



ENERGY AND WATER MANAGEMENT POLICY

1 Introduction

This policy has been prepared in support of Bangor University's Sustainability and Environmental Policies and applies across the entire estate

2 Policy Statement

Bangor University aspires to be sustainable by means of a balanced consideration of financial matters, the wellbeing of our staff and students, our impacts on the local community and of the environment around us. Responsible energy and water management is an integral part in achieving this and in this respect, we aim to optimise our energy and water consumption, thereby reducing our costs, as well as the socio-economic and environmental impacts of greenhouse gas emissions

Bangor University is committed to achieving good practice benchmark standards in energy and water efficiency, whilst maintaining a comfortable working / living environment for all staff, students and visitors to our institution. To this end the University will provide senior level commitment, an appropriate management structure and cost effective resources to achieve these standards, which will contribute to continual environmental improvement.

3. Objectives

Stemming from the University's Carbon Management Strategy and working with the Carbon Trust and the Gwynedd Local Service Board, the University aims to achieve the following greenhouse gas (CO₂(e)) reduction targets:

- 1) An annual reduction of 3%
- 2) 40% reduction of 2005/06 base year emissions by 2020

These targets form the basis of our Energy and Water Management Action Plan

4 Strategic Actions

In pursuance of the above Policy statement and objectives the University will seek to:

- i. purchase energy and water that ensures best value for Bangor University, including the purchase of renewable energy where cost effective.
- ii. utilise energy and water as efficiently as possible by no cost measures (i.e. good housekeeping)

- iii. better manage its energy and water use through Automated Metering Monitoring and Targeting (AMMT) systems.
- iv. invest in energy and water efficient plant and projects with paybacks of less than 5 Years.
- v. design-in energy and water efficiency to all new buildings, refurbishments, maintenance and equipment, using life cycle cost analysis techniques.
- vi. actively seek to obtain external funding to assist financing of installation of energy and water efficiency systems.
- vii. develop Strategic Energy and Water Management Action Plans, publish clear targets for energy and water consumption and to monitor performance against targets.
- viii. raise energy and water efficiency awareness amongst staff and students.
- ix. reduce dependence on fossil fuels by using alternative ambient and renewable forms of energy where it is practical and economic to do so.
- x. procure goods and services from organisations who demonstrate a positive commitment to environmental and sustainability goals including energy and water efficiency where it is practical and cost effective to do so.

5 Operating Principles

Responsibility Structure

Responsibility for the management of energy and water rests primarily with the Director of Estates and Facilities, who reports to the Vice-Chancellor, the Estates and Facilities Task Group, and the Sustainability Management Board. The Director of Estates & Facilities also has, on behalf of the Head of Residences, responsibility for the design and maintenance of the University's Halls of Residence.

Within the Estates & Facilities Department, a Strategic Energy and Water Management Group has been established with responsibility for:

- i. Developing an Energy CO₂ and Water Management Strategy, and delivering the associated actions derived from the Strategy.
- ii. Developing specific energy saving capital projects and providing advice on the energy efficiency aspects affecting major capital projects.
- iii. Developing and running the Automated Metering Monitoring and Targeting (AMMT) system
- iv. Developing bespoke Awareness Campaigns
- v. Working with the Heads of Residences on energy and water management enhancements

The efficient use of energy and water supplies is the responsibility of every member of staff and of every student.

a. Energy Purchase

Energy will be purchased centrally by Estates and Facilities at the most competitive rates available. Electricity will be purchased from renewable sources if the environmental benefits are considered to outweigh any extra cost.

b. Investment in Energy and Water Efficiency

Each year Bangor University will allocate 5% of the annual energy revenue expenditure associated with non-residential areas for investment in energy efficiency projects and water management programmes. For projects costing less than £5,000 a simple payback criterion of 5 years will be applied. For projects greater than £5,000 discounting methods will be used to appraise and compare projects.

c. Energy and Water Efficiency by Design

Bangor University is committed to sustainable procurement. All central government departments and related organisations must ensure that they meet at least the mandatory Government Buying Standards when buying goods and services. This requirement will be adhered to for all design by Bangor University staff and integrated into standard contract conditions. Wherever practicable, implementation of the “Best Practice” Standard will be considered.

d. Monitoring and Targeting

The Automated Metering Monitoring and Targeting (AMMT) project has culminated in over 120 gas, electricity and water meters throughout the University’s estate. The Environmental Manager in the Estates and Facilities Department is responsible for:

- Routinely monitoring and analysing data from the system, and producing reports.
- Developing targets for individual buildings based on building use, best practice and established benchmarks.
- Monitoring performance, identifying action plans and raising awareness of efficiency amongst building users.

e. Building Energy Certificates

Energy Performance Certificates (EPCs) and Display Energy Certificates (DECs) will be prepared in accordance with the Energy Performance of Buildings Regulations. The Advisory Reports accompanying DECs will feed into the Energy and Water Management Action Plan.

f. Maintenance and Plant Control

Energy conversion plant (boilers, chillers, compressors) distribution systems and energy using equipment will be correctly and regularly maintained to achieve optimum efficiency. Plant and equipment will have appropriate controls to minimise energy use and be linked, wherever possible and appropriate to the University’s Building Management System (BMS).

g. Awareness Training

Awareness and motivation campaigns for staff and students will promote the benefits of saving energy and water and how to avoid waste. Campaigns will embrace financial, environmental and sustainability agendas. Training will be provided for key people who have a significant influence on controlling energy and water consumption.

5 Departmental Responsibilities and Central Support

Deans of College and Heads of Departments will support the objectives of the Policy and will provide encouragement and assistance to staff and students.

To support Bangor University in achieving its objectives each Head of Department (or their nominated representative) shall:-

- Publicise to staff and students energy/water consumption figures and targets.
- Identify energy/water intensive items of equipment and liaise closely with Estates and Facilities to avoid wasteful practices.
- Examine both running costs and capital costs of proposed new equipment and projects so that utilities costs are considered in the decision making process.
- Report changes in building use or occupancy times to ensure heating, cooling, ventilation and other services are provided efficiently.

- Raise the awareness of staff and students to the importance of energy/water saving and build this into normal procedures (e.g. laboratory protocols and procedures for cleaning/security staff).
- Actively support participation in Estates and Facilities awareness campaigns and encourage the display and dissemination of policy materials.

Estates and Facilities will provide the following support and advice to Colleges and Departments:

- Practical advice as to how energy/water savings can be achieved in order to meet targets.
- Regular reports on energy/water consumption and costs.
- A programme for rapid energy walkabout surveys to identify early achievable savings.
- An analysis of the energy / water consumption associated with large plant/equipment and advice on how to minimise consumption.

6 Heating and Cooling

The Workplace (Health, Safety and Welfare) Regulations 1992 specify that during working hours, workplace temperature should be *“reasonable and at least 16°C”*.

The majority of Bangor University buildings are controlled by a Building Energy Management System, programmed by Estates & Facilities, with the aim of optimising the comfort of staff and students, whilst balancing the financial costs and environmental consequences of energy use. The University aims to maintain a comfortable temperature in all of its occupied buildings.

Summertime (Heating Shutdown): 1st May – 30th September

During this period the heating systems are shut down for inspection and maintenance. This is however subject to flexibility depending on weather conditions, and the heating season referred to above may be extended if the outside daytime temperature does not exceed 16°C for more than 3 consecutive days.

The University does not control space heating during summertime conditions, and occupants are asked to cope with high summer temperatures by opening windows to maximise natural ventilation, and using curtains/blinds wherever practicable. Mechanical or refrigerant air conditioning will however be considered where:

- Room processes require close temperature control
- Natural ventilation is insufficient for replenishment and air movement
- Stale, hot or noxious fumes or smells require removal
- Room temperatures consistently rise above 28°C, and all other options have failed.

Non Core-Time Heating and Cooling

The University does not normally provide heating or cooling for academic and office areas outside of core time hours. However where such conditions are required, for example for conferences, night classes and private functions, they should be requested at least 5 days in advance through the Estates and Facilities Helpdesk (extension 2783). The University reserves the right to recharge the cost of providing this service.

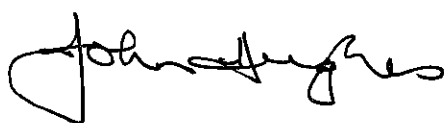
Unauthorised Heating / Cooling Equipment

The use of portable heaters and air conditioners can have an overbearing impact on the building's electrical supply, causing faults and tripping of the supply. Their use is also not considered environmentally friendly and therefore where an individual or College/Department wishes to use portable heating or cooling they should first request Estates & Facilities to assess whether local improvements are possible and where additional portable devices are required then Estates & Facilities should confirm that it is safe to do so.

Policy Review

This Policy will be reviewed annually by the Estates and Facilities Task Group, and endorsed by the Sustainability Management Board. It will also be communicated to the wider University population and made publicly available.

Signed:



Professor J.G.Hughes, Vice-Chancellor

Date: 15TH DEC. 2014

