

16 JAN, 2023

TNBs world-class electricity supply

The Malaysian Reserve, Malaysia



TNB's world-class electricity supply

National utility company takes great pains to keep abreast with the latest power and energy technologies



by FAREZZA HANUM RASHID

A RELIABLE supply of electricity is most crucial for industries, commercial entities and the population as whole that it is almost impossible to find any other services more apt to be considered as the backbone of the economy.

Not only powering the convenience of modern living, electricity also forms the lifeblood of modern industries — telecommunication, media, IT, among others — that are critical for a thriving business environment.

Cognisant of this responsibility, the national utility company, Tenaga Nasional Bhd (TNB) took great pains to keep abreast with the latest power and energy technologies in ensuring that Malaysia's electric supply is not only reliable and efficient, but also delivered at a lower cost.

In a conversation with *The Malaysian Reserve (TMR)* recently, President and CEO of TNB, Datuk Indera Ir Baharin Din spoke on the utility giant's challenges and its new focus on energy transition, as well as key issues related to Malaysia's electricity infrastructure.

TMR: Do you believe the cost of power in Malaysia is reasonable in comparison to those in the South-East Asian region as a whole?

Actually, domestic electricity tariffs in Peninsular Malaysia is among the lowest in the region, especially compared to our nearest neighbour — Thailand and Singapore.

The rate for domestic consumers in this country is only RM0.218 for the first 200 kilowatt hours (kWh). This is an extremely low rate that hasn't changed since 1997.

The rate charged for the subsequent 100 kWh is RM0.334. This means that the first 300 kWh will cost only RM77, and this rate also hasn't been changed since 2009.

In comparison to Thailand and Singapore, the average tariff is around RM0.50/kWh (3.78 baht) and RM1.02/kWh (SGD0.3127) for Q1 2023.

Having said that, it is also important to note that despite having one of the lowest tariffs in the world, Malaysia's electricity supply service remains world-class. It is, in fact, of higher quality than in some European countries with higher tariffs.

TMR: As the single electricity provider in Peninsular Malaysia, what are the challenges faced by TNB?

Taking customer experience as a measure of our service, TNB holds a record of 8.7 points in the customer satisfaction index in 2021. This includes all forms of TNB services given to its 9.66 million customers.

On our current challenges, we think that the public is aware of TNB incurring extremely high generation costs as a result of the Covid-19 pandemic, which was exacerbated by the Russia-Ukraine conflict.

As a result of these circumstances, the market price of coal has risen to more than US\$416 (RM1,840) per tonne, while the price of global crude oil has risen to more than US\$97 (RM429) per barrel.

The rise of fossil fuels price, particularly coal, has had an impact on the country's power industry, where it nearly doubled the cost of electricity generation in 2022.

Pressure on generation costs due to the increase in fuel prices indirectly impacted TNB's financial position. This is due to the fact that TNB prioritises generation costs on behalf of the electricity industry in order to ensure continuous supply to consumers.

The additional electricity generation costs for the first six months of 2022 had reached RM7.0 billion while for the second half of the year had increased to RM16.2 billion.

TNB, as the sole electricity provider, is determined to meet this challenge by managing the additional costs through a transparent tariff system and the implementation of the Imbalance Cost Pass-Through (ICPT) mechanism.

This allows for a six-month review of fuel costs. The authorities will then decide whether the costs will be passed on to customers or borne by the government.

TMR: Is there any guarantee the electricity tariff will not be raised for a set period of time, even if it will add to the country's financial burden?

As announced by the Minister of Natural Resources, Environment, and Climate Change (NRECC) Nik Nazmi Nik Ahmad on Dec 16, 2022, the government has agreed that tariff increase will not incur for certain categories of users, following the electricity tariff adjustment through the ICPT mechanism for the period of Jan 1, to June 30, 2023.

Users need to understand that any tariff increase falls under the purview of the government, through NRECC as well as the Energy Commission.

As mentioned earlier, the energy sector is experiencing significant generation cost increases as a result of global fuel prices, which remain high.

Based on ICPT, the cost can be passed through to the customer, while the energy sector, in particular TNB, has already borne this cost in its account.

To recover the additional generation costs that it has accrued earlier, TNB imposes surcharges to customers. It is reasonable and fair that customers pay the real price of the quality service that they enjoy.

For the implementation of ICPT for January to June 2023, the government has decided for there to be no rise in electricity tariff for all domestic customers. At the same time, for non-domestic customers under low voltage commercial and low voltage industrial (LV) which includes micro, small and medium enterprises (MSMEs - Tariff B & D) like restaurants, bakeries and groceries, they will not face any tariff increase. For these customers, the government has allocated RM8.74 billion in subsidy.

PROFILE

Datuk Indera Ir Baharin Din

- TNB President and CEO since March 1, 2021
- Experience of over 35 years in the energy industry including network planning, business development and engineering services
- Served as MD of Sabah Electricity Sdn Bhd from 2007 to 2013
- Holds a Bachelor's Degree in Electrical Engineering Science from the University of Syracuse
- Holds a Masters Degree in Business Administration from Universiti Tenaga Nasional/Bond University, Sydney

According to Baharin, TNB has been moving toward RE since 2017

16 JAN, 2023

TNBs world-class electricity supply

The Malaysian Reserve, Malaysia



Non-domestic customers for low and medium voltage specific agriculture such as farmers and breeders (Tariff H, H1 and H2) will also not face tariff increase, with government allocation of RM90 million in subsidy, to ensure that there is no increase in prices of food and agricultural products.

However, medium voltage (MV) and high voltage (HV) customers in industries and multinational corporations will face a surcharge at 20 sen/kWh. The government will subsidise RM1.93 billion to avoid any significant increase on the surcharge should it be passed on entirely to the customer.

TMR: Many are now talking about renewable energy (RE) in order to save the environment. What steps is TNB taking, and how much money has been invested?

TNB has been moving toward RE since 2017, when we made our first investment in a solar farm in the UK.

With that experience, we were able to develop and operate our solar projects in Malaysia as part of the Large-Scale Solar (LSS) programme.

As of today, we have approximately 650 megawatts of RE capacity, which includes solar, onshore wind, and offshore coastal wind.

We have invested over RM2 billion in RE and will continue to grow and invest in this segment. Aside from financial investment, we will continue to invest in talent and capabilities to diversify technologies of RE.

This investment in RE is one of TNB's four energy transition pillars. In addition to developing RE, we are also modifying our power generating plants towards green technology.

Among the efforts made is reinforcing the grid to facilitate developments and multi-party RE operations. As an example, we provide solutions and environmentally friendly products for consumers such as Green Electricity Tariff (GET), electric vehicle (EV) charging infrastructures, rooftop solar energy and energy efficiency products, among others.

We will also collaborate to develop vendors within the environmental, social and governance context. On average, we projected to invest approximately RM20 billion annually in the next 28 years as capital expenditure as an initiative to accelerate TNB's responsible Energy Transition Plan.

TMR: Does this mean that when RE is expanded, TNB no longer need to use coal, natural gas, crude oil, or hydro to generate electricity? When will it be realised?

For the time being, Malaysia's RE sources are limited to hydro and solar using existing technology. (So) there is a possibility that Malaysia would need to continue using natural gas as the primary fuel to ensure



Every year, TNB's Grid Division spends RM2b to develop the national grid lines and strengthen the system through the Future Grid Initiative



Aside from financial investment, TNB will continue to invest in talent and capabilities to diversify RE technologies

a balanced electricity supply.

In order to reach Net Zero Carbon, TNB needs to invest in green technology such as Carbon Capture, Utilisation and Storage (CCUS) and the use of green hydrogen as fuel.

This means that natural gas power plants need to be modified in order for the fuel to be easily converted to hydrogen, or greenhouse gas (GHG) emission from the plants needs to be channelled directly to the CCUS (where carbon dispersed from the plants' burning is planted underground).

Based on research, we expect the green technology to mature and be commercially feasible in Malaysia by the 2030s. It is our hope that Malaysia will continue to develop RE and green technology so that we would no longer depend on coal as fuel in the future.

TMR: What other efforts has TNB made to keep up with current technological change?

TNB realises that technology evolves at a very rapid pace.

To ensure TNB is always up to date with new and upcoming development, we have been using the Technology Management Process, which ensures surveys, studies and investments in the latest technology are implemented by our internal experts.

Recently, TNB has identified a space in green technology which would enable decarbonisation efforts to be undertaken within our operations.

Green hydrogen technology as well as CCUS are being developed

around the world and TNB is taking steps to cooperate in this field with business partners like Petronas.

TMR: What assurance can TNB give that power outages will not occur again in the future?

TNB always ensures that the electricity supply system in the country stays stable and reliable.

Every year, TNB's Grid Division spends RM2 billion to develop the national grid lines and strengthen the system through the Future Grid Initiative.

Under this initiative, TNB will modernise the grid system by developing an all-encompassing system digitalisation. The grid's digitalised system will make the national grid system more agile, smart and robust to ensure massive electricity supply interruption does not happen in the future.

TMR: Many customers complain that their electricity bills have increased since the old meter was replaced with the new one. What are your thoughts on the matter?

For your information, conversion to the new meters were subject to the Electricity Meter Conversion Guidelines issued by the Energy Commission.

Any changes to your electricity bill may be caused by factors such

as old meter's inaccuracies etc. Old meters could be working less efficiently due to their aged components. Another factor could be a changing pattern in household consumption.

TMR: Scammers are targeting TNB customers with e-wallet voucher compensation offers. What is TNB's advice?

TNB advises the public to be careful and ignore any messages from TNB's 13454 line that offer compensations in the form of e-wallet vouchers.

TNB customers are also advised to be alert when receiving suspicious emails and messages from unknown parties.



Any changes to your electricity bill may be caused by factors such as old meter's inaccuracies



Domestic electricity tariffs in Peninsular Malaysia is among the lowest in the region, compared to Thailand and Singapore