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Johor’s grid faces rising demand from data centres



The Malaysian Reserve, Malaysia

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JOHOR’S expanding data centre industry is expected to drive significant electricity demand, highlighting the need for continued power infrastructure development, said BMI, a unit of Fitch Solutions.

Data centres in the state are projected to require about 30 terawatt-hours (TWh) of electricity annually by 2031, accounting for around 18% of Peninsular Malaysia’s electricity supply, up from 6% this year.

“This is equal to over 90% of the net new electricity generation we forecast for Peninsular Malaysia over the same period, underscoring how tight power supply is expected to be.

“Peninsular Malaysia faces the tightest balance because its grid is not connected to Sarawak, where most of Malaysia’s hydro-power growth will occur. Gas will meet most of this demand,” it said in a statement.

BMI also forecast that Malaysia’s thermal capacity will rise by a net three gigawatts (GW) over 2029-2031, from 33.3GW in 2028 to 36.3GW in 2031, with gas-fired generation increasing by 13.6TWh to 106.7TWh.

This is above the net increase of around 0.9GW implied by planned figures, under which 7.9GW of new gas capacity is intended to replace 6.9GW of retiring coal and gas capacity.

“We expect some of these retirements to be delayed given the tight supply margins,” it stated.

Beyond generation capacity, BMI has identified grid connectivity as another key consideration in supporting data-centre expansion, as physical infrastructure requires

longer development timelines, while regulators are tightening connection requirements.

Grid infrastructure takes considerably longer to develop than data centres, meaning headline generation capacity does not necessarily reflect the amount of electricity immediately accessible to new projects.

In Johor, overall grid utilisation is only around 30% based on industry estimates, but data-centre demand is concentrated in a small number of locations, particularly the Sedenak and Nusajaya Tech Parks, where local substations and connections face increasing demand.

To support grid infrastructure development, Tenaga Nasional Bhd (TNB) plans to invest RM43 billion in grid upgrades, although major grid projects typically take five to 10 years to complete.

Meanwhile, connection requirements are also becoming more stringent. In February 2026, Malaysia restricted approvals for new non-AI data centres for almost two years, with operators required to demonstrate access to their own power and water supplies before connecting.

“We therefore expect grid access, rather than headline generation availability alone, to be one of the main constraints on data-centre development across these markets. Projects with secured connections, committed tenants and strong access to funding are more likely to proceed on schedule, while projects that have yet to secure power are more exposed to delays,” it added.

— *Bernama*