

Power Responsive Steering Group

Note of Seventeenth Meeting

2 December 2019, 13:00-17:00 hrs, held at Elexon's offices, 350 Euston Rd, London NW1 3AW.
This note was prepared by National Grid Electricity System Operator (ESO) and Sustainability First on behalf of the Power Responsive Steering Group.

1. Welcome and introductions

Colm Murphy (chair) opened the discussion, held under the Chatham House rule.

A brief summary of steering group discussions from 4 Sept 2019 was provided. Discussions focused on **data transparency and market facing information**, insights from the Energy Data Taskforce including the implication of assumed open data, identifying data gaps, accessing data from different sources, market-based standards, and skills requirement. The steering group also briefly discussed the power outages on 9 August 2019.

This steering group meeting considered the **role of DSF in ensuring a resilient system** and wider **flexibility market coordination to achieve whole system efficiencies**.

2. Demand Side Flexibility (DSF) Horizon Scan

BEIS Covered current and upcoming activities:

- [Smart System and Flexibility Plan](#) – BEIS and Ofgem are still working to implement actions from the plan with 60% of actions now implemented.
- [The Electric Vehicle Smart Charging Consultation](#) – This consultation is looking at proposals for electric vehicle charge point smart technology regulations. The consultation closed on the 7th October 2019 and the feedback is currently being reviewed.
- [Open consultation on storage](#) – BEIS were consulting on the proposal to remove electricity storage (except pumped hydro) from the Nationally Significant Infrastructure Projects (NSIP) regime. Feedback has now been collected and is being analysed.
- [BSI are developing technical standards for smart appliances](#) - The British Standards Institution launched this programme in March 2019 and will ensure all developed standards are based on the 4 key principles of interoperability, data privacy, grid stability and cyber security.

Ofgem covered current and upcoming activities:

- In December 2018 Ofgem launched a [Significant Code Review \(SCR\)](#) into network access and forward-looking charging. The objective of the SCR is to ensure that electricity networks are used efficiently and flexibly, reflecting users' needs and allowing consumers to benefit from new technologies and services while avoiding unnecessary costs on energy bills in general.
 - [Targeted Charging Review \(TCR\) decision](#) has been released – recommending that residual charges are levied on a fixed basis and to be implemented in a phased approach.
 - In December 2019 Ofgem published their second Access [working paper](#) of 2019.
- Retail market reforms - How can all customers engage with smart systems? Reforms linked to smart meter rollout, use of half hourly settlement etc. A draft impact assessment being developed.
- RIIO 2 – Electricity System Operator (ESO) & Distribution System Operator (DSO) incentives - There is a paper due on key enablers on the distribution side.
- Ofgem will publish a consultation on the Sector Specific methodologies in summer 2020, where they will provide further detail on their approach.

3. What should be the role of DSF in ensuring a resilient system?

National Grid ESO talked through the events on 9 August.

Full details can be found in [Ofgem's report](#).

The group considered what short term actions could be taken to address the finding of Ofgem's report. Some high level areas are listed below:

- Review the Security and Quality of Supply Standards (SQSS).
- Is there a case to cover larger losses but at a higher cost to consumers?
- In scenario planning, should the ESO consider seasonality and whether there is wind on the system?
- Are there any quick wins that could be put in place following the event on the 9th of August?
 - Providers that didn't know they had trip off setting set to 29.2Hz are now aware and can mitigate this issue.

National Grid ESO gave a control room perspective.

- The control room processes are very robust but not as flexible as they could be.
- The ESO is developing a system to ensure that any asset could connect to the system and provide flexibility & contribute.
- [Platform for Ancillary Services \(PAS\)](#) has been developed to get assets involved, quickly – to future proof services.
- The ESO has initiated an [Energy Forecasting Strategic Project](#) to replace its existing forecasting capabilities and energy forecasting system (EFS) with a new advanced platform for energy forecasting (PEF). This will redesign current processes and apply advanced machine and deep learning modelling techniques & automation to drive efficiency.

The group discussed blockers for getting Demand Side Flexibility (DSF) involved, and how to improve data transparency, issues raised include:

- A large energy customer found integrating DSR from industrial plant challenging compared with embedded generation.
- There is a lack of transparency, there is data available but this requires expert interpretation.
- A fixed amount of demand response is auctioned, so it could be available when needed but there is no contract in place with National Grid to unlock it.
- There is a trade-off between holding response and reserve and the cost to consumers.
- Until recently, data was published regularly that suggested 16,000 MW of Mandatory Frequency Response is held overnight in competitive agreements – DSF providers don't feel they have access to this.
- The more data in the market, the more aggregators can do with it.
- It is difficult for a customer to determine where's best to place their flexibility.
- The [Association for Decentralised Energy Code of Conduct for aggregators](#) helps to ensure DSR standards, but not in discerning the competitiveness of aggregators.
- There are issues with connecting DSF to the system to meet ESO standards.
- Need to balance between bringing new people in with new kit, versus creating a level of assurance that the ESO needs through known kit.
- Through the Residential Response Workstream the ESO is testing innovative new ways for residential flexibility assets to enter ESO balancing services markets using methods such as reduced metering requirements.
- ESO need to provide confidence that there will be value for DSF in the future.
- Closer to real time markets needed – the ESO wants greater trust in the assets in aggregator's portfolios.
- A need to create stackability by looking at the compatibility of different markets. Looking at areas in isolation is not going to reach the right outcome.

In response to some of the points above, National Grid ESO has now released its [Response and Reserve Roadmap](#) which provides an overview of the proposed reforms taking place to response and reserve services.

Distribution Future Energy Scenarios Discussion

Distribution Networks release a Distribution Future Energy Scenarios (DFES) annually which looks to provide a range of possible views of the future, that indicate how different influences can change electrical demand and generation on their networks. One of the challenges noted by the DNO's was ensuring they are aligned with the national Future Energy Scenarios which is published by National Grid ESO.

Northern Powergrid provided an overview of their observations of their network and is currently discussing some of the below points with stakeholders:

- Low levels of storage on the network to date, but a significant number of connections. (Grid scale battery storage has dominated this technology type).
- Vehicle to grid and heat storage is expected to increase.
- On the demand side, electrification of heat and transport increases customer resources to provide Demand Side Flexibility (this also increases need for greater resilience and the means to provide it).
- Aiming to use electric van fleet to provide prompt, reliable and clean restoration of power during a power cut.
- Northern Powergrid is running a 'Resilient Homes' Project that is looking to reduce the impact of a power cut on those who rely on electricity to power critical medical equipment in their homes. The projects look to reduce the impact of a power cut by installing in-home batteries into 30 customers houses.

It was discussed how DSF could defer traditional reinforcement, planned maintenance, emergency support.

The group heard how storage can provide various transmission and distribution applications, including digital inertia and faster response. It is also possible to add storage as a virtual transmission line as contingency (e.g. German GridBooster).

Western Power Distribution (WPD) gave an overview of progress on their DFES document.

- WPD has broken their area of the UK into 250 zones and carried out analysis on each one. This will feed into the DFES document and help WPD consider what capacity it might need under certain future scenarios.
- WPD is trying to give as much visibility of future needs as possible. With an ambition to signpost what is needed in each area and see the value of flexibility flowing back to the owner of the flexibility.
- WPD want to ensure their markets are accessible, fully stackable, allow price discovery and are investable over the long term.

4. Flexibility market coordination and achieving whole electricity system efficiencies.

There are many policy and regulatory changes happening across the energy sector. How can policy makers and the industry ensure these changes don't impact on confidence in DSF?

Some areas discussed were:

- RIIO Incentives
- System operation
- Charging reform
- Retail reform
- Fair sharing of costs on the energy system

TCR Overview and Feedback

An overview of TCR was provided and some of the feedback gathered talked about the slow pace of value stream replacement, the increased expense to industrial customers and uncertainty making investment decisions difficult.

5. Power Responsive activity update/Steering group actions

National Grid ESO Power Responsive Discussion

- Vision – can power responsive create a clear vision and help the demand side to navigate this complexity?
- Confidence – How can we ensure these policies do not impact confidence in the DSF proposition?
- Actions – What actions can Power Responsive stakeholders take to meet objectives?

Ideas discussed:

- Possible policy subgroups – carbon reduction, data transparency, charging. Each subgroup to have a goal, chair and volunteers, Steering Group prioritise the topics.
- How does the whole picture fit together – map all the reforms across government and Ofgem.
- DSF needs a central voice.
- Focus on ESO markets and / or advocating changes to wider markets to ensure that DSF can operate and compete.

Power Responsive want to deliver their strategy by the end of 2020. Annual report to be released in April 2020

Next steering group – March 5th 2020