



## **LONG TERM ELECTRICITY NETWORK SCENARIOS (LENS) – DRAFT SCENARIOS REPORT AND CONSULTATION - AUGUST 2008**

### **RESPONSE BY SP ENERGY NETWORKS**

SP Energy Networks welcomes the opportunity to comment on the points raised in this consultation.

We think that this work has been well researched and carried out, and has resulted in a plausible range of network scenarios for 2050. However, we had expected that section 5 of the report (implications for networks and regulation) would have been developed in greater detail by this stage.

Some areas which we would like the final report to cover include the following.

- industry organisation and structure - some scenarios imply a greater or lesser role for 'traditional' network operators. In some cases, network operators may be carrying out more tasks than now, possibly integrated with energy service provision. The nature of and need for economic regulation of networks may therefore vary between scenarios.
- 'rules of the game' - there could be some consideration given to the extent to which interactions between agents and between agents and customers would require a standard book of rules (such as the BSC in electricity), or could be left to local/bilateral contractual arrangements. For example, in the DSO and Microgrid scenarios there may be less emphasis on national energy balancing and settlement arrangements, at least for electricity, as a result of more localised production and consumption. This would in turn impact on the nature of economic regulation needed to protect customers.
- transitional issues to 2025. There could usefully be some further analysis on how we get from here to 2025 given the long lived nature of network assets, and the network-related programmes now - or close to - being implemented – such as in relation to offshore transmission, and provision of infrastructure to accommodate onshore wind.

Our comments on the specific questions in the paper are set out below

#### *Q1. Further comments on the draft network scenarios for Great Britain*

##### *Q1a*

We agree that all 5 scenarios are plausible.

It is of note that some of the assumptions, in particular relating to the Big Transmission & Distribution scenario, are already being overtaken by current events on UK networks. For example, we are currently seeing increasing pockets of renewable generation being connected to the Distribution Networks, which are necessitating a level of 'active' control in these areas. It is difficult to see how the picture will reverse from the present day when taken out to 2050.

Distribution System Operators scenario – this is plausible, although it should probably include a “more-electric” economy rather than focussing on the hydrogen economy (the economics of moving to a H<sub>2</sub> economy has been severely challenged in a few recent papers / publications).

*Q1b*

We think that the scenarios span a wide range of plausible outcomes (but see our comment on Q1a above)

*Q2 Views on scenario implications for networks*

We suggest that the final report should develop further the possible implications in each scenario in relation to such factors as industry organisation and structure, and possible regulatory/trading regimes.

Technological implications

Increasing levels of generation (particularly from variable resources) will require either more complex secondary infrastructure systems to manage (e.g. control systems **linked** with DSM) or primary infrastructure assets like energy storage. Economics and the favoured Regulatory mechanism of the day will dictate which is used as a first resort. As more variable generation is deployed, we believe there will be a need for **both of these** primary and secondary asset solutions. We think that consideration should be given to a diversity of approaches being applied.

Microgrids scenario: We believe that storage will be required on the Distribution Networks in order to cope with reverse power flow in areas of high penetration of microgeneration. The microgrid concept also requires a high degree of storage and/or DSM on the LV networks (between customers).

*Q3 Views on scenario implications for regulation of networks*

We think that the factors mentioned above will have a bearing on the nature of economic regulation that might apply in each scenario, and it would be useful to bring out the possible need for and nature of regulation in each scenario in more detail in the final report.