

# SMART LIVING



A BMW i8, a plug-in hybrid sports car, is exhibited at Gelora Bung Karno, Jakarta. The city is set to host an electric car race Formula E next year.

JP/Narabeto Korohama

## WHY ELECTRIC VEHICLES HAVE YET TO REV UP

By Istu Septania

As part of the effort to replace fossil fuels with cleaner energy, Indonesia has been pushing for the development of electric vehicles (EVs). In August, President Joko “Jokowi” Widodo issued a regulation that aims to spur the EV industry.

The expected impact has yet to be seen. The local EV industry is still at its infancy. Electric motorcycles were introduced long before the regulation was issued, yet electric cars are still lagging way behind. E-cars are currently imported, finding a niche market among the super wealthy.

The most notable downside of EVs is that they are much more expensive than their gas-guzzling counterparts of the same class.

Chinese carmaker Wuling Motors sells small-sized electric cars starting at Rp 200 million (US\$14,100). Electric cars used for taxis, such as BYD for Blue Bird and Hyundai for Grab Indonesia, can cost more than Rp 600 million. In the premium class of EVs is the Tesla, which can cost around Rp 3.5 billion.

A local carmaker, PT. Great Asia Link (Grain) from Surabaya, produces small electric cars priced from Rp 200 million.

Electric cars are equipped with chargers that are compatible with standard outlets, allowing the owners to charge them at home.

However, a new electric car owner should call PLN to increase electrical power for free. PLN will add another outlet for charging the car. “It is risky to charge a car with the old grid and the old standards,” says Ganesha Tri Chandrasa, a senior researcher at the Agency for the Assessment and Application of Technology (BPPT). “If it’s just an electric motorcycle or bicycle, it’s okay [to use the old grid].”

The luxury electric cars like Tesla might

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Electric cars require less maintenance because they require fewer fluids like motor oil and fewer moving parts. The main concern about EVs is their battery life.

not be suitable for a house with insufficient electrical power.

A BYD electric car costs Rp 90,000 to reach a full charge, which is enough to travel up to 300 kilometers, according to GridOto.com.

Ganesha says his office’s nine-year-old Mitsubishi electric car needed eight hours to fully recharge and cover 100 km, costing him about Rp 30,000.

“The car is usually charged at home overnight,” he says. “A charging station is mostly for those who don’t have time to charge the car the night before [...] they have to travel a long distance.”

Electric cars require less maintenance because they require fewer fluids like motor oil and fewer moving parts. The main concern about EVs is their battery life.

Electric cars use lithium-ion batteries – the kind used to power smartphones, laptops and solar panels. It is a long-lasting battery and crucial component that made the EV boom possible. It is



JP/Seto Wardhana

An electric taxi of Blue Bird is being charged in Jakarta.

also an affordable option for mass adoption.

But just like all other technology, lithium-ion batteries will wear out in the course of time. To ensure excellent performance, the battery must be replaced every five to 10 years ideally, Ganesha says. The battery, which makes up most of the price of an electric car, can cost about Rp 80 million to 100 million.

“But it’s not mandatory,” Ganesha adds. “We haven’t replaced our car’s [nine-year-old] battery but it still functions just fine.”

Many countries have long pushed for the development of EVs in order to improve air quality and tackle climate change. Some countries like the United Kingdom, India, Norway, Germany and France even plan to ban conventional cars in the coming decades.

The booming electric vehicle business has raised the demand for lithium. But extracting lithium, it turns out, has environmental costs, like harming the soil, contaminating the water and polluting the air, as reported by *Wired UK* magazine.

ELECTRIC VEHICLES, page 8

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ON THE MOVE



An electric car made by the Sepuluh November Institute of Technology (ITS) Surabaya is on show in Jakarta.

JP / Wendra Ajistyatama

ELECTRIC VEHICLES, from page 7

Lithium-ion battery waste is another issue that many predict will cause headaches. Indonesia has yet to introduce a proper and comprehensive recycling system to manage waste.

Ganesha says Indonesia had yet to introduce a recycling system because the country did not generate enough battery waste.

Right now, the Indonesian government is focusing on building the infrastructure for EVs to get people to shift to conventional

vehicles and to generate business for locally produced EVs.

State-owned utility company PLN is set to invest billions of rupiah to install charging stations in major cities across Indonesia.

There are three types of electric charging stations: normal charging, fast charging and superfast charging. The normal charging station, which is suitable for residential use, can charge an electric car fully for four to

six hours. The fast-charging station, suitable for parking lots, office buildings and malls, can do it in two hours. The ultrafast-charging station, perfect for EVs stuck in traffic at toll roads or for those passing through rest areas, can fully recharge a car in 15 minutes.

Drivers in need of a charging station can locate one via Google Maps.

Electric cars are believed to bring many

benefits. For the owner, it can reduce operational and maintenance costs as it does not consume much electricity. In addition to environmental gains, the country can benefit from the boom of EVs.

“PLN has a surplus of electricity,” says Ganesha. “Electric vehicles will help make use of the excess. We have calculated it and concluded that our electricity supply will last for many years to come.”

# Renting e-bikes in cities



A woman rents a Migo e-bike in Jakarta.

JP/Jerry Adiguna

Every day, Mahdalena, 27, has to travel over 10 kilometers to get to her office in Kuningan, South Jakarta. If she orders a ride from an on-demand ride-hailing service, it costs her roughly Rp 25,000.

To make her daily commute cheaper, she would opt to take the Transjakarta or rent an electric bike near her house in Pasar Senen, Central Jakarta.

But she prefers the e-bike rental service to the bus rapid transit system for efficiency.

The e-bike rental service is provided by Migo, the first and only start-up that provides e-bike rental services in Indonesia. Migo has 282 rental stations with 1,900 e-bikes across Jakarta. These stations, which act as the pick-

up and drop-off points, can be found in big office buildings, crowded residential areas, and near train stations or bus stops, among other places.

“Coincidentally, there is a Migo station near my house and one not too far away from my office,” says Mahdalena.

It usually takes around 30 minutes for her to reach one Migo station in South Jakarta. After parking the e-bike at the nearest station, Mahdalena orders a ride from a ride-hailing app for the last leg of her trip. In total, it costs her Rp 16,000.

Migo charges based on the time spent riding the e-bike, instead of the distance traveled. At a rate of Rp 3,000 per 30 minutes, customers

can ride to numerous locations. Customers need to reach a Migo station to rent an e-bike and have to return it at any Migo station. The service can be accessed only through a mobile app.

Besides its low cost and ease of mobility, another appeal of Migo is its environmental benefits. An e-bike produces no emissions.

“I don’t actually know how polluting a conventional motorcycle is to the environment,” says Mahdalena. “But if its impact is really that bad, I do want to cut down my carbon footprint.”

The e-bike rental service has its own downsides. Some customers might misuse the e-bikes, leaving the next customers to deal with any possible damage. Mahdalena once rented an e-bike with low battery, which caused the e-bike to shut down in the middle of the trip (Migo says its app automatically selects a fully-charged e-bike for customers).

Mahdalena then called customer services who gave her guidance on how to ride her e-bike slowly to the nearest Migo station to replace it with a new one.

When it is not possible to turn on the e-bike at all, the customer service center will manage to send an e-bike immediately. The customers, of course, have to wait for the e-bike to arrive.

Earlier this year, Migo came into the spotlight for not having an operation permit, which arose from the ambiguity over whether e-bikes are bicycles or motorcycles.

The bikes, categorized as low-speed motorized vehicles, are now allowed to

operate on the bicycle lanes in the main roads in Jakarta.

To ride a Migo e-bike, people do not need a driver’s license as long as they are used to riding a bicycle. However, only people with an ID card can register on the Migo app and rent an e-bike.

A cheap and efficient rental service app like Migo appeals to many office workers and college students. The service is especially popular in the business districts in South Jakarta.

Right now, Migo is offering a free rental service at the National Monument (Monas) in Central Jakarta. And, yes, it’s free for an unlimited period of time.

“With this program, we want to introduce electric bikes to the public for free so they will get used to using electric vehicles in their daily life,” says Monica Dwi, the director of Migo. “Above all, the government is strongly promoting battery electric vehicles and non-polluting vehicles.”

The company, however, prefers to expand its business to other regions slowly. Launched in August 2017, Migo first launched in Surabaya, the capital city of East Java. The rental app now has almost 150 rental stations and around 1,000 e-bikes in the city. In late 2018, Migo was launched in Jakarta.

Next year, the company plans to extend its reach to Yogyakarta, a relatively small province with over 400,000 college students. Following that, Migo intends to lure tourists in Bali with its electric bikes.

—Istu Septania



A child drives a Migo e-bike in South Jakarta.

JP / Donny Fernando



ANALYZE THIS

# Top brands compromise on plastic



A ship collects garbage at Pluit Reservoir in North Jakarta.

JP/P.J.Leo

Amid growing concern about pollution from plastic waste, major companies are ramping up sustainable initiatives to address the adverse impacts of their supply chains on the environment.

Recently, consumer goods giant Unilever Indonesia launched a refill station for its household cleaning and laundry products in the Saruga bulk store in Bintaro, South Jakarta. The refill station offers four types of products: liquid detergent Rinso, liquid fabric softener Molto, liquid dish soap Sunlight and floor cleaner Super Pell.

Unilever Indonesia also offers a 10 percent discount for cleaning products bought from the refill station.

The bulk store-located refill station is a pilot project by the company that allows people to get its products without having to go through new plastic packaging.

“We’re planning to expand this project to include more product variants and team up with other stores as well,” says Maria Dewantini Dwianto, the head of corporate communications at Unilever Indonesia. Globally, the company looks to accelerate its use of recyclable or recycled plastic and to halve its use of virgin plastic by 2025.

Integrating sustainability into business strategy is not a novelty after all. By now, the pressure to incorporate sustainable practices has grown stronger with rising concern over plastic waste and climate change. Corporations have begun to take steps and joined the movement.

In the food and beverage industry, for example, the Packaging and Recycling Alliance for Indonesia Sustainable Environment (PRAISE) – which includes renowned brands such as Danone, Indofood and Unilever – aims to distribute recycling drop-off bins across Jakarta and develop waste



Courtesy of @sarugapackfreestore

Consumer goods giant Unilever Indonesia launches a refill station at a bulk store in Bintaro, South Jakarta.

banks in different communities. Nestlé has introduced paper straws with some of its beverages to cut down on pollution from plastic straws.

In some European countries, government regulations have prompted major companies to take action and meet sustainability requirements. However, such is not the case in Indonesia, where the pressure comes mainly from environmentally conscious consumers.

“More consumers demand sustainable products from the big brands,” says Lufaldy Ernanda, the head of sustainability at consulting firm Environmental Resources Management.

Younger people also show strong social and environmental awareness and expect their workplace to embrace sustainability. Furthermore, in the past two years, investors have been pushing board members and executives at their companies to respond and take more serious steps to address environmental issues. The recent trend among peers also influences companies to keep up with their competitors in terms of sustainable practices.

These factors drive companies and their suppliers to shift to greener options. The plastic industry, then, must be prepared for change with suppliers being demanded to shift to recycled plastic

products or even nonplastic ones, says Lufaldy.

The moves made by well-known brands can lead to practical actions that allow more consumers to adopt a greener lifestyle. “This can implicitly educate the public on pollution from plastic,” Lufaldy says.

Changing the behavior of the masses, however, is not an easy thing to do.

Bulk store Saruga, which targets eco-conscious people and through which Unilever set up its first refill station, sometimes still finds that some of its customers do not bring their own reusable containers. That means the shoppers have to get new reusable containers from the store.

“I try to remind them to bring their own package the next time they come here,” says Adi Asmawan, the cofounder of Saruga. “If they keep taking new containers from here, that means they just keep adding more waste all the same.”

Saruga sought to attract people with a serious commitment to the environment, Adi says, and that usually happened among newcomers. Smaller bulk stores, moreover, sell many personal care and household products from artisans labeled as “organic” or “natural”, but they might not appeal to all customers because of their higher prices.

“I think top brands are able to encourage more people, especially their loyal customers, to let go of disposable plastic packaging,” Adi says. “Eliminating packaging is not easy. We can begin a movement just by using packaging less, then we can go on to no packaging to help save the environment.”

—Istu Septania

