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# UK climate change policy: how does it affect competitiveness?

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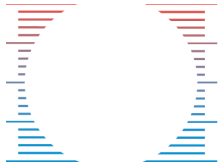
in collaboration with

Chris Duffy, Sam Fankhauser, Fergus Green and Michal Nachmany

Grantham Research Institute and CCCEP  
London School of Economics and Political Science

**APPCCG: *The fifth carbon budget: how will it affect the UK's competitiveness?***

London, 10 May 2016



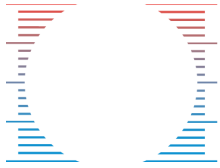
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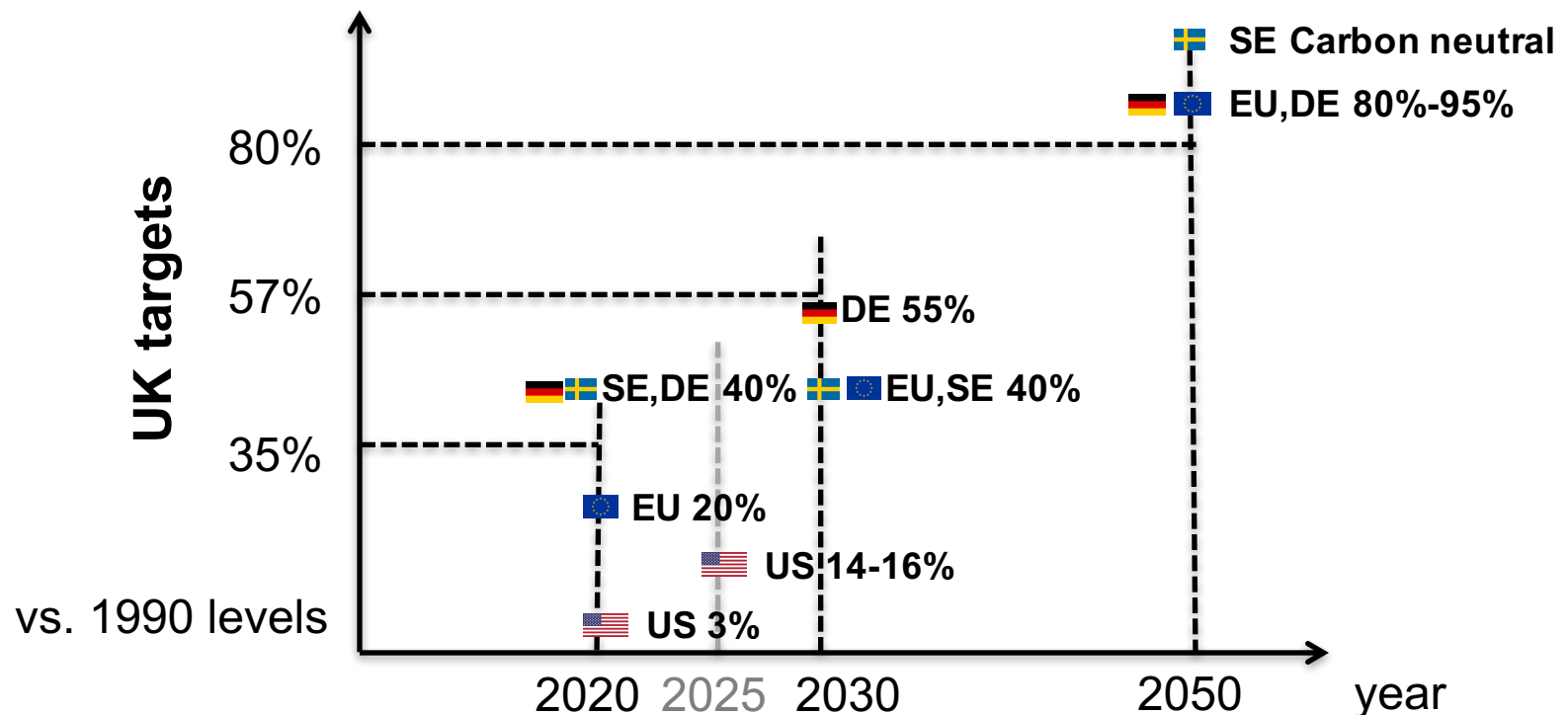
## Presentation overview

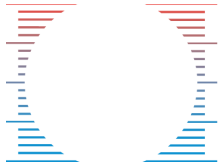
- ❖ Climate targets across UK's key competitors
- ❖ UK and EU targets
- ❖ Carbon pricing
- ❖ Climate legislation and institutions
- ❖ The impact of policy on competitiveness
- ❖ Business opportunities
- ❖ Conclusions



## Climate targets across UK's competitors

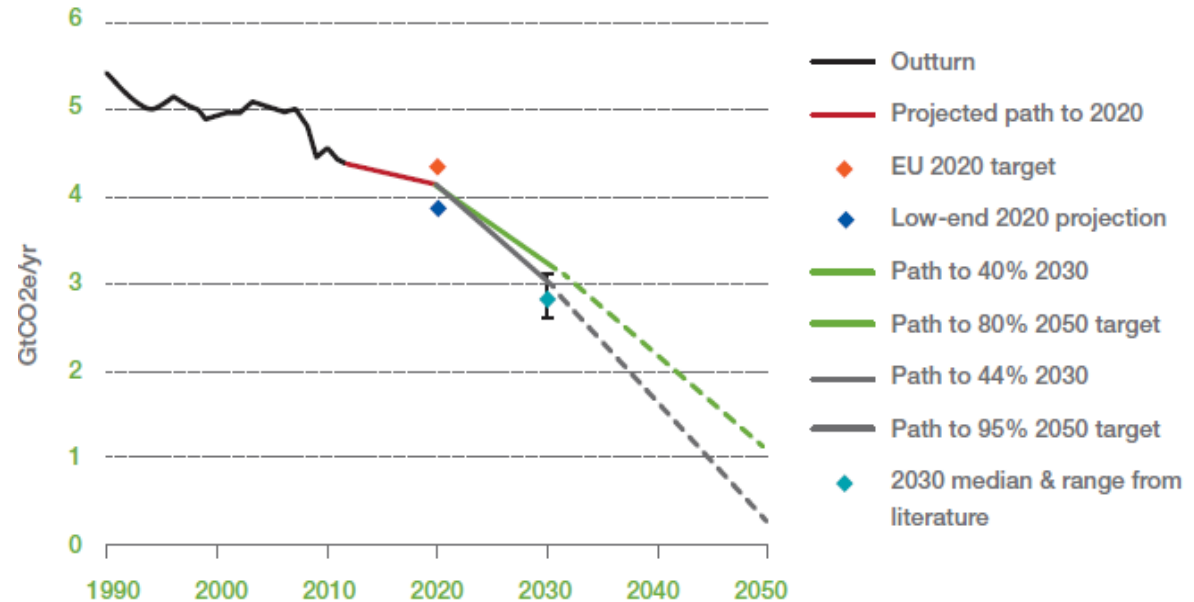
- ❖ All UK's main trade competitors have targets (44/99)
- ❖ UK among most ambitious, but not alone
- ❖ Some have higher targets: China 2020 carbon intensity 40-45% vs 2005 (UK 39%); Sweden, Germany (2020/50) EU (2050)



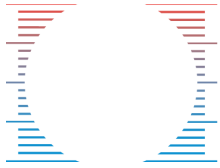


## UK and EU targets

- ❖ Effort sharing UK: 51-57% (CCC, 2015)
- ❖ UK on upper end but cost efficient
- ❖ EU not on cost efficient trajectory
- ❖ EU to revise upward or accelerate post 2030

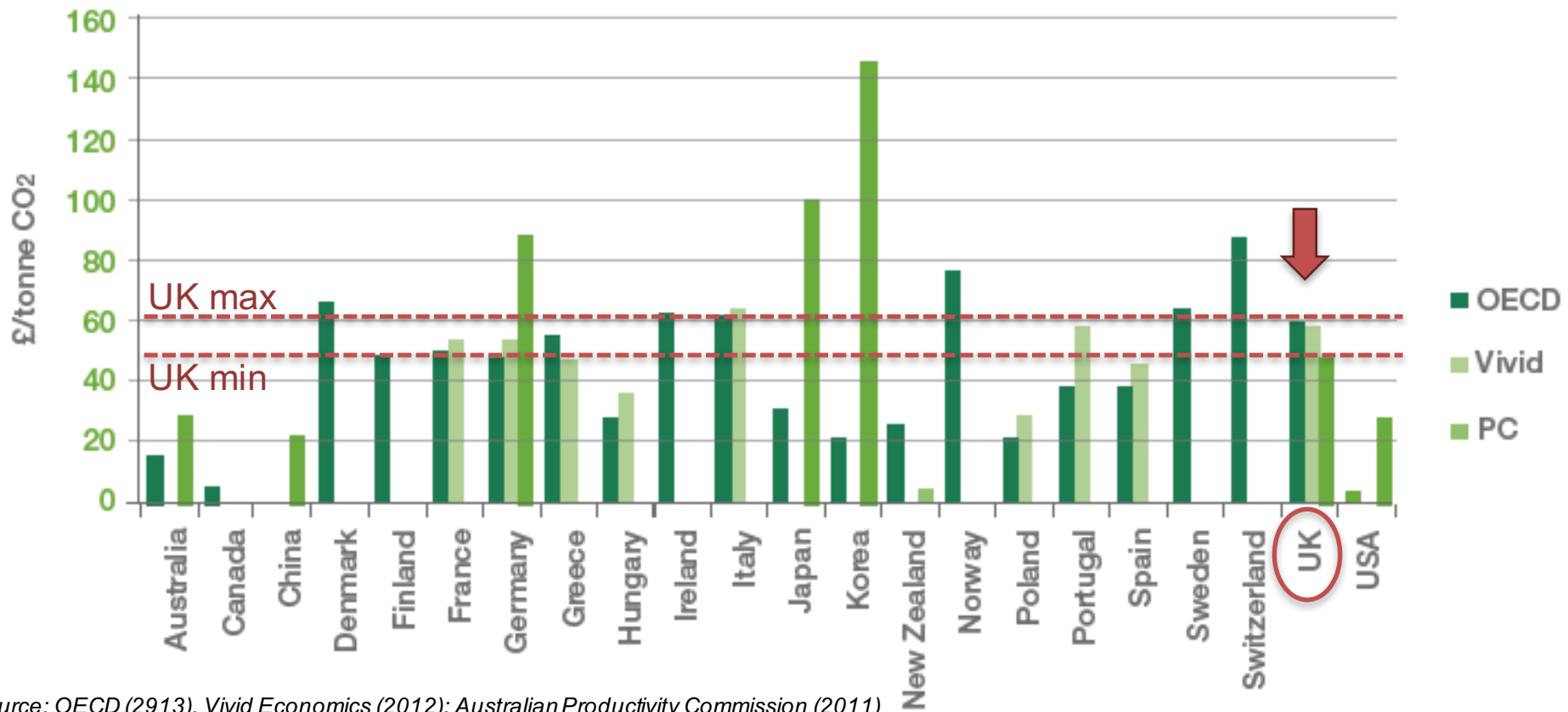


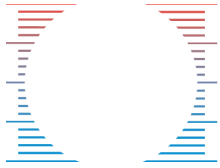
Source: EEA (2014), Sandbag (2014), Knopf et al (2013)



# Carbon pricing

- ❖ Several competitors have implicit/explicit carbon prices (33/99)
- ❖ UK average £48-59/t CO<sub>2</sub> (CCL, CRC, ETS, CPSR): middle-upper range



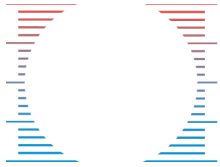


## Legislation and institutions

- ❖ 58 out of 99 countries have framework legislation (Nachmany, 2015)

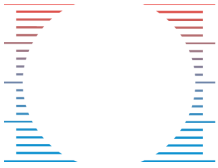
UK	Climate Change Act (2009)
EU	2030 Framework Climate & Energy Framework (2014)
Germany	Action Programme on Climate Protection 2020 (2014)
China	National Plan for Takling Climate Change 2014-2020 (2014)
India	National Action Plan on Climate Change (2008)
Mexico	General Law on Climate Change (2012)
Etc.	

- ❖ Institutions: UK CCC first of a kind
- ❖ Some countries taking example e.g. Danish Climate Council



## Policy and competitiveness

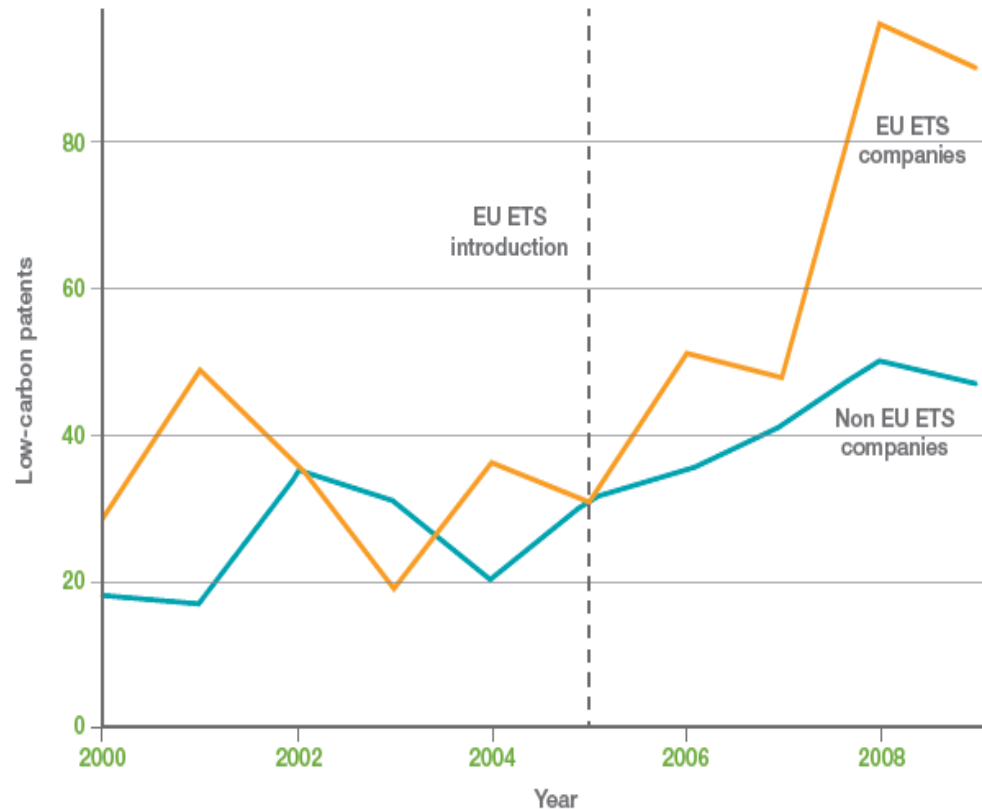
- ❖ Climate policy can raise energy prices, but small part of investment decision vs labour cost etc.
- ❖ UK policy cost relatively small for medium industrial users: £0.01/kWh vs EU average £0.03/kWh
- ❖ No evidence firms relocate due to climate policy (e.g. CCL, ETS)
  - low carbon pricing: EU ETS ~ £5/tCO<sub>2</sub>; CCL £4-10/tCO<sub>2</sub>
  - (over) compensation: free allocation, exemptions,...
- ❖ Rising policy cost +£20/tCO<sub>2</sub>: no significant competitiveness impact on most sectors
- ❖ Small yet important subset can be affected (~4% GDP): steel, cement, refined petrol, chemicals, pulp and paper, rubber
- ❖ Will require *targeted* compensation



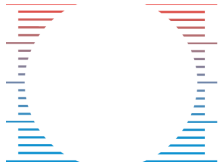
## Business opportunities

- ❖ Climate change policies support innovation
- ❖ Low carbon innovation filters through wide range of sectors: comparable to ICT
- ❖ UK well positioned re. global low carbon transition

Effects more marked when  
carbon price ~ €30/t CO<sub>2</sub>  
(2007/8)

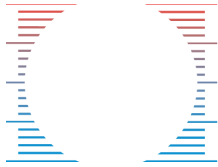






## Conclusions

- ❖ UK among climate leaders, but **not alone**
- ❖ UK at upper end of estimated effort sharing, but **carbon budgets on cost-effective trajectory** (unlike EU)
- ❖ Existing policies have had **no impact on competitiveness**
- ❖ **Impacts on costs is limited**, but **concerns for energy intensive sectors**
- ❖ As carbon pricing increase, more **policies needed to manage structural change**, especially for subset of sensitive sectors



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# Thank you

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## UK climate change policy: how does it affect competitiveness?

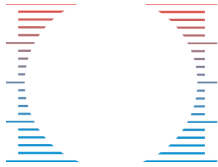
Policy brief

*Samuela Bassi and Chris Duffy*

Grantham Research Institute (LSE) & CCCEP

Available at: <http://www.lse.ac.uk/GranthamInstitute/publication/uk-climate-change-policy-how-does-it-affect-competitiveness/>





# Related studies

Bassi, S., and Zenghelis, D., 2014. [\*Burden or opportunity? How UK emission reduction policies affect the competitiveness of businesses.\*](#)

Bassi, S., Fankhauser, S., Green, F., & Nachmany, M., 2014. [\*Walking alone? How the UK's carbon targets compare with its competitors.\*](#)

Dechezleprêtre, A., Martin, R. and Bassi, S. 2016. [\*Climate change policy, innovation and growth.\*](#)

Grover, D., Shreedhar, G., & Zenghelis, D. 2016. [\*The competitiveness impact of a UK carbon price: what do the data say?\*](#)

Nachmany, M. et al., 2015. [\*The 2015 Global Climate Legislation Study - A Review of Climate Change Legislation in 99 Countries.\*](#)