

# Copper & Clean Energy

Copper is a vital component of technologies that will power the world's transition to clean energy. Fortunately, Resolution Copper has the potential to supply up to **one-quarter of the nation's total copper demand**, providing a homegrown source for American manufacturers and driving innovation and economic opportunities in Arizona and across the country.

## Renewable Energy Driving a Global Copper Crunch

The U.S. was the fourth largest copper-producing nation in 2019, after Chile, Peru, and China. But analysts estimate global copper demand from wind, solar, EVs and battery applications will increase by **600%-900% by 2030**, to as much as 8.7 million tons.\*



**Solar:** PV solar panels contain approximately **5.5 tons of copper per MW**. The Resolution Copper project could provide enough copper to meet the entire world's projected solar uptake through 2050, adding approximately 1.2 TW of new solar capacity.\*\*



**Wind:** The US is currently leading the world in wind energy production, but a lack of copper may thwart this industry's expansion efforts. A single wind farm requires **between 4 to 15 million pounds of copper**\*\*\*. The Resolution Copper project could meet the entire projected global need for wind energy through the life of the mine, enabling approximately 5.5 TW of wind power growth.\*\*\*\*

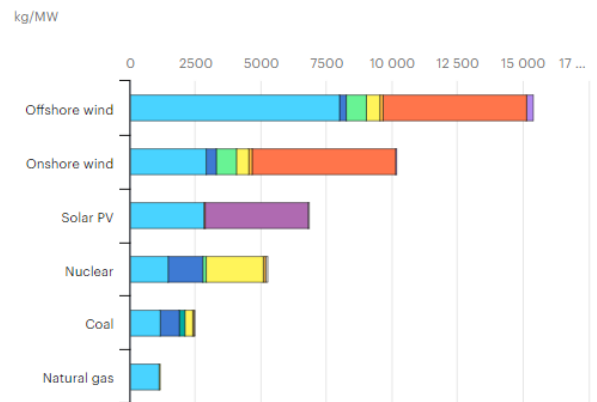


**Energy Storage:** Storing energy reserves requires massive amounts of copper. Grid energy storage installations require between **0.3 to 4 tons of copper per MW**.\*\*\*\*



**Electric Vehicles:** Electric vehicles use **four times** more copper than conventional automobiles, and the EV car field is only growing. The Resolution Copper project has enough copper to manufacture **almost 220 million EVs** (about half the projected global supply) by 2040.\*\*\*\*\*

Minerals used in clean energy technologies compared to other power generation sources



IEA. All Rights Reserved

● Copper ● Nickel ● Manganese ● Cobalt ● Chromium ● Molybdenum ● Zinc  
● Rare earths ● Silicon ● Others

Source: "The Role of Critical Minerals in Clean Energy Transitions," IEA (May 2021)

\* Goldman Sachs Commodities Research (April 2021)

\*\* Calculation based on SEIA & Wood Mackenzie analysis (March 2020)

\*\*\* Copper Development Association (May 2019)

\*\*\*\* Calculation based on Wood Mackenzie analysis (October 2019)

\*\*\*\*\* Calculation based on Bloomberg NEF EVO report (May 2020)

**Renewable energy sources require more copper than traditional energy sources. With a strong domestic supply, the U.S. can be a leader in the clean energy transition.**

**Learn more: [www.resolutioncopper.com](http://www.resolutioncopper.com)**