

UK Concrete and Cement Industry Roadmap to Beyond Net Zero – a summary



UK concrete is...

- **Essential** for our economy, homes, buildings, infrastructure and quality of life
- **Sustainable**, local and responsibly sourced
- **Protecting people** and properties against fire, flooding and other threats
- **Tackling climate change** and key to a net zero carbon economy
- **Innovating** to meet the future needs of society
- **Enabling great design** that enhances our communities

The UK concrete and cement industry has developed a roadmap to beyond net zero by 2050 – removing more carbon dioxide from the atmosphere than it emits each year.

The industry has a strong track record having taken considerable early action and delivered a 53% reduction in absolute carbon dioxide emissions since 1990 – decarbonising faster than the UK economy as a whole.

However, it is committed to building on this early action and has prepared a detailed and viable roadmap that sets out a clear pathway to reduce emissions to beyond net zero.

Importantly, the roadmap does not rely upon carbon offsetting or offshoring emissions but demonstrates an achievable route to beyond net zero through the application of seven decarbonisation technologies.

The 'Roadmap to Beyond Net Zero' calculates the potential of each technology and the carbon savings which can be achieved.

Five of these technologies focus on production related emissions:

- **Indirect emissions from decarbonised electricity**
- **Decarbonised transport networks**
- **Low carbon cements and concretes**
- **Fuel switching**
- **Carbon capture, usage and storage (CCUS)**

Going beyond net zero will be achieved by using on-site carbon capture and by maximising the natural, in-use properties of concrete which include:

- **Carbonation** – the natural process where concrete absorbs CO₂ from the atmosphere throughout its lifetime
- **Thermal mass** – a property of heavyweight materials like concrete and masonry where heat can be absorbed, stored and released, reducing the energy needed to heat and cool buildings

Government and industry enablers

Delivering beyond net zero requires our industry, all levels of Government and the wider construction, energy and transportation sectors to work together.

There are a number of enabling actions required by Government in order for the industry to achieve its targets:

- Set a net zero goal on consumption emissions, to ensure net zero is not met by closing UK manufacturing and importing goods instead
- Ensure national greenhouse gas accounting includes the CO₂ permanently captured and stored by the carbonation of concrete
- Ensure that the UK electricity system is regulated to provide decarbonised electricity at internationally competitive prices
- Provide regulatory certainty in climate change policy to create long-term visibility for company capital investment programmes
- Require that CO₂ emissions from buildings and infrastructure are assessed over their whole life and introduce this principle into public procurement policy
- Provide subsidies for energy intensive industries with support for research, innovation and deployment of low carbon technologies
- Support the creation of a public and/or private UK CO₂ transport and storage network
- Support the development of a zero carbon gas network and market at cost competitive prices

About UK Concrete

UK Concrete is part of the Mineral Products Association (MPA), the trade association for the aggregates, asphalt, cement, concrete, dimension stone, lime, mortar and silica, sand industries, and represents the UK's concrete industry.

Concrete, and the cement used to make it, are essential materials for our economy and our way of life. New homes, schools, hospitals, workplaces, roads and railways, as well as the infrastructure that provides us with clean water, sanitation and energy all require these materials.

The concrete and cement sector is a key part of a combined mineral products industry, which contributes around £18bn to the UK's GDP and directly employs 74,000 people, supporting a further 3.5m jobs.

Download the UK Concrete and Cement Roadmap to Beyond Net Zero at www.thisisukconcrete.co.uk

Beyond net zero: our roadmap in numbers

Absolute 2050 CO₂ emissions reductions compared to 2018

Delivering beyond net zero is not a linear process but we forecast that seven technology levers will play an important and active part in delivering beyond net zero for concrete and cement.

Contribution to beyond net zero from each technology lever

