



Just Transition Platform – Policy approach:

OFICEMEN CARBON NEUTRALITY ROADMAP

Spain

This document is part of a series presenting information and lessons learned on policy approaches at national, regional or local level supporting a just transition to a climate-neutral economy. The Just Transition Platform (JTP) assists EU Member States and regions to unlock the support in this transition. Visit the JTP website: https://ec.europa.eu/regional_policy/funding/just-transition-fund/just-transition-platform_en

Member State:

Spain

Region:

N/A

Sector:

Cement

Total budget (€):

No information on total budget

Financing conditions (co-financing rate):

No information on financing conditions

Sources of funding:

No EU funding

National funding:

No information on national funding

Regional funding:

No information on regional funding

Duration:

2021–2030

Responsible Managing Authority/Agency:

Oficemen Agrupacion de Fabricantes de Cemento de España (Oficemen)

Summary

The roadmap looks at how to reduce CO₂ emissions, prioritise environmental goals, and increase energy efficiency by improving its products and processes to combat climate change. The sectoral strategy of this new roadmap is based on the 'Approach of the 5Cs' that promotes collaboration of the entire value chain 'Clinker-Cement-Concrete-Construction-(re)Carbonation' to turn into reality the vision of climate neutrality.

The path to climate neutrality in 2050 requires the accomplishment of a series of intermediate objectives. Established in the Paris Agreement, the Spanish cement sector has set itself the goal of reducing its emissions by 43 % in 2030 throughout its entire value chain. Innovation, digitisation and constant investment in efficiency and modernisation in processes, must continue to be key levers for the cement sector to achieve an impact positive in the fight against climate change.

The Spanish cement industry's roadmap is based on the roadmap 'Cementing the European Green Deal', which was developed by the European cement association Cembureau in close collaboration with its members.

Type of policy measure/activities:

The roadmap presents how the cement industry can reduce its emissions to achieve climate neutrality by 2050. There are five main steps of the value chain on which the roadmap focuses. Those steps are the '5 Cs': **C**linker, **C**ement, **C**oncrete, **C**onstruction, (re)**C**arbonisation. Those 'Cs' are the main stages of the life cycle of cement and the roadmap identifies for each stage which reduction steps can be taken. Those reduction steps incorporate for example: the use of decarbonated raw materials (clinker production); renewable origins of electricity (cement production); carbon neutral transport (concrete production); improving energy efficiency of buildings (construction); and re-carbonisation.

The roadmap is aligned with the National Integrated Energy and Climate Plan (2021–2030), will help achieve the objectives indicated in the Long-Term Decarbonisation Strategy of the Government of Spain, which marks the path to achieve climate neutrality in Spain by 2050.

Goals and approach:

The European Commission has set a goal of carbon neutrality for the year 2050 and the Spanish cement industry aspires to become one of the key players in this ecological transition. This roadmap shows the path to follow so that in the next 30 years carbon neutrality can be achieved, a very demanding but achievable route. The roadmap is based on the roadmap by the European cement association Cembureau.

The Spanish roadmap is meant to provide guidance to the companies of the cement industry. The companies of the sector must develop their own roadmaps and plans to reduce emissions to achieve the reduction goals laid out in the roadmap by Oficemen.

In order to achieve climate neutrality, the '5 Cs' approach is laid out which enables the reduction of CO₂ along the value chain. The approach additionally needs concrete policy measures that facilitates the development of new, innovative technologies, that are needed to design concrete production in a climate-neutral way.

Important outputs, results or achievements:

As the roadmap was only developed in 2020, there are no major results so far. The roadmap is additionally relying on the companies of the sector to develop their own roadmaps adjusted to the overarching one as every company might face different circumstances.

However, there are already two pilot projects that can be seen as a direct output of the roadmap: Power to Green Hydrogen Mallorca Project, and ECCO2. The company Power to Green Hydrogen Mallorca, formed by CEMEX, Enagás, ACCIONA Energía and IDAE, began the production of renewable hydrogen at its facilities in Lloseta in Mallorca on 23 December 2021. Green hydrogen will have multiple applications on the island, such as the supply of clean fuel to buses and delivery vans, and through fuel cells the generation of heat and power for commercial and public buildings or power supply in port terminals. The business sector

is also joining the deployment of this clean energy ecosystem with agreements such as the one reached with the Iberostar hotel group to replace part of its natural gas consumption with renewable hydrogen. Other industrial economic sectors, mobility, public and private entities will foreseeably join the use of this renewable energy, strengthening the green energy project of Mallorca, as well as the reindustrialisation of Lloseta. It is the first renewable hydrogen project on an industrial scale in Spain and in southern Europe.

In the second project, LafargeHolcim, together with Carbon Clean and Sistemas de Calor, have created ECCO2, a joint venture for the development of an advanced technology CO₂ capture plant and large-scale carbon utilisation at the Carboneras cement plant (Almería).

Scalability¹ and transferability²:

As outlined, the Spanish roadmap is based on the European Roadmap 'Cementing the European Green Deal' and adapted to the Spanish cement industry's conditions. The European climate neutrality roadmap was developed by Cembureau, the European cement association,

together with its members. Therefore, it is applicable to all members home countries' conditions.

¹ Scalability entails that a policy approach can be adapted to a bigger scale than just the local context.

² Transferability entails that a policy approach can be applicable to a similar setting and replicated.

Key success factors and lessons learnt:

A major advantage of the cement industry as such is that the end product, cement, is going to play a delicate role in mitigating climate change. However, this end product must be developed in a climate friendly way. Momentarily, the production of cement results in CO2 emissions, but the product cement can contribute to achieving climate neutrality by 2050, e.g. through its ability to capture CO2 emissions.

Key challenges:

The advantages of concrete come with drawbacks, perhaps the most prominent of which is the CO2 emissions from the cement manufacturing process. That is why the Spanish cement and concrete industry has been undertaking voluntary initiatives to minimise its carbon footprint for years, making it the biggest challenge for the future.

The companies of the Spanish cement sector are facing huge difficulties: one the one hand, the reduction of CO2 emissions; and on the other hand, to ensure the competitiveness against competitors from outside of the EU. Carbon leakage is especially relevant: countries that are near the EU might increase their cement capacity production if the EU faces stricter reduction policies that might limit cement production. This is a huge challenge for European producers and the competitiveness of the European cement industry. Therefore, collaboration with politicians, investors and other sectors is needed.

Central framework conditions³:

The European Green Deal and its objectives lay the foundation of climate-neutral transformation. The European cement industry has joined the plan and issues an associated roadmap. Following the European Green Deal's objective will have a major impact on the cement industry in Europe. Achieving climate neutrality by 2050 will require efforts by all stakeholders, innovative adaptations, and an extensive regulatory framework.

Cement production has a longstanding history in Spain. Spain is one of the largest cement exporters in the European Union. The climate-neutral transformation of cement production while ensuring competitiveness is therefore a delicate subject for the Spanish cement industry.

Outlook:

The Spanish cement industry faces huge CO2 reduction efforts in an ambitious, although still achievable, time frame. Therefore, it is crucial that the industry keeps on working for the climate neutrality goal. The cooperation not only with the sector's companies but also their workers is of high relevance. Oficemen is already cooperating with workers representatives to ensure a successful transition.

³ Framework Conditions encompass the institutional, informational and socio-economic factors that determine a given environment (contextual information), e.g. market conditions, access to finance, tax regulation, infrastructure and support.

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<https://www.oficemen.com/wp-content/uploads/2020/12/Hoja-de-ruta-del-cemento-neutralidad-clim%C3%A1tica-en-2050.pdf>

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