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# Submission to the inquiry by the Energy and Climate Change Committee inquiry on 'Leaving the EU: implications for UK climate policy'.

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**Policy paper**

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**The Grantham Research Institute on Climate Change and the Environment** was established in 2008 at the London School of Economics and Political Science. The Institute brings together international expertise on economics, as well as finance, geography, the environment, international development and political economy to establish a world-leading centre for policy-relevant research, teaching and training in climate change and the environment. It is funded by the Grantham Foundation for the Protection of the Environment, which also funds the Grantham Institute for Climate Change at Imperial College London. More information about the Grantham Research Institute can be found at: http://www.lse.ac.uk/grantham/

# Energy and Climate Change Committee inquiry on 'Leaving the EU: implications for UK climate policy'.

**Introduction**

1. This is a submission by the ESRC Centre for Climate Change Economics and Policy and Grantham Research Institute on Climate Change and the Environment at the London School of Economics and Political Science to the House of Commons Energy and Climate Change Committee inquiry on 'Leaving the EU: implications for UK climate policy'.

2. This submission outlines the latest research evidence from the ESRC Centre for Climate Change Economics and Policy and Grantham Research Institute on Climate Change and the Environment focusing on the question: 'What should be the Government's priorities on the EU Emissions Trading System when negotiating the UK's exit from the EU? What would a successful negotiation outcome look like?'

**What should be the Government's priorities on the EU Emissions Trading System when negotiating the UK's exit from the EU? What would a successful negotiation outcome look like?**

1. Following the UK's decision to leave the EU, its participation in the Union's flagship Emissions Trading System (EU ETS) is subject to negotiation. In this submission, we argue that the EU ETS has been beneficial for the UK, and maintaining the UK's participation in the system should be a priority in its negotiations to leave the EU.

2. Using insights from recent original research (Doda and Taschini, 2016)., our analysis reviews the economic benefits and costs of two options against maintaining the status quo:

    a. Implementing a UK ETS in isolation;
    b. Implementing a UK ETS with a view to linking it to other ETS's.

**Implementing a UK ETS in isolation**

3. Emissions trading is a cost-effective way of distributing the economic burden of reducing greenhouse gas emissions across regulated businesses in a country. Essentially, the EU ETS is a system of linked country-level ETSs. It allows permit transactions across borders and creates additional cost saving opportunities unavailable in an isolated ETS (Flachsland et al., 2009 and Jaffe et al., 2009).

4. These potential costs savings are larger, the larger the market (i.e. where more or bigger countries participate) because firms in countries where it is expensive to reduce emissions can buy surplus permits from firms in counties where reductions can be made more cheaply.

5. By participating in a linked system, a small country tends to capture the bulk of the cost savings. This is because the potential for cost savings is not diminished when small countries access the linked system to buy and sell permits. In contrast, when large countries join the linked system, their purchase and sales decisions influence the market price in a way that can limit the potential for cost savings.

6. Currently, the EU ETS is the world's largest market for emission permits. According to European Environment Agency data, between 2013 and 2015, approximately 11 per cent of the greenhouse gas emissions regulated under the EU ETS originated from UK installations. The UK is therefore a relatively small partner in the system compared to Germany, which accounted for approximately 25 per cent of emissions over the same period. Consequently, implementing a UK ETS in isolation implies a greater burden of regulation for the UK economy as many cost saving opportunities will cease to exist following a withdrawal from the EU ETS. For example, low-cost abatement opportunities from eastern European countries would not be available any longer. Conversely, where permits held by UK firms are relatively cheap because demand in a booming Member State economy is high, mutually beneficial transactions would not take place.

7. In fact between 2013 and 2015 the UK was allocated less permits on the primary market (auctions and free allocations) than its verified emissions, leaving a shortfall in each year. Some of the shortfall is likely to have been made up by permits banked in previous years; the remainder would have been bought on the secondary market (i.e. bought directly from other firms or via a trading exchange or broker). Without access to the EU ETS, the permits bought on the secondary market are likely to have been much more expensive. In other years, for example from 2009 to 2012, the UK had a surplus of permits which UK firms had the option to sell to non-UK firms or bank. This option would be severely limited if the UK leaves the EU ETS.

**Implementing a UK-ETS with a view to linking it to other ETSs**

8. Setting up a new UK ETS and linking it to others is likely to be costly. Linking can imply substantial negotiation costs to harmonize the systems' key design features. There is also likely to be costs incurred setting up the financial, legal and administrative infrastructures to facilitate the transactions between ETSs. So, if the UK were to set up a new ETS and then try to link with, for example, the California-Quebec cap-and-trade system, the UK would effectively have to negotiate a costly carbon 'trade deal'.

9. A large portion of these costs are sunk in nature which the UK has already incurred when it became part of the EU ETS. Viewed in this light, even if the UK can form a new link with another ETS quickly, it will probably be inferior to the status quo. First, a new set of sunk costs must be incurred and these costs are likely much higher with non-European linking partners because they are likely to be institutionally dissimilar to the UK.

10. Second, currently there is no market that is comparable in size to EU ETS, even after excluding the UK, which limits the magnitude of potential cost savings.

11. Third, although new, larger ETSs are in the pipeline (e.g. a national ETS in China is expected in 2017), linking with systems that have not matured may come with its own difficulties. More importantly, larger systems stand to gain more from linking with other large systems. In other words, although pursuing a new large partner may be an attractive option for the UK, it is unlikely to be a priority for the large partner.

## References


Doda, B. and Taschini, T., 2016. *Carbon dating: when is it beneficial to link ETSs?*. Working Paper No. 208. London: Grantham Research Institute on Climate Change and the Environment

Flachsland, C., Marschinski, R., and Edenhofer, O., 2009. To Link or Not to Link: Benefits and Disadvantages of Linking Cap-and-trade Systems. *Climate Policy*, 9(4), pp.358–372.

Jaffe, J., Ranson, M., and Stavins, R., 2009. Linking Tradable Permit Systems: a Key Element of Emerging International Climate Change Policy. *Ecology Law Quarterly*, 36, pp.789–808.