Achieving 80% Reduction by 2050
Carbon Emissions in the UK Built Environment

This infographic is based on the Green Construction Board's Low Carbon Routemap for the Built Environment. Development of the Routemap was managed by WRAP, working in collaboration with Arup and the Climate Centre. The carbon emission sources included in the analysis and their values are based on the Routemap. For more information visit: www.greenconstructionboard.org.

For each input, absolute values in 2050 are provided, unless followed by a "→" to denote a decrease.

Legend
- Baseline 1990 Carbon Dioxide Emissions (MCO2e)
- 2050 Carbon Dioxide Emissions (MCO2e)
- Interventions and Assumptions for Emissions Reductions

Carbon emission sources covered
- Operational Non-Domestic includes heating, cooling, ventilation, hot water, and lighting and excludes cooking, other appliances, and plug loads.
- Operational Domestic includes heating, cooling, ventilation, hot water, and lighting and excludes cooking, other appliances, and plug loads.
- Operational infrastructure includes emissions from water/wastewater, outdoor lighting and construction and demolition (C&D) waste treatment, and excludes emissions from use of infrastructures by vehicles.
- Capital carbon includes direct process emissions and indirect emissions from the manufacture and production of UK and imported construction materials and products, emissions from the transport of materials, emissions associated with professional services in support of construction, and all C&D work on site.

UK Built Environment

Carbon Intensity
- 70% Landfill
- 30% Gas Boiler
- 10% Solar

Technologies Improvement v. 2010 Build
- 20% Cooling Delivery
- 10% Lighting
- 10% Heating Delivery
- 10% Buildings Energy Use Efficiency
- 20% Marine Energy Use Efficiency
- 20% Industrial Energy Use Efficiency
- 20% G-Values
- 20% U-Values
- 20% Resistive Heating
- 5% Heat Pumps

Interventions and Assumptions
- 50% CCS in Materials Sector
- 90% CCS in Energy Use
- 30% CCS in Transport
- 0% CCS in Buildings

Growth of Spending
- 50% Energy Use
- 13% Greenhouse gas intensity
- 43% Transportation Carbon Intensity
- 31% Industry Efficiency
- 61% Glass Industry Efficiency
- 30% Plastic Industry Efficiency
- 15% Mineral Efficiency
- 100% Site Efficiency
- 5% Transportation

Gap
- 49% Capital
- 89% Operational

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