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Power gridlock ahead

The Star, Malaysia

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Experts: Renewable energy on track but lack efficiency

By DIYANA PFORDTEN
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PETALING JAYA: Malaysia is making strides in renewable energy under the National Energy Transition Roadmap (NETR), but experts say the country is lagging in other critical areas.

The NETR, launched in July 2023, is a plan to shift Malaysia to a low-carbon economy by 2050, focusing on six key areas: energy efficiency, renewable energy, hydrogen, bioenergy, green mobility and carbon capture.

According to Association of Water and Energy Research president Piarapakaran Subramaniam, the country has already surpassed its 2025 renewable energy target, with renewables making up over 31% of installed capacity.

However, solar only produces energy for four to six hours a day.

This intermittency means Malaysia still relies on fossil fuels to keep the grid stable, adding to electricity costs.

Piarapakaran said energy efficiency should be a top priority.

"If we reduce energy usage while maintaining or even increasing output, we will save billions," he said.

He criticised the lack of progress in this area, particularly in the construction and transportation sectors, and urged the government to reevaluate the NETR with a more holistic and long-term approach.

International Islamic University Malaysia associate professor Dr Wan Mohd Zulhafiz Wan Zahari, whose area of research includes climate change policies and energy law, sees the NETR as a shift from planning to action.

He pointed to new policies and large-scale projects as evidence of progress but warned that issues with infrastructure and market rules could slow things down.

"The next big challenge is keeping the pace high enough to meet rising demand from AI, data centres and industry," he said.

He highlighted the Corporate Renewable Energy Supply Scheme, which allows companies to buy renewable energy directly from producers, as a positive step but cautioned that grid congestion and slow approvals could hinder its success.

Several companies are actively involved in renewable energy production in Malaysia, including Tenaga Nasional Bhd, Solarvest Holdings Bhd and TNB Renewables Sdn Bhd.

These companies, among others, are driving the growth of solar, hydropower, biomass and other renewable energy sources.

Former National Water Services Commission (SPAN) chairman Charles Santiago said that despite gains in solar and electric vehicles, Malaysia is still too dependent on fossil fuels.

He noted that the country's renewable energy share of installed capacity, at 26% in 2024, is still 5% below its target.

While hydro accounts for most of this, wind and solar combined make up only 2%, well below the global average of 15%.

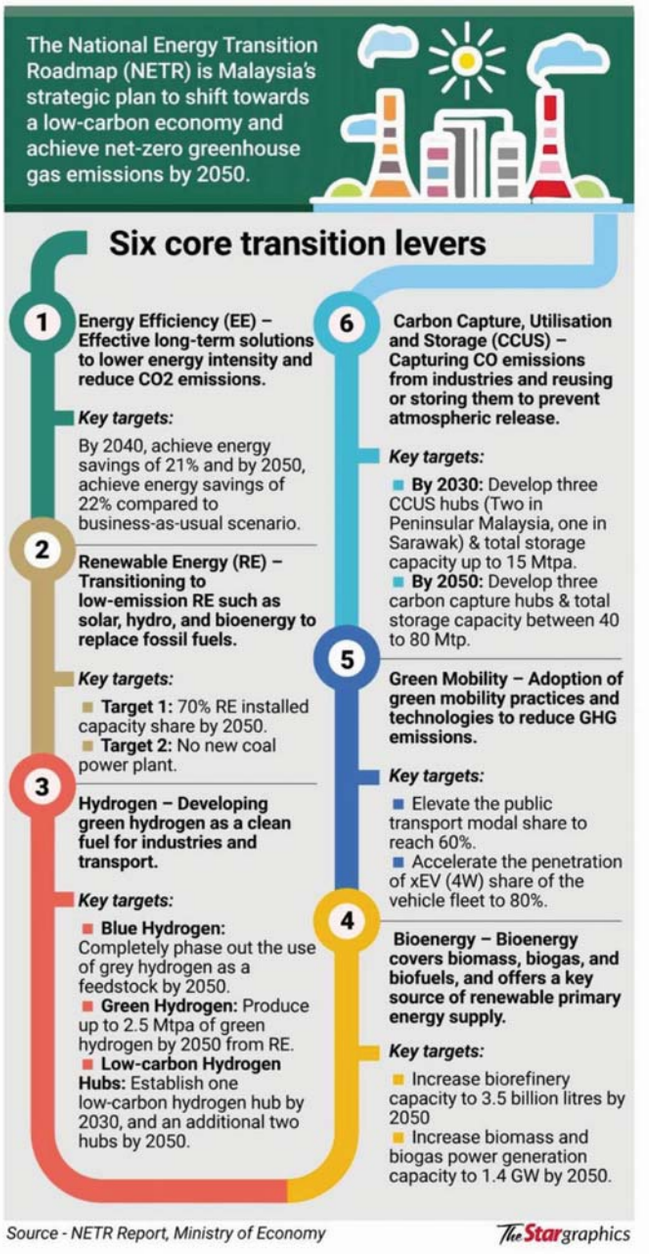
Santiago is also concerned that the focus on natural gas and carbon capture as a "transitional fuel" will lock in high emissions and derail climate targets. He advocates shifting focus to proven and affordable renewables.

Sahabat Alam Malaysia president Meenakshi Raman called for environmental and climate concerns to be at the heart of energy policies.

She warned that the rapid growth of data centres could lead to a massive increase in energy and water consumption.

She also emphasised the need for urgent grid upgrades and more battery storage to handle the increasing amount of variable renewable energy like solar.

Malaysia's current grid, built for centralised coal and gas plants, struggles with the intermittent nature of solar and wind, leading to stability issues.



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Progress in renewables, hurdles in efficiency and costs

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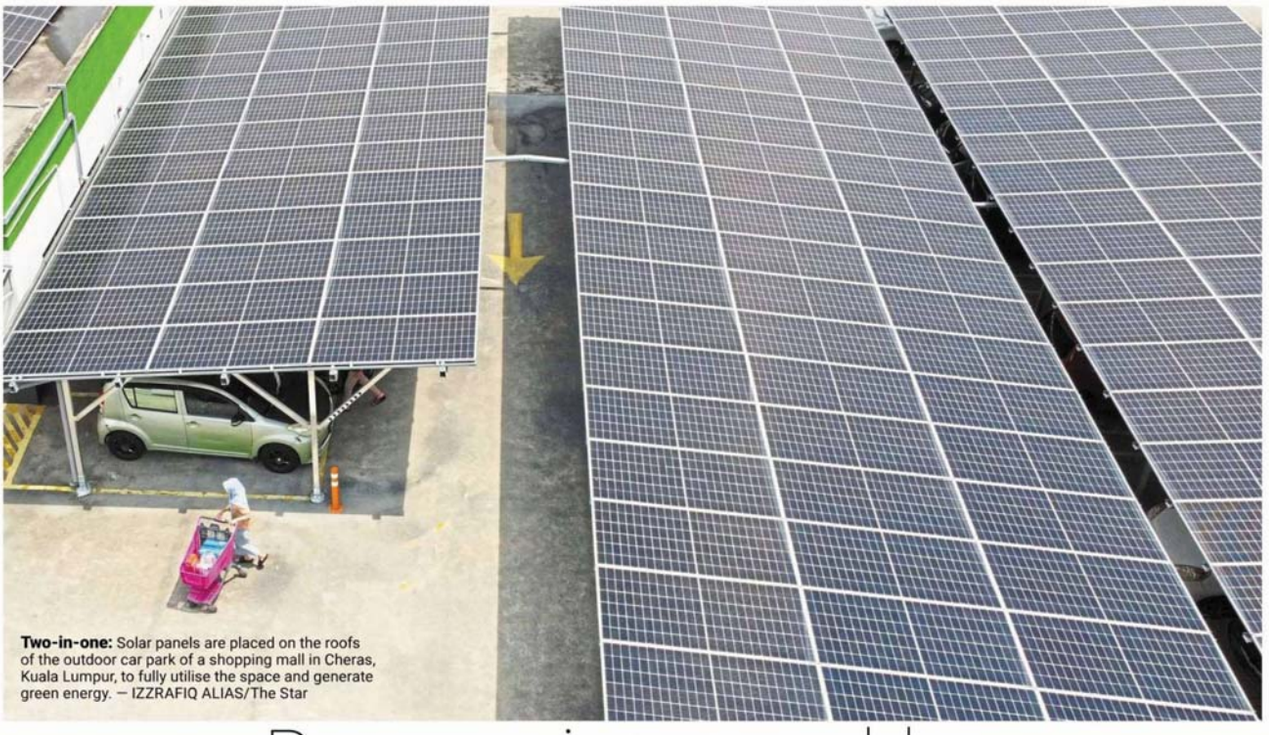

Two-in-one: Solar panels are placed on the roofs of the outdoor car park of a shopping mall in Cheras, Kuala Lumpur, to fully utilise the space and generate green energy. – IZZRAFIQ ALIAS/The Star

Progress in renewables, **hurdles in efficiency and costs**

Solar adoption is driving Malaysia's green energy goals but experts say the country needs better grid infrastructure and policies. **> See reports on page 5 by DIYANA PFORDTEN and FAZLEENA AZIZ**