

## A Smart Flexible Energy System: a call for evidence

### Overview

<i>General Comments</i>
See attached covering letter

### Detailed Response

<b>Specific Comments</b>
See Below

<b>1</b>	<b>Have we identified and correctly assessed the main policy and regulatory barriers to the development of storage? Are there any additional barriers faced by industry?</b>
Storage regulations must be careful to capture behind the meter storage where electricity is not re-exported to the Grid but is consumed on site. This electricity should not be subject to the grid electricity levies outlined in Table 4. Careful control strategies and the use of metering should be covered in any guidance issued.	
<b>2</b>	<b>Have we identified and correctly assessed the issues regarding network connections for storage? Have we identified the correct areas where more progress is required? Please provide evidence to support your views.</b>
<p>Table 3 provides a good summary of the issues regarding network connections for storage. Scottish Water works with renewable developers to install renewables on its sites and is interested in incorporating storage to these sites as well. Scottish Water would welcome clarity on if, when storage is paired with a pre-existing demand or generation load, the connection agreement may need to be modified.</p> <p>Scottish Water's experience in applying to the DNOs for modifications to existing connection agreements to install renewables for site off-setting purposes has been mixed. It would be helpful if the DNOs could clarify the rules around connection, embedded generation and/or storage into local distribution networks in a consistent manner.</p> <p>For example, Scottish Water has experienced feedback from the DNOs that reducing site loads by installing onsite generation can adversely affect the balancing of loads in the local distribution network just as much as a lack of export capacity. This has resulted in nil or reduced export capacities being offered in connection applications and grid-limiting devices not being accepted. Electricity storage projects bolted onto existing sites would have the potential to have the same affect.</p>	

15	<p><b>Smart Tariffs - To what extent do you believe Government and Ofgem should play a role in promoting smart tariffs or enabling new business models in this area? Please provide a rationale for your answer, and, if you feel Government and Ofgem should play a role, examples of the sort of interventions which might be helpful.</b></p>
	<p>Industrial and Commercial demand flexibility has the most immediate potential for scale as compared to domestic and residential markets. However Scottish Water has observed that suppliers are slow to introduce more flexibility in tariff structures, away from the conventional Time of Use Tariffs split into red, amber, green charges. Over 80% of our portfolio is settled on an half hourly basis and we only have one tariff model.</p> <p>It would be useful if Government/ Ofgem could offer funding for suppliers and end users to trial new pricing models which can be evaluated for their effectiveness at encouraging DSR and the potential cost savings for end users. This will require changes to existing billing systems.</p>
18	<p><b>Smart Tariffs - Do you recognise the reasons we have identified for why suppliers may not offer or why larger non-domestic consumers may not take up, smart tariffs? If so, please provide details, especially if you have experienced them. Have we missed any?</b></p>
	<p>Scottish Water does not recognise the first reason identified for suppliers not offering larger non-domestic customers more choice in smart tariffs. We simply have not had the choice of additional tariffs.</p>
19	<p><b>Smart Distribution Tariffs – Incremental Change Are distribution charges currently acting as a barrier to the development of a more flexible system? Please provide details, including experiences/case studies where relevant.</b></p>
	<p>Scottish Water has made a lot of progress over a number of years in changing its consumption shape to reduce peak tariff times and avoid peak demand periods (Triad and red zone avoidance). Scottish Water is finding that the current pricing for non-commodity price signals, including the Capacity Mechanism, TNUoS and DUoS are pulling in different directions. For example, the effect of DCP228 will make DUoS costs in 18/19 become comparatively cheaper in the red zone and more expensive in the amber and green. This is contrary to what the other charges are trying to achieve.</p>

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