



Centre for  
Climate Change  
Economics and Policy

An ESRC Research Centre



Grantham Research Institute on  
Climate Change and  
the Environment

# Submission to the inquiry by the House of Commons Select Committee on Energy and Climate Change on 'Fuelling the debate: Committee successes and future challenges'

Samuela Bassi, Chris Duffy, Sam Fankhauser, Ajay  
Gambhir, Bob Ward, Dimitri Zenghelis

Policy paper  
December 2014

ESRC Centre for Climate Change Economics and  
Policy

Grantham Research Institute on Climate Change and  
the Environment

in collaboration with

**Grantham Institute**  
Climate Change and the Environment

An institute of Imperial College London

**The Centre for Climate Change Economics and Policy (CCCEP)** was established in 2008 to advance public and private action on climate change through rigorous, innovative research. The Centre is hosted jointly by the University of Leeds and the London School of Economics and Political Science. It is funded by the UK Economic and Social Research Council and Munich Re. More information about the Centre for Climate Change Economics and Policy can be found at: <http://www.cccep.ac.uk>

**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/>

**The Grantham Institute at Imperial College London** is committed to driving research on climate change and the environment, and translating it into real world impact. Established in February 2007 with a £12.8 million donation over 10 years from the Grantham Foundation for the Protection of the Environment, the Institute integrates researchers and capabilities from all areas of the College necessary to tackle the challenges of climate change and the environment, through which we work to offer practical scientific and technical knowledge of the highest quality. The Institute is supported by a team of experts who provide authoritative analysis and assessment of research outputs, communicating it in a policy-relevant way to decision makers. More information about the Grantham Institute can be found at: <http://www.imperial.ac.uk/climatechange>

This policy paper is intended to inform decision-makers in the public, private and third sectors. It has been reviewed by at least two internal referees before publication. The views expressed in this paper represent those of the author(s) and do not necessarily represent those of the host institutions or funders.

## **ECCC Enquiry 'Fuelling the debate: Committee successes and future challenges'**

### **What are the greatest challenges in UK energy and climate change policy over the next Parliament (2015-2020)?**

1. Summary: The Grantham Research Institute on Climate Change and the Environment, at the London School of Economics, and the Grantham Institute at Imperial College London, outline the main energy and climate change challenges in the UK over the next five-year term. In particular, we identify five key issues, in light of the evidence from the most recent economic and policy analysis: the need for policy certainty; increased investment in low carbon innovation; reform of environmental taxation; support to the EU ETS reform; and stronger focus on energy efficiency.

#### **Delivering policy certainty and maximizing investment**

2. Lack of policy certainty is the greatest threat to investment in the UK's low-carbon future. Significant investment is required in UK energy infrastructure over the next 10 years. Failing to show clarity and confidence, for instance by being or appearing shaky on climate policy commitments, will damage private sector investment in low-carbon technologies and the prospects for growth (Romani et al., 2011).
3. One way to achieve greater certainty would be to set a carbon intensity target for the electricity sector, in the flexible range of 50-100g CO<sub>2</sub>/kWh (Bassi et al., 2013), bearing in mind that the sector will need to be virtually decarbonized by 2050. Evidence shows that credible *early* action to set the UK economy on a low carbon trajectory is likely to be cheaper than delay (Aghion et al., 2014); therefore this target should be set no later than 2016.

#### **Increasing investment in low-carbon innovation**

4. The UK currently under-invests in low-carbon innovation. The UK, however, has the potential to become a global leader in several areas, including carbon capture and storage (CCS), energy storage, marine energy and offshore wind. With regard to CCS, it will be crucial to find out as soon as possible whether gas fired power stations fitted with CCS can become economically viable in the UK in the next decade or so (Bassi et al., 2013).
5. The Government should direct innovation activities to these areas. It should also allow the Green Investment Bank to raise capital and promote greater access to venture capital (Bassi et al., forthcoming)

#### **Reforming environmental taxation**

6. Environmental taxation, especially on carbon emissions, will be crucial to reach climate objectives, support the transition to a low carbon economy and close the budget deficit. Simplifying policies like the Climate Change Levy, Climate Change Agreements and CRC Energy Efficiency Scheme into a single instrument would improve consistency, while reducing administrative burdens for businesses (Advani et al., 2013). Such reform should be consistent with the overall aim to provide a clear trajectory for UK carbon prices in the 2020s, including through the EU Emissions Trading Scheme (EU ETS).
7. Clear signals should also be provided on the availability of Contracts for Difference to drive growth in low carbon generation post 2020. Additional clarity for investors would also be provided if the Emissions Performance Standard were extended to

existing coal plants. By 2030 old coal plants should be strictly limited to very low operating hours, or closed (Gross et al., 2014).

### **Delivering a strong carbon price through the EU Emissions Trading System**

8. A strong European carbon price is crucial to shift the European economy onto a low-carbon pathway. The UK Government should seek the earliest possible implementation of the Market Stability Reserve (MSR) for the EU ETS (Taschini et al, 2014). It should also support proposals to move all backloaded emissions allowances into the MSR rather than release them back into the market.

### **A more aggressive drive on energy efficiency**

9. To help bring bills down the UK Government should support an aggressive drive on energy efficiency (Ekins et al., 2013) through a reformed Green Deal or more explicit state funding of energy efficiency. The poorest households should be targeted first. More support should be made available to businesses for energy efficiency, potentially by providing access to finance via the Green Investment Bank.

## **References**

Advani, A., Bassi, S., Bowen, A., Fankhauser, S., Johnson, P., Leicester, A., & Stoye, G., 2013. *Energy use policies and carbon pricing in the UK*. [pdf]. London: Institute for Fiscal Studies & Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, LSE. Available [here](#).

Aghion, P., Hepburn, C., Teytelboym, A., and Zenghelis, D., 2014. *Path-dependency, innovation and the economics of climate change*. [pdf] Supporting paper for New Climate Economy Supporting. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics and political Science. Available here. Available [here](#).

Bassi, S., Duffy, C., and Rydge, J., 2013. *Decarbonising electricity generation*. [pdf] Briefing note. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, LSE. Available [here](#).

Bassi, S., Fankhauser, S., Gambhir, A., Ward, B. and Zenghelis, D., forthcoming. *Climate change priorities in the 2015 general elections: recommendations for parties' manifestos*. Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, LSE, & Grantham Institute, Imperial College.

Ekins, P., Keppo, I., Skea, J., Strachan, N., Usher, W. and Anandarajah, G. 2013. *The UK energy system in 2050: Comparing Low-Carbon, Resilient Scenarios*. [pdf] London: UKERC. Available [here](#).

Gross, R., Speirs, J., Hawkes, A., Skillings, S., Heptonstall, P. 2014. *Could Retaining old coal lead to a policy own goal?* [pdf] London: Imperial College. Available [here](#).

Romani, M., Stern, N., Zenghelis, D., 2011. *The basic economics of low-carbon growth in the UK*. [pdf] Policy brief. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, LSE. Available [here](#).

Taschini, L., Kollenberg, S. and Duffy, C. 2014. *System responsiveness and the European Union Emissions Trading System*. [pdf] Policy paper. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, LSE. Available [here](#).