

Coventry University Winner – Carbon Reduction “Coventry University Carbon Challenge”



Summary

The Coventry University Carbon Challenge began in response to our corporate carbon reduction targets but has now evolved into an inter-building competition with eagerly anticipated monthly reports and quarterly league tables which have empowered students and staff across the University to take responsibility for their own electrical consumption and thereby saved over 1000 tonnes of carbon in two years.

Project partners

Coventry University Environment Team, all Coventry University Faculties and Professional Services staff, Deputy Vice Chancellor for Resources

The problem

Challenged by a corporate target of reducing carbon emissions by 500 tonnes per annum by 2015, the University's Environment Team realised that the most important thing is to empower every student and member of staff at Coventry to physically use less energy. We focussed on electricity as this is the key area of energy usage directly controlled by our users as our heating systems are largely gas powered and automated. It is also the most significant area of our overall carbon footprint.

The approach

The Environment Team began by analysing consumption data to create a baseline for each building against which on-going assessment could be made. Spreadsheets were then designed to record energy consumption against each baseline and a format created for a monthly building progress sheet and quarterly league table that would display performance statistics and rank participating buildings against each other.

The aim was to use the data in such a way that it revealed examples of good practice and motivated excessive consumers to change. In order to manage and promote the scheme, we set up a network of energy champions in each building to act as local administrators and as two-way contact points for gathering and disseminating energy efficiency advice to and from staff and students.

Our goals

1. To reduce energy consumption in a city centre campus with many older and less energy efficient buildings, by changing the behaviour of the building occupants
2. At a time of economic uncertainty, to achieve a considerable cost saving on energy bills that can be sustained across a significant time period without massive capital expenditure on new buildings or technology.
3. We set out to create a self-funding competition that provided participants with a genuine financial incentive and encouraged a healthy rivalry between our various campus buildings.

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Obstacles and solutions

Identifying individual building electricity consumption:	We have a high voltage circuit at Coventry University that serves 25 buildings in total. This is fed from two mains grid supplies and six of our own Combined Heat and Power Engines (CHP) so working out an individual building's consumption was complicated. We solved the problem by installing a system of submeters to give us accurate building by building consumption data.
Keeping people motivated whilst we sought further annual improvements:	This challenge was overcome with on-site audits several times a year focussing on what occupants can achieve. We also continued to change the focus of the challenge by concentrating efforts on particular problem areas such as out of hours switch-offs, unused and inefficient appliances and so on. It was also important not to get too hung up about who achieved what to stop disagreements between services and faculties.

Performance and results

Our carbon challenge scheme has delivered significant and consistent savings to Coventry University during the two years it has been operational. Energy consumption across campus has shown a steady continuous decline at each quarter recorded since the scheme commenced.

In the first year of the programme:

- Every building on campus reduced electricity compared to the previous year
- The largest percentage winner reduced electricity by 18% on the year before
- Our library saved 155,595kWh compared to the previous year - this alone is a saving of 84tonnes of Carbon £14,000 off our energy bill and £1000 off our Carbon Reduction Commitment (CRC) liability.

To date, after two years of the programme:

- The Carbon Challenge competition has recorded a saving at the University of more than 2 million kWh in two years.
- This translates to a Carbon saving of 1100 tonnes in two years £200,000 off our energy bill at current prices and £13,200 off our Carbon Reduction Commitment liability.

Lessons learned

The Carbon Challenge has left a lasting legacy in terms of behavioural change towards energy use by reaching all levels from Vice Chancellor to front-line worker at Coventry University. Our library building won the largest amount saved prize for 2009/2010 and Senior Manager Phil Brabban tells a story that can be repeated across all faculties of the University.

"The University Library has welcomed the opportunity to participate in the campus-wide Carbon Challenge scheme. Although initially daunted, we formed a staff 'Green Group' as a working party..... to look at ways that the Library could become more Environmentally aware.....The challenge has really inspired our Library staff to look for further ways to improve what we do and we have certainly changed our behaviour towards energy usage as a result. Our Green Group continues to ensure that staff and customers are aware of the things they can do to help whether it be through 'Switch me Off' stickers on our computers and monitors, new recycling bins in prominent places, or announcements to customers before we close. Every bit helps and the Carbon Challenge has shown us that, although there are many and varied departments in the University, when we work together toward a common goal we can achieve a huge amount making a significant contribution to reducing our Carbon footprint."

Further information

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