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### **ELEXON's response to SSE Report on Supporting a Smarter Electricity System**

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 billion of transactions each year and interacting with over 230 companies in the electricity industry. As part of this we administer the settlement of the Balancing Mechanism and the determination of electricity imbalance prices for generators and suppliers in respect of each half hour of each day. We are independent of any specific interests within the electricity sector.

We welcome the opportunity to provide feedback to SSE on their proposals for their transition to Distribution System Operator (DSO), "Supporting a Smarter Electricity System". We recognise the benefits to consumers presented by the approach of DSOs, e.g. in the active management of distributed energy sources. We supported this point in our response to BEIS in their call for evidence on the [Cost of Energy Review](#).

In addition to our responses to the specific questions asked in the document, we would make a number of general points:

- We believe that DSO/local balancing platforms/local market facilitation will need to include interaction with the central imbalance settlement arrangements. This is because it is unlikely that local balancing will match net contract sales and purchases with net out-turn local generation and demand. There is always likely to be some degree of mismatch (net imbalance);
- It would be extremely beneficial to all market participants (and the end consumer) if all DSOs operated/adopted a common DSO model and set of rules for their local balancing platform. For example, Suppliers operating nationally would have the same set of rules/interfaces (maintain level playing field across different DSOs). ELEXON would like to enter discussions with all DSOs and National Grid (in its TSO/ESO role) and other platform designers/providers both on this and the post-event financial settlement arrangements, in order to help in this design area;
- We strongly support the standardisation and collaboration suggested on pages 13 and 26, assuming that this standardisation includes market arrangements/interfaces as this will reduce implementation costs to central systems and hence to the end consumer;
- In addition, the Smart Grid Market Architecture model (pages 14 & 15) should include BSC/ELEXON/post-event settlement (in the GB model). The commitment to build a DSO market platform in 2019/20 should also be planned to include discussion with ELEXON on the interfaces with the central (BSC) market arrangements that we administer;
- On page 16, ELEXON should be included in the collaborative working with DSOs and the TSOs;
- On page 26, it's implied that SSEN will not necessarily develop its own balancing platforms, but will facilitate others. This will be done by providing, for example, information on network

status. However, this is contradicted by a commitment on page 36 to build a DSO market platform in 2019/20;

- Local (or central) market arrangements will also have to allocate imbalances attributable to the local balancing areas / platform between local members. ELEXON would welcome further discussion on where we can add value;
- ELEXON would also welcome discussions on local balancing settlement (not only imbalance settlement and allocation) as we have long experience on this through undertaking settlement of National Balancing Mechanism actions and, in future, are likely to be tasked with the GB settlement of European TERRE and MARI dispatch actions. We are leading on TERRE implementation through [BSC Modification P344](#);
- On page 36, trialling DSO market platforms in 2019/20 with third party market operators and participants is mentioned. We would welcome discussions on where we could add value through code administration services;
- A whole systems approach to system balancing also needs consideration of data publication. ELEXON administers the Balancing Mechanism Reporting System (BMRS), which is intended to be a 'one-stop shop' to GB electricity market information and the BMRS should be considered in this context when local balancing platforms are developed to avoid fragmented publication of electricity market information; and
- A whole systems approach (including the ELEXON-administered BSC arrangements) is also needed when considering changes to Black Start restoration. Changes to technical solutions may require changes to the market arrangements too, so ELEXON should be involved in these discussions

The views expressed in this response are those of ELEXON Ltd, and do not seek to represent those of the BSC Panel or Parties to the BSC.

If you would like to discuss any areas of our response, please contact me on 0207 380 4328 or by email at [Jeremy.caplin@elexon.co.uk](mailto:Jeremy.caplin@elexon.co.uk)

Yours faithfully,



Jeremy Caplin,  
Market Architect, Design Authority, ELEXON

Attached: ELEXON Responses to SSE Report

1 As we transition to DSO we will look to build fairness into everything we do, and encourage policy-makers to do the same. What additional measures should be introduced to ensure the transition is fair to all customers?

N/A

2 What steps do you think SSEN, government and the industry should take to ensure customers without a smart meter are not left behind in the transition?

As an industry, we have a set of arrangements which support the continued use of non-smart energy meters. We believe it is right to focus attention on supporting the transition to a smart energy system, including the smart meter rollout and market-wide Half Hourly Settlement, where we are leading the design work on behalf of Ofgem. We also believe it is vital that legacy meters continue to receive the standard of support that customers expect today, without incurring excessive costs. This will include using collective learnings from our work with smart meters to inform our legacy meter approach, for example in different settlement profiling. As far as possible, SSEN, government and industry should be looking to ensure rules, standards and process are applicable across smart and legacy meters without compromising the valuable functionality of smart meters.

Although the industry focus is on smart meters, market players should still recognise the obligations they have under the market arrangements for supporting legacy meters.

3 Smart meters and time of use tariffs will enable costs to be distributed in a more reflective way, how should SSEN protect vulnerable customers from higher prices?

We believe it is important that the roll out of smart meters and market-wide Half Hourly Settlement should be used to provide value to consumers and hope that by simplifying market arrangements overall costs can be reduced. Therefore, in the context of this consultation, it is important that SSEN and all other DSOs use the information available to them to make economic and efficient decisions regarding the operation of their networks and the costs subsequently incurred. We do not operate in the retail space, and it would not be appropriate for us to comment on the protections required for time of use tariffs.

4 SSEN believes in learning by doing and has a track record of delivering innovative solutions into its business as usual operations. In the context of ensuring a smooth transition to DSO and with reference to our action plan, are there any other projects or initiatives SSEN should be prioritising in the next five years?

N/A

5 SSEN believes that Peer-to-Peer platforms have the potential to allow flexibility to be traded locally in a way that reduces network constraints. Do you agree with this? If so, what are the next steps SSEN should be taking in order to support Peer-to-Peer trading?

We believe that as an industry we should be enabling innovative new products, business models and ways of operating to come to the market and compete to provide solutions to problems and deliver value to consumers. With regards Peer-to-Peer trading it is imperative that we understand the existing frameworks that would be utilised to support it and whether any barriers exist, then understanding if and how those barriers can be removed. This includes considerations of the necessary supporting interactions between DSOs, Peer to Peer trading facilitators and other industry participants such as suppliers and the TSO. We are developing a sandbox for the Balancing and Settlement Code to support innovation in the electricity market, and would encourage other organisations to consider whether they could implement similar approaches.

Interoperability must be a key feature of any system to ensure that the systems work across all DSOs.

6 As a universal service obligation, electricity distribution includes a number of socialised charging arrangements including non-sole use reinforcement. Due to the rise of new technologies such as Electric Vehicles these socialised costs may significantly rise. Do you think that we should be moving away from socialisation and should the same rules apply for all customers e.g. domestic and commercial?

N/A

7 The ENA represents network companies including SSEN and through the Open Networks Project the ENA has a key role in delivering the DSO transition. Do you have any views on whether SSEN or the ENA can better coordinate the transition?

ELEXON closely follows the ENA Open Networks project, and believes it is vital in coordinating the nationwide transition to DSO operation. If each Distribution Network ends up with radically different DSO models, costs incurred by market participants and other central industry arrangements could increase dramatically. These span from the up-front costs to understand and integrate each model through to operational support and resource needed to continuously review ways of working. We believe SSEN and all of the other DNOs should leverage the Open Networks project to maximise the benefits of standardisation and provide the best outcomes for industry and customers.

Interoperability must be a key feature of any system to ensure that the systems work across all DSOs.

8 Do you agree with SSEN's view that the DSO should be a neutral facilitator? If so what does this mean to you?

We agree with this view. The principles of good system operation are well established, and in the Transmission System Operation place this has been reflected with a separation of the owner and the operator of the system. While there are differences between Transmission and Distribution Systems, operating principles are not radically different. We believe it is important the DSOs operate their networks in accordance with defined principles including economic and efficient delivery of network operation on behalf of all of their customers. This includes being technology agnostic and avoiding conflicts of interest in the options available to them in managing their systems.

9 Networks provide a very high level of reliability and enable a wider pool of resources to buy and sell together. However, non-network solutions such as demand side response can reduce the need for more network assets by rewarding customers who provide it. Do you have any views on how network and non-network options can be co-optimised?

One of the key advantages of the DSO model is that it recognises a range of solutions to the problem of optimal network planning. This includes balancing the need for reinforcement against other available technologies to mitigate that need. We recognise that there are situations where a single action by a customer can provide benefits to multiple parties. The co-optimisation of these actions will be important to unlocking the full benefits of DSO transition and is related to unlocking the benefits of other industry initiatives, not least the smart meter roll-out and market-wise Half Hourly Settlement. There are many possible technical solutions to co-optimisation, but they should include a calculation of benefit in addition to a mechanism of realising that value, and directing the revenue streams for these services through to the customers providing them.

10 SSEN serves over 3.8m customers across central Southern England and the north of Scotland and has supported community projects. How important do you think this local relationship will be in helping communities realise their ambitions?

We believe this local relationship to be very important. DSOs will be well placed to help local communities achieve their energy goals, by providing support to projects, helping communities understand the energy system and how they interact with other local and also national aspects of the energy system. The energy system is undergoing a fundamental change regarding local and national aspects, and the balance is yet to be found. Ensuring DSOs have local relationships and can use those to inform debates at national levels will be important to ensuring the balance is right, and that industry arrangements are fit for purpose to facilitate both national and local needs. In the future these issues may need to be considered in the context of balancing and settlement, network charging, energy supply and transmission and distribution network management.

11 As roles and responsibilities in the emerging energy system evolve, do you expect DSOs to be more customer facing, if so in what way?

Under the existing supplier hub model, energy suppliers are the primary interface between a customer and the rest of the system. This is starting to change, with new technology (battery storage, solar panels, electric vehicles) enabling a larger role for aggregators. We expect this to continue, with a more diverse range of organisations offering services directly to consumers. We note that Ofgem have published a call for evidence on their supplier hub model, and our response to that is published on our website. We call for wider access to appropriate data, and DSOs may have a role in that. In the medium term, it is possible that DSOs could directly contract services from customers, particularly if those services are available via open access flexibility platforms or similar.

12 Our Action Plan outlines some of the steps we are taking as part of the transition. In order to prioritise our efforts we would like to hear which ones are the most important to you?

For ELEXON, the most important aspects of the action plan are continued input to the ENA Open Networks Project, the trialling of new market platforms and building a new market model based on ENA ON SGAM Models. We believe these areas are where there will be greatest interaction with the existing industry arrangements, and we look forward to working with DSOs and National Grid to integrate these models in the electricity industry frameworks.

ELEXON currently use Enterprise Architect as our architecture modelling tool

13 Do you have any other views on our DSO principles, action plan or on the transition process that you would like to share?

We support the DSO transition in general, and would like to reiterate points mentioned earlier regarding consistency of approach across DSOs, and the importance of working collaboratively with the rest of the industry, including ELEXON, to develop solutions that work for the industry and can seamlessly integrate with other essential industry arrangements, such as balancing and settlement.