

Power Responsive Steering Group

Note of Tenth Meeting

31 January 2018, 13:00-17:00hrs, held at Elexon, 350 Euston Rd, London NW1 3AW. This Note of Meeting is prepared by National Grid on behalf of the Steering Group.

1. Welcome and introductions

Cathy McClay (chair) welcomed attendees to the meeting and summarised progress and activities since the previous Steering Group meeting on 11th October 2017. Most notably, development included; the publication of National Grid's [Product Roadmap](#), introduction of the [Charging Futures Forum](#) – a programme to coordinate significant charging reform.

Cathy ran through the meeting agenda, highlighting discussions to be held on:

- **Sources of demand side flexibility from assets and providers** - looking at what flexibility services are offered, into which markets, and if there is any underutilised potential.
- **Power Responsive Strategy** – a discussion around the proposed Power Responsive strategy articulating clearer end-points in terms of outcomes for Power Responsive, indicators of success, and re-focuses the role and priorities of the Steering Group in 2018.
- **Demand side flexibility (DSF) horizon scan** – providing updates from policy, regulation, and the System Operator
- **Power Responsive Annual Report 2017 & demand side flexibility metrics** – headlines from the report including demand side flexibility metrics and the self-reporting survey compiled by the Association for Decentralised Energy (ADE).

2. Power Responsive Strategy

Rhiannon Marsh (Power Responsive Manager, National Grid) presented the proposed Power Responsive strategy to Steering Group members. In light of the pace of change in the energy industry in 2017, a strategy 'refresh' was conducted in order to ensure the ambitions and actions of the Power Responsive programme remain relevant. The strategy has been composed following interviews with Steering Group members and opinions from across the sector. Common themes to arise include:

- **Awareness raising is the most notable achievement** – perceptions of demand side flexibility have shifted
- **Sector-specific engagement** – would be an effective way to target hard-to-reach groups
- **Welcome greater engagement with DNOs and ENA** – necessary to keep proposition simple for end users as new revenue streams emerge
- **Focus needs to be kept on simplification** – there is a risk that new revenue streams increase complexity
- **Greater price transparency and price discovery mechanisms** - for confidence and decision making
- **Further utilise the power of the Steering Group to drive change**

Much of the discussion focussed on whether Power Responsive were working to the correct definition for flexibility. Since inception in 2015 Power Responsive have focused on addressing the challenges for Demand Side Response (DSR). With a growing focus on wider technologies, a 'catch-all' term of Demand Side Flexibility (DSF) has been used to incorporate DSR, distributed generation and storage.

Consideration was raised as to whether a 'whole system' approach was considered in enough depth within the strategy, and how the Power Responsive programme should work to compliment the ENA (Energy Networks Association) Open Networks project. It was acknowledged that from a communications perspective there are similarities that fit alongside the Open Networks project work stream 2 – 'Customer Experience'¹. Closer engagement with the ENA was highlighted as a key deliverable, with future ENA/Open Network project updates to be provided in future 'Horizon Scans'

¹ ENA Open Networks Project – [Workstream 2: Customer Experience](#)

and Power Responsive Steering Group meetings – likely to be delivered through attending ENA members. There was also discussion relating to flexibility participation moving beyond ancillary services to wider opportunities; it was highlighted that the next National Grid ‘Product Roadmap’ would be looking at wider services including Black Start in the coming months.

Some Steering Group members suggested that the strategy should address a further area of focus – indicators for the size of the market(s). Work is ongoing to address the provision of information and improve transparency – notably through the Power Responsive annual report. Comment was given to what the most appropriate indicators might be. Factors considered included: ensuring it is possible to distinguish new unique market entrants from price discovery from duplicate units; that measuring DSF participation in tenders may not be a true measure of success as continued unsuccessful tenders may lead to participants leaving the market; and that diversity in services is desired, therefore this should be represented in any statistics used to measure success.

3. Sources of Demand Side Flexibility – assets and providers

Cathy McClay handed chair responsibilities over to Claire Spedding (Head of Business Development, National Grid). Claire introduced the next item on the agenda asking ‘are certain markets suited to specific asset/providers? Steering Group members representing the storage community and industrial and commercial energy users (with both load response capabilities and small scale generation assets), provided their views on the accessibility of markets.

The appetite for DSF is believed to be strong. Small-scale generation has been where most activity has focused as the characteristics of these assets have the closest similarity to traditional sources of flexibility.

There are many positive messages around DSF, but apprehension still exists, with some potential providers seeking more certainty around the balancing of risk and reward. A common theme was the challenge I&C users face around securing business buy-in for investment, particularly if pay-back periods increase from initial projections. This has resulted in some parties halting their flexibility programmes, in favour of alternative cost saving methods such as LED lighting replacement – simple, but effective energy efficiency measures.

Complexity and the level of competition in tenders were also given as factors deterring new parties from entering the market. Documentation, particularly contracts, need to be accessible for all providers, including energy managers with less technical backgrounds.

Power Responsive’s recent Flexibility Forum (11th January 2018) highlighted a move towards shorter term, week-ahead markets, as described in National Grid’s Product Roadmap for Reserve and Response. This approach offers providers a more accurate view of system requirements - closer to real time and therefore greater opportunity to move between revenue streams. However, the discussions highlighted a potential gap between industry participants’ needs. Whilst distributed generators appear to favour shorter-term markets that allow them to follow the money/value in different services, providers, whose core business is not energy, may not have the resource for more frequent procurement exercises and require longer-term contracts that offer greater visibility over return on investments.

Furthermore, providers with sites nationally (and across multiple DNO regions) feel that understanding and managing all DNO requirements is too challenging. For instance, satisfying paperwork and contracts for hundreds of retail outlets is unfeasible. As a result, some DNOs have seen little take-up in their flexibility trials, despite their lucrative nature. New market entrants were acknowledged to be low and there was therefore a call for greater provider diversity. However, there was a feeling that aggregators were providing an essential function within the market by cutting through the complexity for their customers.

On a battery storage front, concern was raised that whilst battery storage can perform across all markets, there is a trend towards technology being built too quickly and potentially incorrectly based upon poor business models due to a lack of visibility. Steering Group members also acknowledge that, whilst stacking revenue streams is desirable (or even essential), there is a need for one ‘anchor’ revenue stream to underpin a business model.

In summary, it was concluded that mapping assets against the markets they currently participate in

would be valuable in providing new providers with visibility of potentially markets and in understanding where effort should be focused to increase accessibility.

Further detail from the discussion can be found in the supporting Snapshot document from the 10th Steering Group.

Medium Combustion Plant Directive (MCPD)

During discussions it was evident that uncertainty exists around the Medium Combustion Plant Directive², and how this impacts existing assets in use for balancing services. An action was taken for BEIS to coordinate with DEFRA to seek clarification.

Since the meeting, BEIS have provided the Power Responsive team with the following fact sheet and FAQ's surrounding proposed changes under MCPD.

- [Medium Combustion Plant Directive Factsheet](#)
- [Medium Combustion Plant Directive FAQs](#)

Power Responsive are collating feedback on behalf of BEIS through powerresponsive@nationalgrid.com.

4. Demand Side Flexibility Horizon Scan

Updates were provided on developments for DSF in policy, regulation and procurement, as well as other relevant industry initiatives.

Ofgem

Philippa Pickford summarised Ofgem's updates since the last Steering Group meeting. Included in the update were:

1. An update on DNO ownership on storage and proposals through Ofgem's consultation, proposing to introduce a new condition in the electricity distribution licence to ensure that distribution network operators cannot operate storage³.
2. Targeted Charging Review⁴: Next update to be published later in the year. Two Task Forces are currently in place, which are considering how to progress Ofgem's working paper on the 'Reform of electricity network access and forward-looking charges':
 - Access Task Force
 - Forward Looking Charges Task Force
3. Progress on the Electricity System Operator's (ESO) legal separation⁵ and associated benefits to incentivise the ESO to drive consumer value.

BEIS

David Capper provided an update on BEIS and Ofgem's Smart Systems and Flexibility Plan⁶ which focuses on 29 actions to achieve:

- Removal of barriers to smart technologies – incl. storage
- Enabling of smart homes and businesses
- Markets that work for flexibility – incl. value stacking

7 of the 29 points have been completed, although more actions continue to be identified.

² Medium Combustion Plant Directive – [Schedule 25A \(medium combustion plants: Medium Combustion Plant Directive\) and Schedule 25B \(specified generators\)](#)

³ Ofgem (Nov 2017) [Enabling the competitive deployment of storage in a flexible energy system: changes to the electricity distribution licence](#)

⁴ Ofgem (Aug 2017) [Targeted Charging Review - Significant Code Review launch](#)

⁵ Ofgem (Jan 2017) [Greater separation for National Grid's system operator role.](#)

⁶ [BEIS & Ofgem \(Jul 2017\) Upgrading Our Energy System: Smart Systems and Flexibility Plan](#)

Further points raised include:

- Proposal for half hourly settlement powers for Ofgem have been added to the Smart Meter Bill.
- Autonomous & Electric Vehicle Bill – proposal for charge points to be smart enabled – Bill is going to House of Lords for approval.
- Consultation on smart appliances to provide for automation and safe guard against cyber security.
- £30 million of innovation funding to be made available for vehicle2grid (V2G) technologies.
- Government's Industrial Strategy⁷ has set grand challenges to put the UK at the forefront of the industries of the future. The challenges include a Clean Growth Challenge. There is a proposed new programme under the Industrial Strategy Challenge Fund called 'Prospering from the energy revolution', which would sit alongside the Faraday Challenge on batteries and EVs.
- In the cabinet re-shuffle Claire Perry will take over most of the energy brief.

BEIS were keen to remind industry that they welcome continued input on existing and emerging barrier since the call for evidence and the publication of the 29 actions within the Smart Systems Plan.

National Grid SO

Rhiannon Marsh updated on National Grid's recent balancing procurement:

FFR

- **January 2018 Tender** - 230 FFR tendered were received from 21 providers. Tender Round 97 represents a full tender round giving providers the opportunity to tender in volume to be accepted for delivery between Feb-18 and Jul-20. 18 contracts were awarded to 11 units owned by 9 providers.
- In December 2017, National Grid SO published its interactive guidance document, 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 under development in order to provide an alternative method of guidance.
- Finally, to support improved reporting on participation, from February, parties tendering in to FFR will need to identify their technology type. This won't be used to assess tenders but will enable National Grid SO to understand the extent to which certain technologies are participating in the service.

STOR

- **From Tender Round 23** - secured a significant proportion of required volume for the year and National Grid expect to satisfy the remainder of their requirement for seasons 12.1 - 12.2 (April – August) in next the tender round, with a greater requirement remaining for seasons 12.5 & 12.6 (October – April).
- The Invitation to Tender pack for TR34 has been published, which covers the period 1st April 2018 to 1st April 2020.
- In December 2017, National Grid published a letter of industry developments⁸. 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 to highlight these broader industry developments. Providers can ensure that they minimise their exposure to risk whilst tendering, and for the SO to minimise 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.

⁷ [BEIS: UK's Industrial Strategy](#)

⁸ National Grid: [STOR Letter to Industry](#)

- The EU Medium Combustion Plant Directive, which aims 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)

Demand Turn-Up

- The service concluded on 28th October 2017. A post-service report is being written (available mid-February) with information on activity from summer 2017. Reflections are underway on changes to improve the service and ensure it is aligned with system requirements.

Product Roadmap

- In June 2017, National Grid published its System Needs and Product Strategy (SNAPS)⁹ consultation, which outlined the SO's system balancing needs and sets out how SO products and 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 Reserve¹⁰ that addresses actions the SO is taking to simplify and improve these services.
- A number of principles underpin the Product Roadmap. They include:
 - Transparency of procurement decisions and a clear methodology to the market ahead of time.
 - The design of products - the way National Grid procures, and the contractual arrangements will increase competition in the provision of services to the SO.
 - 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 closer to real time, and to introduce daily windows for availability.
 - 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 optionality 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 Electricity Forward Agreement blocks), the timings for which are every four hours starting from 23:00.
- At the Power Responsive Flexibility Forum in early January 2018 views were sought from delegates on the Product Roadmap.
 - Transparency was welcomed, and people were keen to understand what the latest plans meant for battery storage and state of charge management, and for 'stackability'.
 - The feedback gathered through this session will be analysed and used to inform future work.

5. Power Responsive Annual Report 2017 & demand side flexibility metrics

Steering Group members were thanked for feedback provided on draft versions of the annual report. The report looks to reflect on significant developments in DSF over the last 12 months – both within the Power Responsive programme and wider initiatives, highlight remaining challenges, and present metrics for benchmarking demand side participation in flexibility services.

Headlines include:

- DSF participation in contracted markets is increasing steadily
- There is greater awareness of the opportunities and the proposition is more widely regarded as 'business as usual'
- Some challenges remain, including market complexity and uncertainty in a time of significant change
- I&C providers continue to voice their need for simple, reliable revenue streams in order to invest in demand side flexibility

⁹ National Grid: Future of Balancing Services – [System Needs and Product Strategy](#)

¹⁰ National Grid: Future of Balancing Services – [Product Road Map for Reserve and Response](#)

- 'Value stacking' is seen as increasingly important to build a business case for investment
- Domestic DSR and electric vehicles are likely to have an increasingly significant role in enabling flexible electricity consumption

It was acknowledged that key industry parties need to come together to further build on the annual report in future years.

6. Power Responsive work update

Power Responsive Flexibility Forum

The Power Responsive Flexibility Forum took place on 11th January 2018 to bring latest industry activity and thinking to 220 stakeholders across the flexibility landscape.

Headlines

- End of the beginning for demand side flexibility
- Continued industry engagement is critical to ensure strategies are compatible with new innovations
- Multiple opportunities emerging – across revenue streams and technology solutions

Discussion topics

- Transition from existing SO services and delivery of Product Roadmap – price discovery, dispatch system
- Access to the Balancing Mechanism for demand side flexibility
- Potential from electric vehicles – innovation projects, role of DSO in accessing flexibility

Feedback

- "Lots in one space which is good for small businesses"
- Good range of speakers
- Requests for more interactive sessions and further detail on:
 - Interaction with DSO
 - Product Roadmap progress
 - Future opportunities – constraints, reactive power, black start

Forward activity timeline for 2018

The Power Responsive timeline for Q1-3 was presented to steering group members. High-level activities and milestones are to include:

- Annual Report Publication – Feb 2018
- Spring Steering Group Meeting – March 2018
- Sector specific engagements – Q2 2018
- Spring Flexibility Forum – TBC
- Summer Conference/Reception – June 2018
- Summer Steering Group meeting – July 2018
- Commencement of Annual Report data gathering – July 2018
- Autumn Flexibility Forum – Sep 2018

7. AOB

No matters arising.

8. Next Steps

- National Grid – further analysis to map participation from each asset category against service to provide a view of quantitative view of accessibility, utilising existing data from the Power Responsive annual report and other sources.
- BEIS – provide clarification regarding the implications of the MCP directive.
- National Grid – explore opportunities for sector specific engagement.

- National Grid – publish the Power Responsive Annual Report 2017.

Future meeting dates:

- 11 April 2018
- 5 July 2018

Attendees

Name	Company	Sector representation
Cathy McClay	National Grid	Chair
David Capper	BEIS	Policy & Regulation
Philippa Pickford	Ofgem	Policy & Regulation
Louise Van Rensburg	Ofgem	Policy & Regulation
Claire Spedding	National Grid	System Operator
Roger Hey	Western Power Distribution	Distribution Network Operator
Matt Copeland	E.ON	Large Supplier
Fiona Navesy	Centrica	Large Supplier
Will Chilvers	Orsted	Renewable generator & supplier
Robert Buckley	Cornwall Energy	Small suppliers
Justin Andrews	Elexon	Electricity Market
Eddie Proffitt	MEUC	I&C (industry)
Andy Pennick	United Utilities	I&C (water/utilities)
Alastair Martin	Flexitricity	Aggregator
Yoav Zinger	KiWi Power	Aggregator
Jo Butlin	EnergyBridge	Market Commentator
Matthew Rowe	DNV GL	Electricity Storage
Marek Kubik	Fluence	Electricity Storage
Dale Geach	BEAMA	Technology
Maria Spyrou	Marks and Spencer	I&C (retail) – guest presenter/attendee
Judith Ward	Sustainability First	Secretariat
Rhiannon Marsh	National Grid	Secretariat
Adrian Sellar	National Grid	Secretariat

Apologies:

Jim Cardwell (Northern Powergrid)
 Neil Gillespie (United Utilities)
 Sara Vaughan (E.ON)
 Clare Dudeney (Sustainability First)
 Jeff Whittingham (Orsted)
 Joe Ernst-Herman (Crown Commercial Service)
 Matthew Webb (TFL)