

ERP Plenary meeting

MEETING DATE: Wednesday 14 October 2015, 09:45 – 12:15

LOCATION: Church House Centre, London

ATTENDEES:

Chair:	Keith MacLean	ERP Co-chair
Members:	Craig Lucas	DECC, ERP Co-chair
	Bob Sorrell	BP
	Tom Delay	Carbon Trust
	Philip Blythe	DfT
	Kathryn Magnay	EPSRC
	David Clarke	ETI
	Duncan McLaren	Friends of the Earth
	Rob Saunders	Innovate UK
	Peter Bance	Origami Energy Ltd
	Neville Jackson	Ricardo
	Maggie McGinlay	Scottish Enterprise
	Ali Naini	Turquoise International Ltd.
	Ron Loveland	Welsh Government
Alternate		
Member attendees:	Colin Green	ABB
	Richard Neale	Atkins
	Duncan McCombie	EST
	Soichi Furuya	Hitachi
	Jon Fenn	National Grid
	David McDougall	SSE
	Amber Sharick	UKERC
Observers:	Andrew Wright	Ofgem
	Chris Stark	Scottish Government
Invited:	Allen Creedy	Federation of Small Businesses
	Paul Durrant	DECC
Secretariat:	Farida Isroliwala	DECC
ERP Analysis Team:	Andy Boston	ERP
	Mark Workman	ERP
	Helen K Thomas	ERP
	Simon Cran-McGreehin	ERP
	Richard Heap	ERP
	Mathilde Bourgeois	ERP

1. Chair's introduction

Written apologies were acknowledged.

Guests were welcomed and included: New Member Philip Blythe – DfT; Craig Lucas, DECC - acting as Co-chair for the plenary on behalf of John Loughhead; Allen Creedy – Federation of Small Businesses (FSB); Chris Stark, Scottish Government, and Paul Durrant, DECC attending for the International Engagement project.

Minutes of the July 2015 meeting were approved.

The key objectives of the plenary meeting were outlined as follows:

- I. Discuss **Transport project** - report is due **in January 2016**.
- II. Consider and discuss key issues relating to **International Engagement project**.
- III. Consider and discuss upcoming activities and confirm outputs relating to the ongoing **Horizon Scanning project**.
- IV. Discuss and provide input following an overview of **ERP Stakeholder Engagement Strategy**.

2. Transport Project

Project Chair Neville Jackson thanked the Steering Group for its work. He highlighted that this second phase of the project is considering broader energy issues associated with transport, for example considering the best use of the limited biomass or the potential scale of low-emission sources of hydrogen. He advised members that the current stage of the output was an interim report, and that comments were invited for the remaining work. He introduced ERP Analyst Simon Cran-McGreehin who presented slides on interim conclusions and the work to-date on the project's scenarios.

It was stated that the project has focused on four energy vectors (liquid fuels, methane, hydrogen and electricity), to consider current status and interactions with the wider energy sector. The project has reached interim conclusions about their potential and issues can be grouped into three over-arching themes:

- Technological breakthroughs are needed, e.g. fuels for heavy transport
- Solutions depend upon other developments, e.g. CCS
- Wider uptake requires strategy, e.g. effective regulation of emissions

The project is developing scenarios to consider the "best use" of different energy sources. Examples were presented of some of the considerations for natural gas and biomass, including:

- What has to be optimised, e.g. reduce GHG to a certain level
- How other factors are traded-off, e.g. achieve objective at least cost
- Technical requirements, e.g. high energy density needed for heavy transport
- Strategic considerations, e.g. reliance on one fuel
- Resource limitations, e.g. supply of 2nd generation biomass

Comments and questions from members included (grouped into the following categories):

- **Technologies and fuels:**
 - Relatively low-cost technologies exist to improve conventional cars' efficiency and emissions, but are not used because car makers do not want to incur any higher costs if they don't have to.

- EVs' lifetime emissions depend upon mileage (some drive 300-400miles/day using rapid charging networks), and batteries' end-use (re-use is more efficient than recycling).
- Imported bioethanol is readily available, so there is less incentive for UK production. Therefore there is scope to use UK production either to increase the bio-fuel blending requirements or replace imports (whose transport and sometimes inappropriate land use reduces the overall carbon impact).
- Technical challenges for 2nd generation biofuels differ between waste and crops.
- Electrification of railways is important, but costs are high and mostly associated with infrastructure, so the project could consider the merits of battery electric trains.
- **Behaviour and uptake:**
 - Consumer acceptance and behaviour are key factors, and regulation has a role in behavioural change. Mobility as a service is becoming a key theme at DfT. Behavioural aspects (e.g. use of mobility in urban areas) could be analysed further in this project. It is important to understand the propensity of different people/companies/areas to switch to new technologies; ERP could do a behavioural study, perhaps in early 2016. Technology costs can vary between rural and urban areas. Businesses and residents in some rural areas have limited services (e.g. broadband), highlighting the need of solutions for these areas including for transport.
- **Scenarios and strategies:**
 - It is important to identify the UK's competitive strengths in new transport technologies/energy.
 - Comparative analysis with other countries would show solutions that are sought internationally (e.g. in California, China, Germany), for road and rail.
 - Scenarios should consider how costs could change in future.
 - Top-down scenarios identify "best" solutions, but these might not be easy to implement, especially for infrastructure. A bottom-up transition theory scenario would be useful, exploring 'disruptive' change (e.g. behaviour, modal shift, sharing and automation).
 - Adopting incremental changes as a model, would require a long term, consistent political support and policy environment basis. Incremental development is not the most efficient way of building infrastructure and it is not clear where in government lies the decision-making to enable non-incremental approach. The report could comment on this governance issue i.e. governance and where decision-making can be at different levels: locally, nationally, or internationally.
- **Interactions with wider energy sector:**
 - Electrification scenarios should focus on implications; it should not be assumed that distribution networks can accommodate EV scenarios (in addition to renewables, heat pumps, etc.). Outcomes depend upon synergies and competing demands. The reuse of batteries for network storage is a good opportunity. Analysis should aggregate short-run impacts to determine impacts on larger infrastructure.

Energy system will be a key issue for a low-carbon energy system: electricity storage is 100 times the cost of heat storage, which is 100 times the cost of fuel storage.

Neville Jackson (the Steering Group Chair) thanked members for their comments which would be considered, but underlined the challenge of keeping the report's scope manageable. He reiterated a key challenge being the competing demands for renewable energy, and additional issues such as assumptions being made about technologies' long term costs and efficiencies.

Action: Analysis and final report to be shared with members for comments ahead of publication in January 2016.

3. International Engagement Project

Keith McLean called upon Rob Saunders (Innovate UK), deputising for Prof. John Loughhead (DECC) in relation to the International Engagement project and asked him to introduce the project. Rob provided the context for the presentation: the UK has 0.9% of world population and 2.2% of R&D, 16% of most highly-cited papers, but only 5% of R&D spending.

It was explained that this raised questions such as: *are we taking advantage of international expertise on energy? And engaging with it via International partnerships/learnt lessons/establishing presence in international markets?*

What has transpired is an opportunistic and sporadic approach to engaging internationally so far, rather than a more strategic framework that should be pursued in future. ERP's paper is aimed at providing this much needed additional structure. Members were advised that the paper was presently a working document, and that comments and advice on how to take it forwards would be sought in the next few months.

Rob introduced Andy Boston who presented key points, which started by mapping out the complex arena of International Engagement for Energy with its many actors. The recent activities of the Science and Innovation Network (SIN), Carbon Trust, DECC and InnovateUK were presented along with the initiative of the Low Carbon Innovation Coordination Group (LCICG) to try and bring some co-ordination to the space. Andy provided an outline of how a strategy might be developed for two scenarios (i) where it had been identified that the UK needed to innovate but didn't have sufficient capability, and (ii) where the UK could collaborate from a leadership position.

Strategy development was illustrated for the pilot example of Offshore Wind, chosen as an example of a technology area important to the UK energy system yet in need of innovation. The pilot showed how analysis at component level revealed areas where the UK was leading and others where it lacked the expertise or facilities needed to deliver the required improvements. Although the project was still in the working stages, Andy said that the final report was likely to recommend that a living strategy was compiled for each key technology area and that long term resources be secured to keep it updated.

In seeking input from members, it was noted by the Chair that the involvement of Go Science and DfiD could possibly be considered (international aid in climate change and energy) and factored in. He mentioned the offshore strategy followed by UK, an area which was studied in the past. He stated that whilst the UK was mainly involved in R&D, Germany was concerned with deployment. Rob answered that the UK was active in more than just the turbines themselves and that UK offshore wind strategy did not focus on international engagement (and should).

Craig Lucas, deputy Co-Chair (DECC) noted that the industrial landscape should be considered given how constrained government resources imposed difficult choices. Both these criteria would have to be considered whilst developing a strategy, in addition to diplomacy drivers like political will (as in the case of research into storage with Mexico).

Members provided input and comments on:

- An energy R&D driving force that varied by country, e.g. a strong industrial policy in Germany, a dominant export policy in China and political and academic collaboration in Denmark.

- The reality of drivers like government coherence (political support), geographic constraints and opportunities and institutional structures.
- A concern was raised that there was too much of a focus on technologies in the analysis presented which could prevent the UK from learning from differences in behaviour, politics, cultures, financial sources in other countries, all factors which could be far more disruptive than just technology alone. This could be avoided by opting for analysis per purpose, rather than per technology alone.
- Assessing the actual strength of UK's R&D, and whether the aim should be to attract more R&D to UK, or to collaborate abroad.
- The fact that policy is not just UK driven but also by the EU, and by the devolved governments. Industrial strategy should be key, so that UK's strengths to be developed would benefit manufacturing and consequently GDP.
- The importance of delivery mechanisms for the report's recommendations.
- The observation that there was a lot more going on than what appeared in the report since energy had moved up the agenda of international meetings (e.g. within G20) which made looking into this further well-timed. The challenge presented by the people-intensive factor of international engagement, which made looking into how to deliver a recommended strategy complex yet essential. Finally, a note that the present spending review, soon to be completed, would make that guidance opportune.

Rob concluded the discussion by confirming that the scope would be reviewed following this valuable feedback from members, and Andy Boston clarified that the final output would recommend strategy and would look at non technological factors as suggested.

It was suggested by a member that DCLG and EU regional development funds have been available for SMEs, but had stopped for low carbon. This was followed by a suggestion from another member that holding thematic focused events targeted to a small number of businesses would help identify opportunities for SMEs.

Action: Andy to take on board advice given and circulate final report for comment before publication in February 2016.

4. Horizon Scanning

Keith McLean introduced this project and invited Mark Workman to present the latest update. Mark's presentation highlighted the following:

- There is a need to clarify the outputs sought from the ERP Horizon Scanning Project with ERP Members in order to ensure that the exercise provides value to the UK energy sector.
- A number of measures have been put in place to mitigate and/or address the potential for UK energy group think as per concerns of past UK energy futures exercises.
- Details of the work-up to the two workshops scheduled to date for **30th November** and **7th December** were noted as well as the follow up scenarios, energy and policy modelling and financial analysis exercises.

A briefing paper summarising the work can now be viewed on [ERP website](#) and members are requested to provide input to the following:

1. Clarification of the outputs from the Horizon Scanning project - so they can form useful inputs into other energy futures work; and
2. State whether the members would object to disseminating a horizon scanning survey in the next fortnight.

Actions: Members to contact Mark Workman regarding inputs sought, and to undertake a horizon scanning survey which will be circulated w/c 2 November.

5. ERP Stakeholder Engagement Strategy

Keith McLean began by informing members that ERP had been working to produce a Stakeholder Engagement Strategy to inform its ways of working, formalise its communications processes and help improve ERP's impact. He called on ERP Analysis Team Helen Thomas to provide a brief overview of the strategy to date.

ERP Members were initially reminded of ERP's Mission Statement before a summary of the Stakeholder Engagement Strategy's aims and purpose were provided. These focused on:

- Improving awareness of ERP, its role, brand and remit
- Improving the impact of ERP's outputs
- Incorporating best practice amongst ERP's staff, members & colleagues

It was explained that the strategy would set ERP on an upward spiral, where increased recognition would ensure high quality inputs to ERP, which in turn would ensure high quality outputs. The resultant increased awareness should again improve inputs and so on.

The important role for ERP Members was highlighted in terms of: ERP's impact; increasing awareness amongst member organisations (and the wider energy field); providing ideas or raising current and relevant energy issues to the ERP team; engagement in project steering group meetings; and using the stakeholder strategy to disseminate outputs. It was noted that ERP's Members (as well as its activities and analysis), really do add value to the organisation's work, reputation and output.

Finally, the Strategy recommendations were noted as:

1. New and focused Analysis Team resource for Communications & Impact has been proposed
2. Detailed (or tailored/focused) stakeholder mapping exercises to be carried out
3. ERP Members and Steering Group Chairs/Members to consider how their organisations can support ERP's communications activities.

Following the presentation, questions and comments raised by Members included:

- Stakeholder mapping is extremely important, but is likely to be a full time task requiring full-time resource. This task should maybe be focused on one area of mapping in the first instance.
- However, the risk of 'groupthink', presented by a homogeneous set of stakeholders in terms of concepts and ideas was raised -therefore mapping stakeholders more broadly could benefit ERP.
- Some Members felt there was still too much of a one-way focus to the strategy, despite its focus on inputs as well as outputs. Members provided a reminder of the need to listen to the broader public (e.g. in the process of presenting an overall narrative for energy policy), calling for ERP to consider ways to (and whether it should) engage with the public as a stakeholder.
- There was emphasis on the fact that ERP Members could all assist with ERP having a more powerful impact and this was noted and acknowledged.
- Members also acknowledged that the ERP team was not recruited on the basis of communications expertise, therefore input from those Members with expertise, plus extra ERP team resource would help to add value and effectiveness.
- Members felt that ERP as a whole would benefit from clearer direction and communication between all parties about current energy issues. Greater trust to share issues when they arise would, for example, save industry trying to 'second guess' Government's interests and enable timely analysis and maximum impact from ERP.

- In relation to the above, the Transport & Heat projects were used as examples where ERP has been a valuable advisory body for raising issues and informing organisations such as Go-Science, DECC and HMT.
- There was a final observation that organisations with successful impact were often the ones who utilised the best but simplest communications channels, occupied a clear space which was widely understood, and used external contact points well (conference presentations, etc.)
- In relation to this it was noted that the circulation of ERP-branded slides with key messages and a short re-cap of its role would be a useful tool for Members. Individual slide packs per project would also help Members to disseminate project findings/recommendations.
- Finally, Members were informed of the new ERP publication 'three level' approach; 1) a full report 2) an exec summary and 3) an elevator pitch which could be used/disseminated by the Analysis Team and Members depending on audience/purpose/impact required in each case.

Action: Analysis Team to circulate ERP Overview Slides for Members to disseminate and utilise.

Action: Analysis Team to create slide packs on a *per project* basis and make available to Members.

Actions: Members to provide feedback and update Helen Thomas re any offers of communications support and involvement.

7. AOB

Keith McLean called on Duncan McLaren and Peter Bance who had previously asked to raise points. Duncan proposed Members consider the role of ERP in the light of the new government's announcements setting its direction of travel for energy. It was noted that of particular concern was the growing policy incoherence. Concerns were also raised that the current government appears less open to science input. A proposal was put forward to look further into the 'modalities' of how ERP works, and the need to establish a Strategic Narrative (rooted in ERP's public engagement work).

Action: Members were invited to add their comments, weight or concerns regarding these views and engage in discussion. Please contact the [ERP Analysis Team](#) with views relating to ERP, or Duncan McLaren directly with wider views.

Peter Bance added that ERP's previous boldness to 'say the unsayable' had appeared to decline but needed to continue. He proposed that ERP's report recommendations should be more 'pointed' and agreed that ERP should use the weight of its Members' seniority to challenge and debunk myths. Keith McLean suggested that debunking could perhaps include challenging Deiter Helm's view that innovation will solve all problems.

Keith concluded the AOB sections and advised that **time would be allocated at the next plenary meeting to discuss ERP's impact and Consortium Agreement (current agreement will be worked on in the lead up to December 2016)**, by which time the Government spending review would have provided some clarity.

Keith made the following final announcements:

- ERP is organising a half-day **Managing Flexibility conference on 27th November** to publicise its work in this area and hear about the work of others. The conference will be jointly hosted by EU Zero Emissions Platform, who will follow the meeting with a half-day on EU perspective on CCS flexibility.
- Recent ERP reports published were on: Managing Flexibility, Cities, Community Energy and CO₂-EOR.

Details of the next plenary meeting (including a post-plenary session) were provided as: **Thursday 14 January 2016, 14:30 – 20:30, Church House Conference Centre, Dean's Yard, London SW1P 3NZ.**

Members were invited to enjoy the ensuing buffet lunch whilst networking with additional guests attending the post-plenary session on Hydrogen and the meeting was brought to a close.