

ERP Plenary meeting – final minutes

MEETING DATE: 16 July 2013, 3:00 - 5:30pm

LOCATION: 170 Queen's Gate, Imperial College London, SW7 5HF

ATTENDEES:

Chair:	David MacKay	DECC
Members:	Keith MacLean	SSE, ERP Co-chair
	John Perkins	BIS
	Rod Smith	DfT
	Peter Emery	Drax
	Alison Wall	EPSRC
	David Clarke	ETI
	Duncan McLaren	Friends of the Earth
	Mark Wagner	Isentropic
	Peter Bance	Octopus Investments
	Sue Ion	Royal Academy of Engineering
	Angus Gillespie	Shell
	Rob Saunders	TSB
	John Loughhead	UKERC
	Julian Allwood	University of Cambridge
Non-member attendees:	Richard Neale	Atkins
	Chris Pook	BIS
	Bob Sorrell	BP
	Mike Thompson	CCC
	Graham Welford	Doosan
	Stephen Fleming	E.ON
	Chris Bennett	National Grid
	Diego Villalobos	Ofgem
Invited:	Paul Durrant	DECC
	Minister Michael Fallon	DECC/BIS
Secretariat:	Farida Isroliwala	DECC
	Rufus Ford	SSE
Analysis Team:	Andy Boston	ERP Analysis Team
	Mark Workman	ERP Analysis Team
	Richard Heap	ERP Analysis Team
	Simon Cran-McGreenhin	ERP Analysis Team
	Helen K Thomas	ERP Analysis Team

1. Chair's introduction

David welcomed Members to the meeting and welcomed Chris Pook (BIS), Paul Durrant (DECC – presenting on the LCICG's Low Carbon Innovation Strategy) and two new members of the ERP Analysis Team – Andy Boston (Head of Analysis

Team, seconded from E.ON for 6 months) and Simon Cran-McGreehin (Executive Analyst, previously from Ofgem).

Apologies were noted from: Stephen Trotter (ABB); Martin Grant (Atkins – with Richard Neale in attendance); David Eyton (BP - with Bob Sorrell in attendance), Tom Delay (Carbon Trust); Steven Aldridge (DCLG), Jill Duggan (Doosan – with Graham Wellford in attendance); Sara Vaughan (E.ON - with Stephen Fleming in attendance), Nick Winser (National Grid – with Chris Bennett in attendance); Neville Jackson (Ricardo); Paul Lewis (Scottish Enterprise) and Ron Loveland (Welsh Government),

The minutes from the April 2013 meeting were approved.

The key objectives of the Plenary meeting were outlined as follows: (i) Discuss and provide feedback on the LCICG's Low Carbon Innovation Strategy; (ii) Discuss and agree the updated ERP mission, project sign-off process and possible gaps/amendments to the membership; (iii) Meet Michael Fallon, DECC/BIS Minister to provide him with an overview of ERP's role and hear from the Minister regarding a transition to a low carbon economy, followed by discussion.

2. Briefing session regarding the Minister's visit

David introduced the session, which provided an opportunity to discuss and prepare ahead of the Ministers visit later in the agenda. Members were asked to identify key messages, which would be put forward to the Minister. Suggested areas from the Co-chairs were:

- Innovation and how the energy landscape differs from others;
- The importance of public and private/industry partnerships and
- The Industrial Strategy

It was recommended that although EMR is a topical subject, Members might like to allow more time for other areas of discussion, given ERP's remit and expertise.

Areas of particular importance raised by Members were:

- Public values and support – public values are currently seen to be disconnected from policy;
- Innovation Funding – clarification was sought in this area;
- Budgets and Spending Reviews - linked to innovation funding and translation through to R&D, plus the UK's ability as world leaders;
- The Industrial Strategy and the 8 'great technologies' - how policy relates to this e.g. what does the strategy say about technical development and partnerships?
- The Climate Change Act: achieving the 2050 targets requires demand reduction;
- Demand Side Management - ensuring appropriate policies and incentives for efficiency and behavioural change are in place;
- R&D (early and late-stage) with an emphasis on avoiding 'trigger-pulling' which can mean that technologies are deployed before their ready and therefore cost more to deploy;
- ERP's letter to The Chancellor, which stated that maintaining current levels of innovation funding were not adequate for the future.

Volunteers were chosen to raise these points during the session with the Minister.

3. The LCICG's Low Carbon Innovation Strategy

David introduced Paul Durrant from DECC who was called to provide Members with an overview of LCICG's Low Carbon Innovation Strategy work. The strategy builds on the work of the Technology Innovation Needs Assessments (TINAs) in order to provide a shared vision of the LCICG's aims, principles, approach and priorities for public investment between now and 2020.

The Strategy project was launched in December 2012 and technology-specific workshops took place in April/May 2013. It is expected that final publication and launch will take place in October/November 2013.

The Strategy is intended to provide a framework within which the LCICG members operate based on the gaps identified by this project. It will not prioritise the technologies nor discuss allocation of funds, but will identify those areas that are important to the UK, where there are market failures that require public investment and what success will look like in 2020. It will also highlight the potential for EU and international collaboration: The UK's funding from the EU's FP7 Energy budget (8% on average over the last 7 years) has been lower than some of our competitors: Germany (16%), Spain (13%), France (10%) and Italy (9%). We should be able to improve on this by being more proactive. The Strategy will also support a coordinated approach by government departments and bodies to future Spending Reviews.

The key stages of work were summarised as:

1. Develop a common understanding of priorities, based on the shared evidence base of the TINAs;
2. Map existing activities and their alignment;
3. Develop a shared vision of the objectives and priorities for future support programmes out to 2020 – (this element was discussed at the Plenary meeting);
4. Develop a shared delivery plan out to 2020 – incorporating all UK government-backed energy innovation programmes.

It was noted that the audience for the strategy work was primarily LCICG Members; technology developers and commercial investors; Governments within and beyond the EU (e.g. potential for collaborations) and external commentators / decision-makers e.g. HMT, NAO and CBI.

It was additionally noted that the LCICG work groups technologies into 'families' for ease when defining spending budgets and prioritisations - although the previous work of the TINAs does highlight more specific areas and opportunities for economic gain, and additionally the potential for EU and international collaboration.

Interdependencies with other work were listed and these included:

- 11 industrial strategies (including offshore wind, nuclear, automotive, oil & gas);
- The Offshore Renewable Energy (ORE) Catapult;
- The Research Councils: Jim Skea's Energy Research Prospectus;

- The EU Strategic Energy Technologies (SET) Plan, 'Horizon 2020', Integrated Roadmap and Action Plan.

Examples of emerging messages in Offshore Wind and Bioenergy were subsequently provided and Members' thoughts and initial inputs were welcomed. It was expressed that the LCICG found ERP an extremely useful body to act as a 'sounding board' and one that could provide a welcome broad range of feedback, due to the mix of membership.

Members were specifically asked to feedback on the following topics:

- Will the strategy be helpful to industry/innovators?
- Is anything missing from the strategy - what more could be done to make it relevant/useful?
- What are the key principles of government support and when and how should government provide this?
- Where are the best opportunities to achieve more? For example to up the UK's engagement in and leverage from EU programmes;
- Is there any interest in particular chapters of the report? – Would individual ERP members be willing to provide comments on drafts of particular chapters as they emerge?

Members thanked Paul for his presentation, which they found interesting and encouraging, particularly the focus on the EU, where the ERP's International Engagement work is highly relevant. The following questions and comments were raised in relation to the work:

- The work is focussed on technologies but where does the whole system approach fit within this? Will it be addressed?
- In relation to the previous question – it is important to develop whole-system thinking, including non low-carbon elements that need to be addressed, as these play a role as back-up technologies and enablers. In addition to this, interactions with infrastructure were also mentioned. It was noted that the ERP Co-chairs would be meeting with Ofgem in the next week to talk about the LCNF.
- It is important to take measures to invest in readiness and enablers (infrastructure, mechanisms etc.) rather than specific technologies per se, to reduce overall capital intensity and enable transactions on an asset-by-asset basis.
- Innovation is and should not be solely about technologies, but include enabling issues such as finance and behaviour. A solely technology approach is likely to raise costs.
- Public acceptance / engagement is an area that needs to be addressed and highlighted in advance, as it can have major effect on how successful technologies are. Many Members agreed with this.
- It is important to involve the public at an early stage 'up-streaming' and to gain public trust by being more transparent. It was highlighted that the LCICG should have consulted with the public already (as part of the process) to provide coherence between the values of the public and a trajectory focus.
- It was noted that public support for some technologies is low. The opinion was put forward that if the 'fund-everything' approach continues then the public will not be on-board. A more responsive innovation approach is required to prioritise and roll out technologies effectively.
- The strategy should be focused on maximising impact.

- International engagement and collaboration should continue to be an area of important focus.
- Members requested clarification on how technologies in the Strategy were prioritised. For example, did the Strategy use the metric ‘cost per tonne of CO2 avoided’? It was stated that this was one of the metrics employed but that a suite of metrics would be developed for this purpose - these would be rolled out by the LCICG shortly which the ERP were welcome to review. It was additionally raised that cost per tonne of CO2 depends on the scale of deployment of a low carbon technology (for which there are various scenarios). In this way the strategy therefore hopes to provide recommendations on how to meet targets in both a low carbon *and* low cost way. It was also noted that metrics would be very difficult to apply to demand reduction through behavior change.
- In relation to this it was noted that the LCICG has another project looking at a variety of metrics – ERP Members may like to hear about this at a subsequent plenary meeting.

In response to the above comments, Paul acknowledged that the whole system approach was an important but challenging element and welcomed further feedback from Members on how to achieve this. Members were informed that the strategy was tasked with a particular focus on individual technologies, although some of the background modelling did provide system-level analysis, including value of the technologies to the system.

Some aspects of the TINAs / LCICG Strategy work had been separated to acknowledge whole-system elements such as networks and storage and work around (public) attitudes and values regarding technologies, innovation or development/deployment had been noted.

Action: Members to contact Paul Durrant or James Lingard at DECC with feedback, suggestions or potential input to the LCICG Strategy draft work including regarding a ‘whole-system’ approach.

4. ERP forward look, Mission Statement amendments and proposal for new Consortium Agreement

Keith prompted Members to provide final comments relating to the previously drafted Mission Statement, which had also been amended following discussion at April’s plenary meeting. The timeline for the renewal of ERP’s Consortium Agreement was outlined as follows:

- Amended ERP Mission statement approved by Members.
- Members to contact Secretariat / Co-chairs with amendments to ERP Membership within the next two weeks.
- Current Consortium Agreement to be revised and amendments added (to include Mission Statement and updated Membership), with assistance from the ERP Team and Imperial College.
- Revised Consortium Agreement to be sent out to ERP Members and legal contacts with a view to final sign-off **by the end of September**.

Clarification was requested regarding Point 9 in the Mission document, which related to ERP Member representation. This addressed whether Members represented

themselves or their organisations. It was agreed that ERP Members should represent their organisations and be responsible for feeding back and informing their own organisations. This differs from the former agreement where Members presented their own individual views. It was agreed that in cases where Members should wish to express their individual views, this should be stated beforehand.

Points were additionally raised regarding the clarity of ERP's aims and agenda going forward, as it was felt that this required clearer articulation. In response, Keith brought Members' attention to the new process for prioritising projects, which would enable ERP to have a more structured process whilst allowing a more ad-hoc and responsive approach. It was noted that as the nature of policy is ever changing and sometimes unclear, it would be hard for ERP to prioritise an exact aim for the upcoming Consortium period. The ERP Co-chairs will however, aim to seek greater clarity regarding ERP's role whenever possible. For now, it was encouraged that ERP continues in a flexible and responsive way

It was proposed that any finer detail should be added to the Mission Statement as an Annex, in order to keep the main Mission Statement clear and concise. There were no further comments and Members agreed the current version of the Mission Statement document.

In relation to membership, it was stressed that ERP needs to continue a well-balanced and evenly split mix of public and private membership.

Action: Co-chairs to meet with relevant Members as required (new or existing) regarding the new phase of ERP Membership.

Action: ERP Analysis Team (with Imperial College) to amend and circulate the final version of ERP's Consortium Agreement for the new Consortium period.

5. ERP Project Prioritisation Process

Richard Heap was asked to provide Members with a brief overview of ERP's project prioritisation process. The process responds to concerns raised by Members about the need to have a more structured process for identifying and prioritising new projects, allowing ERP to be flexible and responsive, including being able to pause or terminate projects.

Members welcomed the new process, which they felt would be a useful addition to ERP's ways of working. Given that it could take up to three months for a project to be identified and approved, it was agreed that provision needed to be included to allow projects to short-circuit the process so they can be identified and approved within a matter of weeks. It was recommended that the document should be amended to include a section on 'intended audience' for the proposed work. It was also suggested that projects put forward should undergo a small, internal peer review / enhancement process by colleagues from the relevant Member's organisation, with final approval from the ERP Co-chairs / Secretariat. The project prioritisation process document will be updated to reflect this.

Action: Analysis Team to amend ERP Project Prioritisation Process document.

6. Visit from Minister Michael Fallon

David welcomed the Minister and thanked him for attending the plenary meeting, which provided a good opportunity to meet a group with a broad focus across the energy sector.

Members were reminded of the Minister's responsibilities which fell under the roles of DECC Minister of State for Energy and BIS Minister for Business and Enterprise.

The ERP Co-chairs went on to provide a brief introduction from the public and private sectors respectively. The following points were noted:

- ERP works across the whole energy system;
- Innovation in energy differs to other kinds of innovation;
- The importance of public-private partnerships;
- What innovation is doing to help the energy sector;
- Main points from ERP's letter to The Chancellor which included: investment in energy innovation, Government and Public support for innovation and the chance to boost the UK's economy, including job creation and improved services.

The Minister thanked ERP for the invitation and noted its important role in bringing together a mix of government, industry and research organisations to work on issues across the energy sector. He cited ERP's Nuclear Fission and Nuclear Roadmap work and went on to highlight how the energy landscape has changed. He noted that energy is now regarded as an economic opportunity, but the scale of investment required is huge, with £23billion of near-term projects already through the planning pipeline. He then focused on four key issues:

1. The need to develop a stable energy policy framework around EMR; to ensure energy security and affordability and to achieve the UK's/EU's targets as set out in the Climate Change Act. He highlighted the importance of affordability and the impact on consumer bills and implications for their constituents, noting switch ability and providing the best deal.
2. The need for further innovation to reduce the costs of new technologies so they are not reliant on market incentives; Innovation is key to developing affordable and accessible energy. Here the Minister noted the potential cost savings of £160bn in energy supply costs to 2050 and UK-based business activity contributing up to £89 billion to GDP over the same period, noting £45bn in Off-Shore Wind alone. He welcomed ERP's input in to the LCCIG's Low Carbon Innovation Strategy development.
3. The importance of emerging technologies, specifically Energy Storage and Shale Gas; ERP's work on Energy Storage and Flexibility Options was cited and the Minister stressed the importance of continuing to look for new ways to balance supply and demand efficiently. The Minister saw **Energy Storage** as a very important factor for future energy use but one that needs to be carried out cost effectively. As one of the 8 great technologies announced by David Willets last year, Energy Storage R&D has been awarded £30million to create dedicated R&D facilities to develop and test new grid scale storage technologies. Regarding **Shale Gas**, the Minister stated that the Government is providing a framework of certainty that is needed to ensure the industry flourishes whilst ensuring that the

environment and community is protected hence the creation of the Government Office for Unconventional Gas.

4. The progress made on developing industrial strategies and the importance of industrial activity being aligned with policy for energy technologies. The work on the Industrial Strategy was about government working in partnership with industry to set out a long-term vision. Over £4bn has been committed to support the Industrial Strategy with action across five key themes: sectors, technologies, access to finance, skills and procurement. Out of the eleven strategic partnerships being developed, three were energy related: Nuclear and Oil and Gas came out in Easter with Off-Shore Wind due to published this summer.

Members were then provided with an opportunity to raise the points discussed in the earlier briefing session (see Section 2 above) with the following points additionally addressed:

- System, infrastructure and behavioural changes required for improving efficiency within the transport system;
- Transparency regarding costs and tariffs;
- Smart metering (in relation to demand-side measures);
- The importance of whole-system analysis;
- The need to invest in enabling technologies such as oversizing CO₂ pipelines for CCS demo projects to facilitate and reduce the costs of future network expansion;
- Low strike prices, severe digression and short contract lengths make it difficult to realise a virtuous circle of investment and innovation that in turn lead to reduced costs.
- The opportunity presented by the EU for the UK to step up and take on a greater role in shaping EU priorities.

Members noted their support for the Industrial Strategies, highlighting the need to capitalise on the UK's world class R&D.

In response, the Minister noted that the Industrial Strategies helped put the case to HMT but that industry was to take ownership of their respective agendas. He noted that demand reduction needed to be 'baked into' EMR. Government is also spending more time in Brussels addressing interconnectors and aligning with EU Energy Policy. The Minister recognised the challenge of behaviour change, noting housing and battery electric vehicles as examples. Regarding EMR he expects industry to respond to the current consultation and noted that the Strike Price was not designed to trigger innovation in all areas, such as far out to sea OSW.

The Minister thanked Members for their comments and was once again thanked by Co-chairs and Members.

6. Any Other Business

Members requested a brief update on current and upcoming ERP projects - this was provided by the Co-chairs and Analysis Team. Members were reminded that ERP's work on Public Engagement would be presented at October's Plenary meeting. In the mean time, the Analysis Team should circulate an updated version of the project work plan. Members made their way through to the ERP drinks reception and dinner.



Action: Analysis Team to update and circulate ERP work plan and project updates paper to provide Members with a better visibility of upcoming and future ERP projects.

Next meeting: Thursday 10 October 2013, 09:45 – 12:30.