

BACKGROUNDER: RECYCLING

Today's global economy requires efficient use of raw materials, as well as material conservation through its re-use and recycling. On average, copper products contain 35 percent recycled content, which significantly reduces copper's carbon footprint. Unlike other commodities, such as energy or food, copper is not consumed. Since copper does not lose its intrinsic properties during recycling, it can be used again and again with the same expectations for performance.

Recycling copper is a highly eco-efficient way of reintroducing a valuable material back into the economy. Nine million tonnes of copper are recycled every year. The copper recycling requires up to 85 percent less energy than primary production. Around the world, this saves 40 million tonnes of CO₂ annually, the equivalent of taking 16 million cars off the road.

It is estimated that since 1900, two-thirds of the 550 million tonnes of copper mined is still in productive use. For recycling to be effective, innovation is needed. Endeavors supporting recycling can be implemented in new product design to facilitate end of life recovery and the industrial recycling processes to increase overall yields. In addition, regulatory policies must continue to encourage recovery and recycling, both at the industry level and by the individual citizen.

A vast majority—70 percent—of copper goes to end-use applications because it is the most efficient nonprecious conductor of heat and electricity. So the things containing copper tend to operate more efficiently. Copper in electrical systems can deliver lifetime savings of 100 to 7,500 tonnes of CO₂ emissions and save its users between \$25,000 and \$2.5 million in reduced energy costs.

Copper's superior electrical and thermal conductivity is the foundation of energy efficiency. Copper is the most efficient nonprecious conductor of heat and electricity, so the things containing copper tend to operate more efficiently. A vast majority—70 percent—of copper goes to end-use applications that benefit from its high level of efficiency.

Energy efficiency is a contributor to sustainable development and economic growth. Many of the necessities that define a modern quality of life require a power source, making energy supply/security critical to long-term sustainable development.



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