

ALECTRONA

28th June 2013

Ofgem
Energy Market Monitoring & Analysis
9 Millbank
London
SW1P 3GE
Attention: Ben Smithers

Dear Ben,

Response to Ofgem's Smarter Markets Consultation – Creating the right environment for demand-side response

Alectrona Grid Services Ltd welcomes the opportunity to provide our views on how to create the right environment for demand-side response. We consider this to be an area of great importance since it is fundamental to ensuring a cost effective transition to a low carbon energy sector. We believe firmly that infrastructure optimisation does not lead to a total electricity system optimisation as network infrastructure is about delivery not cost. Instead solutions should start with optimising the cost of energy as a commodity before considering how to deliver this efficiently and cost effectively through the network. With this in mind we submit our responses to the consultation questions.

Question 1

The consultation document gives a good overview of the regulatory framework and explains how the framework creates challenges to efficient unlocking of value from demand-side response. However, the document needs to examine further the implications for current and additional policy changes from, for example, Energy Market Reform and evaluate how these policy changes facilitate or impede true wholesale market price discovery. In particular we refer to the risk of Contracts for Difference flattening wholesale market price signals. In addition Feed-In-Tariffs (FiT) that are not based on temporal market prices act as inhibitors to value discovery for demand-side response. A Time-of-Use FIT could have been chosen as an alternative to the PV FiT which would have provided householders with much clearer signals to use electricity from PV generation in the home. This would have avoided increased distribution network cost from additional voltage regulation from PV spill on the low voltage networks.

Question 2

Structural issues

The regulatory structure of electricity markets in the UK imposes barriers on the efficient unlocking of benefits across the electricity supply chain with generation, distribution and supply not necessarily working together to minimise costs. In contrast, locations dominated by vertically integrated utilities have engaged with customers and successfully motivated them to act with simple customer proposition that combine the savings their actions create. Further work is required to produce a framework where the customer can access savings across the electricity supply chain that have been created as a result of their flexibility. In the current framework these benefits are disaggregated and there is no mechanism to fully reward the customer.

Examples

- Community energy companies that match local generation and demand provide system benefits such as reduction in losses, potential reduced network reinforcement, provision of capacity to the system and additional flexibility provided to the distribution network, transmission system operator, and supplier. However, there are no formal markets or arrangements for these companies to be reimbursed for the system benefits they provide. They will continue to be charged DUoS and TUoS in spite of localised matching of decentralised generation and demand ensuring large reductions in use of delivery infrastructure.
- Incentives for reduction in network reinforcement flow to DNOs regardless of whether their actions have led to the demand reduction. This acts as a barrier to entities that move demand out of periods of peak demand for energy cost reasons, as they will create benefits through investment cost reductions that they have no means on accessing.
- A supplier that owns generation assets will naturally which to obtain the highest market price for generation. This can result in a mismatch in objectives since generation assets receive the highest price for output at times of peak demand which does not lead to cost optimising customers by encouraging them to use energy at times of low market price.

Settlement issues

Currently electricity market settlement is based on profiles for all but large energy users with all residential, small non-domestic customers as well as larger commercial energy users settled on a profile basis. Non-half hourly settlement can support static ToU tariffs but dynamic ToU would not be possible. Half-hourly settlement would be better for all ToU as it will be easier to clearly identify actions taken by customers to reduce demand in peak periods and therefore justify rewarding that action.

The Balancing and Settlement Code presents no barrier to the implementation of half-hourly settlement. However, lack of smart meters in the home to provide the data, the perceived cost of updating systems, and the requirement to increase DUoS charges for half-hourly settled customers, are creating commercial barriers to its implementation. Aggregation of demand-side response from profile classes 5 to 8 could make significant contribution to total system cost optimisation. However, profile based settlement acts as an inhibitor as these customers have no visibility of time of energy use which is a necessary precursor to enabling demand shifting. Since many suppliers are reluctant to move to half-hourly settlement for these profile classes it may be necessary to mandate half-hourly settlement for profile classes 5 to 8.

To commercialise the value from manipulating demand at the local level, settlement associated with electricity usage, based on real data, needs to be settled quickly to ensure clarity and reduce the risk being held by parties in the process. Currently this process takes up to 14 months due to the lengthy periods between meter readings to confirm usage. Real usage data on a half-hourly basis should enable this process to be carried out much quicker, for example two weeks, so that Suppliers, aggregators and consumers have confidence in their positions, leading to lower credit risk.

Question 3

Further work is necessary to focus on how to achieve the objective of cost optimising the low carbon transition – this requires a regulatory framework that prioritises total energy system cost optimisation. For example as noted in response to Question 2, suppliers that own generation assets will naturally wish to optimise revenue from generation by selling electricity at the highest price. This acts as a barrier to total system cost optimisation as they are not incentivised to push customer demand in to the

lowest wholesale market price periods. Since low price periods tend to coincide with periods of low demand a wholesale market price optimisation would lead to lower delivery infrastructure investment requirements and lower total system cost.

Question 4

In order for the demand side to respond, in addition to signalling value, requirements to respond must be clear. In other words the demand side must be dispatched for a clearly defined time period. This is as important as signalling value as it determines whether an organisation or individual householder can act and provide demand-side response. By way of illustration, the National Grid STOR programme is based on dispatch for clear time periods enabling demand-side participation and an example from Oklahoma Gas & Electric in the US gives clear time boundaried information to householders on which they can act as demonstrated in figure 1.

SmartHours Pricing (June 1 to September 30)

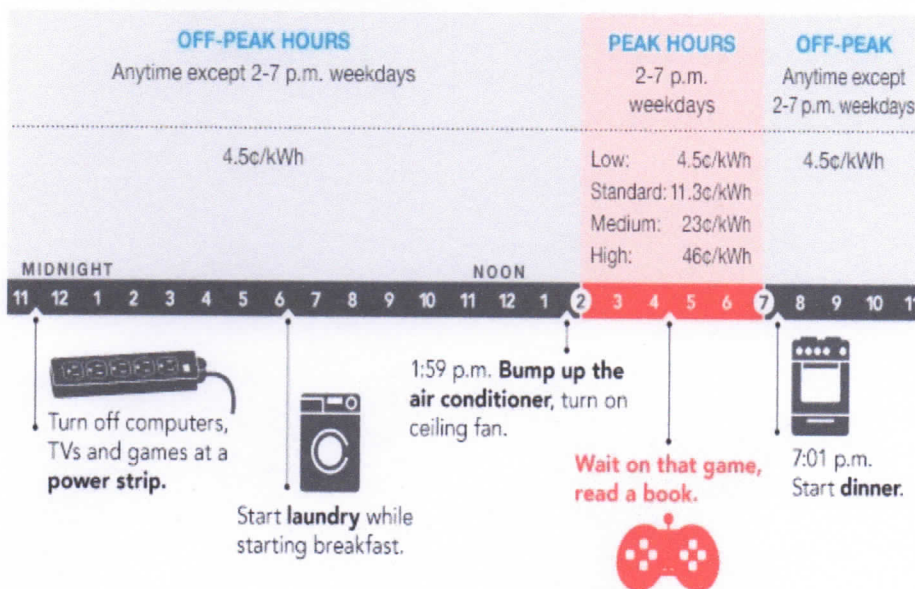


Figure 1

Question 5

The Capacity Mechanism could open up untapped potential from larger half-hourly settled customers and aggregated smaller commercial customers but to do so the mechanism must suit the demand-side. A Capacity Mechanism that provides improvement in signals of value will need the following fundamental features:

- Dispatch
- Time boundaried periods requiring action
- Absence of penalties or low penalty levels that reduce risk – the demand-side will be reluctant to absorb risk

Question 6

In order to ensure that value from demand-side response flows correctly to the entities that have ensured the response, ELEXON could act as an honest broker of information. ELEXON has access to all settlement data and could verify actions by electricity customers and provide a means of sharing incentives.

Question 7

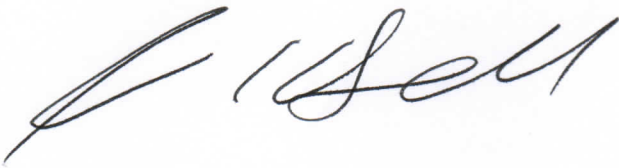
An awareness campaign to coincide with the launch of the Capacity Mechanism would be very useful in helping to explain the opportunities from demand-side response to UK based companies. This could be followed by a public awareness campaign for SMEs and householders based on the information in the Ofgem Smart Market Team Factsheet 119, How managing your energy use could help you.

Question 8

Third parties such as Aggregators play a vital role in ensuring the combination of meaningful amounts of demand-side response to ensure that required response is achieved in a timely and cost effective manner. Since total system cost optimisation depends on the ensuring this response and these entities have a great deal of experience in convincing and enabling companies to participate, their expertise should be heavily leveraged in policy construction around demand-side response.

We hope you find these responses useful and would be happy to discuss them in more detail.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Sara Bell', written in a cursive style.

Sara Bell

Managing Director