



EU Emissions Trading Scheme – further approaches to benchmarking in steel and cement sectors

Science Summary SC070011

The EU Emissions Trading Scheme (EU ETS) is a key policy introduced by the European Union to help meet the EU's greenhouse gas emissions reduction target.

The scheme is divided into phases for which Member States must develop a National Allocation Plan (NAP) approved by the European Commission. These plans must set an overall 'cap' on the total amount of emissions allowed from all the installations covered by the scheme. This is converted to allowances - 1 allowance equals 1 tonne CO₂. The allowances are then distributed by Member States to installations in the scheme.

Installations covered by the Scheme are required to monitor and report their emissions. At the end of each year they are required to surrender allowances to account for their installation's actual emissions. They may use all or part of their allocation and have the flexibility to buy additional allowances or to sell any surplus allowances generated from reducing their emissions below their allocation.

Installations are covered by the EU ETS on the basis of CO₂ emitting activities they carry out, and cover heavy industries such as steel and cement manufacture.

The aim of this study was to investigate to what extent benchmarks already developed in the UK (Phase II benchmarks for new entrants, termed 'NE Ph II BMs') would be suitable for incumbents in Phase III. The study also looked at potential alternatives to the NE Ph II BMs and considered the key issues that could arise from applying a UK-centred benchmark at the EU level. It was not within the scope of the project, however, to recommend any particular benchmark method(s) for Phase III incumbents.

Benchmarking is a process of gathering information on organisations within a specific sector and using this data to compare performance and to set targets. Benchmarking can be applied in a variety of ways; this

study focused on the use of benchmarks to set allowance distributions within an externally determined sectoral cap for the UK. The issues were explored by analysing two sectors, cement and iron/steel, selected due to their carbon intensity and vulnerability to international competition. The suitability of different benchmarking formulae is assessed against feasibility, environmental effectiveness and economic criteria.

The applicability of Phase II New Entrant Benchmarks to Phase III incumbents will vary from sector to sector. The criteria used to develop NE Ph II BMs included feasibility, incentivising clean production and competitiveness impacts, with an overriding steer to develop standardised benchmarks to ensure transparency, simplicity and incentivisation of clean technology. These benchmarks would generally score well against the feasibility and environmental effectiveness criteria used in assessing Phase III incumbent benchmarks. Differentiation was only generally applied for different products (such as types of lime).

The main potential trade-off is with competitiveness, and the extent of this impact under an EU-wide benchmark will depend on how the UK sector compares with the rest of the EU in terms of raw material, fuel and technology.

For sectors where NE Ph II BMs were broken down into different process units, particularly to allow for allocation for modification of existing plants, more aggregated benchmarks might be more suitable to incumbents, for example, to allow for the variation in energy flows among different processes. The integrated steel sector is a good example of this.

The fundamentally different application of benchmarks to incumbents (generally with historic data) versus new entrants (without historic data) would be expected to lead to minor modifications to the NE Ph II BMs so that they were based on actual production, activity levels,

product mixes and so on rather than the standardised assumptions for new entrants.

If benchmarks are applied across EU sectors, the chosen formula will affect the sectoral cap for a country. Therefore, variations in installation performance at an EU level are important. Ongoing data collection by EU sectoral associations should allow accurate assessment of proposed benchmarking formula in the near future.

The economic impacts of different benchmarking formulae are lessened by their combination within an overall sectoral cap. The effects of switching from one formula to another must be assessed in the context of the actual sectoral cap and ratio of auctioned allowances.

A transitional phase benchmark is only relevant where the balancing of economic impacts and environmental effectiveness requires short-term differentiation on the basis of technology, or other aspects that the operators have a choice over in the medium to long term. Under the assumptions applied to this analysis, transitional benchmarks do not appear to be relevant for the cement and iron/steel sectors.

This summary relates to information from Science Project SC070011, reported in detail in the following output(s):

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