# EV industry's demand for nickel in doubt due to oversupply, economic concerns

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By Anthony Barich Market Intelligence

Nickel developers and producers are clambering to be more environmentally sensitive for the electric vehicle industry, which experts say may not increase demand into a significant share of an already oversupplied market for up to a decade.

Environmental, social and governance issues have already cast a shadow over the Sept. 22 annual shareholder meeting of Tesla Inc., whose CEO Elon Musk lit up nickel markets in July when he offered a "giant" long-term contract to companies who could mine it in an "environmentally sensitive way."

Management consulting firm McKinsey & Company said in a Sept. 11 note that for nickel, "every mining method, processing route and type of generated waste will bring its own challenges for meeting ESG requirements," whether it comes from laterite or sulfide ore bodies.

McKinsey said producers, explorers and developers are positioning themselves to demonstrate to EV original equipment manufacturers and end users that they can supply "clean nickel."

However, those decisions will be influenced not only by reputation but also by economics, and "at current nickel prices, the anticipated new supply coming online is still mostly (but not exclusively) expected to operate with current practices, while EV OEMs are expected to increasingly demand clean nickel," McKinsey said.

Private investment firm PAC Partners' analyst Phil Carter told S&P Global Market Intelligence that there will always be ESG imperfection when it comes to sourcing vital metals, an inherent consequence of mining and processing raw materials. However, he said nickel sulfide producers and developers will benefit more than their nickel pig iron, or NPI, counterparts in the hunt for "clean" nickel as they produce significantly less waste throughout the processing cycle.

A subset of these sulfide projects with the ability to operate with low carbon emissions could benefit from the recent clean nickel sentiment hinted at by Musk, Carter said, citing West Australian producer IGO Ltd. investigating electric vehicles for underground mining at the Nova mine, as well as a proportion of its power generated via solar.

Blackstone Minerals Ltd. will also be able to source power from a nearby hydroelectric plant in Vietnam, to which its Ta Khoa nickel-copper-platinum group elements project is already connected.

## Water dam and tailings facility at Blackstone Minerals' Ta Khoa nickel-copper-platinum group elements project in Vietnam.

Source: Blackstone Minerals

Blackstone Managing Director Scott Williamson told Market Intelligence that the hydro plant "wasn't a huge selling point" for his project until Musk's comments "exposed the whole industry," and nickel in particular, in the challenge to develop a low-carbon supply chain for lithium-ion batteries. He added that the hydro plant was important in winning over institutional funds in Blackstone's A\$21 million raise this month, in which U.S. investment management firm Fidelity International was a cornerstone investor.

### Surplus impact

This month, Market Intelligence tightened expectations for this year's primary nickel market surplus from 97,000 tonnes to 80,000 tonnes, and increased its 2020 average London Metal Exchange three-month price forecast by US\$130 per

#### tonne to US\$13,620 per tonne.

Yet Wood Mackenzie's principal nickel analyst Angela Durrant said "there is a lot of trepidation among people who are watching the nickel industry at the moment, because it's looking pretty dire in terms of the supply, and where it's all going to go."

She said the market is effectively relying on China to keep producing stainless steel, a global market that still accounts for 74% of nickel demand according to McKinsey, with EV batteries only representing up to 8%.

"Considering the supply-demand balance and expectations over the mid to long term, we don't see the uptick in EVs and nickel requirement in batteries to really turn anything around from a nickel market perspective until anywhere between 2027 and 2033," Durrant told Market Intelligence.

"If we're looking at surpluses out for the next decade potentially, we worry that eventually there will be no incentive for projects whatsoever," she said, particularly with increasing volumes of stock on the London Metal Exchange and Shanghai Futures Exchange.

Costs are as low as they have been in years. Wood Mackenzie sees C1 costs dropping to about US\$2.07 per pound, or US\$4,563 per tonne, in 2020 from about US\$2.94 per pound in 2019, and Durrant said that with producers making margins at current prices, there is no impetus to cut supply.

Carter said the current nickel price appears to be driven by sentiment as opposed to fundamentals.

"A surge in NPI supply from Indonesia in the short term should keep the nickel market in oversupply territory for at least the first half of the decade, as stainless steel will continue to dominate nickel consumption," he said.

PAC expects to see noticeable impacts on nickel demand from EVs by the mid-2020s, but agrees with Durrant that in the short term "fundamentals suggest there is little reason for further gains in the nickel price," Carter said.

Independent analyst and nickel specialist Jean-Francois Bertincourt sees the nickel price boom occurring in five years, as "the EV thematic is still valid, pushed by China but also now by Europe, with huge investments to turn traditional auto makers into EV [production] faster."

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