

Critical Elements

re:sourcing UK

The Problem

Raw materials are fundamental to Europe's economy, growth and jobs and they are essential for maintaining and improving our quality of life. Over recent years, there has been a growth in the number of materials used across products. Securing reliable, sustainable and undistorted access of certain raw materials is of growing concern within the EU and across the globe. As a consequence, the EU published a list of fourteen 'critical elements' which were seen as having a high economic importance to the EU combined with a high risk associated with their supply. The list included elements such as niobium, gallium, germanium, antimony, cobalt and Rare Earth metals.

The Solution

Link2Energy secured funding through the Small Business Research Initiative ("SBRI") to prove a hypothesis, namely that these critical elements would be present in bulk industrial waste streams such as filtercakes, sludges, ashes and phosphogypsum. Mapping exercises in the Yorkshire & Humber region alone identified the continuous discharge of industrial residues in excess of six million tonnes per annum with further stockpiles in landfill cells or lagoons.

Screening exercises of such residues using XRF analysis did reveal the presence of many of the critical raw materials with an estimated inherent value of \$17 billion based on conservative calculations. The project also identified possible routes for commercial extraction using new technologies.

Resource Innovation Case Study

Re:Sourcing UK is a practical service delivered by Link2Energy Ltd. At the forefront of developing creative solutions for companies with bulk industrial waste, Re:Sourcing UK solves problems through the application of Industrial Symbiosis and Resource Innovation.



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