 **August 3, 2023**

**THE ‘HORIZON’ OF A SUSTAINABLE WORLD OPENS UP IN MARDIN**

**Eti Bakır's Mazıdağı Plant qualifies to receive EU funding for sustainable batteries**

**Eti Bakır's Mazıdağı Metal Recovery and Integrated Fertilizer Plant, the only plant in the world that can produce cobalt from pyrite concentrate which is a byproduct of copper production, became the only Turkish company to receive EU funding for the project “Sustainable Technologies for Reducing Europe’s Battery Raw Materials Dependance”.**

Putting R&D activities, the driving force behind sustainable growth, at the center of production, Cengiz Holding accelerates its efforts in this area as Eti Bakır Mazıdağı Metal Recovery and Integrated Fertilizer Plant - the largest private sector investment in Eastern and Southeastern Anatolia with an investment of USD 1.2bn - becomes one of the 19 international organizations in the consortium qualifying to receive funding within the scope of Horizon Europe’s call for “A Competitive and Sustainable European Battery Value Chain”. In the €7 million “STREAMS: Sustainable Technologies for Reducing Europe's Battery Raw Materials Dependance” project, Eti Bakır will produce cobalt, nickel, manganese and lithium compounds and cathode active material, one of the main components of batteries, with a EUR 1.05 million budget of which 600,000 Euros will be funded by STREAMS.

**19 ORGANIZATIONS FROM 13 COUNTRIES**

**Emre Kayışoğlu, General Manager of Eti Bakır Mazıdağı Metal Recovery and Integrated Fertilizer Plant,** said that with this success they have achieved in Horizon Europe, Türkiye has taken on an important role in the sustainable production and recycling of batteries, which is a major issue of the 21st century. Pointing out that they are the only plant in the world to produce cobalt from pyrite, a residual product of copper production, Kayışoğlu said, “With the recent increase in electric car use, the production and recycling of electric car batteries has become a standing item on the global agenda. In this context, the EU made a call for ‘A Competitive and Sustainable European Battery Value Chain’ in support of ‘cross-sectoral solutions for the climate transition’. We are delighted to be the only Turkish company in the consortium of 19 companies and international organizations from 13 countries, including Austria, Australia, Norway, the United States, Ukraine, Finland, Spain, the United Kingdom, Belgium, and Poland. We take great pride in being part of a project, which TÜBİTAK RUTE, one of Türkiye's most important scientific research institutions, is also part of.”

**SET TO DEVELOP LITHIUM-ION BATTERIES**

Explaining that in the project, battery components will be synthesized from primary and secondary sources and battery waste with sustainable and environmentally friendly technologies, Kayışoğlu added: “This project aims to develop lithium-nickel-manganese-cobalt-oxide (NMC) type lithium-ion batteries with high energy density. Our role in the project will be to provide the cobalt, nickel, manganese and lithium compounds required for cathode active material, which is a main component of batteries. The cathode active material accounts for approximately 31% of the battery by weight and for 51% of the cost.”

**LITHIUM TO BE SUPPLIED BY ETİ ALÜMİNYUM**

Drawing attention to the ‘sustainable’ nature of the projects gaining currency in Europe, Kayışoğlu said that all group companies of Cengiz Holding have been making these efforts for years, with a zero-waste approach. Stating that with the Horizon Europe project, they will improve the existing cobalt carbonate production process with advanced purification methods and develop battery-quality cobalt sulfate heptahydrate, Kayışoğlu continued his words as follows: “We will synthesize new products in the form of battery-quality nickel sulfate hexahydrate and manganese sulfate monohydrate compounds by recovering valuable metals such as nickel and manganese, which are present in trace amounts in our existing raw material, pyrite concentrate. Further, we will also recover lithium, found in trace amounts in the residual product of bauxite ore processed at Seydişehir plant of our sister company Eti Alüminyum, and use it to synthesize battery-quality lithium carbonate and lithium hydroxide with advanced purification techniques in Mazıdağı. We are thrilled that with this 3-year project, we will be contributing to the sustainable economy in our country and the world.”

***EDITOR’S NOTE:***

*Lithium has the greatest electrochemical potential and the highest energy density per weight of all metal elements. As such, lithium-ion batteries are much more durable than other batteries, have a higher energy storage capacity for the same volume or weight, and require less maintenance. Lithium-ion batteries can be used in cell phones, tablets, laptops, and small household appliances, as well as in electric cars and aircraft thanks to their greater physical durability.*