

Power Responsive Steering Group

Note of Ninth Meeting

11 October 2017, 13:00-17:00hrs, held at Danubius Hotel 18 Lodge Rd, London NW8 7JT. This Note of Meeting is prepared by Sustainability First on behalf of the Steering Group.

1. Welcome and introductions

Cathy McClay (chair) welcomed attendees to the meeting and introduced Claire Spedding who has recently taken up the position of Head of Business Development, National Grid. Cathy reflected on the significant developments in the demand side flexibility (DSF) space over the summer. This steering group meeting considered how various initiatives and forums sit together and the role of Power Responsive in this new context. There were discussions on: how to take a 'whole system' approach; the Power Responsive Annual Report 2017; Flexibility Forum; and development of a forward strategy.

2. 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

Andy Burgess summarised Ofgem's regulatory strategy document¹ – which explains some of the thinking behind Ofgem's recent initiatives and how they fit together, including greater separation for National Grid's System Operator and its enhanced role², the Smart Systems and Flexibility Plan³, future price controls and RIIO, the Targeted Charging Review⁴, and The Innovation Link.

The strategy sets out five principles:

1. Aligning incentives for the System Operator and Networks
2. Ensuring cost reflective charges
3. Promoting a level playing field
4. Efficient investment and allocation of risk
5. Harnessing market based mechanisms where it is in consumers' interests to do so

Areas for current focus include:

1. Whole system – incl. relationships between the SO, DNOs/DSOs and TSOs⁵
2. Cyber security
3. Investment risk – alternatives to traditional network reinforcement
4. Access to the system – capacity allocation and price signals

BEIS

The BEIS and Ofgem Smart Systems and Flexibility Plan focuses on:

- Removing barriers to smart technologies – incl. storage
- Enabling smart homes and businesses
- Making markets work for flexibility – incl. value stacking

¹ Ofgem (Aug 2017) [Strategy for Regulating the Future Energy System](#).

² Ofgem (Jan 2017) [Greater separation for National Grid's system operator role](#).

³ BEIS & Ofgem (Jul 2017) [Upgrading Our Energy System: Smart Systems and Flexibility Plan](#).

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

⁵ System Operator (SO), Distribution Network Operators (DNOs), Distribution System Operators (DSOs), Transmission System Operators (TSOs).

It sets out 29 specific actions, some of which have already been delivered, such as developing electricity storage licence, establishing the Smart Systems Forum and launching innovation competitions. There was discussion on whether household customers could participate in DSF. This is not really feasible today, but enablers are being put in place that will make it possible in future (incl. smart meters, half hourly settlement, smart appliances and automation).

David Capper noted that BEIS has recently consulted on the de-rating of battery storage in the Capacity Market. Some concern was expressed about the signal this sends to investors. It was noted that the Capacity Market was designed to ensure security of supply, not to offer a revenue or support a wider business case. The Government's Clean Growth Strategy is out on 12 October. The Industrial Strategy is being developed. Dieter Helm is undertaking an independent review on the costs of energy for the government.

Energy Networks Association (ENA) – Open Networks

Jim Cardwell gave an overview of the ENA's Open Networks project⁶ – which brings together the SO, DNOs and TOs to consider the future direction of the energy market and what steps are needed. An end of year report will be launched at the Low Carbon Networks and Innovation (LCNI) conference on 6-7 Dec. The focus of the project has been on: the Commercial Principles paper⁷; whole system investment planning & optimisation; the transmission and distribution (T&D) interface; connections / queue management and the customer experience. Themes for the year ahead include: continued work on the T&D interface and customer view; charging, and smart grid market model. It was noted that it would be helpful to have some customer representatives on the 'customer experience' group.

The Association for Decentralised Energy (ADE) – Code of Conduct

Chris Higby updated on the ADE's voluntary industry-led Code of Conduct for demand side aggregators. The code addresses five areas: sales and marketing; proposals and pre-contractual information; contract; technical due diligence and site visit; and complaints. It will be enforced by naming those in breach, and if necessary, removing them from the code. Consultation respondents had also asked for the code to consider cyber security. Findings will be presented on 7 November. The Crown Commercial Service will require aggregators in its demand side response framework to adhere to the code.

National Grid

Claire Spedding updated on National Grid's recent balancing procurement:

- **Firm Frequency Response** – there has been a considerable increase in the number of tenders (August=206, September=152) from earlier this year (~20). It was noted that this might be due to some participants tendering multiple times as a means of price discovery (recent tenders were received from approximately 25 units). National Grid does not plan to publish its assessment model, but will offer more guidance.
- **Short Term Operating Reserve (STOR)** – post-tender report for Tender Round 33 will come out soon, work is also underway to ensure continued compliance with EU developments.
- **Demand Turn-Up** – finishes 28 October. National Grid is finding out about people's experience of the service to inform plans for next year. It was suggested that the service was used less this year than last, as it is weather dependent and WPD did not use it this year.
- **Enhanced Frequency Reserve (EFR)** – the first battery tendered through EFR just came online.

Interaction of forums

Following publication of the summer documents, there was a discussion of the different working groups, incl. linkages and potential overlaps, and whether Power Responsive remains a distinctive and valuable forum. BEIS and Ofgem co-chair the new Smart Systems Forum – which will meet 3-4 times per year as a discussion forum, helping to ensure the 29 actions are delivered. It essentially

⁶ Visit the [Open Networks Project](#) website for more information.

⁷ ENA (Aug 2017) [Open Networks Project Commercial Principles for Contracted Flexibility: Promoting Access to Markets for Distributed Energy Resources](#).

amalgamates two pre-existing groups⁸. Separate groups are being established to coordinate stakeholder input to the Targeted Charging Review⁹.

BEIS and Ofgem are both supportive of Power Responsive. Steering group members suggested that it remains a key forum for the DSF conversation, with momentum growing for DSF it is “more important than ever”, in particular as one of the few forums bringing I&C customers and market actors together. Senior people continue to attend, and the group has evolved over time. It should remain open to new members – as new types of business enter the sector.

Cathy has begun a review of outcomes for Power Responsive, including what an appropriate ‘end-point’ might look like. Colleagues will be in touch with steering group members to discuss this.

3. Whole system benefit – work development

Asheya Patten (National Grid) opened the discussion, explaining that by ‘whole-system’ we mean optimising the use of resources across the energy network. She gave an overview of two major areas of work: National Grid’s Product Roadmap and the ENA’s Commercial Principles paper.

National Grid Product Roadmap

The System Needs and Product Strategy (SNAPS) gave a view on the future needs of the system and evolution of Balancing Services products. It had consulted on potential design decisions for future products. There were 128 responses. Key themes included: greater transparency of SO day-to-day activities, reduced barriers to entry and SO providing more details on its simplification of products. There was a broad view that standardised products, rather than single markets, would better enable stacking of services. On the duration of contracts, there was a split of views between long- and short-term contracts, with the majority opting for a mix. It was noted that for long-term contracts consumers take greater risk. The majority favour ‘pay as clear’ markets over ‘pay as bid’. The Product Roadmap will be published in December.

ENA Commercial Principles paper

Developed through the ENA’s Open Networks Project, the Commercial Principles paper considers how to enable Distributed Energy Resources (DER) to deliver flexibility services to multiple entities, and the relationships between entities procuring such services. The paper built on existing trials and procurement models, considering how to create an environment that reduces complexity for participants and allows them to stack value. It consulted on five areas: market models, visibility & controllability, routes to market, pricing curtailment and distribution constraint management.

Roundtable discussion on the ‘whole system’

It was noted that few industrial and commercial (I&C) customers appear to have responded to the SNAPS consultation (potentially a resourcing issue). And very few industry groups involve customers. I&C customers had the opportunity to feed in views on both documents via the recent Flexibility Forum. The feedback from this session was very positive. But a greater focus is needed on end-customers, not just in terms of product simplicity but also administrative simplicity.

National services are already complex, but routes to market will become ever more challenging with the development of new locational services (e.g. constraint management, reactive power). DNOs are steadily rolling out projects in locations – approx. 50 demand side response zones over the past year, with potentially 500-1000 by this time next year. DNOs currently have different criteria and rules – so standardisation and transparency will be important – to clarify DNO schemes requirements.

I&C customers ideally want a simple call from the energy sector to flex their usage, and they can respond. This would require significant coordination. It was argued that it is the role of aggregators

⁸ The Smart Grid Forum & Electricity Networks Strategy Group (ENSG).

⁹ The Charging Futures Forum (CFF) and Charging Delivery Body (CDB).

and suppliers to provide that layer – making it simpler for I&C customers to contract in multiple markets. Aggregators can deal with the complexity but this adds cost. Some larger I&C customers still want to contract directly.

There was discussion on the role of price signals, instead of contracted markets. It was noted that these are only effective if end-customers understand and respond to them. I&C customers highlighted that in this sense Triads have offered a very effective signal. Triads were not designed to promote DSF; they are for Transmission network investment. If Triads currently also deliver winter peak security, then it is likely that another product would emerge as a replacement.

Ofgem noted that it is also important to consider access rights as a way of sending price signals in the market. If there is a need for network reinforcement – this should be opened up to market competition – to see if there are other solutions (e.g. DSR, storage, heat networks), which are more effective and / or cheaper for consumers.

It was agreed that it would be helpful to consider further what consumers want from Open Networks – this could be done by involving customers in the ENA's workstreams and/or a Power Responsive customer event on what end users want.

4. Annual Report 2017 & demand side flexibility metrics

Clare Dudeney (Sustainability First) gave an overview of progress on the Power Responsive Annual Report 2017. There is a draft text, but the metrics are still being gathered. The plan is to share the near final DRAFT Annual Report with steering group members for feedback in November and publish it in December. The structure is similar to the previous report (see Annex A), but we are hoping to produce a more comprehensive picture, gathering more detailed metric data. Including via a self-reporting survey, which the ADE is leading on. It was noted that it might be helpful to share this survey with members of the storage community.

Clare gave an overview of headlines for the annual report. Steering group members offered feedback – reflecting on progress made over the past year and opportunities / challenges for the year ahead. Some points raised include: ensuring the five categories of DSF account for various forms of flexibility (e.g. wind generation, electric vehicles and network services). Whether there is a challenge of competition between different flexible technologies (e.g. demand side response vs. storage). How National Grid might assess progress against its initial aspiration for 30–50% of balancing capability from demand side sources by 2020. The report could touch on future risks, such as cyber security.

5. Power Responsive work update

a. Flexibility Forum on 27 September

The Flexibility Forum has amalgamated the former DSR providers and storage forums. There were 161 participants. BEIS, Ofgem and National Grid gave updates, with breakout sessions on: product simplification, the ENA Commercial Principles paper and wider access to the Balancing Mechanism. Polling of attendees showed increased understanding and knowledge as a result of the day.

b. Strategic look at Power Responsive outcomes

A strategy paper for Power Responsive will be brought to the January 2018 steering group meeting This will: articulate clearer 'end-points' in terms of outcomes; consider the metrics of 'success' for Power Responsive; and re-focus the role and priorities of the Power Responsive Steering Group in 2018 (esp. with respect to other recent smart initiatives).

c. Steering group meeting agenda – Jan 2018

The main discussion for the next steering group meeting will be on different sources of DSF – plural assets (e.g. load response, storage, generation and electric vehicles) and providers (e.g. the role for commercial buildings and smaller customers). It will also consider the Power Responsive Strategy Paper, National Grid planned paper on future wider market design, and the work of the Charging Futures Forum. Steering group members also requested a summary of the Power Responsive Annual Report.

6. AOB

No matters arising.

7. Next steps

- Jim Cardwell – suggest customer reps. join the Open Networks customer experience group.
- National Grid – undertake bilateral discussions with steering group members on the Power Responsive Strategy.
- National Grid – possible event on what end-users want from ENA's Open Networks project.
- Sustainability First and National Grid – develop the Power Responsive Annual Report 2017.
- National Grid & ADE – liaise with the Electricity Storage community on sharing the self-reporting survey with storage providers who contract directly.

Future meeting dates:

- 24 January 2018
- 11 April 2018
- 3 July 2018

Attendees

Name	Company	Sector representation
Cathy McClay	National Grid	Chair
David Capper	BEIS	Policy & Regulation
Andy Burgess	Ofgem	Policy & Regulation
Louise Van Rensburg	Ofgem	Policy & Regulation
Claire Spedding	National Grid	System Operator
Asheya Patten	National Grid	System Operator
Jim Cardwell	Northern Powergrid	Distribution Network Operator
Roger Hey	Western Power Distribution	Distribution Network Operator
Matthew Copeland	E.ON	Large Supplier
Mark Futyan	Centrica	Large Supplier
William Chilvers	Dong Energy	Renewable generator & supplier
Robert Buckley	Cornwall Energy	Small suppliers
Peter Frampton	Elexon	Electricity Market
Jon Ferris	UtilityWise	Third Party Intermediary
Neil Gillespie	United Utilities	I&C (water/utilities)
David Penfold	Sainsbury's	I&C (retail)
Eddie Proffitt	MEUC	I&C (industry)
Joe Ernst-Herman	Crown Commercial Service	I&C (public sector)
Chris Highby	ADE	Decentralised Energy
Alastair Martin	Flexitricity	Aggregator
Yoav Zinger	KiWi Power	Aggregator

Matthew Rowe	DNV GL	Electricity Storage
Dale Geach	BEAMA	Technology
Judith Ward	Sustainability First	Secretariat
Clare Dudeney	Sustainability First	Secretariat
Rhiannon Marsh	National Grid	Secretariat
Adrian Sellar	National Grid	Secretariat

Apologies

Sara Vaughan (E.ON UK)

Jo Butlin (EnergyBridge)

Imran Abbasi (AES)

Matthew Webb (TFL)

Annex A – Power Responsive Annual Report structure

Chapter Title		Summary
	Introduction	
	Report outline	
1	Power Responsive programme	Summary of activities and deliverables in Year 2 (2016-17). Plans for year 3 (2017-18) Case studies and/or quotes from stakeholders.
2	Demand side flexibility in GB electricity	<p>7.1 Current markets for demand side flexibility – incl. discussion of value stacking.</p> <p>7.2 Policy and regulatory context – how this is evolving. Smart Energy Systems Plan, and review of charging arrangements.</p> <p>7.3 System Operator steps to enable demand side participation – System Needs & Product Strategy, simplification of balancing services.</p> <p>7.4 Electricity market actor views</p>
3	Business customer & demand side flexibility provider insights	<p>3.1 Business customer & provider views – case studies and results of Energyst Survey.</p> <p>3.2 Assets for DSF – how opportunities and challenges vary by technology (load response, embedded generation, storage and EV)</p>
4	Metrics for demand side flexibility	<p>4.1 Context</p> <p>4.2 Total demand side flexibility today</p> <p>4.3 Balancing Services – Short Term Operating Reserve (STOR) & STOR runway, Fast Reserve, Demand Turn Up (DTU), Firm Frequency Response (FFR) & Enhanced Frequency Response (EFR)</p> <p>4.4 Capacity market</p> <p>4.5 Active demand side providers</p> <p>4.6 Self dispatch activity – Triad management, Red zone management, Wholesale market & Balancing Mechanism</p> <p>4.7 Overall benefit to the system and consumers</p> <p>4.8 Further work – future reporting requirements to improve metrics</p>
5	Future development of demand side markets	Forward outlook, successful outcomes, steps required and gaps. Statement from Cathy McClay.