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Learning from the industry's best green practices



The Edge, Malaysia

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Held in conjunction with the International Sustainability Week 2026, the Green Building Study Tour 2026 organised by Qube Integrated Malaysia Sdn Bhd and GreenRE Sdn Bhd was held in the Klang Valley on Sept 9. The study tour saw 120 participants from various backgrounds, including industry players and delegates from China, Hong Kong, Brunei and other countries.

The first site was ALP OMEGA 1 Bukit Raja in Klang, a warehouse project that represents a new generation of logistics facilities. Developed from a vision to move beyond the conventional Grade A warehouse, ALP Malaysia managing director Bryan Yeo said the project demonstrates how logistics buildings can be designed not only for storage and distribution, but also for long-term energy, resource and operational efficiency.

The warehouse occupies a 27-acre site and has a total floor area of about 171,000 sq m. The facility includes over 100,000 automated pallet storage and about 1.2 million sq ft of net lettable area. ALP OMEGA 1 Bukit Raja is GreenRE Bronze certified and was completed in 3Q2024.

One of the project's key green features is its automation-first approach, said Yeo. The warehouse incorporates an Automated Storage and Retrieval System, supported by warehouse management systems and digital technologies.

"By maximising vertical storage and making better use of the available floor area, automation reduces the need for excessive building footprints while improving storage efficiency. Automated operations can also reduce unnecessary movement of equipment and personnel, contributing to lower energy consumption during daily operations," he explained.

The building was also designed with long-term sustainability and maintainability in mind. Rather than treating sustainability as an additional feature, Yeo elaborated that the project integrates environmental considerations into the overall warehouse design.

"We were asked to look into



ALP OMEGA 1 Bukit Raja's automation-first approach reduces the need for excessive building footprints



passive design and practical measures rather than relying heavily on technologies. In this particular building, the active systems are largely dedicated to and managed by the customer, ALP. You will be able to see very clearly how they reduce operational and technology-related impacts."

Another feature is the project's approach to shared and multi-tenant logistics operations. By allowing different customers to utilise a common high-quality logistics facility, the development can make more efficient use of land, infrastructure and building resources.

This approach supports the growing demand for logistics space while avoiding unnecessary duplication of facilities.



The TNB Platinum Headquarters Campus features high-efficiency building systems and monitoring technologies

The project's sustainability philosophy also extends to its wider development strategy. Yeo highlighted. Its expansion across Southeast Asia demonstrates how a standardised approach to efficient warehouse design can be adapted to different locations and markets.

"The local project is, of course, also reflecting what has been done in Thailand. If you look at the Taiwan projects, you will see that some of the strategies are actually very similar. These are all the lessons and experiences we have gained from the process," he added.

Energy-efficient smart building

The next site was the TNB Platinum

Headquarters Campus, which showcased how sustainability can be incorporated into a modern commercial development through a combination of energy efficiency, renewable energy, water conservation, smart technology and passive design.

Completed in 2023, the campus occupies a 13.6-acre site in Bangsar. The development includes four office buildings, a convention centre, childcare and Pelitawanis facilities as well as a central "green island" plaza connecting the different components of the campus. TNB Platinum Headquarters Campus is GreenRE Platinum certified.

According to TNB Energy Services Sdn Bhd engineer Athirah

Rashid, one of the building's most significant green features is its emphasis on energy efficiency. She added that the development incorporates high-efficiency building systems and monitoring technologies to manage energy consumption more effectively.

"A smart building monitoring system enables our building operators to track performance and identify opportunities for further savings. This approach allows energy management to become an ongoing process rather than a one-time design exercise."

The development also benefits from district cooling, which provides an efficient approach to air conditioning and cooling requirements. In addition, she said the incorporation of solar photovoltaic panels allows the building to generate renewable energy on site, which reduces reliance on conventional electricity sources.

Water conservation is another important component of the project. Athirah explained that the building incorporates rainwater harvesting, allowing rainwater to be collected and reused for appropriate non-potable applications. Measures involving water efficiency and potentially greywater reuse further reduce demand for treated potable water, she added.

The development also has green roofs, which she said, contributes to the buildings' environmental performance while introducing vegetation into the built environment.

Athirah said the Platinum building is part of TNB's wider energy-transition strategy rather than an end point.

"The company has set an aspiration to achieve net-zero emissions by 2050, with an interim target of reducing emissions intensity by 35% by 2035 and halving coal generation capacity by the same year.

"We need to move away from coal towards natural and renewable energy. So, our aim is to transition from coal generation to renewable energy, including biomass, solar and hydropower. In addition, we are also looking at nuclear energy as part of our future energy mix," she said.