Indonesian Electric Vehicle: Are We Prepared? And How Can We Improve?

Indonesia is not ready for massive electric vehicle (EV) implementation, as there are still many unsolved issues, such as local ecosystem transition and nickel resource planning. In many sectors, electrification is considered a momentum for change, in this context, it should be the enhancement of public transportation. Instead, the Indonesian government provides a variety of incentives for the rich EV buyer, which increases the number of vehicles on the road.

The government's primary motivation for pursuing this plan is to maximize the gain of Indonesia's enormous nickel reserves. These reserves, which many people believed to be the largest in the world, are only enough to meet the demand for EVs through the year 2040[1]. The government also hopes that this increased demand will make use of the excess electricity generation currently being wasted. But if coal continues to dominate electricity production, EVs will just exacerbate the negative impacts of the pollution shift on the underprivileged group.

Additionally, because EVs are so expensive, all government incentives will solely benefit the wealthy, widening the economic gap. This is because an EV is believed to have a lower lifecycle cost than a conventional vehicle. Surprisingly, neither the opposing nor supporting party has ever opposed these unfair incentives. Nevertheless, as the system makes no guarantees on equality, we should not hold any expectations from it[2].

Furthermore, for the 30 million citizens of the Greater Jakarta Area who had to prepare nearly twice as much time for commuting before COVID, more EVs on the road will simply make matters worse. Nevertheless, it is believed that Jakarta's traffic is now worse than it was before COVID, particularly on days when it rains. Due to the reinforcing feedback caused by the expanding middle-class populations that purchase cheap small-engine vehicles to protect themselves from the humid, hot, and polluted air during commuting, this condition will only deteriorate.

This issue needs to be addressed since, as it stands, EV implementation will merely transfer economic growth to other countries where the car was imported, most likely China, which now controls the majority of the world's supply chain for lithium-ion batteries. Contrastingly, the

[1] Gardian, P. I., Wardhana, A. R., & Kaswiyanto, R. P. (2021). Prediction of Growing Electric Vehicle and Battery Production to Nickel Supply Chain in Indonesia Using System Dynamics Approach. Jakarta; ICB REV.
[2] Relates to the course about Democracy

conventional vehicle ecosystem in Indonesia has matured to the point that the majority of the automobiles sold locally have 80% local content, which can also be a gauge of how much of an impact each car has on the local economy. This occurs as a result of the participation of many local parts manufacturers.

In addition to Jakarta, several other developing nations like India that intended to cut back on their oil imports are now experiencing this conundrum.

To address the concerns, the government must implement thorough action plans based on the roadmap for local content regulation, with an emphasis on the issues of local supply chain development, nickel management and electricity planning. These plans should be evaluated carefully against the environmental and social safeguards parameter in order to fully comprehend all externalities. Additionally, each assessment made specifically for all programs and projects must be considered in these evaluations. [3]

Local supply chain development can start by updating relevant curriculum in the vocational school to bridge different skills required in the EV ecosystem.

Nickel resources shall be professionally managed. Indonesia should not rely on the plan to create a market-controlling "cartel". Instead, institutionalized control and value-added processes should be established, just like in the oil and gas sector.

The government should also evaluate transferring the risk of electricity demand, which is the main culprit of the electricity oversupply, from PLN as the monopoly owner to private companies, which are used to absorbing this risk in other countries.

In the meantime, the government should invest more in modernizing the fleet of buses, vans, and electric trains in metropolitan areas in order to improve reach, convenience, and reliability—three areas that are currently lacking.

In conclusion, as the local EV ecosystem in Indonesia has never been widely spread, the government needs to develop a specific plan of action. Meanwhile, the government needs to invest more funds in making public transit more convenient rather than increasing the wealth of

[3] Relates to the course about Environment.

the rich, as this will ultimately diminish many of the negative externalities associated with privately owned vehicles.