TENAGA NASIONAL
Better. Brighter.

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Rewiring TNB

CEO Datuk Seri Amir Hamzah Azizan shares utility giant's strategies to adapt to the changing power landscape.
> 12, 13 & 16

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Rewiring Tenaga Nasional

CEO shares strategies on changing power landscape

By GURMEET KAUR and P. ARUNA
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ON the cusp of the biggest transformation in its 70-year history, Tenaga Nasional Bhd (TNB) is powering ahead towards inevitable changes on the horizon.

The utility giant, which has enjoyed an almost absolute monopoly in many areas in the country since its earliest days, must now figure out where it fits in the government's vision of a new, liberalised power sector.

Its president and CEO, Datuk Seri Amir Hamzah Azizan, who took the helm of the company in April this year, says TNB has been through several transformations before and will manage the impending changes – just as it has done successfully in the past.

"The key message is that we have seen changes before, and we have managed them.

"The next evolution is not something that is unique only to Malaysia – it is happening in many countries throughout the world today, whereby the market is being deregulated, and where efficiency is the focus," the 52-year-old says in an interview.

From the setting up of the Central Electricity Board in 1949 to the privatisation of the organisation, then known as the National Electricity Board of the States of Malaya (NEB) in the 1980s, and the subsequent establishment of TNB as its successor, the journey of power generation in Malaysia has indeed seen many changes along the way.

TNB, which has become synonymous with the power industry in Malaysia, is today among the largest electricity companies in Asia, serving some 9.65 million in Peninsular Malaysia, Sabah and Labuan.

Given its undisputed position all these years, the government's recent announcement of plans to liberalise the sector understandably created some panic among its investors, who feared that the company, which is 27.3% owned by Khazanah Nasional Bhd, would end up a casualty of the transformation.

The company's share price suffered as a result, slipping to a one-year low of RM11.11 in May, but later recovering as more clarity emerged on the government's plans and as TNB revealed its own strategies to cope with the changes.

Prior to this, one major change in the sector was the privatisation of power generation, which saw the entry of the independent power producers (IPPs) into the market following the landmark 1992 power blackout.

TNB, ahead of the government's recent announcement of its 10-year master plan for the industry, had announced a corporate restructuring exercise in July.

Financial discipline for the generation and retail segments

The company said it would set up independent generation (GenCo) and retail business (RetailCo) entities for a more focused approach on the two core businesses.

Last week, the group entered into agreements to transfer its domestic power generation and electricity retail business to GenCo and RetailCo, respectively, a first step among others to ensure it can run these new entities in good order come July 1 next year.

The industry reforms, under the Malaysia Electricity Supply Industry 2.0 (MESI 2.0) framework recently approved by the Cabinet, aims to accomplish three agendas – increasing industry efficiency; future-proofing the industry structure, regulations and key processes as well as empowering consumers; and democratising and decentralising the electricity supply industry.

The 10-year master plan seeks to ultimately liberalise the sector across the value chain, lower electricity costs and encourage the supply of green energy.

Among the reform initiatives include allowing IPPs to source their own fuel; moving towards capacity and the energy market from the current power purchase agreement (PPA) regime; enabling third-party access for transmission and distribution; liberalising the retail segment; and increasing transparency between Single Buyer and Grid System Operator.

As these reforms take place, Amir says TNB will still account for about 50% of the country's total generation capacity.

Even so, this space is seen as matured, given that yields for the second-generation PPAs are not as generous as what IPPs had enjoyed in the first round of contracts.

Future PPAs will also have a shorter tenure instead of 21 years and going forward, a more competitive merchant market would gradually be introduced, similar to Singapore, where the government had progressively opened up the electricity market to promote more competitive pricing as well as provide consumers with more options.

The two set-ups – GenCo and RetailCo – which will have their separate boards and management teams, will force discipline, greater accountability and bring about an innovative culture, says Amir.

"What is most important for us is that the mindset has to change, and we have to be very transparent because the segment numbers will appear in the annual account reports," he says.

Currently, TNB's accounts do not show how much is made in these segments, as the figures are integrated.

"When you are transparent, it holds people accountable to their performance. That discipline is very important," he asserts.

Amir adds that the government, via MESI 2.0, has also confirmed that TNB's grid and distribution network remains a national monopoly.

"It is not a good idea to break this up into little bits because then, you would have issues like overlapping capital expenditure, which can be inefficient.

"There are also operational issues to deal with on how to maintain the grid and this creates risks such as blackouts," he says.

Reforms to the retail side of the business, he says, will be more exciting as TNB will be forced to reinvent itself, be more innovative and compete for customers who will be able to choose which provider to buy their power from – a break from the current model.

"Malaysia is not a pioneer in retail liberalisation.

"There are many other markets that have done this and we have observed what needs to be done," he says.

But while consumers stand to get more attractive or bundled offerings, Amir says it may not necessarily translate to lower tariffs because about 70% of the electricity tariff is still made up of fuel costs.

"We don't know that, but are doing the best to remove inefficiencies in the system so that the best rate can be given to the consumer," he says.

TNB is also embracing digitalisation in the way it operates, to keep up with the changing times, and future-proof the business.

One way it is doing this is through the rollout of smart meters at its customers' homes, which it kicked off in Malacca back in 2016.

The company plans to set up 9.1 million smart meters at households nationwide by 2026, and is currently installing the smart device at homes across the Klang Valley.

The smart meters, which provide a more accurate reading, also allows consumers to monitor their electricity consumption via their smartphones and help them reduce usage.

Re-tweaking the transformation plan

The group is also adjusting TNB's transformation plan, Reimagining TNB 2025, to make it more "realistic", with new and more achievable goals.

"I am trying to put a rigour in terms of providing some clarity about what the game plan is, and then add in detailed plans and targets so we can actually deliver what we promise," he says.

An issue with the original transformation plan, he says, was that the measure of success had been predominantly financial.

The element of operational excellence was missing.

"We want to be able to compare with the top-10 utility companies in the world, and improve ourselves wherever we are lacking," he says.

Amir adds that some of the financial targets stated in the plan are unrealistic, and need to be relooked.

"By setting achievable targets, you can excite and motivate your people to deliver," he adds on the group's plan to become a top-10 global utility player by market capitalisation by 2025.

Next level for TNB

As part of its future generation sources strategy, TNB is shifting its focus towards renewable energy (RE), both locally and abroad.

It had a total installed RE capacity of 332MW as at the financial year ended Dec 31, 2018 (FY18), boosted by its acquisitions in the UK and the commissioning of a 50MW large-scale solar in Sepang.

"In the international space, we have decided sometime back to grow our business, especially in the RE space. However, our first round of forays had challenges.

"In the last six months, we have been refining our portfolio, and have seen encouraging returns from our investments in RE in the UK."

Amir says the group, which targets to grow its renewable capacity to 1,700MW by 2025, will continue to seek opportunities in this space overseas, but these investments "must meet our financial threshold and strategic focus."

On which markets it has set its sights on, Amir says there are still opportunities in Europe that the group can explore, while he also sees opportunities coming up in Asia, where South-East Asia is seen to be the largest growth market after China and India with an estimated investment of US$500bil or 4.3% globally, according to Kenanga Research in a recent report.

For now, the contribution from the international business is small, but Amir reckons that in five years, it will be material to the group's portfolio.

In FY18, TNB made an impairment of around RM1.07bil for its investment related to two of its international associates, namely, Turkey's GAMA Enerji Anonim Sirketi and India's GMR Energy Ltd. This dragged down FY18's net profit to RM3.7bil or a decline of 46% from a year ago. Minus lower regulatory returns and losses from its foreign associates, core profit came in at RM5.4bil.

For context, TNB had been maintaining an average net profitability of about RM6.7bil from 2014 to 2017.

For FY19, Amir says the group is on a more stable platform with "yields coming in the way it should be and we should be able to deliver our normal average for the year".

TNB shares have rebounded since May, closing at RM13.92, which is about what it was trading at in the beginning of the year.

At this level, its market capitalisation stands at RM78.93bil (US$19.08bil), making it now the second-most valuable stock on Bursa Malaysia after Malayan Banking Bhd. The top power companies around the world, meanwhile, have market caps ranging from US$39.26bil to US$111.19bil.

MESI 2.0: Timeline

	2020				2021				2022
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	
Opening up of fuel sourcing	MyPower engage with IPPs to come up with the rules and incentive mechanisms			Energy Commission (EC) approval	Pilot period	Full roll-out			
Establish hybrid generation market by introducing capacity and energy markets	MyPower to come up with energy and capacity markets' design and rules								EC approval
Enable third party access for transmission and distribution	EC and Tenaga to determine interim network changes, develop rules/guidelines for third party access (TPA)			EC to approve and submit Regulatory Period 3.					
Facilitate choice in retail	MyPower to detail and complete a retail regulatory framework			EC approval		Pilot period			
Increase transparency of Single Buyer and Grid System Operator	MyPower will present a report on enhanced governance				Enhanced ringfence governance				TPA framework

Source: CGSCimb Research

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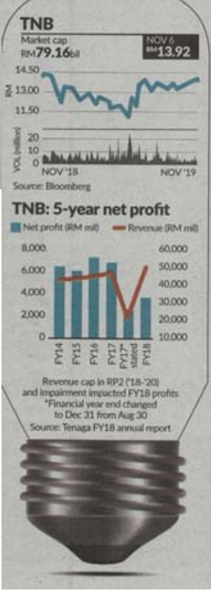

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The nature of the power business

WHEN he took on the job of steering TNB into its next phase, Datuk Seri Amir Hamzah Azizan (*pic below*) already knew it would be an uphill task.

While he knew he would have to deal with the challenges arising from reforms in the power industry, Amir was almost immediately faced with an unexpected obstacle - a surge in complaints about "overcharged bills".

The issue was amplified and made worse by viral posts shared across social media, and the utility firm had to deal with angry customers demanding explanations and refunds.

Amir, who is the son of the late former Petronas president Tun Azizan Zainul Abidin, says many lessons were learnt from the incident, which occurred hardly a month after he entered the company.

For one, he says, it needed to improve the way it communicated with its customers and stakeholders to prepare them for such changes. One of the reasons that many customers thought they had been overcharged, he says, was due to the accuracy of the new smart meters installed at their homes. Another factor, he says, was the scorching weather at the time of the installation of the smart meters, which resulted in higher consumption of electricity. There was also a system glitch at TNB, which resulted in the company not being able to bill some of its customers for five days.

Once the glitch was sorted out, customers had to pay for the additional five days the following month, and this naturally pushed the bill up, says Amir, who is a Liverpool football fan and father of three girls. TNB, he says, dealt with the issue in an orderly and professional manner.

Today, seven months since he took on the job, Amir says he has truly enjoyed the journey.

The organisation, he says, needs someone to rally its people together and outline a clear direction for the company. This is what he hopes to accomplish during his time at TNB.

Excerpts of the interview:

How is the group positioning itself under the changing landscape of the power sector brought about by the Malaysia Electricity Supply Industry 2.0 (MESI 2.0)?

This year is important for TNB, as we are celebrating our 70th year. We are a strong component of nation-building, working hand-in-hand with the government towards the country's growth since before Malaysia gained independence.

Over the years, we have seen and gone through many transformations and have shown that we are able to adapt to any framework of changes.

Today, we are at the cusp of another evolution in the industry space with MESI 2.0. This evolution is not something unique to Malaysia but is happening in many other countries around the world where markets are being deregulated where efficiency is the focus.

TNB has been actually working behind the scenes with the government and related entities to ensure there is balance in the sector.

The good news is that the reforms under MESI 2.0 will be done in a gradual and orderly manner - no sudden changes that will shock the system.

Generation space

If you look at generation, this segment has been open for a long time already following the entry of independent power producers (IPPs) in the 1990s. In this space, we will still account for 50%-52% of the total generation capacity in the country. In the first round of the IPPs, the deals were generous. Over time, it got a lot tougher, as the IPPs had to compete for contracts and the yields became normal. So effectively, this space is already matured. The government has said that it will honour the existing power purchase agreements (PPAs), which means there is no early termination of contracts. That is an important statement as it gives stability to the markets.

Going forward, there will be a measured opening of the market with the introduction of the merchant element of the trading of electricity. What we are anticipating initially from this change is players competing for available capacity. To compete in this space, we are setting up a new independent subsidiary – GenCo – which is slated to be running by July next year. It will encompass all of the generation business that TNB has. By having it as a standalone entity, it creates discipline and accountability because how much we make in the generation space will show in the annual accounts. When the merchant market kicks in, it will no longer be about fighting to get a PPA, but rather the ability to effectively compete on the ground.

Retail space

Another important element of MESI 2.0 is the liberalisation of the retail space. There was a lot of talk and worry on this from the TNB point of view because the company has been the sole service provider of electricity. However, we are not worried because we are involved in the whole value chain of the electricity sector. Financially, it will not have a material impact on TNB, considering that the retail space is a one-sen margin business. Having said that, it is an important one-sen margin business because this is the point of contact for the 9.1 million households we have in Malaysia. What we have seen in other markets is that competition fosters innovation. When you are the only supplier, it is about achieving excellence. But when there is competition, it becomes about how creative you are to capture and retain the customer, and service them in a better way. So, what we can anticipate is new products and offerings coming onto the market. If you look at more developed countries, where energy costs a lot more, the needs of the end-consumer have changed and retailers have gone on to develop products to help them manage their (power) consumption pattern.

Bringing technology here

In Malaysia, the government is also pushing through new capabilities to give consumers the ability to control and manage their electricity costs. For example, the smart meters that we are rolling out fundamentally allow consumers to see the consumption pattern as opposed to the lump sum of how many kilowatts of electricity were consumed at the end of the month.

We have rolled out 270,000 smart meters in Melaka with another 70,000 left to be rolled out in that state. Next, we will begin to roll out the smart meters in the Klang Valley for residential and business premises. We are doing it in phases, with the second phase expected to see about 1.2 million smart meters installed. For TNB, the role is two-fold. One is service to the customer and the other is to build the infrastructure that allows this change to come into play.

Are you expecting stiff competition in the retail space?

The tariff system in Malaysia is regulated, and we anticipate that this system will survive in the early days of this evolution. So, the competition will be more on service offerings, new products and better service support to customers, as opposed to pricing. The margin for the retail business is only one sen, so if that one sen becomes half a sen yield, the customer is not going to enjoy a big rebate.

However, under the tariff system, there are many other costs that can be adjusted.

Yes, there will be competition with new players, but TNB already has engagement with the customers and we have built some amount of credibility in offering services. If we need to be more fleet-footed, then we will. The team has to be very innovative and improve customer service to retain what we have.

But if we end up ceding it, and the market is more creative than us, then the financial impact to us would still be small because it is a one-sen margin business for the retail side. Ultimately, the end-consumer has options and this is a very good thing. This is why TNB is supportive of the changes.

Changes in the retail business will be more pronounced from a TNB point of view. For the GenCo business, it will be almost business as usual with routine things of generating electricity, but in the retail space, we have to reinvent ourselves to serve the customer and acquire the customer. This is where the evolution will be quite exciting.

Managing costs

Under MESI 2.0, there is also a portion about fuel efficiency, which gives generators an opportunity to try and optimise costs. How do you include incentive programmes in the current pricing framework to allow IPPs to take control of procurement?

The government is trying to introduce this so we can manage costs inside the system.

About four weeks ago, TNB did the first delivery of gas under the third party access (TPA). We entered into a deal with Shell, and brought liquefied natural gas (LNG) cargo to the regassification terminal in Malacca, the Peninsular Gas Utilisation pipeline, owned and operated by Petronas and fed two power plants. The net cost was cheaper than the in-company sourcing price. This allowed us to share the benefits back with the government, and of course, the government gave us a small incentive. We have learnt that from a system point of view, we are able to handle it. From a legal point of view, the framework is already there.

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TNB eyes new opportunities

The government needs to look at the framework documents and put a sharing mechanism in place. But we have proven that it can work, which is important. Fuel costs make up a material part of tariffs, but there are many ways to reduce this cost. MESI 2.0 is providing the opportunity for cost to be tweaked so that consumers can potentially enjoy cheaper electricity.

Grid a national monopoly

What we also got from MESI 2.0 is confirmation from the government that our grid and distribution network is a national monopoly. It is not a good idea to break this up, because then you have issues like overlapping capital expenditure, which can be inefficient. There are also operational issues to deal with, like how to maintain the grid. TNB has been able to do well over the years and we have come to a point that we all take electricity for granted. If you look at our statistics, our reliability levels are good. That is why transmission and distribution have been kept as a national monopoly - the government has tools to manage and oversee us through the incentive-based regulation (IBR) framework. We are now moving to the concept of the grid of the future. Previously, if we had any challenges in the distribution network, we had to deploy people. Now with technology, there is more stability in the grid.

Can we expect lower tariffs for consumers?

At the end of the day, we must understand what is in the tariff. The tariff includes, firstly, the basic element of fuel. From a generation point of view, about 70% of the cost comes from fuel. If oil prices go up, the tariff is going to be affected. What is important is that while we are not able to control the direction of fuel costs, we can control our efficiency.

Like the incentives to be given to IPPs to source for cheaper ways of procurement. Will it lead to lower tariffs? We don't know.

But MESI 2.0 allows us to innovate to be more efficient, and reduce costs. Under our current system, ICPT is a pass-through mechanism, so what we can do to improve procurement efficiency will immediately be passed through to the consumer. While we have seen oil prices flatten out, we cannot guarantee lower tariffs. But we are doing the best we can to remove inefficiencies in the system so that the best rate can be given to the consumer.

Growing the international business

In the last six months, we have been refining our portfolio, doing a stock take and found a couple of good things. In the international space, our renewable business has been doing very well. We have acquired a fairly large position in solar energy as well as some wind ventures in the United Kingdom. The amount of money that we invested has beat the financial hurdle threshold that we put in and the performance that we are getting is very encouraging - better than we expected. We have also been able to come up with new initiatives to improve yields. For example, in the solar portfolio, we have done some refinancing so we were able to get better yields. In the wind venture, we went the other way around. We worked with the manufacturers of the turbines and looked at ways we can control the operating pattern to improve efficiency and get better yields. We are learning very good things and getting better financial returns. So, I am encouraged in my renewable energy (RE) portfolio.

At the end of the day, RE is a big growth area. Whatever we learn there, we can grow new opportunities elsewhere and also deploy in Malaysia.

I have told our international team that we are interested in the RE space, and to look out for new ventures. We had some portfolios that have had challenges. Those were probably self-inflicted - we may not have done enough when we reviewed the asset.

Some of it was related to economic conditions that worsened from the time of our original investment. We are now trying to manage these challenges.

Our Turkey investments were caught up in the whirlwind of economic challenges there. The international team is now trying to address this and strengthen the position.

Going forward, we see a lot of scope for growth in the international arena. We have improved the mechanism to control our investments, we have brought in more commercial focus, and we are more street-smart.

What are your targets for the international business?

This year is more of doing a stock take, putting in some controls and rebuilding the team. Next year, we will start growing the business. In five years, it should be material enough in the portfolio that we can double the size - but it is all opportunity-based.

Today, we have spent roughly RM3bil on the international business. For the total TNB portfolio, it is still small but from the yield point of view, it opens up a new area of earnings for TNB. We believe we now have better handle in terms of how to execute it, and we also have more capable people. These two pre-conditions were very important things to fix before we went further. The proof for us is that our assets in the RE space have paid off. We are quite happy with that. At the moment, what is clear is that the RE space looks good. Globally, the RE space is growing much faster than any other form of energy in the world. So, that is the right space for us to play in.

The RE space in Malaysia

In Malaysia, the government has been quite clear about its aspirations for the RE space. By 2025, they want 20% of the installed capacity to be RE. We have seen large-scale solar (LSS) bids taking place over the past few years, and are at the third round of bidding now. TNB was successful in the first and second bids. The third round is quite competitive, so we'll see what happens. Apart from participating in LSS bids, we are also trying to activate other forms of solar energy. In the retail group, we have GSPARX which has been striking new contracts with industries and institutions, and also some government institutions to instal solar panels on rooftops. To-date, they have already secured contracts up to 16MW. In the industrial space, GSPARX becomes the contracting party that helps companies with the installation of rooftop solar. For those who are interested, but cannot afford it, GSPARX has put in a leasing mechanism, whereby we invest over a period of time and lease it back to them. By putting in such innovative solutions, we are capturing faster growth than before. We are trying to activate that space.

Tweaking the 'Reimagining Tenaga' plan

When I came into TNB, I told my team that my responsibility is to help the company realise its potential. As I was looking for elements within TNB that could serve as anchors for the company, I found that Reimagining Tenaga (RT) was actually a very good frame that we could use to drive TNB forward. The game plan for TNB is still based on RT. There are two key differences in the approach that we are taking today compared to the past.

One is that we have taken a restock in terms of what is the baseline because a few years have passed since its launch. Are we on track? If not, why? And should we still hang on to that goal?

I am trying to put a rigour in terms of providing some clarity on what the game plan is, and then put detailed plans below each goal so we can actually deliver what we promise.

Secondly, when we launched RT, the measure of success was predominantly financial. I told my team that it is not just about the financial measure - it is about operational excellence.

So, when you compare yourself with the top-10 utilities in the world, it doesn't matter if your share price is higher and your market cap is bigger. Are you meeting the performance standards? Are your reliability numbers better? These things matter as well.

Benchmarking TNB

The international business, particularly in the RE space, gives us a new benchmark. It gives us new capabilities, new ideas and also brings me new insights in terms of how TNB can do new things. Look at our technical excellence on the conventional side of our business, for example, gas and coal power plants. There are many benchmarking tools out there that we should be using to compare our performance with others for a reality check. We have just subscribed to the smart grid benchmark. For us, we still have some way to go. This is not a problem because our journey in the smart grid has just started. We are at the early days of that evolution. But by having that benchmark, it forces our people to push faster - otherwise they wouldn't know where we rank.

The National Fiberisation and Connectivity Plan (NFCP)

If you look at the broadband penetration rate in Malaysia, it is still not wide enough with pockets of areas still unserved or underserved due to coverage issues. When we first explored this idea, we asked ourselves what were TNB's strengths that could help contribute to this nation-building exercise. We are a utility company, and there are some similarities in the telco space to utilities. That was the theory behind our penetration into this space. So, we kicked off with a pilot project in Jasin, Malacca and promised to get it done within three months. Well, we managed to complete it earlier than the target and successfully fiberised 1,100 houses in Jasin. The whole idea was to build the infrastructure and work with the retail service providers (RSPs) who can then connect and service the houses. Today, that Jasin pilot project is doing much better than originally anticipated. We had said that if we passed 1,100 houses, within the first year we would get 10% customer subscription. Today, less than a year down the road, we have already achieved more than 10% subscription. We have brought connectivity to these houses. The more important thing is that we have unleashed new businesses and changed their lifestyle and all that is possible due to broadband connectivity.

Following this, the board has given us the nod to pursue up to 135,000 houses that we have identified and we are now in the next stage of rollout for our NFCP programme. However, the challenge still lies in the underserved areas whereby we cannot make commercial value because the volume is too small, despite TNB having its infrastructure presence there. So, there are a few thoughts on this. Would we be able to get access to the Universal Service Provision (USP) fund? Would the government help to co-fund so the growth for these areas can be tackled? Moving forward, we will focus on what is within our means and implement it in the commercially viable areas. At the same time, we are hoping we can help to accelerate the broadband penetration rate in the country because despite the minor income, it serves the social greater good.

On any rightsizing of the workforce in view of TNB's restructuring.

I can say quite definitely, there is no intention to do any rightsizing. The activity level, moving through the changes TNB is going through, will be quite heavy. As time progresses, we will have windows where rightsizing can be managed. There will be natural attrition and sometimes we can use that. For example, in the smart meter rollout, it resulted in certain jobs becoming obsolete, such as meter readers. However, we could find ways to manage this. We reskilled some of them, found different roles for them. When positions opened up as some of the senior staff retired, these reskilled personnel took up those jobs.

If you manage things well, you can find soft landings along the way. Shocks to the system don't do well and finding a balance is important. If we grow the business, we may need more people. If we don't do well, then we have to figure out how to manage as we go along.

Current capacity reserve margin

It is in the lower 30s at the moment. The figure will climb a bit because by year-end, Jimah East's second turbine block will start to operate and then by July 2020, there is the Southern Power Generation Sdn Bhd (SPG) - so the reserve margins will spike a little bit. But it will quickly drop and balance out around the middle or end of next year, because some of the older PPAs will start to unwind. As for the ideal level for the reserve margin, the Energy Commission and the ministry would have to determine that. At the moment, we are seeing a massive ramp-up in RE, so the rate of decline of the older plants will be partly compensated by RE.

We also seeing a strong push for the interconnections between Thailand, Malaysia, Singapore and hopefully later on, Indonesia. I am a believer of the Asian power grid. It would be good for the region to create cross-dependencies on each other. And if the power grid really works, reserve margins in every country can decline because you can rely on other parties to help you. The likelihood of everyone going down at the same time is very poor, so you can borrow from others' reserve margins. What also happens when the power grid connects is that we can get to the point that we are okay to import. Then, places that have a cheaper source of generation may be able to provide the energy, and we can share the cost across the region. — **By Gurmeet Kaur and P. Aruna**