

Steve Pye

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Steve Pye is a Senior Research Associate at the UCL Energy Institute (<http://www.bartlett.ucl.ac.uk/energy>), an interdisciplinary group at University College London, focused on sustainable energy research. He has 14 years of experience in both consultancy and academic research in the field of energy and climate policy.

His main research interests are in the transition of national and global energy systems to low carbon systems, using energy-economic models, and the implications for policy makers. In particular, Steve is interested in the distribution of financial impacts from such transitions across different socio-economic groups, including those experiencing energy poverty, and the role of demand side and behaviour-focused measures. He is also considering how policy makers understand and deal with system transition uncertainties.

Over the last 10 years, Steve has been involved in numerous modelling studies exploring long term sustainable energy pathways for UK Government and associated UK bodies, such as the UK Committee on Climate Change (CCC). He has also worked on similar studies internationally, in South Asia, East Africa and the USA. Currently, through the INSIGHT_E project (www.insightenergy.org), Steve is involved in providing research and policy support across a range of sustainable energy issues to the European Commission, including on the issue of energy poverty.

Selected experience (current)

- **United Nations Sustainable Development Solutions Network (SDSN) – Deep Decarbonisation Pathways Project.** Major climate change initiative to explore how countries can achieve a 2°C compatible energy system. Our focus is on modelling UK transition pathways. <http://unsdsn.org/what-we-do/deep-decarbonization-pathways/>
- **Energy Technologies Institute (ETI) – Investigating demand side / behavioural measures in ESME model,** focusing on price-induced demand response and transport modal shift.
- **Energy Technologies Institute (ETI) - Approaches to modelling the distributional impacts of energy system scenarios,** focusing on the distribution of financial impact across socio-economic groups, including low income households.
- **European Commission - INSIGHT_E FP7 project, providing policy advice and research to the European Commission.** <http://insightenergy.org/>. Main research efforts to date on tackling energy poverty & vulnerable consumer protection in Member States.

Selected experience (previous)

- **UK Energy Research Council (UKERC) – ‘Flagship’ Uncertainties project (2014).** Research to assess the impact of key uncertainties on the transition to a low carbon energy system, using the ETI’s energy model, ESME.
- **UK Energy Research Council (UKERC) – TIAM-UCL development (2010-2012).** Programme to develop a global TIMES model for UK policy, using the TIAM model as the starting point, to understand international drivers on UK climate and energy policy.
- **US Agency for International Development (USAID) – Regional Energy Security and Market Development (RESMD) in South East Europe (using TIMES), 2010-2012.** This

major initiative focused on promoting renewable energy and energy efficiency in the South East European Region, to address climate change issues and promote energy security.

- **Asian Development Bank (ADB) - Development of a Pakistan Integrated Energy Model (using TIMES), 2010-2012.** Project to build a TIMES energy model for Pakistan, to help facilitate energy planning, whilst also considering sustainability issues (climate change, air quality).

Selected publications

Pye, S., Sabio, N., & Strachan, N. (2015). An integrated systematic analysis of uncertainties in UK energy transition pathways. *Energy Policy*. [doi:10.1016/j.enpol.2014.12.031](https://doi.org/10.1016/j.enpol.2014.12.031)

Pye, S., Usher, W., & Strachan, N. (2014). The uncertain but critical role of demand reduction in meeting long-term energy decarbonisation targets. *Energy Policy*, 73, 575-586.

Pye et al (2010), Opportunities for Low Carbon Investment in Tanzania, Funded by UK Government (DFID), December 2010.

http://economics-of-cc-in-tanzania.org/images/Tanzania_low_carbon_growth_assessment_v7.pdf

Pye S, Watkiss P, Savage M and Blyth W (2010), *The Economics of Low Carbon, Climate Resilient Patterns of Growth in Developing Countries: A Review of the Evidence*, Stockholm Environment Institute, Funded by DFID, February 2010.

Strachan N, S Pye, R Kannan (2009), The iterative contribution and relevance of modelling to UK energy policy, *Energy Policy* 37 (2009) 850–860

Strachan N., S. Pye, N. Hughes (2008), The role of international drivers on UK scenarios of a low carbon society, *Climate Policy*; 8, S125-S139.

Pye et al. (2008), Addressing the social dimensions of environmental policy - A study on the linkages between environmental and social sustainability in Europe, DG Employment, European Commission, September 2008. <http://ec.europa.eu/social/main.jsp?catId=88&langId=en&eventsId=145>

Pye et al. (2008), MARKAL-MED model runs of long term carbon reduction targets in the UK, Phase 1 and 2 reports, On behalf of the Committee on Climate Change, November 2008, <http://www.theccc.org.uk/reports/building-a-low-carbon-economy/supporting-research>

Pye S and Palmer T (2008), Optimising delivery of carbon reduction targets: integrating air quality benefits using the UK MARKAL model, UK Department of Environment, Food and Rural Affairs, November 2008.

<http://www.defra.gov.uk/environment/quality/air/airquality/panels/igcb/documents/uk-markal-model.pdf>

Strachan N., R. Kannan, S. Pye (2008), Scenarios and Sensitivities on Long-term UK Carbon Reductions using the UK MARKAL and MARKAL-Macro Energy System Models, UKERC Research Report, 7th February 2008: REF UKERC/RR/ESM/2008/002. <http://www.ukerc.ac.uk/support/tiki-index.php?page=ESMUKERCresearchreports>

Pye et al. (2008), Review and update of UK abatement costs curves for the industrial, domestic and non-domestic sectors, On behalf of the Committee on Climate Change, August 2008. <http://downloads.theccc.org.uk/AEAUpdateofUKabatementtCh6.pdf>