Approved

Energy Research Partnership
Notes of 19th January 2010 meeting

MEETING DATE: 19th January 2010

LOCATION: 1 Victoria Street, BIS Conference Centre, London

CHAIR: David MacKay, DECC

ATTENDEES:

Members:	Peter Bance	Ceres Power
	Neil Bentley	CBI
	David Clarke	ETI
	Brian Collins	DfT, BIS
	Tom Delay	Carbon Trust
	David Eyton	BP
	Mike Farley	Doosan Babcock
	Paul Golby	E.ON UK
	Iain Gray	TSB
	Sue Ion	Royal Academy of Engineering
	Paul Lewis	Scottish Enterprise
	John Loughhead	UKERC
	Ron Loveland	Welsh Assembly Government
	Turlogh O'Brien	Arup
	Philip Sharman	Alstom Power
	Adrian Smith	BIS
	Alison Wall	EPSRC
	Nick Winser	National Grid (Co-Chair)
Secretariat / Analysis Team:	Ian Welch	National Grid
	Farida Isroliwala	DECC
	Sarah Scrase-Field	DECC
	Richard Heap	ERP Analysis Team
	Jonathan Radcliffe	ERP Analysis Team
	Charlotte Ramsay	ERP Analysis Team
Non - Members:	Charles Carey	Scottish and Southern
	Mark Cox	Ofgem
	Jeanie Cruikshank	DECC
	Karl Cunion	DCLG
	Frigyes Lestak	Shell
	Fraser MacDonald	HMT
	Jo Thorpe	GO-Science
Apologies/ Not present:	Pam Alexander	SEEDA
	Alistair Buchanan	Ofgem
	Jonathan Brearley	DECC
	Rebecca Lawrence	HMT
	Ian Marchant	Scottish and Southern
	Graeme Sweeney	Shell
	Jeremy Watson	DCLG

Chair's introduction

David MacKay welcomed members to the meeting, in particular Neil Bentley from CBI, attending his first ERP plenary session and noted the apologies received.

David informed members that John Loughhead and Graeme Sweeney, representing ERP, appeared before the House of Lords Select Committee on Science and Technology last week, as part of their inquiry on 'Setting Science and Technology Research Funding Priorities'. Feedback from the Committee staff has indicated that the Lords felt it was a good session, and the contribution of ERP was well received. Further information about the session is available on the ERP website.

David noted that ERP Analysis Team member Charlotte Ramsay would be leaving the team on the 19th February. Ian Welch thanked Charlotte for her contribution on behalf of the ERP secretariat and noted to members that recruitment for a replacement was in train, (coordinated by the Pay and Remuneration Committee).

The minutes of the previous meeting 10th October 2009 were approved.

International Engagement

David invited John Loughhead (UKERC) to present the findings from the International Engagement project. A briefing note presented in October 2009 had been recast as a report which set out an action plan to improve the effectiveness of UK participation in international innovation activities.

John highlighted the growing importance of the European and International stage in framing the debate on the UK's innovation strategy. This is driven by a growing number of activities and funding mechanisms, outside the UK, aimed at increasing collaboration to accelerate innovation.

The work proposed three steps to an 'Action Plan' for ERP to help deliver more effective engagement for the UK on an international platform:

1. **Coordinating UK activities**
   Establishing a 'forum' for those with an interest in international activities, which would help deliver the further two steps:

2. **Prioritising technologies**
   Setting out an assessment of how technologies perform against criteria to guide prioritisation of UK engagement

3. **Reviewing national and international mechanisms**
   Assessing UK participation in international activities and the potential for improvements

The Chair invited discussion by members on these conclusions and next steps for the ERP international engagement work. Comments included:

- The development of any new forum should be aligned with existing organisations. A new body should not be created if others could perform the functions outlined in the report. For example, the newly launched Energy Generation and Supply Knowledge Transfer Network (EGS KTN), which had been established with the intention of bringing together the UK energy community, with a particular focus on coordination of the community in activities such as international engagement.

- The Science and Innovation Network (SIN) based in BIS could provide intelligence on science and innovation activities, including energy, in countries across the globe. Tapping in to this resource could provide useful evidence on innovation activity in other countries that could assist with prioritisation for UK RD&D work. Similarly, the Research Councils are active in the USA and China, and again, making use of these existing networks could help to provide context for the UK's own innovation activities.

- Access to European funding was seen as a priority by several members. There is already considerable activity going on in the European area with the SET Plan, EII and EERA work, along with the establish R&D Framework Programmes. There was concern that talks are already underway to set the priorities for the 8th Framework Programme, and members were keen that the UK makes a strong contribution into these discussions. The ERP would be well placed to facilitate this, and have a specific focus on assisting UK interaction in Europe.

- Speed of action is imperative as initiatives are taking shape now. To influence activity initial steps should be taken in the next few months. Iain Gray said the EGS KTN (bringing in other relevant KTNs through a special interest group) would be able to organise a workshop in a matter of weeks to help prioritise topics to inform a UK position for FP8 negotiations.

- There was general support for ERP to focus work on reviewing national mechanisms for international engagement (particularly in Europe), initially with a short-sharp review, reporting back to ERP at the next meeting, by which time the prioritisation workshop would also have taken place.

- It was also suggested that a next step to demonstrate value for the conclusions could be to take a technology case study – and show how further coordination would help to access funds and improve coordination in context.

- Even if other bodies take forward work on prioritising technology areas, ERP should retain a close interest as it can offer a unique contribution.

ACTIONS:

1) The International Engagement Report will be redrafted in the light of the comments received, with a focus on taking action to help improve effectiveness of UK organisations engaging in EU and international activities.

2) ERP members with an interest in this area will form a working group to take this work forward and identify whether there is an existing forum that can deliver on the challenges outlined in the ERP report. Other stakeholders will also be invited to participate (EGS KTN, SIN, and Research Councils UK). ERP members expressing an interest in being part of this group were: TSB, Carbon Trust, BP, Shell, Scottish Enterprise and DfT. Other members with an interest should contact Jonathan Radcliffe on the Analysis Team.

The group will report back at the April ERP meeting.

3) The EGS KTN will be asked to organise a workshop to identify priorities for UK engagement, both for current activities and with a perspective to influencing content of Framework Programme 8 within a month.

Innovation Milestones to 2050

David invited the ERP Analysis Team to present the draft report for Innovation Milestones to 2050. Richard Heap from the team talked through the draft report, and presented the main findings on the technology analysis and the initial conclusions on implications for RD&D.

The report sets out for policymakers, funders and investors, how and when some of the major innovations in energy technologies are expected to develop, and what some of the options could be for the energy system. It also identifies what the implications of these choices may be on the wider energy system, to inform decisions that may be taken by policy makers, funders and investors.

The key messages were broken down into 4 technology areas of electricity generation, enabling technologies, road transport and the built environment. The analysis (drawn from various stakeholder scenarios and existing roadmaps) identified the position on the innovation chain of a number of key technologies, with conclusions on the steps needed to allow these technologies to contribute to the energy system in 2050.

For RDD&D the report had the following messages with implications for prioritisation of activity over the next 10 years:

1. Research & Development: Early stage Research and development work is needed for technologies that are expected to have an impact after 2025 / 2030 – e.g., next generation insulation materials, novel energy storage solutions and EV technologies
2. Demonstration: A number of technologies that are proven in a developmental sense still require large scale demonstration to provide data on their operation in a whole system setting and to illustrate how they will operate with end users. CCS, offshore wind, wave and tidal technologies, a range of demand side technologies (dCHP, heat pumps, smart meters), smart grids and road transport technologies.
3. Deployment: Technologies that are ready now must be deployed over the same time horizon, this means massive effort to roll-out e.g. off-shore wind, nuclear and energy efficiency solutions.

The Chair then invited comments from members on the content and conclusions on the report.

Members were very positive about the content and conclusions of the draft report, in particular the emerging conclusions on prioritisation of RD&D activity and identification of a technology innovation pipeline for action in the short term. Some suggestions were made for inclusion of additional technologies that had not had significant treatment, as well as suggestions for restructuring the key messages and the recommendations and next steps for the work. The following points were made:

- The role of gas was not well explored in the technology analysis. There was no inclusion of the role of, or scope for, gasification of coal or shale gas, and no comment on security of supply concerns around existing sources of gas. This reflected a lack of coverage for gas innovation issues in the scenarios studied in the meta-analysis.

- Other technologies suggested for further treatment in the report were Concentrated Solar Power (CSP) from deserts and interconnection with mainland Europe and other countries.

- The section on transport should recognise the importance of heavy transport, including freight, marine and rail, which is likely to lead to some major infrastructure investment. DfT are developing some work on this that the report could highlight.

- The importance of interactions between the energy infrastructure and other critical infrastructures (e.g. water, waste, telecommunications, transport etc) was highlighted. Work is underway to explore how these infrastructures interact to coordinate their future development through Infrastructure UK[1]. The ERP 2050 Innovations milestones work could be an important contributor into this work, as well as taking some messages from this analysis.

- David MacKay highlighted that there was ongoing interaction between ERP's project and DECC's 2050 Roadmap project. The DECC 2050 project is focusing on developing a "carbon calculator" that expresses a range of possible scenarios which can deliver the 2050 target.

- Members noted that RD&D could also be prioritised on the basis of economic benefit to the UK, and development of market opportunities for the UK. As it stood, the report focused on the technologies that would have greatest impact to reducing emissions (rather than contributing to UK economy), some additional comments could also be made on market opportunities on a global stage – particularly in the light of the previous discussion on International Engagement.

- The implications and impact of costs on the technologies envisaged was a factor raised by several members. It was felt that some recognition of how scenarios would change in relation to cost assumptions was needed, and an understanding of the cost drivers that have influenced technologies in the past could be helpful.

- Restructuring of the executive summary was proposed, to set out: 1) What had been done, the meta analysis and drawing together of a wide evidence base, 2) Main findings from the meta analysis – commonalities and differences, 3) What did this say about RD&D activities, set out as implications for Research & Development, Demonstration and Deployment.

- It was noted that the report has some strong messages on the scale of the challenge facing the UK in terms of demonstration and deployment. And that the unique perspective on innovation that the ERP brings to the debate strengthens the conclusions of how we prioritise technologies in the RD&D pipeline.

- Delivering the 2050 targets is not just about the technology, but will require a significant behavioural transition, particularly on the demand side. The social sciences need to be engaged to understand how this can be achieved.

Jonathan Radcliffe presented proposals for the next steps. Over the next month the Analysis Team would be consulting with the ERP membership for detailed input and comments on the report, with a view to holding a stakeholder event in early March. A meeting with the DECC Minister is scheduled for March 16th, to present findings from the report and the ERP recommendations. Publication was proposed for late March. Members were asked to consider the specific 'next steps' made in the final chapter, including how ERP's future work could be guided by the report's conclusions.

[1] See http://www.hm-treasury.gov.uk/ppp_infrastructureuk.htm.

Member comments indicated that March was going to be a busy time for publication of reports, and that earlier publication would be beneficial if the ERP was to have more impact. A revised schedule was agreed to publish the report (minus the technical appendices) by the end of February/start of March.

Areas for future ERP work proposed by members included distributed vs centralised generation, energy storage and competing uses of biomass. A point was made that ERP's strength was considering issues at the energy system level.

ACTION:

1) Report to be redrafted to include:

- Specific technical comments from members including the role of gas, CSP and interconnection;
- Comments on prioritisation to achieve economic benefit for UK as well as emissions reductions;
- Restructuring of the executive summary.

2) Members wishing to make further detailed comments should contact the Analysis Team by 29th January. The Analysis Team would contact a number of members over the next three weeks directly, where clarification on specific points was required.

3) Accelerated timescale to publish the report by the end of February/start of March. Analysis Team to circulate draft press release and publication/dissemination strategy along with revised draft.

4) Members with further comments on the implications of the 2050 work for the ERP workplan should communicate these to the Analysis Team. This will contribute to a discussion of future projects and a revised workplan at the April plenary meeting.

Chair's Closing Remarks

The Chair, informed members about the rescheduled meeting between ERP members and the Energy Innovation Minister David Kidney that has been set for 16 March, 10.30 – 11.30 am at 55 Whitehall Place.

The purpose would be to present the latest position on the 2050 Innovation Milestones with a representation from ERP rather than a full membership attendance.

Date of next meeting

The next meeting is on the 20 April and will be held at the ERP offices in 58, Princes Gate, South Kensington.