

Response on behalf of Cumulus Energy Storage and NRG Management Consultancy

Cumulus Energy Storage are a UK company with a US R&D facility. Our vision developed from asking our customers what they needed. Rather than scale-up from 'mobile' batteries, or new chemistries developed in the laboratory, our vision for a grid-scale battery was to take a large-scale industrial process and adapt it to our purpose for stationary energy storage.

Using chemistries and architectures already used for 50 years in the mining industry at ~100 MWh scale equivalent, we have developed a rechargeable Copper/Zinc battery that is safe, reliable and sustainable, and offers class-leading Total Cost of Ownership to our customers.

Our unique technology will play a significant role in improving the economics of renewable generation and transforming energy markets.

NRG Management Consultancy are advisers to start ups in the energy sector. Providing advice on how to monetise the provision of services through contracts for services that are of value to system operators and consumers.

Both companies welcome the opportunity to respond to Ofgem's Consultation re Clarifying the regulatory framework for electricity storage: licensing. We would also welcome the opportunity to discuss these issues further with Ofgem.

Licence proposals

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 proposal. The objective going forward will be to ensure that the licence is broad enough to encompass the main current issues and potential future storage developments. On the other hand the breadth should not be so wide that other technologies which have significantly different attributes to storage are able to use the licence and thereby cause a market distortion. We believe the current proposal gets this balance right but see also our response to the later questions.

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

In line with the objective set out in relation to Q1 we support the inclusion of these words as they reflect one of the key attributes of storage as it is currently perceived in terms of storage's functional activities. Any future changes to storage would need to include the facility to operate "in a controllable manner" in order to retain the expected role in terms of a flexible energy future.

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.

Storage is a disruptive technology in that it challenges a number of fundamentals within the prevailing energy model. Including commercial viability of large power plants through economy of scale, the concept of network branches (or DNO systems) only being used to deliver energy (i.e. one way) rather than distribute it (two way). As a result additional regulatory obligations are appropriate as they should facilitate the changes that disruptive technologies will involve. Such regulatory obligations should

ensure that consumers are protected and that incumbents do not use market power and political leverage to slow the pace of positive change.

The primary function obligation in paragraph 1 of E1 may have unintended consequences. To prevent this we suggest that licence holders should be encouraged to licence a storage unit and then meter the facility so that energy used on site is treated as electricity delivered to site which must pay import levies and electricity delivered on to the network does not.

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 list of included and excluded technologies needs to address the issue of hybrid technologies. For example a facility that uses electricity to compress air and then uses that air in lieu of the compressor in a Combined Cycle Gas Turbine. We note that the last paragraph of Appendix A includes such technology. In our view this technology should receive the licence benefits of storage but only in relation to the electricity imported and used by the generating plant. We suggest adding a note that "hybrid arrangements involving the technologies described will be evaluated on a case by case basis based on the criteria set out in the licence." A brief description should be added to the Annex List B section, to underline the rationale as to why these technologies are not considered as eligible.

There should be a clarification to the wording re lists A and B not being exhaustive to underline that the list has no legal status or bearing and does not preclude new technologies being developed from being considered to be energy storage technologies.

Change to Licence

Question 1: Do you have any comments on the proposed changes to the Application Regulations for electricity and gas licences?

We support the proposed licence changes and in addition we suggest that parties with this licence should be obliged to provide an update to the description provided in response to section 19 of the application form if that description should change materially. In order to reduce administrative burden on applicants they should be encouraged to split their answer into 2 sections. One covering material issues and the second to include explanation or illustration.