

Embodied Carbon

Architecture

The carbon spent before a building is occupied, and where most of it sits.

Embodied carbon is the greenhouse gas released in extracting, making, transporting, building, maintaining and eventually removing a building, as opposed to operating it.

REPORTED IN
kgCO₂e per m²

BIGGEST LEVER
build less

- Upfront carbon covers stages A1 to A5, to handover.
- Structure and substructure are often about half.
- As operating energy falls, embodied share rises.
- Concrete and steel dominate most frames.
- Reuse of an existing structure beats any new build.
- Reported in kg CO₂ equivalent per square metre.

LOOK FOR IT

Refurbishing rather than demolishing typically avoids the largest single carbon cost a project can incur.

Educational reference. Figures depend heavily on the assessment boundary and dataset; compare only like with like.