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“Conservative” EU carbon market alone will not drive the clean industrial revolution

Carbon Market Watch webinar discussed opportunities and barriers to the decarbonisation of cement and steel sectors

Europe will not become climate neutral without decarbonising its heavy industry. Technical solutions to achieve deep emission cuts in sectors such as steel and cement exist, but strengthening the EU carbon market and implementing a smart mix of policy and financial measures is crucial to incentivize their uptake, industry experts say.

Carbon pollution from the heavy industry remains stubbornly high. It has hardly gone down over the past eight years and is not expected to do so in this decade. Our recent webinar discussed how the EU Green Deal and the EU carbon market can support innovation and what else is needed to bring industrial carbon pollution to zero.

The main message from industrial experts was that carbon pricing alone was not enough. In order to reduce carbon pollution in sectors such as steel and cement, the EU must deploy a variety of measures.

Valentin Vogl, a researcher at Lund University in Sweden, works on the decarbonisation of the steel sector. He is also involved in the ground-breaking “Hybrit” research project, which explores and assesses pathways to fossil-free steel production through replacing coking coal with hydrogen.

The steel sector accounts for approximately 4% of the EU’s total greenhouse gas emissions. According to Mr Vogl, due to its “conservative” design, the EU carbon market alone is simply not enough to drive emission reductions; it optimises the existing technologies but discourages the kind of radical technology shift that we need. The sector will require a mix of policies and measures to increase efficiency and to allow for a technology switch, such as electrifying blast furnaces.

According to Mr Vogl, the discussion around decarbonising the steel system is caught up in the “carbon leakage treadmill”, whereby industry aims to keep the focus on this single topic to keep its free pollution permits. However, employing a robust policy mix would also address the industry’s concerns on this (NB: so far hypothetical) threat.

Mr Vogl proposes a dual strategy to achieve zero emissions from the steel sector. This means measures both on the demand-side (reducing demand and better collecting and reusing materials) and on the supply side (including the above-mentioned electrification of production).

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"*Technically, the steel industry can go to zero emissions, so that should not be an obstacle*", said the researcher.

When it comes to cement production, clinker, which makes 95% of its total composition, is the worst climate headache. The chemical process emissions are responsible for nearly 60% of the sector's total greenhouse gas emissions. **Anne Dekeukelaere**, the owner and director of the consultancy Cementis, has worked in the industry for many years and studied the avenues to produce low-carbon cement.

She referred to recent research from Lausanne University that found that the share of clinker in cement's composition could be reduced by over half and replaced by limestone and calcine clay. This, in turn, could significantly reduce carbon pollution in the sector.

While the climate benefits are clear, Ms Dekeukelaere observed that for the cement industry the economic profits generated by the free allowances disincentivise deployment of cleaner production methods. She concluded that in its current design, the EU ETS does not incentivize a paradigm shift towards low-carbon cement. Full auctioning of emission allowances under the carbon market would make the low carbon cement comparably cheaper, while the cost of a residential house would only rise by 0.5%.

The EU carbon market should not hinder but drive the clean industrial transition

Currently, the EU emissions trading system (EU ETS) is the only policy to reduce carbon pollution from heavy industry. But due to the exemptions built into the system and the massive handouts of free pollution subsidies, the EU ETS has not reduced emissions from industrial processes. The industry experts helped to shed more light on why the free emission allowances are a barrier to the deployment of climate-friendly industrial technologies.

Responding to the conclusion that the EU ETS alone would not decarbonise the steel and cement sectors, **Beatriz Yordi**, director of EU and international carbon markets at the European Commission, described it as "an important" while not "the" instrument", to reduce greenhouse gas pollution from heavy industry.

Following the launch of the EU Green Deal, the Commission is currently reviewing the EU ETS rules, and Ms Yordi confirmed that a proposal would be presented by June 2021. She also said that in this context, the Commission was looking into the possibility of replacing the current free allocation with a carbon border adjustment measure.

Addressing the need to fund innovation, she also referred to the €10 billion Innovation Fund under the EU ETS as one of the instruments that could make the scheme "less conservative, and more forward-looking".

Ioana Popescu, Senior Programme Manager at ECOS – European Environmental Citizens' Organisation for Standardisation also criticised the free allocation of pollution permits under the EU ETS stating that this meant that the pollution pays principle is not holistically implemented under the scheme.

Ms Popescu prefers a “carrot and stick” approach to drive emissions cuts from industry sectors. This means for example funding to support innovation but also a hard regulatory approach to phase out the most polluting practices. It is crucial to design a policy package that addresses the entire value chain of energy-intensive products during their entire life cycle, she said. Examples of existing policy instruments that could be employed include the industrial emissions directive (IED) and its best available techniques approach.

All speakers agreed that energy and resource-intensive industries such as steel and cement can and must decarbonise if Europe is to become climate neutral in line with the EU Green Deal. This will require a mix of policy and financial measures, including a strong carbon price. Carbon Market Watch will continue to assess the problems and solutions in relation to free emission allowances and follow closely and contribute to the discussion. For Europe to become climate neutral as soon as possible after 2030, it is paramount to ensure a clean and competitive European industry that provides good quality jobs without fuelling the climate breakdown. In this future, there is no space for allowing the industry to pollute for free.

You will find all speaker presentations on the event page and catch the recording of the event here.