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Advanced Materials for Batteries Partnership

17/7/2024

The Advanced Materials for Batteries Partnership

The Advanced Materials for Batteries Partnership (AMBP) was established in 2018 to work toward the generation of a pipeline of interregional business investment projects. The battery market is expected to reach a yearly level of €250 billion from 2025 onwards, offering the opportunity of creating 4-5 million jobs. The AMBP takes this opportunity and accelerates the volume for the manufacture and deployment of advanced materials and battery cells using sustainable and competitive technologies, for mobility and stationary uses.

Added Value of the Partnership

We would like to highlight that AMBP has the unique value added that allows to support clusters, research and innovation actors and companies of the regional ecosystem AMBP also has the capacity to influence policymakers and regulations, while providing regions with access to various EU funding opportunities, particularly through the I3 and the Horizon programme. Additionally, AMBP participates in networks to develop joint strategic EU projects and platforms.

Benefits of Interregional Collaboration

As a concrete example we would like to mention the implementation of the EU's first Circular Battery Valley through the BATMASS Project (EU circular BATtery valley for second life, recycling, and re-manufacturing of materials and black MASS) that will mobilize a fully comprehensive interregional ecosystem around 4 pilot plants aimed at scaling up, commercializing and deploying green innovative technologies. In addition, technology transfer between less developed, transitioning and developed regions is intended to structure this emerging value chain and anchor it in regional innovation ecosystems.

The project is developed in 4 demo cases:

- Collection and disassembly. The lack of digital integration and automation leads to inefficiencies and suboptimal security.. These issues stem from poor traceability caused by insufficient data collection, storage, and transfer, as well as limited flexibility due to reliance on non-digital decision-making processes in circular chain operations.
- Second life. Extending the life cycle of the product and its underlying material is also a key factor, ensuring scalability of second uses in line with regulatory requirements.
- Black mass. The challenges relate to the need for safe decommissioning on an industrial scale, a reduction in the environmental footprint and inefficiencies of the processes in question, and their economic viability when brought to scale.
- Production. The BATMASS project will be the first advance concerning potential supplier of recycled CAM cathode materials. In this sense, new processes and new materials imply the need to qualify recycled materials for use in the development of new cells. Therefore, further industrial optimization and validation is needed at the end of the chain to green batteries and reach citizens and end consumers.

BATMASS integrates 15 entities from 11 regions of Slovenia, Spain, France and Italy; its total budget is ca €14 million, receiving funding from the Interregional Innovation Investment (I3) Instrument

Benefits of Interregional Collaboration

The AMBP gives us the opportunity to work on regional priorities within our Smart Specialisation Strategy, based on the exchange of knowledge on innovation and policies, working with key regional stakeholders in developing a pipeline of joint projects.

Knowledge exchange has been provided through the organisation of on-line working meetings, exchanging partnership working documents, and providing accurate advice through European Union contract services. We would like to highlight the developed joint TAF Technical Assistance Facility Interregional Innovation Investment as well as I3 Interregional Innovation Investment as an accurate instrument to improve regulatory framework(s) and mobilise interregional investment at the participating quadruple helix regional actors.

Impact of the Partnership

The partnership has among its main objectives to accelerate the volume of the manufacture and deployment of advanced materials and battery cells using sustainable and competitive technologies,

for mobility and stationary uses. It aims to generate a pipeline of business investment projects, build upon existing regional assets to leverage synergies across the partnership, and identify and address key missing elements in the regional ecosystem and the industrial value chain to effectively reach end users .

Link to Thematic Smart Specialisation Partnership page: Inforegio - Advanced Materials for Batteries for Electro-mobility and Stationary Energy Storage (europa.eu)