Implementation of Regulation 2019/943 in relation to Dispatch and Redispatch

A Highview Power response

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Highview Power

Highview Power (HP) 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. HP has developed a proprietary energy storage technology that uses surplus electricity, at times of low demand/low cost, to produce 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 geographically unconstrained, uses no exotic materials, produces no harmful emissions, and is based on synchronous generation providing Inertia and other grid stability services becoming scarce as the levels of renewable generation increase. In addition, the technology can offer a platform for sector coupling applications involving cooling and/or heating.

Consultation Question 9: Do you agree with the TSOs' proposal for a revised priority dispatch hierarchy?
The RAs request that the TSOs consider the points raised in this Section in their response with any further proposed changes to the hierarchy.

Doubt: Would it be possible to clarify where storage would fit into this hierarchy? in particular, storage systems can be classified depending on generation type, i.e. synchronous, grid following, grid forming. Would there be a difference in priority dispatch for storage based on different kinds?

Consultation Question 10: Feedback is requested from interested stakeholders on the types of demonstration projects that may be suitable for an application process for limited priority dispatch eligibility.

Comment : As highlighted in the previous point there are significant differences between energy storage technologies. Some technologies and applications are more innovative than others so this should be considered, in our view the most innovative storage technologies and applications are those related to the provision of locatable synchronous energy storage such as compressed air energy storage and liquid their energy storage. Looking at the design of DS3 services and the formula to estimate revenue for SIR we note that the maximum SIR Factor is given to synchronous condensers perhaps because these have no active power, however we note that synchronous storage technologies could be drawing active power, "providing" negative MW if necessary while providing inertia. In addition to synchronous energy storage, storage using grid forming technologies should also benefit from priority redispatch as this is an innovative technology. On the other hand, storage technologies utilising grid following inverters have been widely demonstrated.

Consultation Question 11: The RAs' interpretation of the Regulation is that where a new connection agreement is required or where the generation capacity of a unit is increased, a unit will no longer be eligible for priority dispatch.
The RAs also propose that units should be able to make a choice on whether they wish to retain their priority dispatch status or not. Feedback is requested on this proposal.

Comment : There is a need for greater detail and clarity on this point. There are three options that could be further studied, namely life extension, repowering with wind or the same asset class,

repowering with energy storage. The decision to grant the retainment of priority dispatch status should be based on the type of project under consideration and on the impact this has on facilitation of whole system outcomes. Looking specifically to the design of the Constraint Management Pathfinder run by National Grid DSO and on the developments on the GridBooster (Netzbooster) In Germany by Tennet, it is clear that storage solutions to solve grid congestion should be placed in specific locations to be effective. Furthermore, the procurement of such solutions is following a market approach.

Consultation Question 14: Do you agree with the RAs' interpretation of Article 13(7) and the view that the provision of financial compensation to firm generators subject to curtailment based on net revenues from the day-ahead market including any financial support that would have been received represents an unjustifiably high level of compensation?

Comment : Assessing whether the level of compensation is unjustifiably high would require assessing the level of uncompensated curtailment assumed in the project finance models of assets being affected or to be affected. It is however, foreseeable that compensation costs would reach high levels.

An aspect to consider is investment certainty for new renewable assets needed to achieve carbon reduction goals. If investment in new assets is more uncertain, resulting in higher IRR requirements, then PPA prices are likely to increase while renewable deployment rate is likely to decrease. There is a need to further analyse where the right balance of compensation is.