Cement Europe

Position Paper

AHEAD OF THE EU CIRCULAR ECONOMY ACT
CIRCULARITY OF CEMENT AND CONCRETE

1st July 2026

The ambition of increasing the EU's strategic autonomy and transitioning towards a competitive and increasingly circular economy is one which Cement Europe actively supports. The European Commission's 2026 Work Programme foresees in the publication of a Circular Economy Act in Q3 of this year. This initiative presents a unique opportunity to further elaborate and consolidate the EU's regulatory framework with the objective of fostering industry's competitiveness and bolstering its strategic independence. Below, we outline the three main areas along the cement-concrete value chain where the sector provides a unique circular economy contribution:

1. Co-processing: circularity of waste streams to reduce dependency on fossil fuels and primary raw materials

As a hard-to-abate sector with two thirds of the carbon emissions coming from the manufacturing process, electrification is not the key to decarbonise the cement industry. In co-processing, the combustible fraction of waste and biomass replaces fossil fuels for use in the cement kilns, while the mineral fraction can be incorporated into clinker and substitute virgin raw materials. the application of alternative fuels in the cement industry shall be considered as partial recycling (15%) of the material input and partial energy recovery. This leaves no waste residue, making it an inherently circular waste management solution. However, this is not accounted for in the current hierarchy.

The cement sector currently utilises ~40 million tonnes of alternative fuels per year. The waste materials used in the cement industry come from a variety of streams and includes, for instance, the biogenic fraction in refuse derived fuels (RDF), end-of-life tyres, saw dust from related industries, animal meals, agricultural waste or wood waste (please see Cement Europe's brochure for more information). These biogenic waste streams are unsuitable for other uses.

In 2023, cement plants in the EU substituted on average 56% of their fossil fuel consumption with non-recyclable waste derived fuels, 22% of which was bio-waste. Cement Europe's Net Zero Roadmap (2024) aims to reach 60% alternative fuels by 2030, and 95% by 2050, with more than half (50%) biomass waste. **At current rates, the sector is avoiding >20 million tonnes of annual CO_2 emissions,** supporting our vision for a carbon neutral Europe for 2050 and contributing to a circular waste management strategy.

The forthcoming Circular Economy Action Plan provides an opportunity to acknowledge the central role of the cement sector in waste management by focusing on the following key measures:

- **Create a dedicated recovery option for co-processing under the Waste Framework Hierarchy, aligned to recovery operation as mentioned in ISO 4349:2024, Solid Recovered Fuels Determination of the Recycling Index for Co-Processing**. the contribution of the cement sector to the waste management value chain through co-processing should be acknowledged in the Waste Framework Directive and taken into account in the recycling targets of the Member States. The current categorisation of co-processing under the WFD restricts the supply of fuels to plants. Co-processing is placed in the "other recovery" category of the waste hierarchy, thereby failing to recognise the dual effect of co-processing. This categorisation places co-processing on an equal footing with less efficient and less circular treatment methods, such as incinerators. Not only is there no recycling element involved in such other methods; but there are multiple, fully renewable alternatives for heat & electricity generation for such other sectors. Accounting for either energy recovery or recycling, the current waste hierarchy fails to acknowledge treatment methods whereby material is **simultaneously recovered and recycled as raw material in addition to energy recovery** – as in the case of co-processing and clinker.

- **Formally remove unintended Renewable Energy Directive (RED) certification requirements for the use of biomass in cement kilns *(articles 29 (1) and 30(3))***. The Renewable Energy Directive causes significant obstacles in accessing waste. The sustainability classification under the RED applies to the biogenic fraction of waste used as fuel in cement kilns, requiring it to comply with the greenhouse gas savings criteria and certification. Although biomass is a fundamental decarbonisation lever in cement production, there is now a high degree of regulatory uncertainty surrounding its use - therefore disincentivising procurement. Cement plants do not produce heat for the purposes in the scope of the RED. The biogenic content of waste, as well as for the secondary solid fuel used in kilns for the production of the clinker, are used exclusively as a heat input to the relevant production process. There is no direct electricity, heating or cooling production to be fed into the grid. **Some Member States – such as Germany, Italy, and Bulgaria - have already set the precedent for providing explicit scope exclusion.** In addition, the European Commission has suggested, in its EC Guidance document "Biomass and other zero-rating under the EU ETS" (version 3), to omit the GHG savings requirement when municipal or industrial waste is used directly for combustion. In order to adopt an EU-harmonized approach on this issue, Cement Europe suggests that the upcoming revision of Annexes V and VI of the Renewable Energy Directive (RED), expected in Q3 2026, formally remove the Renewable Energy Directive (RED) certification requirements for the use of biomass in cement kilns.

- **Divert waste away from landfilling and less circular treatment methods,** and towards higher added value treatment options, such as co-processing in the cement industry.

- Establish a level playing field among waste users: **Waste incinerators are currently not covered by the ETS Directive.** This disparity in treatment creates a major imbalance in Europe's carbon accounting rules and leads to unfair competition in access to alternative, non-fossil, fuels that industry could use to support its competitiveness.

2. CO_2 use as feedstock

Cement Europe Cement Action Plan points out that the cement sector is one of the hard-to-abate sectors with process emissions representing 2/3 of overall CO_2 emissions. Reaching the net-zero ambition by 2050 requires a combined use of traditional levers (alternative fuel and raw material use, clinker substitution, energy efficiency, etc.) and breakthrough technologies such as carbon capture and storage with the latter representing about 43% of the sector's overall emission reduction effort in 2050.

Captured carbon from cement kilns can either be permanently geologically stored or use in a variety of products and materials (CCU). Such carbon use options are vital for many EU cement kilns which are landlocked and not located next to CO_2 storage sites. Through CCU, the cement sector can provide a significant stream of concentrated CO_2 for use in various sectors of the economy, allowing to decarbonisation and cut the EU's reliance on fossil fuels.

A study carried out by VITO for Cement Europe[1] on the topic estimates that there will be a need for between 250 million tonnes and 450 million tonnes of CO_2 by 2050 for a variety of industrial applications (transport fuels; chemicals; food and beverages; metal fabrication; others). CO_2 sourced from accessible biogenic sources is estimated between 21 and 63 million tonnes by 2050. On its side, the EU Commission estimates CO_2 from Direct Air Capture (DAC) to reach 5 million tonnes by 2030 and has no estimate for 2050.

In addition to the CO_2 accounting issues and the permanent or non-permanent character of CO_2 use, both issues that will be dealt with under the upcoming review of the EU ETS, the Circular Economy Action Plan offers the opportunity to lay out the level of demand for CO_2, differentiated by source (industrial, biogenic, direct air capture) and clearly establish that CO_2 from industrial sources as a key input into a circular economy value chain.

3. Concrete recycling

Cement is the essential intermediate to produce concrete, a material that is inherently local, durable, and 100% recyclable, qualities that make it a key enabler of circular construction across Europe.

[1] BULUT, Metin, CO2 from cement industry needed for decarbonation of EU 27 society in timeframe 2030-2050, VITO, April 2023.

Concrete is the largest material fraction in construction and demolition waste in every region in the EU, ranging between 38% in Northern Europe to ca. 61% in Western Europe[2]. On its turn, construction and demolition waste accounts for one third of all waste generated in the EU.

From this perspective, the recycling of concrete substantially contributes to Europe's circular economy model. Concrete recycling is realized in various steps of the value chain, i.e., in concrete, in cement or in clinker production.

Various changes in practice at each point in the concrete life cycle, from design to end of life, will improve the availability of clean and high-quality recycled aggregates to be able to reach high recycling rates.

To further encourage the recycling of concrete while also ensuring the best environmental outcomes, Cement Europe calls for the Circular Economy Act to:

- Encourage pre-demolition audits and sorting demolition waste, to ensure high-quality recyclable material can reach the market.

- Phase out landfilling of construction and demolition waste. Diverting demolition waste from landfill keeps the material in the economy and encourages the market to find solutions for its use.

- Avoid simple targets on recycled content of concrete. Recycled content targets for concrete are difficult to meet and do not necessarily lead to an overall reduction in the environmental impact. This is because supply of recycled materials may not always be available locally and may require transport; concrete made of recycled aggregates may not have the lowest environmental impact; and recycled aggregates are often technically more suitable for other applications. Instead, a circular economy approach needs to encourage all recycling that results in a reduced use of virgin materials & energy, be it "open loop" or "closed loop.

- All (= 100%) concrete & demolition waste should be recycled.

Cement Europe looks forward to being an active part of the discussions on the EU Circular Economy Action Plan.

[2] *Background data collection and life cycle assessment for construction and demolition waste management, Joint Research Centre, 2022.*