

Subject: Clinker substitution technologies should be front and centre in the IAA

Dear Executive Vice-Presidents and Commissioners,

In 1824, traditional Portland cement was first patented in Europe by Joseph Aspdin. He discovered how to produce clinker at an industrial scale, laying the foundation for modern cement making. This heralded the beginning of an era in which Europe industry became a global leader in cement and concrete, largely building upon our expertise in traditional clinker manufacturing.

Today, however, cement and concrete finds itself at a critical juncture. If Europe wants to remain at the forefront of cement and concrete innovations, we need to fundamentally alter the way in which we produce the material. In doing so, reducing clinker as much and as fast as possible will be of the essence to move to a competitive and clean industrial basis. Other regions and countries are moving fast, Europe must follow-suit.

The forthcoming Industrial Accelerator Act (IAA) offers a unique opportunity to make this happen. Taking inspiration from the 1900s, Europe is well-placed to develop and scale the cement and concrete technologies of tomorrow.

To move away from a Portland clinker-centred industry, it is vital for the IAA to acknowledge the importance of clinker substitution and create the right regulatory framework in which these technologies can thrive. These technologies include:

- 1) **Supplementary Cementitious Materials (SCMs)** – a wide range of cementitious materials which can be blended with traditional Portland cements to drastically reduce the share of clinker in those mixes.
- 2) **Alkali-activated cements** – a set of non-Portland cements with a long and proven track-record in (and beyond) Europe.
- 3) **Electric recycling of clinker in steel facilities (EAF)**, reducing the need for virgin Portland clinker production and CCS deployment in the first place.
- 4) **Novel cement types and production methods**, a set of cements which rely on different feedstocks, typically allowing for alternative and non-fossil production processes (e.g. electrochemical production).

Each of the above technologies has a clear place on the market, offering the construction sector the flexibility to opt for the best cement/concrete for meeting the requirements of a given project in a cost-effective way. **As such they complement and reduce the need for much more expensive decarbonisation levers, in particular CCS¹.** This also reflects from the recent [Bellona report](#), showcasing that the most ambitious and realistic scenario for cement decarbonisation in Europe is one with a high degree of clinker substitution.

¹ The abatement costs per tonne of CO₂ for CCS ranges between 135 to 215 euros, while most clinker substitution technologies are cost effective today already (e.g. abatement cost per tonne of CO₂ for a popular type of new SCM is 25 euros) – [France 2023](#)

For the IAA to deliver on clinker substitution, it is vital that:

- **Lead markets create a level-playing field.** Priority should be given to policy interventions at the level of concrete, including the development of labels.
- **Level-up investments for clinker substitution technologies.** This stems from the fact that the EU innovation fund has a bias toward decarbonising ETS installation, i.e. the deployment of CCS to clinker production facilities. Supporting the wider spectrum of clinker substitution technologies would provide significant benefits to the construction value chain, especially due to their potential to achieve cost-effective emission reductions well ahead of 2030.
- **Move to performance-based cement and concrete standards:** European cement and concrete standards are key for the uptake of low-carbon solutions on the market, as well as attracting finance to scale clinker substitution technologies. However, our standards are limited to Portland clinker cements, in many cases fully ignoring low-clinker solutions and alternative cements. While some progress has been made in recent years to improve this situation, they are by no means in line with the pace of innovations, nor the regulatory context in key markets such as the US, Canada or Australia. More effort and priority should be given to this topic to prevent an exodus of European cleantech players in cement and concrete.

Our detailed feedback on the public consultation can be found [here](#).

As highlighted in the recent [Climate Analytics Report](#), cement should not be seen as a hard-to-abate but rather a ready-to-abate sector, provided the right policy support is in place for readily available and scalable technologies such as clinker substitution.

Yours sincerely,

The Alliance for Low-Carbon Cement and Concrete (ALCCC)

The [Alliance for Low-Carbon Cement and Concrete \(ALCCC\)](#) represents leading innovative business and stakeholders across the cement and concrete value chain throughout Europe (and beyond). Proven, scalable and cost-effective solutions exist today, which fundamentally alter the way in which make cement and concrete in Europe.