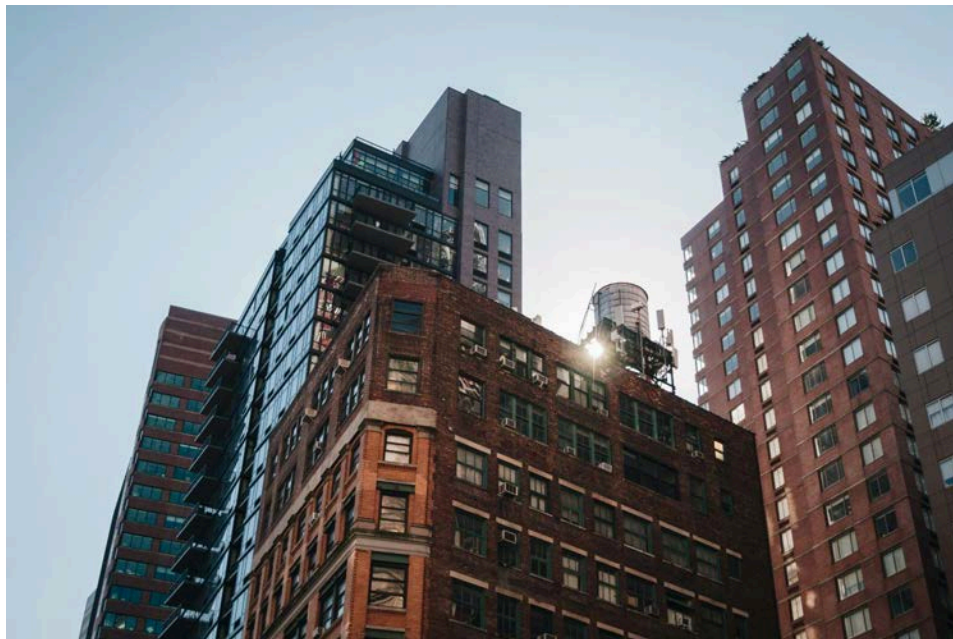




17th September 2024

Real Estate Accounts for About 40% of Carbon Emissions Globally

As the built environment accounts for a significant percentage of global carbon emissions, about 40, the real estate sector needs to significantly reduce emissions resulting from the development, ownership, and management of assets. The report, [Global Retrofit Index Interim Report: Assessing progress on the path to zero](#), by Kingspan and 3Keel, assessed the ambitions, policies, and strides made by significant economies in decarbonizing their built landscapes. While there are encouraging reductions in building emissions across several nations, the trajectory falls short, revealing a plateau in reduction efforts in key EU countries and an alarming 3% increase in greenhouse gas (GHG) emissions from buildings in the United States since 2010.



An American Problem

The findings shed light on the pressing need for significant interventions to reverse this trend and align with the national net zero scenario. The U.S., in particular, faces a daunting challenge: to meet net-zero goals, it must reduce building emissions by 73% by 2040. Without decisive action, building emissions are expected to continue their upward trajectory, contradicting the imperative set by the Paris Agreement.

Retrofitting Explained

Retrofitting encompasses a range of techniques and is pivotal in enhancing the efficiency and sustainability of existing structures. Strategies include adaptive reuse, renovation, extension, and restoration, each tailored to address specific challenges.

The benefits of retrofitting are multifold, from improved energy performance and reduced environmental impact to enhanced safety and accessibility. It not only prolongs the lifespan of structures but also contributes significantly to reducing emissions, fostering economic growth, improving building occupant health/wellbeing, and promoting social equity.

A Collaboration for Change

As previously stated, the building industry is retrofitting facilities, but not at the rate needed to meet the targets set forth in the Paris Agreement. Many ask, “How do we expand our understanding and ability to retrofit aging buildings?”

The Global Retrofit Index Interim Report outlines five pivotal elements crucial for effective and scalable retrofitting of national building stocks:

1. Setting net zero building performance standards
2. Developing a national retrofit plan
3. Providing financial incentives and support
4. Upskilling the workforce and scaling the supply chain
5. Promoting best practices and data transparency

Each of these elements is vital in enabling affordable and large-scale retrofitting. Still, without proactive collaboration from all parties, implementing any of them, let alone all five, is nearly impossible.

Renovation, retrofit, and refurbishment of existing buildings represent an opportunity to upgrade the energy performance of commercial building assets for their ongoing life. Retrofit often involves modifications to existing commercial buildings that may improve energy efficiency or decrease energy demand. In addition, retrofits are often used as an opportune time to install distributed generation in a building. Energy-efficiency retrofits can reduce operational costs, particularly in older buildings, as well as help attract tenants and gain a market edge.

Market Expectations

Another key driver is market demand. With ambitious ESG targets to achieve, investors and occupiers are increasingly concerned with real estate's green credentials. They want to invest in and occupy prime buildings that are energy-efficient and sustainable. Employees also want to work for companies that have ESG at the forefront of their agenda and to work in buildings that demonstrate this.

This 'flight to quality' is putting further pressure on secondary assets, which are at risk of becoming obsolete if they do not keep up with market expectations.

Who Should Bear the Burden of Retrofitting – the Owner, Occupier or Both?

We are hearing a lot about the 'green premium' that prime buildings are attracting and, conversely, the 'brown discount' that is being applied to secondary stock that does not meet the sustainability criteria now expected by the market.

It is clear that the cost of retrofitting (or indeed demolishing and rebuilding) a building will need to be weighed against the potential return on investment that those works could achieve. The carbon cost of retrofitting, demolishing, rebuilding, and doing nothing must also form part of this analysis.

While improving a building's sustainability credentials is in the interests of both the owner and occupier, the answer as to who should bear the financial burden of boosting those credentials through retrofitting may not be as clear-cut.

The occupier's repair obligations under the lease should be considered first, but in reality, in most cases, the extent of the required upgrade works goes beyond what the occupier is liable for. For the buildings currently facing a stranding risk, few of them have leases in place that include green lease clauses that place greater obligations on tenants.

The reality is that owners of occupied buildings facing a stranding risk will have to engage with their tenants to agree on a combined strategy to boost their green credentials. Unless there is scope for re-gearing the lease, those owners may have to make a significant investment without an immediate return.



Are there any government-funded or sponsored schemes for improving the energy efficiency of existing buildings, and how do they work?

A number of schemes to improve existing buildings' energy efficiency have been funded or sponsored by the US federal, state, and local governments. Examples of these schemes include the following:

1. The Property Assessed Clean Energy (PACE) initiative is a newly adopted and innovative means of financing energy efficiency and renewable energy upgrades to existing buildings and new developments. Interested property owners voluntarily evaluate measures and upgrades that achieve energy savings and obtain financing from a lender with municipal approval for the up-front cost of energy or other eligible improvements on a property. This financing is then repaid through property tax assessment over a period of up to 25 years. The loan obligation is attached to the property rather than the borrower who made the loan, and the PACE financing mechanism provides strong credit without the need for government subsidies, which is attractive to private-sector investors and operators. The PACE program is structured to overcome challenges that have traditionally hindered the adoption of energy efficiency and related projects in buildings by (i) innovatively adding to the capital stack, (ii) providing attractive, long-term financing, and (iii) making it possible for building owners to transfer repayment obligations to a new owner or paying it off without significant penalty. The program is available for both residential and commercial buildings. PACE programs add value and have gained bipartisan support nationwide at federal, state, and local levels. To date, 37 states and the District of Columbia have adopted (or already had) legislation that enables local governments to offer PACE benefits to building owners.
2. The DOE's Building America Program is a cost-shared industry partnership research program that works with national laboratories and science research teams to accelerate

the development and adoption of advanced building energy technologies and practices in new and existing homes. This work advances building technologies and practices to decarbonize homes while centering on equity and benefits to communities.

Summary – Decision Time

As changing legislation and market expectations put further pressure on secondary assets to improve their green credentials, property, and portfolio owners must decide whether to retrofit or even redevelop those properties. While the cost of carrying out retrofit or redevelopment works could be high, the cost of doing nothing may well mean being left with a 'stranded asset'.

How Can We Help?

ESG Playbook has an end-to-end solution to aggregate data with analysis tools to help establish the most cost-effective strategies to decarbonize your portfolio. For additional information, contact us: <https://www.esgplaybook.com/contact-us/>

