

Reducing carbon emissions from housing

Kate Macintosh outlines the environmental standards for new housing in the UK and argues that the bigger problems related to the quality of the existing housing stock are being neglected.

Official figures show that approximately 27% of UK carbon emissions are generated from energy use in homes¹. One of the ways in which the government is trying to reduce these emissions is through a new set of codes for new housing. The current target is that, by 2016, all new homes built in England will be 'zero carbon'. However, in pursuing this target, the government is neglecting action to tackle the emissions of the existing housing stock, which will still make up the vast majority of housing for decades to come.

High standards for new housing

The Code for Sustainable Homes was introduced in 2007 and is intended to rate the sustainability of new homes in nine environmental impact categories, including energy and carbon dioxide, water, materials, ecology and waste. For energy and carbon dioxide, the Code ranges from levels 1 to 6, the latter being classified a zero carbon home. Table 1 gives the CO₂ emission standards for these six levels. The government plans that these levels will be phased in until, by 2016, all new homes built will be zero carbon.

Table 1 – CO₂ emission standards required by new building regulations²

	Reduction in CO ₂ emissions ^a
Level 1	+10%
Level 2	+18%
Level 3	+25%
Level 4	+44%
Level 5	+100%
Level 6	+100% ^b

^a Compared with the base level given in Part L of the 2006 Building Regulations.

^b Additional measures are needed to qualify as a 'zero carbon' home.

Conformity with Level 3 requires triple glazing and heat recovery systems, while Level 4 will probably require the need for energy generation from renewable sources. At present only social housing is required to achieve Level 3. For other housing, this standard will not become mandatory until 2010, unless the local planning authority determines otherwise. The result is that there are varying

standards across the country, which can be confusing for developers and materials suppliers, making it more difficult for them to plan ahead.

The developer is obliged to provide Energy Performance Certificates, the assumption being that higher-rated new properties will fetch higher prices and the market will thus drive energy efficiency improvements. However, there are concerns that the current problems in the housing market might prevent this from happening to any great extent.

Measures for existing housing stock neglected

Many building professionals doubt that for above Level 4 the additional investment will be worth the improvement in energy performance. The same money invested in improving the existing building stock would arguably yield greater environmental and social benefits. Given that 85% of the existing housing stock will be standing in 2050³ – judging by present trends – much greater focus is needed in this area.

There are many examples of the inadequacies in government policy in this area. New-build is subject to a zero VAT rate, while much improvement work is still levied at 17.5%. Incentives for many forms of home insulation are still relatively trivial. There is a lack of contractors with the necessary skills to install many energy efficiency or renewable energy technologies. The lack of effort to tackle the rise in air-conditioning – for example, by promoting alternatives such as greater use of window shading – is also a serious shortcoming.

New campaign

In order to tackle the inadequate government policy on the current housing stock and its contribution to climate change, a new coalition called the Existing Homes Alliance was formed in June. It consists of over 40 businesses, environmental groups and related organisations, including Federation of Master Builders, WWF, the Energy Saving Trust and the Association for Environmentally Conscious Building. SGR has also joined.

The Alliance has at its heart a declaration⁴ that calls on the government to deliver:

- a strategy for delivering an 80% reduction in the carbon emissions of the housing sector by 2050;
- a timetable for regulation to improve energy efficiency standards;



- more financial incentives and services to help home owners, landlords etc. to invest in energy efficiency and renewable energy;
- training and related support to improve the skill levels in the buildings sector; and
- demonstration projects and supporting information campaigns.

If the government is serious about cutting carbon emissions, it must stop neglecting the contribution of the current housing stock. If it does not take serious action now, its targets for tackling climate change will simply not be met.

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References

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3. Existing Homes Alliance (2008). Declaration on the future of existing housing. http://www.existinghomesalliance.org/media/EHA_Declaration_FINAL.pdf
4. As note 3.