

## **Results of the assessments of sectors and sub-sectors based on the qualitative criteria set out Article 10a(17) of Directive 2003/87/EC**

### **Manufacture of bricks, roof tiles and construction products, in baked clay (NACE code 2640)**

#### *Background on the quantitative assessment*

The Commission's quantitative analysis of the sector showed that although it was above the carbon intensity threshold set out in the Directive, it was below the trade intensity threshold required. CO<sub>2</sub> cost in relation to GVA is 9.8%. The trade intensity is 2.7%.

Two issues have been considered for the quantitative assessment. Firstly, using the CITL (Community Independent Transaction Log) could present a false picture of CO<sub>2</sub> emissions from the ceramics industry in that it is incomplete covering only around 300 installations already in the ETS, while the number of ceramics installations covered by the ETS from 2013 is expected to be significantly higher due to the harmonisation of the definition of ceramics installations in the revised ETS Directive. This circumstance could not be reflected in the standard quantitative assessment (based on data from the CITL) with a result of 4.3%. Therefore Member States data that includes information about the complete sector, considering also small companies, has been used, with a result of 9.8%.

Secondly, the evaluation of carbon leakage for all industrial sectors has been carried out based on Rev 1.1 of the NACE classification at 4-digit level, since this was the version that was applicable during the reference years, 2005, 2006, and 2007. There is a significant difference between NACE Rev 1.1 and the new NACE Rev 2, since the ceramics industry is one of those where the nomenclature was considerably revised. The new NACE definition has the effect of bringing bricks & roof tiles into the same category as wall & floor tiles, which are traded world-wide (some European companies traditionally exporting half their total production).

According to a sensitivity analysis by the Commission services, if bricks and roof tiles had been assessed under NACE Rev 2, the result might have been different, but even then only at the NACE-3 level. However, since NACE Rev 2 only became applicable in 2008, that is, after the three reference years, and for the sake of consistency with the treatment of all other industrial sectors in this whole exercise, Commission staff have carried out their assessment at NACE Rev 1.1 4-digit level.

#### *Qualitative assessment*

- a. The extent to which it is possible for individual installations in the sector or sub-sector to reduce emission levels or electricity consumption

The brick and roof tile production process is highly energy intensive, with the cost of energy normally accounting for up to 30% of total production costs, and the sector accounts for about half of all energy consumed in the ceramics industry.

The kiln technology is already at a mature state. CO<sub>2</sub> emissions come not only from the firing process but also from the raw materials, which differ according to the location.

Specific energy consumption in the industry as a whole went down by up to 33% depending on the country.

b. Current and projected market characteristics

Production, imports and exports all grew over the 3-year period (2005-2007). However, this was a period at the height of the European construction market boom.

It is challenging to establish the ability of companies in the sector to pass on cost of carbon pricing. Some cost can be expected to be passed on in inland EU countries because of the weight of the product. Due to the high transport costs, bricks and roof tiles are currently not traded over long distances, and markets therefore tend to be regional.

Moreover, trade exposure at EU level does not reveal large differences at the national level. Detailed assessment shows that trade exposure of border countries is significantly above the EU average. Even a regional market means trade with third countries at the EU borders benefitting from short road distances.

On the price elasticity side, the available assessments of the price elasticity of export demand leads to high figures, indicating high price sensitivity on export markets for EU producers. To the contrary, domestic demand for bricks and tiles within the EU is deemed to be rather inelastic to prices according to a study on carbon leakage commissioned by the UK authorities.<sup>1</sup> It has proven more difficult to get plausible estimates for import demand.

Exports to non-EU27 countries have been increasing over the 3-year period, although at a much lower pace than imports from non-EU27 countries.

Imports have been following an increasing trend over past years as importers from third countries benefited from relatively low sea transport cost and manufacturers from as far as China have already started imports of clay facing bricks. Over the 3-year period, the share of extra-EU 27 imports over the total imports (intra and extra-EU 27) rose from 5.1 to 8.2%, and reached 9.3% in 2008. The total extra-EU27 imports more than doubled in value between 2005 and 2008, albeit still modest in comparison of EU27 production (80 million euro in 2008 as compared to 6836 million euro production and 221 million EU exports to extra-EU27 countries).

Therefore, currently available data suggest that the trade exposure, albeit only at 2.7% over the relevant period (2005-2007), has increased over the past years (from 2.5% in 2005 to 4.4% in 2008) and is actually higher in Member States subject to competition from non-EU neighbours, as this market is regional.

There is also a clear difference in the structure of the market between the north of the EU and southern countries. The north is characterised by some multi-national producers whereas producers tend to be SMEs in the south. At EU level, the SMEs, which typically had more difficulties in keeping their unit production cost low, represent around 40% of the market.

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[http://www.decc.gov.uk/assets/decc/what%20we%20do/global%20climate%20change%20and%20energy/tackling%20climate%20change/emissions%20trading/eu\\_ets/news/471-carbon-leakage-ce-report.pdf](http://www.decc.gov.uk/assets/decc/what%20we%20do/global%20climate%20change%20and%20energy/tackling%20climate%20change/emissions%20trading/eu_ets/news/471-carbon-leakage-ce-report.pdf)

The sector faces volatile demand, predominantly driven by the construction industry, in particular domestic demand. This can result in periods of low demand, which limits the ability of the producers in this sector to pass on the cost. Brick products are used as materials in numerous branches of building and construction, indicating a low concentration on the side of the client sectors. They are usually designated according to their application, e.g. facing bricks, engineering bricks, lightweight bricks, roof tiles, paving bricks, etc. Clay products are in competition with other construction materials. Production of these (e.g. concrete, steel framed and timbered structures) is also covered by the ETS.

c. Profit margins

Profit margins have been compared to CO<sub>2</sub> cost and the result shows that CO<sub>2</sub> cost would represent around 45% of profit margins considering the results of the standard quantitative assessment. Furthermore, EU average results reflect an overall decrease in profit margins, with many Member States reporting negative margins by 2008. In 2009, a sample of companies for which data was already available experienced a further worsening of results.

Being a capital intensive industry, the economic situation of the sector is very sensitive to the rate of capacity utilisation. The comparison between the return on capital employed and the weighted average cost of capital of the sector shows a growing discrepancy between the two ratios starting already in 2007, leading to low incentives to invest in the long run.

d. Conclusion

Based on this assessment and the combined impact of the qualitative criteria referred to in Article 10a(17) of the Directive, it can be concluded that the sector should be deemed to be exposed to a significant risk of carbon leakage. This qualitative analysis is specific to the assessment of the carbon leakage risk in view of granting free allowances for direct emissions and does not prejudge the Commission's conclusions on sectors eligible for compensation for indirect emissions. It is based on the specific situation of this sector and complements the quantitative analysis based on the combined criteria of CO<sub>2</sub> cost increase in relation to GVA and trade exposure.