

Power Responsive Flexibility Forum

11th January 2018 – Summary

The Power Responsive Flexibility Forum took place on Wednesday 11th January at etc. Venues St Paul's, London.

This document provides a summary of the second Power Responsive Flexibility Forum. The first Flexibility Forum was held in September 2017, following an amalgamation of the DSR Provider Group and the Storage Working Group, as these two forms of technology for flexibility provision are largely complementary to one another.

The objective of the forum is to provide a working level platform from which flexibility stakeholders and interested parties can;

- a) hear the latest updates from across the industry;
- b) seek clarification from industry experts and;
- c) contribute / input into industry and market developments.

Overview

The forum saw morning updates from the Department of Business, Energy & Industrial Strategy (BEIS) and Ofgem on the publication of the Smart Systems and Flexibility Plan, whilst National Grid updated delegates on recent procurement activity and recapped the latest developments of the System Needs and Product Strategy work, including the publication of the Product Roadmap for Reserve and Response in December 2017.

Two breakout sessions gave delegates the opportunity to hear from and feedback on:

- a) National Grid's Product Simplification Roadmap – introduction to the Product Roadmap for Frequency Response and Reserve, and what this means for future product development
- b) System Planning – exploring how the Network Options Assessment (NOA) could create additional opportunities and revenues for demand side

Feedback collected from participants during breakout sessions and round table discussions can be found in the appendix to this summary and will help to form the future work programmes across the industry.

The final session covered a range of industry updates, with the aim of informing delegates of the upcoming opportunities and developments for 2018. Presentations were delivered on the Power Responsive annual report, future electricity network access and charging arrangements, Pan-European services, the ENA's Open Networks project, Innovate UK's outlook on innovation and power flexibility, and the ADE's Code of Conduct for aggregators.

For the first time, industry experts manned stands on three topics, to enable delegates to ask questions and seek clarification throughout the day. These covered:

- The Capacity Market
- National Grid and UK Power Network's Power Potential project
- SO Balancing Services

Welcome and Introduction

Claire Spedding, Head of Business Development at National Grid SO, welcomed delegates. The agenda for the day was introduced, and delegates encouraged to ask as many questions as possible whether from the floor or through the Slido platform provided.

Agenda:

Session 1: Policy, Regulation and System Operator updates

Session 2 – Breakouts:

- a) National Grid's Product Simplification Roadmap
- b) System Planning

Session 3: Industry updates – from Power Responsive, National Grid, the Energy Networks Association, Innovate UK and the Association for Decentralised Energy

Claire Spedding provided an overview of Power Responsive activities since the last Flexibility Forum in September 2017. During this time, the Power Responsive team have been engaging with stakeholders at events up and down the country to raise awareness of flexibility opportunities across the industry and the potential benefits of different demand side technology applications. To name just a few, these include:

The 9th Power Responsive Steering Group was held on 11th October. Discussion focused on 'Whole system benefit' – i.e. the optimisation of distributed assets to meet transmission and distribution requirements. Topics covered:

- How industry work streams are tackling 'whole system'
- Interactions between National Grid and ENA deliverables
- End-user views on 'whole system' approach

Steering Group members highlighted the importance of keeping the proposition simple for end users and consulting with customer throughout the design of a 'whole system' approach.

Session 1 – Policy, Regulation and System Operator Update

Upgrading Our Energy System: Smart Systems and Flexibility Plan

Edward Nelson, Smart Energy, BEIS

Edward Nelson of the Smart Energy team at BEIS gave a progress update on the actions for BEIS in the Smart Systems and Flexibility Plan, which alongside Ofgem was published in July 2017. This update covered a range of activities under the three workstreams of i) removing barriers to storage; ii) enabling smart homes and businesses; and, iii) helping markets work for flexibility and reflect its true value. A key sentiment was that good progress is being made, but that continuing industry and stakeholder engagement is critical to support delivery on the actions and ensure the strategy is able to work with new innovations and unexpected developments into the future.

The Regulator's Perspective

Louise van Rensburg, Head of Flexibility and Whole Systems Coordination, Ofgem

Building on Edward Nelson's comments, Louise van Rensburg provided more detailed updates focusing on Ofgem activity since the publication of the Smart Systems and Flexibility Plan under the three workstreams.

Removing barriers to smart technologies

- Two Storage consultations:
 - Clarifying the regulatory framework for electricity storage: Changes to the electricity generation licence (2 October – 27 November)
 - Enabling the competitive deployment of storage: Changes to the electricity distribution licence (2 October – 27 November)
 - To conclude Summer 2018
- E-Serve published guidance on co-location of storage with FiTs and ROCs sites, see Ofgem website (14th December 2017)
 - Workshops being held in Glasgow (11/01), London (16/01) and online (17/01). Register interest and questions via REDevelopment@ofgem.gov.uk.
- Industry started modifications to change TNUoS and BSUoS charging to make sure storage isn't overcharged. Ofgem are calling on industry to also raise a DCUSA mod to change distribution charging.

Smart homes and businesses

Half-hourly Settlement:

- Published project objectives and assessment options for the market-wide HHS business case (12 September 2017)
- Voluntary requests for information for: a) decision on supplier agent functions, b) the business case and c) access to data for settlement
- Regular design working groups for the target operating model underway
- Publishing the Strategic outline case this winter and the outline business case mid 2018. Final decision second half of 2019 – followed by system implementation.

Markets that work for flexibility

- Future Focussed Strategy paper published 4 August 2017
- Targeted Charging Review:
 - Launched a significant code review (4 August), Published an update on approach to reviewing residual charging (6 November),
- Reform of electricity network access and forward-looking charges: a working paper (6 November). Set up two industry task forces to develop options and workshops are to be held at the end February 2018.
- Charging Futures Forum established to coordinate charging related changes. First meeting held 9 November. See website: www.chargingfutures.com
- Smart Systems Forum is operating

Louise concluded with an update from the Call for Evidence on future of supply market arrangements, which was published on 14th November 2017. Ofgem has been pleased with the breadth and quality of responses received to date and are still seeking further response, including specific information from innovators regarding the barriers they are facing. This feedback, and views gathered through workshops cover coming months, will help inform a suite of reform options later in 2018.

System Operator Update

Claire Spedding, Head of Business Development, National Grid

Claire Spedding provided an update on existing SO Balancing Services and a recap of System Needs and Product Strategy work, in preparation for the interactive breakout sessions.

Update on existing Balancing Services

- Firm Frequency Response (FFR)
 - National Grid recently published a letter setting out a number of 'quick wins' to be implemented in the FFR market in the immediate future. These actions range from providing more information in the post-tender report, providing more guidance on the assessment process itself, to changing the timeframes of the tender itself. All the changes will be delivered by end of Q1 2018.
 - In December 2017 an interactive guidance document was published, which provides current and potential FFR providers with clear, simple and transparent guidance on the service. It pulls together FAQs on the service and provides links to related documents, such as testing guidance and Market Information Reports.
 - In addition to this, FFR guidance YouTube videos are under development for providers to use in order to provide an alternative method of guidance. Watch this space!
- Short Term Operating Reserve (STOR)
 - In December 2017, National Grid published a letter of industry developments. The letter aims to highlight to participants the obligations that National Grid will be subject to and for providers to consider where these may have an impact on them. The intention is that by highlighting these broader industry developments, providers can ensure that they minimise their exposure to risk whilst tendering, and that the SO minimises the possibility of providers failing to deliver the contracted service.
 - The developments include:
 - Optional STOR pricing i.e. the price Flexible STOR providers will be paid if utilised after declaring themselves unavailable at week ahead stage, but then available within week.
 - The EU Medium Combustion Plant Directive, which is to introduce permits and emission limits on certain plants depending on age, size, type and fuel. The letter provides guidance on where to seek more information.
 - The latest status of Code Modifications P354 (ABSVD for non-BM Balancing Services at the metered (MPAN) level) and P344 (Wider Access to the BM).

Claire also ran through recent FFR and STOR tender results, which can be found in the slides from the day and on the National Grid website under Market Information for each Balancing Service.

Recap of System Needs and Product Strategy work

Delegates were reminded that in 2016 National Grid launched its Future Role of the System Operator programme. Within the Flexibility Workstream of this programme, a number of deliverables centred around our System Needs and Product Strategy work.

Back in June 2017, National Grid published the System Needs and Product Strategy document and consultation. Consultation responses were analysed, which led to the articulation of a roadmap of actions. The Product Roadmap for Reserve and Response, published in December 2017, provides an overview of the actions the System Operator is proposing to take in the next few months and years to address stakeholder feedback and improve our products and procurement approaches.

Session 2 – Breakout Sessions

Two breakout sessions, in the style of informal roundtable discussions, gave delegates the opportunity to hear from and feedback on:

- a) National Grid's Product Simplification Roadmap – introduction to the Product Roadmap for Frequency Response and Reserve, and what this means for future product development
- b) System Planning – exploring how the Network Options Assessment (NOA) could create additional opportunities and revenues for demand side

National Grid's Product Roadmap for Response and Reserve

Adam Sims, SO Flexibility Manager, National Grid

In June 2017, National Grid published its System Needs and Product Strategy (SNAPS) consultation, which outlined the SO's system balancing needs and set out how SO products or services could develop over time. The consultation received 128 responses, which were used to inform the latest publication – the Product Roadmap for frequency response and reserve that addresses actions the SO is taking to simplify and improve these services.

This breakout session summarised the principles that underpin the Product Roadmap, the current state of play for reserve and frequency response and the actions for simplifying these services.

The principles guiding National Grid's work are:

- o Procurement decisions will be transparent, and the methodology and needs will be clear to the market ahead of time
- o The design of products, the way National Grid procures, and the contractual arrangements will increase competition in the provision of services to the SO
- o National Grid's products will be designed to balance both operational requirements and the technical ability of provider assets while maintaining system security

Details of actions can be found within the Product Roadmap, including plans to trial an auction to procure Firm Frequency Response.

The session then sought feedback on four areas:

- o auction trial design
- o faster acting response
- o service product suite
- o market simplification (FFR, STOR, Fast Reserve)

At present, FFR providers can decide which hours of the day they are available for, further split by working days, Saturdays, and Sundays/Bank Holidays. This allowable variability creates over a million different possible combinations of tendered windows. National Grid has reviewed its daily requirement profiles with a view to reducing this variability to a manageable level, and are introducing daily windows to align with EFA blocks (Electricity Forward Agreement), the timings for which are every four hours starting from 23:00.

During the breakout, delegates raised queries about the impact of four hour windows on demand/DSR and battery storage deployment, requesting that any detrimental impact was mitigated. There were also several requests for new approaches to enable the integration of renewable generation.

On the theme of battery storage, several delegates asked for more information on deadbands and state of charge management, with the view to understanding the impact on batteries.

'Stackability' featured as a theme, with a request for the removal of market separation for similar products.

And transparency was welcomed – from transparency on why certain tenders are accepted to regular feedback from National Grid on the progress/success of the FFR auction trial.

The feedback gathered through this session will be analysed and used to inform future work.

System Planning

Alice Etheridge, Network Competition Workstream lead, National Grid

Hannah Kirk-Wilson, Technical Economic Assessment Manager, National Grid

The System Planning sessions aimed to give the audience an introduction to how National Grid SO currently carries out network planning – through the Electricity Ten Year Statement and the Network Options Assessment

– and plans to develop this. As one of the developments is to allow market participants to provide alternative solutions to transmission system requirements, National Grid SO were keen to seek input on what delegates could provide to meet those needs and what information they would need from the SO in order to participate in the process.

There were lots of interesting conversations and helpful input, with discussions around risk versus reward, including the value of certainty, the sorts of solutions people could provide, enablers such as better information and working across the electricity system, as well as some of the barriers potential providers face, such as connection times. The team will incorporate the feedback into their developments, including trials to develop the new processes and a roadmap with our longer term direction, which is due to be published in Q2 of 2018.

Session 3 – Industry Updates

Power Responsive annual report 2017

Rhiannon Marsh, Power Responsive Manager, National Grid

The Power Responsive annual report 2017, due to be published at the end of January 2018, reflects on the developments for demand side flexibility (DSF) over 2017, provides insights from flexibility providers and Steering Group members, shares metrics for demand side participation in flexibility opportunities and highlights future developments that are likely to emerge throughout 2018.

Feedback from flexibility providers and Steering Group members, who represent a range of industry groups and stakeholders, has provided the following insights:

- Due to awareness raising activities, providers are now enlightened about the flexibility opportunities that are open to them and perceptions of DSF have shifted. For example, DSF is seen as business as usual, rather than a crisis response.
- That being said, confidence is fundamental to enable investment (whether financial or time/resource). It can be challenging for providers to secure broader business buy-in for DSF projects, meaning untapped potential remains.
- We've also received feedback that sector-specific engagement can help to target harder to reach audiences, and aggregators and third parties have a key role to play here.
- A continued focus on simplicity is paramount – this is particularly important as new parties look to procure flexibility services.
- Two ways to support with this are continued collaboration across transmission and distribution, and to provide clear guidance on compatibility/service stacking.

The main development in the Power Responsive Annual Report 2017 has been further work on the metrics, building on those included in last year's report. Progress has been made in presenting a more detailed view of demand side participation in the Capacity Market and National Grid's Balancing Services. Where possible, metrics are presented for tendered and accepted volume (MW) and utilised volume (MWh) on an individual service basis, broken down by technology type. Costs spent and prices (lowest and highest) paid per unit are included for availability (i.e. being on standby to provide a service) and utilisation (i.e. providing a service). Figures are provided for April 2016 – March 2017.

The Association for Decentralised Energy (ADE) has also undertaken a self-reporting survey of aggregators and suppliers, to give a more comprehensive picture of DSF participation in different markets (reserve, frequency response, capacity, wholesale and network cost avoidance). This survey considers the assets delivering flexibility, the sectors participating and the regional spread of activity across GB.

Some gaps in the data remain (including consistent technology categorisation across services), but a clearer baseline picture is beginning to emerge, upon which to make year on year comparisons.

Future electricity network access and charging arrangements

Rob Marshall, Charging Development Manager, National Grid

Delegates were introduced to Charging Futures – one place for electricity network users to learn, contribute and shape the reform of GB's electricity network access and charging arrangements – and ran through potential future changes that may have a significant impact on transmission and distribution charging. These included:

- recovering sunk costs of today's network by reviewing the demand residual (through Ofgem's Targeted Charging Review)
- having access rights that meet future flexible uses of the network by reviewing access rights (through the Charging Futures Access Task Force)
- recovering future costs of the network by reviewing forward looking charges (through the Charging Futures Forward Looking Charges Task Force)

Demand users are likely to see changes to their network charges as a result of this activity. The extent of these changes is still being developed through the Targeted Charging Review and task forces.

Parties with limited time were encouraged to:

- look out for the upcoming Power Responsive and Charging Futures webinar (details to be confirmed, through Power Responsive mailing list)
- visit www.chargingfutures.com for summaries of potential changes
- speak to their Trade Association
- look out for summer consultations

For those wishing to get more involved, options included:

- attending the quarterly Charging Futures Forum as a network user
- getting in touch with Task Force members
- attending future workshops on the TCR and Charging Futures Task Forces (dates tbc)

Pan-European Services

Rachel Woodbridge-Stocks, Senior Commercial Analyst, National Grid

Rachel provided an overview of Project TERRE and highlighted the elements of the Demand Connection Code that may be of interest to demand side flexibility participants.

Project TERRE is a key implementation initiative for the European Electricity Balancing Guideline (EB GL), which aims to establish a pan-European market for Balancing Energy. The project is seeking to design and develop a central platform to facilitate the close to real-time (<1 hour) exchange of Replacement Reserves (balancing energy products with a >15 min lead time) between Transmission System Operators (TSOs) in Europe and aims to facilitate participation by smaller generation and aggregated units to a minimum volume of 1MW.

The Demand Connection Code (DCC) is one of a set of new European codes that are being introduced as part of the European Third Energy Package; this came into law on 3 March 2011, with the aim of enabling a greater penetration of renewables, improving security of supply and enhancing competition. It looks to do this by developing a European internal energy market through the creation of a regulatory framework to support the harmonisation and integration of European Energy Markets.

The DCC impacts any 'new' Demand connection to the transmission system and any 'new' demand equipment that could provide DSR. DCC entered into force as European law on 7 September 2016. 'New' demand connections will need to be compliant from 7 September 2019.

Find out more about the definitions and specific elements of the Code that are relevant to demand side player in Rachel's presentation.

ENA's Open Networks project

Jason Brodgen, Open Networks Project Director, ENA

The Open Networks project will enable the UK and Ireland's electricity networks to:

- Address the challenges caused by the continued uptake of distributed generation, as well as the electrification of heat and transport
- Move from their traditional role of simply delivering electricity, to one where they are a platform for new smart energy technologies - the 'DNO to DSO transition'

In December, the ENA launched a major publication from the project: *Opening Markets for Network Flexibility; 2017 Achievements and Future Direction*, which sets out what the group have done in the last year and what they plan to deliver in the future of the project.

Jason shared a short animation to provide context: <https://www.youtube.com/watch?v=8GxeWspmmBI>, gave an overview of case studies underway and focused on the Distribution System Operator (DSO) element of the programme of work. The project has defined DSO and set out a roadmap for evolution. Three market models are being modelled currently, with two more to follow in 2018. The roadmap ensures that network operators are moving at an appropriate pace and that opportunities are being made available to flexibility service providers.

To join the mailing list, email opennetworks@energynetworks.org, and all outputs will be posted online: www.energynetworks.org/electricity/futures/open-networks-project/open-networks-project-overview/

Innovate UK: Outlook on innovation and power flexibility

David Richardson, Innovation – Energy Systems, Innovate UK

Innovate UK drives productivity and growth by supporting businesses to realise the potential of new technologies, develop ideas and make them a commercial success.

Below is an overview of current funding opportunities for energy systems being run, or supported by Innovate UK. Note, typically competitions require registration of interest by the lead applicant a week before the application deadline. For consortium applications, the [Knowledge Transfer Network](#) can help potential applications find collaborators. They also maintain a useful [energy specific LinkedIn group](#) which can be used to find partners.

Infrastructure Systems sector competition

Brief Description: This competition accepts applications for innovation projects in infrastructure systems. Energy projects are a core, specified area of scope with, and energy systems or energy supply projects encouraged to apply. Currently this is Innovate UK's core funding competition for energy sector innovation.

Funding available: £19 million for innovation projects, £16 million for knowledge transfer partnerships

Closing date for applications: 12:00pm, 31st January 2018

Innovate UK: Open Funding Competition

Brief description: This is Innovate UK's open competition welcoming applications from across all priority sectors (including energy). It aims to fund game changing or disruptive innovations with significant potential for impact on the UK economy.

Funding available: £19 million

Closing date for application: 12:00pm, 28th February 2018

Non-Domestic Smart Energy Management Innovation Competition

Brief description: Funding is available to develop innovative energy management services for hospitality, retail or school premises based on smart meter data.

Funding available: £7.3 million

Closing date for application: 9th February 2018

Domestic Demand Side Response (DSR) competition

Brief description: This competition aims to identify and demonstrate controllable, flexible demand in real domestic environments. It is looking for projects that can be replicated at significant scale.

Funding available: £7.75 million

Closing date for application: 5pm, 15th February 2018 (register interest by 5pm, 8th February 2018)

The below competitions are now closed but included for information as areas of sector development.

Vehicle to Grid (V2G) competitions

Brief Description: Funding has been made available for innovative projects that develop future V2G products, services and knowledge.

Funding available: £20 million

Competition closed in October 2017, winners will be announced shortly

Infrastructure Systems Innovation Loans

Brief Description: Funding to help businesses overcome barriers to scaling up. Loans will fund work enabling them to demonstrate their ideas work as expected in real-world applications with users, and to take their solutions to market.

Funding available: £10 million, interest rates of 3.7%

The first pilot of the infrastructure systems loans programme **closed on 10th January 2018**. Loans programme in other sectors will follow this year, and future iterations of infrastructure systems loans will be considered with evaluation of this programme.

Code of Conduct for aggregators

Chris Higby, Policy Officer, Associate for Decentralised Energy (ADE)

Chris provided an overview of the ADE's mission statement and activities across combined heat and power (CHP), district heat and energy management (DSR), and guidance for energy intensive businesses in search of an aggregator.

Chris advised these energy users to consider three baseline questions:

- 1- The first step is establishing trust. Can I trust the facts and figures that are being presented to me. Is this aggregator and honest broker?
- 2- Second, what should I expect in terms of cost to my businesses, training of my workers, revenue and overall effect on my bottom line. What risk does my participation in this market expose me to?
- 3- Finally, how can I compare the value of competing offers and easily understand the market space that I am entering?

In order to support the process of new and existing market participants identifying and striking contractual relationships aggregators, the ADE is progressing a voluntary Code of Conduct. A draft of the Code was consulted on in summer 2017, with the Steering Group reviewing responses in November 2017. The Code is due to be launched in 2018 and covers five key areas of the life cycle:

- Sales and marketing
- Proposals and pre-contractual information
- Contract
- Technical due diligence and site visit
- Complaints

Stands – the chance to speak to industry experts

For the first time, industry experts manned stands on three topics, to enable delegates to ask questions and seek clarification throughout the day. These covered:

- The Capacity Market
- National Grid and UK Power Network's Power Potential project
- SO Balancing Services

The Capacity Market

Chris Thackeray, Capacity Market Manager, National Grid
Konstantina Maniki, Account Manager, National Grid

Chris Thackeray and Konstantina Maniki represented National Grid EMR Delivery Body at the Flexibility Forum, holding meaningful discussions with a variety of delegates.

They answered questions- from general to complex – on the Capacity Market. The main discussion points evolved around (i) the recent changes of the battery storage de-rated factors, (ii) the upcoming Capacity Market auctions, and (iii) the Tier 2 Disputes. In addition, there were some questions regarding the efficiency of the existing Capacity Market strategy and its objective. The Capacity Market representatives also held discussions with Capacity Providers with regards to the existing engagement and support.

More details on the Capacity Market can be found at the EMR Delivery Body website: <https://www.emrdeliverybody.com/SitePages/Home.aspx>. Please contact emr@nationalgrid.com for any additional information.

National Grid and UK Power Network's Power Potential project

Amy Boast, Commercial Workstream Lead, National Grid
Clare Maguire, Communications Lead, National Grid
Tatiana Ustinova, Technical Workstream Lead, UK Power Networks

The Power Potential project, which is a world first, could save energy consumers over £400m by 2050 and generate up to an additional 4 GW in the South East region of the UK. With additional funding from Ofgem, the energy regulator, National Grid has teamed up with UK Power Networks to launch this new initiative which aims to open up new reactive power market for distributed energy resources (DER) and generate additional capacity on the network.

Throughout Great Britain, distribution power networks have been experiencing increased levels of renewable generation such as wind and solar, etc. As this trend continues to increase, more coordination between the Great Britain System Operator (SO) and Distribution Network Operators (DNOs) is needed. This will increase system flexibility by using more DER capabilities and provide network support at a distribution and transmission systems.

Members from the Power Potential project team from both National Grid and UK Power Networks joined the Power Responsive Forum, inviting distributed energy resources (DER) to join the project trial, commencing in 2019. The team met with a range of attendees; some were familiar faces to the project, some had yet to make contact with the team and others were keeping a watching brief of the project, as their location or connection status mean they aren't able to participate. All attendees the team spoke to will be contacted by the Commercial Lead, Amy Boast. In the meantime, the team looks forward to speaking with delegates further on the next project webinar on 29th January.

SO Balancing Services

Emily Hirst, Account Manager, National Grid

Alex Byers, Account Manager, National Grid

Account Managers Emily Hirst and Alex Byers were available at the Balancing Services stand to answer queries around Power Responsive and SO Balancing Services. The stand proved popular, with delegates from across the industry showing interest. The Account Manager role is to support the provider journey through forming framework agreements, tendering in to provide services and service provision. Emily and Alex were therefore well positioned to answer queries from delegates at all levels of knowledge and experience of Balancing Services.

The main topic of conversation included the recently released Product Roadmap for Frequency Response and Reserve, as well as general introductions to each of the services that National Grid procures as System Operator. Also discussed were the proposed changes to Balancing Services that will allow increased participation from demand side flexibility. Good feedback was received regarding recent actions by National Grid to make information and processes more transparent, such as the FFR "Quick Wins" implementation and the [FFR interactive guidance document](#). Suggestions for future improvements were taken on board.

Other notable points of discussion included the perceived impacts of the incoming Pan-European services TERRE and MARI, the Balancing Mechanism and how Balancing Services interact with the Capacity Market. Please visit the National Grid balancing services website (<https://www.nationalgrid.com/uk/electricity/balancing-services>) or contact commercial.operation@nationalgrid.com for more information.

Presentation Slides

Session 1 - Policy, Regulation, & System Operator Update

[BEIS: Upgrading our Energy System](#)

[Ofgem: Smart Systems and Flexibility Plan Update](#)

[National Grid: System Operator update](#)

Session 2 - Parallel Breakout Sessions

[Product Simplification Roadmap](#)

[System Planning](#)

Session 3 - Industry Updates

[Power Responsive Annual Report](#)

[Future electricity network access and charging arrangements](#)

[Pan-European Services](#)

[ENA: Open Networks Project Update](#)

[Innovate UK: Flexibility & Innovation](#)

[ADE: DSR Code of Conduct](#)

Q&A sessions

Questions were asked from the floor and through the Slido application. Due to the volume of questions received through Slido, questions were grouped into themes and directed at the relevant speakers. Responses to questions can be found below by theme.

Current and future price trends for Balancing Services

Increased participation in Balancing Services increases the liquidity of markets and results in more competitive prices tendered, driving value for end consumers. A similar price trend has occurred in STOR over recent years – with tendered and accepted prices falling as a result of competition, followed by a steadying. Interested parties may wish to review the historic price movement for STOR as a possible indication of what could happen on other services.

It is not possible to give a view of the price ranges for new products; price discovery will occur through market mechanisms.

European Codes and Brexit

Despite Britain leaving the EU, European Codes will continue to apply to GB as they are being implemented into GB frameworks and hence becoming GB law. However, there is a sliding scale of GB's position in the European energy market in the future, from still a full part of the single market, to outside of the market completely.

How DSO differs from DNO

The ENA and many DNOs are exploring the transition from Distribution Network Operator (DNO) to Distribution System Operator (DSO). Whilst DNOs already innovate and use non-firm connections, the DSO model is about opening up the flexibility market under a set of services.

Innovate UK's loan programme

In addition to funding for innovation project, Innovate UK offer a loan programme with an interest rate of £3.7% annually.