TheStar people's paper

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OIL AND GAS

The path to net zero

Petronas strikes a balance in its transition strategies and capital spending

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FROM the global energy transition to supply chain disruptions, the Covid-19 pandemic and now new geopolitical risks, national oil company Petroliam Nasional Bhd (Petronas) has had its hands full dealing with these challenges. Now throw in its goal of achieving net-zero emissions by 2050, coupled with its ongoing obligations to pay handsome dividends to the government plus help develop the local oil and gas (O&G) industry, and Petronas has a fine balancing act to manage.

Since it was established in 1974, Petronas has largely lived up to expectations, especially in the 1990s and 2000s, registering impressive growth for both the company and the Malaysian economy.

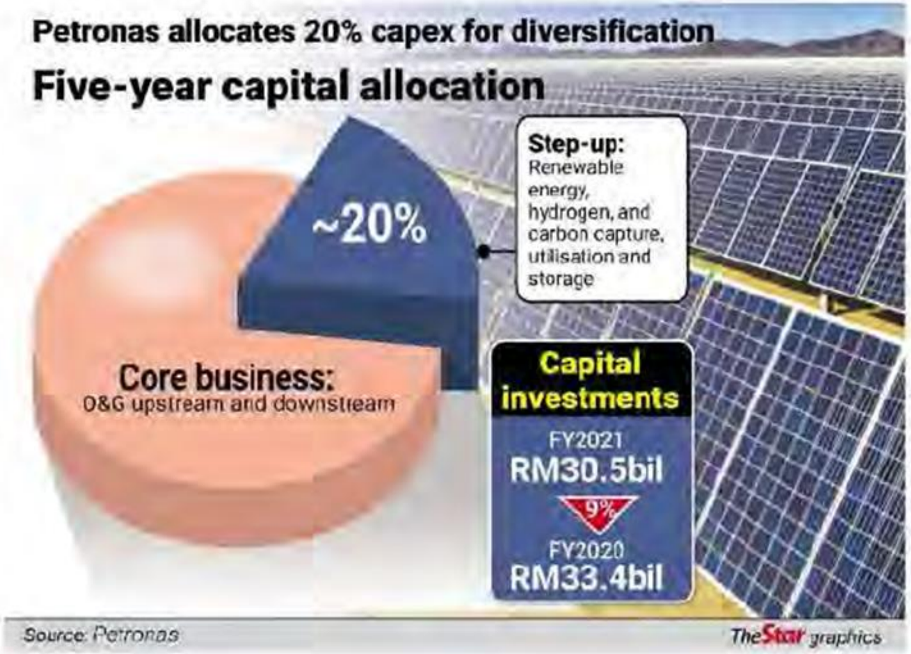
As the corporation that is vested in the entire O&G resource spectrum in Malaysia, Petronas has also been entrusted with the responsibility of developing the sector locally.

Many O&G service providers were created, with Petronas dishing out contracts to local companies. Billions of ringgit in wealth creation was achieved. But fast forward to today and the buzz that should be associated with the recent oil price climb seems to be a stifled one.

Part of the reason for that is because the energy sector has been impacted by the global movement toward a low-carbon future. Major investors and banks are increasingly looking to reduce their exposure to assets that pose risks to climate change.

Hence, this is the time when oil majors such as Petronas must make tough choices - to improve their resilience and to consider how to position themselves for the future.

Can Petronas strike this balance? Is it going to



en by the recovery in global energy demand as key economies reopened and travel restrictions eased amid higher Covid-19 vaccination rates around the world.

"Petronas has benefitted from the overall recovery of the O&G sector globally," says Tengku Taufik. He points out that Petronas had booked an average Brent crude oil of US$70.91 per barrel in 2021, more than 70% higher than the US$41.67 per barrel it had booked in 2020.

For the fourth quarter ended Dec 31, 2021, Petronas recorded a PAT of RM13.4bil against a loss of RM1.1bil in the same quarter a year earlier. The higher earnings were due to higher selling prices and lower impairment losses of assets.

Revenue for the quarter increased to RM76.6bil compared with RM44bil in the same corresponding quarter last year.

Other oil majors such as Shell, ExxonMobil, Chevron, Shell, BP and TotalEnergies are set to ramp up their capex for this year, albeit lower than what was seen in 2014.

According to Wood Mackenzie in its Global Upstream Outlook 2022 report, the global upstream sector is set for a rebound next year, when overall investment in exploration and production is expected to exceed US$400bil (RM1.67 trillion) for the first time in three years.

Nonetheless, the report highlighted that despite record high cash flows and with oil at over US$70 (RM292) a barrel, companies will maintain discipline in spending and pay more attention to climate and shareholder pressure to decarbonise operations.

Previously, the new energy business was parked under Petronas' "gas and new energy" unit led by Adnan Zainal Abidin.

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Can Petronas strike this balance? Is it going to be a clean energy company moving forward?

Petronas president and group chief executive officer Datuk Tengku Muhammad Taufik says: "Please note that Petronas is not abandoning hydrocarbons. A decarbonised future is not a future entirely absent of hydrocarbons. The main challenge is to address emissions."

Speaking to reporters at a press conference that lasted almost two hours, Tengku Taufik lays out how Petronas is setting up two new "independent entities" that will focus on its net-zero emission plans.

This first will be a business unit focused on "clean energy solutions" that will oversee Petronas' renewable energy (RE), hydrogen ventures and advancing the concept of green mobility. Petronas will also set up a "carbon management unit", which is a centralised unit under its upstream business that aims to accelerate decarbonisation efforts across the group.

To support the growth of the new energy and the current business, Tengku Taufik reveals that Petronas is planning to bring back its pre-pandemic annual capital expenditure (capex) of RM40bil to RM50bil in 2022.

About 20% of the capex has been earmarked solely for its clean energy solutions and carbon management units, higher than the 9% capex allocation plan for such ventures previously.

"We have to plant the foundation now, because if we don't we risk being left behind," he points out.

Despite being under a tight budget, Petronas' new energy has reached several milestones, including 1GW of solar installation in Malaysia and India. Tengku Taufik says that the "clean energy solutions" business unit will be an independent vehicle from Petronas that will act almost like a venture capital or private equity firm that will take strategic stakes in and nurture these new businesses.

Under its green mobility plans, Petronas will take an active role in providing infrastructure for electric vehicles, which will see the company installing between 20 and 30 charging stations throughout Malaysia this year.

"Petronas must take bold decisions now or risk missing out on the narrow opportunities to navigate the global energy transition successfully."

Datuk Tengku Muhammad Taufik

"In the longer term, we foresee a proliferation of higher and faster charging stations across Malaysia. The proliferation of infrastructure will unlock green mobility in Asia," he says.

The higher capex allocation by Petronas comes at the time when crude oil prices are on a tear, trading at their highest since 2014. Brent crude oil was last traded at US$111.18 (RM464.23) per barrel.

For financial year 2021 (FY21), Petronas returned to the black with a profit after tax (PAT) of RM48.6bil from a net loss of RM21bil in FY20. During FY21, Petronas reported a 39% growth in revenue to RM248bil compared with RM178.74bil

unit led by Adnan Zainal Abidin.

Following the restructuring, Adnan will be in charge entirely of Petronas' gas business as the executive vice-president and CEO. He was also promoted to chief operating officer of Petronas, a post that has been vacant since 2015.

Petronas, whose portfolio is 70% gas and is the fifth-largest gas exporter in the world, expects gas to remain as an important component of the global energy transition.

Adnan expects an uptick in demand for both piped gas and liquefied natural gas (LNG) in Malaysia and the region, post-pandemic. "In Malaysia, we will see an increase in gas consumption, especially from the power sector. We are also positioning ourselves to offer solutions through carbon-neutral LNG. We have delivered it to Shikoku Electric, and are going to supply it to Hiroshima Gas Co Ltd in China," he says.

Meanwhile, Tengku Taufik reckons that gas demand is expected to accelerate in the coming years, as it will be an important component for the global energy transition, even after the recent upswing in prices in Europe and other key markets.

He says that O&G will still make about 40% of the world's energy mix beyond 2040-2050, and that gas is seen as a transition fuel for economies that want to have low-carbon futures.

"Clearly what is being displaced is oil. So far as gas is concerned, we have seen growth in demand for natural gas," he reiterates. He points out that the overall investment in gas assets has been "quite slow" over the last decade and hence there is shortage in the market.

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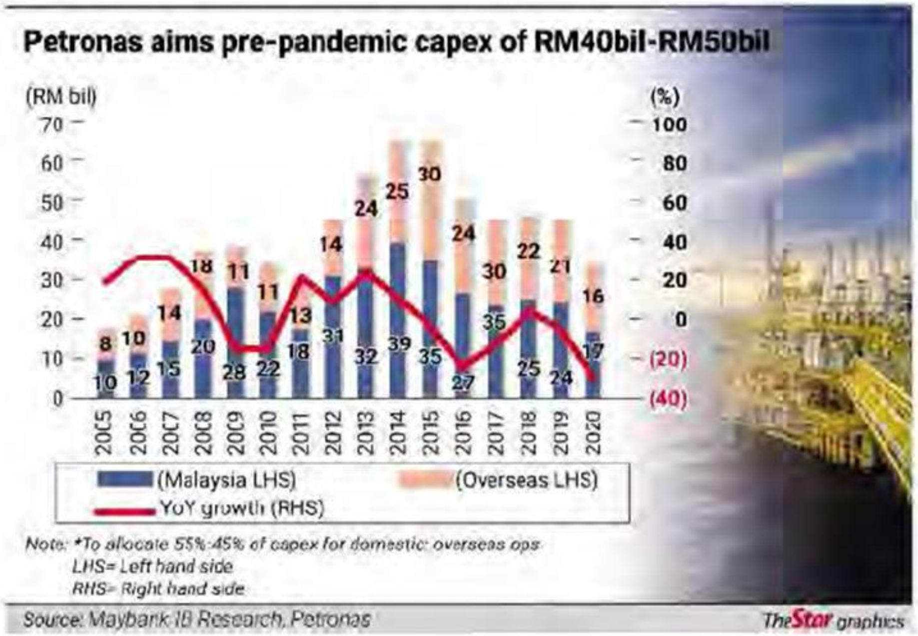
recorded a year earlier. It attributed the stellar performance to surging commodity prices, driv-

"In the next two to three years, we expect a shortage of 25 to 28 million tonnes per annum of



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LNG. "We just have not stepped up as an industry to take on more gas," he adds.

Petronas is developing Sabah's first nearshore LNG plant that will be the first of its kind in Malaysia, and will have a minimum capacity of two million tonnes per annum.

Upon completion, the nearshore LNG plant will increase Petronas' LNG production from floating LNG (FLNG) facilities from 2.7 million tonnes per annun (tpa) to 4.7 million tpa. Petronas operates two FLNG vessels — the PFLNG Satu and PFLNG Dua, at the Kebabangan and Rotan offshore gas fields respectively.

According to McKinsey & Co's "The Future of Liquefied Natural Gas" report, Asia is still highly dependent on coal as its primary energy source, accounting for about 47% of its energy mix.

Gas makes up about 12% of the region's energy consumption, a stark difference compared to 20% of consumption in other regions.

"Increasing Asia's share of gas energy consumption to 20% would add the equivalent of more than 400 million tonnes of LNG to annual gas demand, nearly doubling the size of the LNG market," it says.

The report adds that the long-term outlook for LNG is brighter than that of other fossil fuels because of its comparatively lower cost and lower emissions from production and combustion.

"But to find a true competitive advantage amid a volatile market, the LNG industry must move beyond what were once winning strategies (control of gas resources, reliability of supply). Instead, LNG players should focus their efforts on five areas: capital efficiency, supply-chain optimisation, downstream market development, decarbonisation, and digital and advanced analytics," the report states.

One of the interesting points that was highlighted during the press conference is that Petronas is taking a bet on hydrogen, which is dubbed as the energy of the future by some quarters.

Tengku Taufik says that the demand for hydrogen is building up.

"The O&G industry is naturally positioned to take on hydrogen because the chemistry that we can do has already helped us produce blue hydrogen. Hydrogen is an energy carrier and it will be envisaged as part of the ecosystem. The trick right now is how to transport it. That is why you say it's difficult to see how hydrogen is going to be so widespread.

"But, for blue hydrogen it can be sent in the form of ammonia, which is already done today. In fact the customers for hydrogen are typically the same players that consume LNG," he says.

The Petronas Activity Outlook 2022-2024 report highlighted that Petronas is targetting its domestic hydrogen projects to commence operations from 2024, starting with blue hydrogen and to subsequently move to green hydrogen production.

In the report, Petronas encourages the O&G services and equipment (OGSE) players to take the opportunity to diversify and spur new business growth while upskilling capabilities in line with charting the country's aspiration of going into a low-carbon economy.

Petronas expects global hydrogen demand to accelerate in 2030, driven by policy, technology, market competitiveness and cost reduction.

"The versatility of hydrogen as a fuel, heat source and feedstock allows for the demand to further grow and be used in many other sectors such as transport, industries and power generation," it says.

Tengku Taufik stresses that while the group is diversifying into new energy opportunities, Petronas will continue to maximise the value of Malaysia's hydrocarbons.

He says the Malaysia Bid Round has earmarked to offer 14 exploration blocks for this year, higher than the 13 offshore blocks offered in 2021.

"As the national oil company, Petronas recognises its responsibility to maximise the value of the nation's hydrocarbon resources. It is our responsibility to provide long-term economic value and energy security.

"But, as an O&G player we can no longer operate under a business-as-usual approach, simply because that won't help us achieve our net-zero aspiration by 2050. Nor can we then expect to serve as an energy partner for our customers who are increasingly demanding for green energy.

"Petronas must take bold decisions now or risk missing out on the narrow opportunities to navigate the global energy transition successfully," Tengku Taufik says.

"We will continue to remain in our role as the catalyst of the local OGSE sector and we will work together with our partners, especially as the industry is now moving to decarbonise operations," he adds.

Oil majors such as Shell and BP have also announced diversification into renewable energy and set targets to become net-zero firms by 2050.