

Report on the ESRC / UKERC Seminar on the Future Economics of Hydrogen

10th February 2006

This seminar on the 'Future Economics and Markets for Hydrogen Applications & Infrastructure', sponsored by the Economic and Social Research Council (ESRC) and the UK Energy Research Centre's (UKERC) Meeting Place, was held at the UKERC headquarters, Imperial College, London. The seminar was the 5th of the ESRC 'Analysing Social Dimensions of Emerging Hydrogen Economies' seminar series, which is coordinated by Mike Hodson at SURF (Centre for Sustainable Urban and Regional Futures) within the University of Salford.

During the week of 6-10th February, UKERC's Energy Systems and Modelling Research programme had arranged to carry out collaborative research with the US Environmental Protection Agency MARKAL modelling team which had relevance to the seminar topic. This research collaboration took place at the Policy Studies Institute in London, under the auspices of the UKERC Meeting Place. The seminar was therefore modified to include an EPA speaker and co-badged as an ESRC/UKERC Meeting Place event.

The seminar was split into two parts, with the morning concentrating on future applications for hydrogen (the demand side) and the future economics of hydrogen infrastructure development (supply side). On the applications front, there were presentations from Dr Paul Harborne of the Cass Business School and Professor Paul Ekins of the Policy Studies Institute.

Interesting discussion followed these talks, particularly on the 'sailboat effect' which could prompt improvements in conventional technologies as a result of the emergence of hydrogen / fuel cells. Also of interest was discussion of the reasons why consumers may or may not be willing to compromise on the performance of vehicles, when the benefits are public rather than private.

Before lunch, Dan Loughlin of the US EPA presented some interesting results from the organisation's MARKAL modelling work, with a focus on hydrogen. This was of particular interest to the PSI MARKAL modelling team, but also stimulated a wider discussion.

In the afternoon, the focus was on the economics of hydrogen infrastructure development. David Joffe of Imperial College London and Dr Steve Cook from BP presented different angles on this subject. David's presentation focused on the production and distribution aspect, while the BP focus was on the business case for infrastructure development and how to phase it in discrete chunks.

Discussion included reference to different approaches to hydrogen at the regional level within the UK, with Scotland, Wales and London cited as being particularly keen. It was

considered that the national government was starting to catch up with the regions in this area.

Finally, Prof. Ekins gave a wrap up and challenged the audience with the question: 'If hydrogen is the answer, what is the question?'