

## Press release

Vienna, 05.03.2024

# AIT LEADS EU PROJECT STREAMS: A GREEN DEAL FOR EUROPE'S BATTERY PRODUCTION

Focus on sustainability: strengthening supply chains and reducing dependence on critical raw materials

Vienna (AIT): The fragility of current supply chains and the scarcity of critical raw materials pose major challenges for Europe's battery manufacturers. The focus of European battery production is therefore on securing sustainable supply chains and reducing dependence on critical raw materials such as lithium, nickel and cobalt. The increasing demand for batteries, particularly for electromobility and renewable energies, has created an acute need to use our own resources more efficiently.

For this reason, a top-class European consortium led by the AIT Austrian Institute of Technology has initiated the STREAMS research project (long title: Sustainable Technologies for Reducing Europe's bAttery raw MaterialS dependance). The project, which is funded as part of HORIZON EUROPE, aims to strengthen the European supply chain by developing flexible and scalable technologies, reduce dependence on imported raw materials and promote circular economy approaches in battery production. STREAMS pays particular attention to the sustainable production of anode and cathode active materials in order to increase Europe's strategic autonomy and competitiveness.

### Kick-off in Vienna: Consortium presents project priorities

AIT recently hosted a kick-off event at the AIT site in Vienna-Giefingasse, which was attended by representatives of the 19 project partners. The consortium has defined the following priorities for the next three years:

- **Strengthening the European supply chain:** STREAMS aims to strengthen the supply chain for battery materials in Europe, reduce dependence on imported raw materials and increase the resilience, competitiveness and strategic autonomy of the global battery production industry.
- **Development of comprehensive technological solutions:** The project is developing a portfolio of flexible and scalable technologies for the sustainable production of anode and cathode active materials and their starting materials.

- **Use of different material sources:** STREAMS will promote the use of various primary and secondary sources together with recycled battery material to further reduce dependence on third countries.
- **Circular economic models for sustainability:** Through the development of cycle models, the production of battery cells on a pilot scale and comprehensive tests according to established standards, STREAMS will identify optimal conditions for the future use of the project results.

### **A significant step towards circular battery production**

The overall coordination of the project lies with AIT, which is also heavily involved in the direct research work. The experts in the Battery Technologies Competence Unit are integrating sustainably produced active cathode and anode materials into prototype cells made from recycled, reconditioned and reused battery precursors. The overarching goal is to develop materials and cells that exhibit outstanding electrochemical performance and can ultimately compete with conventional battery systems. In addition, AIT researchers optimize environmentally friendly, aqueous slurry formulations for electrode coating and act as a central interface between laboratory and pilot-scale electrode processing.

Damian Cupid, AIT Senior Scientist and project leader of STREAMS, explains: "By developing sustainable technologies to integrate and harmonize the production of active cathode and anode materials from primary sources, secondary sources and end-of-life batteries, we are making a significant contribution to strengthening the environmental circularity of the European battery materials ecosystem. At the same time, this promotes strategic autonomy, increases competitiveness and strengthens the resilience of the sector."

### **Project consortium**

- [AIT Austrian Institute of Technology GmbH](#) (Coordination)
- [ETI GÜBRE](#)
- [GTEC](#)
- [Sipow AS](#)
- [Instytut Sorbtsiyi Ta Problem Endoekolohiyi Natsionalnoyi Akademiyi Nauk Ukrainy](#)
- [University of Oulu](#)
- [Leitat Technological Center](#)
- [Treibacher Industrie AG](#)
- [Université de Liège](#)
- [Nanopow As](#)
- [TÜBİTAK](#)
- [Łukasiewicz – IMN](#)
- [Enviva](#)
- [F6S Innovation](#)
- [Ukrainian Research And Design Institute Of Electrothermal Equipment](#)

- [Evolution Energy Minerals](#)
- [American Energy Technologies Company](#)
- [Imperial College London](#)
- [University of Warwick](#)



The "STREAMS" project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement no. 101137771.

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