

## **The UK Emergency Carbon Plan**

Topic: Consumption-Based Carbon Policies and IO Modeling

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Proposal for the convened session on 'Consumption-based carbon policies and IO modelling' organised by Kirsten S. Wiebe.

Kate Scott (University of Leeds) to present on behalf of John Barrett, Kate Scott, Katy Roelich, Piers Forster, Anne Owen, Julia Steinberger and Tim Foxon (all University of Leeds)

While the latest and past IPCC reports have been clear on the scale of the challenge to achieve a reasonable probability of limiting temperature rise to two degrees, this urgency has not been translated into carbon budgets for countries in international negotiations, let alone the generation of a coherent climate change mitigation plan. A framework is proposed to introduce an emergency carbon tax to transform the carbon intensive systems of production and consumption to a level that is consistent with carbon budgets defined to limit global temperature rise by two degrees.

Five steps are outlined to gain an understanding of the size of a carbon tax needed to align available carbon budgets with the size of the economy. First a global carbon budget is defined based on the IPCC 5th Assessment. Second this budget is distributed to countries based on per capita allocation and a new carbon budget for the UK is given taking its consumption-based emissions as a starting point. Third the contribution of carbon intensity improvements is considered in the UK's carbon budget. Fourth a hypothetical carbon tax is implemented to bring emissions in line with the trajectory for two degrees. Finally, the governance and institutions to enable this rapid transition to a low carbon economy are discussed.