



Copper power cable underpins the energy transition

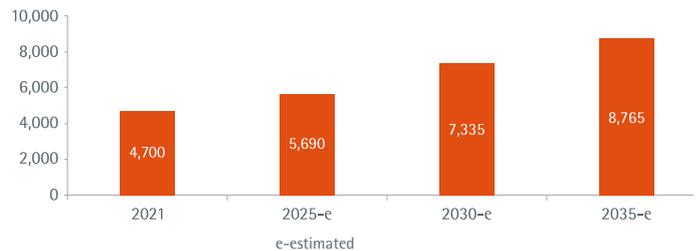
Study Name: Power Cable in New and Emerging Areas
Study Author: SAI INDUSTRIAL LLC
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The global shift to renewable technologies, including the large scale expansion of solar, wind and electric vehicle (EV) infrastructure, is causing an increase in demand for copper in power cabling. Copper's conductivity and energy-efficient properties make it the material of choice for power cables, comprising 54 percent of the global power cable market.

Increasing demand

Demand for copper in power cables is set to rise to more than 8.7 million metric tonnes (mt) by 2035, as the market expands by a compound annual growth rate (CAGR) of 4.5 percent. Increased demand for power cabling is a global trend, and China is currently leading the way with 57 percent of copper consumption in 2021.

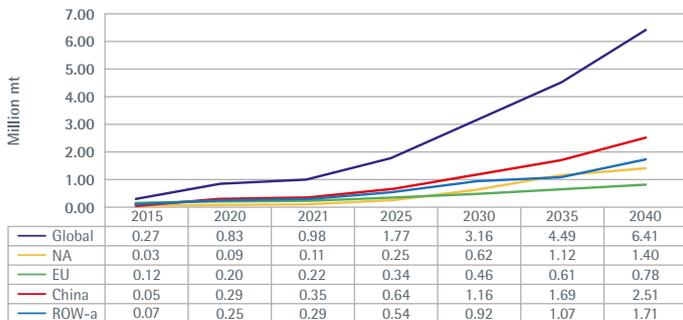
Copper Demand – Emerging Technology (kmt)



Expansion in solar and wind

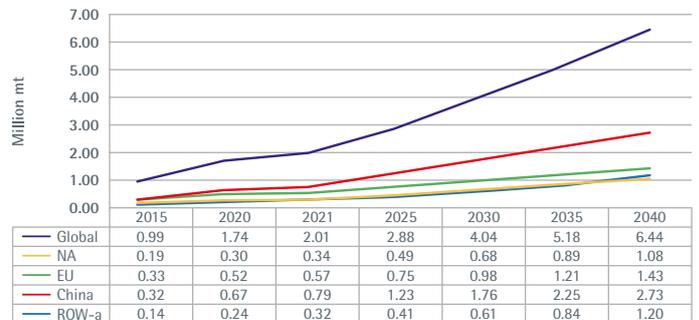
Copper used in power cables for solar technologies will increase from 980,000 mt in 2021 to 6.4 million mt by 2040. China is expected to lead copper demand related to solar technologies, consuming 2.5 million mt of copper by 2040. Followed by countries across South America, the Middle East, Africa and Asia Pacific (excluding China) with 1.7 million and North America with 1.4 million mt of copper by 20240. SAI Industrial projects significant increases in copper demand from wind installations, reaching 6.4 million mt of copper by 2040 from 2 million mt in 2021. China is also expected to lead wind installation-related copper demand, requiring 2.7 million mt of copper by 2040, followed by Europe at 1.4 million mt in the same period.

Copper power cable demand – solar



a: Includes South America, the Middle East, Africa and Asia Pacific (excluding China)

Copper power cable demand – wind

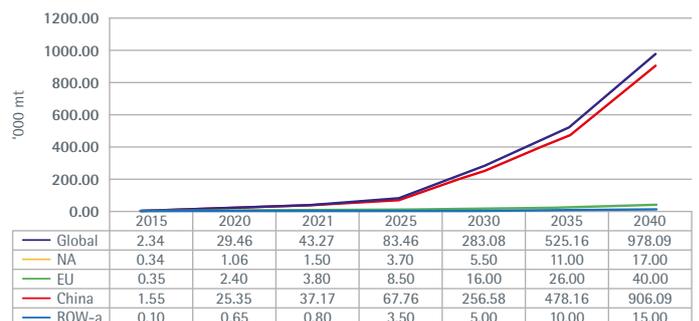


a: Includes South America, the Middle East, Africa and Asia Pacific (excluding China)

Further opportunities

The number of EV charging ports are predicted to grow from 3.2 million in 2021 to 152.3 million in 2040, causing copper demand in the sector to reach 978,000 mt in 2040 from 43,300 mt in 2021. Demand for copper in power cables will also be driven by other emerging technologies including building and construction, data centers, smart grids, HVDC networks and energy storage.

Copper power cable demand – EV charging



a: Includes South America, the Middle East, Africa and Asia Pacific (excluding China)