

21<sup>st</sup> November 2022

### **Electric vehicles in Indonesia - Exciting times lie ahead**

During the Business 20 summit held in Bali on 13<sup>th</sup> and 14<sup>th</sup> November, a side event that was held prior to the main G-20 summit, Indonesia made positive strides about its overall electric vehicles (EV) landscape. The chairman of Contemporary Amperex Technology (CATL), the world's largest EV battery maker, said his company was committed to helping Indonesia develop a "green" battery industry. During the event, the Indonesia Investment Authority (INA), the country's sovereign wealth fund, announced the signing of a memorandum of understanding with CATL and Hong Kong-based CMB International Capital Corporation to kickstart the launch of a Green Fund. INA said the fund will focus on the development of an "end-to-end" EV value chain in Indonesia. The fund size is estimated to reach up to \$2bn.

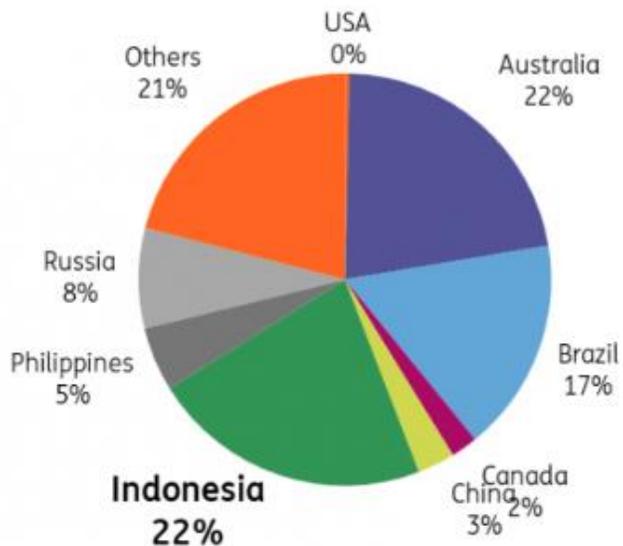
During the same event, Hyundai Mobis, the component arm of the Hyundai group announced that it was planning to establish an EV foothold in the country aimed at supplying Hyundai factories across Southeast Asia and Australia, including the first manufacturing plant of Hyundai Motor in Southeast Asia that opened in Cikarang, Indonesia, in March 2022.

A joint venture set up by Hyundai Motor and LG Energy is currently building a 10GW battery cell plant at a cost of USD1.1bn next to the capital Jakarta, to be opened in the first half of 2024.

Toyota and several Chinese manufacturers have also been showing interest in Indonesia. Foxconn, the Taiwanese tech giant renowned as an electronics contract manufacturer, is exploring the idea of manufacturing batteries, electric buses, and EV motorbikes in the country.

Indonesia has set ambitious EV targets. The government aims at having 2.5 million registered EVs (two wheelers and four wheelers) and to locally produce 600,000 EVs by 2030. The government believes it is achievable thanks to the domestic supply of nickel and upgraded smelting infrastructure. Indeed, Indonesia has the highest nickel reserves in the world. Nickel is the key component in electric vehicle batteries.

Global nickel reserves per country



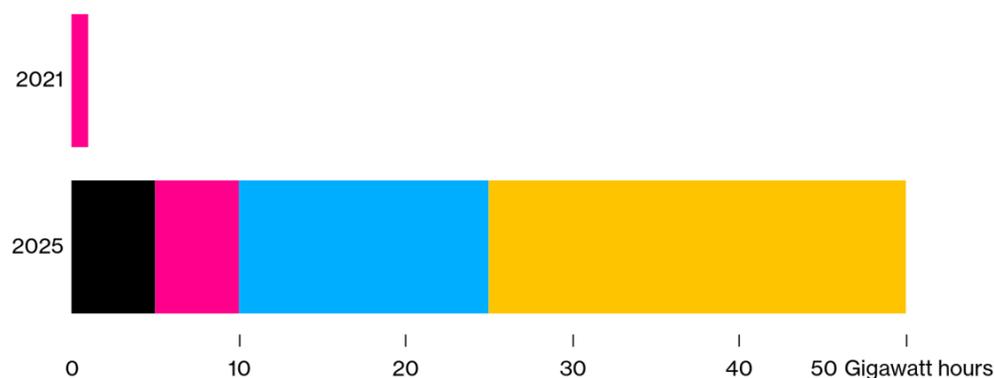
Source: ING

However, it is important to take a step back and remember that the country is still at a very nascent stage when it comes to EVs. Indonesia has no lithium-ion cell or battery component facilities yet. Nevertheless, Indonesia has the highest committed battery cell capacity within Southeast Asian countries, with an expected 25GWh cell capacity by 2025.

**Big Ambitions**

Announced lithium-ion battery cell manufacturing capacity in Southeast Asia

■ Vietnam ■ Thailand ■ Malaysia ■ Indonesia



Source: Bloomberg

The country is prioritising the electrification of its two wheelers (2W) ahead of its four wheelers (4W). Indonesia has roughly 120 million 2W users. Approximately 85% of Indonesian households own a 2W (scooter or motorbike), second only to Thailand and Vietnam in terms of household usage. Japanese manufacturers dominate the 2W market with a 90%+ market share. Honda has approximately 70% of the market and Yamaha 20%, followed by Suzuki and Kawasaki. Given the importance of 2Ws in the Indonesian culture, it seems realistic to start the EV transition in this space.

However, only 21,000 motorbikes/scooters in Indonesia today are electric, a negligible penetration of less than 1%. 12,000 of these were sold in 2021. While Honda and Yamaha are selling electric 2Ws, the production volumes remain very low. The big brands have not given any concrete sales targets for their electric 2Ws.

Chinese electric scooters are yet to get aggressive in Indonesia. While there is pressure to execute a transition towards EVs as a result of the rise in fuel costs combined with emission concerns, both local and foreign brands remain prudent. Electric 2Ws are still not very reliable under extreme conditions. It is particularly relevant to the rural parts of Indonesia where the terrain can be rough. There are already huge problems in India as numerous electric 2Ws are breaking down and even sometimes catching fire.

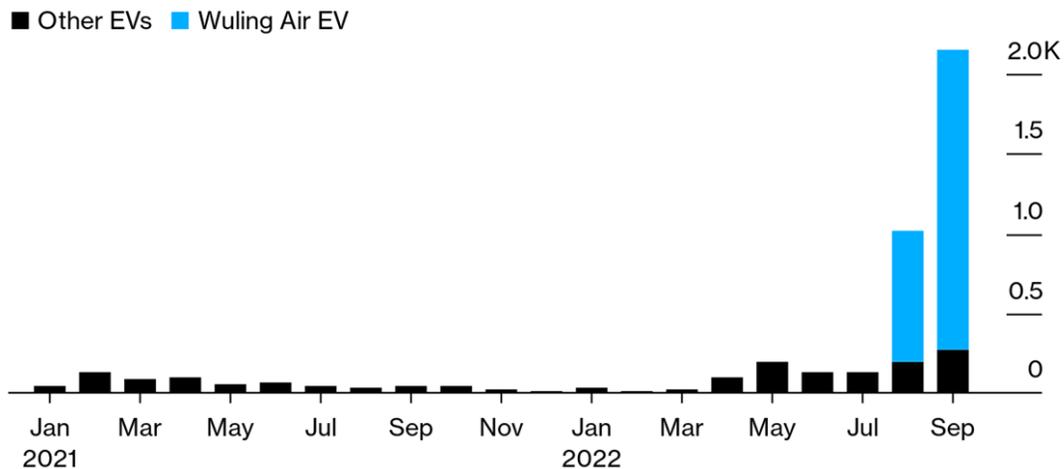
On the 4W side, passenger cars and light commercial vehicles are prioritised over heavy duty trucks. Indonesia is the largest car market in Southeast Asia with approximately 650,000 vehicles sold year to date in 2022. Market shares for 4Ws is not very different from what it is for 2Ws: the Japanese dominate, with Toyota having approximately 40% of the market. Toyota, Honda, Mitsubishi, Daihatsu, and Suzuki together account for more than 80% of the market.

EV target sales set by the Indonesian government are slightly more realistic for 4Ws than they are for 2Ws: there are approximately 20 million registered cars in Indonesia and the target is to have 500,000 electric cars on the road by 2025. There are only 5,000 today. Monthly sales have been negligible until recently.

The situation changed recently with the launch of the Wuling Air EV. Manufactured locally since August 2022, the Chinese electric car seems to be getting popular. More than a thousand units were sold in September.

**Small Car, Big Numbers**

Electric vehicle sales in Indonesia



Source: Bloomberg

The car’s initial success follows Wuling’s story in China:

Wuling Air EV is the latest iteration of the Wuling Mini EV which was launched in China by SAIC-General Motors-Wuling Automobile in 2020. Priced at only \$4,000-\$5,500, it is the best-selling EV model in China.

SAIC-GM-Wuling is in fact the second largest EV car maker of China with a total of 368,000 units sold over the first ten months of October 2022 while BYD sold 1.3m units and Tesla 330,000 units. The SAIC-GM-Wuling JV is seen as another big success for SAIC (Shanghai Automotive Industry Corporation), the long-standing Chinese joint venture partner of General Motors and Volkswagen.



*Wuling Air*

The EV landscape of Indonesia is probably bound to evolve rapidly. The high nickel reserves have created a lot of buzz around Indonesia including from Elon Musk who has been having talks with Indonesian President Joko Widodo about building capacity in the country.

The high 2W and 4W total addressable market of the country is an incentive for car makers to make a move. It is worth highlighting that the US government published a press release on 13<sup>th</sup> November in which it announced the launch of a \$698m Millennium Challenge Corporation (MCC) Compact, supported by \$649 million from the United States and \$49 million from Indonesia. The Compact will support the development of high-quality, climate-conscious transportation infrastructure in five provinces of Indonesia, it will mobilise international capital in support of Indonesia's development goals and increase access to finance for Indonesia's women-owned businesses and micro, small, and medium sized enterprises. A Compact refers to a signed agreement between two governments.

In March 2021, four major state-owned enterprises of Indonesia signed an agreement to set up the Indonesia Battery Corporation (IBC), each one with a 25% stake. These companies are oil giant Pertamina, electricity company PLN, mining company Mining

Industry Indonesia, and nickel and gold miner PT Aneka. IBC was created with the aim of turning Indonesia into a hub for battery production.

In April 2022, IBC signed a partnership with Ningbo Contemporary Brunp Lygend, a subsidiary of CATL, where CATL will invest \$6bn in battery projects in Indonesia. The projects are expected to be operational in 2026. IBC is planning to build 50,000 battery packs for 2Ws in Indonesia as soon as 2023.

Overall, we understand that the Indonesian EV targets for 2025 may be too aggressive. While the country does not have concrete longer term targets, Indonesia will need to have 50% of its registered vehicles being electric vehicles by 2030 if it wants to achieve its 2030 transportation emission targets (assuming vehicle registration keep on increasing at the historical average rate of approximately 8%). This is obviously a very aggressive target, especially given the penetration rates of less than 1% today. However, with its high nickel reserves, high 2W and 4W total addressable market and strong secular economic growth, Indonesia is an EV market worth monitoring. The recent Wuling Air EV success shows that there is a market for EVs if there is a proper fit for consumers. The old days of Japanese dominance could give way to value for money offered by Chinese auto makers in this booming space.

*Sources: Bloomberg, Nikkei, The White House, ING, The Star, BFI Finance, Indonesia Battery Corporation, CNBC, Jakarta Globe, China Daily, China Passenger Car Association*

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