

Estates Carbon Management Plan 2014

015-02-02 Addendum

Executive Summary

This document sets out the Carbon Management Plan (CMP) for The Open University (OU).

It demonstrates the OU commitment to carbon management. It shows the OU contribution to achieving the legally binding targets set by the Climate Change Act and the targets set for higher education by the Higher Education Funding Council for England (HEFCE).

The strategy fits with effectiveness and financial sustainability objectives, the Estates Strategy, the Sustainability Policy, the Energy Policy, the Environmental Policy and the Travel Plan.

A carbon baseline is developed in line with the methodology set out by HEFCE to ensure consistency across the higher education sector and incorporates the latest government conversion factors to convert energy use into carbon emissions.

The carbon baseline is calculated at 15378 tonnes for the 2005 academic year.

A target for absolute reduction in carbon against the 2005 baseline of 15378 tonnes is set at:

- 36% per annum by 2020.

The approach used to identify carbon reduction options to achieve this target is described and an implementation plan is presented. Investment in this implementation plan will be primarily from capital and Estate budgets.

The Director of Estates and a Carbon Management Committee have responsibility for delivering the CMP.

An annual report on progress will be presented to the Estates Committee and reported publicly.

Introduction

Tackling climate change is one of the greatest challenges facing the world. This plan continues to take forward the OU commitment to reducing carbon emissions and is consistent with our core values of social justice and being responsive to the needs of society.

The plan supports and will be co-ordinated with the Sustainability Policy, Environmental Policy, Energy Policy and Travel Plan.

Legally binding carbon reduction targets have been set by the Climate Change Act for the United Kingdom. These are a challenging 80% reduction on the 1990 carbon baseline by 2050 and Government carbon budgets have been set to limit greenhouse gas emissions.

HEFCE require higher education institutions to develop individual carbon management plans and capital funding from 2011 has been linked to performance against these plans.

This plan builds on the previous carbon management plans of 2007, 2010 and 2011.

Overview of Strategy

The OU is committed to carbon management and a reduction in carbon emissions will be achieved by the following strategy:

- Identifying and setting objectives.
- Establishing a carbon baseline.
- Identifying, quantifying and appraising options to reduce carbon use.
- Setting realistic targets based on the most effective options.
- Establishing a carbon reduction implementation plan.
- Monitoring and reporting on progress.
- Reviewing effectiveness and amending the implementation plan based on lessons learned.
- Identifying clear responsibilities.
- Securing sponsorship at the highest level.

Fit with Strategic Objectives

The majority view of scientists is that adverse climate change will lead to severe impacts on coastal communities, reduced food supply, species extinction and extreme weather events. Reducing carbon emissions therefore fits with the OU core values of social justice and being responsive to the needs of society.

Reducing carbon emissions involves minimising energy use, transport and waste and leads to a reduced cost base. This CMP therefore fits with the University objective of Financial Sustainability and the Estates Strategy objectives of efficiency and cost effectiveness.

The CMP will contribute to preserving resources for future generations and therefore supports the OU Sustainability Policy.

Reducing energy use, transport, pollution and waste fit with the OU Energy Policy, Environmental Policy and Travel Plan.

Carbon Baseline

A carbon baseline consists of a calculation of the institution's carbon emissions for a particular year to which future targets for reductions will apply.

It is necessary to establish a boundary to the types of emissions that will be included in a carbon baseline.

The HEFCE Carbon Reduction Target and Strategy for Higher Education in England identifies the following types of emissions:

Scope	Description	Examples
Scope 1: Direct emissions.	Emissions from sources that are owned or controlled by the institution.	Emissions from combustion of fossil fuels (coal, gas, and oil) within the estate. Emissions from transport fuel used in the institutions' own vehicle fleets.
Scope 2: Electricity indirect emissions.	Emissions from the generation of electricity consumed by the institution.	Emissions from purchased electricity.
Scope 3: Other indirect emissions.	Emissions that are a consequence of the activities of the institution, but occur from sources not owned or controlled by the institution.	Emissions from other sources – water use, waste, and procurement (assets, goods and services), land use, business travel (for management, research or teaching) and commuting (both staff and students). Transport can be further categorised by mode into land transport (car, rail, bus, other) and air travel (split between domestic flights and international flights).

The HEFCE carbon reduction strategy and capital investment framework specify that scope 1 and 2 emissions are mandatory for inclusion in the carbon baseline and that research on scope 3 emissions will be undertaken for inclusion at a future time.

The boundary for this strategy is determined by the availability of robust emissions data and by the need to maintain comparability across the higher education sector. Robust data for gas, oil, fleet transport fuel and electricity is currently available. The carbon boundary for this strategy is therefore scope 1 gas; oil and fleet transport fuel and scope 2; electricity.

HEFCE requires institutions to set targets against a 2005/06 baseline. This year is being used as a baseline because it has been demonstrated that robust data for scope 1 and 2 emissions are available for that year at institutional level. This will provide consistency across the sector against which progress can be monitored and reported.

The carbon baseline for 2005/06 based on the boundary to which the targets will apply is 15378 tonnes.

Approach to Identifying Carbon Reduction Options

The following opportunities to reduce carbon emissions are recognised:

- Avoiding unnecessary use of equipment, combustion plant or vehicles.
- Utilising passive measures such as insulation, natural ventilation, solar gain or shading and thermal mass.
- Encouragement of energy-conscious behaviours.
- Using more energy-efficient energy supply and equipment.
- Effective programming of controls.
- Using heat recovery.
- Using cleaner fossil fuel technology.
- Setting BREEAM (Building Research Establishment Environmental Assessment Method) standards for refurbished and new buildings.
- Efficient space utilisation reducing building area to be heated or cooled.
- Using renewable energy sources.

Options to reduce carbon use are identified by:

- Energy conservation surveys of buildings and plant.
- An analysis of energy needs to identify the most effective combination of energy supply plant for the future.
- Consultation with estates technical staff.
- Consultations with catering, computing, finance, purchasing, transport and waste disposal representatives.

Appraisal of Carbon Reduction Options

Identified carbon reduction options are assessed for compatibility, technical practicality, implementation cost, annual financial saving, financial payback and annual carbon saving.

Options that were not compatible or technically practical are eliminated.

Where options compete to supply the same energy then the most financially beneficial options are selected.

The carbon reduction options are listed in a separate programme of projects and summarised in an Implementation Plan.

Planned changes to the Estate are incorporated into the Implementation Plan.

Carbon Reduction Target

The Implementation Plan identifies carbon reduction options with a potential reduction in emissions of 15%. Future carbon reduction options arising from developing technology, energy conservation surveys and space reduction with the potential to achieve a further 21% are being considered.

The target percentage for reduction in carbon against the 2005/06 baseline of 15378 tonnes is therefore:

- 36 % per annum by 2020/21.

The carbon emissions will however be affected by other factors such as changes in an institution's activity. The HEFCE Capital Investment Framework recognises income as a measure of this. Progress is therefore measured annually against both absolute carbon use and carbon use relative to income adjusted for inflation.

Implementation Plan

The implementation plan is provided at Appendix 1.

The Implementation Plan consists of completed, in progress and pipeline carbon reduction options through to 2020/21.

The Implementation Plan will be reviewed and updated annually to reflect new information and lessons learnt.

Financing

The Implementation Plan includes changes to the Estate, installation of major capital plant (subject to detailed financial and technical appraisal), minor energy conservation works and behavioural change programmes.

Changes to the Estate and the major capital plant will be bids against the Open University's capital programme.

A ring fenced HEFCE/Salix revolving green fund is established at The Open University and will be used to finance the minor energy conservation works falling within the funding criteria for the grant.

The remaining minor energy conservation projects will be bids against the Estates minor works budget or, where they incorporate replacement of building elements identified from building condition survey, they will be bids against the Estates major maintenance budget.

The behavioural change programmes will be bids against Estates fees or University budgets.

The projected expenditure on the Implementation Plan will be incorporated into annual financial planning.

Governance, Ownership, Monitoring and Review

Delivering this strategy requires a structured framework to co-ordinate, communicate and control the activities involved.

A Carbon Management Committee has been formed consisting of the Head of Infrastructure, Energy Manager, Unit Finance Manager, Unit Management Accountant and National Projects Manager.

Representatives from other areas are invited as their skills are required to support the CMP.

The Committee will meet quarterly to monitor progress against the Implementation Plan and to initiate appropriate co-ordination or control actions. The Committee will report quarterly to the Director of Estates.

An annual review will be carried out taking into account progress against the Implementation Plan, progress against the targets, changes to the Estate, changes within the OU, evolving technologies and lessons learnt from the projects.

An annual report on progress will be presented to the Estates Committee, which will be published.

The Head of Infrastructure will appoint Project Managers with responsibility for delivering the individual carbon reduction projects.

Higher Education Sector Targets and Scope 3 Emissions

The HEFCE Carbon Reduction Target and Strategy for Higher Education in England commits the higher education sector to a reduction in scope 1 and 2 emissions of 34% by 2020 and 80% by 2050 against a 1990 baseline. An alternative baseline year of 2005 has been set for institutions because robust data is available for that year. The target against the 1990 baseline converts to the following reductions against the 2005 baseline, a reduction in scope 1 and 2 emissions of 48% by 2020 and 84% by 2050.

However, recognising the significant diversity of the sector, institutions are asked to set targets that are appropriate to their individual circumstances. The guidance recognises that the targets at institutional level should be SMART – specific, measurable, achievable, realistic and time bound. The targets specified within this document have been developed from survey, technical appraisal and financial appraisal to meet the requirements.

The HEFCE Carbon Reduction Target and Strategy for Higher Education in England also commits the sector to reducing emissions across all scopes and to work on developing a consistent methodology for reporting scope 3 emissions.

Scope 3 emissions from business travel, commuting, waste and water have been estimated for 2012/13 and will be reported each year in Estate Management Statistics. The data is not yet reliable enough to set targets. Travel planning, recycling and waste reduction initiatives are in progress to reduce scope 3 emissions.