

University of Salford

Carbon reduction

Creating a Carbon Saving Case Study on Campus

Section 1 About the project

Summary

The University of Salford has a challenging carbon target of an absolute reduction of 43% by Sept 2020 from 2005/6 baseline. In order to ensure investment for efficient technologies, a test bed was developed using a University building to be able to trial technologies to demonstrate savings before rolling out implementation to the rest of the campus resulting in total University carbon emissions reductions of nearly 13% over two years and another 11% reduction to date.

Project partners

Some projects were funded through Salix Finance

Section 2 The results

The problem

The university has a challenging carbon target of an absolute reduction of 43% by September 2020, from a 2005 base line of 20,000 tonnes. An interim reduction of 30 percent was required by September 2015. During challenging times for the university, investments into building and maintenance works are being scrutinised more than ever before. The energy management team needed a cast-iron business case for reductions in order to attract investment into equipment and technology.

The approach

Technology House is a university-owned and managed office space facility which is home to over 70 businesses. It's a medium-sized building in relation to the university's portfolio, so ideal for gauging average energy usage. It also has the added advantage of half-hourly meter recordings, so is ideal for measuring the immediate effect of any changes.

The conditions provide an ideal live testing facility for energy-efficient technologies. The self-contained building with its detailed metering allows the energy team to test carbon reduction methods and measure the results to give a compelling business case for investment in the whole campus.

Our goals

- Test energy saving projects for effectiveness without large investment
- Demonstrate real savings and use data to develop robust business cases for implementation across larger campus

University of
Salford
MANCHESTER

Profile

- HEI
- 19,200 students
(includes full and part
time students)
- 2300 staff
- Urban

Category supported by


SALIX
SOLVING ENERGY EFFICIENCY
FINANCE IN THE PUBLIC SECTOR

Finalist's case study

- Reduce energy consumption and, therefore costs for Technology House enabling a more cost efficient offer for tenants
- Contribute to University carbon reduction targets

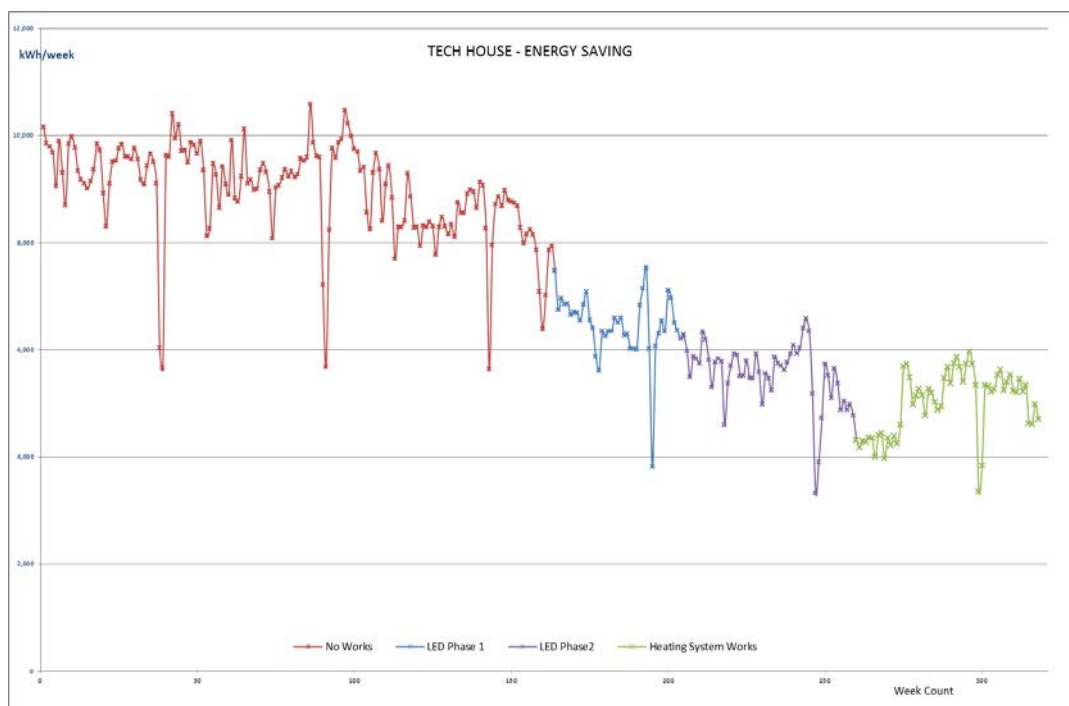
Obstacles and solutions

<ul style="list-style-type: none"> • Implementing projects without disruption to students, teaching or research 	Testing projects in an environment with no disruption at all to students, proving they work and then rolling them out throughout the university during quiet times for the benefit of all students and staff
<ul style="list-style-type: none"> • Installing new equipment and technology in areas leased to external companies 	Ensuring energy costs and savings are made visible and benefits seen in rents. Additional benefits to building users highlighted such as increased thermal comfort and better lighting levels

Performance and results

The results are remarkable. Technology House now consumes less energy during a working week than it did during a total Christmas shutdown before the energy-saving measures were implemented, despite occupancy rising from 79 percent to 94 per cent. In just 12 months, usage dropped from 9,700kWh each week to an average of 5,200kWh a week, allowing the energy team to roll-out energy-saving schemes across the whole campus.

Financial savings in the Technology House case study are an estimated £26,000. Demonstration of these savings has enabled the Energy Team to develop comprehensive business cases for investment in the roll out of these projects to the rest of the campus which has supported the achievement of a total 13% reduction in carbon emissions up to end of 2012/13 since 2010/11, equivalent to a saving of approximately £1.2m (based on business as usual).



Section 3 The future

Lessons learned

Ensuring everyone is included in communications; there were some unexplained problems encountered with our heating systems and it was discovered that the Security Guard who was not aware of the projects was switching the system on manually in the middle of the night to ensure the building was warm in the morning for when occupants arrived, resulting in the Heating Optimiser learning being re-set every time.

Sharing our project

An unexpected benefit was that, as the building space is leased to external businesses, the projects have provided an opportunity to raise awareness of energy efficiency and promote the positive action the University is taking to reduce carbon emissions.

Existing case studies for some of the projects included within this application have already been developed and publicised as case studies with Cylon and Toshiba and are available on their websites.

What has it meant to your institution to be a Green Gown Award finalist?

Receiving a prestigious Green Gown nomination for this project provides fantastic recognition to the team for ensuring that we work successfully towards our challenging, strategic carbon reduction targets. We also hope that this project can serve as a useful case study for other institutions.

Further information

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