



15 SEP, 2026

Energy sector set for fresh investment wave

The Star, Malaysia



Energy sector set for fresh investment wave

Johor remains a key driver of secured DC capacity

ENERGY

PETALING JAYA: The country's push to expand gas-fired power generation is set to trigger a fresh wave of investment across the energy sector as rising electricity demand from data centres (DCs) coincides with the retirement of ageing coal-fired plants.

TA Research said the planned addition of up to 9GW of gas-fired generation capacity by 2032 would be critical to preventing a potential tightening of reserve margins, as some 7.1GW of coal capacity is due to expire between 2029 and 2033.

It added that the growing reliance on gas-fired generation is expected to spill over into the country's gas infrastructure, creating demand for additional regasification terminals and pipelines as Malaysia's electricity needs continue to rise.

These are some of the takeaways following the recent Energy Regulatory Insights 2026 forum.

It was highlighted during the conference that DCs now account for 9.3% of Malaysia's total electricity consumption, with hotter weather increasing demand for cooling.

"The incremental 9GW gas-based generation capacity by 2032 underscores our sector thesis, which highlights the potential sharp drop in reserve margins once the short term power purchase agreement (PPA) extensions under NewGen25 drops off the grid by 2029 to 2030.

"The strong demand growth from digital infrastructure buildout comes amid sizeable coal PPA expiries.

"Some 7.1GW coal capacity is expiring between 2029 to 2033 and the remaining 5GW between 2040 to 2044, which is expected to lead to sustained undercapacity post-2032 without an acceleration in new plant-ups," TA Research said in a report.

Citing Tenaga Nasional Bhd (TNB) data, it noted that demand from DCs remains strong, with electricity load rising 108% year-on-year to 1.26GW as of June 2026.

"Some 5.65GW of DC capacity has been connected to the grid, while another 2.2GW is under construction and 0.5GW is covered by newly signed electricity supply

"Over the longer term, the Energy Transition and Water Transformation Ministry had previously projected DC demand to hit 21GW by 2040. However, at the current rate of DC capacity additions, we would not rule out this target being exceeded."

TA Research

agreements, bringing the total prospective capacity to 8.4GW. TNB also highlighted another 5GW of DC connection projects in the pipeline, which could potentially bring total connected DC capacity to 13GW in the medium term."

The research firm said Johor remains the key driver of Malaysia's secured DC capacity, accounting for 67% of the 8.4GW total.

"Over the longer term, the Energy Transition and Water Transformation Ministry had previously projected DC demand to hit 21GW by 2040.

"However, at the current rate of DC capacity additions (of an average 0.6GW per quarter based on TNB's connected DC capacity growth since 2024), we would not rule out this target being exceeded, although we acknowledge that competition from other regions and demand dynamics for DCs might also influence eventual demand."

According to the research firm, grid availability is also becoming an increasingly important consideration.

Based on TNB's previous indications, every 1GW of solar capacity added to the grid would require the integration of 0.5GW of battery energy storage system capacity once solar penetration reaches 6GW, to maintain grid stability.

Meanwhile, MBSB Research said that during the Energy Regulatory Insights 2026, it was reiterated that the DC share of Peninsular Malaysia's electricity demand could eventually reach 35% by 2035.

As at mid-August 2026, DCs account for 9.28% of total electricity consumption.

The research house said Malaysia is entering a "power catch-up period", as firm generation capacity could not be added nearly as quickly as DC capacity.

"In the interim, the system will have to rely more heavily on its existing generation fleet, potential PPA extensions, additions of renewables, storage and other flexibility resources.

"We see 2029 as the intended supply inflection point, although project delays could prolong the catch-up period up to 2031," MBSB Research noted.

This may be caused by factors such as delays in turbine procurement – which is currently facing a global shortage – as well as slips in timelines for financing, construction, and transmission connections

The research house said the option of extending PPAs for coal-fired power plants should remain open until sufficient gas-fired generation capacity comes online, despite the country's decarbonisation objectives.

According to the research house, the Energy Commission is currently leading a comprehensive study to develop a transition strategy for existing coal-fired power plants.

The study covers options ranging from early retirement through competitive bidding and retirement upon existing PPA expiries, to mothballing, repurposing, converting units into flexible systems for security, and extending PPAs.

The PPA for the last remaining coal-fired power plant is expected to expire in May 2044.