

Business

NanoMalaysia rolls out EV charger that uses green energy in trial

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KUALA LUMPUR: NanoMalaysia Bhd is piloting an electric-vehicle (EV) charger at Temasya Petronas station on the Federal Highway in the Klang Valley using the Renewable Energy Nanogrid (Renew) concept powered by clean, renewable energy technology using nano-enhanced solar panels.

NanoMalaysia is an agency for localisation of EV technology development under the Science, Technology and Innovation Ministry.

The technology development is managed by Nano Commerce Sdn Bhd (NCSB), a wholly owned subsidiary and business arm of NanoMalaysia, in partnership with a local EV enterprise.

Renew consists of a fast-charging 50kW EV charger, nano-enhanced solar photovoltaic (PV) panels, and lithium-ion batteries. The solar PV is enhanced through nano coating supplementing hydrophobic properties allowing greater efficiency during inclement weather.

With Renew additionally powered by solar energy with storage capabilities, the system's dependency on grid power is reduced by up to 20% which effectively will assist Malaysia's decarbonisation.

This 18-month trial project is part of NanoMalaysia's Enabling Mobility Electrification for Green Economy (Emerge) initiative. Emerge focuses on developing electric vehicle technologies to support low-carbon mobility through the enhancement and deployment of energy storage and management system, the Internet of Nano-Things and off-grid green charging stations, and building EV prototypes as validation platforms for eventual industrial adoption. This initiative supports Malaysia's target to reduce carbon intensity against gross domestic product by 45% by 2030 and reach carbon neutrality as early as 2050.

NanoMalaysia has been spearheading the nation's EV technology agenda since 2021, along with other relevant EV technology development programmes such as the NanoMalaysia Energy Storage Technology Initiative, Hydrogen EcoNanoMy, Rapid Electric Vehicles Innovation Validation Ecosystem, and Campuses for Local Electric Vehicle Expeditious Rollout.

This strategic collaboration between NanoMalaysia and Petronas Dagangan Bhd aligns with the National Energy Policy 2022-2040 of early-stage public-private initiatives to support charging infrastructures to enable and accommodate EV penetration.

NanoMalaysia's CEO, Dr Rezal Khairi Ahmad, said: "Renew is a significant milestone that we are now commercially deploying a charging station that rides on a locally developed renewable energy nanogrid technology, with the view of making fast charging, green energy easily accessible nationwide.

Through this project, NanoMalaysia is aggressively nudging the country to be at least a regional leader in EV technology and innovation rather than just mere users of imported products.

“Success from this pilot project will strengthen the local EV industry and expedite the government’s target to achieve 10,000 EV charging stations in Malaysia by 2025 under the Low Carbon Mobility Development Plan 2021-2030. This may increase the percentage of EV numbers towards 38% total industry volume in the country in line with Malaysia’s Low Carbon National Aspiration 2040.

The penetration rate for renewable energy in Malaysia was 2% from 92.8 million tonnes of oil equivalent in 2019. Malaysia has set a target of 20% by 2025. Currently, there are about 30,300 plug-in hybrid electric vehicles and battery electric vehicles on the roads, and Malaysia is targeting 220,000 EVs by 2030 under the National Electric Mobility Blueprint. – Bernama