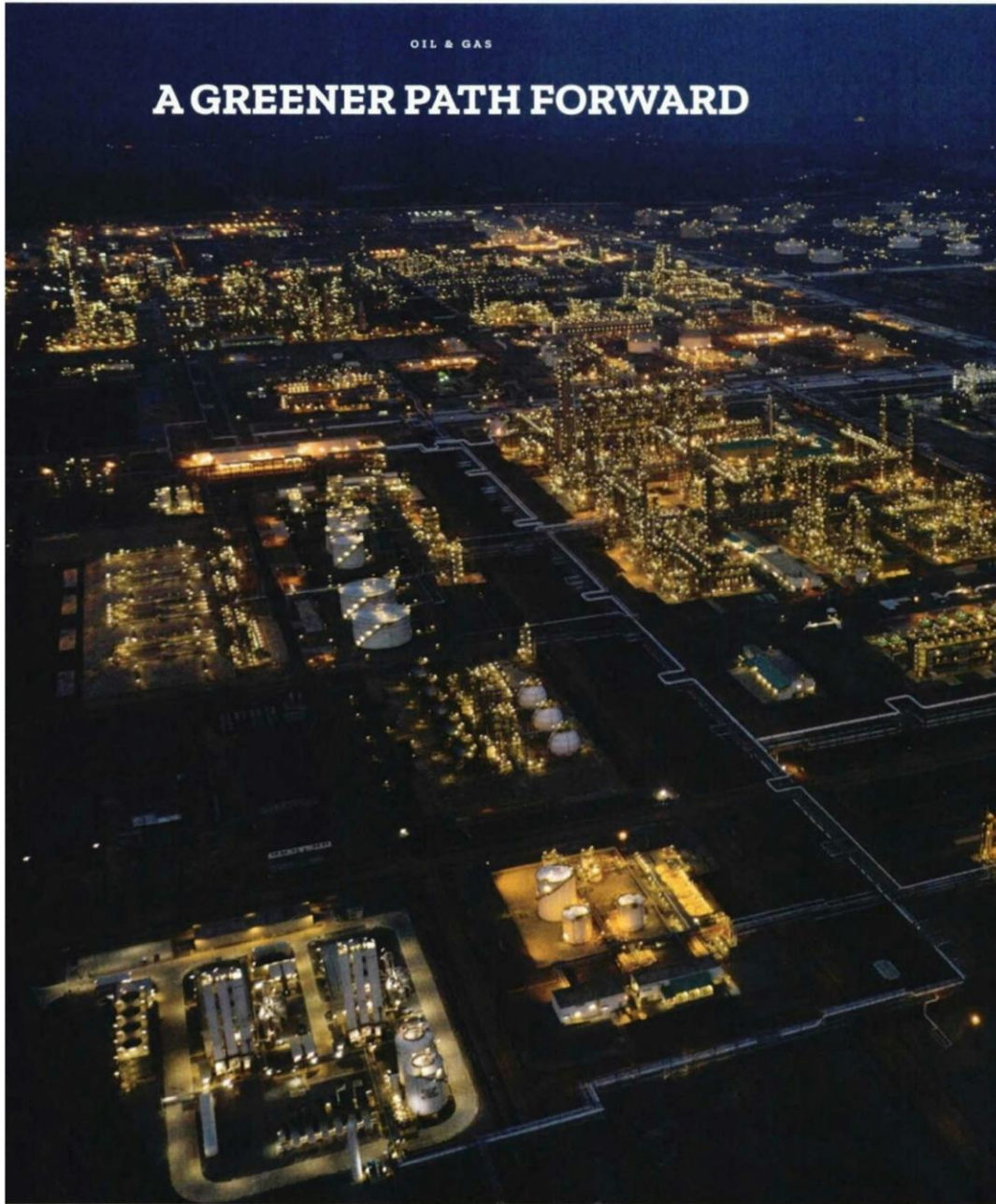
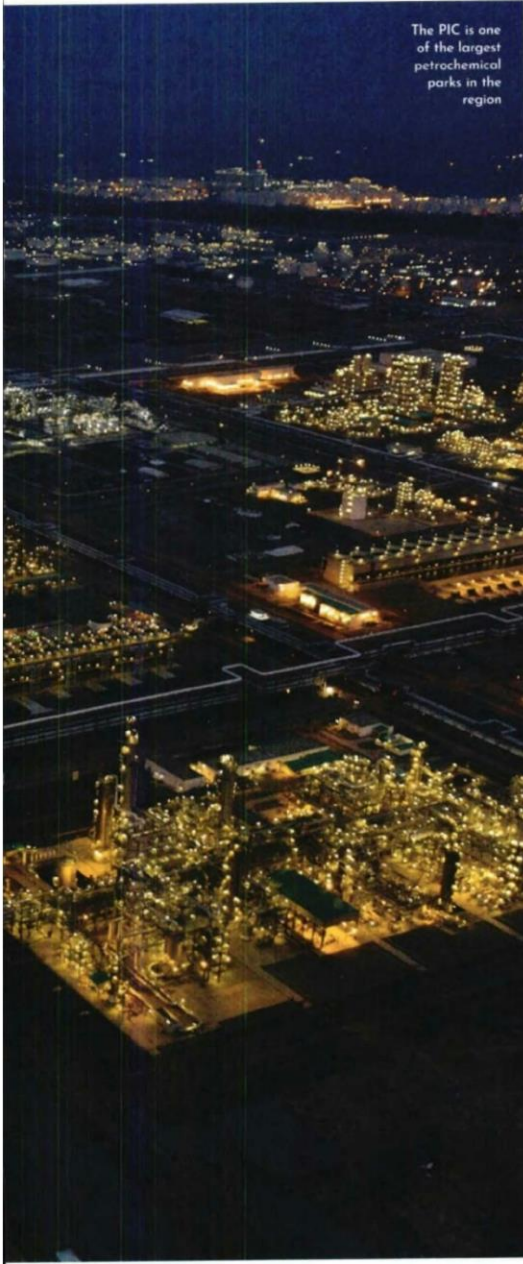


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The PIC is one of the largest petrochemical parks in the region

THE Pengerang Integrated Petroleum Complex (PIPC) is a key project to increase the value of the downstream oil and gas value chain in Johor. Oil refineries, naphtha crackers, petrochemical plants, liquefied natural gas import terminals and a regasification plant are housed on its plot of land which measures around 20,000 acres.

The PIPC, under the purview of the government agency Johor Petroleum Development Corporation Bhd (JPDC), includes the Pengerang Integrated Complex (PIC) which is managed and developed by Petronas Refinery and Petrochemical Corporation Sdn Bhd (PRPC).

It is one of the largest petrochemical parks in the region and Petronas' single biggest downstream investment.

Sustainability is mentioned as a focus for the PIC, which includes the use of renewable energy such as solar power, energy-efficiency equipment, electric vehicles (EVs) and practices aligned with the circular economy.

This move is aligned with global trends, as the pressure on oil and gas companies to adopt sustainability measures and reduce emissions will continue to increase, going forward. To attract high-quality investors and tenants for the PIC, sustainability features would have to be in place.

"PIC has been strategically positioned to expand its business growth to support the development of specialty chemicals and green initiatives, as we are witnessing an ongoing shift towards a more sustainable operation," says PRPC senior vice-president and CEO Kamal Bahrin Ahmad.

"With a focus on building an ecosystem that supports the demand for sustainable solutions, PIC has the potential to play a wider role in becoming a catalyst in the development of green initiatives in the Southern Region."

Some highlighted examples of PIC's sustainability initiatives are the incorporation of high-energy-efficiency multi-train configurations to reduce fuel consumption in the complex, according to Petronas. It also installed the Flare Gas Recovery System to minimise flaring and incorporated low-nitrogen burners with maximum efficiency.

More than 40MWp of solar panels are installed in PIC which, according to Petronas, is Malaysia's largest self-consumption ground-mounted solar installation, with the capacity to reduce 12,000 tCO₂e emissions a year. The increase in solar power capacity will help PIC offer a green energy package to PIC tenants as well.

Additionally, 64 EVs were introduced into its fleet and annual biodiversity monitoring is done in the vicinity of PIC. The latter aims to assess the composition and distribution of species in the study area and monitor potential impacts on the ecology from their operations.

A buffer zone, located at the western and northern boundaries of PIC, has become a habitat for migratory birds and is home to aquatic plants and animals, according to Petronas.

To ensure that PIC's operations do not impact the air quality of the surrounding areas, PIC rolled out a continuous ambient air quality monitoring station in 2021, which Petro-

PHOTOS BY PIPC

The PIC includes a deep water terminal and a power station



nas says is the first and only one of its kind in its operations. This station provides verified and quality-controlled data to the dedicated health and safety team at PIC.

Several partnerships have also been formed to promote biofuels and the circular economy which ensures that waste becomes raw materials again.

Petronas partnered with Eni SpA and Euglena Co Ltd to build a green biorefinery to produce sustainable aviation fuel, for instance, and hydrogenated vegetable oil for on-road vehicles, diesel-powered trains and marine transportation.

Another project is by Petronas Chemicals Group Bhd (KL:PCHEM) to produce Tacoil, a recycled oil, from plastic waste to become a feedstock for plastic production. This is expected to be ready in the first half of 2026.

"Moving forward, PIC will continue to bring in investments and partnerships in this space to maximise its potential and steer further growth. This includes expanding its ecosystem to facilitate the development of sustainable solutions within the complex, which is crucial to attracting new investors," says Kamal.

Another area of focus for the PIC is social outreach activities that provide job opportunities to local communities in Johor, social impact programmes that nurture the development of cooperatives and entrepreneurs, among other groups, and programmes for livelihood restoration.

According to Petronas, PIC has contributed over a billion ringgit to the Pengerang community and the state through economic



"Moving forward, the PIC will continue to bring in investments and partnerships in this space to maximise its potential and steer further growth."

Kamal

livelihood programmes and taxes. It has also developed six local cooperatives since 2014 and the revenue generated via the various work streams amounted to more than RM17 million (as at 2018).

Additionally, in collaboration with JPDC, Koperasi Permuafakatan Lepau Bhd, which will cultivate palm oil trees in PIC for the next decade, and PIC tenants, PRPC has identified locals who are interested in joining the industry and given sufficient training to be employed at PIC.

Other projects that Petronas has done in this area include promoting an aquaculture project to enhance the livelihoods of around 100 Orang Seletar fisherfolk and planting 30,000 mangrove trees at Pulau Tanjung Surat. ● By Tan Zhai Yun