



MEDIA RELEASE

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NMB Commercialises Renewable Energy EV Charging Stations to Strengthen Green Mobility Ecosystem

Iskandar Puteri, Johor, 22 April 2026 – NMB (NanoMalaysia Berhad) recently completed the installation and commercialisation of the Renewable Energy Charging Stations project under the Enabling Mobility Electrification for Green Economy (EMERGE) programme. The milestone was commemorated during a visit by the delegation from the Ministry of Science, Technology and Innovation (MOSTI) to the Electric Vehicle (EV) Charging Stations in Johor, highlighting the project's readiness for broader market deployment and real-world implementation.

The project involves the development and deployment of two units of One-Stop Renewable EV Charging Stations in nano-grid configuration (<100 kW) to support both two- and four-wheeled electric vehicles. Each station is powered by on-site solar energy, which serves as the primary power source, with excess energy stored in a Battery Energy Storage System (BESS) for later use. The national grid serves only as a backup when both solar generation and battery reserves are insufficient.

In addition, the station can operate in both on-grid and off-grid modes, with seamless transition in the event of grid disruption. Collectively, the charging station significantly reduces dependence on fossil fuels and lowers carbon emissions for every charging session. This integrated approach helps alleviate grid burden while promoting sustainable electric transportation.

The integrated system has successfully progressed to an advanced commercialisation stage and achieved Technology Readiness Level (TRL) 8, demonstrating full system functionality in a real operational environment. Two pilot sites have been deployed, tested, and opened for public use, with nearly 300 EV charging sessions recorded to date, validating system reliability, operational stability, and user acceptance. Additionally, the wireless charger prototype developed under this project has demonstrated 18 kW operation with efficiency of up to 98% at TRL 6 with the power receiver unit fitted to an electric bus, further showcasing technical viability.

NMB's Group Chief Executive Officer, Dr Rezal Khairi Ahmad, said: "The successful - completion and early-stage commercialisation of this project demonstrate Malaysia's capability to develop integrated renewable energy EV charging infrastructure using local expertise and innovation. By combining renewable energy generation, energy storage, and smart charging technologies, this initiative supports Malaysia's transition towards sustainable mobility hence reduced carbon emission while strengthening the country's green economy aspiration by creating new opportunities for industry growth through private investments."

Malaysia's EV charging market continues to expand alongside increasing EV adoption. As of 2025, Malaysia had installed 5,360 public EV charging points valued at approximately USD 220 million, with projections indicating growth to USD 270 million by 2030.

The One-Stop Renewable Energy Charging Station integrates multiple technologies including nano-coated solar PV systems, battery energy storage systems (BESS), AC



and DC EV chargers, wireless charging prototype capabilities, battery swapping systems, and a smart energy management system. These components are coordinated through an IoT-enabled platform to optimise energy use, enable off-grid capability, and ensure reliable charging performance.

The project was led by NMB, which oversaw the development and commercialisation efforts, in collaboration with industry and academic partners including Iskandar Investment Berhad, Universiti Teknologi Malaysia, Universiti Malaya, as well as industry collaborators such as EV Connection Sdn Bhd and APM Automotive Sdn Bhd., supporting charging infrastructure, wireless charging integration, and battery swapping solutions. Through initiatives such as EMERGE, NMB continues to accelerate the commercialisation of advanced technologies and to support Malaysia's transition towards a greener, more sustainable economy. Additionally, the stations are open to the public, allowing end users and EV owners to utilise the charging facilities directly as part of their daily mobility needs, thereby indirectly contributing to a more sustainable environment.

NMB, through its subsidiary Electrick Sdn. Bhd, remains open to collaboration with existing Charge Point Operators (CPOs) and potential investors to further scale the commercialisation of the deployed EV charging stations. Moving forward, NMB welcomes strategic partnerships to optimise and expand the use of existing EV charging infrastructure, including replicating the One-Stop Renewable EV Charging Station model in areas with limited charging coverage. This collaborative business model aims to accelerate nationwide EV infrastructure deployment, enhance access to green charging solutions, and support Malaysia's broader transition towards a sustainable and inclusive electric mobility ecosystem.

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