

Practice & Law

The battle against climate change and resource depletion will be won or lost in the world's cities. Cities present huge environmental challenges but also offer immense opportunities, because they create economies of scale in technology deployment and access to capital, both of which are vital if we are to make the existing built environment sustainable and resource-efficient by 2050.

The top 20 cities in the UK, for example, are responsible for more than 20% of national carbon emissions and more than 20% of energy consumption, so local action will be vital if we are to meet the national target of 80% reduction on 1990 levels by 2050.

Research also shows that densely populated cities are more carbon- and energy-efficient per capita than less densely populated cities. Increased wealth is also often associated with more emissions (in per capita terms) and cities that create more waste also tend to create more carbon emissions.

However, driven by a need to reduce energy costs, create green jobs/economic growth and address the issue of fuel poverty, UK cities are putting low-carbon plans into action. Having plans in place to reduce carbon emissions can make a significant difference to the overall reduction in carbon emissions over time. This is being driven by a strong focus on retrofit as many of England's core cities – Bristol, Birmingham, Leeds, Liverpool, Manchester, Newcastle, Nottingham and Sheffield – attempt to tap into the Green Deal, often acting as Green Deal providers themselves. However, this is a complex and uncertain landscape and UK cities face major challenges if they are to achieve their low-carbon ambitions.

What is a low-carbon city?

A key issue is how we define “low-carbon” in a city context. The Work Foundation's recent report on low-carbon jobs, which builds on earlier work, is based on a definition of a low-carbon economy as one that uses fossil fuels efficiently, reduces carbon emissions, and underpins the transition to a low-carbon future. But so-called low-carbon cities may in fact be high-carbon because we have not yet agreed a consistent set of indicators nationally or internationally. An interesting alternative definition by ASSAF is that a



GREEN CITY QUEST

Carbon reduction UK cities need a more strategic collaborative approach to ensure the success of low-carbon plans, says Tim Dixon

low-carbon city “strives to reduce its GHG emissions and increase its carbon sinks, while simultaneously adapting to anticipated climate change impacts”. In short, low-carbon cities should commit to:

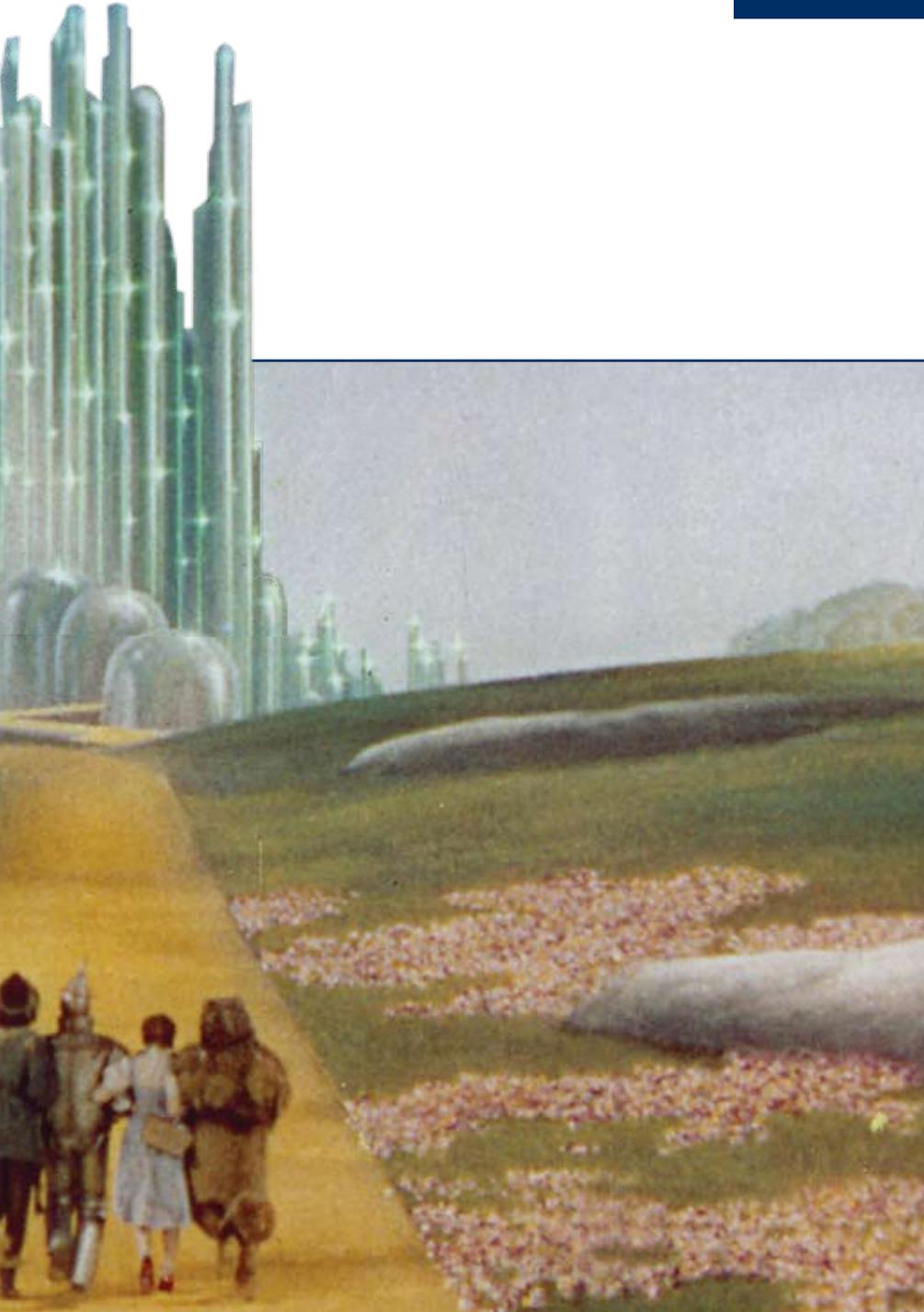
- reduce energy demand;
- move away from fossil fuels;
- continue to meet the development needs of all within society;
- ensure energy security; and
- adopt appropriate technologies and policies.

UK cities and carbon emissions

City authorities have a substantial role to play in reducing carbon emissions in buildings, surface transport and waste, which together account for 40% of greenhouse gas emissions in the UK.

Although the largest opportunity for energy efficiency improvement is in residential buildings, there are also substantial potential gains to be made from non-residential property, sustainable transport and waste management, not only within the local authority's operations but also through, for example, planning permissions for renewable energy projects and electric vehicle charging infrastructure. In other words, local authorities are service providers, housing owners, community leaders, planning authorities and regeneration coordinators and contribute to reducing carbon emissions through these roles.

As the graph on p86 shows, there was a picture of reduced carbon emissions in England's core cities and the UK as a



whole to 2009, particularly in industry and commerce. This was driven not only by greater energy efficiency, but, more recently, by the economic recession – although the period 2009 to 2010 shows an increase (except for road transport), which may have been partly caused by the cold winter of 2010 and the increased use of fossil fuels for electricity generation and space heating.

According to recent data, emissions from buildings in the commercial and public sector totalled 49MtCO₂ and 18MtCO₂ respectively in 2010, which accounted for 11% of economy-wide emissions. The Committee for Climate Change has suggested that there is scope to reduce these emissions by 28% by 2020 through building fabric measures, more efficient

lighting and appliances, energy management and renewable heat.

Much of this potential is covered through the Carbon Reduction Commitment, but uncertainty over the Green Deal may ultimately hinder progress, particularly in the SME sector. Nonetheless, recent research from the Centre for Low Carbon Futures suggests that in Leeds there is potential for £4.9bn of investment in low-carbon options, which could reduce the city's energy bill by £1.2bn pa, pay back in commercial terms (8% rate) within four years, create 4,500 jobs in the low-carbon goods and services sector, and reduce the city's carbon emissions by 36%.

At a city level, there are various examples of how local authorities are supporting the

inside

Public sector equality duty

Caroline Bywater and Sue Chadwick explain the implications of the public sector equality duty for all property professionals involved in the planning process

PAGE 87

Mainly for students

Right to buy was introduced to give council tenants the chance to own their home at a discounted price. Charles Ward explains some recent changes to the scheme

PAGE 88

Practice notes

Will the new offence of squatting in residential premises lead to more unlawful occupation of commercial property?

PAGE 90

Legal notes

Allyson Colby explains what happens when the terms of a lease need modernising and what considerations the court has to take into account

PAGE 91

Law report

Dutta and another v Hayes

PAGE 93

ONLINE THIS WEEK

The owner of a secondhand furniture shop in Dereham, Norfolk, who has been deprived of an access for his van, has suffered a blow in his bid to claim compensation from the council. See www.egi.co.uk/news/legal/755590

non-domestic and domestic property sectors to incentivise the business community to become more energy-efficient. Two examples are Birmingham's use of the Green Deal to include small businesses in its second phase of energy efficiency measures to 2020, and Kirklees' micro-business grant scheme, which includes free on-site advice for firms in the metropolitan borough of West Yorkshire that includes Bradford. Birmingham's response is also based on its Birmingham Energy Savers programme, which focuses primarily on domestic property.

London's RE:FIT programme, which is run to assist public bodies in the capital to reduce carbon emissions within an ESCO framework, is also a good example of city-led action.

How are UK cities responding?

Recent research on the top 60 UK cities, funded by the RICS Education Trust, has also confirmed that the majority of cities have carbon reduction plans in place, and that within these plans, most UK cities have carbon reduction targets: some 59% of UK cities have these targets in low-carbon action plans/strategies and 53% have them in their climate change action plan/strategies.

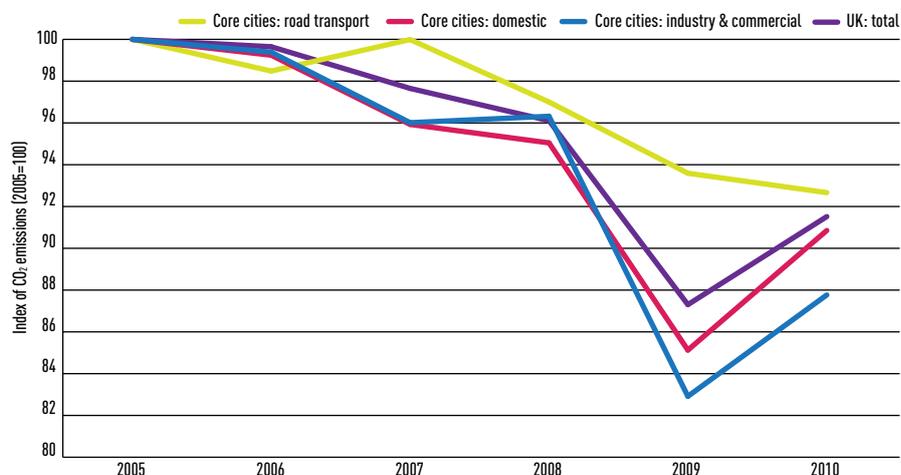
These findings have also been supported by recent work for the Committee on Climate Change, which found that 33 UK city authorities have signed up to the European Commission's Covenant of Mayors Initiative and 20 of these have a sustainable energy plan. Under this scheme, signatory cities undertake a baseline emissions inventory to quantify and identify principal sources of emissions, before producing a sustainable energy plan setting out how the authority will reduce CO₂ emissions by a minimum of 20% by 2020.

More needs to be done, however, because the RICS research found that only seven UK cities had 2050 targets in place, and targets were frequently set for shorter timeframes. The research also suggests that having a plan or strategy to reduce carbon emissions can make a significant difference to the overall reduction in emissions over time.

Despite this, the changed political and fiscal landscape is also having a substantial effect. The RICS found that there was still considerable uncertainty over how the localism agenda is playing out and 20% of people felt the removal of the NI186 carbon emissions indicator set would have a negative impact. If national targets are to be met, then local action is needed, but the localism agenda makes the government reluctant to impose targets on local authorities.

Some 68% of respondents were positive towards the Green Deal, and the top 20 UK cities (in terms of population size)

TRENDS IN CARBON EMISSIONS (CORE CITIES AND THE UK)



Source: DECC

were the most positive group among respondents, although concerns were expressed over uncertainty regarding the exact mechanisms of the deal. Also, about half of respondents felt that the national renewables target was unlikely to be achieved by 2020, implying a tension between localism and the need to have a coherent set of mandatory local targets.

Critical success factors

Looking at the UK and internationally, the cities that are succeeding with their low-carbon plans are those that set ambitious targets, place them in an integrated low-carbon and climate change framework, have innovative financing in place, and use partnerships creatively. But UK cities still need to do more to develop fully integrated low-carbon plans and to help develop and promote a low-carbon economy through, for example, local enterprise partnerships.

Interestingly, the new "city deals" in England in cities such as Liverpool, Newcastle, Nottingham and Birmingham are also attempting to promote a low-carbon agenda that is linked to jobs, skills and transport, without necessarily linking enterprise zones explicitly with green policies. Taking things a stage further, an interesting example is the promotion of "green enterprise zones" in Vancouver in Canada and in several US cities. Designed to bring together the green agenda and economic growth, these zones offer the prospect of tax breaks and financial incentives for "clean-tech" clusters.

Ultimately, however, UK cities will need to attract further investment from the private sector if they are to achieve their low-carbon ambitions, and the rates of return on energy efficiency investments (5-7%) may not be comparable with infrastructure investment returns (10-15%), given that local authorities and energy companies will have different

funding requirements from private sector investors.

Currently, a range of low-carbon funding mechanisms are used by UK cities for energy efficiency measures, ranging from pay-as-you-save schemes through to EU funding (such as JESSICA and ELENA) and ESCO delivery models and special-purpose vehicles. The recent news that the government has allocated £100m for energy-efficiency upgrading of non-domestic property (through Sustainable Development Capital and Equitix) should help pave the way for the Green Investment Bank, but it is still a relatively small amount of funding.

Much remains to be done. The UK government needs to develop a new "low-carbon city" policy framework that recognises the role of cities in the climate change and low-carbon agendas, helps develop sustainable financing models and introduces mandatory local carbon plans for cities. Without these measures in place, cities will struggle to play the important role that they should in helping to meet national 2050 targets.

The UK's low-carbon and environmental market is already worth £112bn – 3% of the global total – and employs around 900,000 people. But this is an international opportunity that is going to grow substantially over the coming decade and beyond, and the UK is falling behind its competitors in the race to secure these new sources of growth and jobs.

Bringing together city-level actions and visions around a focus on carbon reduction in cities and "green growth" is therefore vital for us to move to a more sustainable future by 2050.

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