



## **‘Creating the right environment for demand-side response’ Consultation Response**

### Overview

<i>General Comments</i>	
<p>Scottish Water welcomes the opportunity to comment on the above consultation paper.</p> <p>Scottish Water is a national provider of water and wastewater services and consequently a significant electricity purchaser in Scotland.</p> <p>Scottish Water is actively carrying out an internal Energy Improvement Programme, which includes demand-side response. We are in the early stages of trialling demand-side response opportunities with different levels of experience. However, we are also actively investigating how we can implement demand-side response within our current operating constraints.</p> <p>Scottish Water view is that there should be much stronger signals, with more certainty around their value, for longer periods of time in order to enable consumers to make appropriate investment decisions and gain more certainty in the benefits of this approach.</p>	

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.
	<p>Scottish Water view is that there are additional challenges associated with revealing the value of demand-side response.</p> <p>For STOD (Seasonal Time of Day) activities and Triad warnings, the risks are easily managed and Scottish Water is actively participating on operational sites. The true cost of early design work for STOD requires energy audits and large levels of information being collected. As mentioned in the consultation document, it is difficult for large businesses to see the real cost and benefits for any demand-side response, particularly when rates and bands are changed relatively frequently.</p> <p>There is potential to gain more value for carrying out STOD if the price bands can be fixed out further than 6 months ahead. We believe that fixing the bands for longer periods of time would provide businesses with more certainty about the value of carrying out any changes in practice on site, and more certainty in the benefits gained.</p> <p>For STOR (Short Term Operating Reserve) and GFR (Grid Frequency Response), Scottish Water suggests that the risk / reward balance is insufficient to stimulate investment and activity in this area. Transfer from grid to generator (harmonics) causes site issues, and there is a major concern about the control of our assets; particularly from a third party who would play a key part in the sequence. There are also a large number of scenarios for any given site that would have to be fully understood and communicated. This is to understand at what point a site can and cannot respond to a demand event. The cost of work to mitigate this is known to be significant and hence introduces another risk.</p>



<b>2</b>	<b>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?</b>
<p>As a regulated business, current regulations impact our ability to participate where investment is required, as Scottish Water is only funded to invest in core activities. Our statutory service provision must take precedence over any non core activities.</p> <p>Commercial arrangements are a key driver in demand-side response. Our business arrangements must support the core business and so any extra investment must have a reasonable payback within the financial regulatory period (six years) and provide value to the customer. Calculating savings for different demand-side response technologies can be difficult due to the complexity of the payment system.</p> <p>Also, for system investment, activities like STOD and TRIAD only require small investment (mainly training and staff time), however GFR is relatively low cost compared to STOR where new standby generators are required and Scottish Water suggests the payback on this investment is marginal, particularly when considering the risks involved.</p>	
<b>3</b>	<b>Is current work on improving clarity around interactions between industry parties sufficient? If not, what further work is needed to provide this clarity?</b>
<p>Scottish Water is aware of National Grid and DNO initiatives to manage transmission and distribution in a low carbon economy. It is not apparent to a demand customer how it all joins up with supply contracts that are negotiated around shape. Without further clarity to the customer, it is conceivable that competing signals could cause conflicting priorities e.g. operation of demand response could result in a less attractive shape.</p>	
<b>4</b>	<b>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.</b>
<p>Scottish Water view is that there are additional challenges associated with effectively signalling the value of demand-side response to consumers.</p> <p>If Scottish Water was to participate in STOR then we would have to significantly invest in our infrastructure. This is needed to be able to control our sites (remotely or otherwise), and also to be able to both receive and analyse signals. This would be in the case that we are changing our consumption 'real time' and also if the use of dynamic tariffs were in place.</p> <p>For example, for Triad signals, there are too many 'steps' in the chain to inform a customer of the value.</p> <p>For STOD, we are concerned that bands move as a result of users moving their peak consumption, effectively changing the timing / positioning DuOS bands. We are concerned as it has taken time and training to adapt our operational side to adjust our consumption use, only to re-train our staff frequently about new bands.</p> <p>We are concerned that the reduction in income for the supply chain i.e. the DNO, would mean it is in their interests to control the STOD bands. If the pricing could be fixed out for longer periods e.g. two years, then this would give consumers a stronger signal for potential savings.</p>	



<b>5</b>	<b>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?</b>
Yes - price signals should be fixed for longer periods of time to allow us consumers to investigate, invest and benefit from demand-side response.	
<b>6</b>	<b>To what extent can current or new arrangements better accommodate cross party impacts resulting from the use of demand-side response?</b>
There could be impacts on a consumer's supply contract, leading to possible conflicts of interest. New arrangements should mean that suppliers should support any work by a user in demand-side reduction to avoid extra charges from the supplier. This could include missing volume tolerance rewards, unreasonably high imbalance charges i.e. any demand response incentives should not conflict with any incentives or rewards that customer's have in their contract with their supplier. Suppliers should be obligated to provide support and join up the process. As suppliers currently deal with pass through charges, they should also be obligated to lead and manage pass through services.	
<b>7</b>	<b>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.</b>
The number, diversity and complex inter-relationships of opportunities and technologies can make assessing and capitalising on demand-side response opportunities challenging. In particular, when trying to decide which is the best investment and where the best gains can be made with a limited investment fund. If charging methodologies are clear and simple to follow through, then rates in business cases become much clearer and the value is more accessible relative to the risks involved.	
<b>8</b>	<b>Is there any additional work needed to explore the role of third parties in helping customers to access and assess demand-side response offerings?</b>
The service provider market for demand-side response appears to be fairly immature, with a small number of players. It would be easier if consumers were better able to assess the ability of each third party, particularly in a competitive tender. This would allow the consumer to see, for different types of demand-side response, what the charging methodology is and where the benefits are. This would allow clear conversations with third parties in early stages to ensure they are competent in this area; have the right experience and technical expertise.	
<b>9</b>	<b>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.</b>
Scottish Water is aware of plans to introduce a capacity mechanism through Electricity Market Reform legislation. Demand-side response is envisaged as a precursor to implementation 2018 onwards. To what extent has investment in demand-side response featured in the economics of security of supply post capacity mechanisms?	
<b>10</b>	<b>Do you agree with the priority and timing we have attached to addressing each of the key challenges identified above?</b>
Scottish Water has no comment on this section.	