DEPARTMENT OF ENERGY & CLIMATE CHANGE

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Electricity distribution licensees
Electricity transmission licensees
Users of electricity distribution networks
All parties engaged in the development of smart grids

Date 3 August 2012

Dear Colleague

Publication of Smart Grid Forum Report: Assessing the Impact of Low Carbon Technologies on GB's Distribution Networks.

Today, the Smart Grid Forum is publishing a report assessing the impact of low carbon technologies on GB's distribution networks. This covering letter explains the context of this report and its importance to the development of Britain's electricity distribution and transmission networks, incorporating smart grid technologies. The report was commissioned by the Energy Networks Association as part of the Smart Grid Forum's work programme.

There is broad consensus that the transition to a low carbon energy system will have significant impacts on our electricity distribution networks. In particular, the electrification of heat and transport and the growth of intermittent generation will bring new challenges over the coming years. However, it is also widely expected that by introducing more intelligent monitoring and control into these networks and engaging the demand side (i.e. elements of a smart grid) the cost of meeting these challenges will be reduced, compared with utilising conventional solutions alone.

Ofgem and DECC established the Smart Grid Forum in April 2011 to provide further leadership to the electrical power sector in Britain on smart grid issues. It brings together key opinion formers, experts and other stakeholders in the development of GB smart grids to provide strategic input to help shape policy making. The Smart Grid Forum helps provide the network companies with a common focus in addressing future networks challenges. More details about the Smart Grid Forum, including a full list of members, can be found on Ofgem's website.[1]

The Smart Grid Forum has assessed the network response to the expected growth of low carbon technologies, and today it is publishing the results of its most recent analysis that examines the cost benefit case.

[1] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=7&refer=Networks/SGF

This work builds on the Smart Grid Forum's "Developing Networks for Low Carbon" report, which qualitatively evaluated the scenarios for change in line with achieving the Government's low carbon objectives, assessed their impact for power networks and proposed responses that use innovative techniques where they are seen to be advantageous. Following publication of this initial report in November 2011, an ambitious further programme of work was initiated involving distribution network companies (DNOs) and others within the Smart Grid Forum. The result of this work is a network model that we believe is leading edge in its comprehensive analysis of the forecast costs of alternative distribution network responses, comparing smart and traditional solutions through to 2050.

In commending the modelling and its report, the Smart Grid Forum notes that it:

a) represents the best information and understanding of distribution network challenges and solutions at the current time;

b) uses data on projections of low carbon technologies consistent with the pathways described in DECC's Carbon Plan;[2]

c) enables smart and conventional distribution network solutions to be modelled side by side, and the best value options selected;

d) is capable of being updated for the foreseeable future;

e) can be used by policy makers and industry to assess and refine the broad direction of travel and understand sensitivities to key assumptions;

f) can be used to assess the likely effect of new initiatives;

g) is available to be used by Ofgem and DNOs to inform RIIO ED1; and

h) will be monitored and maintained on an ongoing basis.

The report describing the model and its outputs is published on the Smart Grid Forum website alongside this covering note. The model is fully documented in the report. The model itself remains the intellectual property of EA Technology Limited, and can be licensed from them on a commercial basis. DNOs own licences to populate and run the model.

Next Steps

The model created for this project is not intended as an "endpoint" but will act as a framework that can be populated with improved data as it becomes available. As such, there is an ongoing role for the Smart Grid Forum to keep the model up to date. The model will be used during the electricity distribution price control process (RIIO-ED1) to inform the development of well justified business plans.

The Smart Grid Forum will be hosting a public dissemination event at The Rubens at the Palace Hotel, 39 Buckingham Palace Road, London SW1W 0PS, provisionally 10.30-15.30.

[2] http://www.decc.gov.uk/en/content/cms/tackling/carbon_plan/carbon_plan.aspx

To reserve a place at the event, please send your details to David Spillett at Energy Networks Association, 52 Horseferry Road, London SW1P 2AF, *david.spillet@energynetworks.org*, 0207 706 5124.

Yours sincerely,

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