

Replacing Copper With Aluminium

is the most effective way to deal with the looming global copper shortages

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ABSTRACT

A series of recent studies by reputable organisations have all forecast significant global shortages of copper starting in the mid 2030s.

This presentation will show that substitution is the likely remedy.

Three main points:

- Substitutes (including PEX piping, fibre optic cables, and aluminium tubes) supplied 40% of the global demand for copper over the past 50 years, during which there were two periods of shortage.
- Of the copper consumed globally in 2023, about 70% could have been replaced by substitutes (including aluminium wiring, cables and tubes) without significant negative impacts.
- The main barrier to using substitutes is copper's reputation for quality, and the reluctance of manufacturers and consumers to trust substitute products (including in building wire, aircon HX and renewables cabling) even though they are proven to work just as well as copper.

History has shown that the barriers to substitution tend to crumble quite quickly when shortages appear.