

Ofgem Consultation

Enabling the competitive deployment of storage in a flexible energy system: changes to the electricity distribution licence

A Highview Power Storage response

Highview Power Storage (HPS) welcomes the opportunity to respond to this consultation. HPS is an award winning, UK based energy technology company focused on a cleaner, more efficient and secure energy future. HPS has developed a proprietary energy storage technology that uses surplus electricity, at times of low demand/low cost, to make liquid air, which can be stored and released later to generate electricity at times of high demand/high cost.

HPS technology uses proven components from the industrial gas and power generation sectors, is unconstrained geographically, uses no exotic/rare materials and produces no harmful emissions. It has the potential to provide a large scale, long duration solution to the challenges to the electricity supply chain associated with increased intermittent low carbon generation and low carbon technology.

Proposed new condition in the electricity distribution licence

- 1. Do you agree that the proposed new condition will ensure legal unbundling of DNOs from the operation of storage that benefits from an exemption to hold a generation licence?**

Answer:

Our view is that condition 43B should will ensure legal unbundling of DNOs from the operation of storage that benefits from an exemption to hold a generation licence

- 2. Do you agree that the same principles of unbundling should apply to IDNOs?**

Answer:

The same principles of unbundling should apply to IDNOs insofar as they hold an actual monopolistic position.

Do you have any views on the application of the specific new condition proposed here applying to IDNOs?

Answer:

No comment.

- 3. Do you agree that DNOs should be able to directly own and operate small-scale storage for the purposes of providing uninterruptible power supplies (UPS) at substations?**

Answer:

Our view is that DNOs should be able to directly own and operate small-scale storage for the purposes of providing UPS at substations. Given that the primary function of the storage unit in this application does not entail exporting electricity to the network, there is no risk of market distortion or foreclosure.

Do you agree that DNOs should be able to directly own and operate small-scale storage for the time-limited purposes of emergency restoration and maintenance?

Answer:

No comment

Do you think DNOs should be able to directly own and operate storage for any other specific applications?

Answer:

Ownership and operation of storage for network investment deferral by a DNO or DSO should be explored in a pragmatic and exhaustive way. As highlighted by multiple studies carried out in the UK by Imperial College, storage can help avoid or defer costly reinforcements to the network, resulting in significant savings to the economy. Developing competitive markets for flexibility is desirable. However in cases where a market based approach fails to deliver this kind of solutions

and where a storage solution proves to be the most economical alternative when compared to traditional network reinforcement, an exception could be made. This would require close oversight of the DSO by the regulator in order to avoid conflicts of interest.

More clarity is needed around the criteria to determine whether a market has failed to provide a storage solution. Additionally, the development of an adequate framework that regulates the sharing of a storage asset between regulated and non-regulated entities would be required. This would be crucial as the non-regulated entity would be responsible for monetising revenues that require access to market where a DNO should not participate. This kind of arrangements is currently being explored in New York by the regulator.

- 4. Do you have any views on the treatment of existing islanded system generation currently owned by DNOs? Do you have any views on the treatment of future use of DNO owned and operated generation of storage in similar island situations?**

Answer:

No comment.

- 5. Do you have any views on the treatment of existing islanded system generation currently owned by DNOs? Do you have any views on the treatment of future use of DNO owned and operated generation of storage in similar island situations?**

Answer:

No comment.

Guidance document

Question 1: What are your views on the three high-level criteria proposed as the basis for assessing applications for consent? Do think there are other criteria which should also be included?

Answer:

We support the use of the proposed three high level criteria and would welcome the opportunity to respond to future consultations on this matter.

We would be particularly interested in contributing to the development of a cost benefit analysis to assess the merits of different storage technologies, including liquid air.

Question 2: Do you have any other views on the scope or content of the proposed guidance document?

Answer:

No comment.

Question 3: Do you have any views on the process that should apply to the assessment of applications?

Answer:

No comment.

Reporting and monitoring

Question 1: Do you have any views on reporting requirements for DNOs that own/operate storage assets?

Answer:

No comment.

Question 2: Are there any particular types of data that, if published, could facilitate entry of competitive parties?

Answer:

The following is a non-exhaustive list of data that could help assess the business case of storage by a third party:

Levels of curtailment of renewable energy.

Something similar to a five-year network plan, where future deployment of renewable is expected and where reinforcement needs are set out.

Future needs for reactive power and any need to manage power flows at the interface with the transmission network.

Forecast for network access charges for the next 5 years at least.