

Commission for Regulation of Utilities

Review of Large Energy Users connection policy

A SUBMISSION BY
CEMENT MANUFACTURERS IRELAND



19th March 2024

CMI is a business association in Ibec



Cement Manufacturers Ireland

Cement Manufacturers Ireland (CMI) was established in Ibec in 2003 as the representative body for the indigenous cement manufacturing industry. CMI has three members; Breedon Cement, Irish Cement, and Mannok Cement. CMI is a member of Cembureau, the European Cement Association and an Associate Member of the Global Cement and Concrete Association.

Our members' cement factories are critical to the supply of cement for the concrete used in housing, infrastructure, transport and renewable energy projects. Cement is literally the foundation of construction sector activity here in Ireland, supporting thousands of jobs and enabling virtually every construction project on the island.

Located in predominantly rural locations the indigenous cement industry has a long industrial heritage of using abundant local resources to manufacture high quality cement. Our members operate four modern cement factories to the highest European standards and support over 2,000 jobs. The members compete on the island of Ireland to supply cement products to both domestic and export markets.

Due to the scale of the industry, each of our members cement factories are considered XLEUs. We welcome this opportunity to inform the Commission for Regulation of Utilities (CRU) of the decarbonisation and energy demand challenges faced by our members.



Central control room in one of our members' cement factories.

Key messages from our previous submission

Cement is an essential construction material for our economy

Our members' cement product, the key ingredient in concrete, is literally the foundation of Ireland's construction activity, supporting thousands of jobs and enabling virtually every construction project on the island.

The cement manufacturing process runs 24/7

Due to the requirement to manufacture consistent high-quality cement our members' factories cannot operate on an intermittent basis.

Carbon Capture Utilisation and Storage is essential for our sector to reach net zero

The global roadmaps estimate that Carbon Capture Utilisation and Storage (CCUS) will be responsible for between 30-40% of the emission reductions of the cement industry by 2050.

Deployment of CCUS will significantly increase our electricity demand

Large-scale CCUS infrastructure, that will be essential in each of our members locations, will at least double the electricity demand of the locations.

Responses to the Review LEU Connection Policy

The first point to make is that each of our four member locations are classified as XLEUs and our responses below are made in that context. It goes without saying that each of the locations have substantial existing grid connections. Because of the significant capital investments already made in each location and the proximity of each of the factories to large-scale reserves of limestone, the key raw material, our members' locations are expected to remain operational for many decades to come. However, to ensure these locations remain competitive and sustainable our members will need access to additional electricity supplies.

As an essential industry our members recognise their responsibility to transform the way they make cement to ensure, as a key construction material it continues to perform at the highest levels but with less environmental impact.

Significant progress has already been made. But now the transformational challenge facing our members is to achieve further reductions in fossil fuel consumption, the introduction of alternative raw materials and investment in CCUS and other innovative technologies, all while maintaining product quality. Over the coming decades our members will achieve significant transformation of their locations through substantial investment. Much of this is within our own control but there will also be exposure to external factors and decisions. As XLEUs our members will be vulnerable to any deficiencies in energy supplies and accessing future investment will require certainty around future security of supply.

The conditions applicable to any future connections, or increases in existing connections, should be considered on a case-by-case basis, whereby the specific technology challenges of the relevant location and the importance of the industry to the Irish economy must be considered.

Our members support the use of voluntary and incentive-based requirements for any connections and expansion of existing connections, as opposed to any mandatory requirements.

It is important to understand that the continuous operation of the cement manufacturing process is driven by the need for stability of operation to ensure product quality and energy efficiency. Even during periods of reduced demand, campaigns of continuous manufacturing is the most efficient way to operate.

The sector is considered hard-to-abate and that is why Carbon Capture, Utilisation and Storage (CCUS) is seen as an essential technology to achieve net zero. This arises due to the unique challenge of 'process emissions'. Approximately 60% of the emissions are produced by heating limestone. It will be important to consider this in the context of future net zero emissions for the cement industry in comparison to other industries.

Our members are keen to point out again that they will require substantial expansion of their existing grid connections to meet the increased electrical demand for CCUS. The current consultation paper, Review of Large Users Connection Policy has only one reference to 'carbon capture' on page 22. We would expect to see a greater recognition of the critical role CCUS will play in future energy demand scenarios.

The timelines for when CCUS may become viable for the cement industry in Ireland are not established yet but it is expected to be post-2030 and will be dependent on the advancement of capture, transport and storage technology and the support of policy development in Ireland, amongst many other factors.

The cement industry is currently pursuing other decarbonisation opportunities and investments that may also require additional electrical supply pre-2030.

The cement industry will continue to assist with demand flexibility but the preferred mechanism is through incentive schemes.

Conclusion

Manufacturing cement is fundamentally an energy intensive activity with significant carbon dioxide emissions arising from the processing of the raw materials. Our members have through investment, fossil fuel replacement and product innovation reduced the carbon intensity of our cement by approximately 20%.

Further initiatives and investment are under way and how the cement factories access and use electricity in the future will assist our progress to net zero by 2050. Access to increased supplies of renewably generated electricity will unlock future carbon capture opportunities by our members which will be essential to reach the goal of net zero cement and concrete.

Our members will need their existing grid connections to be upgraded to meet this increased demand particularly to ensure we can invest in CCUS for each of the four locations.

We remain committed to working with the CRU, and others to ensure that as Ireland transitions to more renewable generation, indigenous industries like the cement industry continue to thrive because the correct policy supports and investments have been put in place to ensure Ireland has a robust and resilient energy system.