Power Responsive Steering Group
Note of Thirteenth Meeting

03 October 2018, 13:00-17:00hrs, held at Elexon's offices, 350 Euston Rd, London NW1 3AW.

This note has been prepared by National Grid Electricity System Operator on behalf of the Power Responsive Steering Group.

1. Welcome and introductions

Steering Group members were welcomed to the thirteenth Power Responsive Steering Group meeting by Cathy McClay (chair). The meeting represents the second meeting of year 4 of the Power Responsive programme. It was held under the Chatham House Rule.

The previous meeting on 5 July 2018 focused on **'the potential Demand Side Flexibility (DSF) contribution from cities and local authorities, and electric vehicles'**, including: DNO and Local Authority' engagement; wider DSF benefits to Local Authorities (e.g. relating to fuel poverty, health and emissions reduction / clean air); electric vehicle primary legislation and charging standards; cost and behavioural challenges of moving to fleet EVs; future models for vehicle ownership (will 'shared' vehicles be used 23 hours a day, thus limiting flexibility potential); and the importance of innovation as part of the government's 'Road to Zero' strategy. A summary note of the Steering Group meeting[1] and Discussion Snapshot: emerging opportunities from location based demand side flexibility and electric vehicles[2] have been published on the Power Responsive website.

The focus for this meeting was on remaining barriers to DSF.

2. Demand side flexibility horizon scan

Updates were given by the Department of Business, Energy, and Industrial Strategy (BEIS), National Grid Electricity System Operator (ESO), and the Energy Networks Association (ENA).

BEIS

The smart appliances consultation has concluded and is expected to be published on 15 October as part of *Green Great Britain week* – which highlights opportunities for clean growth and ways business and the public can contribute to tackling climate change. Actions from the Smart Systems and Flexibility Plan will be announced during the week.

The Secretary of State is expected to respond to the Dieter Helm review in late October / early November and will potentially provide comment on barriers such as system data (including governance and improving data flows amongst the industry stakeholders), codes and engineering standards.

A call for views and evidence on whether Capacity Market Rules meet objectives closed on 9 October. Responses will be considered in the 2019 consultation round, with some recommendations potentially brought forward in time for the next auction, with others taking longer.

In Ofgem's absence at the meeting it was highlighted that project TERRE code modifications have been approved. The consultation on storage as part of the electricity generation licence was launched on 2 October, closing 27 November.

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[1] **Summary note to the Twelfth Power Responsive Steering Group meeting** - http://powerresponsive.com/wp-content/uploads/2018/07/Meeting-Note-Power-Responsive-Steering-Group-5-July-2018.pdf

[2] **Discussion Snapshot: emerging opportunities from location based demand side flexibility and electric vehicles -** http://powerresponsive.com/wp-content/uploads/2018/07/Power-Responsive-snapshot-on-place-based-flexibility-and-electric-vehicles-5-July-2018.pdf

Charging Futures Forum
Ofgem's Charging Futures Forum (CFF) is the main forum for engaging on the Target Charging Review (TCR) - some Steering Group members felt there is a lack pace and urgency and it would be useful to set out timelines for decisions.

Customer / end-consumer representation at the CFF is low. Industrial & Commercial customers at the Steering Group were generally receiving more information from the MEUC on charging than through the CFF. With significant industry changes it is hard to know where best to engage, and it can be resource intensive for customers to understand the landscape. Charging Futures Podcasts[3] were considered to be a useful tool.

National Grid Electricity System Operator

Legal Separation
Over the past year and a half National Grid ESO have been working to create the systems, processes and physical environment that will allow the ESO to operate as a legally separate company. A further significant step towards a legally separate system operator took place in September with the introduction of the new brand identities for the System Operator (SO) and the ESO, including, new logo, updated website[4], colleagues to refer to themselves as National Grid SO or ESO, and soon to change email addresses.

ESO Forward Plan
In July National Grid ESO delivered against its baseline expectation by supporting the entry of two new providers into the FR and FFR markets, engaging with industry through the STOR outline change proposal, and publishing the information note on Thermal Constraint Management. In August, whilst there were no new units entered into the FFR market (no STOR Tenders held), a significant milestone in the Fast Reserve market saw the first battery storage unit successfully winning a contract for delivery, whilst this was quickly followed in September with the first domestic provider entering the FFR market.

Further updates include:
- **ESO Roadmaps:**
    - **Reactive Power Roadmap -** stakeholders rated their satisfaction with changes outlined in the Reactive Power Roadmap as 3.7 out of 5 for addressing barriers to entry and facilitating access to services.
    - **Balancing Mechanism (BM) Wider Access Roadmap** – the ESO have put forward proposals for accelerated access utilising existing industry routes to the BM. The road map[5] was published on 9 August to ensure all interested parties have equal access to information with a webinar held on 23 August. The first aggregated unit entered into the BM and provides learning points to inform engagement with other providers.
- **Reserve Outline Change Proposal (OCP)**
    - Fast Reserve OCP was issued on 10 September, including a new set of simplified terms as well as changes to the structure of the service (MW size, EFA blocks, tender windows). The modified STOR OCP closed on 30 August with all responses largely supportive of changes.
- Exclusivity Clauses - Published guidance and initiated industry consultation[6] on exclusivity clauses to improve our ability to stack products and revenue streams for market participants.

[3] **Charging Futures Forum Podcasts** - http://www.chargingfutures.com/whats-happening/charging-futures-forum/5-september-2018-forum/
[4] **National Grid ESO website -** www.nationalgrideso.com
[5] **Wider Access to the Balancing Mechanism Roadmap** - https://www.nationalgrideso.com/sites/eso/files/documents/Wider%20BM%20Access%20Roadmap_FINAL.pdf
[6] **Review of Exclusivity Clauses -** https://www.nationalgrideso.com/sites/eso/files/documents/Review%20of%20Exclusivity%20Clauses%20within%20Balancing%20Services%20Contracts%20Sep%202018.pdf

- **Performance Monitoring** – published the first step to rationalising and standardising the performance monitoring processes[7] for response and reserve, which is a necessary precursor to streamlining upfront testing requirements.
- **Platform for Ancillary Services** - successful test of the new web-based Ancillary Services Dispatch Platform (ASDP) by dispatching for Fast Reserve for the first time using battery storage.
- **Auction Trial for Frequency Response** - Letter published to industry on 31 August outlining the detail of the trial and inviting parties to a webinar at the end of September (attended by 300 parties). Estimated 'go-live' for the project has been pushed back to June 2019 to deliver the full benefits that satisfy stakeholders.

Energy Networks Association (ENA)

Following earlier discussions on networking charging, it was highlighted that the ENA are feeding into CFF developments.

Future Worlds Consultation

The ENA Future Worlds consultation[8] received circa 50 responses. It was recently published setting out 5 Future Worlds capable of supporting the smart decentralised energy industry that the UK is transitioning towards. Scenarios are focused from the perspectives of different sectors, but do not advocate one 'world' over another. The intention is to provide evidence to BEIS and Ofgem in order for decisions to be made.

In wider work, the ENA are consulting on the actions they should take in 2019 including:

1) Setting strategic direction
2) Short term least regrets
3) Whole energy system solutions – gas, heat
4) Network charging reform

Steering Group members were reminded that the Low Carbon Networks & Innovation (LCNI) event would be taking place week commencing 15 October 2018.

3. Barriers to Flexibility

Cathy McClay introduced the discussion, which focused on remaining barriers to demand side flexibility, and whether or not they are understood and being addressed.
The discussion was split into two parts:

Part A:

1. **What's still to do?**
   Short reflection of steps taken so far to tackle barriers to balancing. What barriers remain for demand side flexibility.

Part B:

2. **What issues to tackle, when, how, and by who?**
   Identify priority actions to be taken in the short, medium and long-term.

3a. Barriers to Flexibility – what's still to do?

Rhiannon Marsh, Power Responsive Manager presented a short reflection of steps taken so far to tackle barriers to balancing and a look ahead to what's on the horizon. Steering Group members then reflected on remaining barriers on a sector-by-sector basis:

Demand customers, Storage, and Asset Owners

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[7] **Performance Monitoring Policy -** https://www.nationalgrideso.com/sites/eso/files/documents/Performance%20Monitoring%20Policy%20Sep%202018.pdf

[8] **ENA Future Worlds Consultation** - http://www.energynetworks.org/assets/files/14969_ENA_FutureWorlds_AW06_INT.pdf

- Market access – some volumes are currently in mandatory markets, not accessible to all parties (although this is changing).
- Uncertain future - availability of market information on opportunities, new products arrivals, contract lengths, and accuracy of forecasts.
- Cost-benefit of the demand side proposition.
- Health sector - investment to upgrade assets, and a lack of understanding.
- Retail sector - issues with supplier contracts, and imbalance increases risk premiums.
- Aggregators - in control of processes, and trust issues with sales pitch.
- Battery storage - difficult to finance, need to integrate different revenue streams, at different levels of maturity.
- Lack of time and internal resources.
- Electric vehicles – ad-hoc rather than continually available to provide flexibility.

Aggregators/suppliers

- Getting a network connection and DNO active network contracts.
- Uncertainty – revenue streams are currently under review and the proposition becomes difficult to explain to customers.
- Behind the meter batteries – new uncertainty.
- Medium Combustion Plant Directive (MCPD) Environmental permitting – upgrading of old equipment to meet requirements.
- Flexibility doesn't fit with investor needs.
- Data gathering – a view that National Grid ESO is not currently gathering sufficient data.
- Customer led DSF – how could we pay people for what they have available?
- Code governance – long and complex; slow to make changes; difficult to coordinate. Issues with overall market design (supplier hub model). New and smaller players may not have bandwidth to actively participate – disrupters play outside the rules. Some parties are regulated and others do not need to sign up to codes (aggregators).
- Updating of systems – ensuring they communicate with each existing systems effectively.
- Testing – System Operator requirements to test each new asset at full delivery.
- All issues from customer perspective also applicable

Networks and other wider issues

- Distribution System Operators (DSOs) create different products, so the ENA has defined five product types.
- Many dependencies – makes 'learning by doing' difficult and time consuming.
- Location becomes a barrier – need a site in the right place at the right time, which limits the market.
- Limited new capacity – need new forms such as hot water heating, unclear how much flexibility is available there as it is asked for in certain shapes.
- Confidence – going beyond trials, more zones leads to greater confidence.
- Most barriers for Balancing Services also apply to DNO products.
- Restrictions to stacking services.
- Technology may not be low carbon.
- Small customers - household, electric vehicles, peer-to-peer – whether half-hourly settlement will be mandated.

3b. Barriers to Flexibility – what issues should be tackled, when, how and by who?

In the second part of the discussion, barriers discussed previously were consolidated and Steering Group members asked to vote on two short-term priorities and one long term barrier that could most appropriately open-up greater demand side flexibility participation. The three priority areas as selected by the steering group were:

1. Short-term - **Cost benefit proposition and service stacking**
2. Short-term - **Data gathering**

3. Long-term – **Code governance**

Breakout groups then discussed these issues. See the snapshot[9] for more detail.

4. Power Responsive Update

Rhiannon Marsh (Power Responsive, National Grid) provided an update on recent Power Responsive engagement events:

Power Responsive Local Authority Workshop
To broaden reach to newer audiences Power Responsive hosted an event with local authorities on 26 September, which delivered an overview of demand side flexibility routes to market, case studies, and facilitate a discussion on current blockers facing local authorities at different stages along the provider journey.

Reflections from the day included acknowledgement that; energy must compete with other priorities and pressures; Financial Directors often present barriers and are stakeholders to educate; demand side flexibility should be tied to other priorities e.g. carbon reduction; it isn't easy for local authorities to access and influence sites; there is a long lead time with no guarantee of success.

Delegates rated the workshop positively providing an average score of 8.7 out of 10 when asked how useful they'd found the day, demonstrating the value that can be achieved from targeted engagement events. A summary of the workshop[10] has been published on the Power Responsive website.

Metrics Sub-group
As part of the process to build the Power Responsive Annual Report, a metrics sub-group has again been established to: critique the metrics presented in last year's annual report, consider metrics for this year, and how metrics could be improved in future. The Annual Report will be targeted at market actors, but a separate shorter version will be tailored to customers. The proposed structure and content was discussed.

The sub-group was attended by representatives from the Electricity System Operator, Sustainability First, Western Power Distribution (WPD), Major Energy Users Council (MEUC), and GridBeyond. Reflections from the meeting include:

- There's a need to understand who the report and metrics are targeted at. A customer snapshot of the report could be developed separately to tailor information, e.g. reporting how often and how long assets are utilised will add value to customers.
- Data on 'accepted' tenders is generally considered more useful than tendered.
- The metrics are useful as supportive material to customers and sales material for aggregators.
- When presenting price information, it's important to include narrative on how we value services – this gives context to what prices are achievable.

An outline of the proposed annual report was structure and content was provided to steering group members.

5. Any other business

No matters arising.

6. Next steps

- **Future meeting dates:** 30 January 2019.

[9] **Power Responsive Steering Group – Oct 2018 – Discussion** Snapshot - http://powerresponsive.com/wp-content/uploads/2018/11/Power-Responsive-Snapshot-on-Barriers-to-Flexibility-3-October-2018.pdf

[10] **Summary of Power Responsive Workshop to local authorities** - http://powerresponsive.com/wp-content/uploads/2018/10/Power-Responsive-Workshop-to-Local-Authorities-Summary-Note-.pdf

Attendees

Name	Company	Sector representation
Cathy McClay	National Grid ESO	Chair
David Capper	BEIS	Policy & Regulation
Colm Murphy	National Grid ESO	Electricity System Operator
Jim Cardwell	Northern Powergrid	Distribution Network Operator
Roger Hey	Western Power Distribution	Distribution Network Operator
Fiona Navesey	Centrica	Large Supplier
Jo Butlin	EnergyBridge	Market Commentator
Tom Palmer	Cornwall Insight	Small Supplier
Eduardo Mascarell Gurumeta	Nissan	Electric Vehicles
Justin Andrews	Elexon	Electricity Market
John Parsons	BEAMA	Enabling Technologies
Eddie Proffitt	MEUC	I&C (industry)
Andy Pennick	United Utilities	I&C (utility)
Joe Ernst-Herman	Crown Commercial Service	I&C (public)
Richard Eaton	Aggregate Industries	I&C (Building & Materials)
Martin Garry	Retail Energy Forum	I&C (retail)
Alastair Martin	Flexitricity	Aggregator
Jonathan Ainley	KiWi Power	Aggregator
Wayne Muncaster	GridBeyond	Aggregator
Alastair Steele	DNV GL	Electricity Storage
Marek Kubik	Fluence Energy	Electricity Storage
Judith Ward	Sustainability First	Secretariat
Clare Dudeney	Sustainability First	Secretariat
Rhiannon Marsh	National Grid ESO	Secretariat
Adrian Sellar	National Grid ESO	Secretariat