

Project Synopsis

UK Biomass Scenario Development and Assessment (EPSRC SuperGen)

Based in the Tyndall Centre for Climate Change Research at The University of Manchester, Drs. Patricia Thornley, Paul Upham and Simon Shackley are working on the biomass component of the UK's EPSRC SuperGen (Sustainable Power Generation) programme. The project runs from 2004-6 (contact details are overleaf).

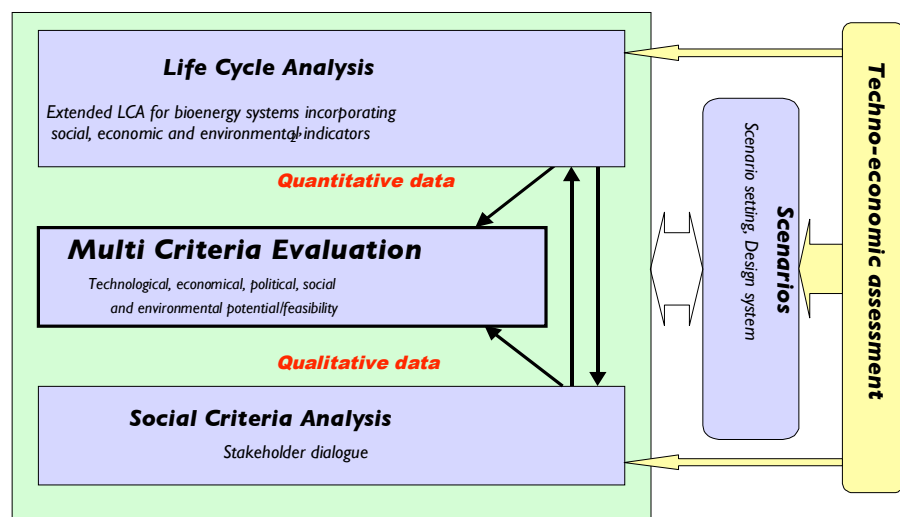
The Tyndall Group are responsible for carrying out a life cycle socio-economic and environmental evaluation of bioenergy scenarios for the UK, to be integrated with a techno-economic evaluation led by the Northern Ireland Centre for Energy Research and Technology, at the University of Ulster. The objective is to carry out an extended life cycle analysis of the costs, benefits and wider implications arising from implementation of bioenergy systems, including upstream activities related to crop growth, their environmental impact and any indirect impacts on rural economies.

Using multi-criteria scenario evaluation techniques, previously developed and applied by Tyndall in the context of wind energy, the research will evaluate the perceptions and priorities of various stakeholder groups in relation to bioenergy. Contrasting bioenergy scenarios will be developed in consultation with bioenergy experts and stakeholders for three UK regions, which include different penetrations for bioenergy and utilisation of indigenous and imported biomass.

The project is providing a mix of quantitative and qualitative data that will assist in addressing some of the barriers and exploiting the opportunities related to bioenergy implementation in the UK. Outputs will include UK-oriented data relating to:

- The overall environmental impact (local emissions, carbon balance, impact on biodiversity etc) of bioenergy crop growth
- Options for electricity and heat production from biomass
- The relative importance placed on different planning issues by various stakeholder groups
- Quantification of the external benefits of electricity and heat production from biomass
- Examination of the most appropriate policy mechanisms to support bioenergy implementation.

Schematic of bio-energy evaluation method



Tyndall Manchester Biomass and Bioenergy Contact details

Tyndall Centre
Pariser Building
The University of Manchester
Manchester
UK
M60 1QD

Tel: +44 (0) 161 306 3700
Fax: +44 (0) 161 306 3723
<http://www.tyndall.ac.uk/welcome.html>

Patricia Thornley
Tel: +44 (0) 161 306 3257
p.thornley@manchester.ac.uk

Paul Upham
Tel: +44 (0) 161 306 3258
p.upham@manchester.ac.uk