



Across Scales in Energy Decision Making (ASCEND) Workshop

Edinburgh Centre for Carbon Innovation, High School Yards, University of Edinburgh, EH1 1LZ

Thursday, 2nd November 2017, 10am to 4pm

Final Agenda

Introduction

In early 2017 the Scottish Government published draft versions of its Climate Change Plan and Energy Strategy. Both documents are currently being revised after parliamentary and public scrutiny, with final versions expected in late 2017 and early 2018.

In this context, the ASCEND workshop will bring together policy, business, research and other communities to discuss the challenges of whole energy systems analysis and decision-making across scales, and identify opportunities for improved analysis and strategy.

The morning will address the energy system as a whole, looking at issues such as model-linking across scales, system integration across vectors, good practice in scenario design and dealing with uncertainty in decision-making.

The afternoon will focus on cross-scale analysis and strategy in the heat sector, looking at issues such as linking national strategy with local master-planning, iterating between long-term whole system pathways and emerging demonstration and pilot studies, and how to represent new policy drivers (industrial strategy, local economic impacts, equity and affordability) in whole systems analysis.

The workshop includes both table-based discussions and plenary panel discussions. The discussions will be introduced by short presentations from leading policy-makers and researchers – the presentations will offer insight on recent policy and research developments, and highlight issues for discussion.

The meeting is designed as a constructive space for discussion on Scotland's energy strategy among policy, research, business and other groups, and the cross-scale opportunities and challenges involved. Note-takers will be distributed around the room to help capture the points made, but in order to support open discussion, the meeting will follow the 'Chatham House Rule': participants are free to use the information discussed, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant(s), may be revealed.

Background

The event forms part of the 'Ascend' scoping project, supported by the EPSRC (Engineering and Physical Science Research Council) and Energy Systems Catapult. The project involves the universities of Birmingham, Leeds and Edinburgh, and University College London. The workshop will showcase emerging findings from project researchers and others.

Attendance is by invitation only: if you are unable to attend and wish to nominate an alternative from your organisation, please contact the organisers (see below). A full agenda, scoping note and list of attendees will be circulated in advance. Please contact the organisers if you have any questions or suggestions.

Local Organisers: Mark Winskel, Niall Kerr, Ragne Lowe, Andrew Mortimer

Morning: Whole Energy Systems Analysis and Strategy

From 9.30 am Registration, Tea, Coffee and Biscuits

10am – 10.30am: Introductions. Chair: Dr Mark Winskel (University of Edinburgh and UKERC)

The opening session introduces the Energy Systems Catapult ASCEND project, and also the development of Scotland's Energy Strategy and Climate Change Plan.

- Introducing the ASCEND Project: Dr Jonathan Radcliffe (University of Birmingham) (10 mins)
- Developing Scotland's Energy Strategy and Climate Change Plan: Kat White and Mike King (Scottish Government) (10 mins); Q&A (10 mins)

10.30 – 11.30: Session 1 – Model linking across scales

- Will McDowall (University College London) and Professor Keith Bell (University of Strathclyde and UK Energy Research Centre) (20 mins)
- Table Discussions (30 mins) and Feedback (10 mins)

Energy research and modelling activity in the UK has proliferated over the past decade, and a similar expansion is now being seen in Scotland. Each new model and research initiative brings new insight, but also adds to an expanding evidence and expert base, at a time when the Scottish Government is seeking an integrated and managed approach to the energy transition. This session considers how national 'whole systems' modelling can be linked to local & city scale modelling, and sectoral models for power, transport, gas and heating.

- *Why do we need to link models across scales and sectors? What are the relative strengths and weaknesses of whole systems models, local / city models and sectoral models?*
- *What are the key enablers and barriers to effective model linking across scales (model design, data availability, etc.)?*
- *What emerging research is being carried out on model linking across scales? What represents good practice for model linking across scales?*

11.30am – 12.15pm: Panel Discussion – Uncertainty and Decision-making

- Dr Keith MacLean (Chair, UK Energy Research Centre Advisory Board); Dr Chris Dent (University of Edinburgh and UK National Centre for Energy Systems) and Ragne Low (ClimateXChange) (20mins)
- Plenary Discussion (25mins)

Long-term energy modelling and supporting analysis can generate a wide range of possible futures for energy systems, but policy advisors have to find effective and clear ways to communicate this to policymakers and political leaders, who in turn need to make hard choices about priority areas, budget allocations and send clear signals to investors and others.

- *How can the rich insights of whole systems analysis be better presented and used to inform hard policy choices?*
- *How can the balance between uncertainty and decision-making be struck, and where can good practice be found?*

12.15 – 1.00: Lunch (attendees will change table places after lunch)

Afternoon: The Low Carbon Heat Transition

1pm – 2pm: Session 2 – National Strategy and Local Planning

- Sue Kearns (Scottish Government) and Hugh Muschamp (Resource Efficient Solutions) (20 mins)
- Table discussions (30 mins) + Feedback (10 mins)

Heating for buildings has become a priority area for UK energy policy, and this has been especially the case in Scotland. However, there is as yet little agreement on the future of heat: a range of solutions are proposed, varying across timescales (shorter or longer term change), geographic scales (national and local), vectors (electricity, gas-based and heat networks), and relative focus on demand-side and supply-side change.

- *How should Scottish strategies be developed alongside UK strategy, and international and local developments? Who are the appropriate ‘system planners’ for the heat transition?*
- *How should responsibilities and resources be distributed within Scotland, between national and local / city authorities?*
- *What represents good practice in this area? Does international experience suggest a way forwards for Scottish and UK contexts, given different starting points and governance capacities?*

2pm – 3pm: Session 3 – System Pathways and Local Pilots

- Jack Causley (Scottish Government) and Viv Cockburn (Scottish Futures Trust) (20 mins)
- Table Discussions (30 mins) + Feedback (10 mins)

Heating for buildings in the UK has seen relatively incremental change since the switch-over to natural gas in the 1960s and ‘70s (although carbon emissions from buildings heating have reduced significantly over the past 20 years). Heating may see more dramatic changes in the coming decades, and a number of pilot and demonstrator studies are getting underway on low carbon heat systems.

- *Given that pilot and demonstrator studies are generating new evidence and insights on the future of heating, how can long term plans and pathways be reconciled with a changing evidence base?*
- *What is the balance between ‘keeping options open’ and making strategic choices around ‘decision points’ on the future of heat infrastructure?*
- *What represents good policy practice in this area?*

3.00 – 3.20: Tea break

3.20 – 4pm: Panel Discussion – Incorporating wider costs and benefits

- Professor Andy Kerr (Director, Edinburgh Centre for Carbon Innovation and ClimateXChange), Dr Frin Bale (University of Leeds) and Professor Jim Watson (Director, UK Energy Research Centre) (20 mins)
- Plenary Discussion (20 mins)

There has been a significant broadening of the aims and scope of energy policy recently, going beyond relatively established concerns for market efficiency and techno-economic system optimisation, to questions of local economy, social equity, industrial strategy and public participation.

- *How can these broader policy concerns be incorporated in whole energy systems research and policy?*
- *Should wider policy drivers be ‘integrated’ into modelling based systems approaches, or are they better addressed in a looser fashion, alongside more established concerns?*

4 pm: Wrap-up and Close

Drinks Reception