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MAKING AN EV FUTURE POSSIBLE

The Edge, Malaysia



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One of the biggest concerns people have about the use of electric vehicles (EV) is range anxiety. What if they get stranded somewhere when the battery runs out, with nary a charger in sight?

In Malaysia, this concern or anxiety is being addressed. Tenaga Nasional Bhd, the largest electricity utility in the country, is collaborating with key partners in the EV ecosystem to make it easy for consumers to live a low-carbon lifestyle by choosing to use EVs.

These partners include Sime Darby Bhd, which through its Motors business is one of the largest EV importers in Malaysia, and PLUS Malaysia Bhd, which currently has a number of EV charging points along its highways.

"Low-carbon mobility is one of the key initiatives identified by Tenaga as having a strong impact on reducing the nation's carbon footprint. To achieve this goal, Tenaga has positioned itself as the integrator or facilitator that brings together key players in the EV ecosystem and helps increase the EV adoption rate in Malaysia," says Tenaga chief retail officer Datuk Ir Megat Jalaluddin Megat Hassan.

This is aligned with Tenaga's vision of being a leading provider of sustainable energy solutions and its goal to be a net-zero emissions company by 2050.

Government incentives to encourage the adoption of EVs are already in place, adds Megat. These were outlined in Budget 2022. "These EV incentives are what I would call the four 'zero' tax exemptions, namely 0% import duty, 0% excise duty, 0% sales tax and zero road tax for EVs until 2025."

With these incentives in place, Tenaga has stepped in to build the ecosystem that will make EV usage seamless for consumers. For instance, in 2021, it partnered with DHL Malaysia with the aim of installing EV chargers at DHL's home base and along the delivery routes of its EV vans.

Then, Tenaga announced that it was exploring a partnership with Sime Darby in December 2021 and PLUS in March 2022.



(Above) BMW dealer Sime Darby Auto Bavaria has set up 33 charging facilities across 13 locations in the Klang Valley, Penang and Johor Bahru, but as details of the partnership with Tenaga are finalised, many more charging facilities are expected

(Below) EV charging stations at a rest area along the PLUS highway. As at March, there were around 600 public EV charging stations in Malaysia.



Currently, Tenaga's subsidiary, TNBX, is developing a digital platform accessible through a mobile app for EV users to find the EV chargers closest to them and pay to use its services.

"Once all the building blocks to support the EV ecosystem are in place, EV users are rest assured that their concerns about range anxiety during intra-city and inter-city journeys have been addressed effectively," says Megat.

As at March, there were around 600 public EV charging stations in Malaysia, according to the Malaysian Green Technology and Climate Change Corporation. Meanwhile, around 29 EV charging points have been commissioned in rest and service areas, and petrol stations along PLUS highways.

"We are collaborating with strategic partners like Tenaga with the objective of providing the necessary facilities and services to EV users on our highways. Under the PLUS EV Charging Stations roadmap, we will facilitate industry players to commission cumulatively 100 charging points by 2024," says PLUS managing director Datuk Azman Ismail.

Their efforts could not have come at a better time as there is already heightened demand from Malaysian consumers for EVs.

Sime Darby group CEO Datuk Jeffri Salim Davidson observes that in FY2022 (July 2021 to May 2022), brands represented by the company sold over 400 EVs.

"That is quite a jump when you consider that about a year ago, there were only about 500 EVs on the road. And this number will only increase, as evidenced by our order bank, which has been growing steadily. This is partly driven by the number of EV models that are available in the market, which will continue to grow and provide customers with more variety," says Jeffri.

Sime Darby currently carries 17 EV models from the six brands it represents in Malaysia.

"We now have 92 EV service bays manned by 174 high voltage certified technicians in Selangor, Kuala Lumpur, Penang and Johor to cater for our customers' needs," says Jeffri. "In preparation to serve more EVs, we have also partnered with TOC Automotive College to ensure a steady stream of qualified technicians for EV maintenance and repair."

Sime Darby has also thrown its weight behind the development of a highly efficient EV charging network, which will be accessible within a 200km to 300km radius of high-density areas to support increased EV adoption. Thus far, BMW dealer Sime Darby Auto Bavaria Sdn Bhd

has taken the lead in this, setting up 33 charging facilities across 13 locations in the Klang Valley, Penang and Johor Bahru, but as details of the partnership with Tenaga are finalised, many more charging facilities are expected.

ADDRESSING MISCONCEPTIONS

A common misconception that people have about EVs is that charging EVs is difficult and the travel range is short. However, EV and battery technologies have improved tremendously over the years. There are also different kinds of chargers to serve consumers' needs.

Direct current (DC) chargers take less time to fully charge an EV than an alternating current (AC) charger, says Megat. It takes 47 minutes to charge a Hyundai Ioniq 5 on a DC charger and achieve a 430km range, which can last at least a week with intra-city travel.

AC chargers — which are the most common chargers in Malaysia — may take up to eight hours for a full charge and is done more often than not in the comfort of the owner's home.

"Tenaga plans to install 60kW DC fast chargers at identified locations along the PLUS highways and collaborate with partners to set up a network of EV charging infrastructure and make it easily accessible to the EV community via a mobile app being developed by TNBX," says Megat.

Jeffri adds that current high voltage battery EV models offered by Sime Darby can provide a range of more than 400km from a single full charge.

Another concern that people have is that EVs in Malaysia are still being charged using the grid, which is not fully powered by renewable energy (RE) yet. But Tenaga is already diversifying its power generation mix with RE sources.

Tenaga is collaborating with S P Setia Bhd to launch properties with EV charging installations, which are powered by rooftop solar solutions. Over time, this will be supported by solar batteries.

"As the award-winning largest property developer in the country is moving in this sustainable direction, Tenaga looks forward to working with more partners in the property development sector to give future homeowners a choice to embrace a low-carbon mobility lifestyle," says Megat.

Additionally, various schemes are already in place to add RE into the grid, such as the Large-Scale Solar (LSS) programme and power purchase agreements (PPA).

"We are open and looking forward to opportunities to green the grid through programmes like the LSS, New Enhanced Dispatch Arrangement or corporate PPA. Another possibility is to connect the EV charging points with a micro-grid, powered by a mini solar farm on land adjacent to our highway," says Azman.

The building blocks to enhance the adoption of EVs in Malaysia are being pieced together through the various partnerships that Tenaga has. With robust infrastructure, a variety of EV models and incentives to promote green mobility, the path towards a low-carbon mobility future is clear.

"The strategic alliances and collaborations with Sime Darby and PLUS enable Tenaga to play a central role in facilitating the market. We can do this by increasing awareness and promoting a low-carbon mobility lifestyle as a viable, sustainable choice through a seamless driving and charging experience," says Megat.

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