

# Shaping Agendas in HE

The impact of potential changing energy, emissions and adaptation drivers through the 2020s

## Introduction

‘Green’ issues are widely discussed these days and the target for the UK to achieve an 80% carbon reduction by 2050 is well known. Less well understood are the details of the plans for how this target is likely to be met. The implications of this trajectory to a low carbon society are already being felt and the pace of change feels quick.

The changes expected over the next 10 – 15 years are, if anything, more significant and within a timescale often considered within university estates strategies. An understanding of the government’s intended direction through the 2020’s is therefore critical to de-risk this aspect of estates development and maintenance.

This note summarises the Shaping Agendas report that provides further information on the relevant issues to higher education estates.

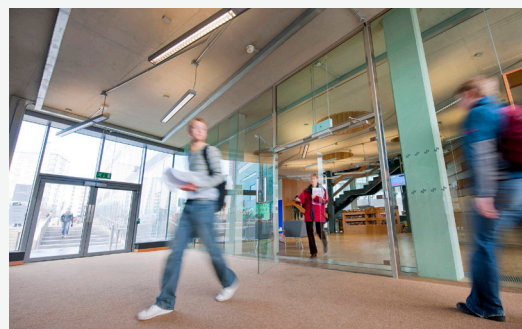


## Energy efficiency and building design

From 2019 all new buildings will need to be ‘zero carbon’, a significant reduction from today’s standards which will impact on costs, programs and procurement. Existing buildings undergoing major renovations will also need to be ‘nearly-zero energy buildings’. These targets fundamental change the way design should be approached.

There are calls for the ‘embodied carbon’ of buildings to be incorporated into regulations around the middle of the next decade. This is supported by advisory bodies that are recommending the use of wood in construction as opposed to as an energy source.

Widespread change will also be needed to improve the alignment of energy predictions used for compliance in the design process with a building’s actual energy consumption.



by 2020, all new buildings and existing buildings undergoing major renovation must be nearly zero energy buildings.

## Energy supply

University campus and individual building energy supplies need to be thought of differently. A lower carbon electricity National Grid is expected deliver significant carbon savings to the sector but recent projections are reducing these savings which will drive the need for improvements elsewhere to meet institution carbon targets.

The reduced carbon intensity of grid electricity is expected to catalyse a major shift to the use of heat pumps, which will mean gas-fired CHP becomes the high-carbon option, impacting many heat networks.



## Adaptation and resilience

There is an urgent need to start adapting buildings and infrastructure to be resilient to climate change. Changing weather patterns may seem distant but the 25 year major refurbishment cycle means that overheating of buildings has one of the greatest needs for action in the next five years.

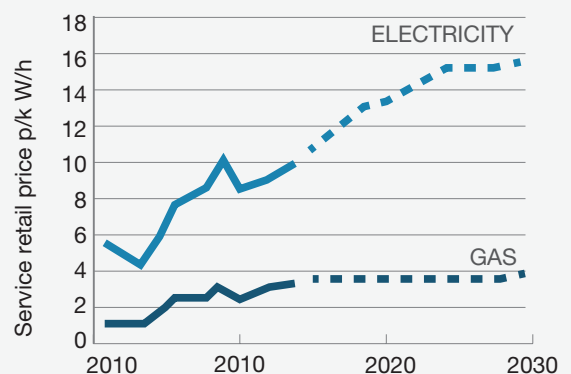
The case for adaptation makes financial sense when considered properly. Reframing the issue to address resilience reduces the risk of significant impact from future climate events.

Of all the sustainability issues, adaptation is the least well understood and the one which potentially poses the greatest risk

## Financial burdens and incentives

With electricity prices projected to rise a further 45% by 2020 and Carbon Price Support charges increasing ten-fold by 2030, energy and carbon costs will be an increasing burden on institutions' finances in the future. Obligations are also changing in the form of compulsory minimum standards for rented buildings and mandatory energy audits for some universities.

However, funds are available for generating renewable energy that significantly reduce paybacks, and Allowable Solutions may provide a feasible route to carbon reductions.



## Next steps

Finance and estates directors should de-risk their medium-term development strategies by testing them against the potential impacts of future policies and taking steps to incorporate future-proofing in planned developments.

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