

Complexity Workshop - Energy and Modeling

Attendees

Mark Lemon, Liz Varga, An Serguieva, Peter Allen, Esmee Wilcox, Owen Dowsett, Mark Rylatt, Colin Axen, Grant Kopec, Eve Mitleton-Kelly, Araz Taieghagh, Richard Lewny, Ian Poll, Roger Gardener, Mark Savill.

We self-organized around introductions and the articulation of personal challenges for energy modeling. In the spirit of Brian McAuley's earlier presentation the modeling got sidelined and the complexity of energy related challenges remained.

Population growth and energy –

Behavioural change, technological fix, reduced consumption?

The inter-related dynamic of demographic change (e.g. ageing, migration), carbon production (e.g. mobility, comfort) and climate change (e.g. extreme events).

How can we move towards a unified and integrated approach to energy?

Each sector and discipline approaches energy in its own way. (fossil fuels for aviation, ground based power);

What do the disciplinary perspectives look like?

How is education dealing with this – disciplines rather than issues?

Behaviour always interferes –

Behavioural change inevitably affects the take up or effective adoption and use of new technologies;

Technology assessment and technology transfer processes need better understanding;

What are the Rebound Effects?

We need a better understanding of distributed energy –

What are the scale issues associated with the technological options?

Management and policy responses at different scales?

How can we monitor, measure and model distributed and diverse energy systems?

What are the vulnerabilities under different energy conditions?

Energy and security of supply, political influence, knowledge, terror.

No decision was made as to where the discussion could lead in terms of collaboration but there appeared sufficient interest to warrant a follow up but ideally with a specific purpose / focus e.g. towards the definition of a research project and potential collaboration for this.