

Creating the right environment for demand side response.

June 2013

SmartGrid GB Response

SmartGrid GB (SGGB) is a not-for-profit membership organisation for stakeholders involved in any aspect of the development or delivery of smart grid in Britain. Launched by former Minister of State for Energy, Charles Hendry MP in June 2011, SGGB provides an open and independent forum in which a wide range of concerned organisations can come together and share ideas and information in order to help inform policy and make a British smart grid a reality.

SGGB's members come from a variety of different backgrounds including the utilities, IT, communications and professional services sectors. SGGB's growing membership includes the following companies: Accenture; Airwave; Arqiva; British Gas; BT; Cable & Wireless; DNV Kema; EDF Energy; Elexon; Engage Consulting; GE Energy; HP; IBM; Intellect; Oracle; Power Plus Communications; Scottish Power; Sensus; Siemens; Toshiba; UK Power Networks; Vodafone; and Wipro. The Department of Energy and Climate Change (DECC), Ofgem and Consumer Focus are observer members of SGGB.

Introduction

SmartGrid GB (SGGB) welcomes the focus that Ofgem is rightly placing on the importance of DSR and the need to address the challenges that face its deployment. In answering this consultation, SGGB first offers some general remarks, and then goes on to address the specific questions raised.

General remarks

SGGB believes that Ofgem has correctly highlighted most of the key issues that need to be overcome in order for DSR to be achieved in the UK. In addition to those areas highlighted in the consultation, SGGB would further emphasise the following points:

- In developing the right environment for DSR, Ofgem and its partners in Government and industry should strive to create a framework that is simple and clearly understood and which enables participants to operate in an open playing field. By putting such an ethos at the heart of their work in this area, Ofgem will help create a competitive and resilient DSR market.
- A clearer vision for DSR is needed, particularly how it co-exists with existing and new market mechanisms, given that the energy industry is facing an unprecedented era of change. The integration of DSR/smart grids with cross-industry initiatives such as smart metering, the 'connected home', building controls and communications should be considered in order to deliver an efficient and future proofed approach. This would facilitate greater investor certainty, streamline governance and allow Britain to speak with a clearer and more effective voice at the international level.
- With the energy market in a state of constant change, the need to future proof arrangements for DSR was repeatedly raised as a priority by SGGB members. For example, the DSR environment that we are seeking to establish today should not be simply underpinned by traditional assumptions based on the energy system we have now and therefore skewed towards the current model: rather, it should take into account likely scheduled change regarding issues such as - but not limited to - a change in the generation mix and the entrance of new market participants in the future.
- The need for effective consumer engagement has been strongly communicated by all SGGB members as a vital condition to achieving Ofgem's longer term goal for DSR. SGGB looks forward to sharing its own research in this area with Ofgem and the Smart Grid Forum once it is published later this year..
- The need for effective knowledge dissemination, particularly the learning which is emanating from current LCNF (Low Carbon Network Fund) trials, and from international markets has also been expressed by all parts of SGGB's membership as an important step toward developing best practice for DSR.

Answers to questions

Question 1

Are there any additional key challenges associated with revealing the value of demand-side response across the system? If so, please identify and explain these challenges.

A general point made by SGGB members was that they believed open standards should be pursued by Ofgem as an important part of helping reveal the value of DSR across the system, most specifically in relation to consumers.

Revealing the value of DSR in relation to settlement reform, consumer engagement / benefits, and better understanding of the drivers of DSR are now addressed in turn.

Settlement reform

- SGGB supports Ofgem's assertion that settlement reform will be needed to deal with the complications that stand in the way of the DSR market, with many SGGB members believing that comprehensive half-hourly metering needs to play a key part in such reform.

The need for consumer engagement and understanding and for consumer benefits to be delivered

- The ability to deliver DSR is largely dependent on having consumers (both business and domestic) who are willing to engage with it and who can derive tangible benefits from it.

If it becomes evident to industry parties that consumers are not sufficiently aware of the benefits that DSR can bring and therefore are reluctant to sign up to it, industry parties will not invest due to the lack of demand in the market. This will not only impede DSR market development but could also hold back other future smart grid innovations that an energy aware consumer base could help enable.

By implication, in order for consumers to understand and get the most out of DSR, DSR products and services will need to be easy to understand, delivering tangible benefits to consumers.

SGGB recognises the role that all parts of the industry have to play to help increase consumer understanding of DSR. We will be releasing a paper later this year on the subject of consumer benefits of smart grid which will include recommendations for industry and policy makers to help consumers get the most out of emerging smart grid technologies such as DSR, we look forward to receiving Ofgem's feedback on this report.

The need for better understanding on the benefits and drivers for DSR

- To ensure the full value of DSR is understood, SGGB members recommend further investigation to map out the current and prospective future benefits of DSR for all parties involved.

In relation to this, there is a feeling amongst our members that whilst the network benefits to DSR have been paid due attention, its 'off network' benefits could do with further research. For example; the ability of DSR to help avoid things such as road works due to network reinforcement, or the potential contribution of DSR to our sustainable future.

- Whilst the consultation does a good job of outlining the current drivers for DSR, we still think even further work could be done. For example, an additional current driver for DSR which may have been underestimated is that of the incentive to reduce carbon usage through discouraging energy consumption at times when CO₂/kWh is high. This could serve as an additional driver for DSR from industry parties who are attempting to meet carbon reduction obligations.

Question 2

Can current regulatory and commercial arrangements provide the means to secure demand-side response being delivered? If not, what will regulatory and commercial arrangements need to deliver in future?

SGGB believes in a simple framework for DSR which enables innovation and competition but maintains clear parameters of what is and is not allowed within the marketplace. These principles of simplicity and clarity should be integral to the design of any future arrangements that affect DSR delivery.

SGGB commends the efforts that Ofgem is making to improve the environment for DSR, and would encourage Ofgem to address a further two areas that SGGB members have highlighted needing alteration in order to ensure the successful delivery of DSR. They concern, firstly, the design of the Capacity Market and, secondly, the need for more knowledge dissemination.

Capacity Market

Part of the Government's plans, as outlined in EMR, is to establish a Capacity Market in the UK that will enable future capacity needs to be bought four years in advance via an auction. The development of the Capacity Market will be underpinned by DSR, therefore, it is important to understand how current plans on its development will effect DSR.

In acknowledgement of this issue, SGGB has worked with the law firm Bird & Bird to assess the implications of the Energy Bill (particularly those parts pertaining to the Capacity Market) on smart grid development and found that the need for the Capacity Market to be supported by DSR is critical. Some of the work's early findings are listed below:

- Design of the Capacity Market is currently progressing to an aggressive schedule set by Government. Whilst we applaud the commitment to pushing forward the Capacity Market, there is a concern amongst SGGB members that the right kind of DSR market will not evolve at the same pace. Unintended consequences of this situation could be that, a) the Capacity Market will not have right type of DSR market to function

effectively and b) that the wrong type of DSR market will evolve. In order to avoid this situation arising, we suggest that the current Capacity Market timeframes for DSR in particular, could be extended in order to allow further industry consultation and research. Please note that SGGB does not recommend delaying the Capacity Market generation timeframes for the purposes of this consultation response.

- The Capacity Market needs to be future-proofed by being designed with the 2023 energy landscape in mind, and not the current energy landscape. In turn, its design needs to take into account the kind of DSR market we might have by that point and the possibility of a different generation mix.

Knowledge Dissemination

Effective knowledge dissemination is highly valued by SGGB as an important part of understanding new smart grid developments including innovations in DSR. Shared understanding of DSR projects and their outcomes facilitates best practice and as such can lead to higher delivery rates of DSR.

Question 3

Is current work on improving clarity around interactions between industry parties sufficient? If not, what further work is needed to provide this clarity?

Knowledge dissemination

- Again, SGGB members feel that effective dissemination of DSR project outcomes is of paramount importance. It can help uncover previously overlooked or underestimated cross-party impacts of DSR. This is particularly true in the case of the NIC (Network Innovation Competition) which will be eligible for projects focusing on the distribution network and transmission network.

Future participants

- A look into what the DSR market might look like in the future, and preparation for such eventualities can help flag up and prepare for future cross party impacts. For example, there may be future participants in the DSR marketplace which change the nature of cross party impacts, like vertically integrated energy companies or technology companies entering the energy industry as a supplier or generator. Preparing arrangements around cross-party interactions based on prospective long term energy developments is a good means of overcoming additional future cross party impacts.

Question 4

Are there any additional key challenges associated with effectively signalling the value of demand-side response to consumers? If so, please identify and explain these challenges.

- SGGB members are keen to see that smart metering functionality enables DSR and are keen to see this taken into consideration in the current work taking place on smart meter design and specifications.

Question 5

Do you agree that signals to customers need to improve in order for customers to realise the full value of demand-side response? Does improving these signals require incremental adaptation of current arrangements, or a new set of arrangements?

- SmartGrid GB agrees that signals to customers need to improve if customers are to realise the full value of DSR. As part of the wider need to understand all the benefits of DSR, pricing externalities may need to be looked at more carefully to ensure that the full value of DSR is signalled to consumers. Benefits such as carbon reduction, reduction of road work costs and community disruption could be incorporated into the pricing used for DSR.
- SmartGrid GB is of the view that these more qualitative benefits of DSR should be understood and recognised at the very least if not incorporated into the price signalling of DSR.

Question 6

To what extent can current or new arrangements better accommodate cross-party impacts resulting from the use of demand-side response?

- At a high level SmartGrid GB members believe that any new or current arrangements being utilised to deal with cross party impacts need to be undistruptive for new market entry and must clearly communicate any potential negative consequences of taking part in DSR to all parties concerned.
- Some SmartGrid GB members have concerns about the ambiguity of who will have governance oversight of conflicts and cross party impacts arising due to DSR, in any new or existing arrangements being used to deal with cross party impacts.
- As DSR uptake increases and the DSR market evolves, the full implications of cross party impacts will become more evident. Consequently developing arrangements to deal with cross party impacts based on how the energy system will change in the future, rather than looking at what the energy system looks like now, is a good means of effectively accommodating cross party impacts.

Question 7

Are there any additional key challenges associated with customer awareness and access to opportunities around demand-side response? If so please identify and explain these challenges.

- SGGB agrees with the challenges associated with customer awareness and access to opportunities around demand-side response as highlighted in this consultation.
- A proportion of SGGB members were at pains to emphasise that one of the most straightforward ways of engaging consumers with the opportunities around demand side response in the future will come through providing common interfaces that integrate all the different parts of a consumer's energy usage that consumers can control. It is widely envisaged that such interfaces would likely come with an in home and mobile dimension and that realising this in the future would require effective cross industry working and flexible, open standards.
- As previously mentioned, SGGB is currently undertaking work that is looking into the consumer benefits of smart grid and a key part of this work naturally focuses on the need to educate consumers on the benefits of smart grid development such as DSR.

One of the key recommendations in this work is that the consumer engagement programme that supports the smart metering rollout should be maximised at the earliest opportunity to engage consumers in a wider debate around potential smart energy / building developments of the future and the benefits they could potentially deliver to consumers.

Whilst it is not suggested that the commencement of such a discussion would be conducted in any major detail, it is felt that GB could miss out on an opportunity to engage customers in this area if it fails to start the discussion at the beginning of the smart meter rollout.

In addition to this, it is also felt that the smart metering rollout itself will be optimised for consumers if they understand the enabling capabilities that smart meters are supposed to have, and the full benefits that they could deliver. This again adds credence to the feeling that the smart metering consumer engagement programme would do well to start touching on future smart energy developments.

Question 8

Is any additional work needed to explore the role of third parties in helping customers to access and assess demand-side response offerings?

- SGGB is of the view that as DSR market grows the issue of regulation of DSR aggregators may become an increasingly important one and is an area that could benefit from further research. In addition to this, and as mentioned earlier in the consultation, further work that explores the 'off network' benefits of DSR could also be beneficial.

Question 9

Are there additional preconditions for delivering the right environment for demand-side response? If so, please explain what these are and why they are important, as well as attaching a priority relative to those challenges we have already identified.

- SGGB agrees with the preconditions that have been set out in the consultation.

Question 10

Do you agree with the priority and timing we have attached to addressing each of the key challenges identified above?

- SGGB agrees with the prioritisation and timing of issues set out in the consultation.