Knowledge Production for Sustainable Bioenergy: 
An analysis of UK decision processes and priorities

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In summer 2009 the then Secretary of State for Energy and Climate stated that ‘the transition to a low-carbon economy will be one of the defining issues of the 21st century’. This commitment was reiterated by his successor Chris Huhne, who has stated the ‘aim to construct a low-carbon economy that will meet our ambitious climate-change targets, deliver energy security and contribute to economic recovery’. According to UK government policy literature, there are multiple rationales for pursuing such research – e.g., reductions in UK greenhouse gas emissions, greater UK energy security and commercial exploitation of technoscientific knowledge. Towards these aims, UK research funds give a high priority to bioenergy research, especially for converting biomass into liquid fuel; other options include electricity and heat. Policy interventions on climate change link the development of a low-carbon economy with knowledge as necessary for converting natural resources into energy and other industrial products.

This transition is envisaged mainly through technological solutions which enhance the commercial use of knowledge in a competitive global market place. This focus builds on earlier policy which likewise envisaged commercialisation of technoscientific knowledge. Given that UK bio-energy policy has multiple aims, these may have tensions, leading to research priorities that favour some aims over others.

In this research project, our objectives are:

1. To identify the range of potential innovation pathways, as a basis to analyse variation, selection and retention of pathways as research priorities
2. To analyse how institutions and processes are linked in selecting research priorities
3. To develop a theoretical-explanatory account of research policy and its relation to shaping of a low-carbon economy in the UK
4. To engage with stakeholders involved in shaping research priorities for agricultural bio-energy.

Our main research question is:
In what ways do discourses, practices and interests of techno-scientific knowledge figure in selecting national research priorities for sustainable bio-energy from a wider range of options?

As possible explanations for some pathways being favoured, we will analyse actors’ models of valuable knowledge, economic advantage, and environmental sustainability.

Data will come from secondary literature and stakeholder research interviews. The data sources will be UK organisations which are stakeholders in bioenergy research – government departments, Research Councils, research institutes, nongovernmental organisations, and industry lobbies.

The research will combine three related theoretical approaches: Cultural Political Economy, Science and Technology Studies, and Critical Discourse Analysis. Together these provide ways of linking a low-carbon bio-economy with commercial aims, technological expectations and discursive meanings, respectively.

Findings will be disseminated in conferences, seminars, workshops and refereed journals. Specific outputs include:

1. Three work-in-progress papers presented at academic conferences, seminars and workshops.
2. A preliminary findings workshop for stakeholders (held in October 2011)
3. Policy briefing papers and web-based publications.
4. Three research papers to be submitted to academic journals.
5. A major end-of-research workshop for academics, interviewees and policy users.

Timescale: December 2010 to summer 2012

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