RPI-X@20 Innovation Working Group

Notes of 2nd Meeting – 30 June 2009

Present:

Hannah Cook - Ofgem
Victoria Hunter - Scottish and Southern
Barry Dalus - Northern Gas
Ian Welch - National Grid
Dennis Timmins - npower
Paul Bircham - ENW
Dave Openshaw - EDF Energy

Notes from WG meeting 19 May 2009

The notes circulated by Victoria were confirmed subject to a minor drafting change (3rd bullet point under Summary of key points . . .) to the effect that a higher rate of return could be attributed to innovation projects, but could alternatively (or also) be attributed to returns generally (reflecting a higher risk profile for energy network companies).

Actions from last meeting

Ian circulated a paper summarising the state of innovation in networks in the USA. Points to note from the paper include:

- Utility average level of innovation is 0.75% of sales (cf. 15% for pharmaceuticals and 1.8% for all industries);
- General consensus that the Ofgem Innovation Funding Incentive (IFI) is more advanced than any regulatory incentive in USA; however
- The new "Obama" Stimulus Package is substantial and is ring-fenced for smart grid development;
- The Obama package perhaps sends a key message about the role of government in providing a major stimulus where the required speed of development might be faster than the free market would deliver.

Relevant developments since last meeting

Ofgem has published Working Paper 1 – "What should a future regulatory framework for energy networks deliver? Ofgem's current thinking" – 10 June 2009. Areas of focus for the paper are:

- What outcomes do we want energy networks to deliver?
- What are desirable network behaviours?
- What are desirable characteristics of the regulatory process and frameworks of the future?

Following the notes to the WG's first meeting, Roger Barnard has issued a briefing paper outlining why he believes that Gas Transporters (GTs) may not necessarily be precluded from contracting directly with end users for demand side management (DSM). There was recollection within the WG of a 'decision' surrounding the role of the Shipper as the customer's agent though there was some doubt as to where or how this had been documented. Partly inspired by Roger Barnard's paper there was general discussion on the merits and limitations of DSM. Key points to come out of the discussion are included as an appendix to these notes.

Ofgem (Anna Rossington) has circulated (limited to DNOs) a memo – "Low Carbon Preparation Fund" (LCPF) - 16 June 2009 - outlining Ofgem's latest thinking on innovation towards establishing networks capable of accommodating a low carbon economy.

Nature of Incentives on innovation

Taking the USA position and the above mentioned recent developments, it is clear that incentives will be a major factor in determining the level of innovation that energy network companies will undertake, and the degree of risk they will be prepared to accept. Some important principles which need to be established include:

- It will be important to achieve the 'correct' balance between the degree to which risk is shared between energy network companies (financial stakeholders) and customers;
- Allowing companies to capitalise costs of innovative investment-avoiding solutions (i.e. allowing the costs to be added to the RAV) would provide an incentive to improve network utilisation; examples could include dynamic ratings and demand-side management to reduce demand peaks;
- In considering the role for incentives on innovation, it will be important not to create a perverse or conflicting incentive whereby highly effective incremental 'process-type' innovation (continuous improvement) might be devalued relative to more expensive high-profile 'big bang' solutions;
- In terms of balancing opex / capex incentives, the underpinning principle should be whole-life cost (though this balance should be factored according to relative risk);
- The incentive framework should recognise that evolution will generally be more productive than revolution;

- Apart from technical innovation, other important areas of innovation include: financial; regulatory / market; commercial; operational / process; and skills.

Structure for the Innovation Working Group's work and final report

Following the useful discussion at the first meeting - as summarised by the notes to that meeting and the 'four key questions' identified - there is now a need for the WG to finalise the scope of its work and agree the structure for its report. Hannah provided an example from the Finance WG for consideration but emphasised that it was for the Innovation WG to determine its own preferred structure. After some discussion the WG proposed, and began to develop, the following structure with each area being led by a nominated WG member:

1. Background - Barry
2. Financial Affordability - Paul
3. Market / Regulatory Structure - Dennis
4. Commercial Innovation - Victoria
5. Operational Issues - Ian
6. Intellectual Capacity - Dave

Paul, Dennis, Victoria will write up / develop the notes to the discussion held on 30 June in respect of items 2, 3 and 4; Barry will address item 1 based on our overall discussion to date and the notes to our first meeting; while Ian and Dave will provide a straw-man paper covering items 5 and 6 respectively for discussion at the WG's next meeting.

Action: *WG members to draft and circulate papers before the next meeting.*

Future Meetings

The next meeting will be held on **29 July 2009 at Millbank - beginning at 1300**

The WG agreed that following the 29 July meeting, further group discussion will be arranged as necessary (including via a further formal meeting if required) to complete their work.

Appendix – Discussion on Demand Side Management (DSM)

i. DSM is an important and potentially fruitful (but as yet largely untapped) area for both technical and commercial innovation in energy networks; particularly in the context of a low carbon economy and a renewable energy strategy - i.e. as means of reducing consumption generally, flattening demand peaks to reduce capacity constraints and/or avoid/defer reinforcement, and (for electricity) mitigating the impact of intermittent electricity generation.

ii. If the regulatory framework (electricity or gas) is a barrier to energy network companies contracting for DSM (i.e. if perceived to violate the Supplier / Shipper Hub principle) this should be addressed as necessary through licence and, if necessary, legislative changes.

iii. Paul outlined ENW's initiative in looking to (bilaterally) contract directly with a selective group of end users for DSM services where this could defer or avoid the need for network reinforcement (the value of the DSM service to ENW is based on the npv of avoided capex). (see vi below)

iv. ENW's presumption is that the ongoing contractual purchase and management costs, and associated operational costs, of running these contracts would be treated as 'network' costs and hence have total parity with capex from a regulatory incentive perspective.

v. Dave outlined a similar (but as yet less advanced) initiative in EDF Energy where a study has commenced to consider the potential for DSM within central London where abnormally high summer ambient temperatures can create abnormally high plant loadings (due to air cooling) at a time when the plant has to be de-rated due to a reduced level of cyclic cooling. A further IFI project involves the use of electrical storage as a means of actively shaping demand profiles.

vi. It was noted that beyond small scale DSM and storage 'demonstration' projects there would be a need to consider the impact on electricity Suppliers' / Traders' 'balancing' positions of network operators unilaterally manipulating demand profiles.

vii. National Grid has issued a public consultation – "Operating the Electricity Transmission Networks in 2020" - June 2009 - which seeks views on how various essential ancillary services might be provided under a future where some 32GW of generation capacity is provided by offshore and onshore wind by 2020. DSM might play an essential role under this scenario.

viii. The (still evolving) Ofgem LCPF incentive was briefly discussed. Under this initiative up to 2.0% of total DNO turnover might be available on a competitive basis for taking forward large-scale 'flagship' projects (in addition to 0.5% for smaller 'reactive' projects) during DPCR5 (2010 – 2015) for innovation in electricity distribution networks to support a low carbon economy; this is in addition to the Innovation Funding Incentive (IFI) which will continue for more general network R&D.