Southern Regional Tafe - Albany

Sustainability Report

Assessment 3

Kynan Brown
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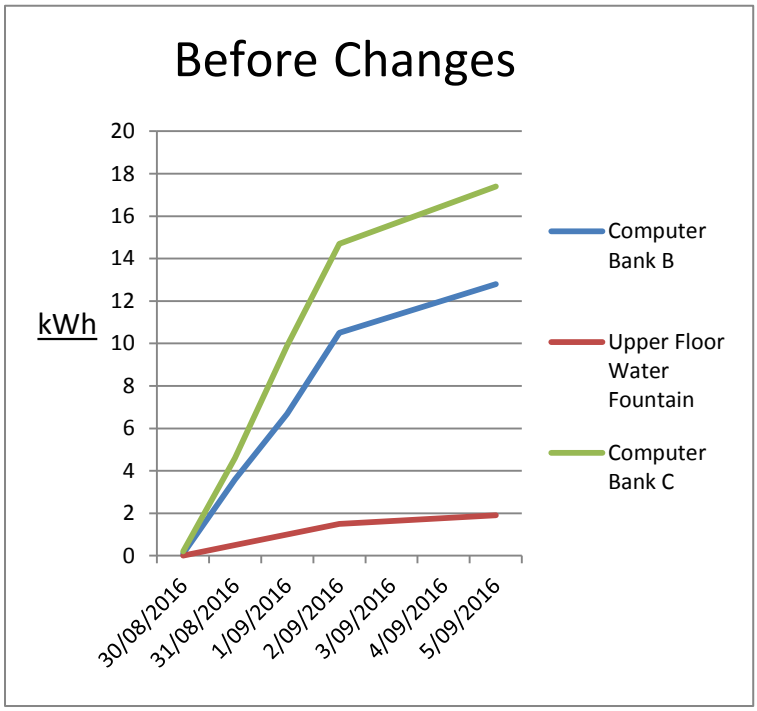
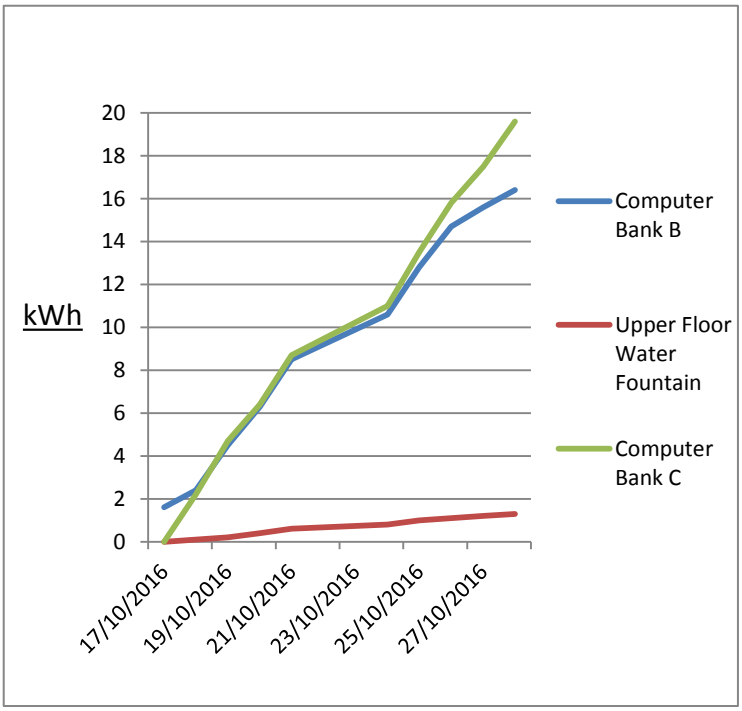
In my project proposal I proposed to measure the power assumption of different electrical devices in the D block and then measure them again while trying to cut back on power. The ways that I tried to combat the high power usage was to turn off computers when not in use, only printing documents that are important and need hard copies and using the water fountains less.

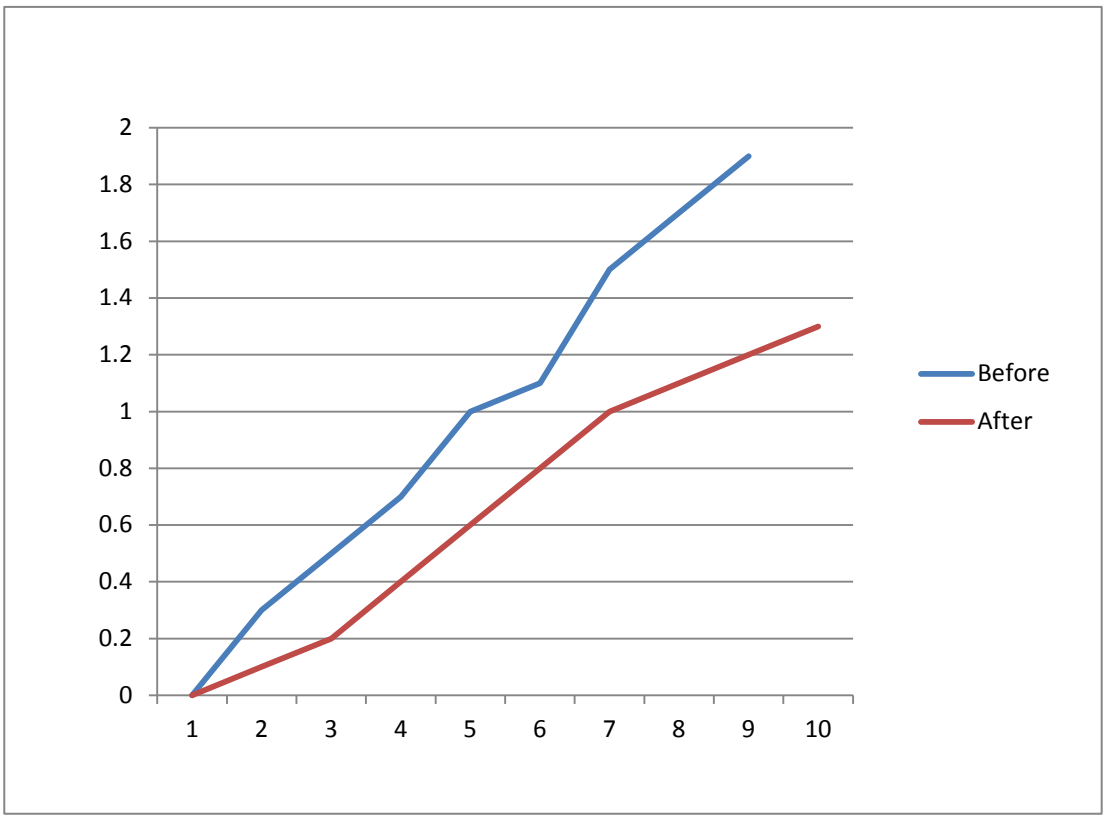
After implementing changes to the D block I expected the power usage to have lowered. The changes I implemented were turning off computers, only printing important documents and using the water fountain less. These changes would have caused the computer banks, printer and water fountains to use less power because they would be getting used less.

The results of the power tests were that the kWh average had increased after the changes for computer bank B and computer bank C but decreased after the changes for the water fountain. Computer bank B had 7.14 kWh before changes and 9.34 kWh after changes, computer bank C had 9.85 kWh before changes and 9.94 kWh after changes and the upper floor water fountain had 1.02 kWh before changes and 0.67 kWh after changes.

There would not be any cost benefits for the SRTAFE if we implemented my proposal across the entire college. This is because two out of the three electrical appliances measured had their power usage increased after my changes were put into effect. If my proposal was implemented across the entire college it would end up costing them more money than before.







SRTAFE has implemented many sustainable ideas across the college, these have helped the college to be more sustainable, but they could be improved.

- A rainwater tank has many environmental benefits; this could be improved by installing many more rainwater tanks across the college and use rainwater for all the tafe's water needs.
- There are a few bike racks around the college; these are very helpful because they support using bicycles which are a great means of transport that don't contribute to pollution. To improve this, there should be more bike racks and they should be moved to easily accessible places.
- Sensor lights are placed in a few selective places around the college. These are great because they are inexpensive and effective devices that have power saving properties. There aren't many around the college so replacing some of the normal lights with the sensor lights would help to lower power usage.
- Wind turbines are a great source of power; they create reliable, cost-effective, pollution free energy. Currently there is only one wind turbine at the college, to improve this there should be more wind turbines installed so as to have more pollution free energy.
- Solar Panels are another great sustainable feature of SRTAFE, using them reduces water, air and the need for finite resources. There aren't many solar panels around the college so installing more would increase the amount of green energy.

The changes that I implemented after the first round of power measurements to decrease power usage failed. The changes weren't performed enough to make a difference in the usage readings. To improve this, the computers could have been turned off more often when not in use and the drink fountains used less. If the changes made were more drastic and the measurements were taken over a longer period of time there would be a bigger difference between the results and the power usage would have lowered.

These are two links that promote sustainability in the Southwest:

- http://www.csiro.au/en
- https://www.wa.gov.au/information-about/environmental-matters/conservation-sustainability