

GREENFLATION

Commodity

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We are moving from the age of abundance to the age of scarcity! So announced Christopher Guérin in July, speaking about the quarterly results of Nexans, a company that builds cables to transport the energy generated by offshore (sea) wind farms to the mainland. In particular, Guérin referred to the commodity that will be the most used in the new sustainable world: copper.

In 2030, i.e. in just six years, the need for this metal will be six times that of today, given its extremely widespread use: in the electric car (which uses six times as much copper as a traditional car), in charging stations, in wind turbines, in photovoltaic panels, in batteries and for electrical grids,

Sustainable finance according to



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CONTACTS info@aism.lu +352 27 85 47 1 21 Rue Aldringen L-1118 Luxembourg including land and submarine cables. If we have called petroleum the black gold, copper will be the future red gold, as it alone will make up more than 50 percent of the metals needed to bring about the energy transformation everyone wants.

However, it is not enough to have sufficient copper in the earth's crust for the change to take place; it is also necessary for mining companies to extract it at a profit.

A copper from a new mine for the first few years has higher quality and is easily recoverable, while over time its quality deteriorates and mining costs increase. Conversely, it takes about two to three years to expand an existing copper mine and eight to start operating a new one. Taking all factors into account and the average life of a mine, which is around 25 years, the cost for a mining company is around \$3.3/lb. and in order to have a profitable investment, the price of copper should be above 4.2lb. This price was only reached for a few months in 2021, before falling back below this threshold, where it still stands today. To maintain a price above \$4.2 for 20 years, the value of copper should grow substantially, in fact it is estimated that the price will have to double in the next few years.

While cost is the main factor for a mining company to be willing to invest large amounts of capital to develop new extraction sites, it is not the only variable to be consider.

To reach the 2050 targets of zero GHG emissions, we will need another 10 to 20 Mtpa

(million tonnes per annum). Today we produce 21 Mtpa and in the last two decades production has increased by 8 Mtpa. So, in the next decade, copper production growth will have to almost triple. But it is not enough to have the necessary investments: equipment, personnel and extraction ability are also needed. It is like bringing water to the desert.

It is therefore clear that the era ahead of us is one of scarcity of supply to meet a rapidly growing demand. And as a first effect, the price will rise.

The age of scarcity does not only concern copper, but all metals and minerals related to energy processing, as well as agricultural commodities due to the increasing world population.

In fact, thinking of electric cars and batteries, another essential element is lithium. The same considerations as for copper also apply in this case: more than seven years to get a new lithium mine operational and 6 to 18 months to reach the quality needed to be used in batteries, whose factories, on the other hand, take only one to three years to build.

We could make similar arguments for aluminium, nickel, cobalt and other raw materials. The poor availability of these metals and minerals linked to energy transformation has coined a new anglicism: **greenflation**. So while on the one hand we have the central banks scrambling to keep inflation close to the 2% target, on the other governments are pushing for a new world that would devour resources that will not soon be available and that could make Powell, Lagarde and Co.'s task harder.