SP ENERGY NETWORKS

Network Planning & Regulation

Chaira Redaelli
Ofgem
9 Millbank
London
SW1P 3GE

Your ref

Our Ref

Date
27/11/2017

Contact / Extension
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Dear Chaira

SP Energy Networks Response to Ofgem Consultation on "Clarifying the regulatory framework for electricity storage: licensing"

This response is from SP Energy Networks (SPEN). SPEN is the networks business of Scottish Power and holds three electricity network licences. We own and operate the electricity distribution networks in the central belt and south of Scotland (SP Distribution), which serves two million customers, and Merseyside and North Wales (SP Manweb), which serves one and a half million customers. We also own and maintain the electricity transmission network in the central belt and south of Scotland (SP Transmission).

We fully support the Government's commitment to a smarter, more flexible energy system which can bring significant benefits for both consumers and the general economy. We are therefore happy for Ofgem to publish our comments on the Ofgem website to share our views on Electricity Storage with the wider stakeholder community.

We understand the importance of being able to balance network security, affordability and environmental impact – the energy trilemma. The move away from large, centralised generation and control towards a more localised energy system with distributed energy resources (DER) such as wind, solar and storage, combined with the decarbonisation of transport and heating through the use of low carbon technologies such as electric vehicles and heat pumps requires significant changes to the way we think about our energy use. For instance, the growth in renewables will need a shift in thinking away from having solely demand-led generation towards the need to also have some generation-led demand. The growth of the "prosumer" and recognition of self-consumption are examples of this shift already taking place.

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We believe that distribution network operators have a central role to play and are leading the initiative towards the DNO transition to become a Distribution System Operator (DSO). The role of system balancing can no longer be considered to be solely a centralised function. System balancing needs to be incentivised to take place within all levels of the distribution network to ensure that the task of balancing the system at a national level is achieved at lowest overall cost. Future balancing will include:-

- behind the meter – prosumers matching their generation and demand in real-time both directly and through the use of storage
- co-located with generation – generators, especially renewables, will need to store their output to better match times of demand
- dedicated network connection – to better manage the peaks and troughs in electricity generation and supply, thereby making better use of existing assets and reducing the need to expand the network

Electricity Storage connected to the distribution networks is one method of supporting local and national balancing requirements, but should be considered alongside other smart solutions and conventional reinforcement, with the lowest overall cost solution being deployed.

Improving the balance of generation and demand at the local level will significantly reduce the cost of balancing the system at a national level. Electricity Storage connected within distribution networks is one of the ways of achieving this. We believe that including the three sub-classes of storage described above in the license definition will enable fine tuning of Regulatory incentives in the future, as the relative importance of storage in the day-to-day operation of the system increases.

Please do not hesitate to contact me should you have any queries in relation to our response.

Yours sincerely

Gerry Boyd
Distribution Commercial & Innovation Manager
SP Energy Networks

APPENDIX 1: Response to Consultation Questions

Question 1: Do you agree that the form and content of the licence as proposed in this consultation will achieve the purpose and deliver what we committed to in the Smart Systems and Flexibility Plan?

We agree with the classification of storage as a sub-class of Generation in the short term as this provides formal recognition of storage and can be implemented relatively quickly, without the need for changes in primary legislation. However, we believe there are sufficient differences between generation and storage for Ofgem to consider options for the longer term which may ultimately require changes to primary legislation. For example, Generation is primarily about the mass production of electricity units, whereas Electricity Storage is more about added value Electricity System Services – as typified by the emergence of the concept of flexibility. We believe one such option for the longer term could be a new, separate "Flexibility" asset class, with Electricity Storage being a subclass of Flexibility, along with other subclasses such as Demand-side response.

Question 2: Do you have any views on whether we should include 'in a controllable manner' in the definition of electricity storage?

We believe that the definitions should be kept as simple as possible. Having considered the counterfactual of "uncontrollable", we believe this to be academic and superfluous. We therefore favour the original definition.

Question 3: Do you think there are any risks or unintended consequences that could arise as a result of our proposal? If so, please provide an explanation.

The proposed treatment of storage as a subset of generation reflects the old paradigm of a "top-down" centralised management and control approach and so the unintended consequence is that new "bottom-up" approaches which help to ensure that problems are minimised "at source", before they become a wider issue, are disadvantaged.

Question 4: Do you have any comments on the list of technologies that should be included or excluded from the definition of storage as set out in Appendix A?

The electrolyser/fuel cell combination should be included in technology list (A), as it takes electricity to create hydrogen in the electrolyser, which can then be stored for subsequent reconversion to electricity via the fuel cell.

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Additional Comments:

Electricity storage should still have to pay final consumption levies on the electricity that it does not return to the network (i.e. the internal round-trip charge/discharge losses, which can be significant), however we recognise that this would require changes to primary legislation and so must be considered alongside wider government priorities. It is not clear from the proposals as to whether that will be the case.

It is not clear why a Storage Facility will need to ensure that they do not have "self-consumption as a primary function". From a system perspective, it would generally be beneficial to co-locate generation, consumption and storage. If this requirement is to ensure that final consumption levies are not being deliberately avoided, then an alternative to this requirement would be our suggestion above of subjecting the Electricity Storage Facility to final consumption levies on the net internal "losses", rather than allowing them to be entirely exempt.

In addition where storage facilities result in additional costs to connect to the network this should be funded appropriately by connecting Storage developers and not unduly subsidised through Use of System Charges borne by domestic customers.

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