



PRESS KIT:

The Euro-Copper Recycling Tour

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THE EUROZONE NATIONS ARE RECYCLING THEIR NATIONAL COINS

The historic replacement of the twelve national currencies by the euro is the largest monetary changeover the world has ever seen. The first minting of some 52 billion euro coins, in eight different denominations, required 184,000 tonnes of refined copper, equivalent to 2% of Europe's annual copper usage over the last two years.

Now that the new euros are in circulation, some 262.055 tonnes of demonetized coins from the twelve Eurozone nations are being removed from circulation. These coins, which contain approximately 147.496 tonnes of copper, will be melted and recycled for use in a wide range of products from new coins to different industrial products.

An estimate of the tonnage of demonetized coins from the Eurozone nations, as well as their approximate copper content, is illustrated below:

Tonnage of coins in Eurozone to be recycled		
<u>Country</u>	<u>Total Metals (tonnes)</u>	<u>Recoverable Copper (tonnes)</u>
Austria	10,289	7,459
Belgium	10,801	5,734
Finland	5,797	4,702
France	43,038	23,190
Germany	78,673	32,476
Greece	8,676	7,550
Italy	44,275	23,816
Ireland	8,374	4,047
Luxembourg	760	206
Netherlands	9,328	2,812
Portugal	6,758	5,246
<u>Spain</u>	<u>35,286</u>	<u>30,258</u>
Totals	262,055	147,496

Source: National Banks and Mints

Copper: a key material for sustainable development

2002 will be the year of sustainable development with the World Summit to be held in South Africa in September. A key challenge is to translate this concept into concrete and measurable actions that appropriately reflect the three basic elements - economic, social and ecological.

Sustainable development means ensuring that the needs of future generations can be met from sufficient resources within a healthy environment.

Sustainable development relies on the highly complex optimisation of many factors, including resource conservation, waste minimisation, energy efficiency, climate change mitigation, longer product life cycles and effective recycling,

Copper facts supporting sustainable development:

1. Copper is 100% recyclable. It maintains all of its beneficial properties, such as durability, thermal and electrical conductivity (the best after silver), corrosion resistance, malleability, ductility and excellent joining, alloying and antibacterial properties.
2. There is *no limit* to the number of times copper can be recycled without any loss of performance. It is also impossible to distinguish whether copper is made from primary or recycled sources. This positions copper as one of the most renewable of all materials.
3. Copper products are highly durable. For example, the new euro coins have a design life of 30 years.
4. Recycling provides a vital proportion of copper's total metal needs in Europe. It is estimated that 45% of the Region's annual demand is supplied by recycling.

Copper and sustainable solutions

Copper, sometimes referred to as “the green metal,” plays a very important role in *each* of these sustainable solutions:

How Copper Recycling contributes to Sustainable Development

Copper recycling offers important opportunities to conserve natural resources, minimise waste, and reduce energy usage.

Resource Conservation: Copper recycling has a strong positive impact on conserving natural resources for future generations. Copper is not “consumed” in the sense of being “used up.” Rather, it is used, recycled, and reused. It is estimated that a remarkable 80% of all copper ever mined is still in use today. Furthermore, some 45% of Europe’s annual demand for copper is supplied by recycled sources.

Waste Minimisation: Copper recycling generates little or even no waste. Pure copper scrap is easily melted in furnaces or smelters. Alloy and mixed scrap are processed in converters, where certain impurities and intermediate products are removed. Cable scrap, electronic etching solutions, electroplating sludge and catalyst residues can all be converted into new copper.

Energy Conservation: Copper recycling is not nearly as energy intensive as mining copper ore. Recognising that recycling requires collection and sorting, the amount of energy required to recycle copper is about 25% of that needed to convert copper ore to metal.

How the Energy Efficiency of Copper contributes to Sustainable Development

Energy is precious, and its true cost is expensive. Waste of energy depletes our natural resources by requiring fossil-fuel power plants to work harder. This results in more greenhouse gases and inevitably leads to the building of new fossil-fuel plants, generating even more emissions that contribute to climate change.

Electricity flowing through copper wires meets far less resistance than it would in aluminium wires of the same diameter. In fact, copper is a better electrical conductor than for any other metal, with the exception of silver. As a result, copper is the material of choice in electric power systems. The use of more copper in high- and premium-efficiency motors, high-efficiency transformers, power cables and electrically efficient appliances can reduce loss by as much as 25%.

The future will see an increased dependency on renewable energy sources, such as solar and wind. However, to recognise the lower capacity available from such systems, for example one medium size power generating station would need to be replaced by 1000 large wind turbines, the energy intensity in our society has to be substantially reduced. Copper plays an essential role in both improving the efficiency of use and in enabling renewable energy generation.

While energy efficient products, that contain more copper, are often more expensive, the extra investment will more than pay for itself in reduced energy bills, usually within a short period of time.

How Copper in Solar Energy contributes to Sustainable Development

Copper solar collectors are at the heart of many commercial systems for space heating and water heating, particularly in warmer environments. In thousands of buildings around the world, copper has proven that the sun's energy can be harnessed effectively and economically.

Copper solar collectors can heat water to over 70°C (160°F), thereby reducing the need for fossil-fuel energy resources. This conserves energy and reduces emissions from fossil fuels that pollute the air and cause climate change.

Copper conducts heat and resists corrosion better than any other engineering metal. The metal's thermal conductivity, resistance to atmospheric and aqueous corrosion, workability, sealability (joining by soldering), and durability are key to making solar collectors and heat exchangers cost-effective.

How Copper's Durability contributes to Sustainable Development

Copper is extremely durable. In ancient times, copper was used in products designed to last more than a lifetime. For example, copper tubing in the water plumbing system in Egypt's ancient Cheops Pyramid is intact and serviceable after 5,000 years. And one of the famous Dead Sea Scrolls found in Israel was made with copper instead of fragile animal skins, providing today's archaeologists with a key source of information about the past. Copper cooking ware and artifacts in museums, dating back some 50 centuries, have also stood the test of time.

Today, products containing copper are made to last from several years to up to 150 years, depending upon the application. The durability of copper remains an important sustainable benefit, providing users with lower operating costs and negligible environmental impact during use.