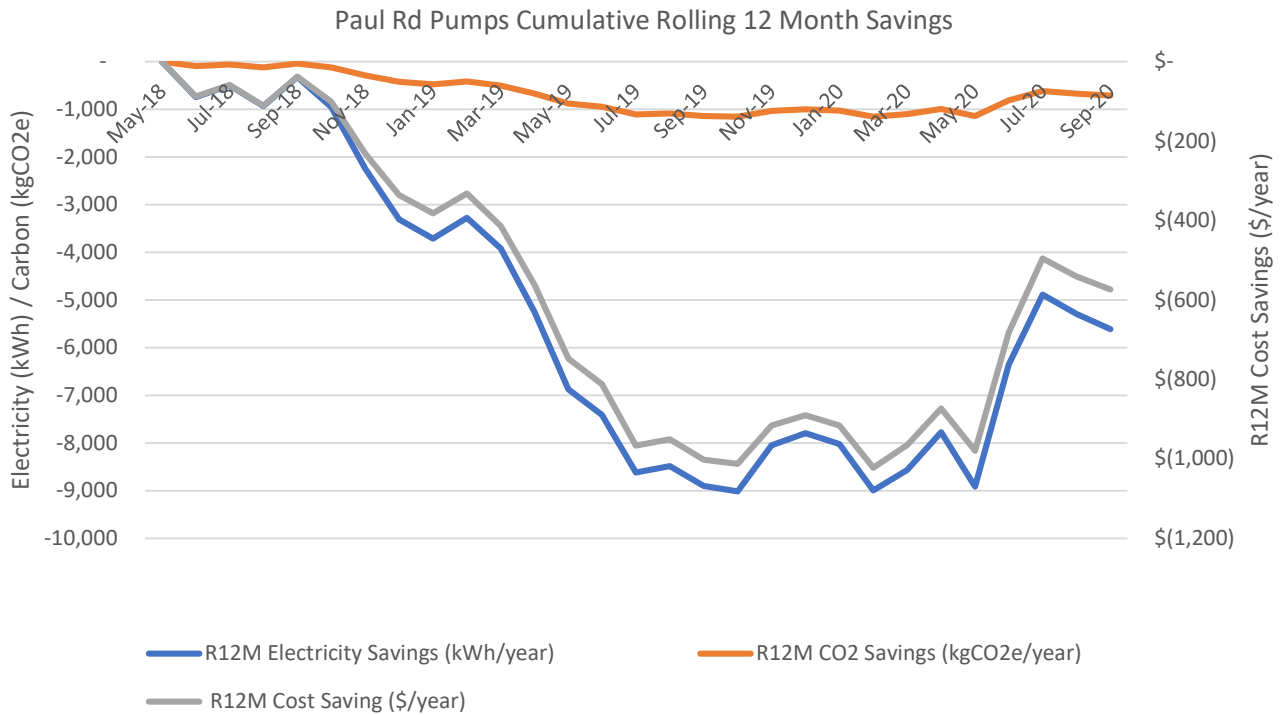
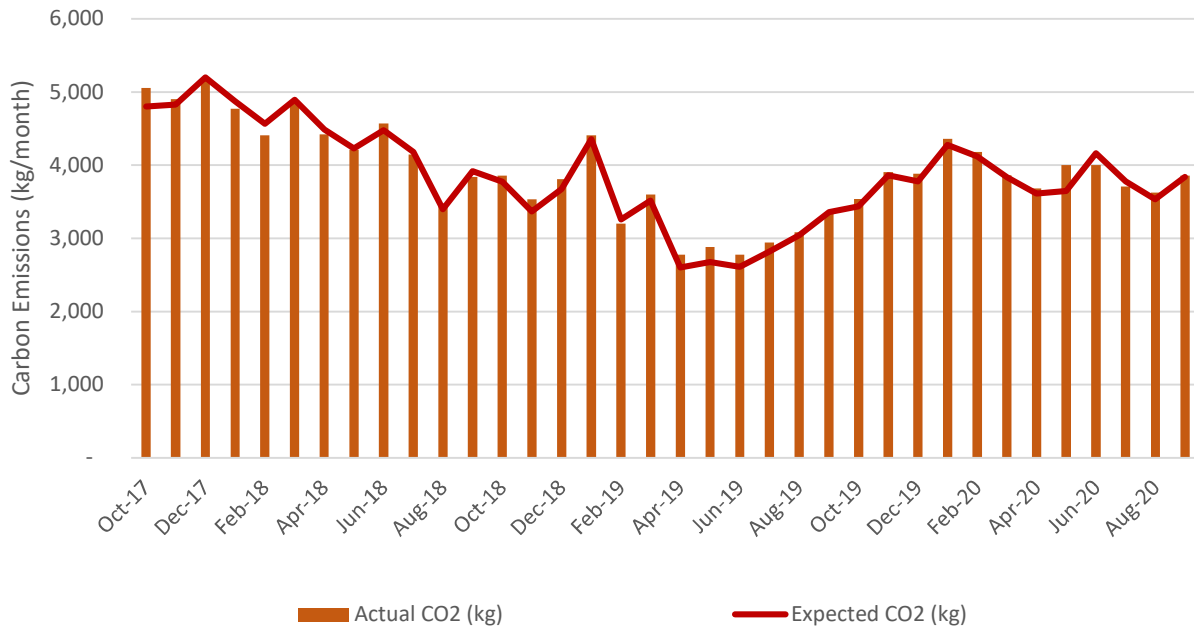
### Comments

Paul Road pump station has used more electricity than baseline this month. Compared to last year, Paul Road pump station has pumped approx 17% more water and has also used 16% more electricity.

Paul Rd Pump Station Actual versus Expected Electricity



### Paul Rd Pump Station Actual versus Expected CO2



## Johnson Rd Pump Station

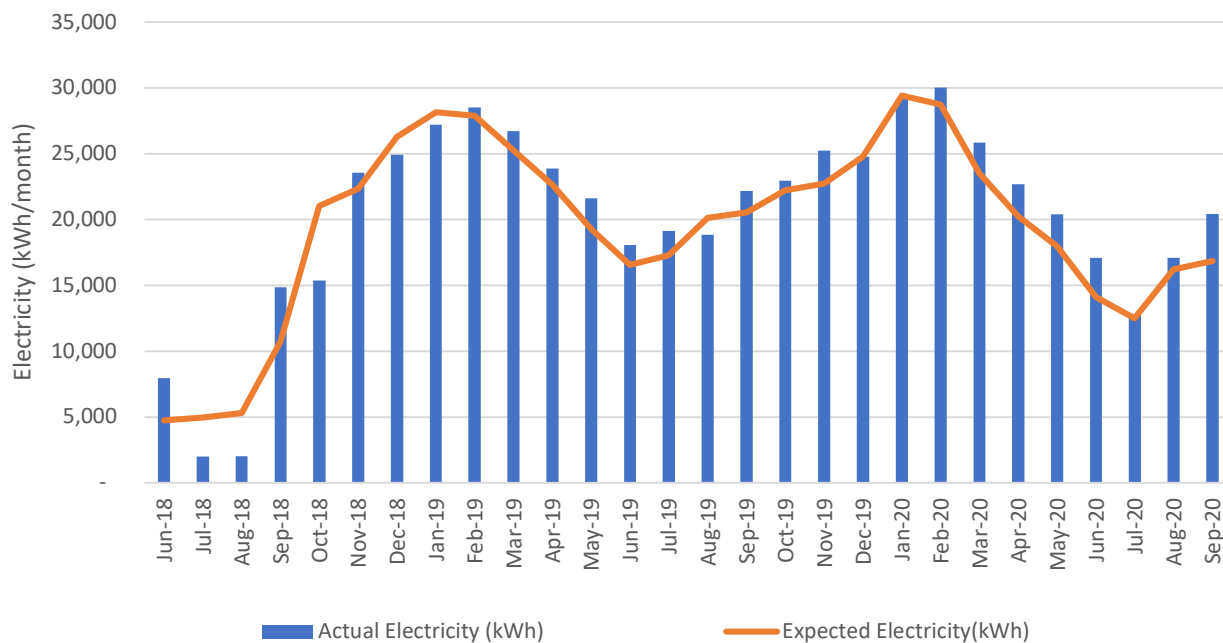
- Electricity savings for the month were -3,584kWh, an extra 21.3%.
- Energy cost savings for the month were -\$780, which is an increase.
- Carbon savings for the month were -460 kgCO<sub>2</sub>e, an extra 21.3%.
- Rolling 12-month electricity savings are -19,239 kWh, an extra 7.7%.
- Rolling 12-month energy cost savings are -\$4,521, which is an increase.
- Rolling 12-month carbon savings are -2,463 kgCO<sub>2</sub>e, an extra 7.7%.

### Comments

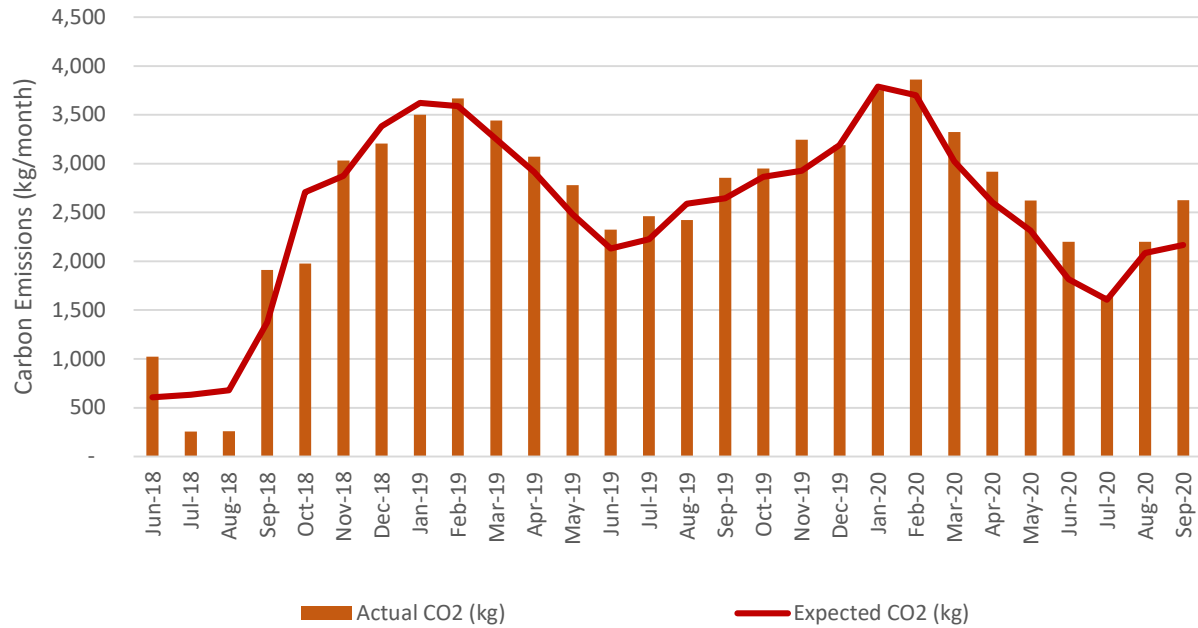
September follows the trend of electricity use that is above baseline. In the last 12 months, 9 months have reported electricity use that is significantly above baseline. Compared to this trend, September's usage was above baseline by a higher margin.

The replacement pump at Braemar Rd. was installed late August 2020. The effects of the upgrade at Braemar Rd have been captured with this usage.

Johnson Rd Pump Station Actual versus Expected Electricity



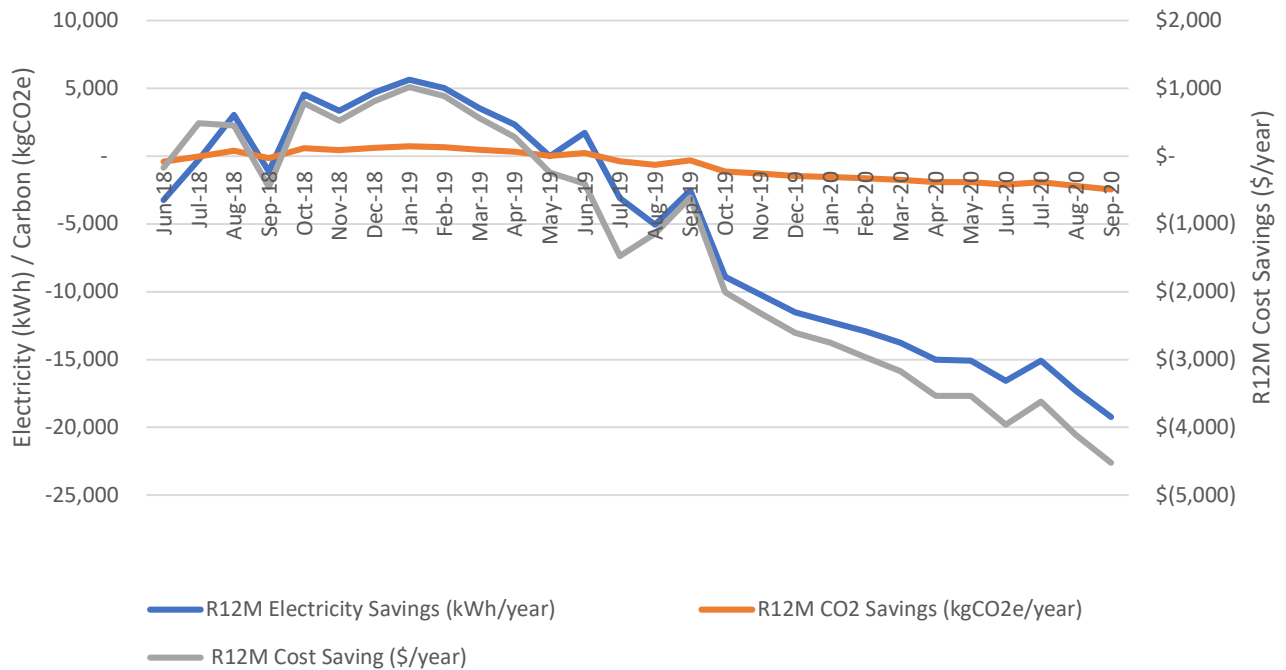
### Johnson Rd Pump Station Actual versus Expected CO2



Actual CO2 (kg)

Expected CO2 (kg)

### Johnson Rd Pumps Cumulative Rolling 12 Month Savings



R12M Electricity Savings (kWh/year)

R12M CO2 Savings (kgCO2e/year)

R12M Cost Saving (\$/year)

## Bridger Glade Pump Station

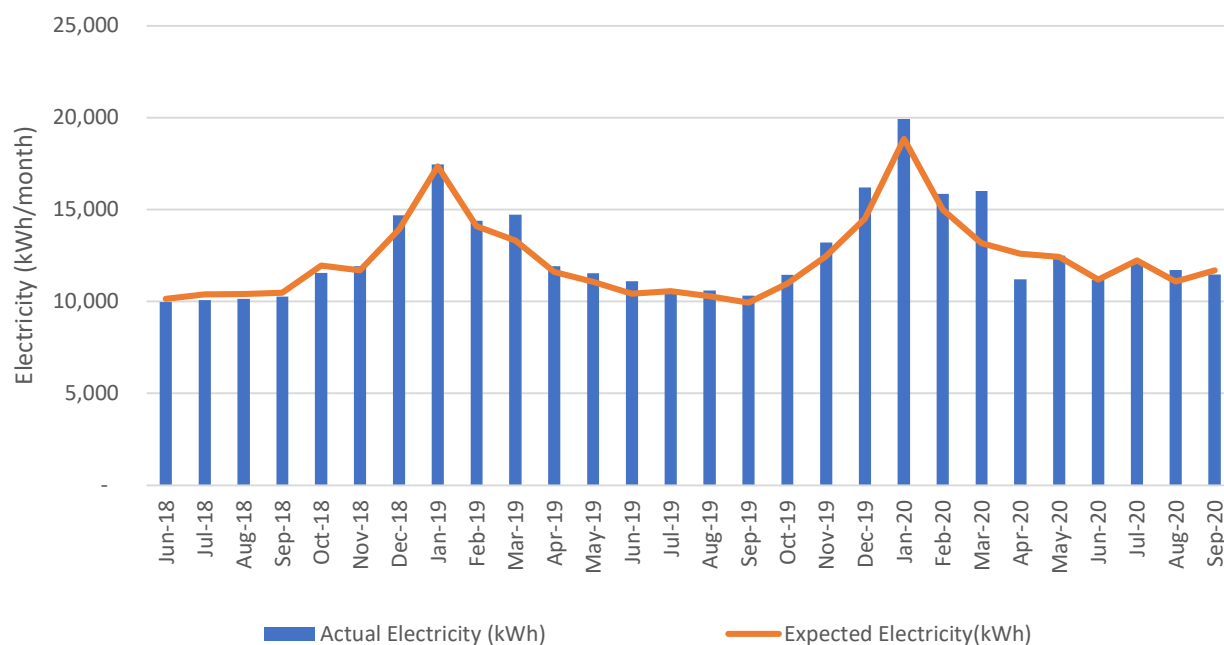
- Electricity savings for the month were 234kWh, a saving of 2%.
- Energy cost savings for the month were \$42.
- Carbon savings for the month were 30 kgCO<sub>2</sub>e, a saving of 2%.
- Rolling 12-month electricity savings are -6,559 kWh, an extra 4.2%.
- Rolling 12-month energy cost savings are -\$1,269, which is an increase.
- Rolling 12-month carbon savings are -844 kgCO<sub>2</sub>e, an extra 4.2%.

### Comments

Electricity use for September 2020 is marginally below baseline.

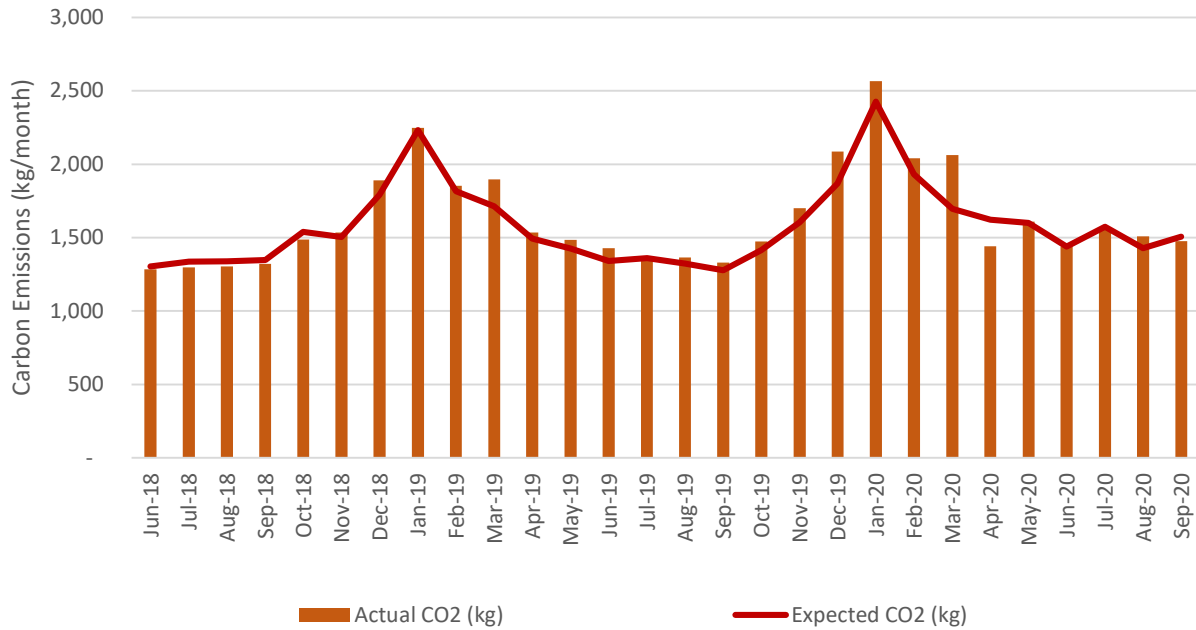
Compared to September 2019, Bridger Glade has pumped approx. 18% more water, while only using approx. 11% more electricity.

Bridger Glade Pump Station Actual versus Expected Electricity





### Bridger Glade Pump Station Actual versus Expected CO2



### Bridger Glade Pumps Cumulative Rolling 12 Month Savings

