

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

Date: 5 June 2013

Dear Colleague

**The Smart Grid Forum – Publication of the Phase 3 Report of Work
Stream 3 – updates to the Transform Model and Least-Regrets network
investments**

This covering letter explains the context of this latest report and its importance to the development of Britain's electricity distribution and transmission networks, and understanding the merits of incorporating smart grid technologies.

Background to the Smart Grid Forum

There is a broad consensus that the transition to a low carbon energy system will have significant impacts on our electricity distribution networks but also bring opportunities. In particular, the electrification of heat and transport and the growth of intermittent generation will bring new challenges and potential constraints for the power distribution networks that serve customers across GB. It is also widely expected that by introducing more intelligent monitoring and control into these networks and engaging the demand side (ie elements of a smart grid) the cost of meeting these challenges will be reduced, compared with utilising conventional solutions alone.

The network companies have been proactive in exploring the likely best options for the future. Government and Ofgem are committed to encouraging innovation across the electricity system so that it is able to play a full role in achieving our low carbon targets at value for money to customers. Innovation is a central element of Ofgem's RIIIO philosophy. In addition to incentives in the price control settlements, Ofgem is encouraging innovation in the distribution network operators (DNOs) through the Innovation Funding Incentive and the Low Carbon Networks Fund, and through the Network Innovation Allowance and Competition in the RIIIO price controls just starting for Transmission companies.

In April 2011 Ofgem and the Department of Energy and Climate Change (DECC) established the Smart Grid Forum (SGF) to provide further leadership to the electrical power sector in Britain on smart grid issues. The SGF brings together key opinion formers, experts and stakeholders in the development of GB smart grids to provide strategic input to help shape Ofgem's and DECC's policy making and leadership in this area. The SGF also helps provide the network companies with a common focus in addressing future networks challenges, ensuring that whole system benefits are considered in this work and provide drive and direction for obtaining the benefits of smart grids.

The members of the SGF represent the network, supplier, generator, customer, academic and manufacturer communities. More details about the SGF can be found on Ofgem's website including a full list of members.

The SGF's Work Stream 3 addresses the network response to the expected growth of low carbon technologies. Today we are publishing the results of its most recent analysis that examines further the cost benefit case for smart grids and the implications for the approaching distribution price control review, RIIO-ED1.

Work Stream 3 – Developing Networks for Low Carbon

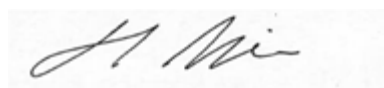
This work has been led by the DNOs and steered by a Work Stream 3 stakeholder group. Two substantial reports, "Developing Networks for Low Carbon – Nov 2011" and "Assessing the Impact of Low Carbon Technologies on GB's Distribution Networks – July 2012" provided both a descriptive assessment and a preliminary financial assessment of the distribution networks' response to the low carbon challenges. The economic modelling approach builds on that developed by [Work Stream 2](#), creating 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 Work Stream 3 modelling and its latest, Phase 3, report, the Smart Grid Forum recognises that the modelling developed by WS3:

- a) represents the best information and understanding of distribution network challenges and solutions at the current time;
- b) fully reflects the latest Government scenarios that are consistent with the Fourth Carbon Budget;
- 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 effects of new initiatives;
- g) can be used by Ofgem and DNOs to inform RIIO-ED1 Business Plans; and
- h) will be monitored and maintained by Work Stream 3 on behalf of the SGF.

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

Yours sincerely



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