

Abstract

Metals Recovery and Recycling

Reduce, Reuse, Remanufacture, Recycle! Is recycling the simple solution to all our environmental woes, or a feel-good waste of time and money? When considering the impacts of metals production, we can easily come up with problem after problem. But what about the other side? The simplest rebuttal to not mining is—we need metal; therefore, we need mines! Is it so simple? The continual creation of new mines is polluting in the short term, and unsustainable in the long term. There are two different, and complementary, solutions to the environmental (and ultimately economic) problems associated with metals mining. The first is improved regulation and oversight of existing and future mines (not the topic of this talk), and the second is for society to reduce demand for metals in the first place, through a combination of recycling, more efficient production methods, and smarter product design. The environmental impact of mining may be reduced by recycling, and is a necessary part of a circular economy. But, how do we efficiently collect, process, and recycle all of these metals? Under current economic conditions, many metals are more economical to extract from the earth than to recycle, mostly because the price of these metals doesn't reflect all costs of production. This talk will reflect upon metals recovery and recycling from the author's perspective.