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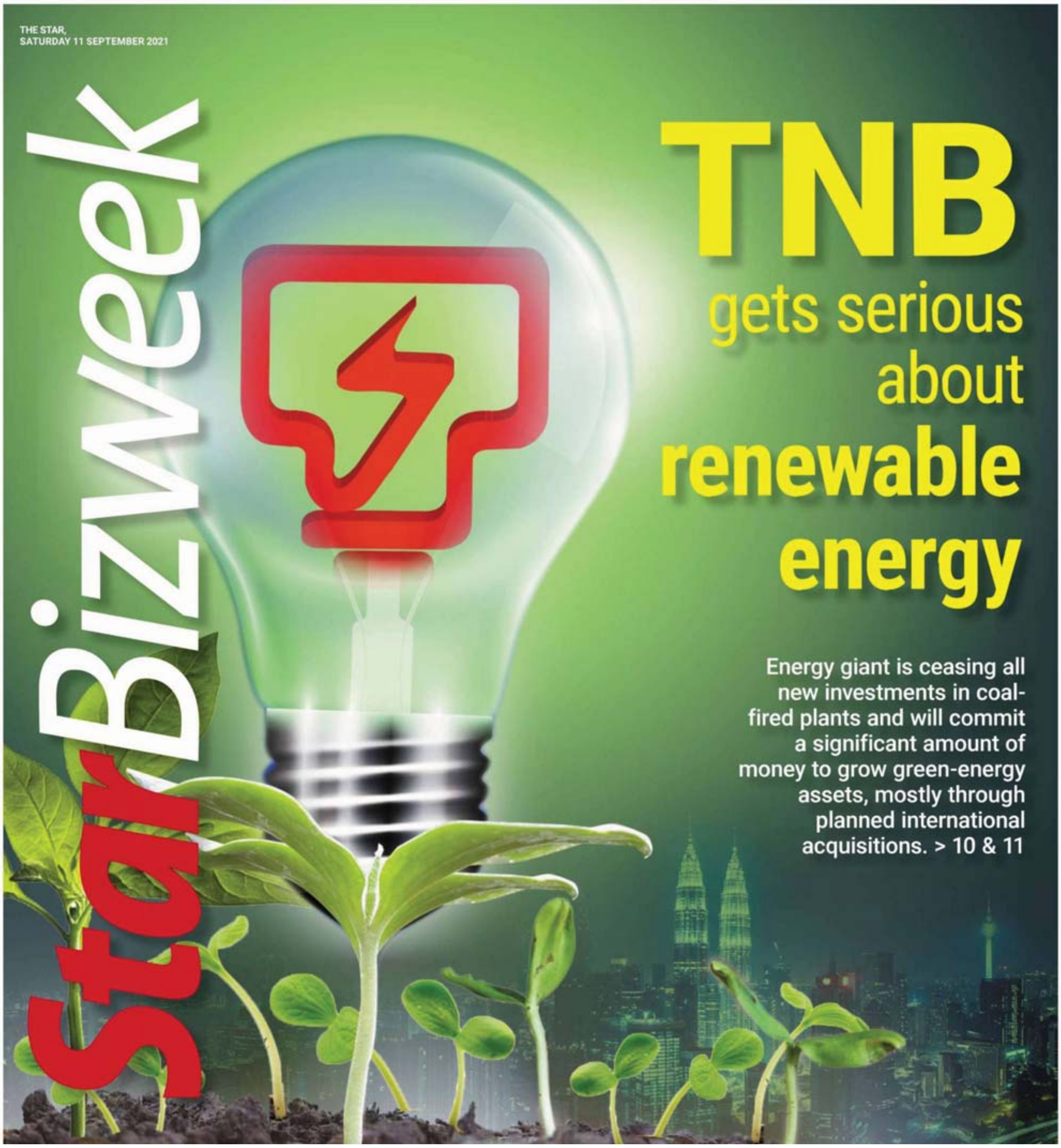

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Energy giant is ceasing all new investments in coal-fired plants and will commit a significant amount of money to grow green-energy assets, mostly through planned international acquisitions. > 10 & 11

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TNB's ambitious green energy plans

Utility giant is going full steam into renewable energy to future-proof company

ENERGY

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IN all the talk surrounding growing the country's green energy aspirations, one important part of the story has remained relatively quiet. National energy giant Tenaga Nasional Bhd (TNB) today operates power plants that supply just over half of the country's electricity needs and the bulk of those plants are running on coal.

So without TNB, green energy will move at a snail's pace.

The good news, though, is that TNB has now laid bare its ambitious plan to overhaul its energy mix and go full steam into renewable energy (RE).

The plan was revealed last week, being referred to as a "sustainable pathway" for TNB and also one that future-proofs the company.

The plan spans more than 30 years with an end goal of achieving net-zero emissions by 2050.

One notable step toward that journey is that TNB will no longer build any new coal-powered power plants.

The Jimah East Power, a coal-fired 1,000MW plant commissioned in 2019, will be the last such power plant by TNB.

For its move into greener energy sources, the plan is to not only build or invest in new RE assets locally but more significantly, to acquire assets overseas in solar, wind and even hydrogen.

The reason for venturing abroad in a big way is because the domestic power market is relatively small for TNB to rapidly increase its RE capacity.

The government has set a goal to increase the country's installed capacity for RE from 7,995MW currently to 18,000MW by 2035.

TNB president and CEO Datuk Baharin Din says the group targets to double its RE capacity to 8,300MW by 2025 from 3,400MW currently. Its current RE capacity in the international market is only 666MW.

While he declines to comment on the amount of capex that TNB is allocating for its RE plans, he reveals that the amount "would be substantial" as TNB aims to add 20GW by 2050 to its RE portfolio.

"We have to go overseas because we are aiming to go for 8,500MW by 2025. The idea is to acquire the technology and the know-how and transfer and grow that in Malaysia and South-East Asia," he tells *StarBizWeek*.

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"TNB's sustainability commitment is guided by our government's initiatives and TNB commits to contributing a prominent role to drive the sustainability efforts in Malaysia."

Datuk Baharin Din

He points out that TNB is looking into the European market for RE assets, as the industry is more mature there.

For perspective, currently, coal is the main fuel used in TNB's power generation, accounting for almost 50% of the fuel mix.

Clearly this has to change in order to meet the country's commitments to use more green energy. Furthermore, investors of TNB would also demand this as environmental, social and governance (ESG) principles feature heavily in today's investing world.

In June, the Energy Commission (EC) released its "2020 Report on Peninsular Malaysia Generation Development Plans". In that, the EC said that more than 7,000MW of coal-fired power plants will be retired by 2033. Coal-fired plants now account for 13,000MW of installed capacity in the country.

Interestingly, the report does seem to indicate that Malaysia will still be having 2,800MW of new coal-fired power plants coming into operation after 2030.

This does seem to contradict statements made by the Energy and Natural Resources Ministry that there will no longer be any newly built coal-based power plants in the country.

The report has also highlighted that the government has increased its renewable target to hit 31% of the country's energy mix by 2025. Two years ago, the government had put that target only at 20%. And now the government wants to grow it even bigger to 40% of the energy mix by 2035, the report states.

According to RHB Research, the revision took into consideration the country's large hydro resources as part of the RE definition for Malaysia.

"This is consistent with practices adopted by other countries internationally," RHB Research said in a report on Wednesday.

"It is not surprising for TNB to focus on the markets abroad, considering that the local market's growth potential could be too small for TNB's earnings base," RHB added.

Margin compression

When asked about the rationale for TNB pursuing its RE journey overseas first, Baharin says that acquisitions will be the "pathfinder" for TNB to expand its RE expertise and adopt the technology and grow it in Malaysia.

"The RE market in Europe is more mature than in this part of the world. We are taking a long-term approach in which we want to acquire the technology and know-how to build and operate RE assets.

"We hope to bring back this expertise to be developed in this part of the world not only in Malaysia but also in South-East Asia," he says.

"This has always been the TNB way of developing our expertise. In the past, we also brought in technology, learned the trade and grew our workforce and capabilities," he adds.

Bahrain stresses that TNB does not see a future without RE. TNB needs to have "skin in the game" he says.

"Of course we need to strike a balance between continuing to support the current business model by focusing on operational efficiency while at the same time working on our energy transition that would include gas and hydrogen and expanding the RE segment," he says.

TNB has established its own RE investment and asset management company called Vantage RE Ltd, to operate and manage its portfolio of RE assets in the UK and Europe.

About 90% of the TNB RE target will be filled up with its international RE capacity expansion, an approach similar to the Petroliam Nasional Bhd or Petronas.

However, RHB Research has raised concerns about the returns that TNB will be getting from its RE investments.

The research house says that the return on investment or ROI by TNB could reduce to a single digit as it goes ahead with its RE acquisitions compared to conventional fossil fuel ventures.

"The earlier generation of power purchase agreements or PPAs for typical thermal plants provides much greater returns and has normalised to about 10% to 12% internal rate of return or IRR in recent years.

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"With significant investments pouring into the RE space, the average returns for these projects, especially onshore solar, tend to be kept at single digits," it says.

Baharin has a different view. He says that RE margins will continue to improve in the mid to long term due to advancements in technology. He says it's already proven that RE plants today have lower operational costs compared with conventional coal-fired ones.

He cites solar power as an example, saying that the cost to produce electricity from utility-scale solar photovoltaics had fallen by a massive 85% between 2010 and 2020.

Coal-fired power plants could be more expensive to run in the future, says Baharin. "Over the past 20 years, the operational costs of running RE has dropped significantly and will continue to improve."

In terms of earnings, Baharin points out that there is data to show that several global pure-play RE companies are able to generate earnings before interest and tax (Ebit) margins of over 30%. "In comparison, non-RE energy firms typically manage Ebit margins of between 9% and 14%," he says.

Reducing cost

"This cost will reduce further because it is a growing emerging technology," he adds.

As for concerns on the high capex needed for RE projects, Baharin points to a telling fact revealed by a report published by the International Renewable Energy Agency in June. That report states that 162GW or 62% of total RE generation added in 2020 had lower costs compared with the cheapest new fossil fuel options for power generation plants.

"As RE generation capacity worldwide increases, project costs will fall further. This will come from improving technologies, economies of scale, competitive supply chains and improving project developer experiences," he says.

Presently, TNB has more than RM5bil cash in its coffers that puts the company in a good position to acquire RE assets.

Sustainable practice: The wind turbines that form TNB's solar-wind-diesel hybrid power generating system on Pulau Perhentian Kecil. The group targets to double its RE capacity by 2025.

Baharin believes that electricity tariffs would remain "competitive" as the group increases its exposure to the RE sector. "Tariffs will remain competitive. As more technologies are introduced, efficiency gains will be achieved. As such, the pressure to increase tariffs will be lesser.

"We are using technology in all directions from the way we generate to the way we distribute electricity," he says.

He says TNB is investing in modernising the national grid with a technology that supports two-way energy flow dubbed as "grid-of the future".

Under the Incentive-Based Regulatory or IBR framework, TNB has planned to invest RM7bil to RM10bil a year from 2021 to 2024 to develop the grid as one of the key enablers of the energy transition.

Baharin says TNB has already made a commitment to no longer build any new coal-fired power plants and it will gradually retire its existing coal power plants according to its PPAs.

He explains that TNB started its "sustainability journey" in 2016 when it launched the "Reimagining TNB Strategic Plan" then and undertook its first carbon footprint assessment in 2017.

"TNB's sustainability commitment is guided by our government's initiatives and TNB commits to contributing a prominent role to drive the sustainability efforts in Malaysia," he says.

This week, TNB signed an agreement with the Energy and Natural Resources Ministry to build a 300MW hydropower plant in Kelantan that will have a 30-year PPA.

The plant is estimated to cost RM5bil to build, which will be financed with debt.

UOB Kay Hian Research expects the contract to be earnings-accretive for TNB. "Based on our assumption that the project has an IRR of 9.5% to 10.5%, the hydropower plant may yield a net present value of RM1.2bil to RM1.8bil for TNB.

"This accounts for 2% of its current market capitalisation. We are positive about the project," it said in a note to clients.

To survive and navigate disruptions, energy companies must continually evolve. To overcome this, business practices will need to change to become flexible enough to respond quickly to opportunities.

Ultimately, energy companies like TNB will need to make conscious, strategic choices to prepare for the future.

To future-proof the company, TNB needs to start to transform its business rather than clinging to what it is today and create a new operating model that is fit for the future.

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