ACT technology can decarbonise cement by 50% by 2030

ecocem

Cement, specifically **clinker**, its key component, has a major CO_2 problem.
It is responsible for over 90% of concrete's footprint.
Every tonne of cement manufactured emits almost one tonne of CO_2.

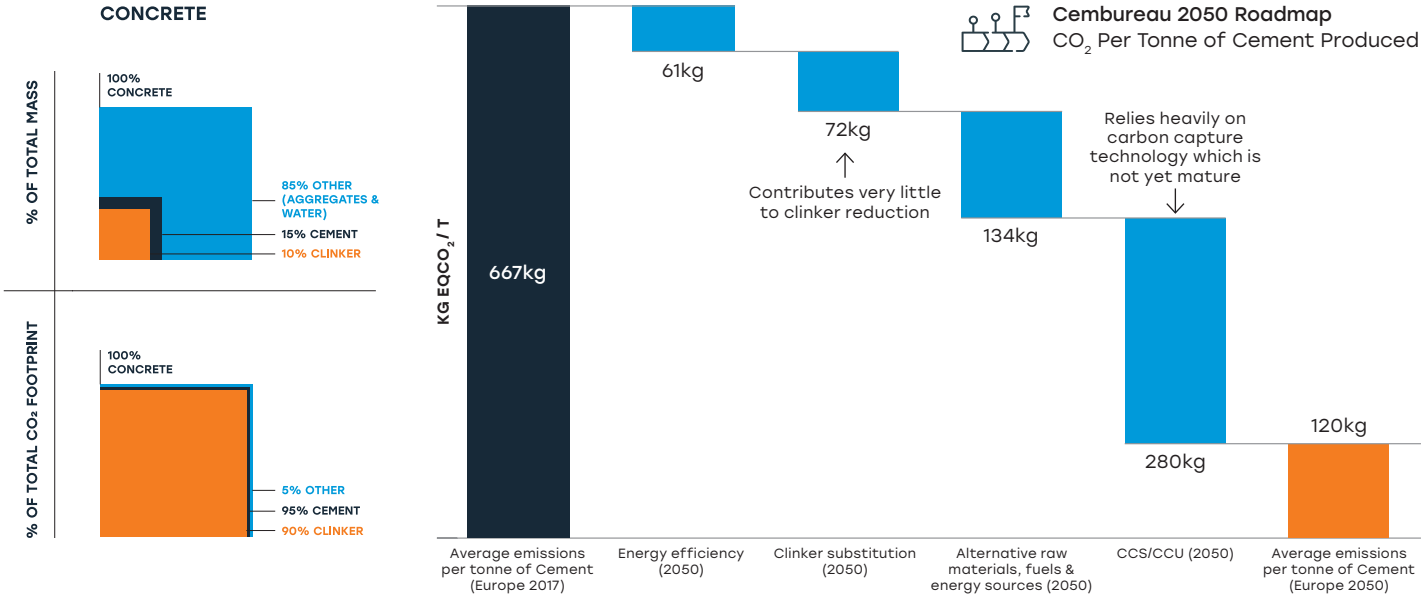
CONCRETE =
Globally the second most consumed product after water

CEMENT =
Almost 8% of global CO_2 emissions

CLINKER, CEMENT RAW MATERIAL =
90% of concrete carbon footprint

If cement was a country =
3rd largest CO_2 emitter after China and the USA.

Clinker = 10% of concrete by volume but = 90% of concrete CO_2 emissions



THE CHALLENGE: TO ACCELERATE DECARBONISATION OF THE CEMENT INDUSTRY

- **Decarbonise the construction industry** by using a range of solutions to tackle emissions from cement and concrete
- **Actively reduce the clinker content in cement** by using low-carbon cement alternatives, which can accelerate emissions reductions before 2030 and reduce the scale of the challenge facing carbon capture technology
- **Encourage** existing cement plants to adopt low clinker technologies, such as ACT **before 2030**
- **Enable** the cement industry to become the first major industrial sector to **achieve a 1.5C decarbonisation trajectory.**

SOLUTIONS DO EXIST

1 Carbon capture and storage (CCS)

CCS is essential to long term industry decarbonisation, however, it will come at a high cost and require substantial investment. It will not be appropriate for all cement plants and the technology will not be operational even at modest scale before 2035.

2 Radically reduce the clinker content of cement

In the short-term, scalable, low-carbon cement technologies are available now and can be easily deployed at little extra cost. They substitute clinker with alternative low-carbon materials and have the potential to halve emissions from cement by 2030, by avoiding carbon production during the manufacturing process.

We need urgent action: "ACT" NOW

ACT: a scalable, low-carbon cement and concrete technology

The product of a decade of research, ACT is a scalable, low-carbon, and energy efficient alternative to traditional cement

-70%
CO_2 emissions
versus cement average

ACT Technology is commercially available from 2026 – low-carbon technologies will enable the cement industry to achieve or even exceed the goals of the Paris Agreement and the Green Deal.

It enables cement, a traditionally hard to abate industry, to decarbonise within the decade.

70% CO_2 REDUCTION

GLOBALLY SCALABLE

DELIVERS ALL OF THE PERFORMANCE CHARACTERISTICS REQUIRED OF ANY CONCRETE IT IS USED TO MAKE – DURABILITY, WORKABILITY AND STRENGTH

USES RAW MATERIALS ALREADY APPROVED BY THE CEMENT AND CONCRETE STANDARDS

CAN BE PRODUCED AT ALMOST ALL EXISTING CEMENT PLANTS WITHOUT SIGNIFICANT INVESTMENT OR MODIFICATIONS

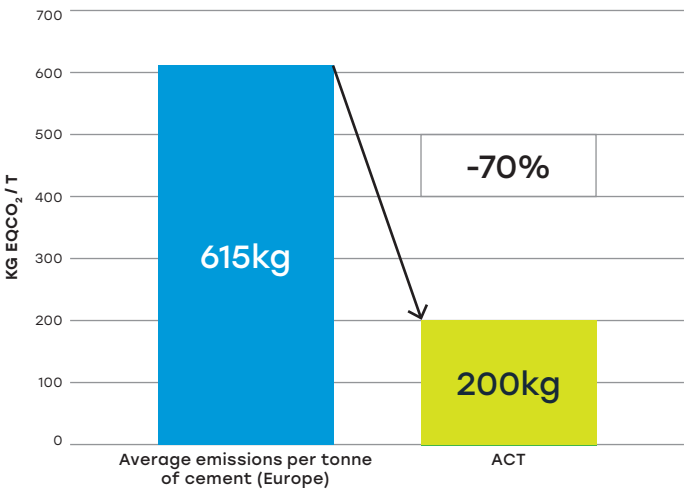
MINIMAL GREEN PREMIUM

ACT TECHNOLOGY OBTAINED AN ETA IN 2024

COMMERCIAL MARKET AVAILABILITY IN 2026

ACT: a drastic reduction of CO_2 emissions

Carbon footprint comparison



Ambition – share of clinker rate used*

	2025	2030*	2050*
European Cement	~75%#	74%	65%
Ecocem	20%	<20%	<<20%

* As per Cembureau 2050 Roadmap
# Estimate based on Cembureau 2017 figure of 77% and target of 74% in 2030, assume equal improvements per annum (c. 0.2% p.a.)

Accelerating adoption of low-carbon cement technologies requires:

- Financial investment to **accelerate industrial deployment** of these low-carbon technologies
- **Public procurement** to ensure the adoption of ACT technology
- **Early certification and standardisation** to ensure ACT technology availability
- Incentivise cement manufacturers to **integrate ACT technology** into production

ABOUT ECOCEM

Ecocem is a pioneer of high-performance technology that significantly reduces CO_2 emissions in the cement and construction industries. Its breakthrough technology can reduce the global carbon footprint of the traditional cement manufacturing process by more than half.

For more than 20 years, Ecocem has been developing, manufacturing, and supplying low-carbon cement and construction solutions to markets in Europe.

From Le Grand Paris Express to Dublin's Aviva Stadium, and the UK's high-speed railway HS2, Ecocem has achieved a cumulative reduction to date of almost 18 million tonnes CO_2 emissions. It would take over 800 million trees to capture this amount of CO_2 in a year.

An independent company with a world-class innovation centre, Ecocem technology, products, and services can help the cement industry cost-effectively decarbonise by 50% by 2030 – and build a more sustainable future for all.

Nearly 11% of the workforce is dedicated to innovation.

ecocemglobal.com
communication@ecocemglobal.com