

Hitting the target, missing the point

20 February 2017

Julie Hirigoyen explains why those responsible for our built environment must aim higher

Targets are always tricky to set. Some people set them around what can easily be achieved, others are more ambitious and seek to challenge themselves; but few set their targets based on hard scientific facts. Yet this is precisely what is required when setting emissions reduction targets to ensure we avoid catastrophic climate disruption.

The UK has a very ambitious target enshrined in the *Climate Change Act 2008* to reduce its greenhouse gas emissions by 80% from 1990 levels by 2050. The construction sector itself has a target to reduce UK built environment emissions by 50% by 2025, showing that at a national level we are quite good at setting stretching targets.

Lead by example

But targets do not mean anything unless considerable efforts are directed at achieving them, and at present, the government has very little policy to help meet the 2050 target. It scrapped the zero-carbon targets for new buildings and the Green Deal, and shied away from setting a trajectory for the Minimum Energy Efficiency Standards, so it is unclear how the built environment ? which contributes 40% of our national carbon emissions ? will help meet the target at all. Developers will thus have to lead by example and set their own targets at the project level to achieve radical energy efficiency improvements.

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The only problem with that is that it presupposes that the industry is both setting the right targets and able to meet them. Yet at present, our buildings are consuming up to five times more energy in operation than they were designed to do.

So there must be a better way to set targets. And let us be clear: targeting regulatory compliance is not in itself stretching or ambitious. Building Regulations only take into account fixed building services, such as heating, cooling, hot water, auxiliary energy use and internal lighting, and exclude IT, security, small power loads and operational factors, so items that can significantly raise a building's energy consumption are largely overlooked.

Accurate targets

The industry must urgently address this by setting design for performance targets based on

accurate predictions of energy use and occupational patterns, with simple indicators understood by all parties, such as kWh/m².

In any other industry, failing to provide products that perform as expected would be a scandal. Yet the UK's property sector is getting away with it. Responsibility for building performance is fragmented among the project team and areas of accountability are ill-defined, leaving us with no real recourse when buildings fail to perform as expected.

We need better control over the procurement process; an integrated approach across projects; and client commitment to validating operational performance. High energy efficiency standards ought to be built into the contractual obligations of the whole project team, with guarantees of the performance of the end product.

Joined-up thinking should be adopted throughout the lifecycle of our buildings, especially at handover, as reciprocal links and monitoring can allow us to understand how a new building is performing during use, and realise any potential for optimisation. Links must be made between operational facilities management (FM) and the design team, and between FM and building occupiers, with a commitment to monitor and feed back on energy performance. Post-occupancy evaluation enables benchmarks to be created for future buildings and to learn what does not work.

Benefits

Better knowledge and awareness is essential in tackling this issue. The benefits of enabling higher building performance make for a compelling business case. But, under schemes such as the outgoing Carbon Reduction Commitment and the Climate Change Levy, it has often been seen as easier simply to pay the tax since energy use is so small a proportion of total running costs in non-industrial building sectors.

Research by the UK Green Building Council suggests that there is a much more powerful case to be made based on the productivity, health and wellbeing benefits of buildings that perform well. Owners, occupiers and letting agents need to understand that it makes economic sense. Through its work with the World Green Building Council, the UK Green Building Council seeks to educate these groups regarding the financial benefits of high-performing buildings through the [Better Places for People campaign](#).

In just a few short decades, we need to be providing zero-carbon, zero-energy buildings. But today we are not even providing low-energy or low-carbon buildings. We must wake up to both the business case and the moral imperative of delivering high-performing buildings. Only by working together to challenge conventional attitudes and improve knowledge through the value chain can we hope to begin to make the change that is needed.

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Further information

- UK Green Building Council, [Delivering Building Performance](#)
- This feature is taken from the *Building surveying* journal (December 2016/January 2017)