



Building a greener

future

The UK government was the first G7 nation to commit to achieving net zero carbon emissions by 2050. We look at the challenges and opportunities for property businesses aiming to meet this target.

Covid-19 has delayed, but not stopped, the United Nations planned COP26 intergovernmental gathering to agree on a long-term strategy to combat climate change. When around 200 world leaders convene in Glasgow in November 2021, they will be aware that the UK is the first major economy in the world to create a legally binding target to bring its greenhouse gas emissions to 'net zero' by 2050. How this will be achieved in practice and to what extent the government will encourage and enforce compliance is currently unclear.

As heavy emitters, sectors such as transport and industry are likely to face the greatest pressure to remove carbon from their operating models. But property (commercial and residential), which currently accounts for one-third of the UK's carbon emissions, also looks set for substantial change. Building regulations for new homes are already under review, though what measures will be required for existing commercial properties are largely still to be determined. Even without new building regulations, the commercial property sector is facing pressure on three fronts with the introduction of minimum energy efficiency standards for let property, investors increasingly concerned about the sustainability of their asset portfolios and occupiers (who are facing new carbon reporting requirements) keen to secure more sustainable buildings in an

effort to reduce emissions and demonstrate their sustainable credentials. "For owners of and investors in commercial property, these are confusing times," says Darren Edwards, partner and head of sustainable energy at Fisher German. "There is a daily stream of information, some of it contradictory, making it difficult to establish facts from opinion. What property owners need is clear and trustworthy advice that cuts through the background noise and enables them to make informed decisions about what they can and should be doing in practical terms without getting side-tracked. They need to be able to focus their attention on not just what is happening at the moment, but what is required to happen over the next 30 years."

The right route

What would an ideal pathway to net zero look like? Darren says this will vary from owner to owner but the process of mapping out the pathway is the same. For each property, its current use and energy performance is assessed and modelled. Steps can then be identified for how that building can achieve its optimum energy efficiency (and at what financial cost). Finally, the gap between the optimum energy performance and net zero can be calculated and measures required to complete the final stages of the journey factored into the route plan.

Corporates realise need for urgent change

Through its National Commercial Property Management arm, Fisher German deals with a wide cross-section of property owners. And the message from them over the past 12 months has been clear: "They understand the underlying issues around climate change and as responsible companies they want to do the right thing and start making improvements," says consultant partner James Rigby. "It is incredibly heartening that so many businesses recognise the need for urgent action and are stepping up to the mark without waiting for the government to introduce and enforce regulation."

Some companies have already made a commitment to be carbon neutral well ahead of 2050 (Amazon, for example, has pledged to be so by 2040). In the UK nearly 30 leading property owners, including British Land, LGIM Real Assets, M&G Real Estate and Landsec, have committed to publishing plans by the end of 2020 outlining how they intend to achieve net zero status.

◀ A building's energy consumption will largely depend on how it is occupied and being used. In commercial buildings, the energy consumption (and efficiency) can vary hugely according to fit out. For example, the main power draw in a shop is lighting compared to a gym where cooling, ventilation and hot water are in high demand or an office where heating and lighting are the principal uses. "It's important to recognise that 80 per cent of buildings that will be in use in 2050 are already built," says Darren, "which is why the performance of existing property is so important. The idea that most of the buildings in 2050 will be brand new is a myth and the truth is very much the opposite."

Under the current EPC rating system (the Energy Performance Certificate is a standardised test for measuring the energy efficiency of property), buildings that are carbon neutral are graded A+. "The reality is that most will never achieve that standard, as it is very difficult to retrospectively make sufficient changes to a building that ultimately wasn't designed to be carbon neutral. Nevertheless, it will often be possible to improve a building's energy rating so that the gap between current performance and carbon neutrality is much reduced," explains Darren. Types of improvements include upgrading elements of the building fabric, such as insulation, ventilation and lighting, as well as introducing renewable energy sources such as solar panels, wind turbines and heat pumps and considering other sustainability measures such as rainwater harvesting. Darren stresses: "It's important to realise that not every solution is suitable for every building, so making informed choices will ensure that capital spent on upgrading a building's fabric is invested wisely and can deliver the best returns for the duration of ownership."

Building regulations set to change for new builds

As part of the plan for achieving net zero by 2050, the government is committed to introducing guidelines for the construction of new housing in 2025. Known as the Future Homes Standard, it will cut carbon emissions from the average home by up to 80 per cent compared with properties being built today. As a stepping stone towards the Future Homes Standard, more stringent energy efficiency requirements will be introduced in 2020 by altering building regulations. "This is the latest in a series of changes to building regulations since the last major revision in 2010," explains Fisher German architectural designer Kirsti Williams. As Fisher German Magazine went to press, the government was deliberating over the results of a public consultation. "While it's difficult to predict the repercussions of the latest changes, it's clear that the new standards call for a general upgrade in building fabric or energy solutions. This may push build costs up, with a potential ripple effect on new house prices," says Kirsti. Specialist energy assessor Ashby Energy, which works in partnership with Fisher German, has summarised the key changes

likely in building regulations for new homes in England:

- A new primary metric of compliance will be introduced, with the current one used as a secondary metric.
- Carbon emission reduction targets on new dwellings will be set at 20 per cent or 31 per cent.
- A third metric of compliance will require new dwellings to achieve a minimum EPC* rating.
- Minimum standards for fabric (insulation) and building services will increase.
- A new method of air tightness testing called Pulse Testing will be introduced.
- Photographic evidence will be required for floor, wall, roof insulation type and thickness and cold bridging junctions.
- Homes constructed on large developments must be built to the regulations that apply when the houses are actually built, rather than those in force when development on the site first started.
- Electric heating (panel or storage heaters) has not made a comeback and it will be very difficult to achieve compliance with standard electric heating.

* Energy Performance Certificate – a standardised test for measuring the energy efficiency of buildings

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Carbon offsetting

For buildings that are not or cannot ever be carbon neutral, there is a risk owners will eventually be required to pay a levy that reflects the carbon emissions still produced by that building. Although there are no immediate plans for a 'carbon tax' on building owners it isn't inconceivable as environmental issues move up the political agenda. For example, the Environmental Bill already looks set to introduce requirements on developers to make payments to replace natural habitats lost through property development (see biodiversity net gain feature, p.14).

Money raised could be spent on schemes that either sequester carbon, such as planting trees, prevent it being released to the atmosphere in the first place such as 'private wire' energy projects (encouraging large consumers to generate their own 'green' electricity near to the point of demand), or like electricity sleeving (purchasing equivalent 'green' electricity from detached third-party owned renewable generators). These processes



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are commonly referred to as offsetting and will become more common as further measures to combat climate change are implemented. While property owners still have, in theory, 30 years to assess their buildings and calculate what level of improvements or offsetting might be required, many are already considering getting ahead of the game.

"We are being approached by companies who are interested in achieving net zero within a few years, rather than waiting until 2050," Darren reveals. "This desire can be driven by a multitude of factors but CSRs (Corporate Social Responsibilities) are becoming increasingly important for public facing companies as consumer awareness of climate change and environmental impact grows. Through offsetting it is theoretically possible to achieve net zero emissions immediately, although that will obviously have a significant and currently unjustifiable financial cost attached to it. Depending on the current and future energy efficiency of a building and the improvements which can be put in place,

the amount spent on offsetting is likely to reduce over time as the building becomes more energy efficient."

For many companies, being able to demonstrate to stakeholders, investors and staff that they are a net zero operation will have considerable importance. "We are currently in an energy policy hiatus complicated further by Covid-19 and cannot second guess what the government will do or what regulations will be introduced, but what Fisher German can do is map out the different routes for property owners and investors, enabling them to see their options when the ultimate destination has been set in stone," says Darren. "Think of us like a sat nav, guiding you towards net zero while avoiding traffic congestion which might arise in the form of building constraints or tenancy issues. By drawing upon our property management expertise and knowledge of landlord and tenant law, we have a unique blend of skills and experience which can now be offered in a single package, starting with enhanced EPCs, energy modelling, tailored design

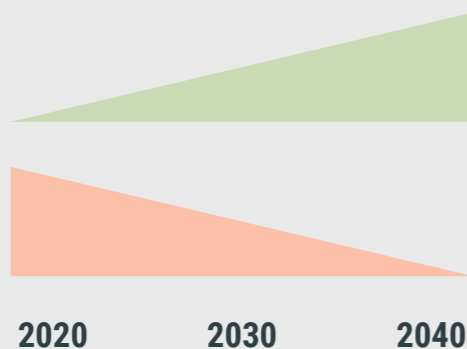
solutions, procurement and implementation of onsite renewables and offsetting.

Property owners retain complete control: once we've drawn a pathway and agreed the route it's up to them how far and how quickly they progress down it. Our aim is to make the journey smooth and cost-effective for our clients."

How to achieve net zero now

Building's proximity to net zero

Costs of offsetting a building



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