

**Briefing Paper 107**  
**The future for zero carbon buildings in the UK**  
**Tony Norton, 11<sup>th</sup> August 2015**

The UK government's publication of *Building a Greener Future*<sup>1</sup> in 2006 saw the country take a lead in planning for zero carbon new homes. The target set in the document was for 'true' zero carbon, meaning no net carbon dioxide emissions from both energy uses governed by building regulations and unregulated uses from cooking and appliances. The target was considered ambitious but achievable, particularly in large developments suitable for site-wide district heating and combined heat and power. The ten year timescale that was set had two intermediate steps; a 25% reduction on the 2006 regulated emissions standard in 2010 and a 44% reduction in 2013, with true zero-carbon following in 2016.

The first step was taken in 2010 by the Labour government through changes to Part L of the building regulations. However, the definition of zero-carbon underwent a series of amendments, which watered down the early ambition, culminating in 2011 when the Coalition removed unregulated emissions from the definition of zero-carbon and reduced the requirement for on-site emission reduction to a 44% reduction on 2006 regulated emissions. The remaining regulated emissions were to be met by a carbon offsetting scheme known as 'Allowable Solutions'. In 2013 the scheduled changes to building regulations were scaled back to a 29% reduction on 2006 and postponed until 2014. An exemption from Allowable Solutions for small sites (under 10 homes) was announced in 2014. This excluded one in five new homes from the zero-carbon standard and created a two-tier regulatory system for homes. The Committee on Climate Change (CCC) could see 'no evidence or rationale' for this policy change<sup>2</sup>.

In June 2015 the CCC recommended that government implement the zero carbon homes standard without further weakening, ensuring investment in low-carbon heat<sup>3</sup>. On July 10<sup>th</sup> 2015 the Government announced that it does not intend to proceed with the zero-carbon Allowable Solutions carbon offsetting scheme or the proposed increase in on-site energy efficiency scheduled for 2016<sup>4</sup>. In its response to the announcement, the Chartered Institute of Building Services Engineers stated:

*It has been clear for some time that the offsetting elements of the Allowable Solutions scheme did not fulfil the requirements of the EU Energy Performance of Buildings Directive (EPBD), under which the UK has to deliver nearly zero-energy buildings from 2021 (and 2019 in the public sector)*<sup>5</sup>.

The Government has stated that Part L of the building regulations will be kept under review beyond 2016, reflecting the potential revisions which may be needed to comply with the EPBD<sup>6</sup>.

The EPBD defines a nearly zero-energy building as a building that has a 'very high energy performance, providing the energy needed for heating cooling and hot water to a very significant extent by energy from renewable sources produced on-site or nearby'. In the absence of national regulations the EPBD has effectively become the key driver for UK emissions and building policy and Member States are urged to:

*'... enable and encourage architects and planners to properly consider the optimal combination of improvements in energy efficiency, use of energy from renewable sources and use of district heating and cooling when planning, designing, building and renovating industrial or residential areas.'*

The Directive requires Member States to set intermediate performance targets and will publish a report on individual members' progress at the end of 2015. The report will form the basis of an action plan and will propose measures to increase the number of new nearly zero-energy buildings and encourage best practice for the cost-effective transformation of existing buildings. Local authorities are seen by the EU as critical in the successful implementation of the EPBD

The Government's decision not to proceed with zero carbon means that homes built between 2016 and 2020 will have reduced emissions targets. However, under the EPBD developments where build programmes extend beyond 2020 could face more stringent requirements than those proposed through Allowable Solutions. Although the way in which the EPBD will be enacted into UK building regulations is likely to remain unclear for some time, local authorities with relevant

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<sup>1</sup> DCLG, *Building A Greener Future: Towards Zero Carbon Development*, December 2006

<sup>2</sup> Minutes of CCC meeting, 02/07/2014, [www.theccc.org.uk/wp-content/uploads/2013/02/CCC-minutes-02072014.pdf](http://www.theccc.org.uk/wp-content/uploads/2013/02/CCC-minutes-02072014.pdf)

<sup>3</sup> CCC, *Meeting Carbon Budgets – Progress in reducing the UK's emissions 2015 Report to Parliament*, June 2015

<sup>4</sup> HM Treasury, *Fixing the foundations: Creating a more prosperous nation*, July 2015

<sup>5</sup> [www.cibse.org/news/july-2015/government-announces-end-of-zero-carbon-buildings](http://www.cibse.org/news/july-2015/government-announces-end-of-zero-carbon-buildings)

<sup>6</sup> OJEU, Directive 2010/31/EU, June 2010

policies in place may find it helpful to highlight the requirements of the EPBD to developers of large scale housing sites extending beyond 2020 as early investment in low carbon energy infrastructure may help to spread the costs of subsequent compliance and improve the overall viability of developments.