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Ofgem Systems & Networks Energy Systems Transition
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Enabling the competitive deployment of storage in a flexible energy system: Changes to the electricity distribution licence

Electricity Storage Network response

Dear Chiara,

We are disappointed with Ofgem's decision to prohibit DNOs from operating storage assets. We have responded to previous consultations stating our opposition to this move and our reasons for doing so. This letter summarises these reasons:

1. Treating storage as generation overlooks the different applications of storage
2. DNOs can use storage to address network constraints
3. There are many successful international examples that can be used as models
4. The exemptions proposed by Ofgem should be carefully considered and potentially expanded
5. Ofgem should make clear how this proposal will align with EU Electricity Directive negotiations
6. Further unbundling to prohibit storage ownership as well as operation is not recommended

The Electricity Storage Network (ESN) was established in 2008 as the UK industry group dedicated to electricity storage. It represents a broad range of members including electricity storage manufacturers and suppliers, developers of projects, users, electricity network operators, consultants, academic institutions, and research organisations. We strongly support UK companies to deliver solutions for the GB electricity system and beyond. The ESN works on behalf of its members to respond to and address issues affecting the development and utilisation of electricity storage within the GB electricity system. The ESN is managed by Regen, a not-for-profit organisation with a mission to transform our energy system.

This response represents the views of the ESN as informed by our members and by our mission to promote a smart, flexible energy system.

1. Treating storage as generation overlooks the different applications of storage

The inherent problem in the approach suggested by Ofgem is one which the ESN and the storage industry have been criticising for some time; storage is not generation and should be defined in policy and regulation as an asset class in its own right. We are pleased to see that in this document, Ofgem use the definition that the ESN proposed in last year's consultation on the definition of storage, but despite this, the approach in the proposal treats both generation and storage in the same way. The lack of any distinction between generation and storage is not appropriate in this case as storage has applications that can provide very different services to the system. This proposed approach reflects the inherent problems created by treating storage as a subset of generation. **We would like to see a resolution to last year's consultation on the definition of storage.**

2. DNOs can use storage to address network constraints

DNOs are well placed to understand network constraints and how storage can best be placed to overcome such constraints, particularly at the low voltage level. There are significant costs associated with installing and upgrading network infrastructure to deal with network reinforcement. Storage is an alternative solution that could reduce many of these costs, but the business models for private investment in this area are currently not viable, discouraging investment. Our experience in GB has been that the DNO companies have been innovative in their adoption of storage. By investing in and investigating new technologies, including storage, at an early stage of commercialisation, they have developed new technical and commercial applications. In some instances, such as UKPN's Smarter Network Storage project, this has led to widespread commercial and third party follow on, but in other instances it has been clear that the business model is not one for outright commercialisation. It is essential therefore that DNOs must be able to own and operate storage assets to put storage to best use and overcome network constraints. Growing storage in this manner is of benefit to the energy system as a whole, but also provides growth opportunities to the storage industry that otherwise would not exist – we are already seeing waning interest in storage from some parts of the market and encouraging growth in this area would retain that interest.

In most cases, we don't believe that there will be a viable market in the near term for DNOs to successfully procure services via third parties for this purpose and this will result in large delays to solving network issues and rising costs. This has been observed so far in DNO trials to procure flexibility services from market participants. Ofgem should look to current and future flexibility trials, for example UKPN's flexibility roadmap, and seek to understand whether DNO ownership (or lack thereof) has had an effect on storage entering the market. Until operating costs are reduced, the cost of service to the customer will not fall – storage is an important means for achieving system cost reduction.

DNOs have a responsibility to ensure security of supply is maintained where the market is not able or incentivised to do so. A future example may be in charging networks for electric vehicles; storage will be required to reinforce the network and if the business case does not exist for private operators in areas of more vulnerable customers, they may lose out if DNOs are not able to step in.

We are also concerned that the restriction on DNO ownership, which will apply to IDNOs as well, sends an incorrect message to the market place. Placing this restriction on a technology is counter competitive, as Ofgem is now seeking to block innovation and improvement of efficiency in a competitive arena between the DNO and the IDNO sectors. As storage helps to reduce overall system cost and supports the decarbonisation of networks, it is vital that storage is able to be used wherever it is appropriate.

3. There are many successful international examples that can be used as models

There are a number of international examples of storage being owned and operated by DNO equivalents and providing value to the energy system and to the market. We encourage Ofgem to closely consider these international examples and case studies.

A battery storage project [deployed in Arizona, USA](#), for example, shows how a privately deployed asset can be operated successfully by a transmission and distribution utility. In this case, the company found that deploying electricity storage as part of transmission upgrade deferral was half the cost of the alternative line replacement. Innovative business models emerging in the US and Australia navigate any perceived issues associated with an asset being used both for network (i.e. transmission and distribution infrastructure) as well as market services (e.g. frequency regulation, balancing market), for instance by leasing the asset to a third party. DNO ownership of storage as a non-wires alternative is also being examined closely in Europe, for instance through [Project RINGO in France](#) acting as a virtual transmission line.

The gas networks should also be looked to as an example of how storage can be used most effectively to lower system costs – there is currently no issue with gas storage and it is used by DNOs to reduce strain on the network and improve operating and system costs.

4. Exemptions should be carefully considered and potentially expanded

If Ofgem are not minded to change this decision, we would ask that the exemptions be considered carefully and potentially expanded in order to ensure that the above considerations are taken into account, and that DNOs are not restricted from using storage in the most appropriate way in order to best serve the network. The applications of storage go beyond those envisaged in the distribution licence and without these applications being fully considered in the exemptions, this change will block or restrict the use of a future technology in new business models. Ofgem should consider cases where storage is used as demand side response to support flexible connections and whether DNOs would also be precluded from owning and operating storage in this case.

5. Ofgem should make clear how this proposal will align with EU Electricity Directive negotiations

EU negotiations on the Electricity Directive are underway and there may be some derogations that allow direct ownership and operation of storage assets by network operators under articles 36 and 54. Given the potential for these negotiations to continue beyond April 2019, Ofgem should make clear how they intend to handle any discrepancies with the current proposals. The UK has a significant influence on other European energy sectors and could influence how this proposal is implemented in Europe.

6. Further unbundling to prohibit storage ownership as well as operation is not recommended

We note with concern that Ofgem may in the future consider further unbundling regulations which separate ownership as well as operation. For the reasons outlined above, we would not recommend this change and would ask that any further changes be done in close consultation with industry.

The ESN works to create an energy system that provides value to all parties; consumers and network operators as well as industry players. We would be keen to work with Ofgem to ensure that these proposals benefit all stakeholders.

Yours sincerely,



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