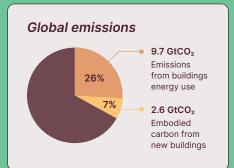


Achieving Zero-Carbon Buildings: Electric, Efficient and Flexible



Solution toolkit: Actions for developers and construction companies

There is a critical opportunity to ensure the next generation of new buildings provide high standards of living, maximise efficiency and choose clean technologies from the start.





Heating



Cooling



Cooking



Lighting and appliances



Embodied carbon

Set ambitious net-zero commitments











Commitments to construct new buildings with ambitious low whole-life carbon targets, which are likely to favour clean, electric technologies in efficient buildings built from low carbon materials.





Commitments for an increasing share of material production and consumption (e.g., steel, cement and concrete) to be lower-carbon.

Drive transparency, data, and reductions in whole-life carbon











Commitments to measure the whole-life carbon (e.g., from sourcing of construction materials to demolition) of all new construction projects and, where possible, share data with policymakers to enable regulation to set clear targets.





Collaborate across the industry to translate leading guidance and frameworks for measuring embodied carbon to all projects, including to lower-income countries, and ensure harmonisation and comparability across countries.













Work with the real estate sector to develop "building passports" - a digital log that contains information on materials, technical characteristics, and energy and environmental performance.



Invest in skills and capabilities to design and build with low embodied carbon, such as:



- How to deploy alternative low-carbon materials (e.g., bio-based materials such as timber and hempcrete).
- Innovative construction and building design techniques which reduce high-carbon cement and steel use.

Ensure new buildings are an asset to a clean energy system











Ensure that all new buildings are built to very high energy efficiency standards, are suitable for, or include, solar panels, and are installed with smart metres and smart energy systems.









Ensure that all new buildings incorporate passive heating and cooling techniques, such as white roofs in hot countries, and double-glazing in windows in countries with a cold winter.