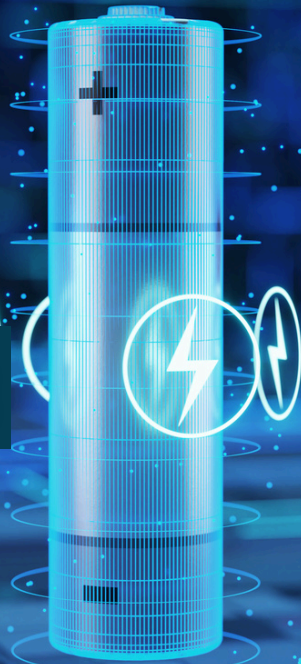


THE

BATTERY

CHRONICLES



Emily Schmidt 

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From Illinois to Europe: AETC's Crucial Role in STREAMS and Strengthening the Battery Supply Chain

I am the business development representative for American Energy Technologies Company (AETC) of Wheeling, Illinois, USA and serve as the project manager for AETC on the STREAMS project. As project manager I am able to participate in all the meetings and help coordinate the work that needs to be done. In February 2025, I had the opportunity to meet with the STREAMS consortium in Poznań, Poland. The STREAMS consortium is composed of nineteen organizations spanning across 13 different countries, so gathering everyone in person was no small feat. Thanks to our consortium leaders at AIT and our gracious hosts of IMN, it was made possible. It was a great opportunity to connect with the team and make significant progress on the project.

AETC plays several roles in STREAMS, with a key as the graphite processors and battery recyclers. I have been working on this project for a year and a half now and it has been very exciting to witness AETC grow and evolve its recycling technologies in particular. As far as we know, AETC is the only organization with the advanced technology of Direct Recycling for the recovery and healing of up to 97% of spent battery components.



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We achieve this unprecedented recovery because we recognize that besides nickel, cobalt, and stainless steel there is tremendous value in graphite, which makes up 48 wt.% of the battery cell Bill of Materials (BoM) irrespective of the lithium-ion chemistry being addressed by our project. The recovered graphite, which accounts for a significant portion of BoM, is fully extracted, repaired, and returned as recycled graphite into the European lithium-ion battery supply chain.

Additionally, AETC has been designated as STREAMS' sole processor of primary feedstocks based on natural crystalline flake graphite and synthetic carbon-based precursors. The flake graphite comes from Evolution Energy Minerals' resource in Tanzania - a favorable supplier to the EU. The synthetic carbon-based precursor is supplied by GLOCK Ges.m.b.H of Ferlach, Austria. These materials are delivered to AETC for processing at our industrial graphite and carbon processing facility located in Wheeling, Illinois, where they are upgraded into anode active materials and cathode conductivity enhancement additives for use in advanced lithium-ion batteries employed in automotive and renewable energy storage applications. The upgraded materials are then returned to the EU partners (AIT, Tubitak, IMN and an off-take partner of STREAMS project, Wamtechnik of Piaseczno, Poland) for rigorous qualification and integration into the European battery supply chain - helping to reduce EU's dependence on critical raw materials for lithium-ion batteries currently sourced from Southeastern Asia.

Our team at AETC is proud to contribute our cutting-edge technologies, ranging from battery recycling to processing of materials from Glock and Evolution, to the STREAMS initiative. The STREAMS program aims to revolutionize Europe's position in the battery manufacturing landscape by strengthening the domestic battery materials supply chain, diminish Europe's reliance on imported raw materials, and boost its resilience, competitiveness, and strategic autonomy in the global battery manufacturing industry. The consortium is well balanced, and each partner has a clear role defined and brings a specific contribution along the value chain of the project. Through collaboration, innovation, and commitment to the STREAMS initiative, I believe the consortium will help reshape the global battery supply chain and propel Europe towards a greener, more sustainable future.

Contact us, at American Energy Technologies Company, if you desire to become part of the EU or North American supply chain in graphite and battery recycling. For more information, visit: www.usaenergytech.com.



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