

REKK Energy Futures workshop

Batteries: a solution for energy storage and e-mobility

22 February 2022

Summary

The aim of the online webinar was to assess the potential of battery technologies for the decarbonization of the energy and transport sectors and to talk about the prerequisites for the development of a competitive battery value chain in the CEE region.

“There are currently more than 100 battery projects in 22 European countries, covering the entire value chain from raw material extraction to recycling,” said **Dr. Diego Pavia**, representing EIT InnoEnergy and the European Battery Alliance, in his introductory presentation. The economic and job-creation impact of the European battery sector is already significant, but further capacity growth and skilled labour will be needed to achieve transport and energy policy goals. The EU's stringent regulation, based on the triple bottom line of sustainability, traceability, and recycling, is several years ahead of US and Chinese regulation.



Source: Dr. Diego Pavia

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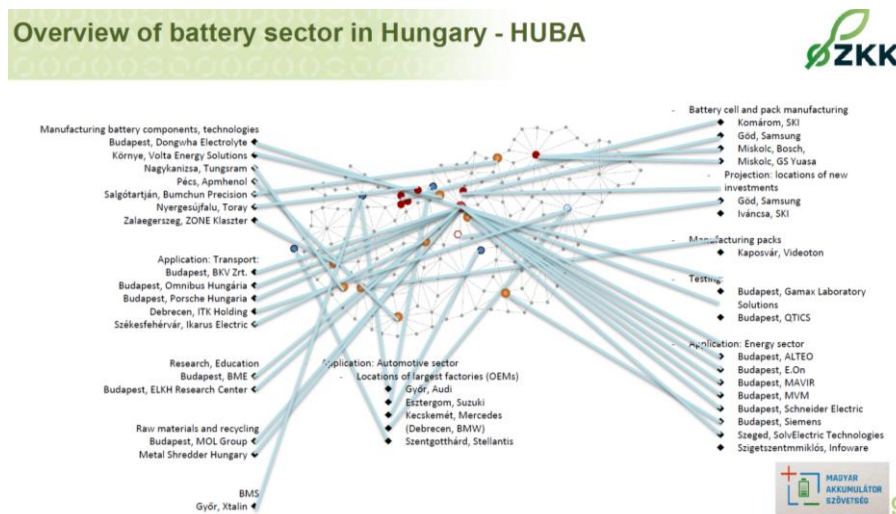
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Dr. Péter Kaderják, Head of the BME Zero Carbon Hub, spoke about the strategy of the Hungarian battery industry and the plans of the Hungarian Battery Association, founded last autumn. He said that battery technology could play a key role in both the energy and transport sectors in Hungary. Hungary currently has the largest battery cell production capacity in Europe, so it can benefit from a first mover advantage. The strategic objective is to maintain this competitive edge, develop the value chain and strengthen R&D activities in order to increasingly turn products manufactured in Hungary into products developed in Hungary.



Source: Dr. Péter Kaderják

During the panel discussion that followed the presentations, moderator **Balázs Felmann**, Senior research associate at REKK, asked representatives of the transport, energy and research sectors about the present and future of battery technology and the barriers to development.

Szabolcs Balogh, Managing Director of MVM Mobility Ltd. said that electric vehicles have become competitive in the transport sector and subsidies are available. Technological progress is still needed in the field of electric heavy vehicles and infrastructure, and batteries could be in homes and workplaces in a few years' time, provided they become economically viable in these segments. **Pál Gerse**, MET's portfolio management director, sees lithium-ion batteries as the flagship technology, and although products typically come from China, he believes that management systems for integrating batteries into the energy system, as well as R&D and operations, could play a key role in Europe. **Roland Deme**, managing director of E.ON Energiatermelő Kft., said that E.ON is testing battery-powered mobile energy storage systems in Zánka and Dúzs, which are designed to help manage voltage fluctuations on the grid. Batteries could play a major role in integrated grid solutions. **Michał Mroskowiak**, researcher at the Institute Jagiellonski, says Poland can be involved at the end of the value chain (assembly, recycling, reuse), as it has experience and a skilled

workforce in these areas. In the energy sector, interest in batteries could increase with the spread of energy communities and the phasing out of net-billing after 2024. At the end of the panel discussion, the speakers discussed the current barriers facing the battery sector. In addition to the high cost of batteries, there are administrative and regulatory problems (e.g. lack of standardisation of DC-side metering, different treatment of producers and storage when allocating capacity). Also, the rapidly changing, unpredictable economic environment was identified as a constraint. The latter, according to Pál Gerse, could be addressed to some extent by the emergence of virtual power plants and aggregators. Workforce training needs to keep pace with rapidly growing demand, and recycling and reuse are important to avoid raw material shortages. An integrated approach is needed, according to Michał Mroskowiak and Diego Pavia, the former referring to policy documents that look at different storage technologies together, the latter to a common approach to the increased demand for electricity in all sectors of decarbonised economies.

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