

# Pilot plant to obtain strategic metals through energy recovery from solid urban waste

January 27 2017

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Credit: Elhuyar Fundazioa

The FARM consortium has developed a pilot plant that carries out an integral process for strategic metal concentration and recycling in solid urban waste (SUW) energy recovery facilities.

Strategic metals are a group of elements found on Earth in very small quantities, but which are critical in certain production processes, including electronics and catalytic converters. The huge economic importance of these materials is combined with high risk. Should the supply fail, the industries that use them could collapse. That is why obtaining strategic materials using [waste](#) is considered a cornerstone to

mitigate this risk and ensure the competitiveness of companies.

SUW energy recovery facilities, such as those managed by URBASER in European countries, generate two types of waste: ash from gas stream treatment (with two different characteristics) and slag obtained directly from furnaces. The ash is generated in a proportion of 3 to 5 percent with respect to the weight of the original waste, while the slag constitutes 20 percent of the original weight. Right now, these waste materials are disposed of in landfills. The technology underpinning the [pilot plant](#) applies an integral process allowing all the metals contained in these new raw [materials](#) to be recycled, both rare metals of great added value and common ones (Zn, Pb, Cu, etc.).

The project has been undertaken through the FARM consortium that brings together the necessary scientific, technical and business know-how to assess the feasibility of the solutions developed. URBASER, the project coordinator, has provided the [raw materials](#), the potential market and its expertise in terms of energy recovery facilities. TECNALIA has developed recovery technologies based on pyro-hydrometallurgical concentration processes, and the POLYTECHNIC UNIVERSITY OF MADRID has studied alternatives based on minerallurgical technologies.

Provided by Elhuyar Fundazioa

Citation: Pilot plant to obtain strategic metals through energy recovery from solid urban waste (2017, January 27) retrieved 3 April 2024 from <https://phys.org/news/2017-01-strategic-metals-energy-recovery-solid.html>

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