

South Regional TAFE - Albany

BSBSUS401 Implement and monitor environmentally sustainable work practices

Assessment 3

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Introduction

Sustainability is a major issue facing the world today with rising sea levels, glaciers melting, massive air pollution and numerous other issues it is imperative that we change our ways. It can be surprisingly easy to become more sustainable in our daily lives from using more power efficient light globes to larger projects such as renewable energy. In this report I have prepared Jake Steel, Cody Crockford-Swiggs and I will check the power consumption of the top D-Block fountain over a two week period while the fountain is running vs when it is not running over another two week period.

Expectations and Findings

Project Details

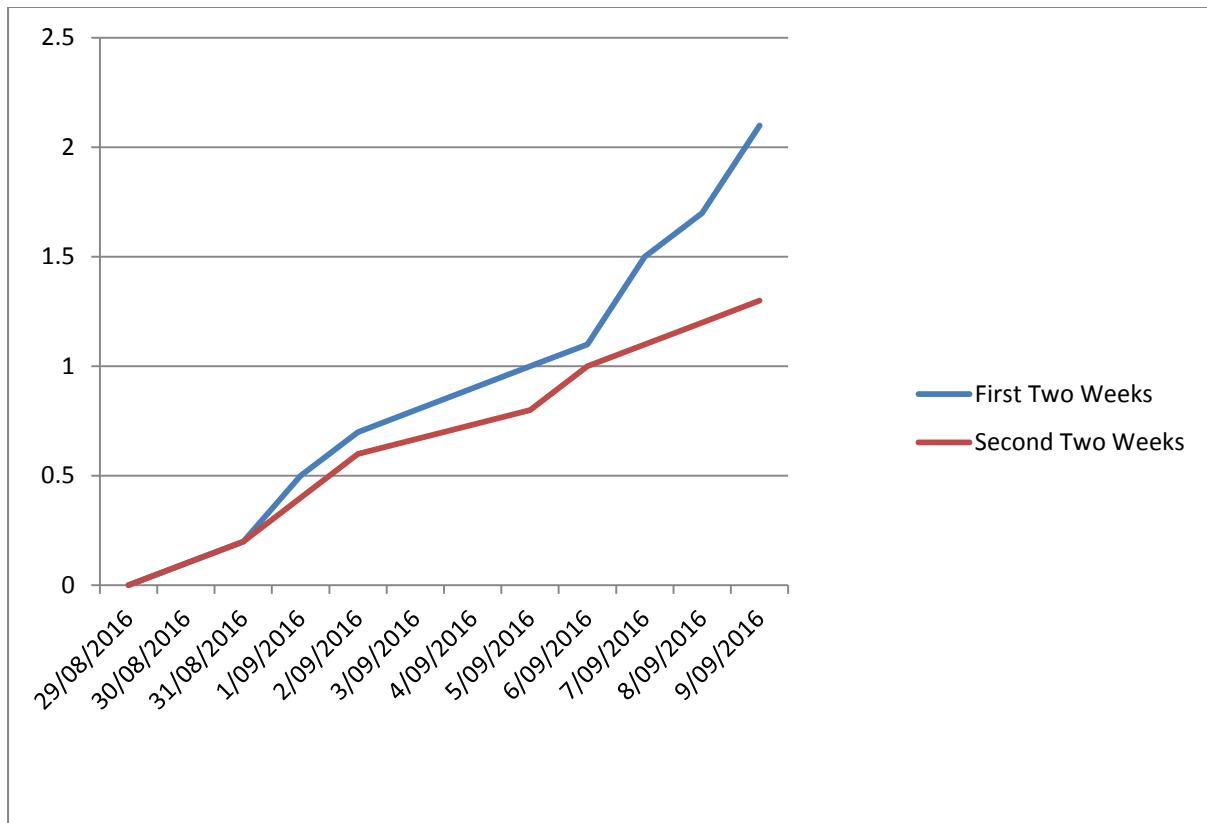
1. Take two weeks of power data from both the top and bottom fountains
2. Take two weeks of power data from the top fountain(decided as a group to cancel monitoring the bottom fountain)
3. Analyse the data(create spreadsheets and graphs) to see if using the fountain while running vs not running has any measurable difference in the power consumption over a two week period.
4. Recommend any if all action needs to be taken.

Expected changes

In this I expect minor (if any) changes in power consumption over a two week period as the fountains cool the water when you activated the fountains which will be the only real draw on the power consumption.

Actual results

- Total of the kwh power consumption came to 2.1 kwh over the first two weeks
- Total of the kwh power consumption came to 1.3 kwh over the second two weeks



Recommended Changes

- In regards to the power consumption while there was a change, it was not enough to justify replacing the fountains with a more sustainable fountain (if one could even be found).
- As a sustainable measure; recommending placing around the TAFE, small posters illustrating the need to fill water bottles at the fountains instead of drinking from them as this would save water over a long period of time.

Improving on Sustainability

In and around the TAFE campus there are a number of initiatives to improve sustainability, below are 5 changes to the current system we can make:

1. **Photovoltaic Cells(Solar panels)**- around the TAFE campus there is a number of sites where photovoltaic cells are set up, if the TAFE installed a number of TELSA Powerwall battery packs to store any excess power gained from the solar panels this would virtually reduce the need to rely on grid power.
2. **Rainwater Tanks**-around the TAFE campus there are a number of small rainwater tanks, however if we were to put into place some large scale rainwater tanks, given Albany's rainfall this could reduce our reliance on scheme water.
3. **Wind Turbine**-on the TAFE campus there is currently only one wind turbine in operation, given Albany's strong it gets year round I believe it would be sensible to place a number around where wind flows freely.
4. **Bike Racks**-on the TAFE campus there are a number of bike racks for students to store their bikes. I would recommend during spring and summer (as winter and autumn are generally wet) have a targeted campaign (i.e. posters) encouraging riding their bikes to TAFE, reducing the amount of cars on the road and promoting a healthy alternative.
5. **Production Horticulture**-the horticulture department on TAFE runs a number of garden beds, perhaps getting the cafeteria to compost any leftover food waste and gathering any paper and using worm farms to break down and convert into nutrient rich fertilizers.

Conclusion

In conclusion putting up posters about the need to conserve water by filling up water bottles instead of drinking directly out of the fountain is an excellent idea to raise awareness. While it is true we can't exactly measure how much water we save by raising awareness, over time perhaps people's minds will warm to the idea of filling water bottles up instead of drinking out the fountain.

Links to Local Sustainability Policies/Projects

WA Sustainability Strategy

<http://www.nrm.wa.gov.au/nrm-in-wa/key-publications/wa-state-sustainability-strategy.aspx>

Albany Sustainable Community projects

<https://www.albany.wa.gov.au/residents/community/sustainable-communities/>

Cleanaway Waste recycling guide

<http://council.cleanaway.com.au/media/34661/Albany%20Waste%20Recycling%20Guide.pdf>