

The Students' Union's at UWE's Efforts to Reduce Utilities Year on Year

We all need make a concerted effort to be less wasteful and more efficient if we are to reduce our carbon emissions in line with the targets that we have collectively set (for example UWE's institutional carbon targets; the Climate Change Act; the Paris agreement).

The Students' Union at UWE Key Facts:

- Over the last three years, we have saved 17.2 Tonne CO2 equivalent
- Over the last three years, water has decreased year on year, saving 1.1 CO2 tonne equivalent
- The data is available on our website:
- The Union is actively engaged with the University Estates and Energy Team to monitor our consumption of a variety of utilities on a yearly basis
- The data is available on our website and we update students via social media also, please find attached
- Our Strategic Plan commits us to Green Impact for the next 4 years, and we will maintain all actions and plans for reductions
- We undertake staff focused energy challenges to raise awareness of consumption and aid our reduction goals
- Over the last three years, we have saved 17.2 Tonne CO2 equivalent
- Over the last three years, water has decreased year on year, saving 1.1 CO2 tonne equivalent
- We can see a direct impact on energy saving challenges on utilities through the data
- As The University does not release its data until a full cycle, we do not see the impact on our energy saving techniques in this green impact submission, but the subsequent data

ELECTRICITY: comparing 2014 in F block (Students' Union Floors) to 2017 in U block, there is a **17.92 Tonne CO2 equiv. saving!** This is equivalent to around £4k+ (elec costs and taxes).

Compare:

	Electricity (kWh)	Tonnes CO2e from electricity
SU 2014-15 SU F block	208,189	85.78
SU 2015-16 New U block	192,172	79.18
SU 2016-17 New U block	193,018	67.86

Although the Electricity use has increased, the carbon intensity of the UK grid has decreased, resulting in the CO2 from the SU electricity consumption to have also dropped.

Due to the Students' Union's new building, the organisation is more prominent to students and offer meeting and events spaces, making us more utilised by students. This has enabled us to better achieve our charitable aims and to organise larger equality and diversity campaigns and events within our space. Even though the building is used more by students, we are still making an energy saving on two utilities.

To add some additional context to the increase of the electricity usage, we can analyse how much the U block space is used via a report from our booking system.

From 1st Sept 2016 - 31st March 2017 there was a total of 436 days, 23 hours, 30 minutes

From 2nd Sept 2017 – 31st March 2017 there was a total of 945 day, 23 hours

It is clear that the record space usage has doubled yet the electrical usage has not increase significantly.

WATER: Comparing 2014 with 2016, there is a 1,044m3 water saving. This is equivalent to around £1,830.

Compare:

	Water supply (m3)	Water treatment (m3)	Total CO2e from water
SU 2014-15 F block	2578.32	2449.40	2.62
SU 2015-16 New U block	1534.20	1457.49	1.56
SU2016-17 New U Block	1497.9	1432.005	1.52

Please find attached the spreadsheet from UWE's Energy Team detailing the reduction over the last three year period of both water and electricity utilities. We are unable to report on gas in 2014-2015 as the boiler that supplies heating / hot water for F-block also supplies other areas, so it is not so easy to see what The Students' Union "consumed".

		2015/2016	2015/2016	2015/2016	2015/2016	2016/2017	2016/2017	2016/2017	2016/2017
			Equip in kWh	kg CO2e / kWh	Tonnes CO2equiv		Equip in kWh	kg CO2e / kWh	Tonnes CO2equiv
Gas	m3	16645	181245.5556	0.183996818	33.348606	16913	192176.8	0.18416	35.3912761

Our gas usage has stayed fairly constant over the last two years, does show a slight increase.

As The University does not release its data until a full cycle, we do not see the impact on our energy saving techniques in this green impact submission. We can't wait to see the result of all our staff awareness and engagement activity below in a few months!

On the week, commencing the 8 January, The Students' Union Building department ran the focus week of the year and completed a "Turn off" week. The aim of this week was to complete 4 electrical energy efficiency practices in an effort to reduce the amount of electricity the Students' Union uses [note: this being completed in U Block Office as a first trial]. This comprise of a focus week to encourage staff to practice more sustainable practices, visual marketing aids, rewards for the department that turns off appliances in their working area and more that is detailed below. Please find evidence of the future energy challenges scheduled for 2017-2018. We are committed to improving our efforts and impact year on year with our strategic plan.

1) **Turn off**

- Office PC, Screen, Appliances off at the end of the day
- Meeting Room lighting, pc, projectors after usage & end of the day
- All staff printers turned off at 5pm

2) **Departmental Monitoring**

On the week commencing the 8th January. Each department will monitored at 5pm Monday

Friday for how well their department turns off PC's, Screens and Appliances. The department will be scored and the highest department will win a free meal & drink vouchers for all their staff in their department. This will be calculated as an average on a percentage due to ranging employee numbers in departments. On screen stickers developed



3) **Lift Usage**

Encourage staff use the stairs and not take the lift. Signage developed and install

4) **Lights off**

Encourage staff, students & visitors to turn off lights when not in usage. Sign developed and installed at all light switches



The results (added spreadsheet) of departmental monitoring

The winners of the *Turning Off Your Workstation* went to the *Building & Community Department* decided by a panel of three staff.

Results of this week are below – Maximum score of 5 as a departmental average.

Position	Department	Score
1	Buildings	4.88
2	Community	4.86
3	Finance	4.75

4	Representation	4.55
5	Bar/Events	4.5
6	CEO & VP's	4.16
7	Opportunities	3.9
8	Marketing	3.67
9	HR & Jobshop	3.5
10	IT	2.33

The Impact

Below are the electrical figure from the month before, during and after the focus week. As you can see that during this week the electrical usage reduced. From this we are developing strategies to embed this throughout the year as the after figure have risen since. We surmise this is likely due to the activity happening out of term time and the building will be higher use by students for longer hours. Now we have run the campaign, we feel confident to re-run successfully at key points in the year. Other factors such as work load and activities will increase the usage and is something the Students' Union needs to look at in the future.

SWITCH-OFF WEEK FIGURES

Electricity	kWh
4-10 Dec 2017	4,048
8-14 Jan 2018	3,873
5-11 Feb 2018	4,191

Energy Saving Features of the Students' Union Building

As a result of a ten year lobbying process by The Students' Union Presidents with the University, The Students' Union moved into new premises in September 2015.

Please find information below on the energy saving features of the building. We also have included in our negative impacts document (SU001) activity taken to reduce our impact.

DAYLIGHTING STRATEGY: Certain areas of the building utilises natural light to illuminate the space. The installation provides LED light fittings with a dimming facility, which reduce the light fittings output whenever possible. The light fittings to be dimmed are predominantly the fittings adjacent to windows.

Where natural lighting could not be provided due to the building form high efficiency LED type fittings were used in conjunction with movement detection switching to limit energy use. Due to this, waste is naturally cut down when spaces are not being utilised. These motion sensors are also in the Glenside and Bower Students' Union office space.

GENERAL LIGHTING: All new lighting was designed in strict accordance with all current CIBSE Design Guides and Codes of Practice. All luminaires were manufactured to British Standards and were

complete with suitable long life, low energy LED lamps. Installations were designed to “maintained” illumination levels as defined by CIBSE guidance and taking account of the depreciation of the lamp light output, luminaires and room surface degradation. All luminaires were selected for their function, and aesthetic suitability including use of vandal resistant units where appropriate. Luminaires (adjacent to windows) in areas which benefit from sufficient natural lighting dim via PIR detectors.

WASTE MANAGEMENT: Waste diverted from landfill: **76%**. The graph is attached.

DISTRICT HEATING NETWORK: The plant room was connected to the new UWE District Heating network. This will reduce the Universities Carbon Footprint and works will start in the coming months to complete the final section of infrastructure on the Campus.

Please see the press release on new energy efficient building:

<http://www1.uwe.ac.uk/about/ourstory/campusdevelopments/studentsunionbuilding.aspx>