SUMMARY OF THE WORK OF THE ENERGY STORAGE CELL WORKSHOP

What is a grid scale energy storage workshop? Grid Scale Energy Storage workshop Establish potential areas for partnerships in this research,both for delivering high quality research and for realising the impacts and benefits. Thirty-six delegates from the research and stakeholder community,many representing wider groups,participated in the workshop (attendee list is available as Annex 2).

What challenges are faced by UK research in grid scale energy storage? The technical challengesfaced by UK research in the grid scale energy storage space and awareness of barriers. Not all areas in the workshop report will be able to be included in the forthcoming calls due to the limits of the budget and remit.

Why do we need energy storage? Since the nature of renewable energy generation can create seasonal disparitieswhich must be resolved,this leads to a greater need for energy storage that is larger capacity and longer term duration than currently exists. The cost effective,efficient storage technologies will be a key factor in reaching the decarbonisation goals set out.

Is location a factor in energy storage at grid scale? Location as a factor in energy storage at grid scale largely focussed on the question of if it is more appropriate for storage to be near energy generation vs storage near use. Most modelling scenarios for future energy storage requirements envisage some subsurface energy storage.

How can storage technologies help achieve decarbonisation goals? The cost effective,efficientstorage technologies will be a key factor in reaching the decarbonisation goals set out. These storage technologies will not exist in isolation but will need to be integrated with existing and future infrastructure.

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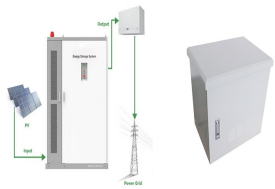
Normalised volumetric energy density vs. cell to cell distance (assuming prismatic cells with dimensions of 20 cm x 10 cm x 5 cm) [own calculation] Figures - uploaded by Andreas Pfrang Author content

Energy Procedia 21 (2012) 2 ????" 13 1876-6102 2012 Published by Elsevier Ltd. Selection and/or peer review under responsibility of Guy Beaucarne doi: 10.1016/j.egypro.2012.05.002 3 rd ???



Post Lithium-ion (Li-ion) battery technologies based on future cell chemistries such as, Sodium-ion, Li-metal, Li-Sulphur, Li-air, and their positioning vis-?-vis shorter term next ???

The Energy Storage Roadmap was reviewed and updated in 2022 to refine the envisioned future states and provide more comprehensive assessments and descriptions of the progress needed Distributed Fuel Cell ???