



04 JAN, 2026

TNB: EVs have safety system for floods

New Sunday Times, Malaysia



ELECTRIC SHOCK CONCERNS

TNB: EVs have safety system for floods

**KUALA LUMPUR:** As more Malaysians switch to electric vehicles (EVs), concerns have emerged over the technology’s safety during floods, particularly the risk of electric shock and the use of public charging stations in flood-affected areas.

Responding to these concerns, Tenaga Nasional Bhd (TNB) said that user safety and comfort remained its top priorities, including in the use of EVs and their charging facilities, especially during extreme weather events, such as the monsoon season and floods.

It said automatic power cut-off mechanisms, tightly sealed battery structures and high-voltage cable insulation ensured EVs did not endanger users, with the risk of electric shock being almost zero.

“EVs are designed with very strict safety systems to ensure they remain safe during floods. Modern charging stations are built with safety features such as water- and dust-resistant designs, automatic cut-off systems and moisture sensors,” TNB said in a written response.

“These devices will automatically stop operating when irreg-

ularities occur, including when submerged by floodwaters.

“Charging stations are equipped with sufficient electrical protection, including auto-trip mechanisms, in the event of immersion or unsafe conditions to minimise risks to the public.”

It said most charging stations were fitted with flood sensors to detect rising floodwaters early, while site conditions were monitored via closed-circuit television cameras and by site partners to ensure accurate flood information before action was taken.

EV charging station operators have an emergency response plan for floods, coordinated with TNB’s safety standard operating procedures, to ensure charging operations can be shut down, safety actions taken and recovery carried out quickly and in a coordinated manner.

TNB said the risk to the electricity grid was very low, as charging stations were equipped with multiple layers of protection, including fuses, miniature circuit breakers and residual current devices. They are also monitored through smart systems, such as the Advanced Distribution Man-

agement System and Geographic Information System.

It advised EV users to take immediate safety measures if water levels begin to rise, including stopping charging immediately, moving vehicles to higher ground and following safety instructions from charging system operators.

Zero Emission Vehicle Association president Wan Ahmad Zam Zam Wan Abd Wahab said there had been no reports on electric shock incidents involving EV charging stations during floods, but users were still advised to remain cautious and avoid using chargers in high-risk areas.

He said most EV charging stations were designed according to Energy Commission safety standards and international standards, including the use of ingress protection ratings for protection against water and dust.

“Critical equipment, such as control panels and distribution boards, are usually installed at higher levels to reduce the risk of damage from shallow floods and the systems are designed in a fail-safe mode, meaning they will safely shut down when abnormal conditions occur.” **Bernama**