



# CONCRETE ACTION FOR CLIMATE



## OBJECTIVE

The Concrete Action for Climate (CAC) Initiative is a coalition of organisations that support the objective of delivering net-zero concrete to the world by 2050. The initiative focuses on areas that require cross-industry and multistakeholder collaboration, such as standard setting and demand creation.

Our objectives are to help:

1. Ensure the supply and manufacturing of cement and concrete are in line with global climate goals
2. Ensure there is appropriate demand for low-carbon cement and concrete—helping design and advocate for appropriate policy levers to stimulate such demand
3. Maximise the potential benefits of cement and concrete while minimising climate and environmental impacts through a circularity approach of land stewardship, effective design, material efficiency, reuse, and recycling

CAC, as part of the Mission Possible Partnership (MPP), is co-led by the World Economic Forum and the Global Cement and Concrete Association (GCCA). It will coordinate global climate action, stimulate demand, and help ensure appropriate financing and public policy are in place to meet the 2050 goal.

## THE CHALLENGE

Cement is a key input in concrete, and concrete is essential in shaping our world. It plays a critical role in the construction of buildings and infrastructure, is crucial for the transition towards sustainable development goals, and is important for clean energy development and energy-efficient buildings.

According to the International Energy Agency (IEA), the cement sector is the third-largest industrial energy consumer in the world and the second-largest industrial emitter of CO<sub>2</sub>. It is responsible for 7 percent of industrial energy use and about 7 percent of global emissions.

With global population on the rise and increased urbanisation, global cement production could increase by as much as 12 to 23 percent by 2050.

Despite the industry reducing emissions over the past few decades, the potential for CO<sub>2</sub> reduction within the cement and concrete industry is high. Around one-third of a cement factory's CO<sub>2</sub> emissions come from energy consumption during production. The remaining two-thirds results from the necessary chemical process known as limestone decarbonisation. Industry experts believe that, in terms of energy use, emissions can be significantly reduced by replacing fossil fuels with other energy sources, for example, the use of co-processing, which uses fuel waste from other industrial processes.

<sup>1</sup> *Technology Roadmap - Low-Carbon Transition in the Cement Industry*, IEA, 2018, <https://www.iea.org/reports/technology-roadmap-low-carbon-transition-in-the-cement-industry>.

## THE MISSION POSSIBLE PARTNERSHIP

In that context, the Mission Possible Partnership (MPP) was launched in 2021 to accelerate the decarbonisation of essential global industries representing 30 percent of global emissions. MPP is an alliance of climate leaders focused on driving faster decarbonisation in industrial sectors. The MPP is led by the Energy Transitions Commission, RMI, the We Mean Business Coalition and the World Economic Forum. Our goal is to propel a committed community of CEOs from carbon-intensive industries, together with their financiers, customers, and suppliers, to agree—and more importantly, to act—on the essential decisions required for decarbonising industry and transport in this decade.

MPP represents a step change in ambition. It brings together a remarkable group of business leadership coalitions, public-sector institutions, and expert organisations into an unprecedented collaboration to support growing CEO appetite for net-zero transformation. Our work builds on growing momentum, investor pressure, consumer expectations, and analytical tools to design and execute net-zero pathways for industries, their customers, their suppliers, and their capital providers.

## OUR APPROACH

With this level of collaboration and engagement, the Partnership will be able to secure mutually reinforcing commitments to action from all stakeholders. MPP's actions in each sector will follow a variation of its four-step process:

**STEP 1.** Convene a critical mass of ambitious industry leaders and agree on a shared vision for sector decarbonisation.

**STEP 2.** Leverage existing analysis to develop a sector-specific, viable, high-ambition roadmap to net-zero emissions by 2050 that will be a collaborative exercise with the industry and other stakeholders.

**STEP 3.** Develop commitments to action that tie specific actions in line with the net-zero roadmap milestones, thereby embedding the roadmap in corporate strategies.

**STEP 4.** Build the market infrastructure needed to track and support ongoing implementation of these ambitious commitments via metrics, standards, and toolkits, as well as rigorous implementation of best-practice public disclosure.

CAC provides a platform for stakeholders to align on a net-zero transition pathway for the industry and shape a favourable environment for investment in decarbonisation solutions. This is underpinned by supportive policy frameworks, rising demand, and financial flows towards the industry's transition.

The CAC will outline an industry roadmap to net-zero CO<sub>2</sub> emissions that includes elements of both the supply and demand of cement and concrete, policy recommendations, financing mechanisms, and circularity solutions. In doing so, the coalition will look at enlarging the circle of progressive industry leaders and companies committed to targets based on a net-zero vision. It will also work across the built environment supply chain to create demand for green and low-carbon cement and concrete innovations.

The roadmap will be published by the end of 2021, with key milestones to be reached throughout the transition at 12 months, 3 years, 5 years and 10 years. This includes a high-ambition project by 2030 such as a first commercial-scale net-zero project.

# MAJOR OBJECTIVES

CAC is organised under six multistakeholder work streams with the following objectives:

## SUPPLY-SIDE COMMITMENTS

- Showcase early commitments from the industry and demonstrate progress/actions (e.g., 55 percent of the industry commits to net-zero targets and progress is demonstrated)

## DEMAND SIGNALS

- Propose terms for a buyers' club and launch a pledge, commitments, or principles for private-sector buyers
- Identify the subset of countries with public procurement principles or guidelines
- Identify the subset of cities/municipalities with public procurement principles or guidelines

## FINANCE ENGAGEMENT

- Develop a financing blueprint/roadmap, with key conditions necessary to enable investments into the concrete sector, as a complement to the net-zero roadmap work
- Explore transition finance and climate-aligned finance opportunities

## POLICY ENGAGEMENT

- Based on the net-zero roadmap, highlight the catalytic policies that would enable the sectoral transition

## INNOVATION AND TECHNOLOGY

- Define focus technology innovation areas across the cement and concrete value chain (e.g., CCUS technologies, transportation infrastructure for CO<sub>2</sub>, alternate fuels and binding materials), identify energy transition opportunities, and promote pilots and networks
- Support innovative pilots and progress on technologies through collaboration and coordination across networks

## CIRCULARITY SOLUTIONS

- Optimise circular economy solutions across value chains with a view on the whole ecosystem, including repurposing of buildings, and reuse and recycling of building materials, advancing binding materials, driving innovation, and promoting pilots and collaboration through networks





# PARTICIPANTS

CAC is seeking industry leadership to guide the vision of each work stream and build attainable outcomes.

## CAC LEADERSHIP GROUP

- In recognition that the initiative is industry-led, the chair will be a cement company CEO, drawn from a GCCA member who has signed on to the 2050 ambition
- CAC seeks CEO-level engagement across the value chain to nurture bold, collective leadership

## CAC WORK STREAM LEADS

- CEO and leaders from a range of key organisations that bring expertise and/or experience towards achieving the goals of each work stream

## CAC WORK STREAM PARTICIPATION

- GCCA members of around 40 companies currently
- Participants from value chain players, service providers, startups, and policymakers are invited to engage with CAC
- Government leaders, financial service officers, and innovators who will support the creation of the enabling environment for the transition
- Organisation representation from Mission Possible Partnership, Climate Champions, We Mean Business Coalition, Leadership Group for Industry Transition, and Energy Transitions Commission