

Cement's pollution windfall from the EU ETS

Carbon Market Watch Policy Brief, November 2016



Introduction

The cement sector is responsible for 5% of global greenhouse gas emissions. In Europe, the sector emits more greenhouse gases than the whole Belgian economyⁱ. In light of the Paris Agreement objectives, the cement industry will need to achieve deep emission reductions in the coming years. The EU's main instrument to decarbonise cement - the EU ETS - has however failed to deliver this so far: By subsidizing pollution, there has hardly been a sufficient economic incentive to leverage emission cuts in the cement sector.

This policy briefing interprets the findings for the cement sector of an updated CE Delft studyⁱⁱ that shows how industry in 20 European countries has massively profited from its pollution under the EU Emissions Trading System (EU ETS). The briefing ends with recommendations on how to make the EU ETS fit for purpose for the low-carbon transition of the cement industry.

Windfall profits under the EU ETS

The EU Emissions Trading System covers the EU's greenhouse gas emissions (GHG) from the power sector, energy-intensive industries and aircrafts which amount to just over 40% of the EU's total GHG emissions. While power companies are obliged to buy all of their CO₂ allowances at auction, industrial companies get their emission allowances for free.

The emission allowances that are given away for free represent subsidies, since governments forego income and lose out on revenues from auctioning these pollution permits. Companies have furthermore been able to make significant windfall profits under the current ETS rules. Windfall profits occur when industrial companies are over-subsidised for their pollution. This can for example happen when too many free emissions allowances are given away that can be sold for a profit on the market.

The cement industry made €5 billion windfall profits from the EU ETS

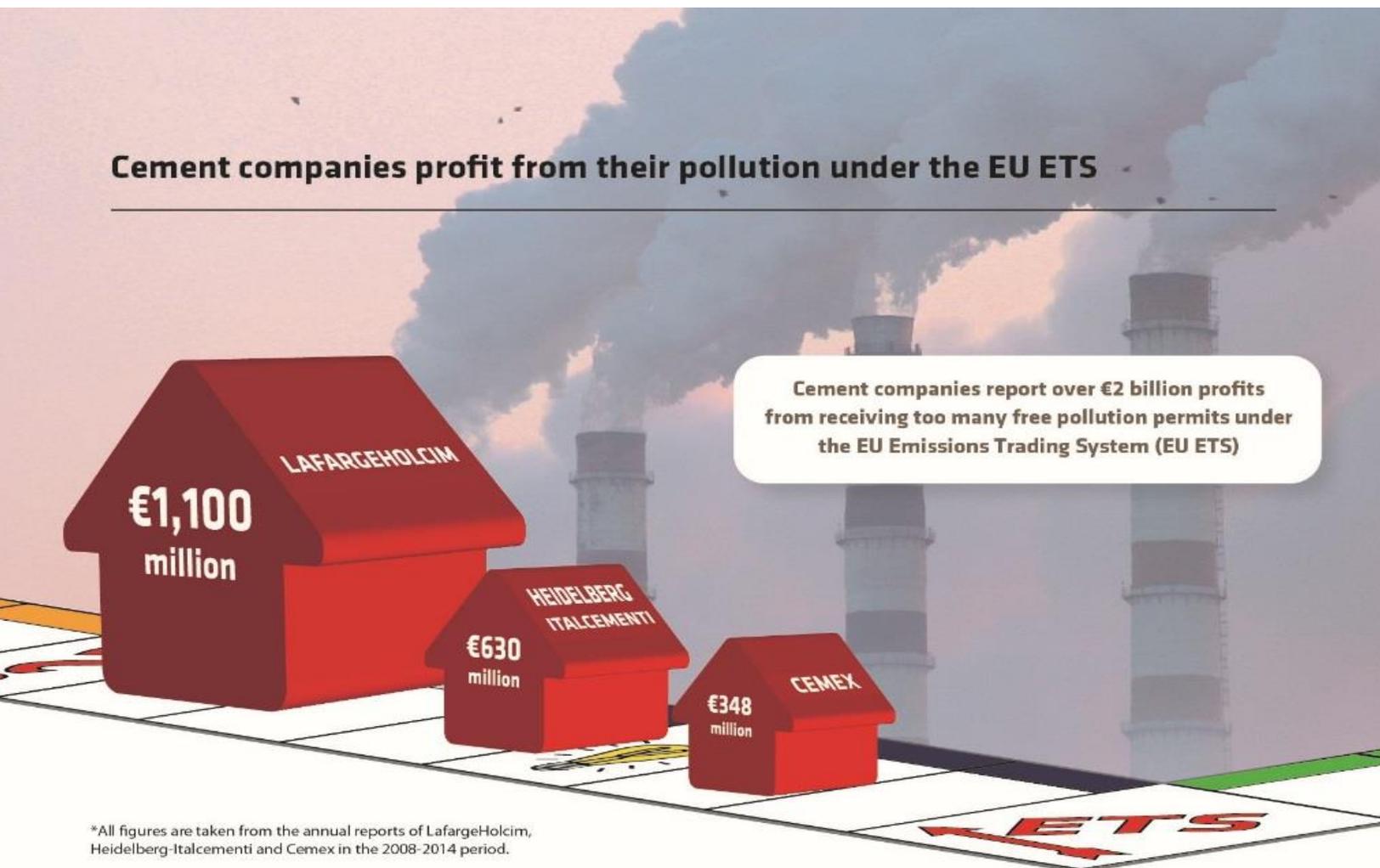
The cement industry in 20 European countries made €5 billion in windfall profits from the EU ETS between 2008 and 2015. In detail, the cement sector has made profits from the EU ETS in three ways:ⁱⁱⁱ

1. **Windfall profits from surplus: €2.7 billion.** Industries have received more emission allowances for free than they actually need, and are able to sell their surplus for a profit on the market.
2. **Windfall profits from offsets: €0.1 billion.** The price for international offsets is much lower than the price for emissions allowances. Industries have bought international offsets to comply with their targets, and are able to sell their remaining free allowances for a profit on the market.
3. **Windfall profits from cost-pass through: €2.1 billion.** Industries have generated profits by letting their customers pay the price for freely obtained emission allowances.

Most of these windfall profits were accrued in Spain (€1,124 million), Italy (€895 million), Germany (€446 million), France (€425 million), Greece (€405 million), the UK (€371 million), Poland (€239 million) and Portugal (€205 million). In Spain, cement companies were able to make almost €800 million from receiving too many allowances and selling this surplus for a profit on the market.

Cement industry confirms profits made from the EU ETS

Cement multinationals themselves have confirmed in their annual reports that they have **made over €2 billion profits** from receiving too many free pollution permits. Between 2008 and 2014, LafargeHolcim has profited by €1,100 million from the system, while Heidelberg-Italcementi made €630 million and Cemex earned almost €350 million.



The EU ETS has failed to promote cement decarbonisation

There are several reasons why the EU ETS has so far been unsuccessful in promoting emission reductions in the cement sector:

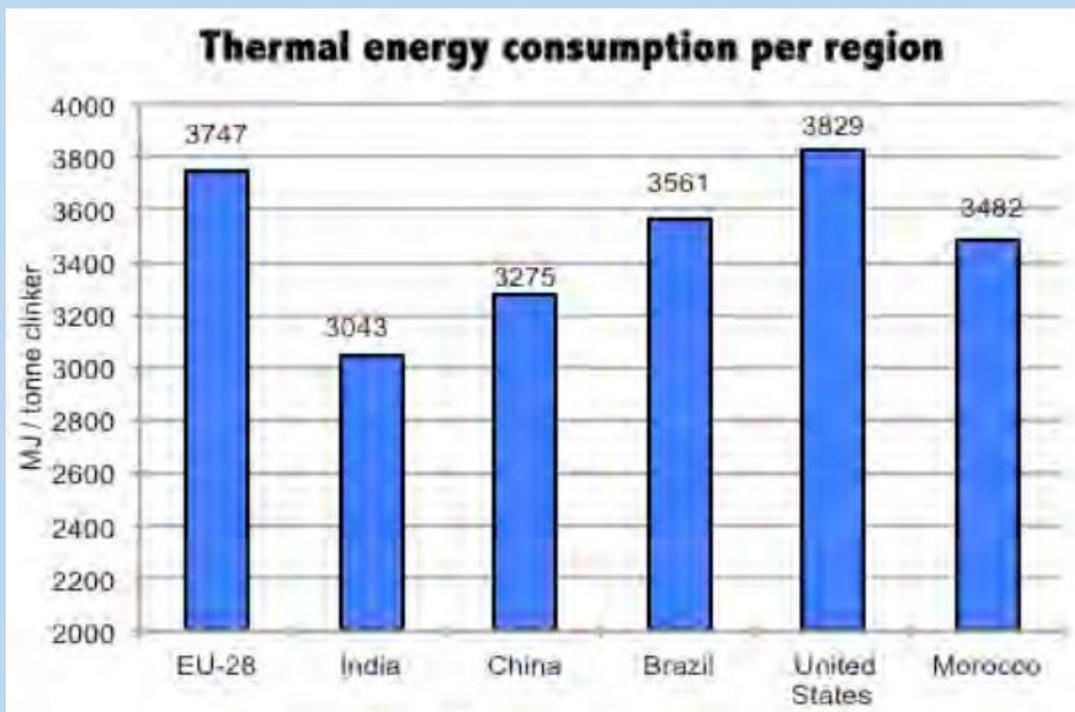
1. The carbon price is currently too low to provide a sufficient signal to produce more efficiently or invest in innovative technologies that reduce CO₂.
2. The EU ETS has allowed high-carbon cement companies to reap huge financial benefits from their pollution instead of making them pay.
3. The EU ETS promotes high cement emissions by incentivising the use of a high-carbon input (clinker). Currently, free emission allowances are awarded to the most carbon intensive step in cement manufacturing (clinker production). This advantage for clinker producers fails to encourage the uptake of low-carbon clinker substitutes .

As a result of these failings of the EU ETS to incentivize the decarbonization of European industry, the European Environment Agency predicts that emission reductions will stall over the next 15 years unless there is an urgent change of the rules^{iv}.

Europe has fallen behind in efficient cement production

Currently, the most efficient cement production occurs in Asia^v. Indian cement production, in particular, is 20% more energy efficient than European production, implying that there is still margin for EU producers to increase carbon efficiency.

Subsidizing pollution through the allocation of free carbon permits results in less money being available for investments in breakthrough technologies. This has halted the development of technologies necessary to significantly decrease the energy and carbon intensity of cement production.



Source: Institute for European Studies (2016)

A forward-looking cement sector

The low-carbon transition of the cement industry will enable opportunities that can enhance the competitiveness of European industry by increasing the economic performance of these industries in a decarbonized world.

The European cement industry still has ample opportunities to reduce its emissions. Achieving deep emission reductions is possible through^{vi}:

- Phasing out older and inefficient production sites and modernizing other plants.
- Substituting high-carbon clinker to reduce process emissions in cement production. There is still significant potential for substituting clinker with granulated blast furnace slag, fly ash material and even limestone itself.
- Investing in process innovations such as the use of the calcium looping Carbon Capture and Storage (CCS) technology that has the potential to capture more than 80% of the cement production emissions.
- Downstream demand reductions that reduce the amount of concrete or cement that is needed.

Recommendations to make the EU ETS fit for purpose

The EU ETS has a role to play in the low-carbon transition of the cement sector, although there is also a need for complementary measures such as the timely development of product standards that allow the uptake of new cement types.

Key recommendations to ensure the EU ETS drives cement decarbonization:

- **Deliver a more meaningful carbon price** that rewards green innovators.
- **End the free allocation of CO₂ allowances** to the cement sector to disallow cement multinationals to profit from their pollution.
- **Introduce benchmarked border levelling** in combination with 100% auctioning, as studies^{vii} have shown that this is the most effective approach to tackle ‘carbon leakage’ in the cement sector.
- **Replace the clinker benchmarks with a cement benchmark** to incentivize the uptake of low-carbon clinker substitutes.
- **Invest more auctioning revenues in climate friendly innovation** and support frontrunners that want to invest in breakthrough technologies.

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ⁱ Sandbag (2016), The final carbon fatcat.

ⁱⁱ CE Delft (forthcoming 2016), Update of the calculation of additional profits of sectors and firms in the EU ETS 2008-2015.

ⁱⁱⁱ CE Delft (forthcoming 2016), Update of the calculation of additional profits of sectors and firms in the EU ETS 2008-2015. Windfall profits from offsets (2) are only calculated for the period up to 2012.

^{iv} EEA (2016), Trends and projections in the EU ETS in 2016, see [here](#).

^v Climate Strategies (2014), Staying with the Leaders: Europe’s path to a successful low-carbon economy

^{vi} Institute for European Studies (2016), The Final Frontier: Decarbonising Europe’s energy intensive industries

^{vii} Carbon Trust (2010), Tackling carbon leakage: Sector-specific solutions for a world of unequal carbon prices