

Power Responsive Steering Group

Note of Sixth Meeting

25 January 2017, 13:00-17:00 hrs, held at the Elexon Offices, 4th Floor, 350 Euston Road, London, NW1 3AW.

This Note of Meeting is prepared by Sustainability First on behalf of the Steering Group.

1. Welcome & Introduction

Cathy McClay (chair) welcomed new representatives from the storage industry to the Power Responsive steering group meeting.

The last meeting on 1 November 2016 focused on *'what does success look like for demand side flexibility in GB electricity markets and how do we judge success?'*. A market snapshot on the topic was published on the Power Responsive website. There was also discussion on the Power Responsive Annual Report and possible metrics; a voluntary industry-led code of conduct for demand side aggregators led by the ADE; and Power Responsive work in Year 2.

A main discussion topic for this meeting was: *'What are the potential impacts of changes to Transmission & Distribution network charges on the investment case for demand side flexibility?'* Since the last meeting, BEIS and Ofgem published their call for evidence on a *'Smart, Flexible Energy System'*. Therefore, in addition to the Demand Side Flexibility (DSF) horizon scan, steering group members shared their headline feedback to the call for evidence. There was also an initial discussion about the recent consultation on: *'Future arrangements for the electricity system operator: its role and structure'*. The meeting finished with an update on Power Responsive work and its working groups.

2. Demand side flexibility horizon scan

BEIS

David Capper noted that there were over 200 responses to the Call for Evidence. Considerable work is now underway to consider this feedback to prepare for the BEIS / Ofgem Smart Systems Plan in the spring.

The Capacity Market T-4 Auction (for 2020/21 delivery) took place in December 2016 – with 1.4GW DSR, 500MW battery successful, at a clearing at a price of £22.50/kw (per year). Early auction for T-1 (2017-18) with 1 GW DSR pre-qualified. Further Transitional Arrangement auction due in March 2017 with 650 MW DSR pre-qualified.

The BEIS *'Industrial Strategy'* was published as a green paper on 23 January 2017. It was launched by the Rt Hon Greg Clark MP, and reflects the new departments' joint remit. There is a strong 'smart' theme in the energy chapter, which will also feed into the Smart Systems Plan. Respondents do not need to repeat responses to the call for evidence, but can instead cross-refer.

Ofgem

Ofgem published their draft Forward Work Programme for 2017-18, which is open for consultation until 15 February 2017. Ofgem is undertaking strategic thinking on the future of the energy system including the role of networks. This is linked to longer-term elements of the Call for Evidence, such as markets versus monopolies, and the role of trading platforms. Ofgem published its consultation on *'Future arrangements for the electricity system operator: its role and structure'* on 12 January 2017 (closes 10 March 2017).

Ofgem launched their new innovation hub: *'Innovation Link'* to enable businesses with new ideas and approaches to talk with Ofgem, including about how existing regulatory

arrangements help or hinder them. Next week Ofgem is also publishing one of their think piece series on local energy. The EU Commission published its 'Clean Energy Package' in November 2016. Given that the UK will still seek access to neighboring energy markets, the UK will continue to seek to influence this. There are also still outstanding questions on detailed implementation of the EU Energy Codes – including for the demand side.

National Grid

Balancing - reserve:

Short Term Operating Reserve (STOR):

- Tender Round 30 (Winter 2016/17 and full year 2017/18) results were published in November 2016. Accepted prices for: availability – marginal price of £10.95/MW/h; utilisation – range between £67.50 – £220/MWh.
- Tender Round 31 – opportunity to tender for up to 2 years; full years 2017/18 and 2018/19. Currently under assessment, results to be published 24 February 2017.

Demand Turn Up (DTU):

- Summary of last year's usage of the service was published in December 2016.
- The DTU service will run again this year, from March to October 2017.
- Opportunities to participate initially with a fixed tender, in addition there will then be twice weekly tenders throughout the period.

Balancing – frequency response:

Firm Frequency Response (FFR)

- FFR tender round in December 2016, with 95 tenders received across 15 units.
- Providers can add volume to existing products from 1 Feb 2017.
- The threshold for entry has been reduced from 10MW to 1MW.
- The first auction may be popular, as providers have awaited this threshold change.

3. BEIS/Ofgem Call for Evidence: Headlines from Steering Group

Steering group members shared their headline responses to the Call for Evidence. Below is a summary of some of the themes:

- **General support for a smart systems plan.** Consistent messages to those coming through previous steering group discussions. Repeated stress on how deeply inter-linked many elements are – and the problems of addressing specifics / and or establishing priorities – unless market changes are addressed *in the round* and choreographed. Management of the transition, with clear sign-posts and mile-stones will be key. A major challenge is to manage the tension between a wish for clarity and a degree of certainty - while also enabling change.
- **Electricity Storage.** Need to agree a definition of electricity storage. Document takes stock of issues storage operators currently face. DNOs would like the option to install electricity storage, but some other parties disagree. Different views expressed about 'ideal' contract lengths to incentivise new storage investment.
- **Access to market.** Ensure access to market for new market participants and evolving business models. Steps can be taken now to reduce barriers to entry. The SO is already making changes to Balancing Services to simplify the product suite.
- **Whole system.** Take a holistic and whole-system approach – including consideration of charging arrangements – cost reflectivity and recovery, alignment of incentives across Transmission and Distribution and development of local markets (e.g. constraining off wind may undermine a signal for storage investment). Need for an enhanced regulatory framework that can acknowledge an 'options' value. Need to understand the distortions which arise from charges – and when these would be addressed – with a clear wish to move towards charges that are coherent and relatively 'future-proof'. Whole system innovation – invest in more intelligent network, not always deferring investment. Learning

- by trialing.
- **Wider changes.** Currently a period of very considerable change. Some regulatory changes pulling in different directions. May need to consider fundamental changes – including some aspects of the wholesale market, capacity market and regional models. Aggregator direct access to BM and to wholesale markets: need to understand how far the benefits are justified, given that underlying incentives and market design is to promote self-balancing among BSC actors. Otherwise, there is risk potential costs to consumers.
- **Roles & responsibilities.** Greater clarity needed on roles and responsibility for parties (incl. BEIS and Ofgem). Relationships between SO, DNO/DSO and customers. Enhanced SO role facilitating transition.
- **Customers:**
 - **I&C.** Major concerns are commerciality, complexity and uncertainty. Difficult to make investment decisions. Hard to keep on top of rule changes. The market place should be simple and transparent, where supply and demand side can compete equally.
 - **Households.** High-level group needed to consider issues *in the round*, coordinate and drive demand side progress on behalf of households and small customers, and develop a clearer grasp of both customer benefits and risks, much in the way Power Responsive does for I&C.
 - **Engagement.** Smart tariffs will happen. Help customers participate who want to, but recognise some may want to stay unengaged.
 - **Standards.** Development of standards important for all end customers.
- **Certainty.** Tension of seeking certainty in a changing world. Apparent divide between those seeking longer contracts to achieve certainty, and shorter, more frequent tendering.
- **BEIS / Ofgem Smart Systems Plan.** Step change is happening. Start with principles, then clear timetable, milestones, priorities. Identify some low regrets steps that can be taken straight away. Ensure efficiencies and value delivered at the consumer end.

4. Future Role of the System Operator Programme

Charlotte Ramsay gave an overview of National Grid's programme of work on the Future Role of the System Operator (FRSO) – covering what the SO is seeing, hearing and doing.

- **Seeing.** From a control room perspective, everything is getting smaller. There is a step-change in the uptake of solar and storage. The old ways of operating the system no longer apply and there is a historic focus on winter peaks. Now summer troughs are also a challenge. With low marginal cost generation, shift in prices from wholesale market to system services, location and the physics of the system are really starting to matter.
- **Hearing.** Feedback acknowledged on: poor transparency; complex processes; undue transmission bias; contract lengths; cost reflective network charges; and possible conflicts of interest. The SO is needing to demonstrate taking a whole system view and collaborative approach. They need to seek greater independence and separation within the group, with a separate board. To be trusted to do things differently, the SO need to be organised differently.
- **Doing: Work programme.**
 1. **Flexibility** – market for flexibility and access to new services.
 2. **Network competition** – Network Options Assessment (NOA). Initially considers needs of the transmission network, but in due course will look at holistic needs of wider system and whether and where network – or non-network – investment would have value.
 3. **Whole system** – Collaborating with DNOs – e.g. regional development programmes with WPD and UKPN – and working with ENA on wider lessons. SO has better visibility of what is happening in local networks to unlock resources and develop common tools.
 4. **Level playing field** – charging and access arrangements. Regulatory incentives and commercial frameworks – fit for future.

Charlotte encouraged steering group members to engage with the SO consultations. In response to questions, it was noted that the SO wants to resolve barriers – so the market is accessible and ‘future proofed’ for all different parties – rather than seek to anticipate the types of players to evolve.

NG has developed the System Operability Framework (SOF) – which identified engineering challenges across the network, but did not address what that could mean for the SO in accessing new and emerging demand side markets. Now developing Future Operability Strategy – starting to discuss what system services may be needed in future. This is likely to come out in March 2017 and will be discussed at the DSR Providers and Storage Working Groups. There will also be ToR for a future Regional Development Programme.

Overall, the FRSO work programme aims to be characterised by ‘designing by doing’; a conveyor belt of deliverables; quick wins; with uncertainty mitigated.

5. What are the potential impacts of changes to T&D network charges on the investment case for demand side flexibility?

This wide-ranging discussion focused on two questions:

- *What are the potential impacts to those investing in demand side flexibility of short/longer term changes to network charging arrangements?*
- *What can we do as an electricity industry in practical terms to help alleviate these potential impacts on the case for investment?*

Cornwall Energy and Kiwi Power kindly gave opening remarks.

The main messages were:

- Demand Side Flexibility (DSF) is driven by technology innovation. There are a plethora of business models – and rapidly growing.
- TRIADs have provided a strong signal for DSF, which is straight forward for customers to understand and engage with. However, TRIAD management has become more challenging, as more companies participate, reducing load at peak, the three TRIAD periods have become harder to predict.
- For Distribution Use of System (DUOS) Red Zone management, it is not clear whether this signal reaches customers (i.e. reflected in individual tariffs by suppliers or socialised across all customers) or produces a response.
- There will be winners and losers as a result of changes in the network charging methodology. Many demand side providers are agile enough to follow the money. But, the changes will impact the investment cases for new assets already in situ – such as diesel and battery storage. For Industrial and Commercial (I&C) customers, management of network charges was a simple route into DSF, so now they would need to engage with the more complex suite of products and contracts, or work via aggregators.
- Ultimately, there was a sense that it may be too late, once the embedded benefits review was announced, it began to impact investor confidence. It is important for network charges to be more cost reflective and also coherent across transmission and distribution. There will be short-term pain, but changes to charging methodologies are needed for the long-term.
- There is confidence that value will be there, but a current revenue stream is disappearing without clarity on what will replace it.
- So the most important thing now is to reduce the period of uncertainty – and setting out steps to make changes.
- Clarity on roles will be important. There is a high degree of commonality in the views of BEIS, Ofgem and the System Operator – which is helpful.
- It was agreed that significant uncertainty arose from industry change processes, which permit part or piece-meal change without taking a ‘whole-system’ view. There was a strong case for a holistic review of network charges (SCR or similar) so that priorities and choreography can be clear. Any review should therefore be holistic, start with principles, identify all the changes required, prioritise these, and set out a timetable for when each issue - or batch of issues - would be addressed.

There was a general view that it's not necessarily change itself, but *the way we make change* that has the biggest impact on market and customer confidence.

6. Power Responsive work update

Annual Report

The full annual report and a short headline version are now available at www.powerresponsive.com. Hard copies are also available. Paul Lowbridge thanked everyone for their input and Sustainability First for drafting the report. Next steps are to move forward on further development of metrics – including systematic data gathering and analysis, and identifying how this will be led and co-ordinated. It was noted that a Power Responsive sub-group on metrics might reconvene.

Working group meeting updates

DSR Provider Group and Storage Working Group both now sit as ongoing open forums subsidiary to the Steering Group. Meetings of both groups took place in December 2016. The first storage group meeting attracted 120 attendees and included breakout sessions. Main topic for both was headlines from National Grid's flexibility questionnaire and receiving feedback on simplification of products. Slides and meeting notes can be found on the Power Responsive website – www.powerresponsive.com. Next working groups: **Storage** on 13 March 2017; **DSR providers** on 21 March 2017.

Meeting dates - 2017

- Wednesday 26 April
- Wednesday 4 July

Attendees

Name	Company	Role or Sector Represented
Cathy McClay	National Grid	Chair
David Capper	DBIES	Policy & Regulation
Andy Burgess	Ofgem	Policy & Regulation
Lee Priestley	National Grid	System Operator
Jim Cardwell	Northern Powergrid	Distribution Network Operator
Matt Watson	Western Power Distribution	Distribution Network Operator
Barry Hatton	UK Power Networks	Distribution Network Operator
Chris Morrison	Centrica	Large Supplier
Brian Tilley	E.ON	Large Supplier
Jeff Whittingham	Dong	Renewable Generator/Supplier
Jo Butlin	Cornwall Energy	Small Supplier
Justin Andrews	Elexon	Electricity Market
Jon Ferris	UtilityWise	Third Party Intermediary
David Penfold	Sainsbury's	I&C (Retail)
Neil Gillespie	United Utilities	I&C (Water & Utilities)
Joe Ernst-Herman	Crown Commercial Service	I&C (Public Sector)
Simon Drury	Aggregate Industries	I&C (Industry)
Ron Ramage	Flexitricity	Aggregator
Yoav Zinger	KiWi Power	Aggregator
Matthew Rowe	DNV GL	Storage Community
Imran Abbasi	AES	Storage Community
Charlotte Ramsay	National Grid	Guest
Asheya Patten	National Grid	Guest
Paul Lowbridge	National Grid	Secretariat
Adrian Sellar	National Grid	Secretariat
Judith Ward	Sustainability First	Secretariat
Clare Dudeney	Sustainability First	Secretariat

Apologies:

Roger Hey (Western Power Distribution)

Sara Vaughan (E.ON UK)

Eddie Proffitt (MEUC)

Alistair Martin (Flexitricity)

Claire Addison (AES)