

Power Responsive Steering Group

Note of Twenty First Meeting

21st January 2021, 13:00-15:30 hrs

*This note was prepared by National Grid Electricity System Operator (ESO)
This meeting was hosted virtually.*

The pre-read document for this meeting can be viewed [here](#).

1. Welcome and introductions

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

This Steering Group meeting focused on two key areas- Code modifications that address the specific actions from the Energy Emergency Executive Committee (E3C) and Ofgem final reports into the power outage of 9th August 2019, and the development of a new Reserve Product via the Reserve Reform Project which is currently underway. The group also held a discussion on the recent response to Capacity Market Notices and Electricity Margin Notices that have been issued by the ESO during the Winter.

2. DSF Horizon Scan

BEIS covered the following current and upcoming policy activities:

- Looking to update the Smart Systems and Flexibility Program.
- Looking to invest at least £100m into longer term innovative storage projects.
- Committed to publishing the Energy Data and Digital Strategy by spring 2021.
- Set out expectations for the continued evolution for using flexibility at distribution level.
- Committed to consult later this year to ensure we have the right institution and energy framework for net zero energy transition (consultation later this year).
- Increased investment in EV charging.
- New ministerial team came in 10 days ago.
- BEIS and Ofgem have changed the distribution licence to facilitate the clean energy package.

Ofgem covered the following current and upcoming activities:

- Established a full chain flexibility program which builds on the work that is happening with BEIS on the Smart Systems and Flexibility Plan which is likely to be published around March.
- Data and digitalisation continues to be a priority.
- Half hourly settlement- Looking to finalise their assessment on that by Spring.
- New requirement for companies to use flex where it is efficient. There is also a requirement for DNO's to report the flex they expect to see coming onto the system and produce an annual report for Ofgem on this.

3. Discussion: Demand Side Providers response to recent CMN & EMN Notices

This winter, the ESO have experienced significantly higher than expected cash-out prices. This may be partly due to the low amounts of demand suppression coming from DER providers via the DNO networks.

Due to the low response, we have seen prices as high as £3000/Mwh which could be partly down to the reliance on some of the more expensive units coming online as a last resort to provide the energy

needed. (These units usually cost more as they rarely operate and therefore recover the majority of their operating/overhead costs in only a few runs per year).

The ESO is transparent in the actions it takes to manage energy 'shorts' which is all publicly available online. An obstacle from an ESO point of view is that these reports only see actions taken by units who have signed up to the BSC and have access to our balancing systems directly. We therefore lack visibility of the actions taken by units in the balancing systems that participate via routes such as Virtual Lead Parties or Wider Access API.

The group were asked why there was such a low response rate to these market notices.

A number of members expressed their view as to what might have caused the low response:

- Behind the meter providers and industrial providers do not have the access to respond to these price fluctuations, due to the majority of industrial supply contracts that don't pass through that market volatility prices. Customers contract to have stability and install solutions to reduce their energy costs. They don't necessarily want to be exposed to high prices which is why only certain assets (e.g. batteries) want to respond to these scenarios whilst others don't.
- On the supply side, customers may hedge the risk of these events via their strategies, so they were already acting in a response to this unintentionally.
- During the EMN one provider was planning for a potential triad and therefore was in a position to respond, but the supplier benefited from the cash-out price spike.
- Sporadic EMN & CMN'S are issued too quickly, as industrial providers are unable to plan ahead and position themselves to respond.
- Lack of confidence that CMN's will actually lead to a stress event.
- Some confusion was caused by the ESO Twitter feed as it sent mixed messages such as 'the notice is just due to an algorithm and is nothing to worry about' and therefore it's hard to make a decision to act on it. ESO Twitter needs to be clearer about what is happening and avoid mixed messages.
- Confusion as to regular prices being fairly high anyway (around £90) and then EMN's are being called in the £40 range.
- There are concerns that the CM is not giving enough of a strong signal to market, for providers to respond. Providers may ignore potential stress events and continue maintenance as it is unlikely that the stress event will actually happen, so it is highly unlikely that they will have to pay the penalty.

The ESO confirmed that the control room teams will be investigating the points raised in conjunction with the Capacity Market Team.

3.a Security & Quality of Supply Standard GSR027 Modification Overview

The ESO provided an overview of the NETS SQSS (GSR027) modification.

GSR027 sets the criteria for Frequency Control that drives reserve, response and inertia holding on the GB electricity system and is required to be carried out by the ESO, in consultation with industry, to address the specific actions from the Energy Emergency Executive Committee (E3C) and Ofgem final reports into the power outage of 9th August 2019.

The ESO talked through the timeline for the modification, consultation responses from industry, actions taken to address the responses, along with steps being taken towards the enduring solution.

Some of the high-level themes from the consultation responses were:

- Timescales to develop the modification – use of urgency, possible unintended consequences and need for a more considered enduring solution
- How an instruction would be implemented, for example:
 - Order of disconnection
 - Definition of 'last resort'
 - Notice period
 - Restoration process & post-event reporting

- Impact of disconnections
 - Compensation
 - Possible damage to assets and safety issues

You can view the detailed slides [here](#).

3.b Grid Code GC0147 Modification - Last resort disconnection of Embedded Generation

This modification seeks to clarify the enduring arrangements for emergency instructions that the ESO can issue to Distribution Network Operators (DNOs) to disconnect embedded generators, as a last resort in an emergency situation and after having exhausted all other commercially available options.

It is required to replace the temporary solution which was implemented on 7 May 2020 via Grid Code modification GC0143, and which expired on 25 October 2020. That modification was treated as urgent due to the unprecedented societal changes brought about by the COVID-19 pandemic which had led to demands out-turning up to 20% lower than predicted, increasing the need for the ESO to have access to an unambiguous last resort action to use in an emergency.

The ESO talked through the SQSS review requirements, discussed the background of the change proposals and how it links to the power cut on the 9th of August. There was also an in-depth presentation on the methodology development process and the potential reliability/cost outcomes from the changes.

You can view the slides [here](#).

3.c Reserve Reform:

The Reserve Reform project aims to deliver a standardised suite of upward and downward reserve product(s) that work holistically with new frequency response products and reserve replacement products (TERRE and MARI) and can be procured at day ahead through an auction held on the Single Market Platform from March 2022.

The ESO are co-creating this product with industry and hosted a workshop on the 9 December 2020 to communicate the need for reserve, and the ESO's drivers when designing a product suite and market. The ESO also wanted to understand the industry's needs and drivers, share ideas to facilitate co-creation of a new reserve product suite and identify common themes and areas for further investigation.

Principles of reserve reform are:

- Product design will be driven by operational need in conjunction with provider experience
- Number of products should be optimised to maximise competition and operability
- Transparent market and operational decisions
- Standardised products
- Minimise barriers to entry

(You can view the latest workshop slide deck [here](#))

The ESO provided an update on some of the feedback that had been collected and answered several questions from Steering Group members during the Q&A such as:

- How much of the ESO spend is in the Reserve product portfolio?
 - Roughly £150m of the overall spend (£415m in 2019/20) is targeted at reserve (STOR & Fast Reserve).
- Are the ESO thinking about stacking with DNO services for this product?
 - Yes- the team is actively involved with the RDP projects to investigate these opportunities.

- By introducing reserve products, do you then remove volume from the BM?
 - It is important that we are clear why we need reserve and how we are going to utilise it. The product is to be used as a hedge during events such as frequency deviations or loss of supply from assets such as wind.
- What duration systems does this aim to work with?
 - The ESO are transitioning into more standardised products. This will be considered during product design.
- Are people looking at reserve as a new revenue stream for DSR?
 - Too early to say.

Power Responsive Update:

- The Flexibility Forum has not happened this year due to COVID and the scale of industry changes.
- There are plans to do a virtual summer event this year and create a regular podcast series which will run throughout the year.
- Power Responsive have nearly finished the updated DSR Guide in partnership with the MEUC and are working with partner Everoze to reinvigorate the Annual Report which will be published at the end of March 2021.

4. Next Steering Group Date:

- 21st April 2021