

## China Building Indonesia into an EV Powerhouse

China's investments in Indonesia's nickel, copper and other ores used in electric vehicles are lifting nation's industrial prospects

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*Chief investment minister **Luhut Panjaitan** has few concerns about China's iron grip on Indonesia's nickel industry as other major investors flock to a country with the range of mineral elements needed to turn it into one of the world's leading producers of lithium batteries and electric cars.*

"We invited everybody and no-one came, except the Chinese," the minister said in a wide-ranging interview that reflected the retired general's consuming vision of Indonesia as a modern industrialized state. "So they're welcome and they are easy to deal with."

It is not the first time he has defended China's growing role in the Indonesian economy. "Like it or not, happy or not happy, whatever is said, China is a world power that can't be ignored," he told a virtual public lecture last year. "You can't dodge facts out in the field."

While European interest often remains focused on just one level of the manufacturing process, the hard-charging Chinese are developing a fully-integrated supply chain, from stainless steel and lithium batteries to even copper wire and other finished products. As Panjaitan puts it: "All the way down."

"Indonesia will move up from a producer and exporter of raw materials to becoming an important player in the world supply chain, where lithium batteries account for 40% of the total cost of an electric car," says **Bahlil Lahadalia**, head of the Indonesian Investment Coordinating Board (BKPM).

However narrowly focused it may be for now, it is a vindication of the once much-criticized value-added mining policy introduced during the Susilo Bambang Yudhoyono presidency and now being pursued with new energy by the **Joko Widodo** administration.

When he steps down in 2024, President Widodo will almost certainly leave a legacy as Indonesia's "Infrastructure President." But his uncertain handling of the Covid-19 notwithstanding, it could be so much more if his government can lay the groundwork for a great leap forward in industrial development.

"Nobody but China was prepared to risk putting money into Indonesia," says

a foreign mining expert who has visited Central Sulawesi's Morawali Industrial Park, the site of one of privately-owned Tsingshan's Steel's two nickel-processing complexes in eastern Indonesia.

As an illustration, he recalled a Chinese engineer telling him during his tour of the plant:

"We looked at the numbers and worked out whether we would be in the lowest 25% in terms of cost of production. Once we had determined that, we knew we could never be out of business."

Often dubbed the "Minister of Everything," Panjaitan is well aware of talk that he sits in Beijing's pocket. "They (Indonesians) don't understand sometimes," he says. "But they can't blame me anymore. I also have a good relationship with the Americans and I have good relationship with Abu Dhabi."

He might have added South Korea, with lithium battery-maker LG Chemical and car manufacturer Hyundai recently announcing new investments totaling \$11.3 billion that will give them a leading role in the fledgling electric car industry.

Panjaitan and his team have also had four rounds of talks with American auto giant Tesla, a major producer of lithium battery packs whose interest in Indonesia lies in several diverse areas, including the location of a future SpaceX rocket launch pad on the northern Papuan island of Biak.

Industry aside, Panjaitan has also been a leading figure behind Indonesia's planned sovereign wealth fund, which has attracted initial pledges from the US International Development Finance Corp (IDFC) and the Abu Dhabi Investment Authority (ADIA), the body that manages the emirate's excess oil reserves.

Government planners say the introduction of electric vehicles on the domestic market and a concerted push into solar power, neglected up to now, will help reduce Indonesia's \$21.2 billion in energy imports by at least a third and also utilize 8,000 megawatts of oversupply on the Java-Bali electricity grid.

Panjaitan and other senior officials are confident incentives in the newly-passed Job Creation Omnibus Law have now given Indonesia a competitive edge with President Widodo ready to sign the last of the EV implementing regulations, some aimed at protecting smaller local producers.

The general-turned-businessman falls back on military terminology in explaining what he calls his "rules of engagement" for potential investors - first-class technology, added-value, majority Indonesian labor, technology transfer and business-to-business deals only.

Skilled labor is still an issue. Finding employees for technical positions has struck an obstacle in Morawali, for example, after it was found the education level of high school students was not up to the standard required for them to enter a newly-established polytechnic.

Progress on the electric car has already been impressive, despite the worrying economic impact of the pandemic which has infected more than one million Indonesians and left 30,000 dead.

In the space of a few months, LG Chemical confirmed the planned construction of a \$9.8 billion lithium battery venture in Batang, Central Java and Hyundai announced it is moving its Malaysia-based regional hub and an entire China assembly line to Indonesia.

At the same time, Panjaitan expects a deal to be reached by next month on Tsingshan Steel's offer to build Freeport McMoRan Copper & Gold's long-delayed copper smelter at its Weda Bay nickel processing facility on Halmahera, the main island of the Maluku chain.

It now appears Tsingshan has been the driving force all along behind the sudden decision to move the long-delayed project from Gresik, near the East Java port city of Surabaya, to Halmahera, 3,400 kilometers to the northeast and closer to Freeport's Grasberg mine operation in Papua.

That's because the sulphuric acid derived from the copper smelting process is needed to produce nickel sulfide, the composition of the alloy used in cathodes. The existing Gresik smelter, operated by Mitsubishi, supplies the by-product to a state-owned fertilizer company.

Panjaitan says Tsingshan has agreed to pay 85% of the cost of the \$1.8 billion facility, with Freeport and the government, the majority partner in its Indonesian subsidiary, committed to sharing the balance. But sources familiar with the talks say the Chinese are still holding out for a smaller 75% stake.

Tied up in the negotiations is what Freeport will have to fork out for treatment and refinement charges (TCs/RCs) and how that will relate to the 5% export tax the Phoenix-based mining giant now pays for the half of the concentrate output it currently exports to mainly Japan and Spain.

Tsingshan is also in talks with Indonesian firm PT Merdeka Copper and Gold to supply pyrite rock from a mine on Wetar island, south of Weda Bay, to the \$7.8 billion Morowali nickel-processing complex, which began construction in 2013.



Nickel mining in Indonesia. Image: Facebook

Together, the two facilities are expected to be producing lithium batteries by 2023 when high-speed acid-leach operations come online. A fourth \$5.3 billion battery plant to be built by China's Contemporary Amperez Technology (CATL) is planned for completion in 2024.

Morawali is expanding its coal-fired power plant from 2,000 to 2,900 megawatts, needed to drive a three million ton a year nickel pig iron smelter to produce stainless steel, a 500,000-ton carbon steel facility and a 600,000-ton high-carbon ferrochrome plant.

Further down the coast, in Southeast Sulawesi, China's Virtue Dragon Nickel Industry has completed the \$1.4 billion first stage of its three-phase Konawe complex, which will eventually boast production of three million tons of ferronickel a year.

It is still unclear how much of Tsingshan's nickel sulfide will be allocated to other battery makers. The only element Indonesia does not have in abundance is the lithium used to produce anodes, which will likely be imported from either Australia or China.

Illustrating the synergy which is already developing in the electric car business, Tsingshan's Weda Bay partner, Zhejiang Huayou Cobalt, already has a joint venture with LG Chemical in the production of precursors and cathodes in Wuxi, north of Shanghai.

Panjaitan says LG was initially reluctant to expand into Indonesia but finally came around after he convinced the company of the logic behind investing in a country with 25% of the world's nickel reserves and adequate amounts of cobalt, magnesium and other key elements used in lithium batteries.

The South Korean project will become part of Batang's 4,300 hectare Integrated Industrial Estate, with power supplied by a new Japanese-built 2,000MW coal-fired power station and a planned gas pipeline linking Cirebon and the central Java province capital of Semarang.

Hyundai will start producing combustion-engine cars at its new \$1.5 billion plant at Cikarang, Jakarta, by the end of this year, and electric cars as early as 2022 with a planned capacity of 250,000 vehicles, more than initially anticipated for domestic demand.

With Toyota still dithering over a planned \$2 billion investment in hybrid and electric cars, the South Koreans have a jump on the Japanese who have seemingly grown complacent after controlling 95% of Indonesia's conventional car and motorcycle market for decades.



Launch of a soon to be ubiquitous Electric Vehicle charging station in Indonesia. Image: Facebook

State-owned Perusahaan Listrik Indonesia (PLN) says it already has enough charging stations between Jakarta and Bali, which will reduce the cost of traveling 350 kilometers, the maximum range for an average EV, from 350,000 rupiah (\$25) to 37,000 rupiah (\$2.6).

Tsingshan took only 18 months to bring its first Halmahera nickel smelter into production, a can-do attitude that has struck a chord with Panjaitan and the team of young assistants he consults on speed-dial when he doesn't have an answer.

The reason for the Chinese-built copper smelter being \$1 billion cheaper than the planned Finnish-designed facility at Gresik is partly explained by new Chinese advances in smelter technology, which have reportedly impressed even Freeport engineers.

But cost-effective equipment isn't the only reason. Asked to explain the difference in prices, a Jakarta-based Tsingshan executive told Asia Times: "It is very important it is done at speed. You have to do it quickly otherwise the budget will only increase."

He was referring to the prolonged delays, exacerbated by the pandemic, that have dogged the Gresik project from the start, mostly due to Freeport's reluctance to take it on. "The problem is there has been too much talking and the capital cost has become too high," he said.

Copper refineries, in particular, operate on paper-thin margins, only breaking even with the sale of anode slime, the sediment rich in gold, silver, selenium and tellurium that settles at the bottom of an electrorefining cell during the refining process.

Panjaitan says that at a recent conference in Yunnan, Chinese companies were encouraged to invest in value-added ancillary industries at Halmahera to offset any potential losses. Electric cars use three times more copper components than conventional vehicles.

In that sense, the new copper smelter will lose much of its stand-alone status and become part of the integrated supply chain dedicated to the electric car venture. After decades of being the Indonesian public's Corporate Enemy No 1, Freeport's Phoenix directors may welcome the distraction.

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