Energy Policy

Operational Owner:	Energy Manager / Senior Environment & Sustainability Adviser
Executive Owner:	Ian Grimes, Director of Estates
Effective Date:	18/06/2023
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Related policies and documents:	Environment and Sustainability Policy Net Zero Action Plan Estate Decarbonisation Plan Water Policy Sustainable Procurement Policy Engagement Management Plan Sustainable Construction Policy Estates Vision 2023 - 2030

Version history:

Version	Reviewed by	Reason for review	Approved by	Date
1.1	Nanna Blomquist	New Policy		

1 Introduction

1.1 Purpose

The purpose of this policy is to set out the University of Hertfordshire's approach and commitments to energy management in line with environmental, financial, and legislative requirements.

1.2 Scope

The policy applies to all students, staff, consultants, and contractors.

1.3 Definitions

BMS – Building Management System. A system which controls the operation of HVAC equipment and major energy using systems across the university.

BREEAM – The Building Research Establishment Environmental Assessment Methodology. A widely used method for assessing the sustainability of new build and refurbishment projects in design and construction.

CO^2 emissions – Carbon dioxide (CO^2) is a greenhouse gas created by the combustion of fossil fuels and the respiration of living organisms. Fossil fuel derived carbon emissions are responsible for the accelerated pace of global warming.

HVAC – Heating, Ventilation and Air Conditioning equipment. Includes major energy using equipment such as boilers and air handling units.

Power Purchase Agreements (PPA) – In this context, a long-term agreement (20-25 years) between the University and a renewable power supplier, which commits the university to purchase energy from a renewable source (such as photovoltaic solar panel arrays) installed at no capex cost to the university, on the university's land. After the PPA period expires, the University takes ownership of the capital generation asset.

Solar PV - Technology that captures the sun's energy and convert it into electricity, also known as solar panels.

Air source heat pumps (ASHP) - Air source heat pumps are a new type of low-carbon heating. It uses the warmth from the surrounding air to supply heating and hot water. ASHPs are electric, and can therefore be more environmentally friendly than a gas-powered boiler.

Whole Life Costing (WLC) – Often referred to as lifecycle cost analysis. In this context WLC is defined as an assessment of the financial benefit of a particular technology or building component based on its impact on operational costs and not just the up-front capital cost.

2 Policy Vision

2.1 Global Context

The generation of energy derived from fossil-fuels such as coal, oil, and gas, emits harmful greenhouse gases and contributes to global warming. In the face of the current climate crisis and increased volatility in the energy market, the University of Hertfordshire therefore has a moral, financial, and legislative responsibility to reduce its energy use consumption and associated emissions.

The United Nations Sustainable Development goals identify the global challenges that need to be addressed in order to help drive a sustainable future. These include poverty, inequality, climate, environmental degradation, prosperity, and peace and justice. Within the environmental pillar of the framework, there are two goals that link specifically to energy generation, procurement, and utilisation:

• Goal 7 – Affordable and Clean Energy – Ensure access to affordable, reliable, sustainable, and modern energy

• Goal 13 – Climate Action – Take urgent action to combat climate change and its impacts

Making progress towards the objectives set out in the policy statement will contribute towards meeting these sustainable development goals.

2.2 Policy Principles

The principles underpinning the Energy Policy are set out as below. These principles are based on the Estate Decarbonisation Plan (EDP) developed in 2023 in collaboration with external consultants. The emphasis on these principles will change as the University progresses towards meeting its targets and the policy will be reviewed accordingly to reflect this. The Estate Decarbonisation Plan will feed into our overarching Net Zero Action plan.

2.2.1 Compliance

Legislative and internal compliance relating to energy efficiency and reporting must be met, and where practicable, exceeded.

2.2.2 Monitoring and Measuring

Measuring, monitoring, and validating electricity and gas usage is a key priority in energy management. It not only enables consumption to be quantified, but also allows the reporting of emissions both internally in line with the governance process set out in section 4, and externally as mandated by the Estates Management Record (EMR) and relevant legislation.

2.2.3 Energy Efficiency

The building management system (BMS) controls the majority of the university's heating, ventilation, and air conditioning (HVAC) plant and plays an important part in energy management. By surveying plant, interrogating the BMS, optimising plant settings and working collaboratively with Schools, building management and facilities teams, zero and low-cost savings can be realised. Conventional energy efficiency measures such as

replacement of lighting with LED and suitable controls and variable speed drives will also be used. This will be particularly important as demand for grid electricity increases as a result of heat decarbonisation.

2.2.4 Efficient Use of Space

Efficient space utilisation is crucial for any energy conservation initiatives. Heating and conditioning empty or underutilised spaces uses unnecessary energy and therefore the control of space use through effective governance and optimised space utilisation is a significant part of the plan to reduce energy consumption and carbon emissions. It is also important to consider the environmental suitability of a space at the design stage, as costly design variations may be incurred at a later stage.

2.2.5 Building and Maintenance Standards

As dictated in our 2035 Estates Vision and Sustainable Construction Policy, environmental considerations will underpin all decision-making relating to future campus developments including construction, refurbishment, and change of use. In the construction of new buildings, energy efficiency best practice measures such as insulation and thermal performance will be pursued to minimise the operational emissions over the lifecycle of the building. Training, guidance, and integrating best practice maintenance standards are essential for the success of any energy reduction initiatives.

2.2.7 Procurement

Energy efficiency will be considered as part of the sustainability assessment in the tender process of all hard and soft services suppliers. In the procurement of equipment, the University will work with departments to establish minimum standards. The University will also consider how best to procure its energy, striking a balance between cost and energy source. As part of this, the university may consider the generation of on / off-site low to zero carbon electricity and / or power purchase agreements to supply renewable energy.

2.2.8 Integration and Coordination

The sequence in which measures are considered can have an impact on the savings in operational carbon emissions relative to costs. Reducing the building's peak heat load through fabric improvement measures and enhanced controls may result in smaller air source heat pumps (ASHP) systems and lower peak electrical loads. Therefore, investment in these measures may avoid the cost of larger plant and voltage upgrades. Equally, switching from gas-fired heating and hot water systems to electrically driven systems will only result in significant carbon savings if the electricity is low- or zero-carbon, otherwise this can become a costly exercise with little benefit.

2.2.9 Stakeholder and Community Engagement

Community and stakeholder engagement plays a key role in successful energy management. Initiatives and campaigns that educate and empower staff and students to take action have the potential to significantly impact energy consumption on campus (and beyond). Effective communication with key stakeholders ensures relevant parties are informed about our commitments and plans.

3 Policy Statement

3.1 University of Hertfordshire recognises that its operations consume energy and that the emission of carbon dioxide and other greenhouse gases through the consumption of fossil fuels have a negative impact on the environment. The University of Hertfordshire has therefore set a commitment to energy management as follows:

To implement the estates decarbonisations plan and achieve reductions in carbon from energy against our 2022 baseline of 85% by 2035 and 95% by 2050.

The university aims to achieve its targets by providing adequate resources to meet the following objectives:

1. Meet, and where possible exceed, all relevant legal requirements.
2. Monitor and measure energy use across the University, quantify consumption and report performance internally and externally.
3. Continue the roll-out of smart metering and sub-metering (AMR meters) to support Monitoring and Targeting and Measurement and Verification of savings from the Net Zero programme.
4. Implement effective building management controls for HVAC and lighting systems to optimise energy performance.
5. Ensure the efficient operation of existing plant through best practice maintenance standards.
6. Seek to procure energy from low or zero carbon sources whilst ensuring value for money.
7. Investigate and develop opportunities for on-site renewable energy generation.
8. Ensure spaces and facilities are used efficiently and reduce energy use in underutilised spaces.
9. Achieve the highest practicable energy efficiency standards in the development of the Estate, with a BREEAM rating of ‘Very Good’ as a minimum with an aspiration of ‘Excellent’ for new build projects.
10. Integrate a whole-life costings approach in assessing the value for money of building and construction specifications against operational energy savings.
11. Introduce standards for low / clean energy consumption equipment as part of all procurement processes.
12. Engage with students and staff and inspire them to take actions to reduce energy use through a series of behavioural change campaigns.

4 Governance Requirements

4.1 Implementation / Communication Plan

The Energy Policy has been approved at the Sustainability Steering Group (SSG) which includes stakeholders from Estates, the Office of the Vice Chancellor, Sustainability, and Finance.

The policy will be communicated on the University's external facing website and on the internal sustainability intranet pages. Staff will be made aware of the policy in the University's induction programme.

4.2 Exceptions to this Policy

4.2.1 There are no exceptions to this policy.

4.3 Review and Change Requests

4.3.1 This policy will be reviewed on a 2 yearly basis, or sooner if there are significant updates or changes that need to be made. The policy will be re-submitted to the Sustainability Steering Group (SSG) following review.

Minor interim changes such as changes to rhetoric or minor amendments to objectives will be managed by the Operational Owner.

Major changes to the policy including the meaning, nature, or substantial changes to the statement objectives will be managed by the Operational Owner, with agreement from the Executive Owner, and approval of the SSG, and executive board if relating to changes to the KPI.

5 Legislative context

Objective 3 states that the University will meet and where possible, exceed all relevant legal requirements. Examples of the energy related legislation that the University must comply with are set out below. This list is not exhaustive and a full register is held in our EMS documentation on Eco Campus.

- Carbon Reduction Commitment Energy Efficiency Scheme 2013
- The Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report)
- Regulations 2019 (Streamlined Energy and Carbon Reporting)
- Energy Performance in Buildings (Amendment)
- Regulations 2018 The Energy Efficiency (Private Rented Property)
- Regulations 2015 The Heat Network (Metering and Billing) (Amendment)
- Regulations 2015 The Energy Savings Opportunities Scheme Regulations 2014

6 Stakeholder Statement & Consultation

The policy was approved by the members of the Sustainability Sub-Committee on 30/06/2023.