

Zero Carbon Buildings

In the March 2008 Budget, the UK Government announced that all new non-domestic buildings should be zero-carbon by 2019 and new public buildings by 2018. In its Children's Plan in December 2007 it announced that it wants all new school buildings in England to be zero-carbon by 2016. The Welsh Assembly has also indicated that it wants all new buildings in Wales to be zero-carbon by 2011.

These targets are set against the requirement of the UK to reduce its carbon dioxide emissions by 12.5% between 2008 -2012 in accordance with the Kyoto Protocol. The UK Government's Climate Change Bill is almost through Parliament and will create a statutory framework to reduce UK emissions of carbon dioxide 20% by 2010 and 60% by 2050. This Bill will give the UK Government clear powers to deal with the causes of climate change.

In order to achieve the aims of the Bill, the UK Government is looking at improving energy efficiency across many sectors including construction and housing. Buildings are responsible for approximately 50% of the UK's carbon dioxide emissions and of this figure homes are responsible for 27%. Homes represent 30% of the UK's energy consumption i.e.

heating homes (53%), heating water (20%), lighting (6%), appliances (16%) and cooking (5%). Government aims to improve energy efficiency in new developments through the Code for Sustainable Homes (currently only in England), planning and building regulations.

The Stamp Duty Land Tax (Zero-Carbon Homes Relief) Regulations 2007 (the "Regulations") provide for a relief from stamp duty for new zero-carbon homes bought on or after 1 October 2007 up to a purchase price of £500,000. Over this price the liability will be reduced by £15,000 and the relief expires on 30 September 2012. The Regulations set out what is regarded as a zero-carbon home and the criteria that must be met for a home to fall within this definition by reference to carbon dioxide emissions and heat loss. In theory this should provide an incentive to provide zero-carbon homes for sale.

Broadly, a zero-carbon building is one which has net zero emissions of carbon dioxide from all energy use over the course of a year. To achieve this zero-carbon status, buildings will have to be energy efficient and powered by renewable sources of energy.

It was reported in Construction News on 31 July 2008 that buyers could end up paying 50% more for a zero-carbon home compared to a traditional home. A Government report into the cost of zero-carbon homes predicted the costs of a standard detached house measuring 102 m sq internally would rise from £91,410 to £138,943 if it was to meet level 6 of the UK Government's Code for Sustainable Homes.

While the stamp duty exemption regulations apply to new builds the introduction of Energy Performance Certificates (EPCs) will impact on new and existing property. The purpose of the EPC is to provide information to improve the energy performance of commercial and residential buildings. The EU energy efficiency regulations require EPCs to be made available to prospective buyers and tenants whenever a building is constructed, sold or rented as well as regular inspections of boilers and air conditioning systems.

EPCs rate a building's performance on a scale of A-G similar to the rates used on white goods. They are valid for ten years and issued only by professionally trained and accredited assessors.

One of the main criticisms in relation to the UK Government's measures is that the new housing sector is being put under a disproportionate amount of pressure when compared to the existing building sector. It is estimated that 70% of all non-domestic properties will still be in use by 2050. Therefore, arguably, existing buildings are an area where a larger carbon saving can be made. While there are measures aimed at reducing carbon emissions from existing buildings such as EPCs, Carbon Emissions Reduction Target from power suppliers and assistance from Energy Saving Trust more regulation may be needed.

The UK Green Building Council has published a report on how to achieve zero-carbon emissions from new non-domestic buildings. The report concluded that it should be possible to achieve new zero-carbon non-domestic buildings by 2019 if targets were set along the same lines as those for residential buildings.

It is expected that the UK Government and the devolved administrations will take measures to deal with non-domestic buildings shortly.

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