

Towards Net Zero in UK commercial real estate

Helping turn your sustainability ambitions
into achievable actions



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Supporting your journey to Net Zero

Back in 2019, the UK became the first major economy to legislate and commit to Net Zero carbon emissions by 2050. That timeline has accelerated, with the UK Government announcing an even more ambitious climate change target in April 2021 – of achieving a 78% cut in emissions by 2035. It makes the need for action even more pressing.

This transition to Net Zero will require transformational change across many sectors, and will require action from businesses of all sizes. There is no one-size fits all approach to Net Zero, and different businesses in different industries will face distinct challenges and opportunities.

At HSBC we work with our customers to help them break down their sustainability goals into achievable actions, that big or small, can have a massive impact on their business. Our partnership with [UCL's Institute for Sustainable Resources](#) is designed to explore sector decarbonisation pathways, helping our customers by providing the insights and practical guidance they need to embark on and pursue their Net Zero journeys.

That partnership has culminated in '[Towards Net Zero in UK commercial real estate: key information, perspectives and practical guidance](#)', a report based on information from academic and policy literature, alongside interviews with businesses operating in the commercial real estate sector. It reviews the current state of play and offers guidelines for how the sector can play its part in achieving Net Zero by 2050. As we face increasing pressure to act now, it is a timely reminder of the challenges and opportunities we face on the journey to Net Zero.

Helping our clients unlock the path to Net Zero offers them a significant commercial opportunity too. And it's not just Real Estate businesses that are changing, we're changing too. You can find out more about our climate strategy [here](#).

Understanding the benefits and opportunities that Net Zero offers and familiarising ourselves with the challenges it will inevitably bring is a key step on the transition pathway. By making this guide and the broader report available, we want to help our clients turn their sustainability ambitions into an achievable transition that makes business sense.



Rob King
Head of Sustainable Finance
HSBC UK



Driving transition to Net Zero

Decarbonising UK commercial real estate is a vital ingredient if we are to meet the government's ambitious targets to achieve Net Zero by 2050. As the report from UCL points out, however, progress has been slow. Lack of clear direction, a diverse ownership mix and the sheer range of properties, mean that pursuing Net Zero is challenging.

The Covid-19 pandemic was a real game-changer, however. It focused attention, and increased awareness and commitment on sustainability. Where previously, there were a few businesses who had been looking at the topic for some time and which were advanced in their strategies, many more hadn't really considered sustainability.

What we need to do now, is to turn that increased awareness into action – to understand what businesses active in the commercial real estate space want and need to do. Pressure is likely to grow, and businesses need to be prepared. Investors, for example, are increasingly looking to green funds, fuelling demand for sustainable investments. Regulation will escalate as we move towards 2050 and market dynamics will shift, placing a premium on buildings that deliver sustainability and lowering demand for those that don't.

That's why reports such as this are so important to help provide insight, share experience, and offer guidance for businesses keen to embark or pursue their journeys to Net Zero. Our Real Estate Finance team works closely with our

Sustainable Finance colleagues to support businesses to transition to Net Zero, helping them deliver achievable change, and turning their sustainability ambitions into an achievable transition.

Sustainability is an issue that effects every property owner, developer and tenant and time is clearly of the essence. As an industry, we simply cannot afford to ignore the need for action, and we must all play a part in securing a just and timely transition to Net Zero.



Andy McDonald
Managing Director of Real Estate Finance,
HSBC UK



Net Zero and the commercial real estate sector

The commercial real estate sector is a fundamental part of the UK economy, providing an economic output of more than £116bn or 7% of UK GVA, and direct and indirect employment for around 2.4m people. It is also an important investment asset for pension and institutional investors both within the UK and globally.

The environmental impact of commercial real estate

But commercial real estate also has a significant impact on the environment. Overall in the UK, buildings produce 23% of all carbon emissions;¹ 30% of these emissions are from non-domestic buildings, split 70:30 between commercial and public buildings.

“**Everybody sees the effects of climate change, and we pride ourselves on being market leaders – it goes back to the core values, and ultimately, there may be a commercial advantage from being ahead of the curve.**”

Alex Edwards, Bruntwood

It is a diverse sector in terms of use, age, and ownership. Half of the UK's non-residential properties, for example, were constructed before 1985. When it comes to carbon emissions, the five largest sub-sectors of commercial real estate by energy consumptions are:

- ◆ Offices: 17%
- ◆ Retail: 17%
- ◆ Industrial: 16%
- ◆ Hospitality: 11%
- ◆ Health: 11%

The environmental impact of CRE can be divided into operational emissions and embodied emissions.

Operational emissions are defined in the UCL report as ‘the amount of carbon emissions associated with the building’s operational energy’.

Embodied emissions refer to the carbon embodied within the building construction. For new builds, reducing that could mean increasing the timber used in construction and reducing the amount of concrete used, for example.

Currently, operational emissions are a key focus for reducing carbon and energy use across existing stock but consultants and engineers developing new builds are increasingly looking at more sustainable solutions to reduce embodied carbon.

What climate change could mean for UK commercial real estate

UK building stock will be vulnerable to the impact of climate change. More frequent and intense extreme weather events, such as flooding and heatwaves will require more resilient building design in the future. For existing stock, changes will be required to protect both properties and those who use them.

¹ CCC. Climate Change Committee, Sixth Carbon Budget, Buildings. 2021 [cited 2021 13 September] Available from: <https://www.theccc.org.uk/wp-content/uploads/2020/12/Sector-summary-Buildings.pdf>

Decarbonisation state of play

Government proposals

Although UK plans to achieve Net Zero by 2050 have not yet developed into targets for the commercial real estate sector, the Department for Business, Energy and Industrial Strategy (BEIS) opened a consultation in March 2021. Although the consultation period has now closed, finer detail of the reform and framework was still to be confirmed at the time of writing.

This sets out the government's proposals to introduce a national performance-based policy framework for rating the energy and carbon performance of commercial and industrial buildings above 1,000m² in England and Wales, with annual ratings and mandatory disclosures as the first step.

The proposals have been widely supported by industry bodies including the British Property Federation, the Better Buildings Partnership, and the UK Green Building Council.

Industry commitments

The Better Buildings Partnership have developed a voluntary climate commitment for members, with an overarching aim to deliver Net Zero buildings by 2050. The commitment requires signatories to:

- ◆ Publish Net Zero carbon pathways and delivery plans.
- ◆ Disclose the energy performance of their assets.

- ◆ Develop comprehensive climate resilience strategies.

The UK Green Building Council has set out three separate Net Zero goals as part of its Net Zero Carbon Buildings Framework Definition:

- ◆ Net Zero carbon in operation.
- ◆ Net Zero in construction arising from new or refurbished buildings.
- ◆ Net Zero whole life – the carbon emissions resulting from maintenance and renovation through a building's lifetime and end of life disposal.

Supporting policies

Despite the current lack of a mandatory scheme for achieving Net Zero in the property sector, there are a number of existing frameworks and regulations that support energy saving and emissions reductions across new builds and existing properties. These include building energy codes and standards, energy performance certificates (EPCs), and the Energy Saving Opportunity Scheme (ESOS).

An industry review found that there are more than 20 policies covering commercial buildings and carbon (mainly operational) and called for rationalisation and a greater focus on embodied carbon in the future.

The most influential of these regulations are the EPCs and MEES (Minimum Energy Efficiency Standards), through helping to identify 'problem' buildings and key portfolio risks. Subject to Government consultation, changes to the minimum rating of these schemes have been proposed, including:

- ◆ 1 April 2025: all non-domestic rented buildings in scope of MEES to be registered and have a valid EPC
- ◆ 1 April 2027: all non-domestic rented buildings to meet a minimum of EPC C or have registered a valid exemption
- ◆ 1 April 2028: landlords of non-domestic rented buildings in scope of MEES must present a valid EPC. This will help identify properties requiring further improvements
- ◆ 1 April 2030: all non-domestic rented buildings must meet a minimum of EPC B or have registered a valid exemption².

² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/970192/non-domestic-prs-meas-epc-b-future-trajectory-implementation.pdf

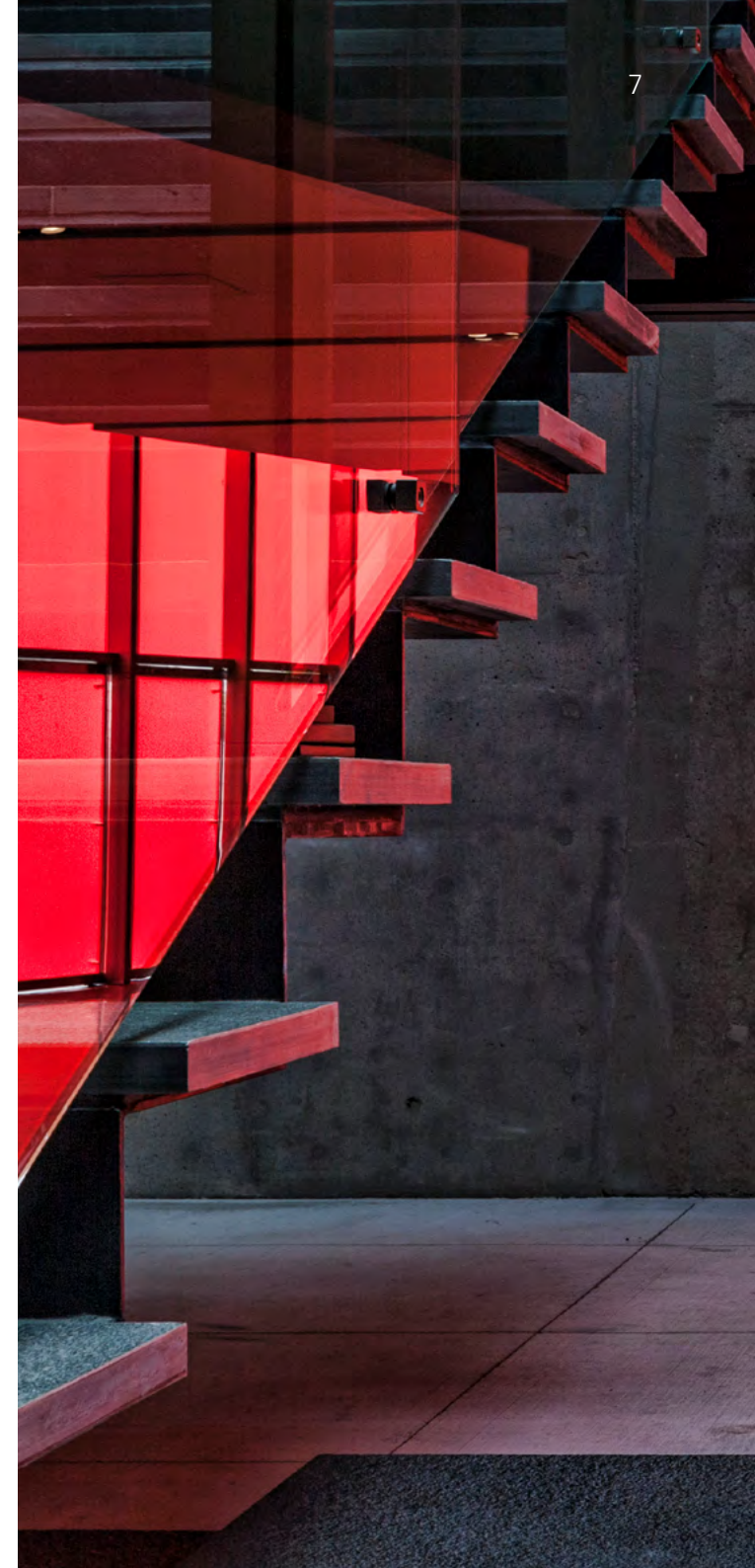
Achieving Net Zero in commercial real estate: the opportunities and challenges

The majority of emissions in the real estate sector are from energy consumption, so energy reduction and management will be vital to unlocking Net Zero. However, the report points out several challenges to undertaking these measures and achieving their aims, including:

- ◆ **Mixed portfolios** – most larger organisations operate across old and new properties, each with different physical and technical energy characteristics. This makes developing a portfolio-wide decarbonisation strategy more difficult.
- ◆ **Different levels of sophistication** – the size and sophistication of organisations varies. Some will have dedicated energy managers or sustainability teams, whilst many are not at that stage yet or simply don't have the resources available.
- ◆ **Availability of data** – smart meter availability, the quality of data, and the ability of a business to analyse and use the data also varies.
- ◆ **Ownership models** – whether a building is owner-occupied or operated on a landlord/tenant basis, and the extent to which services or utilities are managed, can also present challenges.
- ◆ **Context** – whether ultimate ownership, management or use of the property lies with an organisation based in the UK or overseas can also complicate matters, particularly around decision-making and regulation.

“ While we might have a Net Zero plan for the whole of the portfolio, each individual building will kind of have its own mini Net Zero plan, and those will move at different timelines.”

Alex Edwards, Bruntwood



Despite these variables, there are a number of opportunities for UK CRE to reduce emissions and transition to Net Zero, although there are also many challenges along the way.

01 Energy efficiency.

Opportunities – The government’s Building Energy Efficiency Survey outlined the potentially significant abatement of energy across sectors, see figure 1.

The survey identified the most cost-effective measures as:

- ◆ Carbon and energy management: steps such as adjusting controls to optimum levels, and ensuring that services, lighting, and equipment don’t operate out of hours.
- ◆ Lighting: LEDs can lead to energy savings of around 80% when replacing older technologies and even over 50% when replacing more recent ones.
- ◆ Cooled storage: chiller and freezer cabinets used in retail, represent high energy use and thus significant potential savings.
- ◆ Building instrumentation and control: recent advances and new market entrants are improving energy performance and reducing maintenance costs through remote analysis and better diagnostics.

Figure 1 Abatement potential by sector (England and Wales)³

Sector	Capital Expenditure required to deliver abatement potential (£ billion)	Baseline		Abatement potential		Overall reduction %
		Annual electrical energy consumption (GWh/year)	Annual non-electrical energy consumption (GWh/year)	Annual electrical energy savings (GWh/year)	Annual non-electrical energy savings (GWh/year)	
Retail	5.8	21,670	5,670	7,250	2,180	34
Offices	6.8	18,840	8,780	6,270	4,280	38
Hospitality	1.8	8,760	8,230	2,040	2,260	25
Industrial	4.6	11,320	14,410	4,520	7,190	46
Storage	2.5	7,440	5,670	2,430	2,690	39
Health	1.7	6,240	11,140	2,350	4,730	41
Education	2.1	4,930	10,100	1,670	5,090	45
Emergency services	0.6	1,260	2,970	530	1,610	51
Military	0.3	690	1,150	380	610	54
Community, arts & leisure	2.2	3,680	8,110	1,450	3,640	43
Total	28.4	84,820	76,240	28,870	34,290	39

³ BEIS. Building Energy Efficiency Survey (BEES). 2016 [cited 2019 26 November]. Available from: <https://www.gov.uk/government/publications/building-energy-efficiency-survey-bees>.

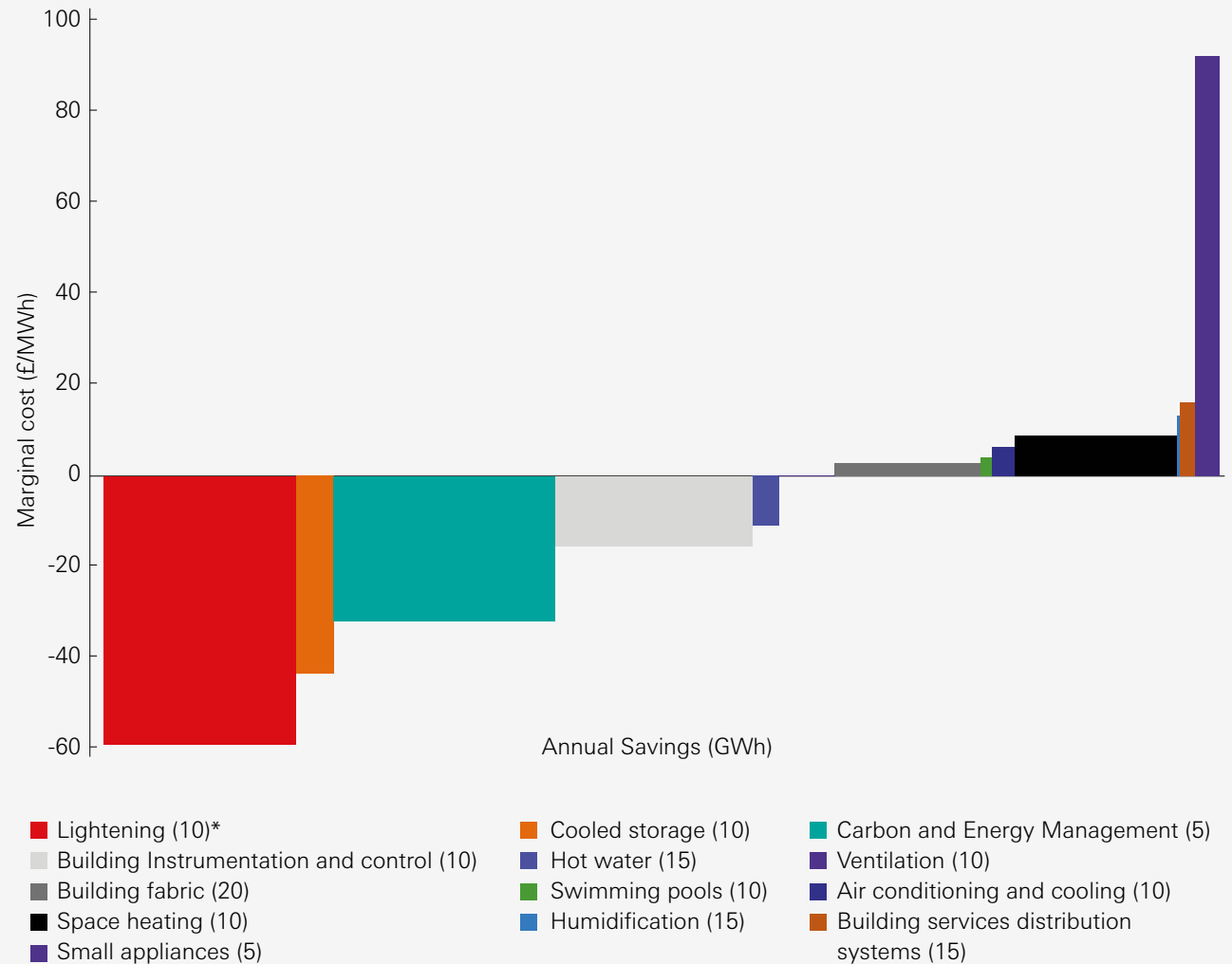
Challenges – Long payback periods, and the risk of losses when buildings change hands, has created a so-called ‘efficiency gap’, preventing organisations from reducing energy use from heating by modernising systems and improving building fabric, and maximising the energy efficiency that could create.

In figure 2 we can see the Marginal Abatement Cost Curve (MACC) for measures in energy abatement. It shows, for example, that lighting is highly cost-effective (the furthest left on the graph), along with some measures to improve building instrumentation and controls. Whereas measures relating to space heating can be seen potentially as one of the more expensive options. However, this may simplify matters. In reality, as the report explains, the diversity of portfolios and tenants make these actions far more complicated, as cost-effectiveness will depend on a number of issues, such as the age of existing equipment and patterns of use of the building. It’s therefore important to use measures such as this with a firm understanding of mitigating factors, in order to create solutions that work for individual buildings.

“ We know what we’re probably doing with them for the next five years, and 10 years, but you know, 20 years – it’s a big commitment to say, “Yeah, we’re still going to own that asset and it’s still going to be an office building. Who knows what might happen next year, or the year after that?”

Alex Edwards, Bruntwood

Figure 2 Marginal abatement cost curve for the 100 most socially cost-effective measure groups at sector level, 2014–15³



* The numbers in brackets after the labels are the assumed working life of each measure in years.
Source: Abatement model results for the sector, England and Wales, Table 4.2.

³ BEIS. Building Energy Efficiency Survey (BEES). 2016 [cited 2019 26 November]. Available from: <https://www.gov.uk/government/publications/building-energy-efficiency-survey-bees>.

02 Renewable energy

Opportunities – Switching energy supplies to renewable sources would be perhaps the easiest way to transition to Net Zero, and the UK already has a relatively strong renewables sector. Increased use of renewable energy would need to combine with greater energy efficiency to reduce overall demand for this to work.

Challenges – Unfortunately, the majority of UK commercial buildings are heated by natural gas-fired boilers. Hydrogen-powered boilers supplied by hydrogen through the existing network are still some way off. In addition, the hydrogen itself would have to be produced sustainably and current inefficiencies in the production of so-called ‘green hydrogen’ would increase costs.

Electric heat pumps are another alternative, but any large-scale switch from gas to electricity for heating would only be cost-effective if electricity generation and distribution was increased and improved.

03 Digitalisation and data

Opportunities – digital innovation is creating new opportunities and markets and delivering environmentally-friendly products and services. Meanwhile data is helping to drive sustainability, resilience, and profitability through improving transparency, understanding, energy use and efficiency.

Alongside remote analysis and diagnostics in building management, data is helping to inform pathways to Net Zero for property owners and tenants. Newer technology includes the use of digital twins, which involves having a physical asset like a building or portfolio of buildings, and a digital environment representing that asset, with data flows between the two. It enables different scenarios to be run digitally, to demonstrate the likely impact of different approaches to reduce energy use or some other aspect of a building’s function. The results can then inform implementation of any solutions within the physical building. It offers significant potential to understand the return on investment potential of any actions.

Challenges – data quality is a significant challenge, but so too is availability. In a tenanted building, is it the property owner or the tenant that can access that data and extract value from it? The ability to analyse the data and understand what it means strategically can also present challenges in resource terms.

“ The majority of the time we [...] smart meter the building as a whole, so we’ve generally got good oversight of how our energy is being used throughout the building.”

Etienne Humphries, Bruntwood



04 Green leases and leasing

Opportunities – split incentives, where one party needs to invest in carbon reductions, but another reaps the rewards, can be limiting and prevent action towards Net Zero. Green leases contain specific clauses that enable landlords and tenants to meet environmental targets by sharing energy data, upgrade costs and information. Green leasing involves agreements that may or may not be written into the lease itself, but that encourage collaboration between tenant and landlord for environmental improvements. They can help increase focus on strategic targets towards Net Zero, reduce the efficiency gap risk discussed earlier and help improve relationships between landlord and tenant.

Challenges – the cost of redrafting leases could be considered prohibitive but having a clearly delineated agreement can be important.

“ Like most people in the real estate sector – most of our emissions are through our tenants’ usage rather than the landlord usage, and that presents a few challenges and opportunities in terms of collaborative approach and how we ensure our occupiers are on this journey with us.”

Leah Barnes, CEG

05 Organisational diversity and decision-making

Opportunities – understanding how the structure of your organisation or the decision-making process may be preventing carbon reduction from happening could help move things forward. Understanding whether your organisation is more motivated by long- or short-term value capture, and what its vision and purpose is, can help frame carbon reduction measures by, for example, either focusing on their strategic or long-term value or their shorter-term operational value.

Bringing in expertise to help create an energy strategy or to help you make the most of any data you have available can also help, particularly in smaller organisations.

Challenges – the diversity of commercial real estate, even something as fundamental as whether they are publicly or privately owned, can create differences that require distinct policy and strategy approaches.

“ While it’s easy to design sustainability features into a new building, retrofitting something designed in the 1970s for example is a much bigger challenge. Also to deliver some of the major works, the building needs to be more or less vacant but where you can’t afford to have a building stood empty is the approach a piecemeal one?”

Leah Barnes, CEG



Next steps for pursuing Net Zero in commercial real estate

Ten guidelines to support commercial real estate businesses on the path to Net Zero.

- 01 **One size will not fit all** – a tailored approach that takes account of the nature of your property portfolio is required.
- 02 **Measurement matters** – gathering investment grade data is vital, but so is organising it – whether it's using an excel spreadsheet, an available platform, or hiring a consultant.
- 03 **Interpretation is critical** – turn numbers into knowledge to gain insight, by investing in technology, processes, and people.
- 04 **Be flexible** – Net Zero is not a 'set and forget' goal. Pay attention to changes in the buildings and tenants in your portfolio and any developments in policy and innovation.
- 05 **Hire wisely** – invest in people who can support your Net Zero activities, either internally or externally. Use them to guide your Net Zero strategies, analyse data and implement technology.
- 06 **Be cooperative** – invest time in landlord/tenant relationships to work together towards Net Zero, or consider green leasing to enhance collaboration.
- 07 **Get involved** – share insight and experience through networking with industry or intermediary groups.
- 08 **Look ahead** – keep an eye on government policy and regulatory change, such as operational energy rating requirements.
- 09 **Plan for financing** – consider how investors or debt providers are approaching Net Zero and how they can support your transition.
- 10 **Be strategic** – take the opportunity to lead, innovate, and drive change through Net Zero.

“ [We are being] innovative in the way that we deliver the redevelopment. For example, reusing the materials that can be reused during the refurbishment, and properly monitoring and contrasting the progress of the building from every aspect. This includes the building’s sustainability profile before and after our treatment.”

Ted Wachtmesiter, CEG

Conclusion and key findings

The report from UCL points out that “achieving a just transition to Net Zero will require coordination, collaboration, and communication between property owners, facilities managers, occupiers, investors and stakeholders within a variety of networks, supply chains and other relationships, often stretching beyond the UK”.

The transition to Net Zero for commercial real estate is, therefore, complex. Diverse portfolios, multiple stakeholders, and the range of embedded technologies, makes choosing measures and strategies that are both cost-effective and that fit an organisation’s overall purpose and vision, can be difficult.

But there are real opportunities available from improving the carbon footprint and the sustainability of UK commercial real estate. By using data, seeking our energy efficiencies, and enhancing relationships between landlords and tenants, Net Zero is achievable.

And, although policies and targets for reducing emissions in the real estate sector are still being developed, organisations must act now if they are to be on the front foot in the journey to Net Zero. Regulators will quickly catch up as the 2050 target draws nearer, and there are already signs of increased awareness and pressure from investors and tenants keen to include sustainability in their own strategies.

“ Probably five years ago [ESG] was peripheral and [since then] it has become completely mainstream. And I think you’re at the point now where pretty soon, I think people will be unable to invest in certain stocks if they don’t hit certain benchmarks.”

Emma Mackenzie, NewRiver

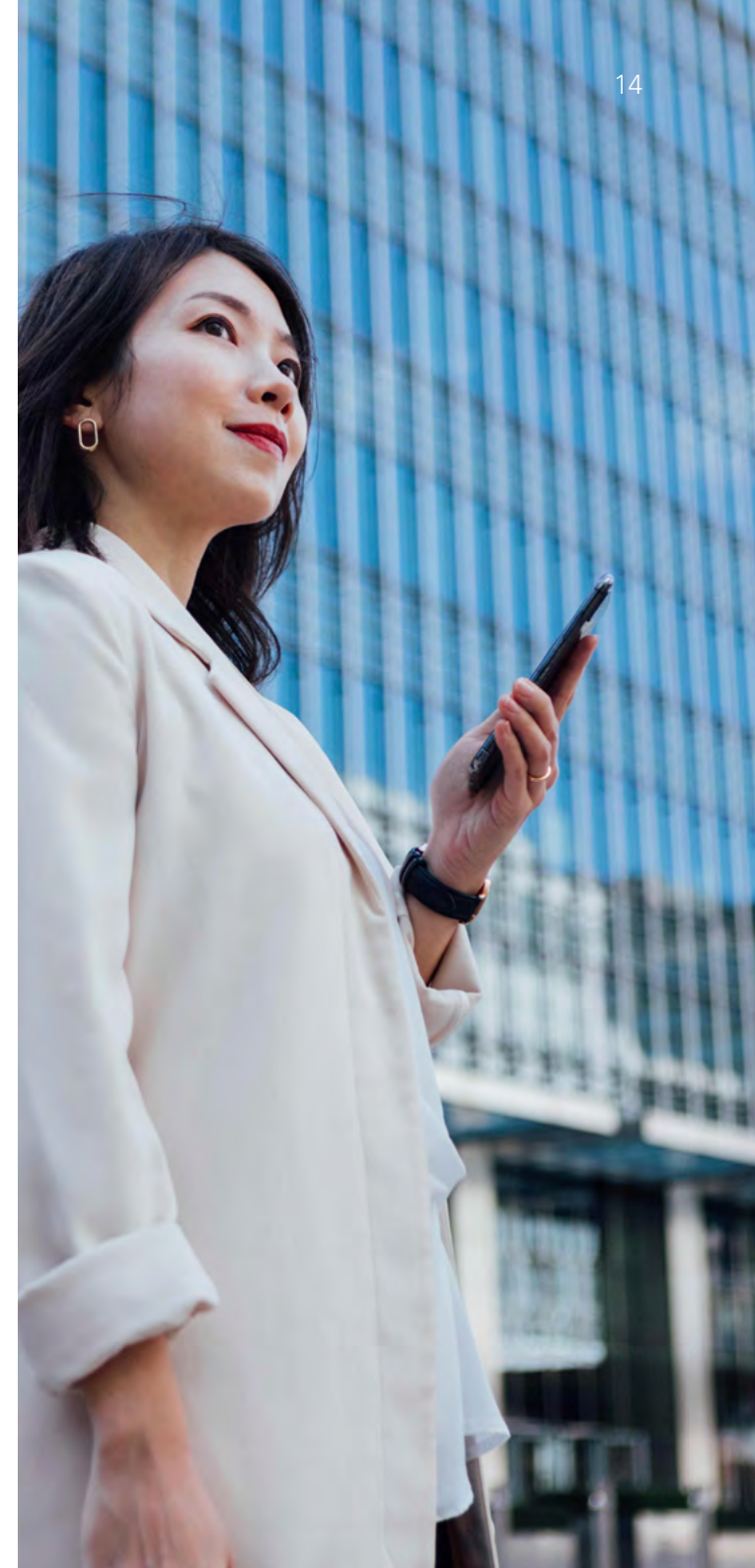
To help the sector move forward with the resources to secure a just and favourable transition, carefully considered institutional and government support will be essential. The businesses interviewed as part of UCL’s research were overwhelmingly optimistic about meeting Net Zero ambitions and about the transformational impact it could have on the UK’s commercial real estate sector. Many businesses within the sector are already taking or thinking about their next steps, and we are on hand to support you.

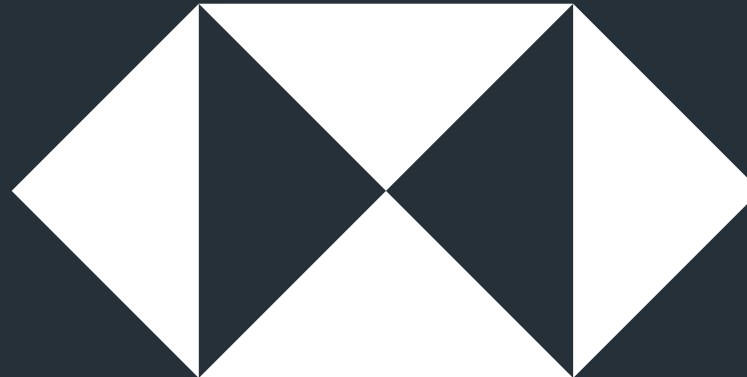
For more practical support and guidance on turning your sustainability ambitions into an achievable transition that makes business sense, please speak to your Relationship Manager or visit our website.



Further information

The report is available on the [HSBC Centre of Sustainable Finance](#).





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