Sustainability

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Introduction

In this short report I will be talking about the use of power consumption on the Albany tafe campus and how it can also be used elsewhere.
Our group "Group 1 – Di, Rain and Jaiden" gathered data from the trial we ran.

The Trial

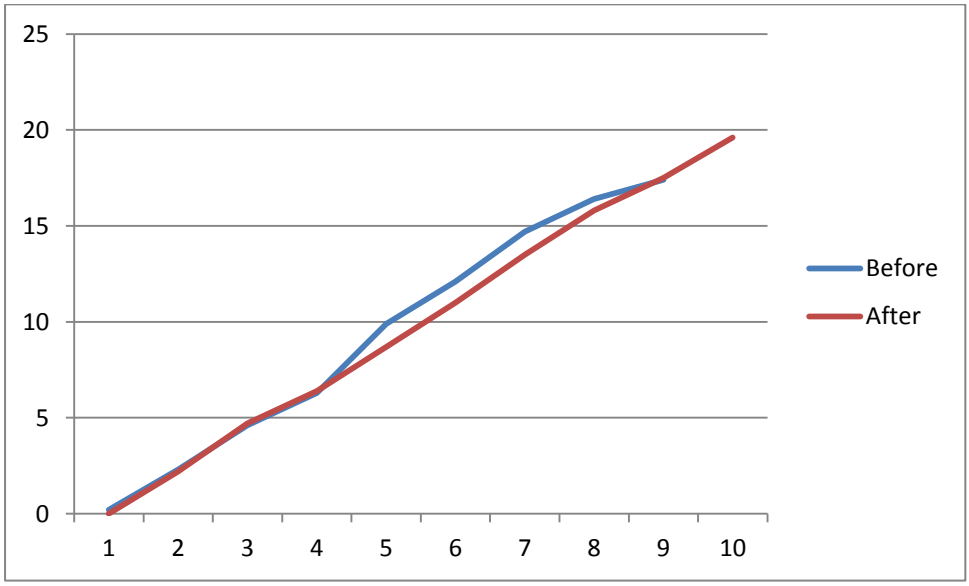
The trial was to monitor the 2 rows of Computers in D23 over a number of weeks.
The first week we allowed the class to use the Computers as normal i.e. leaving them on from 8.30am to 3.30pm as they would normally do.
The next week we input the system of turning the Computer monitors off while not in use and turning them off while on lunch break.

Expectations after the changes

The group expected a small change in power consumption but over long periods of time and if the trail was introduced onto a larger scale it could reduce the cost and amount of power being used significantly.

Result

On a large scale formula this would benefit a lot more than it shows. (taken into account if there was human error in the statistics.)



Cost

The cost of running this Sustainability idea is completely free so no money would have to be invested for the trial to run on a small or large scale.

The benefit of inputting this system over the period of a year would reduce the cost and use of power by different amounts.
On a large scale such as a college it would significantly reduce the amount of power being used and the cost of running the electricity.
On a small scale such as a small business with only 5 computers it would still benefit the company just on a smaller scale.

Other Changes Available

Rubbish Recycling Areas

These areas are used for the things people throw away.
By having more of these areas we can reuse the materials of the products thrown away and turn them into something useful. This is good for the environment because if we simply never reused materials to turn into something else we would be surrounded by rubbish, in turn this would pollute the water and airways were we breathe and get our food from.
The tafe can input more of these areas or have them stand out more so more people will notice them.

Rainwater Tanks

Rainwater tanks are one of the best ways of reducing costs for water usage because the water itself is free. Rainwater is the cleanest water you can find because it has no chemicals introduced. By harvesting rainwater, it can reduce damage to waterways, water habitats and animals caused by dirty or chemically effected mains water.
You can theoretically run an entire college's water usage by using free raindrops that are collect in the rainwater tanks.
The campus can connect these tanks to the water fountains to reduce the mains water cost and use.

Solar Panel

The electricity created by these panels can be direct into a grid to reduce the use of fossil fuels to power the institute.
The tafe can install these on every building and cut electricity cost by a lot.

Sensor Lights

Sensor Lights are an energy efficient alternative to lights. A Motion sensor light only turns on when something or someone walks in the vicinity of the motion sensor.
Estimates say you can have typical savings ranging from 35 to 45 per cent.
If the campus changes most of their lights to sensor lights the electricity cost would benefit greatly.

Wind Turbine

A Wind Turbine have the capacity to power the pumps used in the aquaculture tanks.
It can produce wind and solar power. It can also generate electricity with light winds of 1m/s.
The wind turbine can work 24/7 as long as there is enough wind.
All you have to pay for is the system its self. it will generate power for free after that. You can also connect it to the power grid.
If the campus can install more wind turbines it will cut even more cost and power usage.

Conclusion

In conclusion I believe the changes input in the trial were a success and that if the Tafe or any other business is interested in reducing their power usage and cost they would benefit tremendously from inputting this idea. I believe this because the results from our trial shows that even on a small scale it would reduce cost. The best part about this system is that all it requires is people remembering to turn off their screens or computers so it is completely free.

References:

1 – Sustainability for WA
http://www.sustainabilitywa.com.au
2 - Sustainability for WA by the WA Government
https://www.wa.gov.au/information-about/environmental-matters/conservation-sustainability