



Carbon Floor Price Briefing

The Government announced today a consultation on the design of a ‘floor price’ for the carbon market. This short briefing explains what a carbon floor price is and why the Government believes it is needed. It also highlights the issues that need to be born in mind when designing and evaluating a policy intervention of this kind. It will be important to consider not just the detail of the policy itself but also how it fits in to a broader strategy the Government must deploy to create the right conditions to decarbonise the British economy and grow the sustainable energy sector.

What is a carbon floor price and why is it needed?

Creating a carbon floor price in the UK essentially requires our industries to pay a top up if the market price for carbon falls below a certain level.

A carbon floor price is a regulatory/taxation policy that states that polluters must pay a minimum amount of money for the right to pollute. This is likely to take the form of a tax that requires those who qualify to make a payment to the Treasury. It is expected to replace the existing Climate Change Levy, which is a downstream tax on energy use rather than a direct upstream tax on greenhouse gas pollution.

Roughly half of Europe’s emissions are covered by a European regulation that caps emissions (the EU Emissions Trading Scheme) requiring them to submit sufficient permits to cover their emissions. Permits, known as allowances, can be freely traded and the price someone is willing to pay to acquire them determines the price of pollution. At present because there are too many allowances available in the market compared to the demand prices are relatively low – at around €15 per tonne of carbon dioxide equivalent. This low price is not necessarily enough to dissuade polluters from continuing to emit and does not provide an attractive enough return for would-be investors in low carbon solutions. There is also the risk that it could fall even lower. This lack of price certainty is seen as a potentially important barrier to investment.

One way to overcome this problem and provide stronger incentives would be to issue fewer allowances so that there is more scarcity in the market – this is best achieved at an EU level

where discussions are underway to do just that¹, however, this may take some time and is not guaranteed to happen.

A carbon floor price is therefore primarily designed to attract low carbon investment into a country by making the price of pollution higher and increasing the rewards for low carbon projects. As explained below it is not in and of itself an environmental policy and in terms of value for money it must be assessed as an industrial policy.

How will it work?

The UK's coalition Government has stated that it wishes to introduce a carbon floor price as part of a range of policies to drive investment into low carbon solutions. The precise effect such an intervention will have will depend on important design decisions such as the level at which the floor price is set, the time period over which it operates and who it will be applied to. It will potentially impact on investment in the UK but it will not do anything to reduce overall carbon emissions in the EU, which are set by the emissions trading scheme.

Potential levels and time lines

The European Commission assumed that carbon prices in this trading period (2008-12) would be around twice what they are today, however, the impact of over allocation of permits to certain sectors and the huge sustained economic recession have combined to reduce prices to almost half the anticipated value.

The UK could decide to impose an immediately effective floor price, which takes the price of pollution all the way up to this projected level of cost. This would however have a very significant impact on the competitiveness of UK industry relative to competitors in the rest of Europe. It is much more likely that the floor price will initially be set either at today's market levels (around £13-14 per tonne) or slightly above, incorporating the cost of the Climate Change Levy which is currently equivalent to around £4-6 per tonne. A price escalator may also be built-in to steadily increase the floor over time.

The time period is linked to the question above. If it is significantly above the current market price for carbon, it should not be introduced now as this will create large windfalls for existing low carbon generators. Benefitting previous investors whose decision were already justified by the market conditions under which they originally invested is not a very fair or efficient way to incentivise future investment by new entrants to the market. It would be far more efficient to introduce it to apply in future, say from 2016, when significant volumes

¹ In May the Commission issues a communiqué where as part of a package of policies to take EU emissions to 30% below 1990 levels by 2020 it proposed taking 1.4bn permits out of the market to tighten caps.

of new capacity will be needed. The Government has said that once introduced it would be expected to stay in place for a minimum of 25 years.

Who will it apply to and who will pay?

A likely configuration of a floor price is that it would be applied to UK participants in the EU emissions trading scheme – meaning the electricity generating sector and the heavy industrial sectors such as iron and steel, chemicals and oil refining. One design option would be to require anyone buying permits from the market to meet their cap to pay an additional sum on top of the current market price to meet any difference between it and the floor price. Since by and large only power companies have been given targets that require them to buy spare permits, this would, in the short term, only affect electricity companies. This would disadvantage generators using high carbon fuels such as coal and provide a subsidy to renewables, nuclear and other low carbon generation. Another potential configuration is that the floor price is applied to all emissions by an installation with a rebate being applied on the cost of permits purchased to meet the cap.

It seems likely that whatever the exact mechanism, to protect heavy industry sectors from the impacts of the higher prices, they will be exempted from the policy.

As with the Climate Change Levy the Government is likely also to introduce exemptions for certain energy using sectors outside the EU ETS that it considers will be unduly impacted by the higher energy costs implied by the policy. This would require some form of rebate being made available via electricity bills.

Will it have an environmental impact?

The UK's floor price will hopefully improve the attractiveness of the UK as a destination for low carbon investment, and therefore reduce the carbon intensity of the UK's energy system, however, it will not save any additional tonnes of carbon. The overall number of permits allocated across Europe determines the level of pollution that will occur over time. Simply changing the price does nothing to alter this. Permits can be banked indefinitely and every one will be to allow an emission to occur somewhere in Europe. It is incredibly important therefore that a floor price does not become a substitute for ensuring that there is enough demand for emissions reductions in the market. This can only be effectively and efficiently achieved by tightening the caps on emissions. If other large countries like the UK were to follow suit and introduce floor prices it could have an overall negative impact across Europe. Consistently over-paying for emissions reductions would increase the number of spare permits in circulation depressing the market price even further and reducing incentives across the whole of Europe.

Where will the money go?

The Government is likely to seek to make the overall impact of the increased tax take revenue neutral for the Government ie they would not see it as a money raising exercise too boost public accounts. This would require that revenues were paid back in one way or another. If the model of the Climate Change Levy is followed this could be in the form of cuts in employment tax such as National Insurance. Alternatively it could be repaid in the form of grants to speed the flow of investment in low carbon technologies still further. It is likely that energy intensive industries, who will be hit by rising energy bills as increased costs are handed on, will demand refunds to compensate for these impacts, particularly as many sectors currently enjoy exemptions from the CCL but are not exempt from the impact of the trading scheme. In addition social welfare and consumer groups may demand that the most vulnerable in society are also compensated for the higher energy bills they will face as a result of the floor price policy.

An alternative proposal

In considering this policy in detail the Government should also evaluate a variation, which would see the introduction of a reserve price set for the auction of permits into the market. This would have a similar impact in terms of creating confidence in the carbon price as it would signal the price of carbon the Government expected to be paid now, and more importantly, in the future when auctions become the main method for distributing permits. It has one important advantage, however, in that if the market does not want to pay the higher reserve price then unsold permits can be carried forward and eventually removed from the market reducing the supply of permits into a market which is already currently oversupplied.

Already between now and next March some 31 million permits will be released into the market in 7 instalments of 4.4 million.² The UK should set a minimum price at which these permits would be released into the market, cancelling any permits which were not sold at the reserve price, reducing the supply of permits, lowering emissions and raising the carbon price overall.

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² <http://www.dmo.gov.uk/index.aspx?page=ETS/AuctionInfo>