

Looking for a light bulb moment

We owe it to our children and our grandchildren to tackle carbon emissions and implement green building standards in our homes, argues **Nick Raynsford**



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The death, earlier this year, of Jim (J.G.) Ballard prompted me to reread some of his remarkable novels. Among the many disturbing scenarios he created, few can be more powerful than the image of London transformed into a 'drowned world' as a consequence of global warming. Ballard's shocking anticipation of the collapse of civilisation as we know it as a consequence of climate change is a real wake-up call. If we do not respond effectively to the climate-change challenge, our children and grandchildren could well find themselves facing as horrific a future as Ballard depicts.

Tackling climate change requires a range of responses, among which tackling CO₂ emissions from housing will be one of the key determinants of success. To date, most of the debate has concentrated on reducing carbon emissions in new homes. The government has a good record in this respect. Whereas for much of the post-war era, new homes were built to woefully inadequate energy-performance standards, there has been a real step change in the past decade. Successive increases in the performance standards required by Part L of the building regulations and, more recently, by the Code for Sustainable Homes, have acted as a powerful catalyst for improvement.

Already almost all new homes are meeting Code Level 3 standards, while many of the more progressive housebuilders and housing associations are delivering Code Level 4. A visit to the Innovation Park at the Building Research Centre reveals the range of imaginative responses from the housebuilding industry to the challenge of reaching the zero-carbon objective of Code Level 6.

This is not by any means problem-free. Beyond Code Level 4 the costs associated

with reducing CO₂ escalate alarmingly, and the behavioural change required of the public to use and operate their homes in ways that are compatible with the zero carbon objective are challenging. There are also some definitional issues, such as whether or not schemes may benefit from off-site energy generation, which frankly appear more reminiscent of theology than pragmatic engineering.

However, despite the obstacles to achieving the hugely ambitious target of zero-carbon housing by 2016, we should be celebrating the progress that has been achieved in recent years. By comparison with their forebears from the 1950s to the 90s, today's new homes are in an entirely different league in terms of energy efficiency.

"The government has a good record on reducing carbon emissions in new homes"

But the sobering statistic is the percentage of the country's housing stock which is replaced each year. Even at the high point of new housing development in 2006/7, we were still only adding around 0.75 per cent to our stock annually. Currently as a result of the recession, new homes are only contributing about half that percentage to the total stock.

So, however good we are at raising energy performance standards in new homes, we will not make the necessary impact on reducing emissions and global warming by this means alone. We have also to achieve substantial improvements in existing homes. Here there are a series of obstacles to be overcome. The first is public awareness of the problem. We have been profligate in our use of energy in recent

decades, and changing attitudes will not be easy. Too few people worry about the consequence of leaving electrical fittings on longer than necessary, let alone about the wasted energy that literally flies out of inadequately insulated homes.

Some progress has been made through initiatives such as the CERT Scheme to incentivise the public to install low-energy light bulbs, cavity wall insulation and thicker lagging in the roof. These are essentially 'low-hanging fruit' which are easy to promote because they generate quick financial returns.

More challenging is the task of persuading homeowners to invest in expensive work that will inevitably have a longer-term payback period. Solid wall insulation, heat exchangers, ground source heat pumps and other similar devices will be far harder to promote, precisely because they will not offer quick returns on investment.

This is where the recent consultation from the Department for Energy and Climate Change is so significant. It specifically addresses the very difficult issue of how to make it easier for people to do the right thing – improve the energy performance of their home – when there may not be an immediate economic benefit. Finding the right solution to this challenge – possibly where the cost of the works can be a long-term charge against the property rather than an immediate liability to the homeowner – will be vital to success.

Similarly, we have to explore ways to incentivise landlords to improve the energy performance of their homes, when it is the tenant who will benefit from the improvement. Councils and housing associations may choose to do this out of altruistic motives. Private landlords will probably require either the carrot of a financial incentive or the stick of regulation. ■