

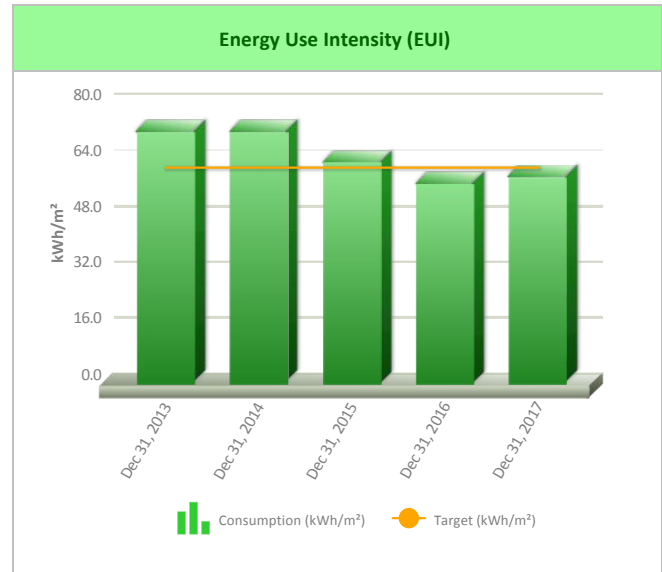
2017 LEED Performance

Reliable Controls Corporation - South Annex

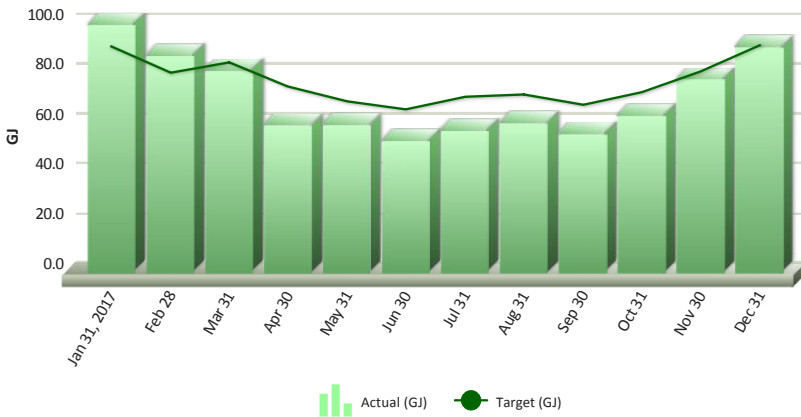
Reliable Controls has occupied the LEED platinum South annex for over five years now, with a steadily growing number of occupants. During that period, many improvements have been made to the sequence of operation of mechanical and electrical systems. The flexibility of the MACH-System means that changes are easy to implement, and the results are easy to monitor.

The chart to the right shows the track record for energy consumed from 2013 to 2017, expressed in units of Energy Use Intensity (EUI). In 2017, the EUI was just slightly above the design goal (58.8 kWh/m²), ending with **58.9 kWh/m²**.

This year started off with a brutal cold snap (by Victoria's standards) with temperatures below 0 Deg C for many weeks. This really puts us 'behind the eight ball' for continuing the previous trend of decreasing EUI.

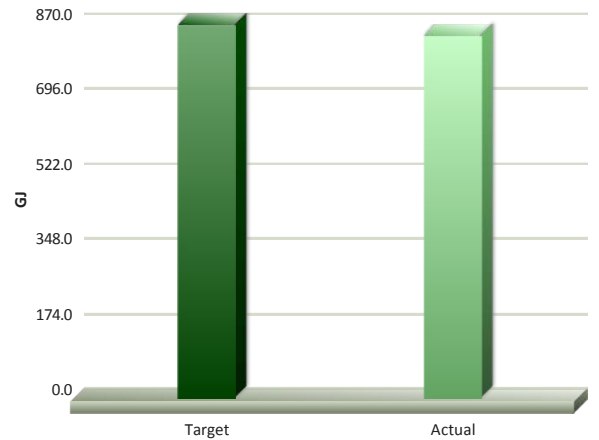


Monthly Energy Consumption



01 Jan 2017 - 31 Dec 2017

Energy Consumption vs Target

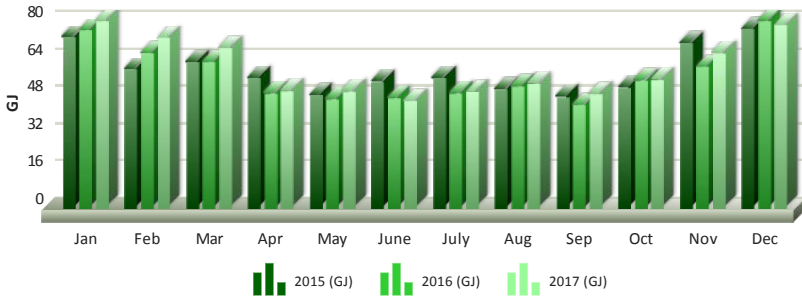


Reliable Controls MACH system calculates a daily target for energy consumption, based on 50% of ASHRAE standard 90.1, adjusted for actual heating and cooling degree days. Standard 90.1 is used to predict the energy consumption of an energy efficient building in our geographical region.

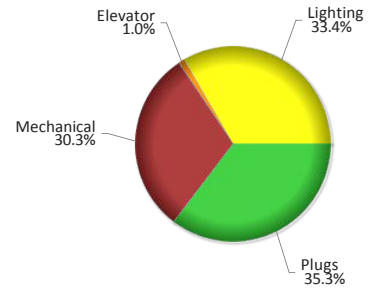
In 2017, the actual energy consumed was **48.4%** of ASHRAE 90.1, nicely below the target!

In simple terms, in 2017 the South Annex consumed a little less than half the energy of an energy efficient building!!!

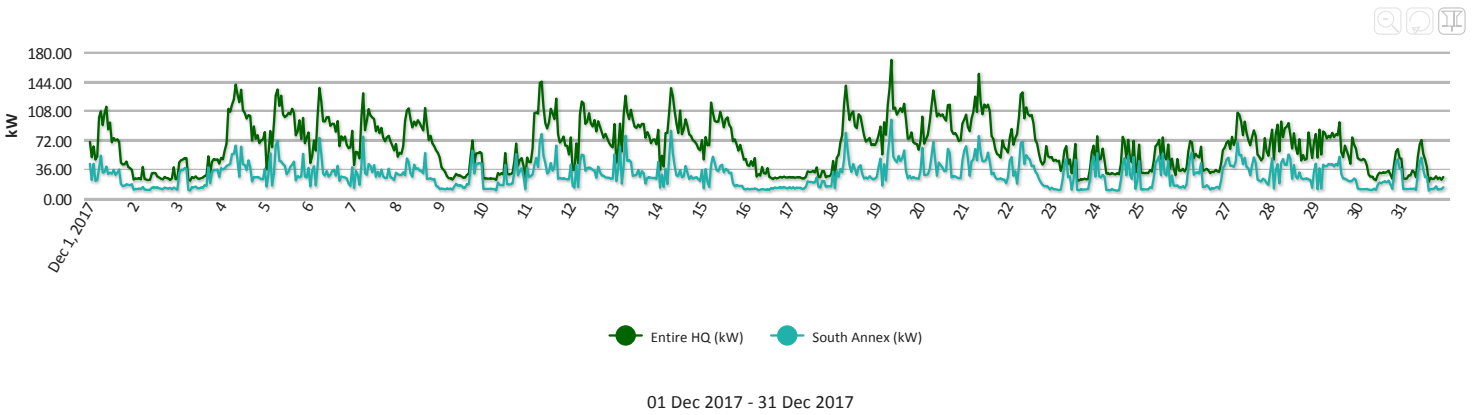
Electrical Consumption 2015 through 2017



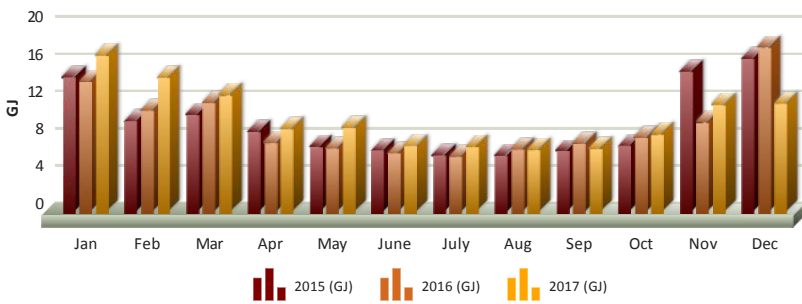
Electrical Consumption Breakdown



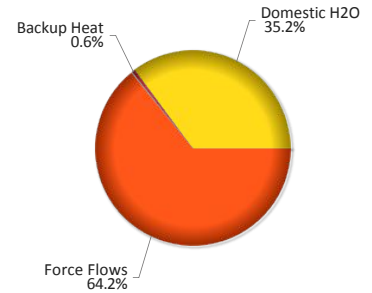
Hourly Electrical Demand



Gas Consumption 2015 through 2017

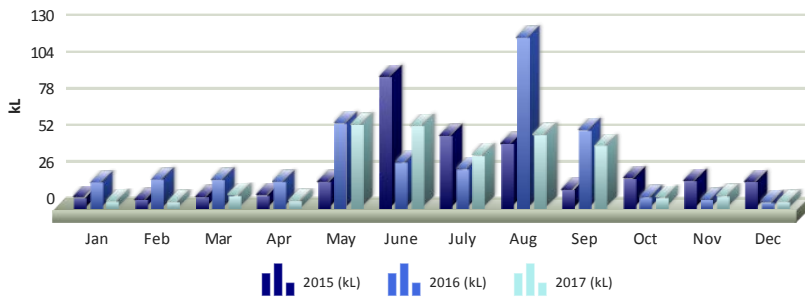


Gas Consumption Breakdown

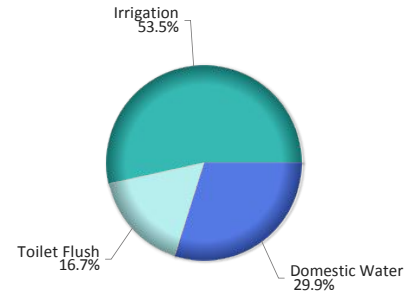


The effect of the cold winter on electrical and gas consumption can clearly be seen in the first three months of 2017.

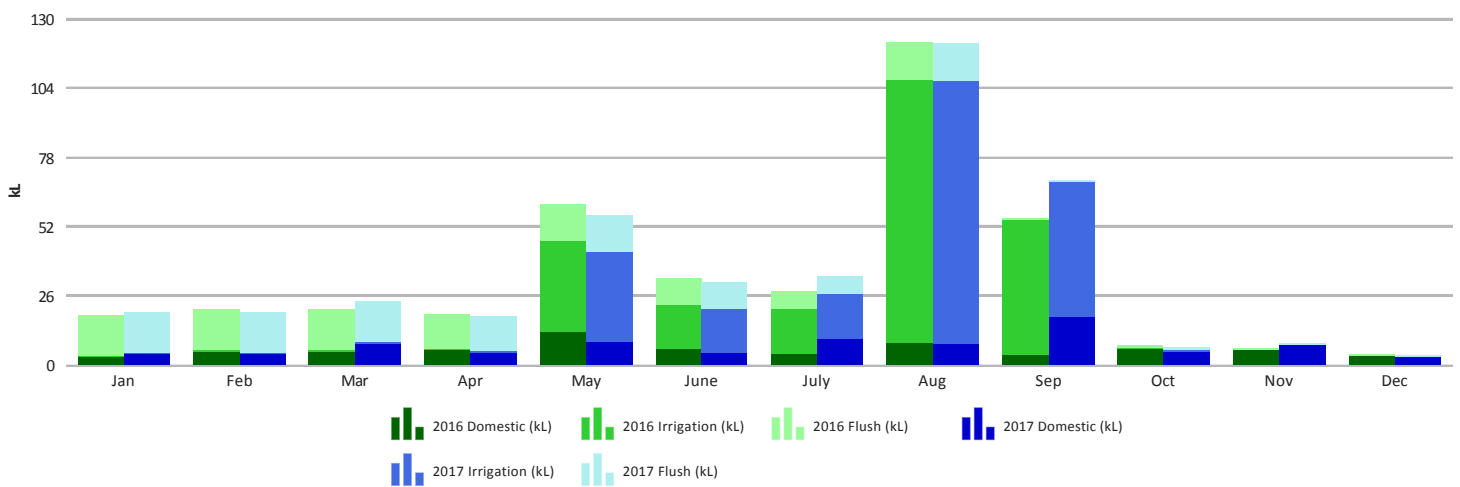
Potable Water Consumption 2015 through 2017



Potable Water Consumption Breakdown

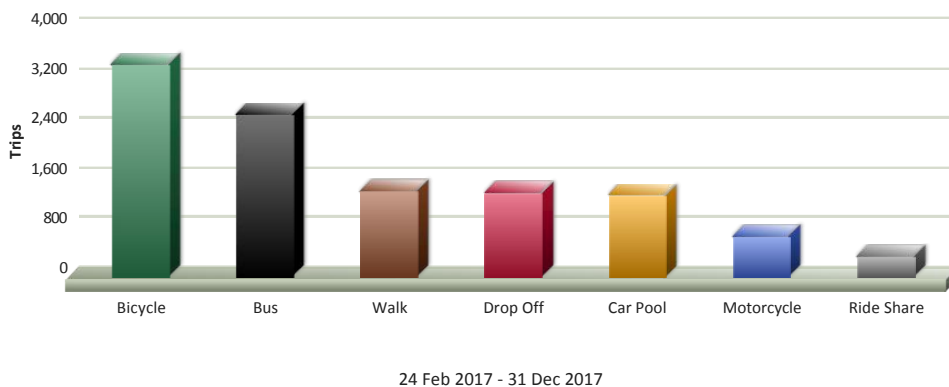


Potable Water Comparison 2016 vs 2017



The South Annex has two large cisterns that store rainwater. One cistern is used to supply irrigation water to sensitive plants in the summer. The other cistern is used to flush all of the toilets in the South building. All urinals in the building are the flushless type. Although both cisterns were sized to supply 100% of the needs of the building, in practice it seems that droughts, equipment failures and operator errors take turns preventing us from reaching our goals! Still, the building uses far less domestic water than standard buildings, and we intend to be even more vigilant in 2018!

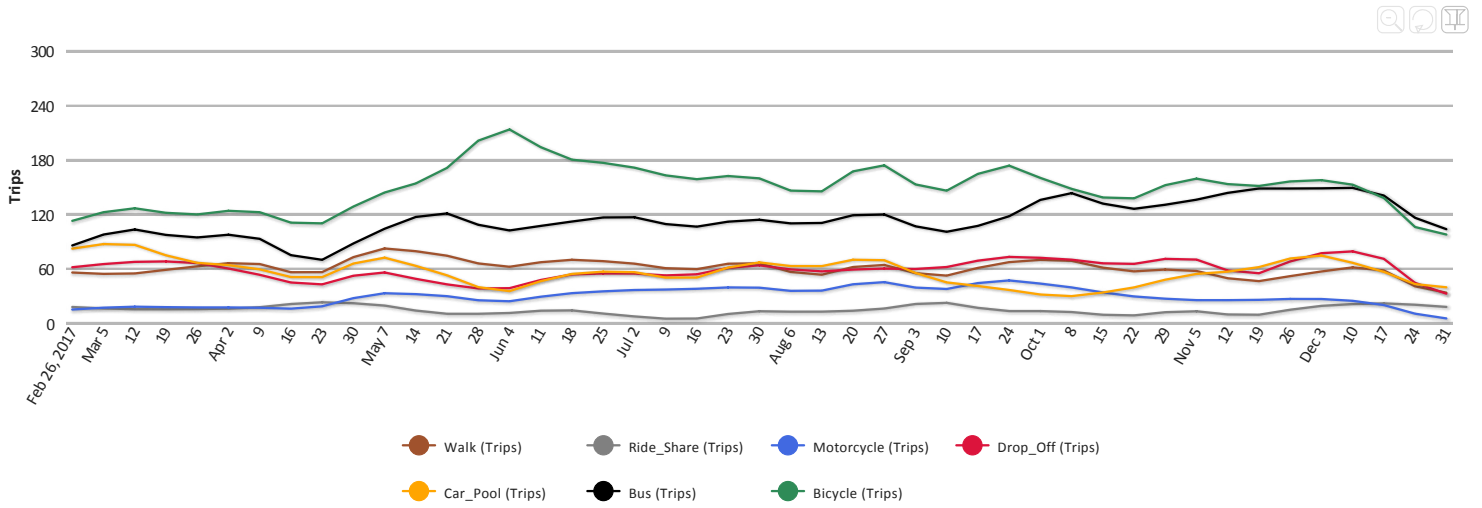
Reliable Controls Employee Alternative Transportation Methods 2017



Well, it looks like the cyclists are leading the charge, but have a long way to go before the automobiles are beaten into submission!

Also interesting to note from the chart below that the upswing in cycling during the summer months comes at the expense of a decrease in other methods of alternative transportation. For example, it appears that employees using the the car-pool and drop off methods switch to cycling in the summer, whereas the drivers keep on driving!

Alternative Transportation Methods Trend 2017



24 Feb 2017 - 31 Dec 2017