

Power electronics set to increase copper demand

Over the next two decades, the widespread adoption of power electronics devices in electric vehicles and renewable energy sources, such as wind turbines and solar farms, will significantly increase copper demand, according to new research released today by IDTechEx.

The research, commissioned by the International Copper Association (ICA), found that by 2030, renewable energy and electric car power electronics devices-including inverters, onboard chargers and DC converters-will require around 20 kilotonnes of copper per year.

The study also found the growth in copper demand follows the trajectory of the global car market, which IDTechEx predicts will expand from roughly 4 percent of the global auto market today to over 80 percent by 2040. This will result in 45 kilotonnes of copper required per year in 2040 for electric car inverters. Furthermore, between 2015 and 2040 an accumulated 425 kilotonnes of copper will be required for the main inverters of plug-in electric cars.

Senior Technology Analyst at IDTechEx, Luke Gear, said, “Shifts from internal combustion-engines to electric vehicles and from fossil fuels to renewables as part of new climate goals will prove advantageous for copper. Over the next two decades, electric cars, wind and solar farms will all need inverters, providing a new source of growth for the copper industry.”

“The boom in electric car markets and renewable technologies is great news for the copper industry,” says Colin Bennett, Market Intelligence Director at ICA. “As next generation inverters, utilizing silicon carbide power modules with copper, lead frames and copper wire bonds are adopted across a wider range of electric vehicles, the research expects to see a solid increase in copper demand – positive news for the industry after the uncertainty of COVID-19.”

About the International Copper Association

The International Copper Association (ICA) brings together the global copper industry to develop and defend markets for copper and make a positive contribution to the UN’s Sustainable Development Goals. Headquartered in Washington, D.C., ICA has offices in three primary regions: Asia, Europe and North America. ICA and its Copper Alliance® partners are active in more than 60 countries worldwide. For additional information, please visit www.copperalliance.org.

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