

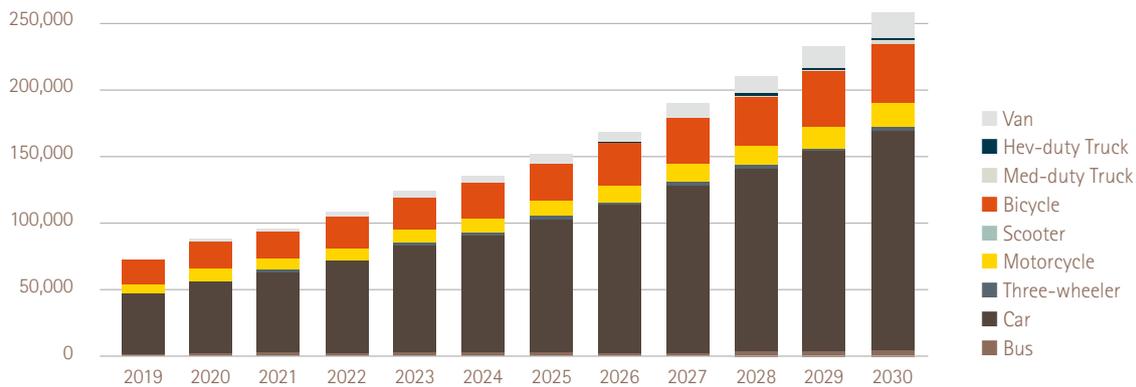


EV motors boost copper demand

Study name: Copper demand in electric traction motors 2020 - 2030
Study author: IDTechEX
First presented: March 2020

Over the next 10 years, the widespread adoption of electric traction motors in on-road vehicles will yield a significant increase in copper demand, according to new findings by IDTechEX. The research, commissioned by the International Copper Association (ICA), found that by 2030 more than 250,000 tonnes per annum of copper will be used within the windings of electric traction motors of on-road electric vehicles.

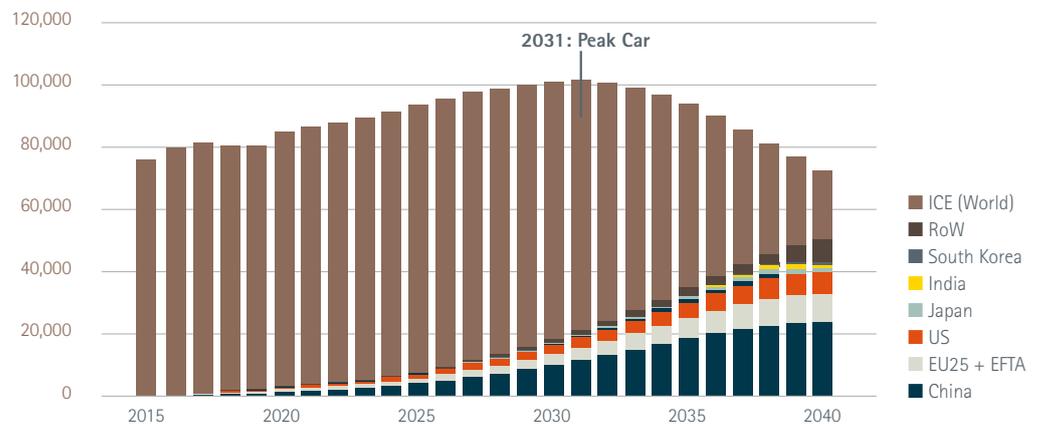
Copper demand in electric traction motors for on-road electric vehicles (tpa)



Development of battery-electric cars

The growth in demand for copper follows the trajectory of the global car market, where pure battery-electric cars are predicted to extract the greatest value in the coming years. IDTechEX predicts by 2030 battery electric and plug-in hybrid cars will account for roughly 19 percent of the total market, and then skyrockets to 72 percent by 2040 amid a declining auto market that peaks in 2031.

Plug-in electric cars extract value from a declining car market (car, thousands)



Copper content in motor types

Copper intensity fluctuates between the various types of electric traction motors, and the vast majority use copper. Motors will, therefore, be a significant source of growth for the copper industry over the next decade. ACIM and WRSM have greater copper intensity due to copper presence in both stator and rotor.

Average Cu kg per kW selected electric traction motors for commercialised cars

