

Energy Research Partnership Notes of January 10th 2008 meeting



MEETING DATE: 10th January 2008

LOCATION: BERR Conference Centre, London

CHAIR: Dr Paul Golby, E.ON UK

ATTENDEES:

Members:

Willy Rickett	BERR & Co Chair
Pam Alexander	SEEDA
John Beddington	GCSA
Jonathan Brearley	OCC
Alistair Buchanan	OFGEM
David Clarke	ETI
Tom Delay	Carbon Trust
Henry Derwent	DEFRA
Mike Farley	Doosan Babcock
Iain Gray	TSB
Joe Greenwell	Premier Automotive Group
Michael Kelly	DCLG – CSA
Paul Lewis	Scottish Enterprise
John Loughhead	UKERC
Ron Loveland	WAG
Ian Marchant	Scottish and Southern Energy
Turlough O'Brien	Arup
Nick Otter	Alstom Power Ltd
Michael Roberts	CBI
Graeme Sweeney	Shell
Alison Wall	EPSRC
Peter Waller	BERR
Nick Winser	National Grid

Secretariat:

Mike Colechin,	E.ON UK
Jonathan Dinmore	GO-Science
Nick Grout	GO-Science
Kathryn Newell,	BERR

Non - Members:

Roy Collins	DfT
Daniel Johns	Defra
Graham Pendlebury	DfT
Richard Ploszek	RAEng
Sarah Rhodes	BERR
Graham Tubb	SEEDA
Andrew Wood	HMT

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Apologies/ Not present:	Peter Bance Brian Collins Iain Conn, Sue Ion Geoff Norris Sir Keith O'Nions, Robert Watson	Ceres Power Limited DfT - CSA BP Royal Academy of Engineering No.10 Policy Unit DIUS Defra
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Chair's introduction

Paul Golby welcomed new members to the meeting: Iain Gray, David Clarke and Alison Wall. He also welcomed the new GCSA, John Beddington, who took a moment to express his very keen interest in ERP work and present an 'open door' to members. Paul noted apologies from several members and explained that Graham Pendlebury and Roy Collins were attending in place of Brian Collins to present to members on transport.

Paul noted that in his role as Co-Chair of the ERP he has been asked to give evidence to the HoC Select Committee Inquiry on Renewable Electricity-Generation Technologies, and that the evidence he will provide will be based on the discussions today and at previous ERP meetings.

Meeting minutes of 4th October 2007 were agreed.

Reflections from the new Co-Chair, Willy Rickett

Willy Rickett attended his first meeting, in the capacity of new public sector Co-Chair (replacing Sir David King). In addressing members, Willy accepted that it will take a little time for him to assimilate into the ERP - something which he looks forward to doing - and took the opportunity to give an overview of BERR Energy Group's current work and priorities. He reflected on current UK and international initiatives and policy drivers for energy innovation, highlighting the need to consider further measures beyond those outlined in the 2007 Energy White Paper to meet our climate change and energy goals. He emphasised the central role that technology would inevitably play in any scenario for a post-2012 international climate change agreement, and highlighted the need to focus on how clean heat, energy and transport technologies can be deployed globally.

Willy also commented on the key importance of making a success of the Energy Technologies Institute (ETI) and Environmental Transformation Fund (ETF), coordinated with the work of other bodies such as the Carbon Trust and Technology Strategy Board.



Environmental Transformation Fund – High Level Technology Strategy

Daniel Johns presented on ETF, inviting views on how the Fund should operate and interact with other bodies and programmes in the innovation landscape. He clarified the scope of technologies that ETF would cover broadly energy production, supply and efficient consumption including the built environment, but not transport – and that it would operate in the area of demonstration and early phase deployment. A project on the ETF as part of a low carbon energy technology strategy would need to report to HMT by April.

In the ensuing discussion, one member highlighted the previous work by ERP's Workstream 2 on the innovation chain and the linkages between the different players. This would be worth revisiting and feeding into the ETF project.

Others points made in discussion included:

- the Carbon Trust will provide expert advice on potential technologies and projects to be supported, with funding allocated on the basis of this and assessment against programme criteria;
- to note the need to avert overlap with industry as well as private sector investments in developing ETF's scope;
- it will be important to develop and target ETF interventions to match the specific needs of individual technologies; although it is important to achieve a coherent strategy with a single access point for funding, a standardised approach to how that funding is delivered would not be helpful;
- Tom Delay assured members that ETI, TSB and the Carbon Trust will work closely to co-ordinate their activities with those of the ETF;
- in considering funding levels, it is the aggregate level of investment across the piece over the CSR period that matters. ERP should look at this and take a view;
- consumer behaviour is key to effective emissions reductions – perhaps a third to a half of early emissions reductions will come from this. A lot of work still needs to be done around unravelling consumer motivations;
- the importance of communicating to industry what the ETF is, what it is trying to achieve and how industry can access support;
- industry needs good information on when specific funding streams will be available, for planning and investment purposes alongside the judgements they make about when markets will be ready for new technologies;

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- several members and the Chair agreed that the ETF should not be risk-averse, otherwise exciting opportunities would be missed. Not all investments will come off, but it must be an intelligent fund able to keep under review its funding decisions and to re-assess priorities. Being able to stop projects may be as important as starting them.

Actions:

- *Mike Farley and John Loughhead to lead in updating Workstream 2's analysis of innovation chain interactions as input to the ETF strategy project;*
- *The April meeting should hear report backs on "sub-strategies" to the overarching work being taken forward, eg. from ETI and TSB;*
- *Secretariat to review the aggregate position on energy RDD&D spend across the CSR period should and report back to the April meeting;*

Renewables Review

Sarah Rhodes presented BERR's work on strategies for responding to the EU's renewables targets (draft Directive and proposed Member States' "burden sharing" allocations due to be published on 23rd January 2008). She invited views on how ERP can collectively add value to and feed into the renewables strategy (some individual ERP member organisations have already been involved).

Consensus among members was that ERP should provide a high level review and challenge role for the renewables strategy work, rather than to provide detailed input. This might include considering the balance of contributions between sectors – with heat presenting some of the biggest challenges - and on the relationship between renewables and other low carbon technologies.

A further area noted for members' consideration was that of the potential for unintended consequences of decisions. For example, how can we ensure that biofuels are truly sustainable and that our promotion of them does not damage the environments and/or social well being of other less developed countries' and populations? Do we understand the potential impacts on food production and prices?

Action:

- *Graeme Sweeney to lead a sub-group to consider the issues identified, adopting a strategic viewpoint. Other members to include Ian Marchant and Peter Bance (not present at the meeting). Other members interested*



in contributing to the work were invited to contact Graeme or the Secretariat following the meeting.

Transport – An overview of the DfT's strategy

Graham Pendlebury and Roy Collins presented in turn, and comprehensively, on the DfT's low carbon transport policies and its perspective on emerging technologies.

The discussion opened with an observation that the DfT's analysis chimed with that of the automotive industry.. It was suggested that existing technologies could deliver sub-100g/CO₂ vehicles, with plug-in hybrids expected to play a key role in the medium term, but that other technologies would be needed to significantly reduce emissions further. A "spread betting" approach with a portfolio of potential solutions was advocated with emphasis on the need for an informed debate on the role for plug-in hybrids and other power-train investment options.

Consumer behaviour and fiscal incentives were noted as important. Demand for low carbon vehicles is still missing. A coherent strategy needed to involve not just fiscal drivers but softer measures for influencing consumer behaviour, informed by the latest social science research. Rather than pushing for people to give up their high performance vehicles completely, if consumers could be persuaded to switch just to the cleanest vehicles within each class, this would effect around a 30% reduction in overall vehicle emissions.

A major issue highlighted was the implication for electricity generation, and related infrastructure, of electricity becoming the route to decarbonising the transport sector. It is estimated that a mass market switch of the car fleet to electric vehicles would require increased electricity generation in the order of 15-20%, and this increased demand would need to be met from "low carbon" sources to have the desired impact on national GHG emissions. This needs to be set alongside expectation, highlighted at ERP's October meeting, that solutions to decarbonising heat could well also involve significant new demand for low carbon electricity.

It was noted that any new demand for electricity from transport (with overnight re-charging of batteries) could match well with existing demand in terms of load management. There may also be additional opportunities to improve the efficiency of the electricity distribution network through load balancing, if significant amounts of distributed energy storage are connected to the grid in the form of vehicle batteries.

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The iterative link between the potential for an increase in total UK electricity generation capacity and private sector technology investment decisions was also emphasised – the price of electricity links directly to the profitability of hybrid vehicles.

It was felt that fuels, vehicles and consumer behaviour needed to be considered in an integrated way. Certainly the links between fuels and powertrain were critical. Historically these links have not always been optimal, and it was clear that in future new collaborations with the electricity sector would be needed.

One member noted that town planning had a key part to play in reducing the actual need for vehicle journeys.

It was agreed that further standardisation in the presentation of how the numbers around different sectors' contributions to GHG emissions is needed (e.g. where aviation emissions might or might not be included).

Mike Farley mentioned that the Coal Forum has been looking at future demand, including for electricity, and that current thinking does not factor in potential new demand from the transport or heat sectors.

Actions:

- *Nick Winser to lead a sub-group (working with BERR, DfT, DCLG and Defra) to look at future demand and current issues and options.*
- *ERP Analysis Team to look develop definitive set of consistent figures on energy demand and GHG emissions across the whole energy sector.*

Any other business / closing remarks

ERP Analysis Team

Paul Golby urged members to give urgency to ensuring that the Consortium Agreement is signed off by their organisations as quickly as possible. He reminded members that without the agreement in place it will not be possible to fully set up the ERP's new analytical team. He asked members to embrace the agreement with an appreciation for its overarching purpose and where possible to avoid undue (eg. legal) delay by over scrutinising minutia.

Bali Outcomes

Henry Derwent provided a brief description of the proceedings and outcomes of Bali but it was agreed by members that the subject required more time than

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was available at this meeting. A future meeting should focus on the (complex) international technology aspect, and the links between this and future UK priorities and activities.

Peter Waller

Willy Rickett took the opportunity to give formal thanks to Peter Waller for all his work within BERR's Energy Group. Further to BERR reorganisation, Peter is now moving on after 4 years.

Sustainable buildings

Michael Kelly made a general request of members that they share with him any key work and materials that they may have concerning sustainability in the built environment.

**ERP Secretariat
January 2008**