



*Jayanta Bhattacharya*  
Chief Editor

## Discussion-Opinion-Editorial™

# Global EV Market: as it is Changing After the Ukraine War

## Background

The future of the EV industry is shrouded in uncertainty, as the ongoing Russia-Ukraine war continues to have a major impact on the global market. With tensions between the two countries remaining high, it is difficult to predict how long the current situation will continue. This has led to concerns about the stability of the EV industry, as well as the future of electric vehicles in general. If the current situation persists, it is likely that the EV industry will be severely impacted. This is due to the fact that Russia is a major supplier of lithium-ion batteries, which are used in electric vehicles. In addition, Russia is also a major market for electric vehicles. If the current situation does not improve, it is possible that the EV industry could collapse.

Russia is also a major producer of lithium, a key component in electric vehicle batteries. As a result, if Russian supplies are cut off, it could cause a major shortage of lithium globally. This would lead to higher prices and could eventually make electric vehicles unaffordable for many consumers. Russia's metals are vital for the electric cars, solar panels, smart grids, and wind turbines needed to tackle climate change. According to Barron's, the price of electric car battery metals has jumped by 50 per cent since Russia invaded Ukraine on February 24, 2022. And price increases in raw materials and the threat of disruptions come at a time when Europe is working to speed up the green energy transition and break its heavy reliance on Russian oil and natural gas. EU leaders recently agreed to cut off 90 per cent

of Russian oil imports by the end of 2022.

In addition, the continued fighting in Ukraine could also lead to problems with production and distribution. Many companies rely on Ukrainian factories for parts and components, and the current conflict is making it difficult for them to operate. This could lead to disruptions in the supply chain and ultimately result in higher prices for electric vehicles.

The Russia-Ukraine war has already had a significant impact on the global EV industry, and it is still unclear what the future holds.

## Nickel prices

Nickel prices have skyrocketed in response to the war in Ukraine, are a good example of how even a relatively available commodity can cause supply chain headaches for the energy transition, given the right conditions. A reliable nickel supply is important for electric vehicles, because it is used in small amounts for lithium-ion batteries. Continued price volatility could raise the price of electric vehicles by as much as \$1,000, despite the small amounts used in the batteries. On a larger level, the issue highlights larger questions about what price – operationally, environmentally and financially – we are willing to pay for a low-carbon future. While nickel deposits exist all over the world, there have been some shortages over the past couple of years of high-grade nickel, which is more expensive and difficult to mine than

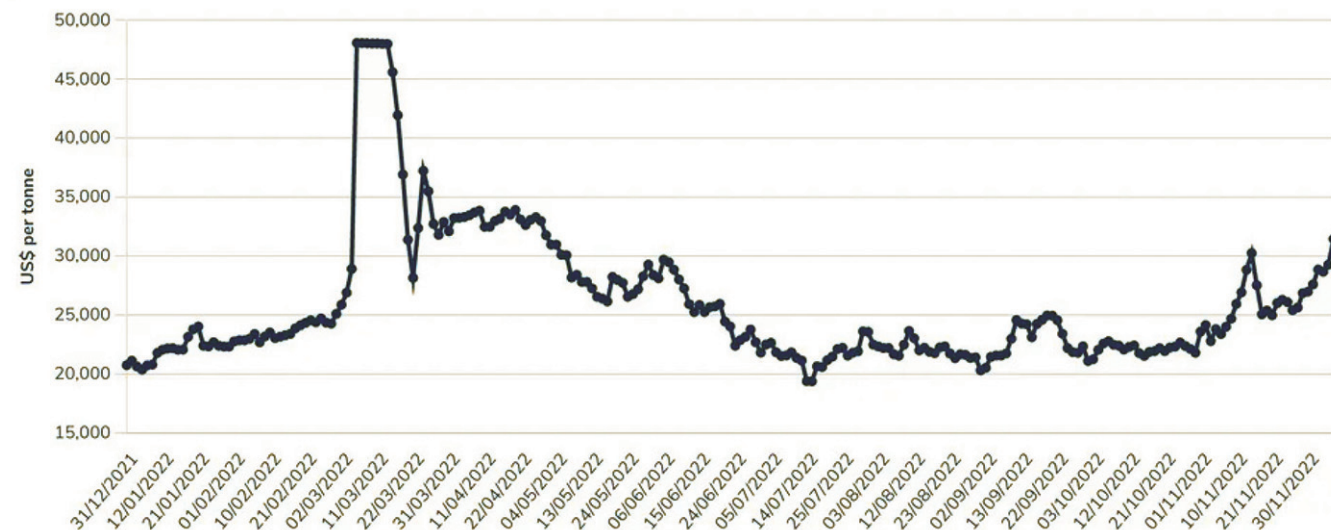
## LME Nickel 3M Official

Mid-point USD/Tonne



Source: Fastmarkets, LME

Price



lower quality nickel. The price of high purity nickel for delivery went up 20 per cent in November and peaking at \$31,275 per tonne. The choppy market conditions underscored how the chaotic events of March still hang over the exchange. One of the nickel market’s biggest traders, China’s Tsingshan, was caught out by the war in Ukraine and a sharp squeeze on prices.

Nickel on the LME doubled to more than \$100,000 a tonne, a record, and the oversized margin calls threatened to engulf smaller brokers. LME chief executive Matthew Chamberlain was forced to suspend trading for a week and cancel more

than eight hours of trades, causing uproar among many of its users. LME trading volumes have declined since then as many traders have pulled back their activity – the resultant thinner market has exacerbated market moves. That brings us to Russia, one of the world’s top suppliers of high-grade nickel at a competitive price. About 11% of global nickel production last year came from Russia, but its decision to invade Ukraine has made sourcing from Russia more complicated. From nearly \$13000.00 per tonne in April, 2020 the price rose to \$30,000.00 per tonne by the end of November 2022.

## Global lithium prices up

### Price markers

1. Chinese lithium prices continue uptrend amid lingering tightness
2. Seaborne lithium prices rise on tight supply, Chinese strength.
3. Europe, US lithium prices trend upward due to a prolonged scarcity of spot units, strong Asian markets

China's lithium prices experienced strong gains for a third consecutive week after the January 31-February 6, 2022 Chinese New Year holiday, with spot supply showing no signs of improvement.

With Chinese demand for lithium largely met through domestic production, market participants are not expecting any major impact on prices in the country from the invasion of Ukraine by Russia for now.

"The market is still extremely undersupplied, and there is no sign of any improvement so far. Chinese lithium consumers have to scramble for any spot units," a Chinese lithium trader said.

Multiple market participants referred to the current Chinese spot lithium market as a "seller's market." As soon as there is any offer of lithium salts in the spot market, it is

immediately secured at a price to the seller's satisfaction. "The current headache for all Chinese lithium consumers is still the scarcity of spot units, and I don't know when it will be eased," a Chinese lithium consumer source said.

### Copper Prices to Remain High, Near Record

Copper prices reached an all-time high of \$10,512 per metric tonne on May 9, marking a 130% growth since March 22, 2020. The consensus forecast from three leading sources (IMF, World Bank, and the Australian Government) for 2021 is \$8,357. The average year-to-date price as of May 20 was \$8,915, which means the forecasts do not reflect an expectation of further increases over the second half of the year.

The copper price growth over the course of the past year was driven primarily by the high demand from China, the top copper consumer, as well as growing optimism about the overall economic recovery in view of COVID-19 vaccine rollouts. The demand for copper is expected to rise further amid rising concerns about low copper inventories.

Copper is the most widely used metal in energy generation, transmission infrastructure, and energy storage. It is the next most used metal after aluminum and steel in the construction, telecommunications, transportation, and automobile manufacturing sectors.

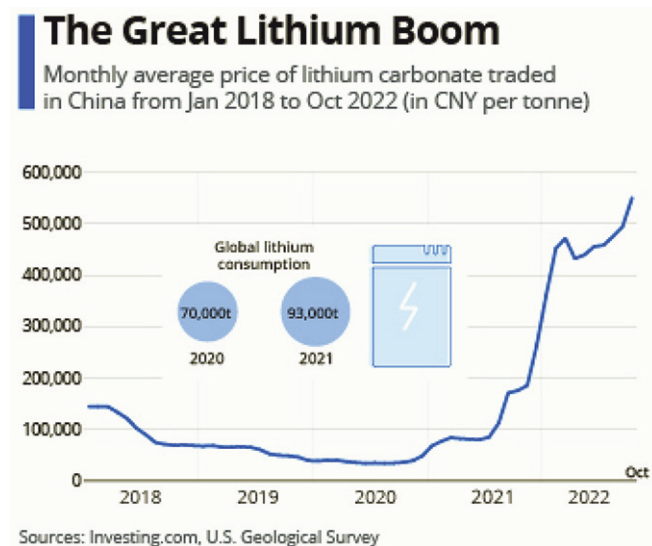
Here are the copper price forecasts issued by each of the leading international agencies:

- The World Bank estimated in its commodity forecast report that the spot price for copper will average \$8,500 per metric tonne by the end of 2021. The price is expected to decrease to \$7,500 in 2022 and then grow to \$8,250 by 2035.
- The IMF projects the growth of the copper price from an average of \$6,174 per metric tonne in 2020 to \$8,313 in 2021, followed by a gradual decline to \$7,600 per metric tonne by 2026.

**Charged up\***

	2020	2021	2022#	2023#	Current spot
China Lithium Hydroxide Monohydrate 56.5%	7,290	16,506	67,000	56,000	70,724
China Lithium Carbonate 99.5%	6,375	18,938	68,000	55,000	70,425

Source: Bloomberg/Fitch Solutions \* Average price trend in \$/tonne #Forecast



### LME COPPER HISTORICAL PRICE GRAPH



- The Department of Industry, Science, Energy, and Resources of Australia also expects the price of copper to rise sharply to \$8,257 in 2021, with a slight decrease to \$7,724 in the following two years and consequent growth to \$8,876 by 2026.

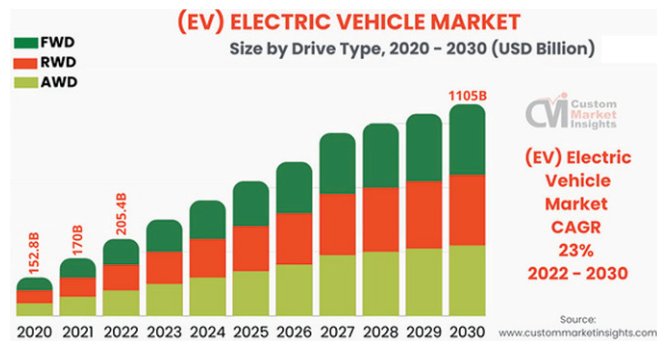
### EV Market aftermath

A June, 2022 Yale report says Volkswagen the world’s second-largest manufacturer of electric automobiles announced in 2022 that any plug-in ordered after May won’t find its way to customers’ garages before 2023. The German carmaker’s sales of nearly 100,000 battery electric models in the first quarter landed it behind only Tesla, but far from the pace needed for the 700,000 it planned to roll off its assembly lines this year. And Tesla, too, like almost all other EV carmakers, says it is highly unlikely to hit 2022’s sales targets.

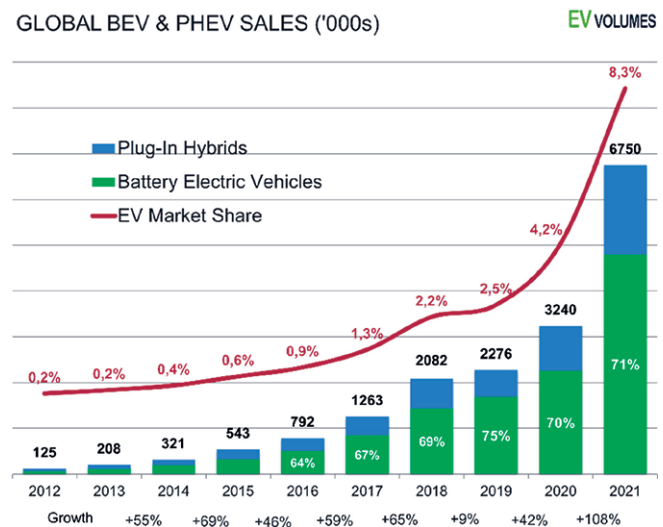
Carmakers such as Volkswagen and Tesla say they face multiple problems, including the Chinese economy’s airtight Covid lockdown, which has stifled China’s demands for new electric vehicles. But closer to home in Europe, the looming obstacles have much to do with fallout from the Russian invasion of Ukraine and Russia’s role as a major supplier of the metals needed for EV batteries, as well as for the entire renewable energy sector, from wind turbines to solar panels. The war in Ukraine – coupled with continuing Covid supply chain disturbances, logistics bottlenecks, and soaring global inflation – has reversed a decade of falling prices in the green tech sector. And that reversal threatens to set back the global rollout of low-carbon technology.

Russia has not cut off its export of the metals needed for the green energy sector, but Britain has imposed tariffs on imports of some Russian metals as a result of the war. And the specter of additional tariffs being imposed by the European Union – thus far blocked by Germany – hangs over an already hobbled renewables sector unable to meet surging demand eight months after the bloc set a goal of reducing greenhouse gas emissions by 55 per cent by 2030.

Europe imports more than \$7 billion of metals, rubber, and minerals a year from Russia, including nickel, palladium, lithium, platinum, cobalt, neon gas, aluminum, and copper. These are all vitally important for the batteries, electric cars, solar panels, smart grids, and wind turbines needed to tackle climate change. For example, Norilsk Nickel – owned by



GLOBAL BEV & PHEV SALES ('000s)



Vladimir Potanin, a key Putin ally and one of Russia’s original oligarchs – is the world’s largest producer of high-grade nickel, mined in Siberia, and also trades in palladium, cobalt, and copper. Russia supplies Germany with 39 per cent of its nickel – which is used in car batteries – and much of that comes from Norilsk Nickel.

“This degree of dependency on [Russia for] some materials is really quite alarming,” says Vasileios Rizos, head of sustainable resources circular economy at the Center for European Policy Studies, a think tank based in Brussels. “It has accelerated a search already underway to diversify and replace Europe’s sources for these raw materials. In no way is it sustainable in the long run, with Putin or without.”