



Consultation Response

SENT BY EMAIL TO: energy.operations@uk.ngrid.com

23 August 2011

Operating in 2020 Team

National Grid

Dear Operating in 2020 Team,

ELEXON's response to "Operating the Electricity Transmission Networks in 2020 – Update June 2011"

Thank you for the opportunity to respond to the above document. This is ELEXON Limited's response. The views expressed in this response are those of ELEXON Limited alone, and are not necessarily the same as those of Parties to the Balancing and Settlement Code.

What is ELEXON's interest in the electricity market?

ELEXON delivers the centrally-mandated electricity settlement services that are critical to the successful operation of Great Britain's electricity trading arrangements under the Balancing and Settlement Code (BSC). We manage processes and systems from electricity meter to bank, handling over £1.5 billion of transactions each year and interacting with over 200 companies in the electricity industry.

As part of this we:

- administer the settlement of the Balancing Mechanism and energy imbalances, including the determination of electricity imbalance prices for generators and suppliers in respect of each half hour of each day;
- look to the future, through analysing and developing changes to the BSC trading arrangements together with the industry, Ofgem and Government.

We have long experience of developing change, as ELEXON from NETA and BETTA onwards, and a number of our staff have been deeply involved with the introduction and development of the first competitive electricity trading arrangements, including the Pool and subsequent 1998 competitive supply arrangements.

We are independent of any specific interests within the electricity sector.

Our detailed response to the specific consultation questions

We have not responded to every question: only to those questions where we can foresee impacts on either the BSC or smart metering arrangements. Our detailed response to those questions is set out below.



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We are keen to help

We are keen to help with the development of a robust set of trading arrangements that facilitate operation of the transmission networks and meet the needs of our stakeholders for the years leading up to 2020 and beyond.

One aspect touched upon in your 2020 document is the question of whether there are barriers to Demand Side Response (DSR). In our answer to this (Question 26) we have identified where there may be barriers to DSR in near and post Gate Closure timescales.

Because of this the current BSC settlement arrangements need consideration and may require changing. We wish to join with any multi-party discussions to explore ways in which this might be resolved.

Please do not hesitate to contact me if you wish to discuss any aspect of this letter or the current electricity settlement arrangements. I can be contacted on **020 7380 4253** or by email: steve.wilkin@elexon.co.uk.

Yours faithfully

Steve Wilkin

Market Advisor



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Operating the Electricity Transmission Networks in 2020

(As noted in our covering letter, we have not responded to every question.)

Section 7: Response Requirements

Question 4.

How ready is generation on the GB system to provide AGC and

- a) How might AGC be provided within existing services?**
- b) And the current market rules and design?**

We are responding to Question 4(b).

If the Automatic Generation Control (AGC) service is of value to National Grid, then it will be important that the market rules do not inadvertently dis-incentivise the provision of this service. From a Balancing and Settlement Code (BSC) point of view the concern is that AGC operation exposes generators providing that service to imbalance volumes.

To address this:

- the BSC could account for any energy production changes arising from the operation of AGC by treating them as energy contracts entered into by National Grid and the generator; or
- compensation payments could be made outside of the BSC.

The first option could be effected as an Applicable Balancing Services Adjustment Volume is now for other Balancing Services.

Section 15: Smart Grid and Potential of Demand Side

Question 26.

How significant will DNO network capacity be in establishing an increase of DSR services? Is a majority of the potential value more realisable by suppliers?

We have an observation on Demand Side Response (DSR) in post Gate Closure timescales.

Under the Balancing and Settlement Code (BSC), Parties are exposed to imbalance if their contracted position does not match their outturn physical position, e.g. for suppliers if their contracted purchases of energy do not match the outturn demand of their customers.



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With DSR, the actions of a third party, e.g. DNO, TSO, or Aggregator, can cause imbalances for the Supplier. This effect needs to be addressed as part of the DSR market design.

We can foresee the following issues in enabling demand side response post Gate Closure:

- Deciding how the communications with the end customer are going to work when a third party dispatches demand side response, e.g. is it via that customer's supplier?
- Identifying which BSC Parties are impacted by the actions of a third party dispatching demand side response and by how much they are impacted. Several BSC Parties could be impacted by a single dispatch action in cases where demand response is instructed in a particular geographic or electrical area. Furthermore the level of response may not equate to the total response that was instructed.
- How the financial consequences are handled between the supplier, third party and end customer. (This may be different in different timescales, e.g. long notice dispatch actions ahead of Gate Closure could well be settled under different arrangements to shorter notice actions taken just pre- or post Gate Closure when imbalances where timescales do not allow notified contractual positions to be adjusted.)

We are keen to join with any multi-party discussions to explore ways in which this might be resolved, particularly since the current BSC settlement arrangements need consideration and may require changing.

Question 30.

What are the main barriers you see in capturing demand side services, in particular those from the domestic sector?

We need to ensure that the suppliers of those customers do not face incentives that discourage offering tariffs with demand side services.

We have given some thought to the way that future BSC settlement can facilitate demand side services by supporting new tariffs in our thought piece [Smarter Settlement](#) which is available on our website.

See also the issues that may need to be addressed in our answer to Question 26 above: the current BSC settlement arrangements need consideration and may require changing to facilitate demand response actions initiated by third parties, i.e. parties other than the supplier or end customer.



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Section 16: Enablers for demand side services

Question 37.

Do you agree with the issues raised and are they being addressed?

ELEXON suggests that the starting point for demand side services is to be clear on the issue that is being addressed and to use this to identify what data is then required. In particular for voltage and/or localised power flow control, is data really required from every end customer meter or, alternatively, would data from key nodes in the system be more instructive? I.e. would aggregated data be sufficient to determine where demand response would be most valuable? Using aggregated data to detect issues could alleviate concerns over data privacy and security, whilst reducing the burden of delivering high volume, near real time, data communication and processing services. Having decided where demand side would be of value, it may then be appropriate to communicate with the individual customers (via the suppliers? see our thoughts on Question 26 above) in the location of interest to initiate demand side response actions as appropriate.

In the case of frequency control of course, location is not important and demand response could be called from any location.

We note that under the Government's proposed approach, metered data from Smart meters belongs to the customer with a limited and pre-defined set of parties legally permitted to have access without customer permission.

The Smart Metering Implementation Programme is currently defining the requirements for smart meter roll out including meter security, functionality and communications. This includes some limited capability to support smart grids etc. We recognise the need to quickly establish any requirements arising from system balancing or more localised smart grid balancing. Unless these requirements are fed in now there is a risk that any upgrade to accommodate the changes will have to await the re-procurement of the DCC services contracts. Whilst these timescales have yet to be established this could mean waiting to around 2020.

Question 38.

What do you believe are the important factors to developing and securing demand side services?

See our answer to Question 26.

Section 17: Operation of demand services

Question 40.

Do you agree that the supplier/DNO relationship will be critical in localised constraint management? How do you see services will be developed?

Local constraints will be identified by the relevant DNO; and alleviation of constraints is



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then clearly a supplier/DNO issue given that the supplier holds the customer relationship under the "supplier hub" principle. However, insofar as action to alleviate constraints could cause BSC imbalances for suppliers post Gate Closure ELEXON requests to be involved in any discussions that may result in market-wide changes, or where market-wide changes could assist.

We also recognise that the smart Data Communications Company (DCC) could be a vehicle for central common services between suppliers and DNOs.

For more information, please contact

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