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Energy infrastructure key to data centre growth



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Digital ambitions depend on long-term power reliability

ENERGY

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PETALING JAYA: As Malaysia reviews its approach to future data centre development, the focus is also shifting beyond attracting investments to ensuring supporting energy infrastructure can meet rising demand in a reliable and sustainable manner.

Drawing lessons from more mature energy markets, Shah Yang Razalli (*pic*), group chief operating officer and country head of Malaysia at Petrolim Nasional Bhd's (PETRONAS) wholly-owned clean energy solutions subsidiary Gentari Sdn Bhd, said digital infrastructure and energy infrastructure can no longer be planned separately.

"While land availability, digital connectivity and government incentives remain important, investors are increasingly looking for confidence that reliable, scalable and lower-carbon electricity will be available over the long term," Shah Yang told *StarBiz*.

The continued appetite for data centre investments comes as hyperscalers diversify their infrastructure footprint amid geopolitical and supply chain uncertainties, with South-East Asia, including Malaysia, emerging as an increasingly attractive destination.

However, Shah Yang said countries that treat energy as something that can simply catch up later risk undermining their digital ambitions, noting that energy infrastructure requires years of planning and investment.

That said, he stressed that Malaysia's data centre expansion must be pursued in a "safe, responsible and sustainable manner".

Peak electricity demand in Peninsular



Malaysia reached a record 21.47GW in April, surpassing last year's 21.05GW, with much of the increase attributed to data centre consumption, according to TA Research in a recent report.

More importantly, utilisation of these connections is also rising.

The research house said load utilisation reached 23% as at end-March 2026, suggesting existing data centres are steadily increasing their electricity consumption even as new capacity continues to come online.

The figures suggest electricity demand could continue rising as more approved data centre capacity comes online.

However, Shah Yang said the challenge is not simply generating more electricity but ensuring it is available when and where it is needed.

"AI-driven data centres have fundamentally different energy requirements from traditional industrial customers, requiring large volumes of reliable, round-the-clock power.

"As a result, energy availability and long-term certainty are increasingly becoming key factors in investment decisions."

He said as competition for AI invest-

ments intensifies, electricity is no longer simply a utility but is becoming a strategic advantage.

Countries that can provide reliable, scalable and increasingly lower-carbon power will be better placed to attract the next wave of digital and industrial investments.

While renewable energy can be deployed relatively quickly, he said the country would still require a balanced energy mix, with battery energy storage systems and flexible generation helping to maintain grid reliability throughout the energy transition.

He added that no single company can deliver the energy transition alone, with success depending on collaboration among customers, utilities, technology providers, developers, financiers and the government.

On Gentari's plans, Shah Yang said the company is expanding its renewable energy portfolio in Malaysia through large-scale projects such as its 150MW large-scale solar 5 project in Kuala Muda, Kedah, while pursuing opportunities under the Corporate Renewable Energy Supply Scheme (Cress).

As part of that effort, it has partnered Gamuda Bhd's energy unit, Gamuda Energy, to develop up to 1.5GW of solar photovoltaic and battery energy storage capacity under Cress for hyperscale data centre customers.

Beyond Malaysia, Shah Yang said regional electricity trade could play an important role in strengthening energy security, with initiatives such as the proposed Vietnam-Malaysia-Singapore renewable electricity project and Indonesia-Singapore cross-border renewable energy development supporting greater regional collaboration.

Gentari has more than 9.1GW of renewable energy and battery storage capacity either installed or under construction globally. The company also has businesses in hydrogen and green mobility.