
CLIMATE STRATEGIES RESPONSE TO HM TREASURY AND HM REVENUE AND CUSTOMS CONSULTATION ON CARBON PRICE FLOOR

BASED ON ANALYSIS PRESENTED IN THE
JOINT CLIMATE STRATEGIES AND
CLIMATE POLICY INITIATIVE PROJECT
'CARBON PRICING FOR LOW CARBON
INVESTMENT'

Project Leader

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Climate Strategies Response to HM Treasury and HM Revenue and Customs Consultation on Carbon Price Floor

Based on Analysis Presented in the Joint Climate Strategies and Climate Policy Initiative Project 'Carbon Pricing for Low Carbon Investment'

1. Introduction

The following comments on the UK proposal for a carbon price floor to support and create certainty for low-carbon investments are based on a the study "Carbon pricing for low-carbon investment" that was jointly pursued by Climate Strategies and Climate Policy Initiative with partners across Europe and is available together with the contributions from various partner organisations on www.climatepolicyinitiative.org and www.climatestrategies.org.

The proposal is in line with the objective to advance the low-carbon development agenda in the UK, which is widely acknowledged for the clarity it offers, the consistency it provides across sectors and time to support low-carbon investments, and the opportunities it creates for innovative products and services from the UK.

The comments provided for this consultation are based on the analysis that emerged from workshops across European countries, and interviews with companies in the UK as well as several other European countries. As such, the comments focus on the aspects that are emerging from the European perspective, so as to complement the sophisticated discussions in the UK. The European perspectives can be of relevance for the UK because:

- Many companies expected to invest in the UK power sector are active across many European countries.
- The economic benefits of a UK low-carbon development will increase prospects for innovative products and services in the common European market
- Actions pursued at the European scale will have impacts on emissions and visibility in other regions of the world.

In the joint Climate Strategies and Climate Policy Initiative study we find that the European Emission Trading Scheme impacts on three aspects of the decision process for low-carbon investments:

- 1. Capturing Companies' Attention** - the policy framework must capture the attention of the relevant decision makers in an organization and results in an appropriate prioritization of climate objectives.
- 2. Providing Clarity for Decision Making** - by defining an emission trajectory beyond 2020, the EU ETS provides guidance for the assessment of low-carbon opportunities.

3. Creating Enabling Environment for Low-Carbon Investment- The carbon price created with the EU ETS contributes to the financial viability of low-carbon projects; however, further components are often required to enable their implementation.

We use these three aspects of low-carbon decisions to assess the proposal by the UK government to implement a carbon price floor for UK power generation by increasing taxes on fossil fuels based on their carbon content so that the combination of fuel duty and EU ETS deliver the target carbon price.

Before discussing these aspects in detail, we would like to introduce three objectives a price floor can aim to deliver, which in turn impact the design of its implementation:

- i. To protect auction results:** Technical failures or unforeseen events could result in unexpected low participation at the auction and could potentially result in very low carbon prices. This can be avoided if a reserve price for the auction is set, usually relative to quoted carbon prices during previous days. This is rather uncontroversial and a technical question.
- ii. To avoid the risk of very low carbon prices:** Policy change or unforeseen developments in the financial markets impacting the ability of market participants to bank CO₂ allowances could result in significant drops of the carbon prices, e.g. below 10 Euro/t CO₂. While analysts would attribute very low probabilities to such events, it might be more difficult to quantify these probabilities for banks when issuing low-risk bonds. The credible commitment to a reserve price in allowance auctions across Europe, or the issuance of put options on future allowances could increase the confidence that very low-carbon prices are avoided. It is unclear, how high the financial sector considers the risk of very low-carbon prices to be: EU ETS carbon prices now have a strong track record of maintaining a stable price throughout the financial crisis.
- iii. To increase and supplement the carbon price above the current level:** The carbon price emerging from the EU ETS is currently too low to facilitate the investment in many of the low-carbon generation technologies. A carbon price support mechanism as outlined in the consultation supplements the total carbon price which power generators are exposed to, so as to increase the viability of low-carbon investment choices.

Objective (i) has already been implemented in the UK EU ETS auctions. The current proposal aims to deliver both objectives (ii) and (iii). There is a significant body of work assessing potential mechanisms to avoid the risk of very low carbon prices (objective ii). Such mechanism can offer benefits for the implementation and financing of individual projects and could be interpreted as an insurance approach. Potential interactions with the concept of the overall scheme are likely to be confined. As pointed out above, we have not pursued the detailed assessment to see how important the implementation of such a mechanism to avoid the risk of very low-carbon prices is, after the EU ETS price has maintained a steady performance throughout the financial crisis.

The comments in this discussion focus on objective (iii) - to increase and supplement the current and future carbon price level above the current level - as this is the main dimension for which the studies offer additional insights.

The remainder of the document discusses the impact of a supplementary UK carbon price on the attention and prioritization investors attribute to climate policy in their decisions (section 2), on the clarity to support low-carbon investment choices (section 3) and on the implementation of low-carbon power projects in the UK (section 4).

2. Will a supplementary UK carbon price maintain the attention and prioritization of climate policy for decision making?

In a survey with continental European power generators, we found that for low-carbon investment and innovation activities, the relevance attributed to long-term climate policy targets and to EU ETS is highly correlated, suggesting that they are mutually reinforcing (based on a survey of power generators by ISI-Fraunhofer/ETH).

Many of the utilities investing in the UK are active across several European countries, and are thus likely to take the emission trajectory and the carbon price emerging from the European Emission Trading Scheme as main input for strategic choices on their overall portfolio. Not least, because these utilities in turn have to explain their corporate strategy to their international shareholders and bond holders.

At this level it might be difficult to explain the national specific supplementary carbon price that is not aligned with the relevant EU framework formulated in the EU ETS Directive. Hence a UK specific carbon price supplement might be less relevant in attracting attention for strategic portfolio choices of utilities and their investors and the stringency of EU ETS will determine what level of attention and prioritisation will be dedicated to climate policy objectives. (Answer to question 5.B.1)

The current emission trajectory formulated in the EU climate package only achieves 51% emission reductions by 2050 – falling short of the commitment by heads of state to 2C that translates to 80-95% emission reduction. This inconsistency and sign of insufficient stringency might well reflect on the attention and prioritization that companies attribute to climate policy objectives, and does thus argue for a European move to strengthen the emission reduction targets which in turn would result in higher carbon price. (Answer to question 3.A.1 and 4.E.2).

3. Will a supplementary UK carbon price contribute to clarity to support low-carbon investment choices?

Climate policy is one of many factors that investors need to consider. Hence it is important that the climate policy framework is clearly and consistently formulated so as to allow for appropriate representation in strategic assessments (e.g. scenario analysis).

The consistency of a supplementary carbon price with the overall policy frameworks depends on the perspective of investors:

(i) UK Perspective

From a UK perspective, a higher carbon price is aligned with the UK emission objectives as formulated in the climate change act.

The question therefore relates to the robustness attributed to the supplementary carbon price. It can only be effective, if it is considered to be robust - otherwise strategic investors will discount or ignore it in their investment analysis. The example of the UK fuel price inflator illustrates the risk of tax based policies. The increments were abandoned with the fuel protests in 2000.

The attraction of EU ETS is the regulatory commitment introduced with the sign up by all European governments and European Parliament. Thus it is difficult to revoke the scheme on short notice or by individual countries, enhancing regulatory stability.

A UK only approach creates distortions to power and gas trading (both to continental Europe, and to Ireland) and concerns about competitive distortions with regard to electricity-intensive production in neighbouring European countries. We did not quantify these impacts. The experience from the discussions on free allowance allocation under EU ETS suggests that even where economic and environmental impacts might be small, the politics are complicated and carry inherent risks for the

implementation process. As a result, announcements of high future carbon taxes for fossil fuels used in UK power generation are likely to be discounted in investment assessments.

(ii) European perspective

The carbon prices for fossil power stations in the UK will be in the short-term higher than implied by the future EU emission targets. This introduces an inconsistency that undermines clarity, if there is no clear process to also strengthen the EU emission target.

- It breaks the link between current UK carbon price and the emission trajectory formulated under EU ETS.
- It breaks the link between the UK carbon price and the carbon price pursued in European/non-UK strategic choices and investment appraisals.

Companies might choose to ignore the particular UK policy 'detail' or might attempt to include the additional complexity in their investment choices. Aspects that are complex are difficult to represent, difficult to understand, and difficult to verify, and thus risk receiving less weight in the final decision

The discussion shows the value both from the perspective of UK investors and European investors, of increasing the carbon price in a joined-up European approach by strengthening EU ETS emission targets (Answer to Question 3.A.3).

Political dynamic

With a supplementary carbon price, UK power installations would be, in the short-term, exposed to higher carbon prices than implied by the future EU emission targets. This could be interpreted positively or negatively:

(i) Initiating momentum towards increasing stringency of EU emission reduction targets

The UK price would be interpreted as a first signal of a move to higher carbon price at EU level – contributing to a political momentum for more stringent Emission reduction targets.

The UK action could accelerate initiatives of EU Commission and Parliament to pursue a joined-up approach to protect the consistency of EU climate policy and the common European market.

European momentum, framework, scale and visibility will be important to attract and accelerate low-carbon innovation and investment.

(ii) Undermining joint approach to low-carbon development in Europe

The unilateral UK approach could be interpreted as a sign that the UK might reduce the previously very successful efforts to contribute to EU climate policy agenda including a shift of EU ETS targets beyond 20%.

This could in turn encourage other countries to pursue unilateral approaches to pursue carbon price support scheme. If increasing shares of emissions covered by the EU ETS would be subject to additional carbon taxes based on a national supplementary carbon price, then these emissions would no longer be responsive to the EU ETS carbon price (in the UK proposal, lower EU ETS carbon prices are compensated in the power sector by national taxes). With less responsive and lower demand for CO₂ allowances, the price of EU ETS allowances declines and becomes more volatile.

The two scenarios illustrate the importance of embedding a UK policy to support the carbon price in a strategy to strengthen the EU emission reduction targets.

4. Will a supplementary UK carbon price support the implementation of low-carbon power projects in the UK?

The decarbonisation of the European power sector requires large investment volumes that exceed by far the balance sheets of European utilities. Thus they will have to leverage their balance sheets with additional debt. Parties that acquire debt and parties that hold equity are sensitive to investment risks: thus both will carefully assess the additional risk(s) associated with investing in new low-carbon in an environment including a supplementary carbon price. What are the implications for the UK carbon price support mechanism (answer to question 5.B.1)?

(1) Renewables

Renewable investments are financed against long-term price guarantees provided by the UK ROC that is gradually converging to a feed-in tariff. For investment in renewable generation capacity therefore the question is, whether the political viability of the renewable support schemes increases or declines with a supplementary carbon price. Higher carbon prices reduce the need for renewable subsidies and can thus reduce the policy risk associated with the renewable support schemes. Likewise, a more stringent European EU ETS cap would achieve the same objective with the additional benefit of higher visibility, consistency of short-term policies with long-term objectives, and the added momentum and regulatory stability inherent in a European framework.

(2) Coal and gas power stations with Carbon Capture and Sequestration (CCS)

CCS is at the demonstration phase and currently receives dedicated support. This dedicated support is likely to be the main determinant impacting on investment choices for the demonstration plants (NER 300 funding at EU level and national complementing policies). However, utilities will only dedicate their full attention to CCS, if they anticipate a large scale application beyond initial demonstration projects. The necessary scale can only be achieved by the European power market, not based on individual member states. Thus any strategic choice of companies to dedicate their resources to CCS will likely be based on the credibility and stringency of EU ETS.

(3) Nuclear power

Nuclear power stations are not viable at the current carbon price level in the EU. Would a higher carbon price implemented with a carbon price supplement ensure their commercial viability in the UK? This depends on whether European companies would take the risk of investing in nuclear power station in the UK, if the commercial viability of the power stations depends on a UK carbon tax imposed on fossil power stations. As outlined in the previous sections, it is difficult to assess the robustness of such a tax scheme for an investment horizon of more than 20 years. Once investments in a set of nuclear power stations has been sunk, any changes to the carbon tax scheme could have dramatic impacts on balance sheets of investors and the ability to repay loans. A more stringent EU ES target would reduce this exposure to the national tax instrument. Long-term contracts issued by the governments or various types of credit guarantees could shift the risk of changes to the carbon tax from the investors to consumers or the public.

The discussion illustrates the close interactions of different policy instruments in the UK, and the opportunity the EU ETS offers to strengthen the long-term credibility of a UK policy framework for investors in low-carbon projects.

5. Summary

This submission focuses on the objective of a carbon price support mechanism to increase and supplement the current and future carbon price level above the current level. This is the main dimension for which the joint study by Climate Strategies and Climate Policy Initiative offers additional insights to complement the

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advanced discussion in the UK. The assessment of the EU ETS shows that the close inter-linkages between UK and European energy and climate policy can offer several benefits:

- Visibility and clarity a common European framework offers to guide corporate strategic choices.
- Regulatory stability through the multiple governance levels that ensure continuity
- The scale of the European market for low-carbon technologies, contributing to their viability.

This shows the value of a strong carbon price mechanism at the European level, using the existing policy instrument EU ETS.

A survey pursued as part of this study revealed that with the current stringency of the EU ETS, about 40% of European manufacturing companies continue to operate and invest along their business as usual trajectory, and only 4% expect fundamental changes to their operations and investment (LSE/Imperial/Carlos III). This confirms the concern formulated in the consultation document that current stringency of EU ETS and the resulting carbon prices are not high enough for many of the low-carbon investment options. If the policy objective is to realize such low-carbon investment opportunities, then our analysis suggests that increasing the stringency of EU ETS can be an important aspect. (Answer to question 4.E.2)

A joined-up European approach to increase the stringency of EU ETS carries the added benefit of high international visibility so as to demonstrate European commitment to and pursuit of low-carbon development.



Climate Strategies is an international organisation that convenes networks of leading academic experts around specific climate change policy challenges. From this it offers rigorous, independent research to governments and the full range of stakeholders, in Europe and beyond. We provide a bridge between research and international policy challenges. Our aim is to help government decision makers manage the complexities both of assessing the options, and of securing stakeholder and public consensus around them. Our reports and publications have a record of major impact with policy-makers and business.

To effectively communicate insights into climate change policy, we work with decision-makers in governments and business, particularly, but not restricted to, the countries of the European Union and EU institutions. In 2011 we are increasing our reach, and will be actively communicating insights in North America and conducting research in the Asia Pacific region.

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