The voice of the energy industry

Energy UK response to creating the right environment for demand-side response

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1 Introduction

1.1 Energy UK is the trade association for the energy industry. Energy UK has over 80 companies as members that together cover the broad range of energy providers and suppliers and include companies of all sizes working in all forms of gas and electricity supply and energy networks. Energy UK members generate more than 90% of UK electricity, provide light and heat to some 26 million homes and invested £10 billion in the British economy in 2011.

1.2 Energy UK strongly believes in promoting competitive energy markets that produce good outcomes for consumers. In this context, we are committed to working with Government, regulators, consumer groups and our members to develop reforms which enhance consumer protections, trust and effective engagement. At the same time, Energy UK believes in a stable and predictable regulatory regime that fosters innovation, market entry and growth, bringing benefits to consumers and helping provide the certainty that is needed to encourage investment and enhance the competitiveness of the UK economy.

1.3 These principles underpin Energy UK's response to Ofgem's consultation on 'Creating the right environment for demand-side response'. We look forward to working with Ofgem, suppliers and other industry stakeholders as demand side response develops, to deliver the many benefits that we hope that it will bring to consumers. This is a high-level and initial response which comments on each of the three preconditions that Ofgem has highlighted.

2 Executive Summary

2.1 Whilst demand side response (DSR) is not a new concept, Ofgem is right to focus its work in making sure that there is the market environment that supports its efficient use across the supply chain.

2.2 There is a significant amount of change being experienced within the energy industry (for example new market entrants offering more competition and choice, introduction of smart meters and Green Deal, Retail Market Review) for customers to understand. The way people lead their lives is evolving, with more and more people using the internet and associated services; therefore it is critical that Ofgem keep their longer term objectives, such as creating this DSR market environment, in mind whilst making shorter term policy decisions to ensure that they pave the way for more competition and innovation in the market, and customer choice, empowerment and engagement.

2.3 Energy UK's view is that DSR should develop within an open, competitive market which allows and enables DNOs, suppliers and other new entrant, third party organisations to bring forward innovative DSR propositions. It is important that there is a level playing field in which all participants are able to participate should they wish to offer DSR products, within an open, competitive market place to encourage customer choice and innovation.

2.4 In addition Ofgem should ensure that it liaises with a number of external stakeholders who are also looking into this area, and related policy areas, including DECC, BIS and the EU.

3 Consultation 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.

3.1 We think the consultation identifies the main challenges to DSR, but have some additional comments.

3.2 To decarbonise the UK's energy supply, it is projected that the majority of household and businesses' heat-load will move to the electricity network. An increase in electric vehicles will also add to electricity demand. Long term objectives to move to a smarter energy system, including the roll-out of smart meters, provides an opportunity, to identify where demand-side response services offer the most potential.

3.3 The current market for demand-side response is relatively immature with arrangements limited between the System Operator (SO), generators, larger non-domestic customers and suppliers. This type of demand response is mainly reactive to respond to pressures on the energy system. Going forward, as part of a smarter market vision, with the market providing price signals and technological advancements, a wider range of market participants could proactively offer DSR services. Ofgem may wish to consider how their roles will work within the future regulatory landscape and remove any perceived or actual barriers.

3.4 A key challenge for the industry in successfully delivering DSR will be securing consumer buy-in and effectively communicating the benefits of DSR, particularly to domestic and micro-business consumers where there is limited active engagement in responding to price signals.

3.5 As a first step it may therefore be helpful to map the opportunities for demand-side across the supply chain. For example, the opportunities that the roll-out of smart meters along with time of use tariff to help consumers manage their consumption and reduce overall demand; for DNOs there is value in DSR to help reduce network reinforcement costs; and for suppliers there is benefit in reducing exposure to TRIAD charges and network losses.

3.6 We believe it is important that DSR is not considered in isolation but alongside other measures that can be used to manage energy on the system, including storage and interconnection, as well as demand reduction and demand shifting. Indeed, research undertaken by Sustainability First[1] suggests there are opportunities to shift on-peak electric heating for both domestic and non-domestic customers.

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?

3.7 The consultation correctly sets out that most of the DSR that currently occurs in the market is through cash-out signals, settlement arrangements and network price controls which can help incentivise demand reduction. The SO contracts a range of balancing services: Frequency Response, Fast Reserve and Short Term Operating Reserve (STOR) which are open to DSR participation. According to Sustainability First, the total value of balancing services in which the demand-side can, in principle, participate totals ~£383 million (excluding Transmission Constraints). Suppliers can also use DSR to help balance their portfolios and reduce their exposure to TRIAD charges but this generally forms a small part of DSR in the market.

3.8 The lack of sharper price signals is one of the key barriers in bringing forward DSR measures, particularly in the domestic market where there is very little exposure to prices signals. However, it is difficult at this point to say what changes, if any, are needed to current commercial and

[1] GB Electricity Demand Reduction Project http://www.sustainabilityfirst.org.uk/gbelec.html

regulatory regimes until we know the outcome of a number of reforms currently underway or planned, including: the Electricity Balancing Significant Code Review, RIIO – ED1 for distribution charging and future trading arrangements. As our energy mix changes, with an increasing proportion of intermittent generation, it will be necessary to evaluate whether the regulatory regime, particularly trading arrangements and balancing processes are fit for purpose. We understand that this is likely to form part of the work Ofgem has initiated on future trading arrangements. Sharper price signals are likely to arise as these reforms are implemented,

3.9 The roll-out of smart meters combined with time of use of tariffs offer a significant opportunity to bring forward DSR products which respond to sharper price signals and will enable consumers to actively manage their consumption.

3.10 In addition, we need to consider how the market will respond to Electricity Market Reform, especially the Capacity Market, which allows DSR to participate. However, while there has been detailed policy development on how generation assets will participate in the Capacity Market, little attention has been given to the role of DSR. Urgent clarity is needed from DECC to understand how DSR would be measured and rewarded in the capacity mechanism alongside capacity from generation.

3.11 DECC has also proposed to include permanent electricity demand reduction in the capacity mechanism, starting with pilots. Widening the capacity auction to EDR could undermine the purpose of a capacity market that is intended to ensure security of supply. While we see difficulties, we welcome the decision to progress this work through a pilot and not automatic inclusion in the capacity market.

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?

3.12 The energy market is incredibly complex. There are a variety of industry players; for example there are over 60 suppliers (domestic and non-domestic) and over 80 different generators.

3.13 Current participants in the DSR market are limited to the SO, DNOs and suppliers. Moving forward, with the roll-out of smart meters and potentially introduction of Time-Of-Use (TOU) tariffs, the number of active participants could increase. To help those looking to offer demand-side services, a clearer and more accessible picture of how the market operates would be helpful.

3.14 Energy UK's view is that DSR should develop within an open, competitive market which allows and enables DNOs, suppliers and other new entrant, third party organisations to bring forward innovative DSR propositions. It is important that there is a level playing field in which all participants are able to participate should they wish to offer DSR products, within an open, competitive market place to encourage customer choice and innovation.

3.15 A governance structure will be essential to give clarity on who has responsibility and authority to make decisions on when energy demand can be reduced or shifted to avoid unintended consequences. For example, if DNOs are able to reduce energy demand on their distribution networks, this will directly impact on suppliers' ability to balance and may lead to cash-out penalties and increase prices for customers.

3.16 We are supportive of the use of pilots to encourage industry parties to collaborative on new initiatives and help identify where improvements can be made. Ofgem's Low Carbon Network Fund included projects that involved DNOs partnering with suppliers, generators, technology providers and other parties to explore how networks can facilitate the take up of low carbon and energy saving initiatives such as electric vehicles, heat pumps, micro and local generation and demand side management. Following amendments to the Fund's governance, DNOs are also trialing measures that shift or reduce electricity demand through LCN Fund projects. We look forward to learning about the outputs of these trials and the timeline Ofgem envisage to 'normalise' these industry and customer options.

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.

3.17 An additional key challenge is the level of automation that may be required in order to provide a demand side response product to consumers. Smart metering will provide real time consumption information to consumers within the home via the in-home display. However, without additional mechanisms in place to allow action to be taken on an automated basis there is a limit to the demand response action that can be taken.

3.18 There is then a question about consumer willingness to pass control of devices in their home to a third party. Communicating the benefits of DSR to consumers will be essential, especially for DSR that requires automation to work effectively. For DSR products where automation is needed, voluntary consumer participation would be preferred over mandation. It may be necessary to consider a set of protections for consumers who take up home automation products; however these protections should also consider those in place already and aim to enable, and not inhibit, customer choice and market growth.

3.19 The identification of appropriate channels to utilise to communicate with low income communities is a challenge that needs to be addressed. Trusted third parties such as charities and housing associations should be involved with developing strategies for communicating with these hard to reach consumers. There is real potential for community schemes to be used to encourage the take up of demand response products and services.

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?

3.20 The market needs to develop products and services that are of value to all customer groups to whom signals are being provided. The current services are limited and not available to all customers. Therefore in order to increase the take up of demand response additional services will need to be designed.

3.21 The current industry arrangements will require amendment if customer actions are to be reflected in energy balancing. One pragmatic way to achieve this would be to introduce a simple and efficient process to provide, as a minimum, half hourly settlement for customers using DSM products.

Question 6: To what extent can current or new arrangements better accommodate cross-party impacts resulting from the use of demand-side response?

3.22 New arrangements are required in order to ensure there is a level playing field for all market participants. These will need to address the scenarios where there will be a conflict between a supplier and network operator e.g. where balancing needs are in opposition to one another. There needs to be an equitable approach. The market arrangements should be designed to avoid the need for forced load limiting as this would be a negative experience for customers.

3.23 The arrangements will need to be designed recognising that consumers will be buying products and services from parties other than suppliers or Network Operators e.g. energy service companies. Where these services rely on access to smart metering data these companies will be required to comply with the requirements of the Smart Energy Code.

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.

3.24 Finding ways to accurately and simply display relative pricing information for Time of Use tariffs can be complex and therefore a potential barrier for some customers to engage in this area

of the market. Currently, some switching sites publish a “best-buy” table. This is going to be very difficult to do so within a DSR future because overall cost will depend on how much energy is used and when, and therefore the results could be unintentionally misleading. In order to have “best buy” tables, the advertiser would have to assume a generic load profile, but doing so could skew customers towards one tariff that may not suit their circumstances. Ofgem have encountered these types of problems when trying to design the Tariff Comparison Rate (TCR) for TOU tariffs. We look forward to working with Ofgem and others on the expected working group looking at what the most appropriate solution/s may be, as whilst we recognize this is a potential barrier we believe that the market will be able to deliver solutions.

3.25 Ofgem have found as part of the RMR that the perception of profiteering is the primary driver of distrust in energy suppliers. If customers are going to sign up to sophisticated Time of Use tariffs then they will need to trust what they are buying. Alleviating the perception of profiteering is key, although indirectly, in achieving this. Working alongside Ofgem, the Government and other stakeholders we look forward to ensuring that transparent, straightforward information is provided to customers.

3.26 The benefits of taking up TOU tariffs will only become apparent to customers if they are given accurate quotations based on their actual usage. It is for this reason that it should be easy for customers to provide their data to suppliers or Third Party intermediaries. The Government is in a position to ensure that this happens via the midata programme, which is supported by the vast majority of energy suppliers. Half-hourly data provision would also be preferable, to allow the possibility of automation in moving customers to the cheapest tariff for their preferences and feedback to customers.

3.27 Difficult choices will need to be made in ensuring the right balance between inclusiveness and promoting early movers/assisting sophisticated customers. Ofgem’s consultation states that customers’ ability and willingness to shift their consumption to provide demand-side response varies considerably between customer groups. There is a risk that general advertising aimed at the less-engaged masses fails to appeal to more sophisticated customers who will lead in this change, enabling others to follow. Messages will need to be designed to suit all.

3.28 Our experience of energy efficiency shows that there will be times when even though intervention can help a consumer save money they will still not act. For example, even though suppliers were offering free insulation, towards the end of CERT a good number of customers still did not take up the offer. Members’ experience suggests that the perceived inconvenience is a major disincentive. This is particularly worrying since typically installing loft insulation for example inconveniences consumers once. Potentially changing the use of appliances or any required demand side response changes could inconvenience consumers. The key therefore is to investigate how this perception of ‘inconvenience’ can be removed by understanding what are the incentives that would lead to a change of behaviour and motivate a conscious choice to alter the use of energy. In other words one should look beyond customer awareness to customer action and how that can be encouraged.

3.29 A balance will have to be struck between automation and consumer choice and further research is needed with regards to the effects of both. For example one of the key challenges with energy efficiency is that the inherent effect of a measure (for example retention of warmth in a house with loft insulation) needs to be combined with an understanding of what the measure achieves so that it is not counterbalanced by negative behaviour (for example regulating the temperature of a room by opening the windows). Therefore it is important to think how information about opportunities will also include information about technology use in the long term.

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?

3.30 Helping consumers is something that a number of agencies can do. Which agency is right will depend on the consumer’s circumstances. Therefore we would not expect Ofgem to need to do any work in assisting TPIs develop the kinds of services that customers want; this will be for the

TPIs to do. Ofgem's work should focus on ensuring that TPIs treat customers fairly and that their activities are transparent. As well as the development of new rules for TPIs, this should involve close monitoring of their activities.

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.

3.31 We have no comments to add.

Question 10: Do you agree with the priority and timing we have attached to addressing each of the key challenges identified above?

3.32 We generally agree with the timing proposed to examine the challenges indentified in the consultation. We are supportive of exploring the opportunities for DSR and understanding where the best potential for DSR lies. However, as noted in this response, the market is undertaking a number of significant reforms. The implications of these reforms need to be understood first, particularly interactions between different policies.

For further information please contact:

Frances Williamson
Deputy Retail Director
T 0207 7472969
Frances.Williamson@energy-uk.org.uk

Bindi Patel
Policy Manager
T 0207 747 2932
bindi.patel@energy-uk.org.uk

Rosie McGlynn
Smart Meter Policy and Project Manager
T 020 7 7472 951
Rosie.McGlynn@energy-uk.org.uk

Energy UK Charles House, 5-11 Regent Street, London SW1Y 4LR
www.energy-uk.org.uk