

Energy transitions in an interdependent world: what and where are the future social science research agendas?

While infrastructural aspects of energy systems remain largely national, other aspects are internationalising, such as ownership, technology development and innovation, regulatory models (including emissions trading), and environmental campaigns. Yet other aspects are localising, such as decentralised generation, community-oriented policies to shift energy behaviours, and cities and towns seeking to decarbonise their energy use. Changing interdependencies thus make energy systems more complex. On top of that, energy systems face other challenges, such as energy security and demands for step-changes towards sustainability, in particular, at the national level, the UK's 2050 target of reducing carbon dioxide emissions by 80%. The need for systemic changes of these kinds focuses attention of energy transitions, for example to new 'green' energy systems.

The neo-liberal policy paradigm, in which market mechanisms and private utilities dominated, is increasingly challenged as people question if it can deliver the kinds of investment, infrastructure, technology and energy practices needed for decarbonised energy systems that are secure and sustainable. While some argue that the State must re-engage much more directly, one can debate the best configuration: should we go for corporatist arrangements with utilities, to deliver large low carbon energy projects? Or should we go for a more pluralistic engagement with a diversity of actors that empowers distributed solutions? Indeed are such pathways incompatible in practice, given the range of low carbon technologies and infrastructure, and the range of scales at which they can be used? More generally, how do antagonisms and synergies between different forms of State involvement (including neoliberal regulatory frameworks) influence the dynamics of energy system transformations?

Because of these multi-dimensional changes, social scientists in the energy field increasingly focus on energy *systems*, asking how the co-evolution of



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multiple elements may lead to large-scale energy transitions. In this context, the Sussex Energy Group at SPRU (Science & Technology Policy Research), University of Sussex is organising and hosting an international conference to discuss and debate emerging research agendas in energy social science. **The conference will be held at the University of Sussex on the 25th and 26th February 2010. and is open to academics, policy makers, industry and non-governmental organisations working in the field of energy transitions.** We welcome abstracts that outline theoretically robust and empirically informed contributions to one or more of the following:

Low carbon energy innovation

- Lock-in, lock-out and path dependence: how do we understand the destabilization of existing energy systems and the build up of momentum around 'green' innovations?
- Distributed innovation, open source, user-led and grassroots innovation: how can new concepts from innovation studies be applied to energy systems?
- The role of firms, finance and energy business strategy in energy systems
- 'Long waves' in technical change, and the effects of global recession on energy investment.
- The roles of policy and the influence of different policy cultures in steering innovation and shaping innovation agendas.
- Technological innovation in developing countries and the shifting geography of low carbon energy innovation

Secure and resilient energy systems

- Different conceptualisations and challenges in energy system security
- What makes an energy system resilient, and how can resilience be assessed?



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- Public policies for energy security- their effectiveness, shortcomings, synergies and trade-offs with other energy policy objectives.

The politics of sustainable energy transitions

- Redefining the role of government, policy and politics in energy transitions: the neo-liberal energy inheritance; governing hard and soft energy paths; different national energy policy styles and international coordination
- Analysing and reconciling policy objectives (e.g. low carbon, local pollution and habitats, wider sustainability, security, energy access/fuel poverty)
- Exploring notions and bases of legitimacy and accountability in sustainable energy governance, and addressing the political conflicts arising from redistributing resources away from carbon intensive activities and into low carbon futures
- Civil society, energy citizenship and transitions

Abstracts should not exceed 300 words in length and must be submitted electronically to Lee Stapleton on l.stapleton@sussex.ac.uk before 15th August 2009 using the designated application form. If you wish to attend the conference without presenting a paper, please note that you still need to complete the application form. Authors of abstracts and other attendees selected by the committee to attend the conference will be notified no later than 31st August 2009. Registration forms and fees must be received by us no later than 30th October 2009. Authors should submit their full papers, not exceeding 8,000 words in length, by 29th January 2010. All papers will appear on the conference website and a conference CD. Authors will be asked to give an oral presentation, not exceeding 20 minutes long, followed by 10 minutes for questions.



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