Decarbonisation and climate resiliency step into the spotlight for the US buildings sector

Reducing emissions from buildings is now a crucial step in reaching net zero in the US. Efficiency standards, government policy and sustainable finance opportunities will encourage decarbonisation, while climate risks will need property owners' attention. Still, complexity can arise when sustainability meets economic and policy uncertainty

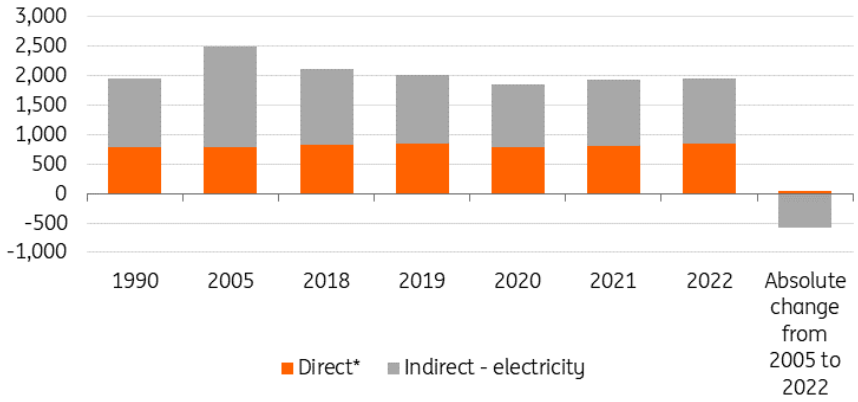
The pressure to decarbonise is steadily increasing for the US buildings and real estate sector - and with it, the need to reduce the impact of climate change on physical assets

More emissions reduction needed from the buildings sector

Today, commercial and residential buildings account for 31% of total greenhouse gas emissions in the US, with electricity and direct fossil fuel combustion being major contributing sources. Between 2005 and 2022, emissions from buildings decreased by 21.3%, the steepest among all other sectors. This is driven by decreases in electricity-related emissions, thanks to a relatively greener power grid and more energy efficient operations.

Emissions from buildings in the US

Million metric tons of CO2 equivalent



*Direct emissions include those from fossil fuel combustion (mostly), landfills, substitution of ozone depleting substances, water treatment, etc. Source: US Environmental Protection Agency

But these achievements are far from enough. First, excluding electricity, direct building emissions actually increased from 2005-2022. Second, the buildings sector uses 75% of the electricity generated in the US for heating, cooling, ventillation, and lighting. This makes the sector's decarbonisation indispensable to achieving net zero across the US economy. The sector will continue to feel the pressure to improve ESG performances from government agencies, sustainability-conscisous investors, and corporate tenants with indirect emissions reduction targets.

There are several pathways for reducing emissions from buildings:

Energy efficiency

Enhancing energy efficiency is considered the most effective way to decarbonise the buildings sector. It includes utilising LED lighting, energy-saving building materials, more effective energy system designs, and smart or even AI imbedded control systems.

Electrification

Electrification refers to replacing natural gas or coal burning with electricity-powered equipment. Examples include installing heat pumps and switching from gas to electric cooking stoves.

Renewable energy

Electrification would not be as effective unless the electricity used is clean. This means a higher percentage of renewables in a building's power usage mix. Ways of achieving this include installing solar panels on property roofs, purchasing renewable energy credits (RECs), and building integrated solar or wind projects.

These pathways can be realised either when a building is constructed, or through retrofitting during renovation. While many property owners are engaging in various kinds of decarbonisation projects, a common approach in the US is obtaining a Leadership in Energy and Environmental

Design (LEED) certificate. With different levels of recognition, LEED is a global rating system of building sustainability, which touches upon – but is not refrained to – the practices above.

Policy is a crucial driver for building decarbonisation

Policy plays a dominating role in driving changes. At the federal level, while there are currently no mandatory building performance standards, the government has established a voluntary Energy Star efficiency certification system for companies to demonstrate their sustainability credibility. Moreover, the Biden administration announced the US's first Federal Building Performance Standard, aiming to boost energy efficiency and reduce emissions in 30% of federal building spaces by 2030.

The US clean energy and climate policy is heavy on carrots as opposed to sticks, and this is no exception in the buildings sector. The Biden administration has set up numerous incentives to encourage property owners to boost energy efficiency and reduce emissions.

The Inflation Reduction Act (IRA) of 2022 includes Section 25C energy efficient home improvement tax credits, Section 179D commercial buildings energy efficiency tax credits, and Section 45L tax credits for zero energy ready homes to push for building energy performance enhancement. The IRA has also established rebate programmes and energy efficiency for affordable housing programmes to compensate for retrofitting and installation projects. In addition, the Infrastructure Investment and Jobs Act (IIJA) of 2021 directs hundreds of millions of dollars towards improved building weather resilience, and helps state governments set up building efficiency codes. Moreover, all the incentives offered by the IRA and IIJA in accelerating renewable energy development will make clean technologies more easily available to be installed in buildings.

Looking at the elections in November, we think that the IRA and IIJA have the potential to survive a potential second-term Trump administration – and even a Republican Congress on top of that – because of the significant economic benefits they can bring. However, with a Republican White House and/or Congress, not only could the implementation of these policies become more difficult, but the magnitude of funding could also be reduced, especially if fiscal deficits become more of a problem. This means that property owners could experience reduced funding availability and longer application times.

Many local governments have established their own policies, and these can be more stable than the federal ones. As of the end of 2023, Maryland, Oregon, Colorado, and Washington state, as well as about ten cities, had established emissions and/or efficiency-based building performance standards, with almost 30 jurisdictions considering it. In New York City, Local Law 97 (effective as of 1 January 2024) sets phased-in emissions reduction targets for buildings with 25,000 square feet or more through to 2050. Local Law 97 covers 60% of New York City's building area and 50% of its building emissions. While most eligible buildings can meet the 2024 requirement, many of them fall short of the requirements set for 2030 and beyond.

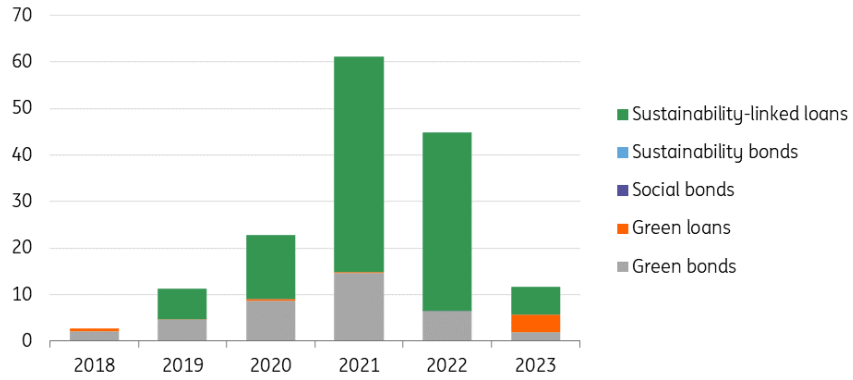
Various financing opportunities to tap into

The emissions gap to realising building standards – along with growing stakeholder and investor sustainability mandates – will push property owners to decarbonise. This opens up opportunities for companies to finance their climate efforts. The US real estate sector's sustainable finance issuance hit an all-time high of $61.3bn in 2021 before shrinking to $11.6bn in 2023. The decrease from 2022 to 2023 was reflected in a drop in the number of issuers, while the average and median

issuance sizes slightly increased. The decline in issuance was mainly driven by factors such as higher financing costs, as well as a more challenging energy, climate, and ESG policy environment in the US that has led to more caution.

Sustainable finance issuance in the real estate sector in the US

(US$bn)



Source: Bloomberg New Energy Finance

Sustainability-linked loans (SLLs) have been the dominant product since 2019. Examples of sustainability KPIs in SLLs include greenhouse gas emissions, ESG ratings (such as the Global Real Estate Sustainability Benchmark), the percentage of green/energy efficiency certified buildings, the percentage of certified procured sustainable materials, the percentage of procured renewable electricity, and the number of communities served through affordable housing developments. It is worth noting, however, that since 2023 there has been a growing preference for green (use of proceeds) loans instead of KPI-linked loans in the sector, partly to reduce greenwashing allegation risks. In 2023, the share of green loans in the US real estate sector rose to 33% from almost zero before. For green loans, a common project type is achieving a certain threshold of building sustainability certification.

Looking at 2024, we still expect subdued sustainable finance issuance for the real estate sector, where politics and policy rates will test the resilience of its general business. For the broader US sustainable finance market, we expect a more positive outlook, with 2024's volume potentially matching that of 2023's. It is true, admittedly, that economic and policy uncertainty can lead to delays in issuance. But such challenges can potentially be offset by sectors that experienced an exceptional first quarter of issuance, such as industrials and materials. In these two sectors, recent developments in sustainable finance standardisation have partly contributed to the growing momentum.

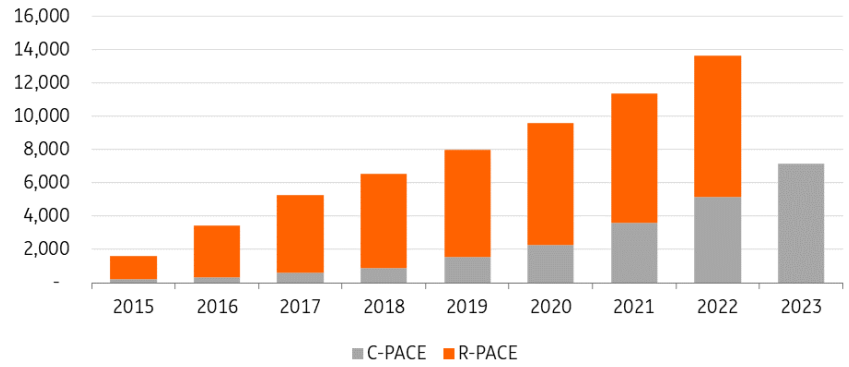
Still, for the real estate sector, sustainable finance remains an effective tool that companies can use to accelerate their decarbonisation journey and marry sustainability with facilitating affordable housing, diversity and inclusion, and a just energy transition that takes equality into consideration.

Another financing mechanism for building improvement is the property assessed clean energy (PACE) model. With sustained growth in investment in the US, PACE programs allow property owners to finance upfront energy efficiency improvement and renewable projects in commercial

properties (C-PACE) and/or residential properties (R-PACE). Today, 38 states and the District of Columbia have PACE-enabling legislation in place. When considering PACE, an owner needs to evaluate the restrictions for accessing the programmes, as well as potential advantages and disadvantages of PACE debts being attached to the property and not the owner. Where applicable, PACE can enhance long-term cashflow through energy cost savings in addition to the sustainability value it brings.

Cumulative PACE investment in the US

(US$m)



Note: 2023 data for R-PACE is not available. Source: PACENation

Buckle up for climate risks

In addition to sustainability, climate change is an increasing risk factor that needs to be taken into account by both real estate developers and investors. In 2023, there was a record number of 28 extreme weather events that cost $1bn or more in the US. More frequent, powerful, and impactful natural disasters such as flooding, wildfire, drought, and hurricanes are threatening the country's real estate sector. Last year, natural disasters might have cost property insurers in the US $65bn. Larger-than-expected insurance payments have led some insurers to exit high-risk states like Florida and California.

Reduced property insurance offering, combined with general concern over higher insurance demand, have also led insurers to raise the premiums they charge customers. A recent study by Realtor.com shows that today, nearly half of US homes face at least one type of extreme weather risk. According to Fannie Mae, two thirds of the respondents from its 2024 survey say they have already seen an impact on their home insurance premiums. In commercial real estate, the property insurance premium jumped by an average annual rate of 7.6% from 2017-2022, visibly higher than that of rent. Inflation has contributed to such increases, but climate change-induced severe weather events are more frequently cited as another major reason.

2017-2022 insurance expense and rent compound annual growth rate (CAGR) for selected commercial real estate types in US cities

	Multifamily			Retail			Industrial		
	Insurance CAGR (%)	Rent CAGR (%)	Insurance vs. rent CAGR (% point diff.)	Insurance CAGR (%)	Rent CAGR (%)	Insurance vs. rent CAGR (% point diff.)	Insurance CAGR (%)	Rent CAGR (%)	Insurance vs. rent CAGR (% point diff.)
New York metro	5.2	3.8	1.4	7.8	NA	NA	9.7	2.0	7.7
Oakland-East Bay	7.9	4.0	3.9	6.4	0.9	5.5	11.1	4.8	6.3
Philadelphia	6.7	5.7	1.0	7.1	0.5	6.6	9.7	4.5	5.2
Houston	12.6	4.1	8.5	8.4	1.1	7.3	9.6	4.3	5.3
Chicago	5.0	5.6	-0.6	4.8	0.8	4.0	8.2	3.4	4.8
San Antonio	14.8	4.7	10.1	11.0	1.3	9.7	8.5	2.8	5.7
Dallas	14.4	6.1	8.3	10.8	0.7	10.1	11.3	4.0	7.3
San Diego	7.8	5.8	2.0	3.6	0.7	2.9	5.8	4.8	1.0
Los Angeles	13.0	4.8	8.2	8.2	0.9	7.3	5.7	8.3	-2.6
Detroit	7.0	4.9	2.1	3.3	0.5	2.8	1.8	3.3	-1.5

These are adding more pressure to the construction and real estate industry in the US. While properties in high climate risk areas have not seen systematic price drops, property overevaluation could, in the medium to long term, become a concern for homeowners and real estate investors. In addition, as weather patterns fluctuate more, increased heating or cooling can also add to operation costs. Property owners facing evolving climate risks may need to assume higher costs to weather-proof their assets, and/or to remedy damage caused by extreme weather. Investors will need to conduct better due diligence and stress tests to ensure that their exposure to climate risks is managed on a portfolio level. Regional banks with a relatively large commercial real estate footprint will need to understand climate-related financial risks in more depth.

In this regard, property owners will benefit from having not only a climate transition plan (to decarbonise), but also a climate adaption plan (to manage climate risks). We can also expect climate adaption to become more mainstream in sustainable finance product offerings in the medium to long term, despite adaptation-related volumes remaining low today.

Conclusion

The US buildings and real estate sector will increasingly feel the pressure to decarbonise, as well as the need to reduce the impact of climate change on physical assets. The incentive-heavy federal policy environment could enable climate efforts – with the possibility of surviving the elections – while state-level building efficiency code development will limit dirtier activities. Commercial bank sustainable finance offerings and government-backed debt programmes will continue to play an important role – though the magnitude of that role could well be affected by macroeconomic conditions and policy consistency.

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