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MESYUARAT AGUNG TAHUNAN TENAGA NASIONAL BERHAD KE-34

21 MEI 2024

POWERING GROWTH
CATALYSING GREEN



MINORITY SHAREHOLDERS WATCH GROUP (MSWG)

Operational & Financial Matters – Regulatory

1. TNB is in the final year of Regulatory Period 3 (RP3), which will end this December. What are the key salient points in TNB's RP4 (which spans across 2025-2027) proposal submission to the Energy Commission? What are the proposals or suggestions TNB made under the submission?

Answer:

- TNB has submitted the RP4 proposal to Energy Commission (EC) in December 2023.
- The key themes of RP4 would be to deliver our customers' energy needs and facilitating Malaysia's Energy Transition. In RP4, we proposed to build a flexible and resilient transmission system, enhance distribution's network visibility, controllability and energy management while enhancing customer service to support Malaysia's sustainable energy future.
- Our plans for 2025-2027 include CAPEX to maintain the security of supply, meeting demand growth and enabling an accelerated energy transition.
- The EC has initiated its discussion and assessment on our RP4 proposal, aiming for finalisation by the end of 2024.

2. To further support its decarbonisation efforts, TNB is actively repowering existing plants with cleaner fuels, integrating green technology, and exploring the possibility of early retirement for coal plants domestically and internationally to ensure its operations are both efficient and reduce its environmental footprint. (page 34 of IAR 2023).

Upon the divestment of power generation assets in India, which included 1,650 MW of coal generation in FY2023, what is the pipeline of repowering or retiring existing plants to enhance operational efficiency and reduce the carbon footprint?

How would operational efficiency and carbon footprint be reduced from these measures? Please provide measurable impacts of these measures.

Answer:

- TNB is always seeking opportunities for decarbonisation, taking into account recovery of our capital cost invested and the investment rationale.
- We are open for options including new technologies, subject to the agreement of existing shareholders and approvals from relevant authorities and regulators.
- For example, we are exploring a few options that potentially provide a total emission avoidance of 7.9 million tCO₂e per year.

Operational & Financial Matters – Data Centre (1/2)

3. In recent years, TNB has seen a significant surge in demand from hyperscale co-location data centres in Malaysia. In response to the growing market, TNB introduced the Green Lane Pathway in 2023 to fast-track the onboarding process and significantly reduce the time to provide electricity to data centres. As of April 2024, it has completed the power supply connection to 11 data centres totaling 1,156MW (page 35 of IAR 2023).
- What is the estimated electricity demand from data centres and in the next two to three years? Based on TNB's current capacity, what maximum power demand could it take on from the data centres industry?
 - With the rapid growth of data centres and mega investments in data centres by juggernauts, concerns were raised about the ability of TNB to cope with the surging electricity demand and potential intermittencies. What are TNB's thoughts on these concerns?
 - How have demand and requirements for electricity by data centres evolved as sustainability and ESG considerations took centre stage in business investments and decisions? How does TNB cater for their evolving needs?

Answer for (a):

- In 2023, we successfully commissioned 9 projects of 635MW with 2 projects delivered ahead of time.
- This year, we will be delivering another 9 projects of ~700MW and we expect to sign on another 10 projects of ~2000MW.
- We currently have a **healthy reserve margin of >30%**, so we are able to support the additional demand from data centres.

Answer for (b):

- Malaysia has a 20-year generation planning for electricity supply. With proper demand forecast and system planning, we will be able to meet the demand and manage any bottleneck risk. Depending on location, we will work closely with customers to enable time to power efficiently.
- To address the potential intermittencies, our investments in digitalisation and modernisation will be much centered on our **Smart Grid investments**. We envision the Grid of The Future as being fully automated and digitalised, supporting bi-directional flow in a decentralised system that empowers self-generation and greater energy efficiency among consumers.

Answer for (c):

- While there is a growing preference for green energy, data centre operators are mindful of the phased nature of their development and the demand requirement. TNB will build grid infrastructure to support the requirements.
- Collaboration with power suppliers like TNB facilitates a practical and responsible transition to predominantly green and sustainable energy sources. Options available for consumers for green energy are self-consumption via solar rooftop, Green Energy Tariff (GET), Renewable Energy Certificates (REC) and Corporate Green Power Programme (CGPP).
- With the nation's Net Zero aspiration to achieve 70% of RE capacity by 2050, we believe Malaysia can meet the green energy demand.

Operational & Financial Matters – Renewable Energy Target (1/2)

4. In 2023, TNB produced a total of 95,203GWh of electricity, of which 79,355GWh was generated from coal and gas sources and 7,903GWh from renewable energy sources. Total renewable energy (RE) made up 8.3% of the total electricity sent out in 2023, a slight decrease from the 8.7% in 2022. (page 38 of IAR 2023). In 2023, TNB continued its steadfast pursuit of more RE generation capacity in Malaysia and internationally in line with its push for RE to comprise 40% of its total capacity mix by 2025. (page 39 of IAR 2023)
- a) Considering that total RE made up only 8.3% of total electricity produced in 2023, how confident is the Management in meeting its target of 40% by 2025 which is only two years from 2023?
 - b) By 2025, what is the expected total RE mix in terms of capacity from solar, hydro, wind and others?

Operational & Financial Matters – Renewable Energy Target (2/2)

Answer for (a) and (b):

- As of December 2023, the RE generation mix at 8.3% is equivalent to a RE capacity mix of 20% (4.3GW) of total TNB's portfolio. This represent half of the RE capacity mix target in 2025.
- TNB remains committed to its 40% RE capacity mix target and is on a constant lookout for viable opportunities to add into our portfolio. This includes both domestic and international capacity; and includes assets under operation, construction and development.
- Given the programmes initiated by the Government such as Feed-in-Tariff (FiT), Large Scale Solar (LSS) and Corporate Green Power Programme (CGPP), we believe this is achievable.

Operational & Financial Matters – New Energy Division (NED)

5. In FY2023, TNB made a non-cash impairment of goodwill amounting to RM123.6 million for its investment in Vantage Solar UK Ltd. and Blyth Offshore Demonstrator Ltd (involved in solar and wind power plants) to reflect the softer power prices in the future and interest rate hike in the region, with no discount to the power plant performance (pages 40 and 238 of IAR 2023). Impairment of goodwill occurs when the carrying amount of acquired assets exceeds the recoverable amount.
- How has the prospect of the UK assets changed upon TNB's acquisition and present?
 - Besides, TNB applied a higher negative revenue growth rate of -3.5% in FY2023 compared to -3.2% in FY2022 for the VIU calculation of its UK operations (page 239 of IAR2023). Does the steeper negative revenue growth rate suggest that TNB management has a tepid view of the prospect of UK assets moving forward?

Answer for (a):

- TNB's outlook for its UK assets remains strong, in line with its initial investment expectations. The investment works well with our strategies as a strategic investor, supporting technology transfer and capability building especially in the RE space.

Answer for (b):

- The cautious outlook in 2023 is reflective of price adjustment experienced following significant surge in power prices witnessed during the Russia-Ukraine conflict in 2022. TNB maintains a positive view of the performance of its UK portfolio.

Operational & Financial Matters – Trade Receivables (Impairment Loss) (1/2)

	Group	
	2023 RM' million	2022 RM' million
As at the beginning of the financial year	(3,002.6)	(2,853.3)
Impairment loss recognised	(105.1)	(163.2)
Impairment written off	200.8	0
As at the end of the financial year (Note 21)	(2,666.7)	(3,002.6)

(Note 45(b) Credit risk, page 315 of IAR 2023)

6. As of FY2023, total loss allowances on trade receivables amounted to RM2.67 billion, constituting a significant 40.5% of total outstanding trade receivables of RM6.59 million. Nonetheless, the Group managed to reverse the impairment loss of RM240.2 million (FY2022: RM13.9 million) from the book in FY2023.

- a) What is the breakdown of allowances made according to the type of customers?
- b) Please explain the recovery efforts taken and the probability of recovering the impairments made.

Operational & Financial Matters – Trade Receivables (Impairment Loss) (2/2)

Answer for (a):

- The allowance of trade receivables is mainly due to commercial and industrial sectors' risk profile.
- However, the improved collection rate in 2023 has allowed for the reversal of impairment loss of RM240.2 mil.

Answer for (b):

- There are several methods for collection management including:
 - i. Nudging and reminders made via email and SMS which have shown success rates of 29% and 10% respectively;
 - ii. Hiring of debt collecting agent that provides success of 24%. These agents are also showing success in collecting inactive debt; and
 - iii. Rendering of demand litigation notices have also shown success in collecting active and inactive debt by 22% and 3% respectively.
- Additionally, the allowances (or provisions) are being assessed regularly based on certain principles.

Operational & Financial Matters – Distribution Network

7. On 10 May 2024, English daily The Sun reported that TNB suffered an annual loss of RM140 million due to unauthorised modification or manipulation of electricity meters, also known as electricity theft. Based on the existing preventive and surveillance measures, has TNB seen reduced losses from electricity theft? What could TNB do better to deter and minimise these incidents?

Answer:

Based on the existing preventive and surveillance measures, TNB has managed to reduce losses for the past few years. At the distribution level, we managed to **reduce our distribution losses from 6.69% in 2020 to 5.42% in 2023**. TNB has taken numerous steps to prevent meter tampering activities such as:

- i. **Install secure meter box** onto our meter to prevent any physical tampering on the meter or shifting of the existing meter to substation once tampering is detected.
- ii. In more serious cases, TNB will carry out further investigation together with the **Energy Commission, Royal Malaysian Police (PDRM) or relevant enforcement authorities** in accordance with the Electricity Supply Act 1990 and other relevant legislations.
- iii. TNB will conduct **unscheduled inspection** on the premises from time to time or based on online load profile analysis, information given by the public, or report raised by TNB meter readers.
- iv. TNB has **embarked on the installation of smart meters** since 2018. The smart meters allow TNB to monitor electricity consumption in real-time and detect any irregularities or tampering more quickly than traditional meters via remote monitoring. Overall, the deployment of smart meters enhances TNB's **capabilities to detect and combat meter tampering or theft of electricity** more effectively, therefore reducing revenue losses and ensuring fair billing for consumers.

Sustainability Matters

1.

	Metric	2021	2022	2023	Targets
1.	RE Capacity*	3,499 MW	3,780 MW (9.8% growth)	4,375 MW (16% growth)	8.3GW by 2025**
2.	EV charging point	-	3 DC 3 AC	14 DC 18 AC	134 DC by 2024 10 – 20% by 2030

* Total includes solar capacity at MWp.

** Target includes assets under operation/construction/development.

(page 71 of IAR 2023)

8. Sustainability Matters

- Considering that the RE capacity in 2023 is still relatively low, how would TNB be able to achieve its target of 8.3GW by 2025?
- On top of that, TNB is gearing up the charging infrastructure with a target of 134 DC by 2024 and 10% - 20% by 2030. What would it take for TNB to achieve these targets? What is the estimated capital outlay required?

Answer for (a):

- TNB remains committed to its 2025 RE target and is on a constant lookout for viable opportunities to add into our portfolio. The 8.3GW target includes both domestic and international capacity and includes assets under operation, construction and development.
- As of December 2023, under the TNB portfolio, we have around 4.3GW of RE assets, i.e. more than 50% of the total target capacity of 8.3GW has been achieved.
- With the 3 flagship projects under the National Energy Transition Roadmap NETR, there will be an additional domestic capacity of 0.5GW by 2025. With these latest developments, we believe this target is achievable.

Answer for (b):

- TNB has committed RM 90 million over three years (2022 – 2024) to support the nation's EV charging infrastructure and ecosystem.
- The buildup of the EV charging infrastructure can only come into fruition through the continued support and collaboration with multiple stakeholders, including the government, regulators, highway operators, and others.

9. Corporate Governance Matters

TNB's whistleblowing policy (dated 23 November 2022) provides reporting channels for senior independent non-executive directors, chief integrity development officer and senior manager of financial integrity.

However, the whistleblowing policy does not clearly segregate the multiple reporting channels based on the person being reported on and the person to whom the report is directed. Such practice is widely adopted by major PLCs and financial institutions.

A clear segregation of reporting channels based on the person being reported on could better protect the whistleblower's identity without the fear of percussions and ensure the information reaches the right hand.

Answer:

- TNB's Whistleblowing policy is a general document where only the medium of channels are specified.
- However, the details of the said channels e.g. email addresses, toll free number and hyperlink to Whistleblowing Information System are published in TNB Website. These reporting channels provide options to the complainants to lodge their concerns or reports.
- Please rest assured that complaints are treated seriously and will be channeled to the designated officer.