Sustainable Markets Initiative

Narrowing the split incentive gap to decarbonise the built environment

Sustainable Buildings Task Force

Johnson Controls · AECOM · Foster + Partners · VIOHALCO · mahindra Rise

TRANE TECHNOLOGIES · ROBERTSON · TaylorWessing · DERWENT LONDON · McGILL AND PARTNERS

Executive Summary

As part of a concerted global approach to tackle climate change, the built environment has a crucial role to play. Buildings account for nearly 40% of the world's current levels of greenhouse gas (GHG) emissions – a figure comprising the emissions generated from both their construction and daily operation (heating, cooling and powering the operations occurring within). Clearly the construction sector will be building our new carbon efficient world, however since it is estimated that 70-80% of the buildings already standing today will still be in use by 2050, our focus in this paper is on operational efficiency. This means managing the operation of and our interaction with existing buildings, as well as investing in their fabric and technology.

Without significant decarbonisation across the real estate sector, our odds of tackling climate change are significantly diminished. Yet it remains the case that many parties committed to building, retrofitting and running low carbon buildings encounter a very challenging roadblock in the form of "split incentives." At its most basic, this amounts to the fact that those parties actually investing in energy efficiency upgrades do not necessarily stand to benefit on the balance sheet in the short term. A split incentive arises for example when a building is leased to a tenant, who benefits from any landlord capital investment in efficiency via cheaper energy bills and operating costs. This is only exacerbated when factoring in global trends of higher interest rates and energy price volatility.

It is of vital importance that together we tackle this fundamental obstacle in our path to decarbonisation. The good news is that governments, industry bodies and businesses across international commercial real estate markets are already rising to the challenge in nimble, inventive, and effective ways.

At COP27, the Sustainable Buildings Task Force published a paper that investigates the role of innovative technological and global partnership incentive structures as a means of urgently addressing decarbonisation (smi-sustainable-buildings-task-force.pdf (storyblok.com)). And at COP28, the UN Environment Programme (UNEP) launched its Buildings Breakthrough, announcing that 27 countries (so far) (including the UK and the US) had pledged to collaborate to accelerate the transformation of the real estate sector and make "near-zero emissions and climate resilient buildings the new normal by 2030."

As we approach COP29, this paper delves further into the drivers for and the capacity of the commercial real estate sector to re-imagine its relationship to the built environment. It considers the most effective strategies already bridging the split incentives gap, in policy and practice, with a particular focus on the European Union and the jurisdictions of England, Wales and the United States. This paper will familiarise owners and occupiers with strategies for overcoming split incentives, while empowering further commitment and investment in operational efficiency, effectively creating a road map for accelerated decarbonisation.

Introduction

In the global effort to tackle climate change, the real estate sector is at the forefront. The operation of buildings is a significant source of carbon emissions. This includes emissions from heating, cooling, lighting, and other building operations. The effective management of these energy-intensive utilities is universally acknowledged to be key to building decarbonisation but attempts to tackle this routinely highlight the existence of a "split incentive gap" and this remains a significant impediment to genuine, long-term success.

What is the split incentive gap?

Among building developers, asset owners, and property occupiers/tenants, commercial interests are rarely exactly aligned. Ultimately, each party is clearly invested in the establishment of an effective building, but exactly what that means can be very different to each. Put simply, even where capital values are enhanced by "green" building credentials, development appraisals might take a conservative approach to material selection, looking to minimise construction costs. Owners may also look to minimise upfront outlay but will also be concerned with controlling ongoing maintenance or refurbishment requirements. On the other hand, short(er) term occupational tenants have less stake in the bricks and mortar on paper, but they can make balance sheet gains where space maximises operational productivity and "green" brand credentials, while minimising running costs with reduced energy bills.

On the ground then, there is often a very real tension in progress to effective decarbonisation, and a growing global realisation that this split incentive gap must be bridged. The good news is that significant trends are emerging that more effectively align the interests of owners and occupiers to help close the split incentive gap in the commercial real estate market and encourage decarbonisation of the built environment as a whole. Those trends are emerging in three primary:

- Legislation
- Target Setting
- Green Leases

Closing the split incentive gap – legislation

A comprehensive legislative focus on decarbonisation is essential for commercial real estate players to make strategic decisions, particularly when property portfolios straddle international borders. Emerging government policy, regulation and legislation will enable the private sector to commit investment to and strategise for decarbonisation in commercial buildings. Companies then have the power to define and embed real change and leverage the benefits of consistent property management approaches or commit to an investment strategy that fully embraces Environmental, Social and Governance (ESG) aims. There are several examples of leading regions and jurisdictions that are introducing policies and regulations that are effectively incentivising investment in building decarbonisation.

Existing legislation and policy in the EU

Regulation (2021/1119) (the European Climate Law) writes into law the ambitious goal set out in the EU's Green Deal for its economy and society to become climate neutral by 2050. This law also sets out the intermediate target of reducing net GHG emissions by at least 55% by 2030, compared to 1990 levels.

Together (and as revised), its Energy Performance of Buildings Directive (EU/2024/1275) (EPBD) and Energy Efficiency Directive (EU/2023/1791) (EED) set out a range of measures to help boost the **energy efficiency** of buildings across Europe, where buildings account for around 40% of C02 emissions.

In particular, the EPBD introduces several concepts, including:

- **Zero-Emission Buildings (ZEBs)**: This requires all new buildings to be zero-emission: non-residential buildings (and those owned by public bodies) must comply as of **1 January 2028** and all other new buildings (including residential) as of 1 January 2030. What ***exactly*** constitutes a zero-emission building will differ between EU member states but broadly they are very high energy performance, requiring zero or very low amounts of energy, producing zero carbon emissions from fossil fuels, and with zero or very low operational GHG emissions.
- **Smart Readiness Indicator**: A Smart Readiness Indicator will be introduced by 2026 to assess the readiness of buildings to use smart technologies, such as the electronic monitoring of heating and hot water.
- **Energy Performance Certificates (EPCs)**: As an energy performance certification system, EPCs provide information on the energy efficiency of buildings and include recommendations for improvements. Ratings are generated between A (most efficient) and G (least efficient), calculated using assumptions based on structural features as opposed to the building's actual operation, and the EPC is issued with a recommendation report detailing works that could improve the rating. The EPBD broadly now provides for:
  - » **Mandatory provision**: EPCs must be provided whenever buildings are constructed, sold, modified or rented. There are limited exceptions to this requirement, ensuring that potential buyers or tenants are almost always informed about the relevant building's energy performance.
  - » **Standardised format**: EPCs will follow a standardised format across the EU, making it easy to compare the energy performance of buildings in different member states with increased harmonisation and digitisation.
  - » **Minimum Energy Performance Standards (MEPS):** Requiring member states to set mandatory MEPS for existing non-residential (and public) buildings will ensure the EU's worst-performing stock is upgraded to that 2050 target. The EPBD specifies thresholds for improvement based on maximum energy performance (energy use in kWh/(m^2.y)) and time-scales to track impact by 2030 and 2033. Exemptions will be limited. EU member states will need to ensure with MEPS that non-residential buildings reach at least EPC Class F by 2027 and Class E by 2030.
  - » **Validity:** An EPC is typically valid for up to 10 years, after which it must be renewed.

Existing legislation and policy in the US

Policy is also emerging in the US relevant to the split incentive issue. Federal, state and local governments are putting in place a variety of requirements, performance standards and incentives that drive building upgrades in existing building stock, and operational efficiency in new construction as well. For example, section 179(d) of the tax code, made permanent with the Inflation Reduction Act (IRA), provides generous tax breaks for deep retrofits of commercial buildings that meet certain efficiency threshold beyond the model energy code. The IRA also includes incentives for consumers, including tax breaks for all homeowners and rebates for low- and moderate-income households, to install heat pumps. Procurement principles approved by the Green Building Advisory Committee pursuant to the Energy Independence and Security Act of 2007, set the scene for new low embodied carbon building materials and construction approaches. The US Department of Energy's ***Energy Earthshots Initiative***™ was also launched from 2021 to develop cost competitive solutions for reducing industrial heat generally (including for concrete).

In 2022, the White House Council on Environmental Quality (CEQ) launched the Building Performance Standards Coalition. There are still no general federal laws on building emissions or operational carbon in the built environmental, but this partnership between 33 states and local governments saw each pledge to adopt "Building Performance Standards" (BPS) within their jurisdiction.

State and local governments are the primary drivers of BPS across the US. Generally, these feature "performance" compliance pathways, which set whole building targets for building owners rather than "prescriptive" compliance pathways that specify the type of technology that must be used. BPS metrics can vary, but it is best practice to use calculations based on site energy intensity (kWh per square foot or meter) or source emissions intensity (kg CO2e per square foot or meter). BPS can also build in flexibility that allows building owners to time compliance with performance requirements alongside major equipment retrofits, or by demonstrating specific technology deployment pathways.

One of the first BPS passed in the US was New York City's Local Law 97 (LL97), which applies to all commercial buildings of 25,000 ft^2 or larger from 2024, to support target GHG emission reductions of 40% by 2030 and 80% by 2050. Boston's Building Emissions Reduction and Disclosure Law is meanwhile based on emissions per square foot. The State of Colorado's BPS is based on site energy use intensity and includes the flexibilities for building owners described above. Washington DC requires specific ENERGY STAR scores (indexed to source energy use intensity) to demonstrate compliance with its BPS, with options to use alternative site energy use intensity metrics.

Existing legislation and policy in the UK

The UK became the world's first major economy to enshrine emission reduction targets into law with the Climate Change Act 2008. These were tightened in 2019 and now "***it is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline***" (s.1(1)). To ease the transition, an interim legislative target of 78% reduction was introduced for 2035. The UK's devolved administrations (Scotland, Wales and Northern Ireland), which together are responsible for about a fifth of the UK's emissions, enacted their own climate change policies to support broader UK-wide goals.

At a building level, UK regulatory control of efficiency is via EPCs. The Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015 (MEES) strengthened expectations with respect to building performance. MEES broadly prevents the leasing of "substandard" property and imposes significant financial penalties for breach.

At the time of writing, "substandard" property is rated F or G, but there is broad expectation of a dramatic upwards trajectory for MEES compliance. Back in 2021, the UK Government consulted on implementing a

minimum B standard by 2030 (where cost effective). Definitive action has not yet been taken but since a general election in July 2024, the new Government has prioritised climate action. It is understood that many property owners are looking to increase their ratings; planning CapEx investments in an orderly fashion over the coming several years.

In neighbouring Scotland, MEES does not apply. Scotland is committed to emission reductions as per its Climate Change (Scotland) Act 2009 and while indications are that achieving its ambitious aim of a 75% cut in GHG emission by 2030 may be off-track, Scotland is still planning for net zero by 2045.

Areas of consideration for policymakers

Building on the learnings from policies and regulations introduced in the EU, England and Wales, and the US, there are several areas of focus for policy makers to consider:

Creating operational ratings

A transparent performance-based ratings (PBR) system for commercial buildings could assist the industry to achieve decarbonisation. By focusing on operational inefficiencies, this would mean harvesting comparable sustainability data on actual utility use (energy and water) and even other sustainability initiatives (e.g. recycling). Moreover, PBR could enable the market to evidence a correlation between operational optimisation and asset value. It might well be, for example, that a building that can be run efficiently attracts higher rent, addressing the split incentive gap from the ground up.

The UK Government consulted[3] in early 2021 on the introduction of a mandatory sector-specific PBR, but the details (including any plan for implementation or enforcement) remain unclear. In the meantime, various schemes already provide excellent models for adaptation and adoption. These include:

- **National Australian Built Environment Rating System (NABERS)**: In Australia, NABERS has been benchmarking buildings' operational efficiency on a voluntary basis since 1989. It awards ratings (between one and six stars) that last 12 months and offer a simple framework for annual reporting and developing sustainability strategies. NABERS reports that its customers save "*an average of 30-40% on their energy over 10 years*".
- **ENERGY STAR®**: In the US, this blue symbol is a government-backed badge of energy efficiency. Administered by the US Environmental Protection Agency, the ENERGY STAR program is a voluntary labelling program that focuses on certification in five key areas, including products, homes, commercial buildings and industrial plants. Property assets can achieve performance ratings based on embodied and operational energy use.

As jurisdictions work to implement PBRs, they must be careful to avoid administrative complexity and address how any existing regulatory regime for certification/ratings (such as MEES) will be replaced or complemented. It is also important that any new rating programme is ***live***, in that it has the capacity to offer up-to-date and genuinely useful data on efficiency, enabling robust reporting on progress to decarbonisation.

Of course, such a scheme might one day involve setting in regulation a minimum standard of efficient operation. If this is the case, it is worth considering the mandated cost of efficiency retrofits or upgrades. Financing will be needed to undertake many upgrades, however, where these generate significant utility cost savings, the upfront cost may be defrayed by creative financing opportunities that pay for the upgrades through the multi-year stream of savings.

Defining Net Zero

A shared definition of net zero will ease target setting around decarbonisation for building owners. At both geographic and sector levels, the methodologies and calculations required for evidencing net zero delivery are complex. There's currently, for example, no globally agreed methodology for defining a carbon or energy budget for the built environment, or for establishing a meaningful goal of net zero for buildings (see discussion in the *"Developing a net zero building standard"* section of this paper).

A model legislative approach should incorporate functioning definitions and methodologies for key concepts, technologies and strategies that are required for whole built industry decarbonisation. Standardised measurements will undoubtedly help with target setting.

Incentivising Technological Solutions

There is an opportunity for policy makers to consider ways of incentivising the utilisation of ready and proven technologies aimed at decarbonisation. The EU has already set the scene by introducing the Smart Readiness Indicator (SRI) as of 2027, as part of its strategy to enhance the smart capabilities of buildings. Key features of the SRI include:

- **Legislative Framework**: The SRI was introduced via the 2018 revision of the EPBD, which emphasised building modernisation with technological advancements. While the SRI framework is established at the EU level, its implementation is voluntary for member states. Each country can decide whether to adopt and test the SRI scheme.
- **Common methodology**: The European Commission has provided a common methodology for calculating the SRI, detailed in its delegated and implementing regulations. This will ultimately ensure consistency across member states that choose to implement the SRI.
- **National testing**: Member states implementing the SRI must define their national testing phases, including the types of buildings targeted, the duration of the test phase, and the criteria for assessing smart readiness.
- EU policy has also incentivised solar technology and this example can set the scene for additional technology such as heat pumps. The revised EPBD includes specific mandates for integrating solar technology into new and existing buildings:
- **New buildings**: All new buildings must be designed to be "solar ready," meaning they should be capable of hosting cost effective rooftop photovoltaic or solar thermal installations. Member states must "ensure the deployment of suitable solar installations, if technically suitable and economically and functionally feasible" on all new public and non-residential buildings with useful floor areas over 250m^2 by 31st December 2026. Residential buildings and adjacent roofed car parks should follow by 31st December 2029.
- **Existing buildings**: Solar installations must also be deployed on existing buildings, starting with large public buildings and non-residential buildings undergoing major renovations or requiring a permit by 31st December 2026.

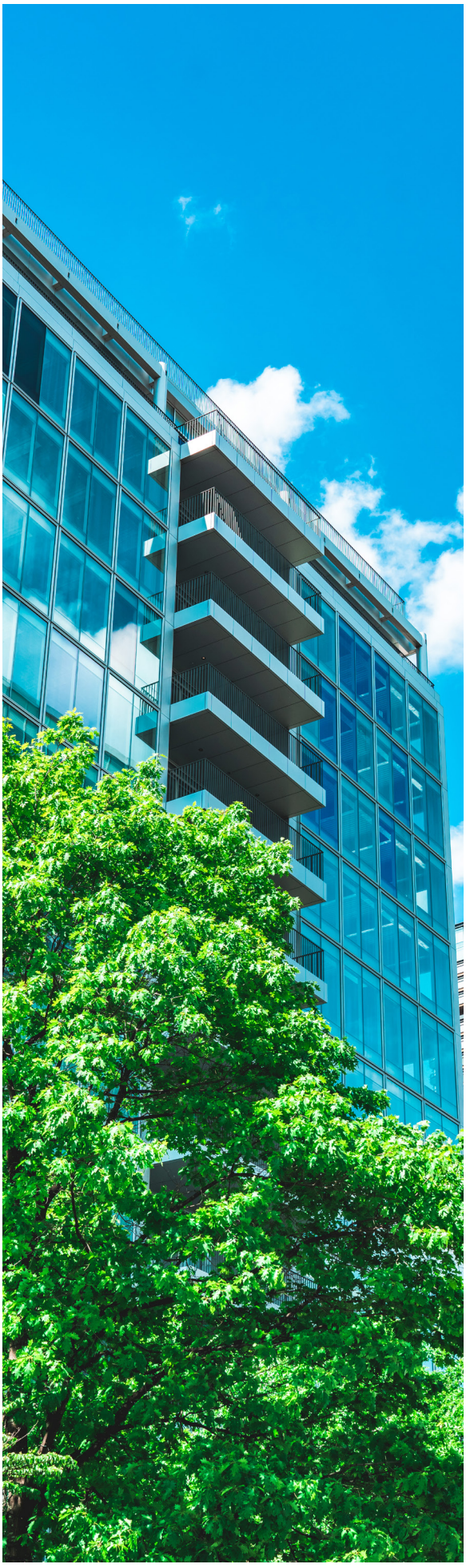
Together, these measures aim to increase the use of renewable energy in the building sector, contributing to the EU's goals of reducing GHG emissions and achieving a decarbonised building stock by 2050. They also highlight the potential for policy makers to leverage existing market solutions to incentivise adoption, drive innovation, and make genuine impactful change. Proven technologies can be further supported with accessible funds allocated for accelerated adoption.

Facilitating industry collaboration

It is important to encourage broader collaboration amongst building owners and municipalities when looking at addressing split incentives. No building is an island, so considering district or even city-wide initiatives can have positive impacts on the overall operational carbon of the broader ecosystem. Power purchase agreements, like the £40 million green energy deal signed by the City of London Corporation in 2020, can make serious, long-term, authority-led commitments to renewable energy investment that benefit vast numbers of buildings and ensure new green infrastructure.

Incentivising the reuse of waste heat is another way to encourage collaboration amongst building owners and municipalities to reduce energy consumption, lower GHG emissions, and enhance the overall energy efficiency. An example of this is the EU's EED, which incentivises the reuse of waste heat through several key measures:

- **Efficient district heating and cooling**: The EED promotes the progressive integration of renewable energy and waste heat into district heating and cooling systems, moving away from fossil fuel-based systems.
- "**Energy Efficiency First" principle**: This principle mandates that energy efficiency, including the reuse of waste heat, must be considered in all relevant policy and major investment decisions. This ensures that waste heat recovery is prioritised in urban planning and infrastructure projects.
- **Financial incentives and support**: Member states are encouraged to provide financial incentives and support for projects that enhance energy efficiency, including waste heat recovery. These can include grants, subsidies, and low-interest loans.
- **Local heating and cooling plans**: EU member states must promote local heating and cooling plans in large municipalities (with populations above 45,000), which incorporate waste heat recovery. This helps to create a structured approach to utilising waste heat at the local level.
- **Industrial waste heat**: The EED also targets the reuse of industrial waste heat, promoting projects that capture and re-purpose heat generated from industrial processes.



Collaborations that bring together non-governmental organisations and the public and private sectors can also help facilitate cooperation throughout the value chain. One example of this is the SMI/Clear Futures Newhaven project. With the leadership of the SMI, Clear Futures is harnessing the power of effective collaboration to create a low carbon heat network in Newhaven, building a district approach to the delivery of heat with a community wide smart grid. This initiative showcases how bringing together private and public partners with long-term commitment can maximise procurement thresholds and deliver value-for-money. The project anticipates completion in 2028 and, in the meantime, offers an example of how collaboration can facilitate the collection of data on transport, buildings and land, the evaluation of heat source solutions across industries and regional areas, and the development of an ambitious yet workable platform for cheaper clean power for all in the long term.

Reporting requirements for buildings

Regulations requiring building owners to report on and provide data on sustainable initiatives and operational carbon impact, thereby promoting greater transparency and accountability in the real estate sector. In the EU, the Sustainable Finance Disclosure Regulation (EU/2019/2088) (SFDR) primarily targets financial market participants and financial advisors, but it indirectly impacts building owners through several mechanisms:

• **Transparency requirements**: The SFDR mandates that financial market participants disclose how they integrate sustainability risks into their investment decisions. This includes investments in real estate, requiring detailed reporting on the sustainability performance of buildings.

• **Principal Adverse Impacts (PAI)**: Financial entities must report on the PAI of their investments. This means building owners need to provide data on energy efficiency, carbon emissions, and other sustainability metrics to meet these reporting requirements.

• **Green taxonomy**: The SFDR works alongside the EU Taxonomy Regulation, which entered into force on 12 July 2020. With four overarching conditions, this effectively creates a common definition of environmentally sustainable economic activities, helping to scale up sustainable investment. Buildings must meet specific criteria to be classified as sustainable, pushing owners to report on their energy performance and other environmental factors.

• **Investor demand**: As investors seek to comply with SFDR, they necessarily demand more detailed sustainability information from building owners. In turn, this creates a market-driven incentive for owners to report on and improve the sustainability of their properties.

Closing the split incentive gap – target setting

An important tool in the reduction of operational carbon in the built environment is an agreed and robust means effectively to calculate and measure progress on operational carbon.

Existing benchmarks and badges

Across many jurisdictions, in another example of the commercial property market seeking to address the split incentive gap from the ground up, there exist a wide variety of industry-set benchmarks and standards. Adoption and alignment with these remains voluntary, and they speak to (usually, the embodied) carbon of buildings. Still, evidencing these standards can help asset owners access favourable loan terms or even increase market reputation or asset value.

For example, many owners and developers already understand the importance of achieving a BREEAM (Building Research Establishment Environmental Assessment Method) sustainability rating for their building project. In England and Wales, they may have also already considered the British Standards Institution (BSI)'s ***PAS 2080: Carbon management in buildings and infrastructure*** guidance, which considers how the whole value chain can reduce carbon and cost through intelligent design, construction, and use.

These benchmarks are useful, particularly in the design and construction stage of a building's life-cycle, but they only tell part of the decarbonisation story.

Developing a net zero building standard

As discussed earlier in this paper, the path to building decarbonisation has long been hindered by the lack of a common definition of "net zero". Indeed, a wide variety of sector and geography specific standards and definitions have potentially muddied the water for those looking to evidence the credentials of their real estate assets. This paper has already discussed the EU's use of a ZEB concept, but member states have flexibility to develop their own national plans reflecting local conditions. Elsewhere, the Scottish Net Zero Public Sector Building Standard is a voluntary guideline for new construction and major refurbishments aimed at achieving net zero emission for public sector buildings by 2045, emphasising operational energy efficiency and zero direct emissions from heating.

In the US, the ASHRAE Standard 228 was published in April 2023 and sets requirements for evaluating whether a building meets the definition of "zero net energy" or "zero net carbon" during operation. It provides a consistent method for measuring energy and carbon flows across a site boundary, including allowances for sites that cannot produce adequate renewable energy. It does not set performance goals or design requirements but focuses on operational evaluation.

The long awaited UK Net Zero Carbon Buildings Standard was launched on 24 September 2024 by a coalition of professional institutions, industry bodies and leaders in the field. This free-to-access technical standard sets out what is needed to decarbonise the UK built environment in line with the nation's 1.5 degree aligned carbon and energy budgets. It defines mandatory requirements for a 'Net Zero Carbon Aligned Building' applicable to all major building types, as well as new build and existing stock. Threshold limits (a maximum) and targets (a minimum) are provided on key aspects such as upfront carbon, operational energy use, the avoidance of fossil fuel use on site, renewables and refrigerants. Offsets may be used to complement, but not replace, the mandatory elements of the Standard, and may be used to achieve net zero carbon at the asset level, an approach defined as 'Net Zero Carbon Aligned Building (plus offsets)' within the Standard. The development of the technical content, text and the numerical limits in the published Pilot Version has been led by a Technical Steering Group with representatives from BBP, BRE, CIBSE, the Carbon Trust, IStructE, LETI, RIBA, RICS and UKGBC with the support from industry volunteers.

Perhaps the most promising news here is the publication of a new global standard for net zero via the International Organization for Standardization (ISO) and its Net Zero Guidelines (IWA 42:2022). These are in the

process of being transposed to a full ISO. This looks to complement existing initiatives and facilitate alignment, so that organisation looking to make or support a net zero claim take a similar approach, and it is based on the single, understandable and ambitious target of net zero for all GHG emissions by 2050 at the latest.

Creating an operational carbon target

Decarbonisation relies on a meaningful understanding of the real-time and real-world operational carbon performance of buildings. A comprehensive, investible carbon measurement standard should therefore be developed for the minimisation of operational carbon. In addition, effective case studies will drive end-user demand for energy efficient buildings, increasing understanding and adoption. High-profile examples showing the benefits of adopting and articulating standards can offer inspiring examples and promote confidence that sustainability solutions work for asset value in the long term, not just at the point of construction.

In particular, underpinning any new PBR scheme will be the effective articulation of what constitutes carbon efficiency, and this paper has already highlighted the importance of incorporating clear definitions and methodologies for key decarbonisation concepts.

To this end, the Institutional Investors Group on Climate Change (IIGCC) and the Royal Institution of Chartered Surveyors (RICS) have convened an informal working group with industry partners to standardise sustainability Key Performance Indicators (KPIs), enhancing clarity and trust. This initiative focuses on climate transition indicators initially stemming from recent EU legislation but they can be tailored to be applicable globally. The group will produce a white paper by Q1 2025, outlining globally adaptable climate transition KPIs. The goal is to streamline collaboration, demonstrate the financial benefits of sustainability, and encourage investment by ensuring consistent KPI usage. This effort represents a significant stride towards a unified approach to sustainability metrics which establish clear value points.

Importantly, this approach goes to the heart of the split incentive quandary. By addressing ambiguity in existing regulatory KPIs, the group is ensuring that operational efficiency is ***investible***. This in and of itself is one more step towards bridging the split incentive gap. The focus on the EU's ZEB as a target for operational emissions provides a consistent framework that can be applied to all countries, assuming localisation through determining thresholds for emissions and energy usage to qualify as a ZEB. The US Department of Energy has already developed a US localised definition of ZEB that is interoperable with EU definitions.

Closing the split incentive gap – green leases

Across global markets, the commercial real estate market is undoubtedly prioritising its own solutions to decarbonisation. 'Green leases' are an example of action being taken to align interests and address split incentives between landlords and tenants.

Green leasing represents a sea-change for commercial leasing. A truly sustainable lease product, which emphasises co-operation and proactive joint management, demands a fundamental re-framing of the traditional splits in responsibilities and contributions. Green leases can be used effectively to address the competing concerns of split incentives, and to accommodate an equitable distribution of risk and reward when it comes to investment in decarbonisation.

By incorporating various clauses and themes in a leasing strategy, parties can effectively pursue the goal of decarbonisation, across both the operational and embodied cost of a building's lifespan and address split incentive concerns.

The key themes of green leasing

Various toolkits and market templates for green leasing are widely available, and are routinely produced with collaborative industry input and support. BBP, for example, was at the vanguard of attempts in England and Wales to standardise green lease drafting in 2008, and released a major update of its toolkit in January 2024, which has been very well received. Similarly, The Chancery Lane Project produces collaboratively created clauses for use across a wide number of transactions and jurisdictions.

Ultimately, the incorporation of green clauses is driven by the ambition of the parties, the extent to which decarbonisation is mandated by law, and the operational set up of the building, but key themes include the following.

Shared objectives to improve a building's environmental performance

An effective green lease will include a carbon reduction goal agreed between the landlord and tenant. Shared objectives can manifest broadly, perhaps even as a non-specific agreement to act in good faith to minimise operational carbon. This sets the scene for more ambitious target setting and co-operation throughout the term of the lease.

On the basis that what is not measured is not managed, shared co-operation clauses might also look to the importance of data, by:

- defining "environmental performance" - there may be an energy consumption limit, but at its most basic, data on performance will enable tracking and review;
- creating a forum – for the parties to meet, discuss target setting, review progress and set efficiency optimisation targets over the term of the lease; and
- sharing data – harvested regularly, data can track energy use and the success of efficiency activities, such as recycling. Data collection might need additional lease rights to install meters or sensors, and expectations should be set for data standardisation so that it may be processed easily. There is an education piece for landlords around ensuring they have the skills in-house for the nimble interpretation of data and its use in revising performance targets.

Meeting statutory and regulatory requirements

A green lease should respond to and allow for requirements in the local jurisdiction. Leasing obligations should also be able to adapt to relevant legislative and regulatory change over the course of the term, and this is potentially a fast-moving area of law.

Depending on the length of the lease term, greater flexibility may be required to anticipate shifting requirements. In England and Wales, for example, this could mean incorporating drafting that anticipates an upwards trajectory for standard MEES ratings, by controlling the production of EPCs where possible and, for example, prohibiting alternations that might jeopardise future MEES compliance. Pegging standards and obligations to a well understood and articulated operational performance target is one solution.

Covenants managing operational behaviour

The largest part of any commercial lease will undoubtedly be the tenant covenants on how the property will be occupied. These can offer an opportunity to import practical, day-to-day operational efficiency. Green lease provisions might include drafting that deals with:

- *Vacancies.* Since the Covid pandemic, vacancies (particularly in city centre office space) have increased dramatically. A tenant committed to hybrid working patterns might be required to cluster employees within the fewest possible heating/lighting zones or even install vacancy sensors. Building manuals can specify that lights are switched off in empty rooms;
- *Services* - Commercial buildings rely on many services to run seamlessly for the occupant. Catering and cleaning activities are embedded in a business' supply chain. A landlord might therefore ensure sustainable practices are followed. Perhaps cleaning is done during the daytime (to minimise after-hours energy use), or single use plastics are banned in the kitchens;
- *Use of renewable energy* - Powering a building with renewable energy is an effective strategy in decarbonising a building. Bulk discounts or the ability to sell energy back to the grid could help alleviate the higher cost of providing renewable energy (although this is more likely where estate landlords are heading in an 'energy flexible' direction with photovoltaic panels, for example);
- *Sustainable travel –* Where employees travel to the workplace, green leases can ensure that sustainable travel is promoted, for example providing for electric vehicle charging stations and bicycle racks;
- *Alterations* - Of course, control over the tenant's alterations will depend on their scope. A landlord might insist upon BREEAM compliance, net zero or waste reduction targets or even circular economy principles for materials selection. For even the smallest works, the tenant could track its impact on the targets set at the property. At the end of the term, reinstatement can be wasteful, and could be dependent only on "environmental performance" or reversionary value.

Costs sharing and recovery for energy initiatives and improvements

Capital investment is almost always required for an existing building to meet or sustain any new efficiency target. Improvements might mean carrying out works to bolster an EPC rating or install technology (such as sensors to track performance or occupancy). More fundamental retrofitting might be needed to create space that can be efficiently occupied and operated.

Ultimately, the landlord could benefit from an asset with a higher capital value. In this context, efficiency investment can bolster rental and asset values, as well as drive savings on a tenant's balance sheet. In fact, a recent study by CBRE analysing 20,600 U.S. office buildings, found that those with US Green Building Council LEED certifications commanded an average rent premium of four to eight percent.

Depending upon the negotiating power of the parties and the length of the term, cost recovery for efficiency improvements might be specifically dealt with equitably. Specific covenants might oblige the tenant to carry out efficiency works. The lease could even contain formulas for costs allocation based on the utility reduction realised, with capital expenditure amortized over the lease term or the useful life of the improvement. A tenant might then pay for efficiency measures via the service charge, or even by way of a rental hike on open market review.

In practice, the cost burden clearly needs to be properly allocated to give environmental targets the best chance of success, and ideally shared between both landlord and tenant. A legislative backdrop focused on whole industry decarbonisation and operational targets could help.

Having paid for a building's efficient commission, a landlord can theoretically use rent levels to ensure tenant adherence to targets throughout the term. Margin ratchets are already used in the world of green financing, for example, but there are often practical reasons to avoid this in a leasing context (such as the landlord's own financing being likely predicated on its income stream, or the tenant's liability for transaction tax).

Conclusion

With buildings accounting for nearly 40% of the world's GHG emissions, they have a crucial role to play in tackling climate change. The good news is that cutting operational carbon unleashes the power of the building sector as "low-hanging fruit" in reaching our world's decarbonisation goals, while catalysing climate action more broadly and saving cost.

To this end, addressing the split incentive gap is crucial for the decarbonisation of the built environment. The real estate sector's significant contribution to global GHG emissions underscores the need for effective strategies to manage building operations and invest in energy-efficient technologies. The split incentive issue, where the benefits of energy efficiency investments are not directly aligned with the parties making the investments, poses a substantial barrier to progress.

However, there is a growing recognition of this challenge, and innovative solutions are emerging. Governments, industry bodies, and businesses are implementing legislation, setting ambitious targets, and adopting green leases to align the interests of building owners and occupiers. The EU's Energy Performance of Buildings Directive and Energy Efficiency Directive are prime examples of regulatory frameworks driving the decarbonisation agenda.

By bridging the split incentive gap through these measures, the commercial real estate sector can significantly contribute to global efforts to tackle climate change and start to see mutual opportunities where there have been hurdles. This paper has highlighted the importance of operational efficiency and provided a review of initiatives being taken to overcome split incentives, ultimately fostering a more sustainable and carbon-efficient built environment. The collective commitment to these strategies will be instrumental in achieving our climate goals and ensuring a greener future for generations to come.

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About the SMI

The Sustainable Markets Initiative (SMI) is among the leading initiatives to coordinate the global effort to accelerate the private sector transition to a low-carbon, sustainable future. The SMI operates under the mandate of the Terra Carta | Sustainable Markets Initiative (sustainable-markets.org) – a charter that provides a compelling set of principles to 2030 for businesses to move towards sustainable markets.

The Sustainable Buildings Task Force, one of SMI's 11 Task Forces, is comprised of global CEOs from throughout the buildings industry working together to accelerate the delivery of net zero buildings. The Sustainable Buildings Task Force supports the overall SMI mission to speed the world's transition to a sustainable future by engaging and challenging public, private, and philanthropic sectors to bring economic value, in harmony with social and environmental sustainability.

The SMI Sustainable Buildings Task Force recognises its role in accelerating the delivery of low / zero carbon emission buildings to help achieve net zero targets. Together, the Members are united by a common ambition to harness the power of technology and drive partnerships and policy decisions that enable the adoption of sustainable building technology and drive a lower carbon future. In addition to commitments to achieve Science Based targets, member companies will prioritise work on buildings, specifically committing to have at least one carbon-neutral building by 2030, while decarbonizing heat and deploying ultra-low carbon building materials.

SMI Sustainable Buildings Task Force members: • George Oliver, Chairman & CEO at Johnson Controls, chair of the SMI Sustainable Buildings Taskforce • Paul Williams, CEO, Derwent London • Steve McGill, Founder and CEO, McGill and Partners • Elliot Robertson, CEO, Robertson Group • Dave Regnery, Chair and CEO Trane Technologies • Michael Stassinopoulos, Executive member of the Board, Viohalco • Sinha Amitk, CEO, Mahindra Lifespaces • Irene Gallou, Senior Partner, Foster + Partner

About the author

Clare Harman Clark is a Senior Counsel – Knowledge in the real estate team at Taylor Wessing LLP . She also chairs the Property Section at the Law Society and published ***A Practical Guide to Green Leases for Property Professionals*** in November 2023. She teaches Property Law and Practice and Commercial Property at the University of Westminster, writes regularly for national and trade press, and sits on the editorial board of the Landlord and Tenant Review.

Acknowledgements

The SMI would like to thank the valuable contributions of Dr Mark Burrows and Charlotte Cordingley of Clear Futures; Peter Walker and Robbie Epsom of CBRE; Christina von Westernhagen and Renee Clair of Johnson Controls; Clare Foster, David Mitchell, Judith Stephenson, George McKinlay and Andrew Hall of Shepherd and Wedderburn LLP and Jess Hrivnak of RIBA/UK NZCBS.