

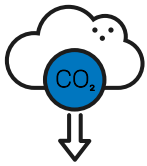
Net zero: Buildings



17% of human-caused greenhouse gas emissions come from buildings and construction.¹

What does the **buildings sector** need to do to reach net zero?

LGIM will vote and implement investment sanctions against companies falling short of our climate expectations. LGIM expects companies' boards to oversee and publicly disclose answers to the following:



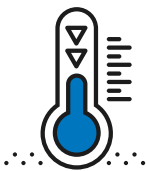
Net-zero commitment

- Does the company have a comprehensive target for net zero by 2050 or earlier, covering scopes 1, 2 and material scope 3 emissions?² As part of scope 3, has the company included embodied carbon emissions?
- Has the company made a commitment to certify/certified this target with the SBTi or other external independent parties?
- Does the company have a net-zero transition plan that includes short- and medium-term targets?³



Strategy

- What are the actions and investments embedded in the company's plan to reach net zero, and what is the contribution of each action towards meeting its targets?⁴
- Does the company integrate energy efficiency management practices across existing and new assets?
- Is the company calculating and disclosing embodied carbon emissions and does it have a strategy to maximise the lifetime of current embodied carbon?
- Is executive remuneration aligned with the company's short- and/or medium-term emission targets, as set out in the net-zero transition plan?
- Does the company's net zero strategy and the use of any offsetting consider the potential impacts and dependencies on biodiversity – for example, in relation to land-use change, specifically deforestation?



Resilience

- Has the company analysed the physical climate risks to its portfolio and evidenced measures to manage them?
- Has the company analysed the resilience of its business model in – and alignment to – climate scenarios, including the IEA's net-zero by 2050 scenario?
- What is the percentage of net-zero carbon buildings within the company's portfolio?



Targets

- Does the company have targets for the use of low/zero carbon construction materials and to improve circularity (increased recycling or re-use of demolished materials)?
- Does the company have targets to optimise properties' water usage?
- Does the company have targets to utilise onsite and/or offsite renewable energy?



Collaboration

- How is the company working collaboratively across its value chain to reduce emissions (e.g. with tenants, material manufacturers, construction firms, sector initiatives, etc.)?
- Is the company advocating meaningful policy action, including from regulators, to meet global net-zero targets (e.g. with carbon pricing)?



Red lines

- Does the company disclose its property portfolio's operational emissions, and has it set a reduction target for them?
- Does the company disclose its climate-related lobbying activities, including trade association memberships, and explain the action it will take if these are not aligned with a 1.5°C scenario?

* The applicability of the expectations vary depending on companies' business models

1. LGIM based off IEA (2019), UNEP (2019)

2. Aiming to cover all segments of the business, as articulated within the GHG protocol guidance.

3. Short-term refers to 2022 - 2025, medium-term 2026-2035 and long-term 2036-2050.

4. E.g., capex allocated to green buildings; integration of low carbon materials such as cross-laminated timber, recycled concrete, green steel, clinker free/ low- carbon cement; increased renewable energy uptake; new builds capable of operating with zero emissions; green leases and differentiated pricing.

Further areas for company consideration

Biodiversity expectations

Why? The climate and nature crises are inextricably linked.⁵ Net zero requires both emission avoidance and sequestration. Functioning natural systems are essential to this but increasingly vulnerable due to climate change.

LGIM's expectations: An assessment of the impacts and dependencies on nature and biodiversity, and appropriate mitigation actions.

Sector-specific considerations: Direct impacts could result from the destruction of natural habitats. Indirect impacts could result from upstream extraction, the manufacturing of building materials, and the financing of poor offsetting practices.

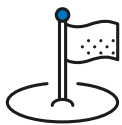


Company levers

- Construction innovation for low-carbon new buildings
- Owners retrofitting existing building stock
- Decarbonisation of power and heat
- Renewables and energy efficiency
- Heat pumps, district heating, biomethane and hydrogen blends
- Recycling and waste treatment
- Meeting consumer demand for sustainable living

Government policies

- Carbon pricing
- Building codes, energy and carbon standards
- Low-carbon public procurement
- Incentives for low-carbon heat and power
- Increased waste collection and recycling



Challenges

Higher costs for lower-carbon materials
 Availability of hydrogen and other low-carbon heat and power sources
 Behavioural barriers and conflicting incentives between owners and occupants
 Policy coordination



Opportunities

Resilience to climate risks
 Energy decentralisation
 Lower energy bills
 Improved tenant satisfaction
 'Green-collar' jobs and urban regeneration



What is needed?

Company leadership	Research and innovation	Consumer behaviour
Investment and R&D across building life-cycle Net-zero targets for building owners and developers	Deep retrofitting models for housing and commercial property Decarbonising steel & cement to reduce embodied carbon	Net-zero public and private procurement Aligning incentives between costs borne by owners and beneficiaries

5. UN IPCC-IPEBS, [Biodiversity and Climate Change workshop report \(2021\)](#)

Sources of emissions



**'Scope 3'
Upstream**

Indirect GHG emissions from a company's purchased goods and supply chain, employee travel etc.



'Scope 1'

Direct GHG emissions from operations including the use of diesel and gas to power trucks and appliances and fugitive methane from coal mining



'Scope 2'

Indirect GHG emissions from purchased energy



**'Scope 3'
Downstream**

Indirect GHG emissions from the processing and use of a company's products (e.g. burning coal to produce steel or generate power)

'Just Transition' considerations

The potential implications for employees, the supply chain, customers and communities from the transition to a lower-carbon business model

Physical risk impacts

High vulnerability to extreme weather; costly adaptations

Potentially uninsurable buildings in certain areas

Sources: LGIM based off IEA (2019), UNEP (2019); UK Green Building Council



For more information and to see how companies are rated

[Climate Impact Pledge 2022 - Net zero: going beyond ambition \(lgim.com\)](https://www.lgim.com/Climate-impact-pledge-2022-net-zero-going-beyond-ambition)

[LGIM Climate Impact Pledge score](#)

[LGIM Climate Impact Pledge](#)

Important information

Source: LGIM as at August 2022. The value of an investment and any income taken from it is not guaranteed and can go down as well as up, you may not get back the amount you originally invested. The above information does not constitute a recommendation to buy or sell any security.

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