

## **ERP Plenary meeting – Final Minutes**

**MEETING DATE:** 16 October 2012

**LOCATION:** 58 Princes Gate, London, SW7 2PG

### **ATTENDEES:**

Chair:	Nick Winser	National Grid
Members:	David MacKay	DECC, ERP Co-chair
	Stephen Trotter	ABB
	John Miles	Arup
	Martin Grant	Atkins
	Julian Allwood	Cambridge University
	Tom Delay	Carbon Trust
	David Clarke	ETI
	Duncan McLaren	Friends of the Earth UK
	Sue Ion	Royal Academy of Engineering
	Paul Lewis	Scottish Enterprise
	Neil Morgan	TSB
	Peter Bance	Octopus Investments
	Keith MacLean	SSE
	Alison Wall	EPSRC
	Neville Jackson	Ricardo
John MacArthur	Shell	
John Loughhead	UKERC	
Peter Emery	Drax	
Rod Smith	DfT	
Jill Duggan	Doosan Power Systems	
Non-members:	Stephen Fleming	E.ON
	Mike Thompson	CCC
Invited:	Paul Durrant	DECC
	Tom Jennings	Carbon Trust
	Jim Skea	Imperial College
Secretariat:	Farida Isroliwala	DECC
	Ian Welch	National Grid
Analysis Team:	Jonathan Radcliffe	ERP Analysis Team
	Richard Heap	ERP Analysis Team
	Mark Workman	ERP Analysis Team
	Helen K Thomas	ERP Analysis Team

### **1. Chair's introduction**

Nick welcomed Members to the meeting and noted apologies from David Eyton (BP); John Perkins (BIS); Jeremy Watson (DCLG); Ron Loveland (Welsh Government) and Sara Vaughan (E.ON - with Stephen Fleming in attendance). John MacArthur was welcomed to ERP as the new Member from Shell.

Nick announced that following a consultation of Industry Members; Keith MacLean (SSE) was to become the new industry Co-chair. Nick thanked ERP members for their support throughout his term and congratulated Keith on his new role.

The minutes of the July 2012 meeting were approved.

The key objectives of the meeting, which followed discussion at July's plenary meeting, were outlined: i) to assess how the innovation landscape is evolving in the UK; and ii) to refine ERP's future work and strategy, ensuring maximum value and impact.

## **2. Low Carbon Innovation Coordination Group (LCICG) work on Technology Innovation Needs Assessments (TINAs)**

Alison Wall provided a brief outline of the work, activities and membership of the Low Carbon Innovation Coordination Group (LCICG), which brings together the major public sector backed funding and delivery bodies that support low carbon innovation in the UK. The aims of the LCICG were summarised as below:

The group aims to maximise the impact of UK public sector funding for low carbon technology in order to:

1. Deliver affordable, secure, sustainable energy for the UK
2. Deliver UK economic growth
3. Develop the UK's capabilities, knowledge and skills

Paul Durrant (DECC) and Tom Jennings (Carbon Trust) provided more detail around the work of the Technology Innovation and Needs Assessments (TINAs) (led by the LCICG) and outlined the technology areas assessed, their structure, current findings and next steps for the work carried out so far.

Main points noted were:

- There are currently six published TINAs (on CCS, offshore wind, marine, heat, electricity networks and storage, and bioenergy), four others due to be published in November (on non-domestic buildings, domestic buildings, nuclear and industrial energy efficiency) and one on hydrogen by Spring 2013;
- The TINAs provide consistent methodologies for the cross-comparisons of various technologies - each one is then summarised in a 10-15 page report;
- Criteria are used to analyse each technology area for greatest potential impact from UK public sector activity/investment, to stimulate innovation;
- A cross TINA comparison is being developed to identify innovation priorities and support that will inform future investment decisions;
- Development plans for an LCICG Strategy are underway which will provide a collective view on priorities for government low carbon innovation support in the remainder of this decade.

Members were then asked to consider the on-going relationship between ERP and LCICG and how ERP's work could be differentiated from the work of the TINAs.

Members extended their thanks to the LCICG team and agreed that the overview had been clear, useful and informative. Subsequent comments included:

- **Public acceptance** and to what extent the TINAs have taken this into consideration, CCS was referred to as an example. In response, it was mentioned that public acceptance was not necessarily always considered but work around Smart Grids was the main area where public acceptance would have emerged.
- **Communication** around the outcomes of the TINAs and how this could take place within non-public, private and industry bodies. It was suggested that ERP could be one mechanism for this.
- **Transport** and whether this area should have been included as part of the TINA work carried out. It was acknowledged that consideration of the transport sector would have been useful in regards the outcomes of the TINAs but from a public sector funded (TINA) perspective, transport was considered already well coordinated.
- **The changing landscape of the energy system** and how the TINAs could be kept up to date. Paul stated that the intention was for the TINAs to be reviewed periodically.
- **Investment opportunities** including how and whether the outcome of the TINAs would be used to inform investment decisions and change the views of those bodies working closely or within the LCICG. Paul said that the TINAs represented a shared and coordinated approach, which all members of the LCICG were enthusiastic about using to inform their decisions.

Other matters noted were:

- The TINAs appeared to rely on rational economic thinking which is not the case in reality - caution should therefore be taken when using these in analysis.
- Some members felt that following the outcome of the TINAs; it was better to focus investment on furthering *particular* technologies rather than spreading investment too thinly.
- There was recognition that with regards to money and current areas of strength, the RD&D portfolio looked more promising than five years ago. Members hoped that improvement would continue over the next five years.

Communication and the impact on delivery of programmes were highlighted as challenging areas in regards to the TINAs. The LCICG representatives felt that ERP would be useful as an aid for delivering, communicating and even challenging the work of the TINAs (filling in the gaps). Member feedback was additionally welcomed on how best to take the LCICG strategy forward.

The Co-chair's highlighted the importance of ERP being kept up to date with the work of the TINAs. It was felt that ERP had a potential role for providing a 'portal' for the broader private sector, for international involvement and for what should take place across infrastructure as a whole. Industry engagement in particular, was highlighted as an area that required a greater focus.

David MacKay added that DECC were particularly interested in using the TINAs to guide the rational spending of public money. ERP could help by challenging the existing evidence base of the TINAs and the way this evidence is ultimately used, especially in terms of providing value for money. David additionally called on ERP

members to interact with government ministers and emphasise the importance of innovation support.

### **Actions**

LCICG to keep ERP informed of progress as work on the TINAs, and how they will be used, develops.

### **3. Prospectus for energy research, skills and training needs**

Jim Skea from Imperial College presented his work to develop a Prospectus for energy research, skills and training needs, for the Research Councils Energy Programme.

The Prospectus follows on from the report of the International Panel for the RCUK Review of Energy which recommended that “a fully integrated roadmap for UK research targets be completed and maintained to allow all to know and understand what is considered essential to meet society’s needs”.

The Prospectus is therefore focused around the following possible areas of improvement:

- The impacts of research on economic benefit, industry development and quality of life;
- The UK’s skills base and the availability of long-term career paths;
- The communication and transparency between open-ended discovery and targeted strategic programmes.

The aims, objectives and work plan of the Prospectus were then covered with the following points noted:

- Work on the Prospectus will take place in three phases, scoping, data gathering and synthesis, and is due to be published in Autumn 2013;
- The Prospectus considers existing work in relation to innovation and research (e.g. work of the LCICG TINAs). This helps to avoid duplication and can highlight possible collaboration opportunities (e.g. with the CCC);
- Systems mapping of innovation is taking place for selected countries;
- Nine workshops are due to take place, including three ‘strategic’ workshops by the end of the year, and six ‘expert’ workshops in the first half of 2013;
- The Prospectus will consult and engage with various partners, including the Energy Research Partnership.

Jim also set out his research programme which would follow the Prospectus and map out systems of energy innovation for a range of countries and technologies. The objective would be to learn lessons for successful energy research and innovation policy, by measuring the effectiveness of the different arrangements.

Members thanked Jim for his presentation and discussion on the possible roles for ERP resumed. Main points noted were:

- It was important for research to shape policy, as well as for policy to drive research. It was felt that ERP had a possible role in supporting this;

- Members raised concerns that research can be very supply-side focused. They were reassured that a third of the Research Councils' prospectus focuses on the demand side, including resource-use efficiency, emphasising its importance;
- Particular technologies such as CCS were a focus of discussion and members raised concerns about ensuring funding is available as soon as technologies come forward, including addressing legal and regulatory barriers i.e. innovation and funding working together to enable technologies;
- Members recalled ERP's previous work on training and skills (the ERP skills brochure 2007). Although the document is now relatively old, members suggested that this work be considered as part of the Prospectus work;
- The differences between the Prospectus and LCICG's work were discussed. It was emphasised that the Prospectus takes a longer-term view and could be a possible 'game-changer' for emerging technologies.

#### 4. ERP forward look

Jonathan Radcliffe led discussion on possible future work areas for ERP over the next 12 - 18 months (See Annex A) and outlined the three key project areas that came to light at the last plenary meeting. The projects with most support were:

- **Public Engagement** – A project which focuses on public acceptance and attitudes towards new energy technologies, within a wider understanding of the implications of the low carbon transition;
- **Buildings Technologies** – A project to assess innovation in technologies to improve efficiency of buildings, in particular for retrofit;
- **Flexible Generation** - A project to assess the potential of supply technologies to generate electricity with greater flexibility, the innovation requirements and the impact on renewables deployment.

Several other topics had also received support, though some of these were being taken forward by other organisations, so not appropriate for ERP to tackle.

Scope for the Public Engagement work was outlined (as above). Members were reminded of work that UKERC has recently carried out in relation to public attitudes, which would complement the new ERP project. This research showed that the public are not against new technologies but there is a lack of trust.

Points raised in relation to public engagement were:

- Public engagement is incredibly important given that the public will be required to use/engage with the new energy system in an entirely different way;
- The National Grid 'new pylons debate' could perhaps tie in to this work as a case study;
- Energy bills are a good area to focus engagement on as prices affect the public greatly;
- It is important to pursue two-way engagement so as not to alienate/preach to the public. It should be recognised that the public can help identify needs/solutions also.
- Technologies that can automate actions may be easier than trying to get the public to opt in and interact.

ERP members supported the organisation of a workshop on Public Engagement to help identify challenges and any existing areas of activity/research in order to improve public engagement. This may lead to further work by ERP.

Two further possible ERP project areas were also suggested:

1. Analysis on the value for money of different investments for innovation support, leading on from the TINAs work – this would have benefits of cross-sector analysis, (taking into account the public, private and industrial sectors);
2. Whether a global carbon price would have benefit as a mechanism for encouraging energy innovation? This was suggested particularly with reference to a recent book by Dieter Helm and could include asking ERP Members' organisations their views on global carbon pricing.

There was general support for both topics to be added to the future work topic list, although not as a priority at this stage. Landfill tax was referred to as a useful comparison in addition to considering carbon pricing as it showed how tax has driven innovation.

Members agreed that the three project proposals highlighted at the previous meeting (as listed above) should be kept as a priority at this time. It was suggested however, that work on carbon pricing could be carried out as a future post-plenary discussion (or similar) in order to assess the value of the work and to raise initial questions.

Members therefore requested Project Initiation Documents be prepared for Buildings Technologies and Flexible Generation, with shorter project abstracts written for the additional project areas 'long list'.

Finally, it was noted that transport did not appear on the future topics list, despite being a main focus area in regards to decarbonisation. It was noted that elements of transport would be covered within other project areas such as Hydrogen but that it should also be kept in mind for a future topic area.

### **Actions**

- Richard Heap to prepare for a Public Engagement workshop; Members interested in steering this should contact Richard.
- Analysis Team to produce Project Initiation Documents (PIDs) for Buildings Technologies and Flexible Generation;
- Analysis Team to produce shorter project abstracts for additional project areas.

### **5. Any other business**

Members agreed a new plenary meeting start time of 09:45 for future meetings to allow an extra 15 minutes for discussion.

Members were also asked to consider ideas for a new SME member and to submit these to the ERP Secretariat.

The next ERP Plenary meeting will take place on Thursday 17 January 2013, 09:45 – 12:00 at the Royal Academy of Engineering.

Members thanked Nick for his support as ERP Industry Co-chair over the past three years and were then invited to stay for lunch and a post-plenary session on System Balancing with presentations from Rachel Crisp (DECC) and Goran Strbac (Imperial College).

#### **Appendix A: Possible future work topics from July plenary discussion**

As described in the minutes to the July plenary meeting, the areas with most support for future work by ERP were:

- Public engagement
- Buildings technologies
- Flexible generation

The proposed scope of new projects on buildings technologies and flexible generation will be presented to ERP plenary meetings in January and April 2013.

Other areas which received some support were:

- Innovation landscapes – seen as an issue which could guide ERP's future role and work areas, and is being covered at the October 2012 plenary
- Scenarios – following-up ERP's 'Energy Innovation Milestones to 2050' report, now being taken forward by Jim Skea as part of the energy research prospectus.
- Fusion – possible topic for a plenary meeting, but subject to an upcoming Research Council report.
- Unconventional fossil (shale gas, underground coal gasification)
- Energy systems in communities / cities

Less well supported topics were: further analysis for the international abatements project; follow-up to work on SMEs; CCS; renewable technologies; enhanced oil recovery; and thorium.