

SU007 – Reducing Utilities over Three Years, 2018-2019

The Students' Union at UWE Key Facts:

- 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
- Our Strategic Plan commits us to NUS Green Impact Accreditation for the next 3 years, and we will maintain all actions and plans for reductions
- We undertake staff focused energy challenges and messaging to raise awareness of consumption and aid our reduction goals
- As The University does not release its data until a full cycle, we publish the previous year years' worth of data
- Over the last three years, we have saved 11.29 Tonnes of CO₂ equivalent through our electricity usage. These energy savings are enough to provide **11.8 average UK household's with electricity for one year**
- In the last three years, there has been a 127.2m³ water saving, an 8.3% decrease in this utility. This is enough to provide water supply to wash **636 full loads of laundry**
- We publish our negative environmental impacts and our utilities usage breakdown on our website: https://www.thestudentsunion.co.uk/union/sustainability/action_plan/
- Last year, we promoted our journey through a blog post <https://www.thestudentsunion.co.uk/news/article/TheSUatUWE/Reduce-Utilities-Year-on-Year/>. For 2018-2019, VP Sport and health, Jade, posted an Instagram story on our electricity reduction

Utility – Electricity

Electricity Usage

Compare:		Electricity (kWh)	Tonnes CO ₂ e from electricity
SU 2015-16	New U block	192,172	79.18
SU 2016-17	New U block	193,018	67.86
SU 2017-18	New U block	193,142	67.90

*** Although the Electricity use has increased, the carbon intensity of the UK grid decreased in 2016, resulting in the CO₂ from the SU electricity consumption to have also dropped. [Source for Conversion](#)*

- Comparing 2015/16 to current available data from 2018, there is an **11.28 Tonne CO₂ equiv. saving!**
- These energy savings are enough to provide 11.8 average UK household's with electricity for ONE YEAR! [Source for Equivalency Calculation](#)

Improved Efficiency

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. The booking system provides data on each bookable space and how many hours it was booked. We have totalled the hours of bookable spaces below.

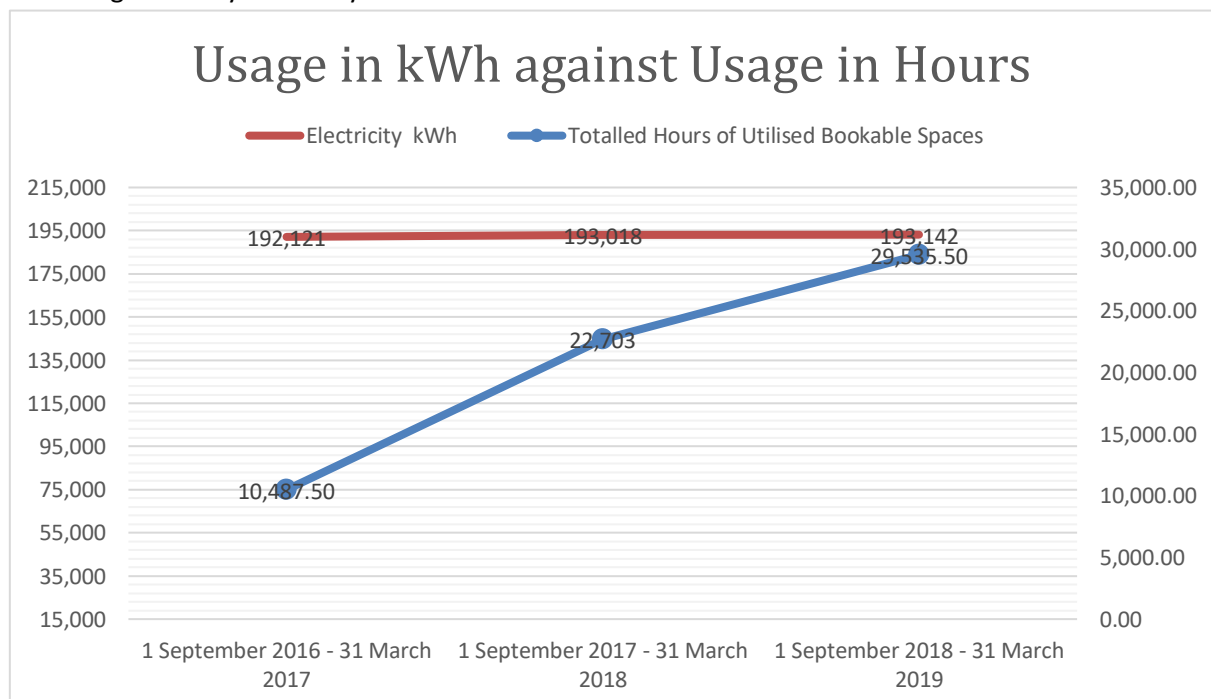
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Hours of Facility Use

Time Frame	Totalled Hours of Utilised Bookable Spaces
1 September 2016 - 31 March 2017	10,487.50 Hours
1 September 2017 - 31 March 2018	22,703 Hours
1 September 2018 - 31 March 2019	29,535.50 Hours

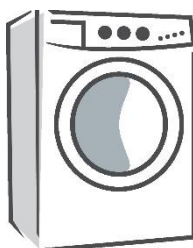
- This translates into an **increase of 19,048 hours** of bookable spaces utilised in the facility in the last three years, i.e. usage of the facility has nearly tripled at The Students' Union since 2016.
- Despite the increased usage in hours, the consumption of energy measured in kWh has remained virtually consistent with just a small increase.
- This effectively displays that efficiency measures taken at The Students' Union result in higher utility efficiency.



Utility – Water

- In the last three years, there has been a 127.2m3 water saving, an 8.3% decrease in this utility.
- This is equivalent to £407 in savings. This is enough to provide water supply to wash **636 full loads of laundry!**
- Source: <http://www.parksville.ca/cms/wpattachments/wpID70atID4418.pdf>

Year	Water Supply (m3)
2015/2016	1534.20
2016/2017	1497.9
2017/2018	1407



x636 full loads worth of water saved!

		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
SU 2016-17	New U Block	1497.9	1432.005	1.52
SU 2017-18	New U Block	1407	TBC	TBC

Utility – Gas

Gas

Type	Unit	2015/2016	2016/2017	2017/2018
Gas	m3	16645	16913	19389

*We have increased usage by 16.48% since 2015/2016

*We have increased usage by 14.64% since 2016/2017

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

Students' Union Staff Energy Challenges and Engagement

On the week, commencing the 8 January, the Students' Union Building Department ran the first focus week of the year and completed a "Turn off" week. The aim of this communicate and embed habits that reduce the amount of electricity the Students' Union uses. 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.

Pleaser find attached evidence of communication from the Buildings Department to all staff about turning off equipment. Additional signage was developed for screens, light switches and printers.



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



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

- Saving 175kWh, which is the equivalent to powering 525 hours of watching plasma TV! You could watch the entire back catalogue of the following TV shoes: Friends (86.5 hours), Prison Break (63 hours), Love Island (158 hours), All Marvel Cinematic Universe Films (40.29 hours), Peaky Blinders (22.48 hours), Big Bang Theory (99 hours), Fresh Prince of Bel-Air (74 hours) – with 32 hours spare to watch 21 football games!

<https://www.ovoenergy.com/guides/energy-guides/what-is-a-kwh-kw-and-kwh-explained.html>

Moving forward, we are developing statistics to explain the impact of switching off monitors (for example) to communicate in inductions for new starters, staff newsletters and during challenges.

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.

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>