

# Better. Brighter.

Integrated Annual Report 2022

Accelerating a  
**responsible**

## ENERGY TRANSITION

Read about  
how TNB  
is driving  
Malaysia's  
Energy  
Transition  
journey

Page. 28



### Climate Action

Doing our part to protect the planet

Page. 83

### Nation Building

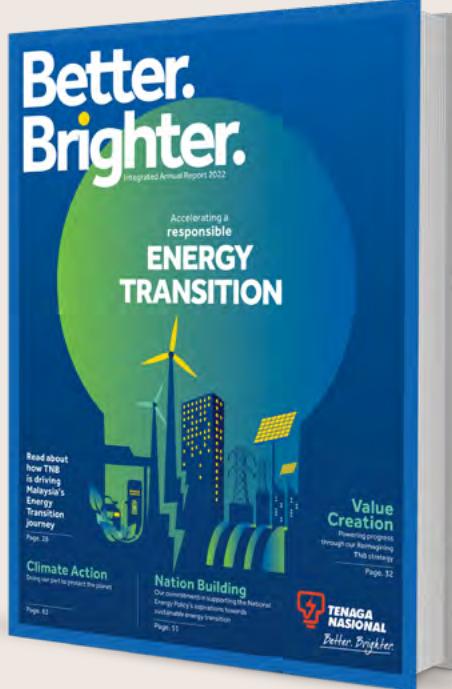
Our commitment in supporting the National Energy Policy's aspirations towards sustainable energy transition

Page. 51

### Value Creation

Powering progress  
through our Reimagining  
TNB strategy

Page. 32



# ENERGY TRANSITION

Our cover this year visually communicates our vision of and approach towards a sustainable future through Energy Transition, as illustrated by the various sources of energy represented in the image. It also reflects our embodiment of innovation and progress, positioning us as the catalyst for this crucial journey. We believe that we can achieve even more by harnessing the power of collaboration between all stakeholders, which will bring us closer to realising a Better and Brighter future for all.

## NAVIGATION ICONS

The following icons are used in this Report to indicate where additional information can be found.



This icon tells you where you can find related information in this Report.



This icon tells you where you can find more information online.

page 05

WE ARE TNB



page 65

SUSTAINABILITY STATEMENT



page 27

FROM OUR LEADERSHIP



page 211

FINANCIAL STATEMENTS



# INSIDE THIS REPORT

## WE ARE TNB

Our Investment Case	11
• Financial Highlights	
• Key Highlights	
• Group Quarterly Financial Performance	
• Six-Year Group Financial Summary	
• Six-Year Group Growth Summary	
• Simplified Group Statement of Financial Position	
• Statement of Value Added	
• Distribution of Value Added	
• Core Revenue	
• Our Credit Ratings	
• Shareholding Information	
• Generation Fuel Mix	
• Our Scorecard	
Performance Review from the Six Capitals Perspective	20
Corporate Structure	22
Our International Footprint	24

## FROM OUR LEADERSHIP

Chairman's Letter to Shareholders	28
President/Chief Executive Officer's Review	32
Achieving Our Strategic Ambitions	38
• Future Generation Sources	
• Grid of the Future	
• Winning the Customer	
• Future-Proof Regulations	
The Market Landscape	54
Delivering Sustainable Value	56
Our Value Creation Model	62

## SUSTAINABILITY STATEMENT

Outlining The Scope and Boundaries of This Statement	66
• ESG Scorecard for FY2022	
Championing Sustainability at TNB	67
• TNB's Sustainability Strategy	
• Feature Story 1 : Strengthening and Promoting Strategic Partnerships	
Responsible Governance and Strengthening Business Resilience	70
• Feature Story 2 : Accelerating Responsible Energy Transition	
• Sustainable Infrastructure and Ecosystem	
• Sustainable Business Expansion	
• Customer-Centricity	
• Sustainable Supply Chain	
Climate Change and Environment	83
• Feature Story 3 : Decarbonisation through Innovative Solutions : Carbon Capture	
• Our Response to Climate Change	
• Feature Story 4 : Our Flagship Green Building - TNB Platinum Campus	
• Minimising Our Environmental Impacts	

## Engaging Our People and Cultivating Talent

• Employment Management and Growth	
• Feature Story 5 : Empower Our People	
• Feature Story 6 : Prioritising People : Safeguarding Safety and Well-Being	
• Emphasis on Health, Safety and Well-Being	

## Creating Shared Values With Communities

• Feature Story 7 : Enhancing the Well-Being of Orang Asli Communities	
• Contributing to Community Development	
• Engaging Indigenous People	

## CREATING VALUE THROUGH STRONG GOVERNANCE

Our Board at a Glance	137
Board of Directors' Profile	138
Company Secretary's Profile	150
Senior Management Profile	151
Organisational Structure	158
Chairman's Introduction to Corporate Governance	160
Principle A : Board Leadership and Effectiveness	162
Principle B : Effective Audit and Risk Management	182
Principle C : Integrity in Corporate Reporting and Meaningful Relationship with Stakeholders	192
Statement on Risk Management and Internal Control	202
Additional Compliance Information	210

## FINANCIAL STATEMENTS

Directors' Report	212
Consolidated Statement of Financial Position	222
Consolidated Statement of Profit or Loss	224
Consolidated Statement of Comprehensive Income	225
Consolidated Statement of Changes in Equity	226
Consolidated Statement of Cash Flows	229
Notes to the Financial Statements	233
Statement by Directors	382
Statutory Declaration	382
Independent Auditors' Report	383

## ADDITIONAL INFORMATION

Corporate Information	389
Statistics of Shareholdings	390
Net Book Value of Land and Buildings	393
Notice of the 33 <sup>rd</sup> Annual General Meeting	395
Statement Accompanying Notice of the 33 <sup>rd</sup> Annual General Meeting	399
Proxy Form	

# BASIS OF THIS REPORT

**This Integrated Annual Report aims to provide our stakeholders with a comprehensive and balanced account of Tenaga Nasional Berhad's (TNB) financial and non-financial performance for the Financial Year ended 31 December 2022. We hope to give our stakeholders, including shareholders, investors and customers, an accurate representation of our value creation activities, capital trade-offs, challenges and progress, as well as our prospects and outlook for the future.**

## Our Capitals

In line with our strategic objectives, we ensure that our value creation activities efficiently employ capitals and resources to generate value for the intended stakeholders. We prudently manage our finite resources by making trade-offs between them when deciding the best way to utilise or sustain our reserves. We detail our capital usage below :

### Financial Capital



Funds that are available to TNB to implement our value creation activities, comprising our shareholders' equity, borrowings and operational income

### Manufactured Capital



Physical assets and infrastructure that are used in the course of our business operations, such as our power plants, transmission and distribution networks, office premises and vehicles

### Natural Capital



Renewable and non-renewable natural resources used by TNB to generate electricity, such as coal, wind, natural gas, liquefied natural gas, water and sunlight

### Intellectual Capital



Intellectual property generated from research and development (R&D) activities, investments into new technologies and innovation

### Human Capital



Our people and talents who are responsible for running all aspects of our operations, from our ground staff at our generation plants to our administrative officers and senior leaders

### Social and Relationship Capital



The relationships of trust we have with our stakeholders and the social approbation created through the reliable and responsible performance of our roles

## Materiality

The information disclosed in this document has been deemed material to TNB vis-a-vis our material matters. Material matters are defined as topics that have significant environmental, social and governance impacts on us and as those that facilitate stakeholders' assessments of us. Our material matters are derived from a materiality assessment process involving both internal and external stakeholders.

 For more information about our materiality assessment, please turn to page 56 of this Report.

## Reporting Framework

The preparation of this Integrated Annual Report was guided by the International Integrated Reporting Council's <IR> Framework. In addition, this Report complies with and is guided by the following :

- the Companies Act 2016;
- the Main Market Listing Requirements of Bursa Malaysia Securities Berhad (MMLR);
- the Malaysian Code on Corporate Governance 2021 (MCCG);
- the Corporate Governance Guide (4<sup>th</sup> Edition) issued by Bursa Malaysia;
- the Malaysian Financial Reporting Standards (MFRS); and
- the International Financial Reporting Standards (IFRS).

## Scope and Boundary

The scope of this Report applies to TNB and all its subsidiaries (the Group). It covers all material factors that reflect the Company's overall performance and business viability, including quantitative and qualitative data, reported as at 31 December 2022, unless stated otherwise.

## Forward-looking Statements

The contents of our Integrated Annual Report may indicate forward-looking statements with respect to TNB's future performance. These statements are derived from realistic measures of current assumptions and at the time of the issuance of this Report. Actual results may differ materially from forward-looking statements expressed due to uncertainty and shifts in circumstances.

**BASIS OF THIS REPORT****Targeted Readers**

The information contained in this Report prioritises our shareholders and investors. However, other interested stakeholders will also find this Report useful in providing them with a detailed overview of our sustainable business operations and value creation processes.

**Management Discussion & Analysis**

Although we have not included a Management Discussion & Analysis (MD&A) in this report, key components of the MD&A can be found in the following:

**OVERVIEW OF OUR BUSINESS & OPERATIONS**

**i** Please refer to pages 6-7, 24-25 for more information.

**OUR STRATEGY**

**i** Please refer to pages 38-53 for more information.

**DISCUSSION OF OUR FINANCIAL RESULTS AND FINANCIAL POSITION**

**i** Please refer to pages 29 and 33 for more information.

**REVIEW OF OPERATING ACTIVITIES**

**i** Please refer to pages 32-37 for more information.

**ANTICIPATED OR KNOWN RISKS**

**i** Please refer to page 202-209 for more information.

**OUR PROSPECTS**

**i** Please refer to pages 31 and 37 for more information.

**Verification and Approval**

Our Board acknowledges its responsibility for ensuring the integrity of this Integrated Annual Report, which in its opinion addresses issues that are material to the Group's ability to create value and fairly presents the performance of TNB.

**Feedback**

Our Integrated Annual Report is a work in progress and any feedback or suggestions for improvements in relation to this Report are welcome. Please direct all comments to us via email at cosec@tnb.com.my.

**Supplementary Report****Disclosure**

Our Sustainability Statement details the manner in which TNB creates value for our stakeholders, focusing on our environmental, social and governance imperatives.

**Reporting Frameworks**

**Bursa Malaysia's MMLR**

**Bursa Malaysia's Sustainability Reporting Guide 3<sup>rd</sup> Edition**

**Global Reporting Initiative (GRI) Standards : Core Option**

**GRI Electric Utilities Sector Disclosures**

**Task Force on Climate-related Financial Disclosures (TCFD) framework**

**United Nations Sustainable Development Goals (UN SDGs)**

We have enhanced our Statement to better illustrate the sustainability performance and initiatives of TNB against our commitments and targets. The key enhancements for each section in this Statement are as follows :

Section in this Statement	Key Enhancements
<b>Sustainability at TNB</b>	<ul style="list-style-type: none"> <li>Introduces the Energy Transition (ET) strategic plans and their integration with other key sustainability principles and corporate strategies.</li> <li>Discloses eight (8) United Nations Sustainable Development Goals (UN SDGs) with targets and maps them to TNB's material matters.</li> <li>Highlights TNB's current collaborations and partnerships in pursuing ET.</li> </ul>
<b>Responsible Governance and Strengthening Business Resilience</b>	<ul style="list-style-type: none"> <li>Introduces the Sustainability and Energy Transition Council (SETC) in TNB's sustainability governance.</li> <li>Highlights TNB's digital solutions to enhance customer experience and satisfaction.</li> </ul>
<b>Climate Change and Environment</b>	<ul style="list-style-type: none"> <li>Enhances TNB's disclosure on climate risks &amp; opportunities in line with TCFD recommendations.</li> <li>Provides details of the ET strategic plans and initiatives across the value chain.</li> </ul>
<b>Engaging Our People and Cultivating Talent</b>	<ul style="list-style-type: none"> <li>Highlights TNB's commitment to safe and healthy working conditions by focusing on the occupational health and safety management system.</li> </ul>
<b>Creating Shared Values with Communities</b>	<ul style="list-style-type: none"> <li>Highlights TNB's corporate social responsibility (CSR) initiatives in FY2022.</li> </ul>



THE  
**ENERGY**  
TRANSITION  
CONFERENCE

Powered by



TENAGA  
NASIONAL  
*Better. Brighter.*

# THE ENERGY TRANSITION CONFERENCE

SAVE THE DATE  
**28-29 AUGUST 2023**

ACCELERATING A RESPONSIBLE  
ENERGY TRANSITION

KUALA LUMPUR  
CONVENTION CENTRE

# WE ARE TNB



Our Investment Case	11
• Financial Highlights	
• Key Highlights	
• Group Quarterly Financial Performance	
• Six-Year Group Financial Summary	
• Six-Year Group Growth Summary	
• Simplified Group Statement of Financial Position	
• Statement of Value Added	
• Distribution of Value Added	
• Core Revenue	
• Our Credit Ratings	
• Shareholding Information	
• Generation Fuel Mix	
• Our Scorecard	
Performance Review from the Six Capitals Perspective	20
Corporate Structure	22
Our International Footprint	24

# WE ARE

## OUR CORE VALUES AND BEHAVIOURS

### I Integrity

- We uphold the highest ethical standards and do what is right, all the time
- We are fair, honest and transparent - in everything we do
- We always seek to achieve mutual benefit for the country, company and customers

 Please refer to page 55 for more information.

### C Collaborative

- We trust each other, believe in teamwork and win together as one company
- We proactively help each other, communicate clearly and provide constructive feedback
- We embrace diversity and inclusivity and we value outside-in perspectives

 Please refer to page 55 for more information.

### P Professionalism

- We take full ownership and accountability for our actions
- We consistently demonstrate high performance and productivity
- We are result-focused and carry out our duties with discipline

 Please refer to page 55 for more information.

For over 70 years, we have been committed to serving our industrial, commercial and residential customers.



#### INDUSTRIAL

Our industrial customers are manufacturers of goods and services. While they are the smallest segment of our customers, they account for the largest share of our electricity sales.



#### COMMERCIAL

Our commercial customers are mainly involved in business activities that drive the country's economy. They make up the second-largest source of our electricity sales.

**OUR PURPOSE**

**Together we brighten lives through innovative and sustainable solutions towards a better world**

**OUR ASPIRATION**

**To be a leading provider of sustainable energy solutions in Malaysia and internationally**

**CC****Customer Centricity**

- We seek to truly understand customers' needs and always stay a step ahead
- We continue to build trust by delivering on our promises
- We look for unexpected ways to delight our customers



Please refer to page 55 for more information.

**FT****Forward Thinking**

- We are bold, challenge the status quo and encourage agility and innovation
- We commit to ensuring the sustainability of TNB in all aspects
- We make informed decisions and learn from our mistakes



Please refer to page 55 for more information.

**M****Mindfulness**

- We know who we are and we stand by our values
- We are empathetic, respectful and compassionate to others and the environment
- We protect the safety and promote the wellbeing of our people and the public



Please refer to page 55 for more information.

**RESIDENTIAL**

Residential customers make up the largest customer segment, representing approximately 33 million Malaysians. Our customers motivate us to perform at our very best every day, for better and brighter homes across Malaysia.

**OUR CUSTOMER PROFILE****BREAKDOWN OF CUSTOMERS  
(PENINSULAR MALAYSIA AND SABAH)****Total**

# 10.6 million

\* Others include Mining, Public Lighting and Agriculture.

\*\* Residential (Tariff A - Domestic).

**Others\***  
**105,477**

**Industrial**  
**35,187**

**Commercial**  
**1,762,473**

**Residential\*\***  
**8,672,533**

## WE ARE TNB

### MEMBERSHIPS AND ASSOCIATIONS

TNB's presence in the main energy and industry leadership associations :

#### ► Heads of ASEAN Power Utilities/Authorities (HAPUA)

HAPUA is an international electricity organisation in Southeast Asia that promotes cooperation among its members to strengthen regional energy security and enhance the quality and reliability of the electricity supply system. Malaysia is part of the ASEAN member countries and TNB as the main utility company is a member of HAPUA and has participated in several programmes, including ASEAN Power Grid initiatives, research and development to enhance the ASEAN electricity supply system.

#### ► The Association of the Electricity Supply Industry of East Asia and the Western Pacific (AESIEAP)

AESIEAP is an association that focuses on the exchange of expertise and technology between organisations in the electricity supply industry, including generation, transmission and distribution providers, to develop solutions and advance the power industry. TNB hosted a prestigious event, namely the Conference of the Electricity Power Supply Industry (CEPSI), back in 2018.

#### ► International Council on Large Electric Systems (CIGRE)

CIGRE's global community is made up of thousands of power system professionals collaboratively sharing their knowledge and experience for the greater good of the power and electrical industry. As a member, TNB has participated in the presentation of technical papers covering new technology, best practices, lessons learnt and asset management in the power and electrical industry.

#### ► International Conference on Electricity Distribution (CIRED)

CIRED is a global electricity distribution community where developments and best practices in technology and the management of electricity distribution are presented and reported. CIRED Malaysia has been operating since 1998 and was established by TNB Distribution leaders with the participation of other industries related to electricity distribution.

#### ► CEO Action Network (CAN), Malaysia

The CEO Action Network, also known as CAN is governed and driven by private sector leaders for policy influence and action to accelerate sustainable development and sustainable business in Malaysia and beyond. TNB has participated in a series of engagement sessions and has collaborated with leading corporations and agencies to send a strong signal to the market of CAN members' traction and commitment to sustainability.

#### ► Malaysian Industry-Government Group for High Technology (MIGHT)

MIGHT offers a platform for collaboration between the public and private sectors in driving the nation's high technology industry, which members can capitalise on through synergistic partnerships. TNB has participated in programmes and projects by contributing inputs to formulate national strategic plans for high technology industry sectors.

#### ► Malaysia National Committee on Large Dams (MYCOLD)

MYCOLD is a professional body under the auspices of the International Commission on Large Dams (ICOLD) which represents Malaysia in areas related to the management and safety of dams. TNB is a primary supporter, providing technical input in the formulation and review of Malaysia's Dam Safety Guidelines.

#### ► 30% Club Malaysia Chapter

The 30% Club Malaysia Chapter advocates for at least 30% representation of women on the Board of Directors and in senior management.

#### ► Malaysian Photovoltaic Industry Association (MPIA)

MPIA is a non-profit organisation representing the Malaysian solar industry to promote solar energy from the local solar supply chain. Through MPIA, TNB and GSPARX promote solar solutions such as SARE and outright purchase to the members of MPIA.

#### ► Zero Emission Vehicle Association (ZEVA)

ZEVA provides a platform to promote the use of Battery Electric Vehicles (BEVs) to relevant stakeholders. TNB has provided funding and has participated in programmes which contributed to the development of BEVs in Malaysia.

#### ► Malaysia Association of Energy Services Companies (MAESCO)

MAESCO is a Malaysian association of Energy Services Companies that focuses on providing services and expertise in energy efficiency to end users from all sectors in order to strengthen the energy services industry. TNB provides assistance and support for the development of energy services.

## WE ARE TNB

## ESG RATINGS

ESG ratings have become increasingly important in recent years as investors, customers and other stakeholders have become more focused on sustainability, social responsibility and ethical business practice. Rating tools are becoming increasingly important in the business world and can provide opportunities for companies to enhance their reputation, attract new customers and investors and improve their operational efficiencies and risk management. TNB is constantly committed to managing and reporting ESG matters, considering the assessments of the rating agencies as an important opportunity to improve our sustainability performance in terms of sustainability and devising specific action plans with the involvement of the various divisions and business units.



- The Morgan Stanley Capital International (MSCI) ESG Rating is designed to measure a company's resilience to long-term industry material ESG risks, as well as how well it manages those risks relative to peers.
- This rating allows investors to assess a company's exposure to and management of ESG issues in multiple dimensions.

TNB's MSCI ESG Rating Score for FY2022 =

**BBB**

TNB's FTSE Russell ESG Rating Score for FY2022 =

**3.0**



- The Carbon Disclosure Project (CDP) runs a global disclosure system to support companies, cities, states and regions to measure and manage their risks and opportunities related to climate change, water security and deforestation.

TNB's CDP Climate Change Score for FY2022 =

**D**

- Sustainalytics' ESG Risk Ratings aim to help companies and investors identify ESG issues that pose potential financial risks. They measure the degree to which ESG issues are putting a company's entire value at risk.

TNB's Sustainalytics ESG Rating Score for FY2022 =

**38.1**

(Rank for electric utilities : 164/299)

## AWARDS &amp; RECOGNITION

TNB has received awards and recognition over the years for its aspiration of becoming the best supplier of sustainable energy solutions in Malaysia and internationally. This initiative was recognised through the following awards in FY2022 :

- We have also been recognised for our sustainable and socially responsible fundraising activities :



The Bond Pricing Agency Malaysia Sdn Bhd (BPAM) released its latest BPAM ESG Bond League Tables report for the second half of 2022 and awarded TNB Genco as the Top Bond Issuer Overall. This is a prestigious award as BPAM is the only registered bond pricing agency accredited by the Securities Commission of Malaysia.



TNB Genco's Sukuk Wakalah Programme was also awarded as the Best Socially Responsible Investing (SRI) Sukuk & Best Local Currency Sukuk of The Year (Malaysia) 2022 at the Borrower Issuer Awards 2022 Alpha Southeast Asia. In addition, the Sukuk Wakalah Programme was assigned a final AAA<sub>IS</sub> rating with a stable outlook by the Malaysian Rating Corporation Berhad.

## WE ARE TNB

### AWARDS & RECOGNITION



#### Enlit Asia Power & Energy Awards 2022

- TNB's Advanced Metering infrastructure (AMI) Project was awarded Energy Advocate of the Year Award under the Smart Grid category. Recognition is given to the projects throughout the region regardless of scale, with outstanding approaches that showcases the implementation or highlights the specific advantages of new data-rich technologies for utilities and customers.



Asian Telecom  
Awards

#### 2022 Asian Telecom Awards

- TNB's wholly-owned subsidiary, Allo Technology Sdn. Bhd. (Allo) which provides high-speed broadband services that support the National Digital Network (Jendela) initiative, has been recognised as Malaysia's Broadband Telecom Company of the Year.



#### Shared Services & Outsourcing Network (SSON) Asia Impact Awards

- Won a Gold Award for Best Shared Services Team at the prestigious Shared Services & Outsourcing Network (SSON) Asia Impact Awards through TNB Global Business Solutions (TGBS).
- Named among the Top 20 Most Admired Shared Services Organizations (SSOs) & Global Business Services (GBS) 2022 in the world.



MINORITY SHAREHOLDERS WATCH GROUP  
BADAN PENGAWAS PEMEGANG SAHAM MINORITY BERHAD  
(Incorporated in Malaysia - Registration No. 200001022282 (244991-M))



#### Industry Excellence Award

- Industry Excellence Award for Corporate Governance Disclosure, MSWG ASEAN Corporate Governance Award 2021.

#### 2022 National Integrity, Governance and Anti-Corruption Awards (AIGA)

- TNB has continuously taken initiatives to strengthen Integrity practice and have gained recognition by being awarded as one of the Top Five Gold winners of the 2022 National Integrity, Governance and Anti Corruption Award (AIGA).

#### 2021 ASEAN Corporate Governance Scorecard Award

- ASEAN Asset Class PLCs, 2021 ASEAN Corporate Governance Scorecard Award.

#### Our dedication towards empowering our people and contributing to society has been recognised through the following awards :

ISGAN Awards of Excellence for Smart Grid Workforce Development for an Inclusive Energy Transition under TNB Integrated Learning Solutions (ILSAS).	Silver for Best Work-Life Harmony Strategy at the Employee Experience Awards 2022.	Winner of Malaysia Best Employer Brand Awards 2022 from HRD Congress.	Winner of Asia's Best Employer Brand Awards 2022 from HRD Congress.	
Winner of Best HR Strategy In Line With Business at Asia's Best Employer Brand Awards 2022.	Asia's Top HR Leader awarded to Feludatun Sharif, Head, People Strategy & Organisational Effectiveness.	Gold for Excellence in Digital Transformation at the HR Excellence Awards 2022.	Silver for Excellence in Learning & Development at the HR Excellence Awards 2022.	Bronze for Excellence in Business Transformation at the HR Excellence Awards 2022.
2 <sup>nd</sup> Runner Up at the Graduates' Choice Awards.	Winner of HR ASIA Best Companies To Work For In Asia 2022.	Kincentric Best Employer Malaysia 2022 and Special Recognition for Commitment to Transforming Culture.	#11 in LinkedIn's Top 15 Companies in Malaysia as Best Workplace for Career Growth.	#10 out of 20 Most Attractive Employers based on Randstad Malaysia's Ranking.

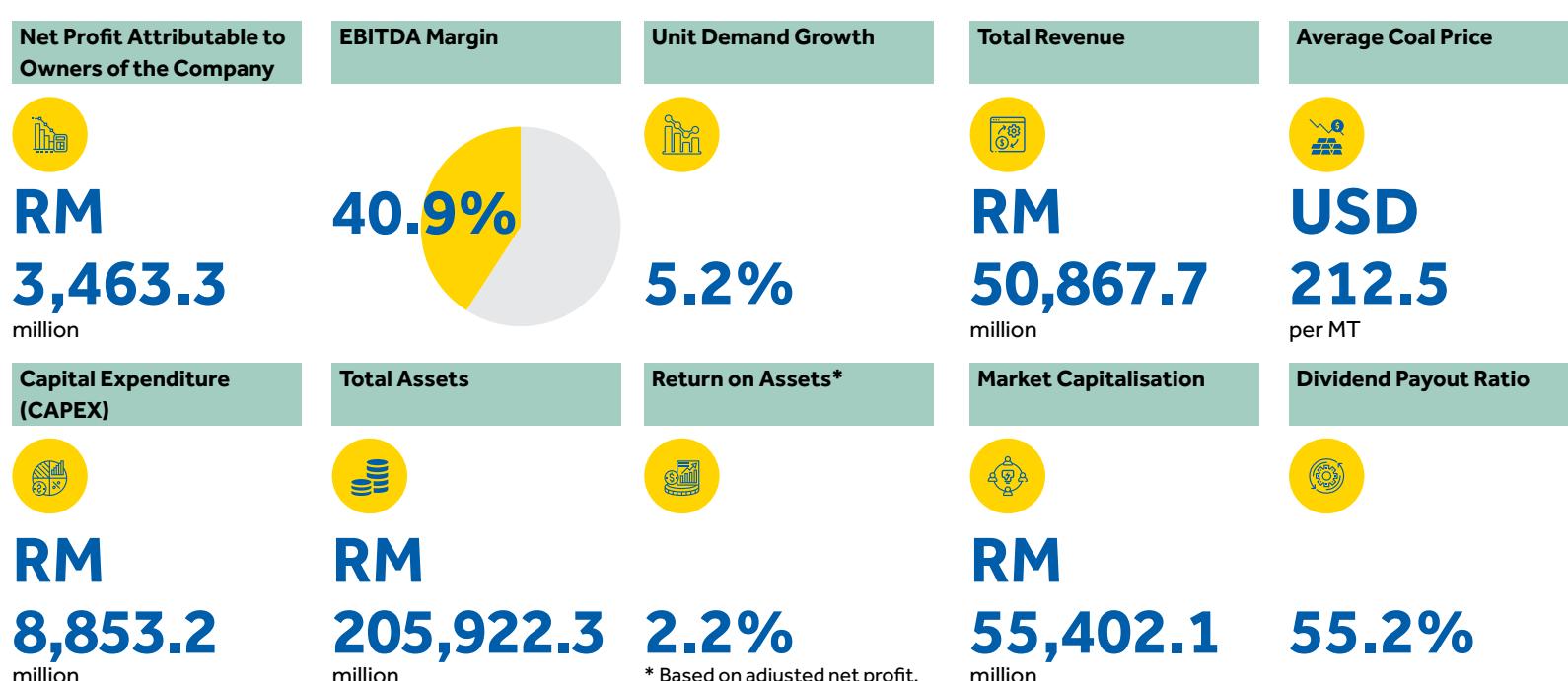
# OUR INVESTMENT CASE

## FINANCIAL HIGHLIGHTS

Financial Year Ended 31 December	GROUP		COMPANY	
	31.12.2022	31.12.2021	31.12.2022	31.12.2021
<b>PROFITABILITY (RM Million)</b>				
Revenue	50,867.7	48,119.9*	46,879.7	44,321.7*
Operating profit	9,409.5	8,083.0	8,693.8	6,969.3
Profit before taxation and zakat	5,348.6	4,738.3	3,319.9	2,334.0
Net profit attributable to owners of the Company	3,463.3	3,661.8	2,425.8	1,985.3
<b>KEY BALANCE SHEET DATA (RM Million)</b>				
Property, plant and equipment	116,577.1	114,105.6	75,185.5	72,910.5
Total assets	205,922.3	182,600.6	200,424.9	180,153.7
Total borrowings	63,882.2	51,678.2	36,231.9	25,036.3
Total liabilities	144,956.1	124,208.2	154,014.2	134,752.4
Share capital	12,204.3	11,927.6	12,204.3	11,927.6
Shareholders' equity	60,966.2	58,392.4	46,410.7	45,401.3
<b>SHARE INFORMATION</b>				
Per share (sen):				
- Basic earnings	60.35	64.05		
- Diluted earnings	59.98	63.73		
Dividend (sen):				
- Interim	20.00	22.00		
- Final	26.00	18.00		
Net assets per share attributable to owners of the Company	1,017.1	988.6		
<b>FINANCIAL RATIOS</b>				
Return on assets - ROA (%)	2.2	2.6		
EBITDA margin (%)	40.9	39.0		
Debt-equity (net of cash) ratio	0.83	0.73		

\* Restated.

## KEY HIGHLIGHTS



## OUR INVESTMENT CASE

### GROUP QUARTERLY FINANCIAL PERFORMANCE

RM MILLION	FY2022				
	Q1	Q2	Q3	Q4	YEAR
Revenue	12,153.1	12,837.7	12,961.8	12,915.1	50,867.7
Operating income	178.6	251.1	247.1	263.2	940.0
Operating profit	2,369.6	2,628.3	2,911.6	1,500.0	9,409.5
Profit before taxation and zakat	1,532.0	1,465.7	1,534.2	816.7	5,348.6
Profit attributable to owners of the Company	893.1	872.2	888.9	809.1	3,463.3
Earnings per share (sen) – basic	15.6	15.2	15.5	14.1	60.4
Dividend per share (sen)	-	20.0 <sup>^</sup>	-	26.0 <sup>*</sup>	46.0

RM MILLION	FY2021 (Restated)				
	Q1	Q2	Q3	Q4	YEAR
Revenue	11,805.3	12,126.4	11,661.9	12,526.3	48,119.9
Operating income	176.7	227.3	144.4	369.7	918.1
Operating profit	2,327.8	2,123.3	2,058.9	1,573.0	8,083.0
Profit before taxation and zakat	1,477.3	1,202.1	1,236.9	822.0	4,738.3
Profit attributable to owners of the Company	958.7	821.5	1,003.8	877.8	3,661.8
Earnings per share (sen) – basic	16.8	14.4	17.6	15.4	64.1
Dividend per share (sen)	-	22.0 <sup>^</sup>	-	18.0 <sup>*</sup>	40.0

<sup>^</sup> interim dividend.

<sup>\*</sup> final dividend.

## OUR INVESTMENT CASE

## SIX-YEAR GROUP FINANCIAL SUMMARY

YEAR/PERIOD ENDED	GROUP					
	31.12.2017 (Restated)	31.12.2018	31.12.2019	31.12.2020	31.12.2021	31.12.2022
<b>OPERATING RESULTS (RM Million)<sup>1</sup></b>						
Revenue	15,692.2	50,392.5	50,939.7	43,976.0	48,119.9*	<b>50,867.7</b>
Operating profit	3,014.0	6,875.6	8,206.8	7,358.8	8,083.0	<b>9,409.5</b>
Profit before taxation and zakat	2,843.5	5,046.6	5,477.7	4,235.4	4,738.3	<b>5,348.6</b>
Profit attributable to owners of the Company	2,622.3	3,723.7	4,529.2	3,592.7	3,661.8	<b>3,463.3</b>
<b>KEY BALANCE SHEET DATA (RM Million)<sup>2</sup></b>						
Property, plant and equipment	104,807.6	111,445.5	109,966.0	112,596.1	114,105.6	<b>116,577.1</b>
Total assets	144,250.0	153,695.0	178,847.2	181,433.3	182,600.6	<b>205,922.3</b>
Total borrowings	41,443.7	47,832.4	45,411.7	49,452.6	51,678.2	<b>63,882.2</b>
Total liabilities	86,261.0	94,643.1	119,565.1	123,983.4	124,208.2	<b>144,956.1</b>
Share capital	11,199.6	11,446.1	11,446.1	11,675.2	11,927.6	<b>12,204.3</b>
Shareholders' equity	57,989.0	59,051.9	59,282.1	57,449.9	58,392.4	<b>60,966.2</b>
<b>SHARE INFORMATION</b>						
<b>Per share (sen)</b>						
Basic earnings	46.32	65.62	79.64	63.06	64.05	<b>60.35</b>
Diluted earnings	46.21	65.39	79.64	62.79	63.73	<b>59.98</b>
Gross dividend	21.41	53.27	100.00	80.00	40.00	<b>46.00</b>
Net assets per share attributable to owners of the Company	1,007.2	1,017.0	1,019.6	978.7	988.6	<b>1,017.1</b>
Share price as at reporting date (RM)	15.26	13.60	13.26	10.42	9.34	<b>9.63</b>
<b>FINANCIAL RATIOS</b>						
Return on assets (%)	5.3	3.2	2.8	2.4	2.6	<b>2.2</b>
Return on shareholders' equity (%)	13.2	8.3	8.5	7.4	8.0	<b>7.3</b>
Gearing (%)	41.6	44.8	43.4	46.3	47.0	<b>51.2</b>
EBITDA margin (%)	32.3	26.5	36.1	40.9	39.0	<b>40.9</b>
Effective weighted average cost of funds (%)	5.0	5.0	5.1	4.9	4.6	<b>4.6</b>
Interest coverage (%)	9.5	7.9	5.4	4.9	5.0	<b>4.8</b>
Currency mix (RM:Foreign)	79:21	74:26	76:24	75:25	76:24	<b>79.21</b>
Debt-equity (net of cash) ratio <sup>3</sup>	0.44	0.50	0.53	0.63	0.73	<b>0.83</b>

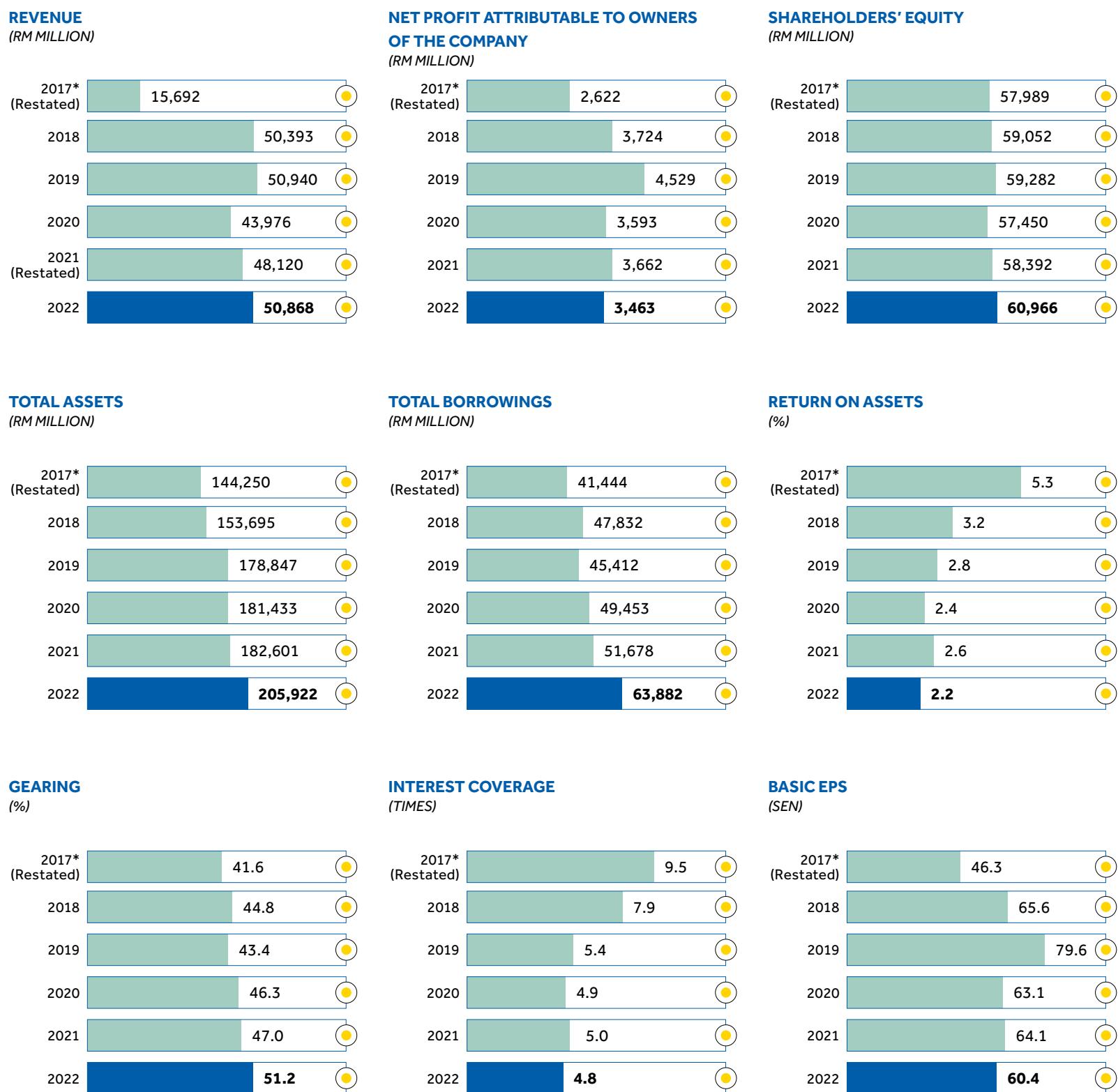
<sup>1</sup> Amounts for period ending 31 December FY2017 have been restated for the Amendments to MFRS15 which were adopted in FY2018.<sup>2</sup> Balances at 31 December 2017 have been restated for the Amendments to MFRS15 which were adopted in FY2018.<sup>3</sup> Cash includes financial assets at fair value through profit or loss (FVTPL).

\* Restated.

Dividend yield (dividend/share price per unit)	1.40	3.92	7.54	7.68	4.28	<b>4.78</b>
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## OUR INVESTMENT CASE

### SIX-YEAR GROUP GROWTH SUMMARY

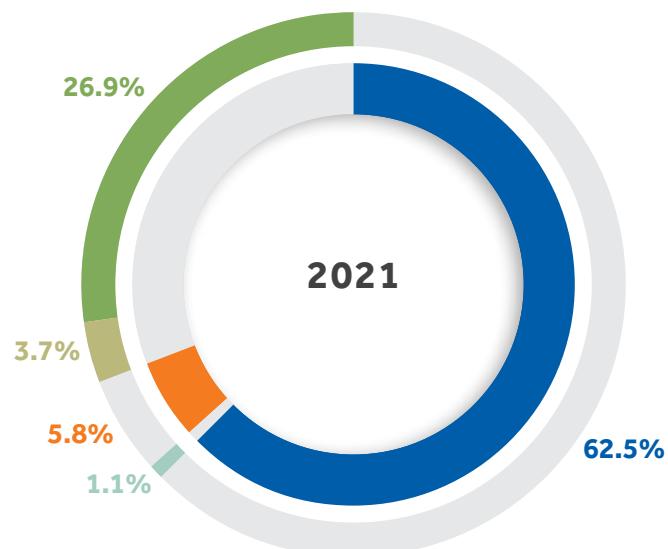
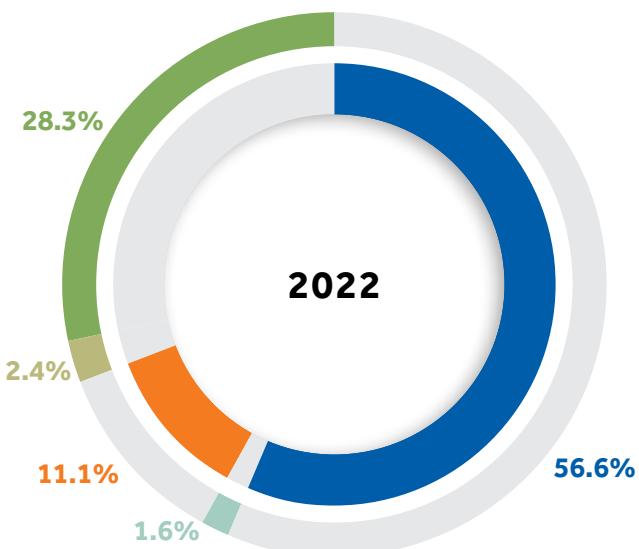


\* Financial Period Ended 31 December 2017.

## OUR INVESTMENT CASE

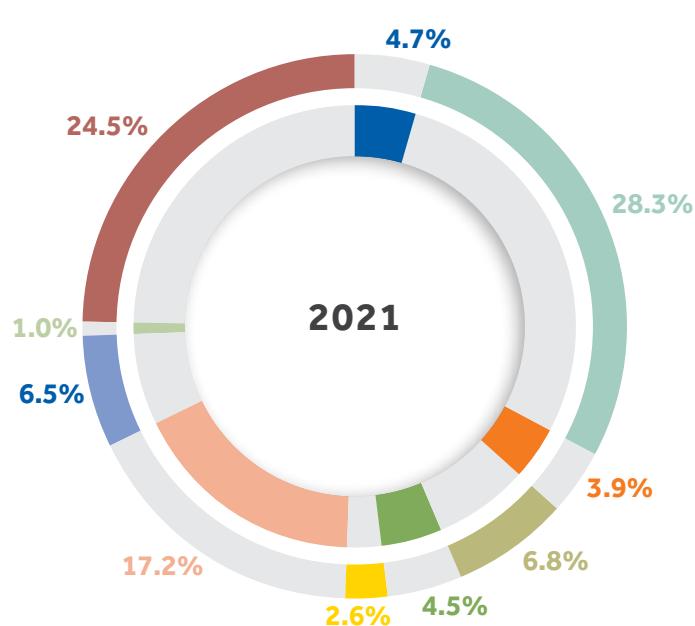
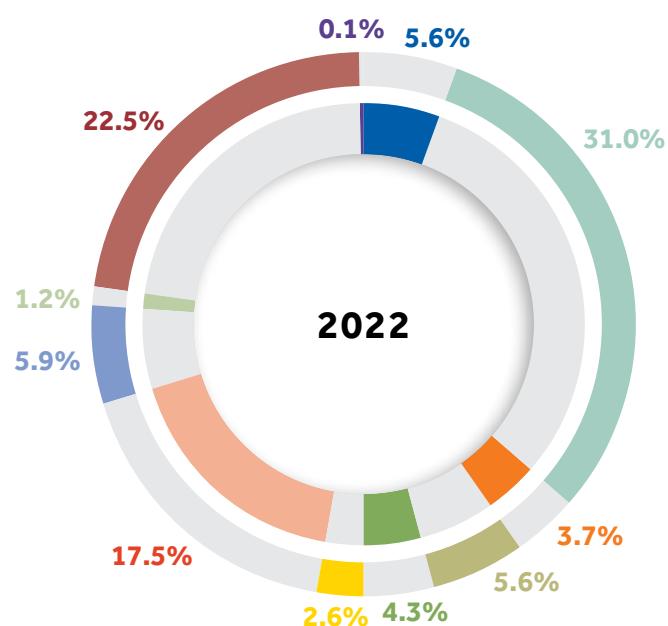
## SIMPLIFIED GROUP STATEMENT OF FINANCIAL POSITION

## TOTAL ASSETS



● Property, Plant and Equipment    ● Inventories    ● Trade and Other Receivables  
● Deposits, Bank and Cash Balances    ● Other Assets

## TOTAL LIABILITIES AND EQUITIES



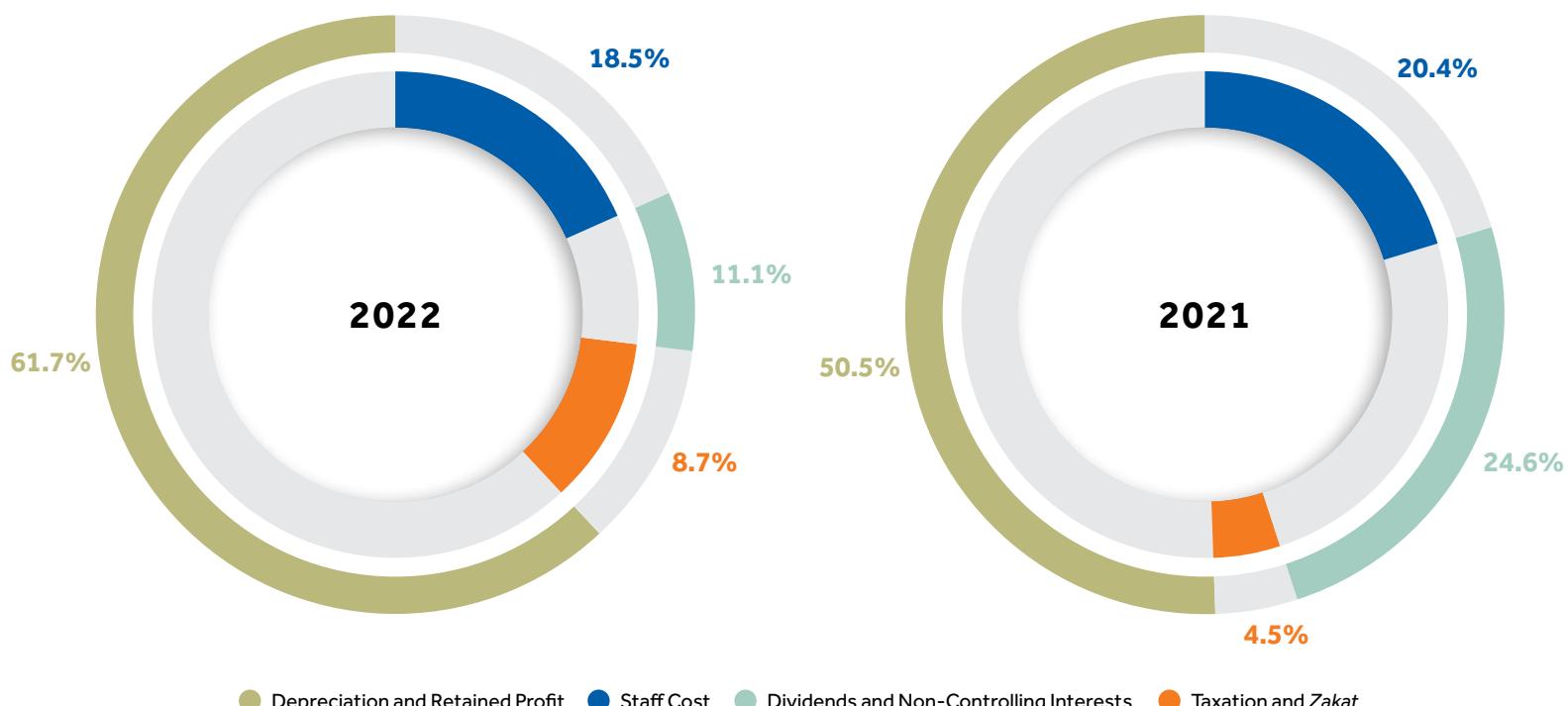
● Trade and Other Payables    ● Total Borrowings    ● Consumer Deposits    ● Employee Benefits    ● Deferred Taxation    ● Contract Liabilities  
● Other Current and Non-Current Liabilities    ● Share Capital    ● Non-Controlling Interests    ● Retained Profits and Reserves    ● Current Taxation

## OUR INVESTMENT CASE

### STATEMENT OF VALUE ADDED

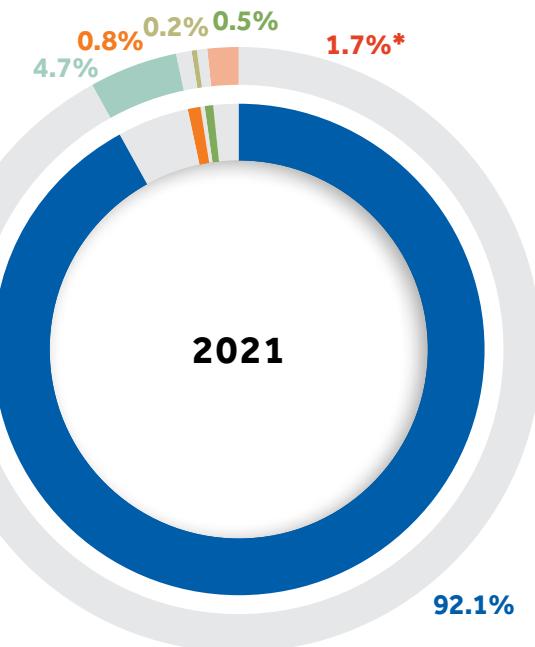
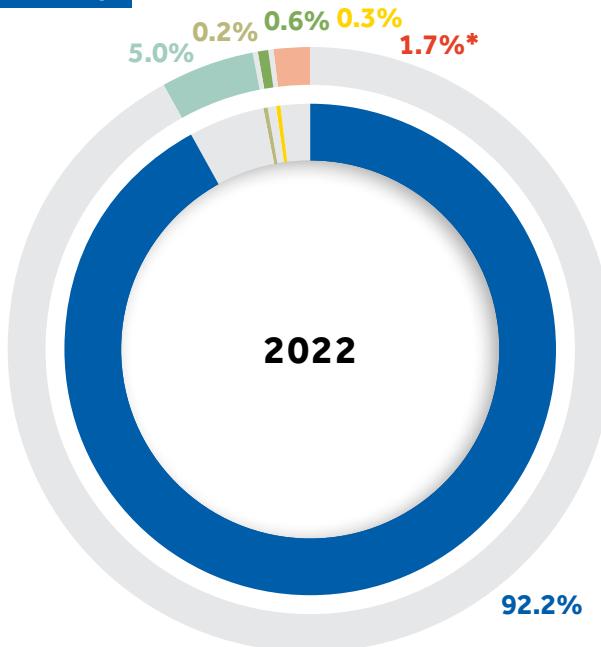
	31.12.2022	31.12.2021
<b>VALUE ADDED (RM Million)</b>		
Revenue	50,867.7	48,119.9
Imbalance Cost Pass-Through (ICPT) under recovery	22,315.3	4,509.6
Operating expenses excluding staff cost and depreciation	(49,411.5)	(29,878.7)
Net loss on impairment of financial instruments	(101.4)	(940.2)
Other operating income	940.0	918.1
Finance income	277.7	221.8
Finance cost	(4,343.4)	(3,793.3)
Fair value changes of financial instruments	130.7	201.8
Foreign exchange loss	(223.5)	(168.5)
Share of results of associates and joint ventures	97.6	193.5
Value added available for distribution	20,549.2	19,384.0
<b>DISTRIBUTION (RM Million)</b>		
To employees:		
Staff cost	3,798.1	3,954.2
To the Government:		
Taxation and zakat	1,791.2	873.6
To shareholders:		
Dividends	2,181.3	4,568.4
Non-controlling interests	94.1	202.9
To reinvest in the Group:		
Depreciation	11,402.5	10,691.5
Retained profit	1,282.0	(906.6)
<b>Total distributed</b>	<b>20,549.2</b>	<b>19,384.0</b>

### DISTRIBUTION OF VALUE ADDED



## OUR INVESTMENT CASE

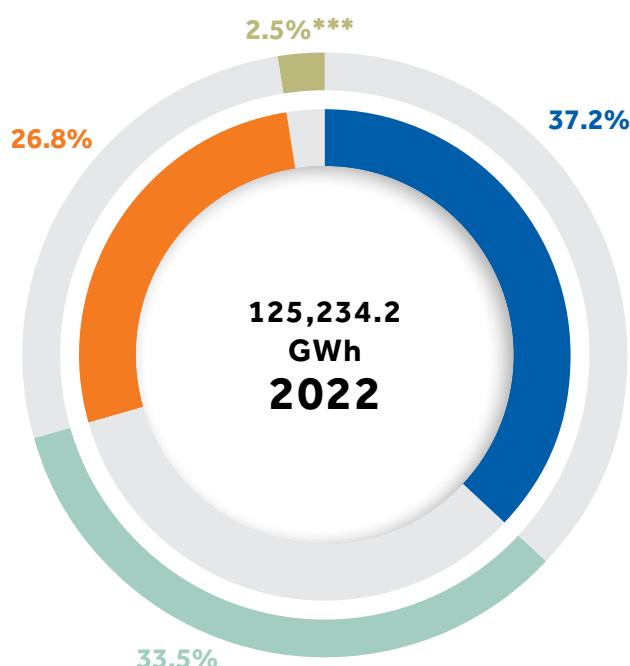
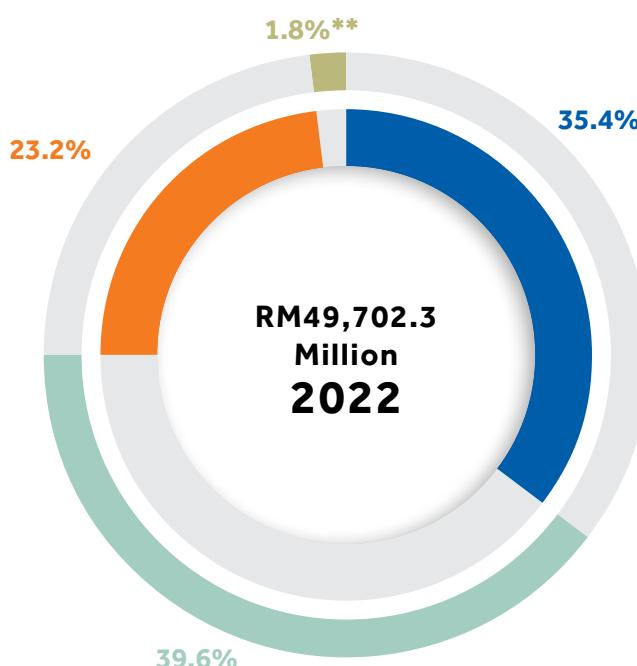
## CORE REVENUE



	Peninsular Malaysia	SESB	LPL	TNBI (UK WIND)	TNBI (Vortex)	TNBI (CEI UK LTD.)	Others*	Total
2022	46,892.2	2,548.7	-	118.0	280.1	139.6	889.1	50,867.7
2021	44,322.4	2,257.9	368.9	103.6	264.8	-	802.3	48,119.9

## GROUP SALES OF ELECTRICITY

BY SECTOR

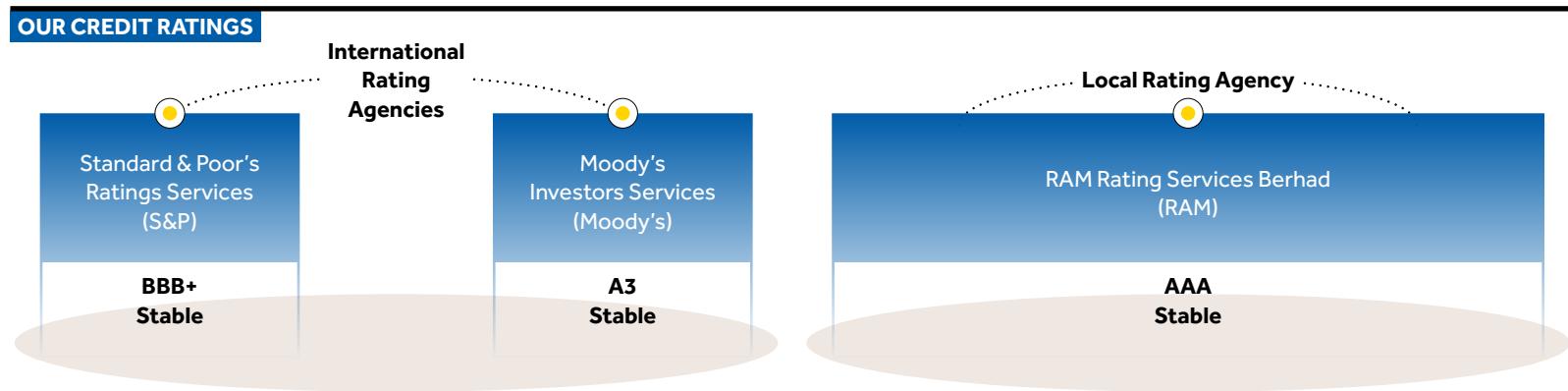


\* Others include Goods &amp; Services and Construction Contracts.

\*\* Others include Agriculture, Mining, Public Lighting, Accrued Revenue, Sales Discount, EGAT, TNBI (UK WIND, Vortex &amp; CEI UK LTD.), Other Regulatory Adjustments, Relief Package from Government and SESB Tariff Support Subsidy &amp; Fuel Subsidy.

\*\*\* Others include Agriculture, Mining, Public Lighting, EGAT, LPL, TNBI (UK WIND, Vortex &amp; CEI UK LTD.).

## OUR INVESTMENT CASE

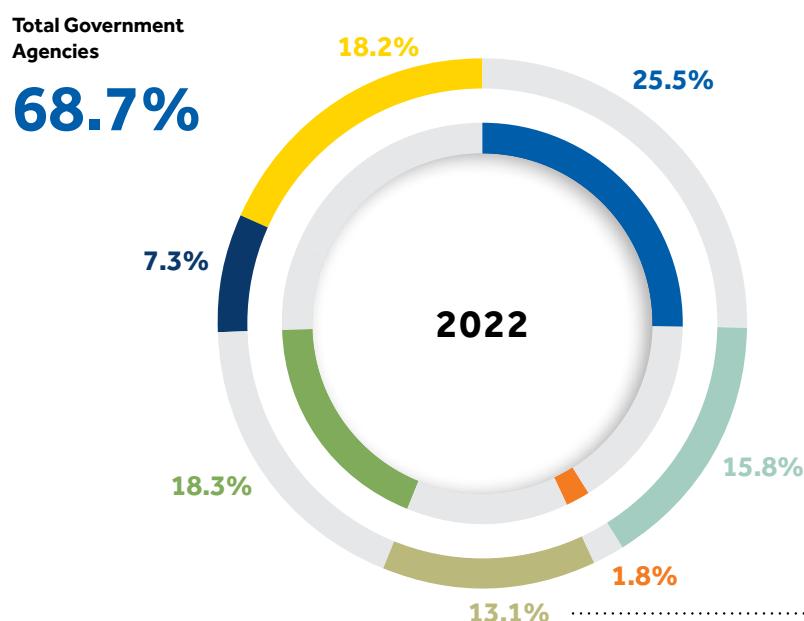


## SHAREHOLDING INFORMATION

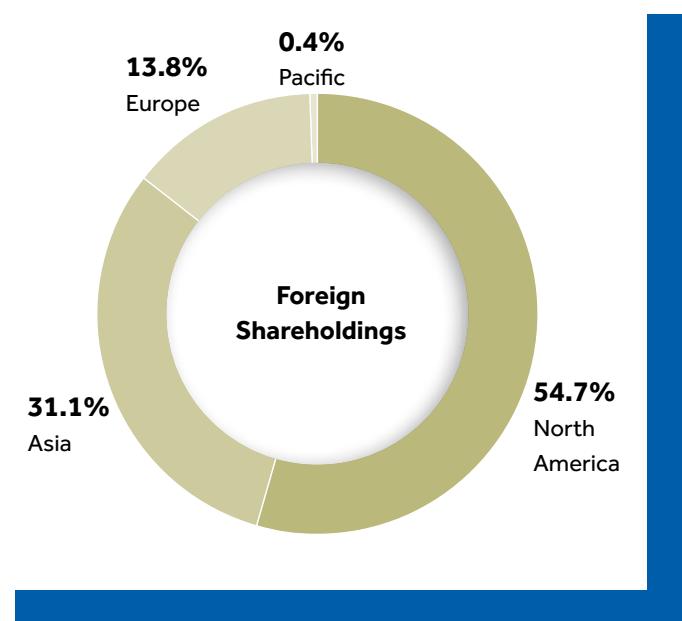
As at 31 December 2022, Khazanah Nasional Berhad remained our largest shareholder, with 25.5% of shareholdings. Other government-related agencies cumulatively held 43.2%, with Permodalan Nasional Berhad at 18.3%, the Employees Provident Fund at 15.8%, Kumpulan Wang Persaraan at 7.3% and others at 1.8%. The balance of 31.3% was held by other local corporations and Malaysian retail and foreign shareholders.

Based on the geographical spread of our foreign shareholding, the largest shareholdings, base was North America at 54.7%, followed by our shareholders from Asia (excluding Malaysia) and Europe, which accounted for 31.1% and 13.8% of the shares, respectively.

### TNB'S SHAREHOLDINGS AS AT 31 DECEMBER 2022



### FOREIGN OWNERSHIP BY GEOGRAPHY

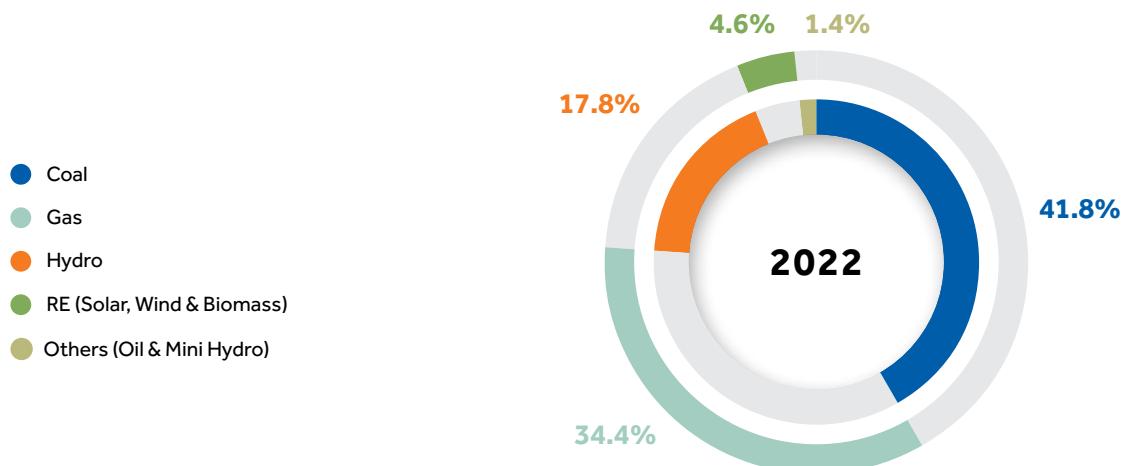


- Khazanah Nasional Berhad
- Employees Provident Fund Board
- Other Government Agencies
- Foreign Shareholdings
- Permodalan Nasional Berhad\*
- Kumpulan Wang Persaraan (Diperbadankan)
- Local Corporations & Retail

\* Comprises total shareholdings held by trust funds managed by Permodalan Nasional Berhad.

## OUR INVESTMENT CASE

## GENERATION FUEL MIX



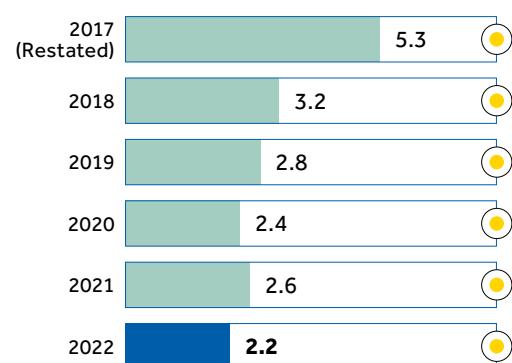
## OUR SCORECARD

	31.12.2017	31.12.2018	31.12.2019	31.12.2020	31.12.2021	31.12.2022
Return on asset	5.3% <sup>(4)</sup>	3.2%	2.8%	2.4%	2.6%	2.2%
Generation market share <sup>(1)</sup>	50.6%	49.9%	51.42%	52.21%	52.79%	49.84%
Customer satisfaction index <sup>(3)</sup>	N/A <sup>(3)</sup>	81%	81%	86%	87%	87%
Corporate reputation index <sup>(3)</sup>	N/A <sup>(3)</sup>	88%	87%	81%	88%	79%
Equivalent availability factor <sup>(2)</sup>	85.45%	88.93%	81.77%	87.39%	82.89%	83.2%
Equivalent unplanned outage factor <sup>(2)</sup>	4.84%	3.84%	7.97%	6.65%	7.85%	7.37%
Transmission system minutes <sup>(1)</sup>	0.05 minute	0.35 minute	0.27 minute	0.08 minute	0.08 minute	0.17 minute
System average interruption duration index <sup>(1)</sup> (SAIDI) minutes/customer/year	50.24	48.22	48.13	44.95	45.25	45.06
Transmission losses <sup>(1)</sup>	1.30%	1.43%	1.35%	1.47%	1.60%	1.59%
Distribution losses <sup>(1)</sup>	6.21%	6.39%	6.30%	6.69%	6.16%	5.45%
Employee engagement/culture barometer score	N/A <sup>(3)</sup>	86%	89%	89%	85%	86.6%

<sup>(1)</sup> For Peninsular Malaysia only.<sup>(2)</sup> All Coal, Gas and Hydro power plants under TNB Power Generation Sdn. Bhd.<sup>(3)</sup> The respective surveys were not conducted during this four-month Annual Report period.<sup>(4)</sup> Financial Period Ended 31 December 2017 (Restated).

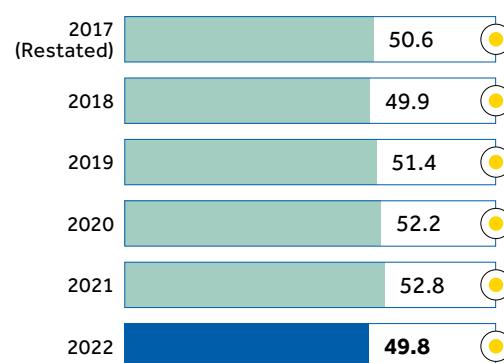
## RETURN ON ASSET

(%)



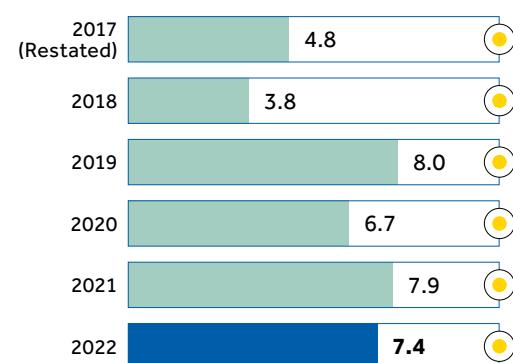
## GENERATION MARKET SHARE

(%)



## EQUIVALENT UNPLANNED OUTAGE FACTOR

(%)



# PERFORMANCE REVIEW FROM THE SIX CAPITALS PERSPECTIVE



## FINANCIAL CAPITAL

EBITDA MARGIN	BORROWINGS CURRENCY MIX	DEBT MATURITY PROFILE
<b>35.7%</b> 2021: 35.7%	MYR <b>RM49,584.65 million</b>	2022      3,954.58
	USD <b>RM8,443.94 million</b>	2023      6,123.74
	JPY <b>RM1,807.86 million</b>	2024      1,414.09
	GBP <b>RM3,214.87 million</b>	2025      2,992.61
		2026      4,871.84
		2027 and beyond      40,916.95
<b>TOTAL DIVIDEND RM</b>		
Interim <b>20.0 sen</b> 2021: 22.0 sen	Final single tier dividend <b>26.0 sen</b> 2021: 18.0 sen	Dividend Payout of Group PATAMI <b>55.2%</b> 2021: 52.8%
		Dividend yield <b>4.9%</b> 2021: 4.3%



## MANUFACTURED CAPITAL

Power Generation Assets	Power Network Assets	Non-Power Assets
<b>Thermal generation plants :</b> <ul style="list-style-type: none"> <li>7 coal-fired plants</li> <li>12 gas-fired plants</li> <li>51 oil, diesel &amp; solar hybrid</li> </ul> <b>Non-carbon plants :</b> <ul style="list-style-type: none"> <li>25 Large hydro</li> <li>111 renewable energy (mini hydro, solar, wind &amp; biomass)</li> </ul>	<b>28,991.87 km</b> of transmission network <b>529</b> transmission substations <b>769,635.20 km</b> circuit distribution network <b>96,892</b> distribution substations	<ul style="list-style-type: none"> <li><b>7.04 mil sq ft</b> of office and operational workspace (Total of 5,866 premises)</li> <li><b>21,918 km</b> of fibre optic network</li> <li><b>4,853</b> vehicles</li> </ul>
<b>EQUIVALENT AVAILABILITY FACTOR</b> (For all majority-owned plants) (%)		<b>EQUIVALENT UNPLANNED OUTAGE FACTOR</b> (For all majority-owned plants) (%)
Peninsular Malaysia <b>83.2%</b> 2021: 82.89	Sabah <b>79.45</b> 2021: 75.11	International <b>95.95</b> 2021: 95.61
<b>SAIDI (minutes)</b>		<b>SYSTEM MINUTES (minutes)</b>
Peninsular Malaysia <b>45.06</b> 2021: 45.25	Sabah <b>286.21</b> 2021: 268.05	Peninsular Malaysia <b>0.17</b> 2021: 0.08
Sabah <b>1.42</b> 2021: 40.74		

## PERFORMANCE REVIEW FROM THE SIX CAPITALS PERSPECTIVE



## NATURAL CAPITAL

Read more about how we are reducing our impact on the environment through strong climate action by spearheading new green technologies and helping to drive Malaysia's energy transition journey.



Please refer to page 102.



## INTELLECTUAL CAPITAL

Read more about how we are digitalising our business, future-proofing our network through smart grid upgrades and exploring a host of new technologies to help us become more sustainable.



Find out more on page 85.



## HUMAN CAPITAL

Read more about how we are creating a conducive work environment, growing our talent and engaging with our employees to unlock greater productivity.



Please refer to page 118.



## SOCIAL AND RELATIONSHIP CAPITAL



## INVESTORS

Provide the investment community with a clear, transparent and holistic picture of the Group's performance and prospects

**Create long-term value for shareholders**

EMPLOYEE  
TRADE UNIONS/  
ASSOCIATIONS

Maintain harmonious relationship through **collaboration and continuous engagement** to sustain high performing culture and enhance employee experience



## CUSTOMERS

**Forge meaningful relationships** via increased focus on customer choice and literacy, quality customer service and innovative solutions, driven by effective communication and engagement

VENDORS AND  
SUPPLIERS

We **support local businesses** when and where possible to spur the local economy



## COMMUNITY

Ensure Malaysians in rural and remote areas have **access to electricity**

Contribute to **higher standard of living** by ensuring Malaysians have proper homes to live in

**Uplift marginalised communities through education**

## OUR SOCIAL CIRCLE



TNB Twitter

**39,305**  
followers



TNB Instagram

**56,600**  
followers



TNB CareLine Facebook

**447,157**  
followers



TNB YouTube

**87,000**  
subscribers



TNB LinkedIn

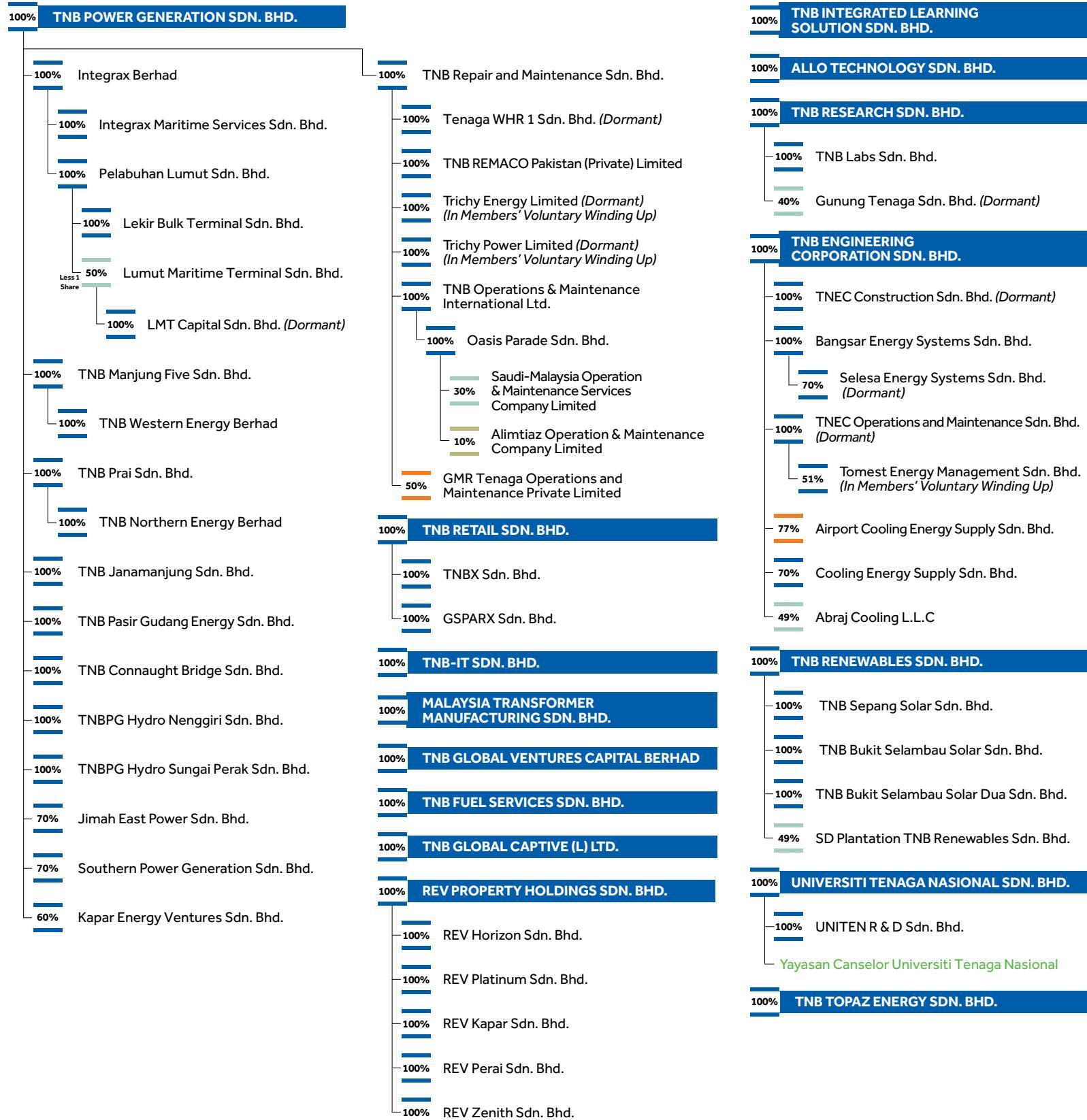
**270,688**  
followers

\* information as at 6 April 2023

# CORPORATE STRUCTURE

As at 6 March 2023

# TENAGA NASIONAL BERHAD

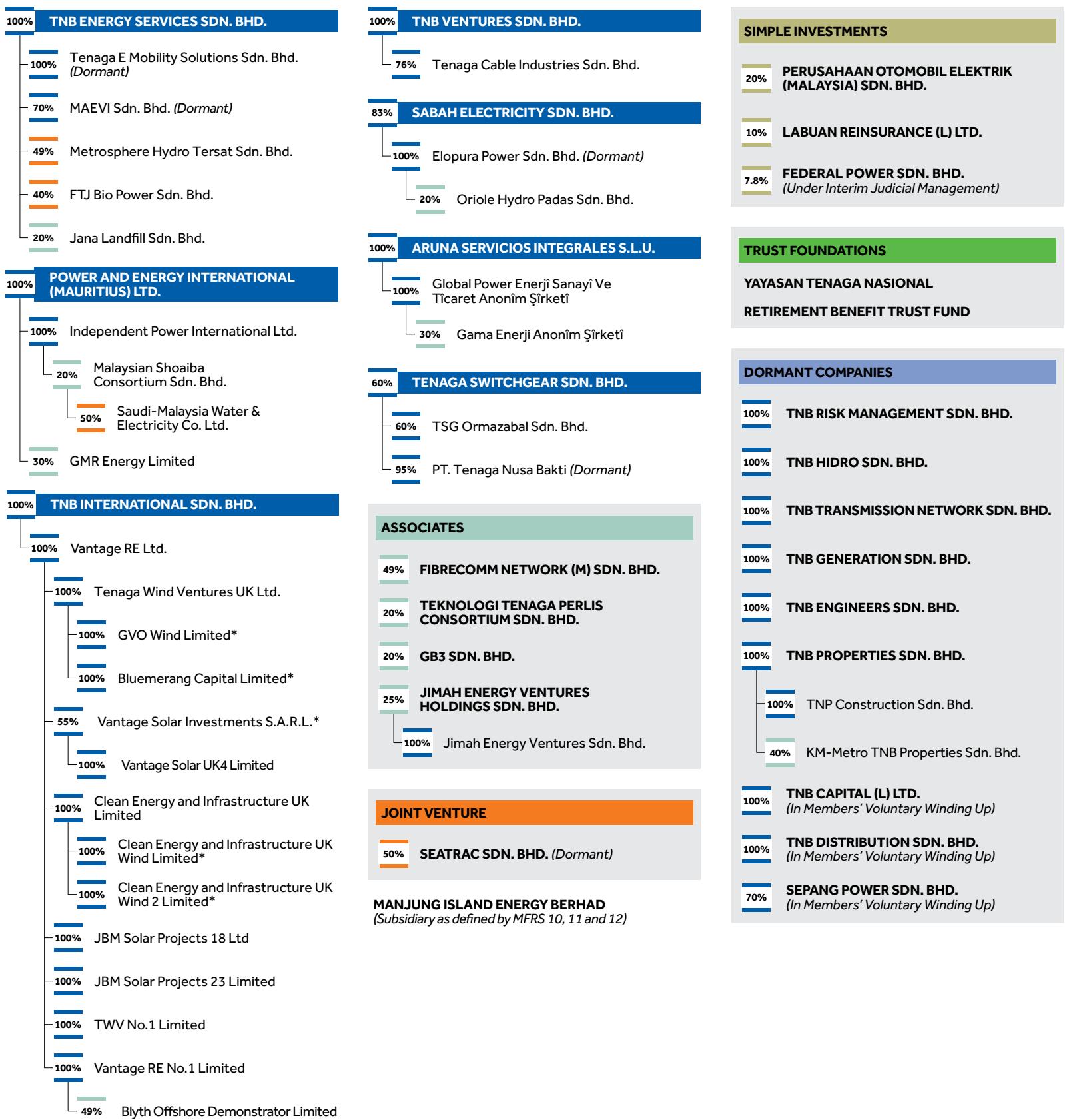


\* GVO Wind Limited, Bluemerang Capital Limited, Vantage Solar Investments S.A.R.L., Clean Energy and Infrastructure UK Wind Limited and Clean Energy and Infrastructure UK Wind 2 Limited Group of Companies are detailed out on pages 255-264 of this Integrated Annual Report.

**CORPORATE STRUCTURE**

As at 6 March 2023

**Legend:** ● Subsidiaries ● Associates ● Joint Ventures ● Simple Investments ● Trust Foundations



# OUR INTERNATIONAL FOOTPRINT

## UNITED KINGDOM

**POWER PLANT**  
TENAGA WIND VENTURES UK LTD.  
(100% Equity)  
Capacity :

**26.6 MW**

CLEAN ENERGY AND INFRASTRUCTURE UK LIMITED  
(100% Equity)

Capacity :

**97.3 MW**

VANTAGE SOLAR INVESTMENT S.A.R.L.  
(55% Equity)

Capacity :

**365 MW**

BLYTH OFFSHORE DEMONSTRATOR LIMITED  
(49% Equity)

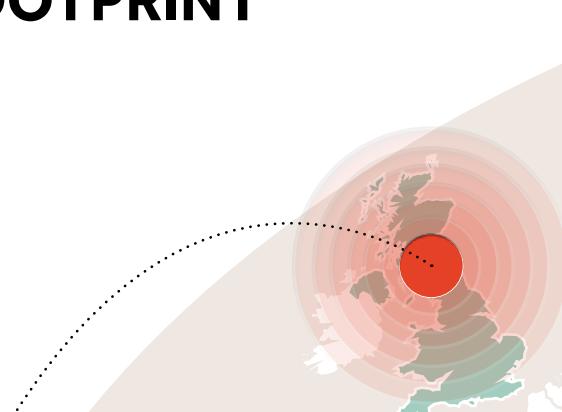
Capacity :

**41.5 MW**

## ENERGY SOURCE :



**TOTAL CAPACITY :  
530.4 MW**



## TÜRKİYE

**POWER PLANT**

GAMA ENERJİ A.S.

(30% Equity)

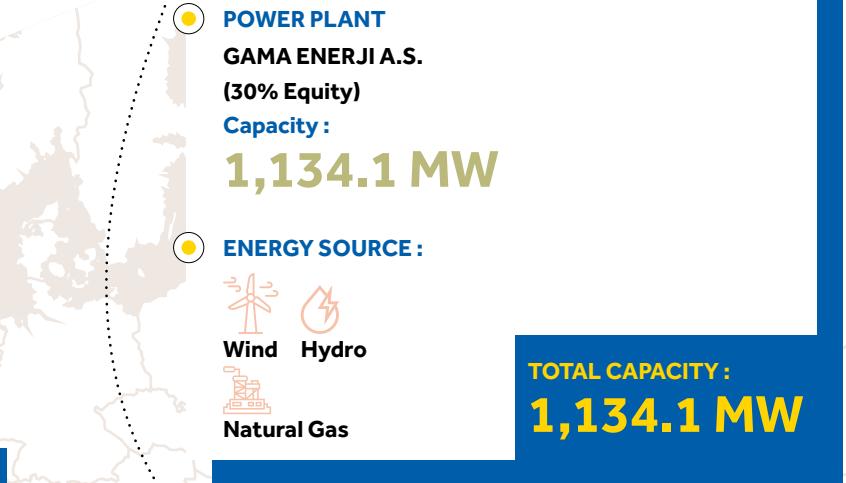
Capacity :

**1,134.1 MW**

**ENERGY SOURCE :**



**TOTAL CAPACITY :  
1,134.1 MW**



## KUWAIT

**POWER PLANT**

SABIYA POWER GENERATION & WATER DISTILLATION PLANT

Capacity :

**252 MW**

DOHA WEST POWER GENERATION AND WATER DISTILLATION PLANT

Capacity :

**170 MW**

## OPERATIONS & MANAGEMENT SERVICES

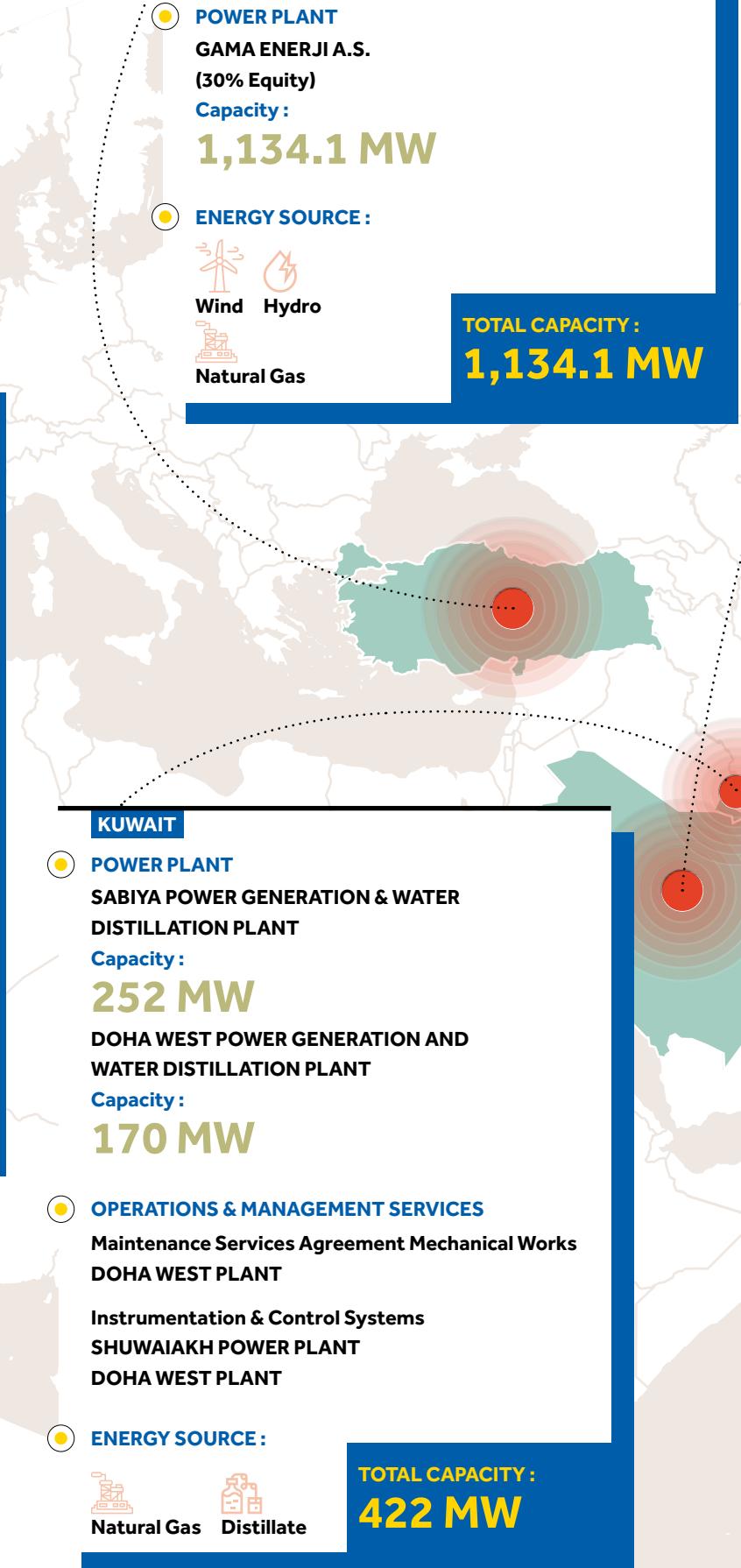
Maintenance Services Agreement Mechanical Works  
DOHA WEST PLANT

Instrumentation & Control Systems  
SHUWAIKH POWER PLANT  
DOHA WEST PLANT

## ENERGY SOURCE :



**TOTAL CAPACITY :  
422 MW**



## OUR INTERNATIONAL FOOTPRINT

### SAUDI ARABIA

 POWER PLANT

SHUAIBAH INDEPENDENT WATER & POWER

PROJECT (IWPP)

(6% Equity)

Capacity :

**1,190 MW**

WATER DESALINATION ASSETS

Total Capacity :

**1,039,000  
m<sup>3</sup>/day**

 ENERGY SOURCE :



**TOTAL CAPACITY :  
1,190 MW**

### PAKISTAN

 POWER PLANT

BALLOKI POWER PLANT

Capacity :

**1,223 MW**

 OPERATIONS & MANAGEMENT SERVICES

- TNB REMACO & BALLOKI POWER PLANT NATIONAL POWER PARK MANAGEMENT COMPANY LIMITED

 ENERGY SOURCE :



**TOTAL CAPACITY :  
1,223 MW**

### INDIA

 POWER PLANT

GMR ENERGY LTD

(30% Equity)

Capacity :

**2,244 MW**

 ENERGY SOURCE :



**TOTAL CAPACITY :  
2,244 MW**

### CAMBODIA

 POWER PLANT

Capacity :

**400 MW**

MANN & Wartsila Engines  
Technical Advisory for  
EDC HFO Plant

 ENERGY SOURCE :



**TOTAL CAPACITY :  
400 MW**



**TNB Electron charging points  
are now available at R&R  
Ayer Keroh (Northbound),  
Tapah (Northbound), and  
Paka (Northbound).**

**Power up your EV for a  
better, brighter drive**



# FROM OUR LEADERSHIP



Chairman's Letter to Shareholders	28
President/Chief Executive Officer's Review	32
Achieving Our Strategic Ambitions	38
• Future Generation Sources	
• Grid of the Future	
• Winning the Customer	
• Future-Proof Regulations	
The Market Landscape	54
Delivering Sustainable Value	56
Our Value Creation Model	62

# CHAIRMAN'S LETTER TO SHAREHOLDERS



## OVERVIEW

It has been a momentous year as the world stepped up to embrace endemicity, a key development that has seen businesses and societies recovering both in strength and vibrancy. The return to normalcy was a welcome change following more than two years of disruptions, lockdowns and strife as a result of the COVID-19 pandemic.

The optimism for a more stable and predictable operating environment was, however, disrupted by the start of the Russia Ukraine conflict in February 2022, which threw global supply chains into disarray and raised commodity, energy and food prices. Coupled with resurgent consumer demand, this led to higher inflation, prompting central banks all over the world to respond with tighter monetary policies. This was true too, in Malaysia, with Bank Negara Malaysia raising interest rates four times during the year to ease inflation.

Despite this backdrop, Malaysia was still able to record economic growth of 8.7%, an impressive effort as the country got back on track, free from the shackles of the pandemic. With greater economic activity fuelling this growth, electricity demand was also higher, registering a 5.2% year-on-year increase in group demand growth, which helped TNB deliver robust revenue and profits. Higher fuel costs persisted, however, exacerbated by the Russia Ukraine conflict, which remains a challenge that we face today.

Nevertheless, at TNB, we remained steadfast in our commitment to meeting the energy needs of industrial, commercial and residential customers amid the buoyant economic recovery. The significant investments we made over the years to diversify energy sources as well as grow our renewable energy portfolio enabled us to continue providing sustainable and reliable energy. Our efforts were recognised by our customers as shown by consistent performance for two consecutive years in our Customer Satisfaction Index scores of 87% in 2022.

## CHAIRMAN'S LETTER TO SHAREHOLDERS

### REVENUE

for the year reflected this positive development, growing 5.7% year on year

2022

**RM50.87 billion**

2021

RM48.12 billion

### TOTAL DIVIDEND

payout for the year was 46.0 sen per share, or

2022

**RM2.65 billion**

2021

RM2.29 billion

Beyond our operational obligations, the Group has continued to advance its Reimagining TNB 2025 strategy and taken our sustainability commitments one step further, by launching the blueprint that will enable us to lead the nation's energy transition.

In staying true to our purpose of building a Better World and Brighter Lives, we have continued to uplift the welfare of the communities we serve through impactful educational and socioeconomic initiatives. In 2022, we continued to support the government's extension of the electricity rebate programme, which was first launched during the pandemic and provides a RM40 monthly electricity bill rebate for underprivileged and poor families.

We also thank the Government for its support in approving the Regulatory Period 3 (RP3) 2022-2024, on terms that are favourable to sustaining TNB's growth. TNB is fully committed to meeting the performance indicators stipulated under the RP3 such as the higher amount of approved Capital Expenditure (CAPEX) which will be crucial in driving the energy transition. We will continue to engage with the

Energy Commission and the Ministry of Natural Resources, Energy and Climate Change to work together to ensure balanced and sustainable development of the electricity supply industry in Malaysia.

### FINANCIAL PERFORMANCE

In the year under review, driven by higher consumption by industrial and commercial customers, we saw more robust economic activities throughout the year. While this demand drove our revenues higher, we recorded a lower profit after tax of RM3.56 billion or 8% lower year-on-year compared to the RM3.86 billion reported in 2021. This was primarily due to a deferred tax movement and the imposition of the Prosperity Tax.

Nevertheless, we remained committed to our dividend policy of a 30% to 60% payout ratio based on Profit After Tax and Minority Interest (PATAMI). As such, the Board is pleased to declare a final dividend of 26.0 sen per share. Together with our interim dividend of 20.0 sen per share paid on 14 October 2022, this brings our total dividend for the year to 46.0 sen per share or 55.2% of PATAMI, which is higher than the 40.0 sen per share or 52.8% of PATAMI for 2021.

### REIMAGINING SUSTAINABILITY – DRIVING THE ENERGY TRANSITION

The conversation surrounding climate change and climate action continues to grow, both in terms of intensity and depth. The tone, as well, has become far more serious and urgent as we see or experience firsthand, the catastrophic effects of extreme weather events which are becoming more frequent, damaging and severe. From droughts, the continued melting of the ice caps, extreme flooding and wildfires, the year 2022 was a year of extreme weather events.

To bring it back to our own setting, Malaysia continues to suffer from perennial flooding as a result of the monsoon rains, which also affects TNB's operations and assets. However, the most significant climate-change-related incident in 2022 was the extensive damage to high voltage transmission towers connected to the Sultan Mahmud Power Station at the Kenyir Dam in Terengganu, which was triggered by unprecedented landslides.

This underscores how critical it is to take action now to slow global warming. As an electricity utility with stakes across the whole value chain from generation to retail, TNB acknowledges that we must be part of the solution.

Thus, to put our words into action, in August 2022, we announced that TNB would commit Capital Expenditure (CAPEX) for initiatives to fast-track our Energy Transition (ET) Plan, which aspires to reduce our emissions intensity to net zero by 2050 in a responsible and sustainable manner.

## CHAIRMAN'S LETTER TO SHAREHOLDERS



*TNB plans to substantially increase its renewable energy generation portfolio as part of its journey towards becoming coal-free by the year 2050.*

This represents a significant step forward for us and the country as we commit our full support to taking the lead in driving the energy transition. In doing so, TNB's ET Plan is the catalyst for the SP2050, providing the spark to accelerate decarbonisation and the sustainable growth of our grid, electrification and renewable energy. This ultimately supports our Reimagining TNB strategic blueprint, which will enable us to stay relevant and also puts sustainability front and centre in achieving our goal of being a leading global electricity utility.

The approach under the ET Plan will be more pervasive and will move at a faster pace as we plough in resources to decarbonise, digitalise and electrify across the entire value chain to generate cleaner power, create more efficient cities and electrify the transportation sector. Other expected outcomes will be a significant increase in renewable energy capacity and a stronger, more interconnected ASEAN grid. The plan will also pursue more efficient usage of energy through smart and digital technology, much wider use of batteries and a range of carbon management strategies.

**In 2022, we forged a range of strategic partnerships to decarbonise the power sector and expand electrification infrastructure for transportation.**

TNB has commenced the journey under the ET Plan. In 2022, we forged a range of strategic partnerships to decarbonise the power sector and expand electrification infrastructure for transportation. In addition, we are equipping greater numbers of customers with rooftop solar PV, investing even more in wind, hydro and solar energy capacity, strengthening the grid and expanding the regional interconnections within ASEAN.

Although we are only at the start of our 28-year journey, through our sustained efforts and by keeping in mind the sobering reminder that saving our planet is ultimately the responsibility of its tenants, I am optimistic that TNB will pull through and deliver on its aspirations.

### GOVERNANCE

As we move forward in unison to achieve our sustainability aspirations, of equal importance is having the right governance structures to provide the appropriate oversight and guidance. In this context, we have established the Sustainability & Energy Transition Council (SETC), which is a merger of the Sustainability Development Council and the TNB Energy Transition Steering Council. This merger will enable TNB to better streamline the management of sustainability-related efforts and initiatives. The Board, too, has kept abreast of the latest developments in the ESG landscape, having attended a range of sustainability-related training courses as well as ESG forums in 2022.

### GIVING BACK TO OUR COMMUNITIES

At TNB, the needs of Malaysians have always been close to our hearts. In building a Brighter Community, our corporate social responsibility efforts are focused on the three (3) pillars of education, socioeconomic and environment. This year, we continued to provide a range of educational opportunities, scholarships and direct aid to the underprivileged.

Through our education trust fund, Yayasan Tenaga Nasional (YTN), TNB offers a range of scholarships for students to pursue tertiary education both locally and internationally. Over the last three decades, YTN has sponsored more than 20,500 students, providing funding of more than RM1.7 billion through initiatives such as the TNB Prime Scholarship, TNB Shine Sponsorship and the My Brighter Future programme for the B40 community. In 2022 alone, we contributed RM107.81 million to these scholarships and convertible loans programmes. We also set aside RM1 million in 2022 to continue our Ceria Ke Sekolah programme, benefiting B40 students in schools in 55 locations nationwide.

## CHAIRMAN'S LETTER TO SHAREHOLDERS

TNB has also sought to train and reskill workers via the TNB Reskilling Malaysia (TRM) programme at our technical training institute (ILSAS), where we not only train but also secure job placements for workers in electricity industry-related jobs. In 2022, we expanded this to include roles in the gig economy, recognising that labour market trends have evolved with the rise of digitalisation. The TRM programme, from inception until December 2022, has job-matched 11,029 job seekers and completed 8,090 traineeships.

Our socioeconomic efforts are encapsulated in several programmes aimed at creating positive impacts on our communities. Through the Program Mesra Rakyat (PMR) and Program Baiti Jannati (PBJ), we help the B40 communities and hardcore poor to build or refurbish their own homes. In total, more than 1,000 families have received new or upgraded homes since these programmes commenced. We also continue to assist Institut Jantung Negara (IJN) and Yayasan Kebajikan Negara (YKN) in their efforts to provide temporary accommodation for family members accompanying patients at government hospitals.

I am also proud of our employees, who have embodied our core value of Mindfulness and taken strongly to the Tabung Warga TNB Prihatin, which enables them to contribute money directly to our humanitarian or community efforts.

### OUTLOOK

Looking ahead, we step into 2023 with positive momentum although we recognise that Malaysia's economic growth is set to moderate from the high achieved in 2022 in light of a potential global recession. However, the forecast of economic growth of 4.5% in 2023 does indicate that electricity demand will remain robust in Malaysia. As such, we remain deeply committed to ensuring reliable supply to our customers to support the nation's continued growth.

With higher inflation affecting households and businesses, in late 2022 the government announced the implementation of a targeted electricity subsidy scheme for domestic users to continue enjoying tariff rebates on their electricity bills and did not increase the surcharge on tariffs for a select group of small businesses and industries. We will continue to support the government's continuous effort to manage the tariff within the framework of the ICPT mechanism, while balancing the need for affordable tariffs for the

#### Governance



We have established the

## SETC Council

which is a merger of the Sustainability Development Council and the TNB Energy Transition Steering Council

#### Giving Back to Our Communities



Through PMR & PBJ,  
more than

# 1,000

families have received new or upgraded homes since these programmes commenced



The TRM programme, from inception until December 2022, has job-matched

# 11,029

job seekers and completed

# 8,090

traineeships

rakyat and economic growth. As a caring corporate entity, we will implement this decision wholeheartedly to help Malaysians cope with ever-increasing cost pressures.

#### ACKNOWLEDGEMENTS

I wish to thank the Board of Directors for their support, wisdom and counsel in navigating a challenging year. I must also acknowledge the performance of the Management Team, which continues to execute TNB's strategic aspirations with dedication to deliver results. They are tirelessly supported by our employees who have displayed extraordinary resilience throughout these turbulent times. I am highly appreciative of the dedicated efforts of our Warga TNB who enable us to serve the rakyat every single day.

I express my appreciation to our stakeholders, including shareholders and industry partners, for their unwavering trust in our operations that will progressively bring TNB to greater heights. We are most thankful to our customers who we continue to support every day through the supply of sustainable and reliable energy.

I also bid farewell to our Chairman, Dato' Sri Hasan Arifin, who ceased to hold office with effect from 1 January 2023. Thank you, Dato' Sri, for your contribution to the organisation. We have been enriched by your expertise and guidance.

In closing, I recognise that I have taken the helm of the Board of the largest utility in Malaysia, which carries with it a huge responsibility. I plan to utilise all that I have learnt in my 36 years of working in electricity generation, regulation and government to steer the organisation forward alongside my fellow Board members and the Management Team.

Thank you.

**DATO' ABDUL RAZAK BIN ABDUL MAJID**  
Chairman  
Tenaga Nasional Berhad

# PRESIDENT/CHIEF EXECUTIVE OFFICER'S REVIEW

Dear Shareholders,

**The year 2022 was certainly a challenging one, but TNB was able to rise to the occasion and emerge stronger. We remained steadfast in growing our business sustainably while helping to steer Malaysia's journey to a responsible energy transition.**

**DATO' INDERA IR. BAHARIN  
BIN DIN**

President/Chief Executive Officer



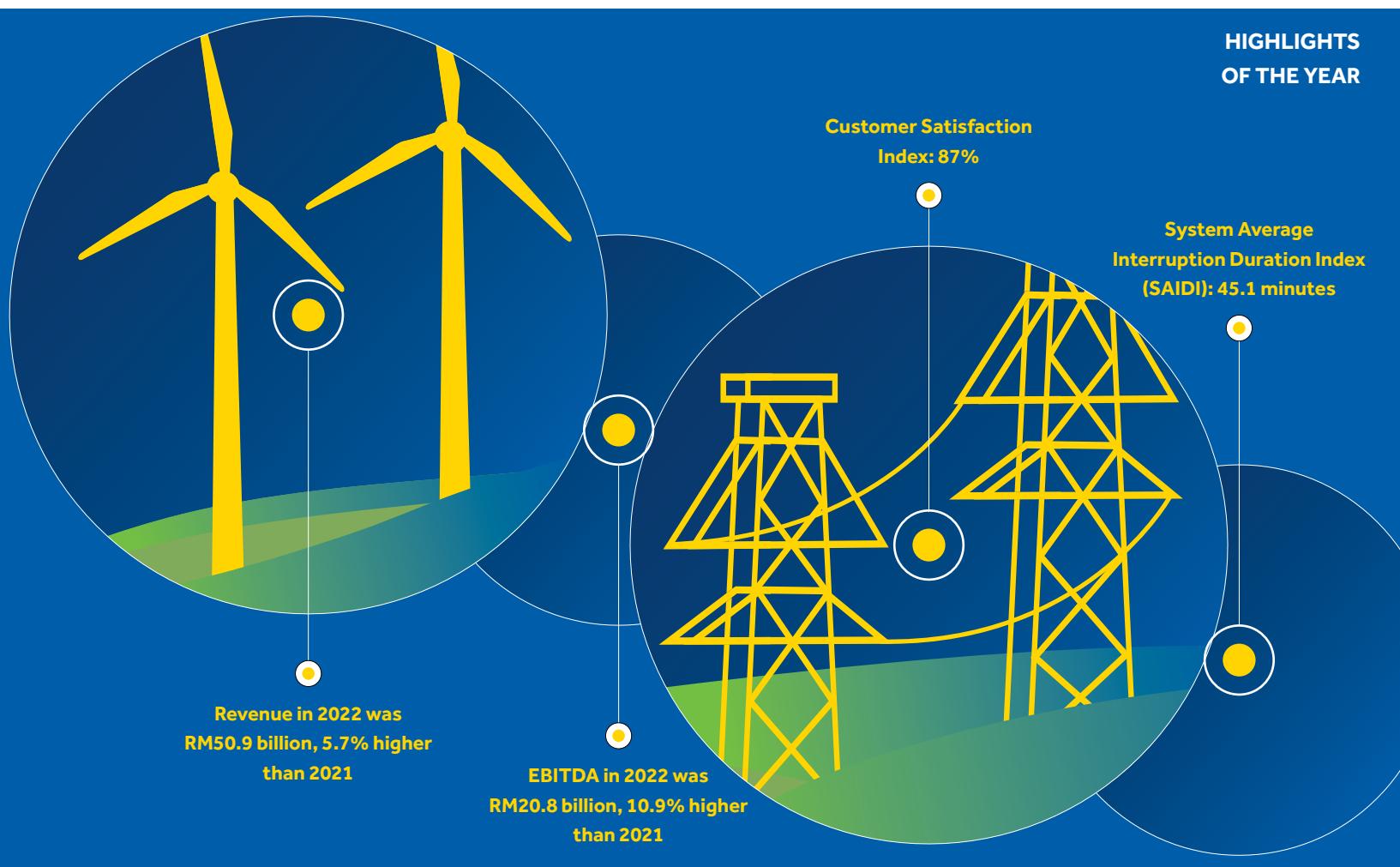
With the threat of the pandemic subsiding and the path towards economic recovery emerging, the world looked set to navigate a year with fewer uncertainties. However, within a matter of months, the world shifted from one of its most significant health crises to a global energy crisis, sparked by Russia's invasion of Ukraine. Due to the range of economic sanctions on Russia, global supply chains that were on the precipice of recovering from the strains of the pandemic were once again thrown into turmoil.

This severely impacted the energy markets given Russia's position as one of the world's largest exporters of fossil fuels. Prices reached multi-year highs with coal and gas prices increasing by 83% and 11% year-on-year, respectively. Domestically, Malaysia was not spared from the higher prices of fuel, which had a significant impact on the cost of generating electricity. Approximately 90% of Peninsular Malaysia's electricity is generated from fossil fuel sources, which is predominantly coal and gas, with fuel costs contributing more than 70% to generation costs. Despite this, we continued to fulfil our obligations by providing reliable, secure and affordable supply of power to the nation.

To minimise economic disruptions, governments globally have chosen to prioritise energy security by ramping up generation from fossil-fuel and nuclear sources. Interestingly, the broader effect of elevated energy prices has led to accelerated investments into developing renewable and alternative sources of energy to reduce the dependence on imported fuel sources. Likewise, in Malaysia, the Government stepped up efforts to increase the use of renewable energy, by announcing programmes to install solar panels on government buildings, the development of solar farms and other initiatives to support the nation's energy transition journey.

Amid this evolving landscape, TNB stepped up to not only identify the opportunities within our value chain but also made further headway into the green and renewable energy space. While the higher price environment has certainly impacted TNB's costs over the past two years, we recognise that the generation mix that exists in Malaysia today was the generation mix that exists in Malaysia today is the decision that the nation has made to ensure security of supply at affordable prices. The energy crisis has thus strengthened our resolve to accelerate and implement a pathway to a cleaner generation mix by 2050.

## PRESIDENT/CHIEF EXECUTIVE OFFICER'S REVIEW



**As a result of stronger electricity demand, TNB recorded total revenue of RM50.9 billion in 2022**

**PERFORMANCE HIGHLIGHTS**

Electricity demand in Peninsular Malaysia increased by 6.0% year-on-year on the back of higher economic activity as industrial and commercial activities picked up in line with the return to normalcy. This was reflected in Malaysia's Gross Domestic Product growth of 8.7% in 2022 compared to the 3.1% recorded in 2021.

As a result of the stronger electricity demand, TNB recorded total revenue of RM50.9 billion in 2022, 5.7% higher year-on-year from the RM48.1 billion reported in 2021. EBITDA was also higher by 10.9% to RM20.8 billion compared to RM18.8 billion in 2021 driven by higher group electricity revenue and lower allowance for doubtful debts, contributed by improvement in collections. Profit after tax was however lower by 8% to RM3.6 billion compared to RM3.9 billion in 2021 due to a deferred tax movement of RM520.7 million and the imposition of the Prosperity Tax of RM340.8 million.

In managing the higher fuel costs, we have continued to work with the government in the implementation of the Imbalance Cost Pass Through (ICPT) mechanism. Under this mechanism, the government has provided direct payments to TNB to offset the higher fuel costs for generating electricity. This, in addition to the prudent management of our working capital, has helped TNB to alleviate the pressure from high fuel prices.

In terms of operational performance, I am pleased to report that we continue to maintain world-class standards of operational excellence. Our power plants recorded an availability factor of 83.2% while our Transmission System Minutes, which is a benchmark for the minutes of interruption caused by transmission, was 0.2 minutes this year. The System Average Interruption Duration Index (SAIDI) was 45.1 minutes. The results we have seen in this area is a clear demonstration of the efforts put in by our workforce to operate and maintain our electricity supply infrastructure to the highest of standards.

## PRESIDENT/CHIEF EXECUTIVE OFFICER'S REVIEW

In terms of our safety performance, our Loss Time Injury Frequency (LTIF) has also improved further to 0.82 from 1.03 in FY2021. While we recorded zero fatalities among our workforce during the year, we regret to report that there were two (2) fatalities among our contractors. We are fully committed to do even more to ensure that our work safety culture is strengthened while consistently implementing safety awareness programmes and compliance to safety rules.

Our operational performance also influences how our customers perceive us and, in that regard, we are seeing success year on year. In 2022, we retained our excellent Customer Satisfaction Index (CSI) at a score of 87%. In addition, as a result of our consistent digitalisation and outreach efforts, the myTNB app now has 6.29 million registered customers, a 14.3% increase from the year before. Mirroring the improvement in customer satisfaction, our Customer Experience Index across multiple touchpoints and channels are overwhelmingly positive, recording approval ratings of above 90% on average.

### OUR STRATEGIC PROGRESS

In 2022, we have further fortified our Reimagining TNB (RT) strategy, setting us on a firmer trajectory to becoming a leading provider of sustainable energy solutions in Malaysia and internationally. This announcement of our Energy Transition (ET) Plan in 2022 comes at a time when many countries and utilities begin charting their own pathways towards net zero commitments.

As a commitment to our ET Plan, while driving Malaysia's own energy transition, TNB will set aside significant CAPEX for initiatives to fast-track TNB's transition to net zero emissions by 2050. Ultimately, we have an eye on the longer-term future of TNB and these investments will gradually shift our existing portfolios to greener ones, for a more sustainable business growth of TNB while creating long-term value for shareholders.

#### Our Commitment to 2035

- Reduce emission intensity by 35%
- Significant renewable generation growth
- 50% reduction in coal generation capacity

#### Our Aspiration to 2050

- Achieve Net Zero GHG emission
- Invest and grow our emerging green technologies including Hydrogen and Carbon Capture & Utilisation (CCU)
- Be coal free

### CATALYSING THE ENERGY TRANSITION

At the core of it, the ET plan is complementary to our overarching Reimagining TNB strategy, as it marshals our resources to enable us to expand on and develop the energy transition elements present within the four pillars of the strategy. To recap, the four pillars are, Future Generation Sources, Grid of the Future, Winning the Customer and Future-Proof Regulations. TNB has achieved significant headway in the year under review across all four pillars of the RT strategy while advancing the energy transition agenda, which we will highlight here.

#### Future Generation Sources



In considering how we can make significant contributions towards the energy transition in the context of power generation, our success is dependent on how quickly we can decarbonise electricity generation. In addition to adding more renewable energy capacity, we are also focusing on the early retirement of coal plants, the repowering of plants with cleaner fuel and green technology and forging strategic technology partnerships.

In the context of retiring coal plants, our approach is to repower plants retiring before 2030 with natural gas – a more sustainable alternative to coal and where possible, with an added hydrogen co-firing capability. This allows for a gradual yet steady transition into cleaner energy, while reducing the risks associated with low fuel supply and the energy crisis. In addition, the early retirement of our coal plants takes place in tandem with repowering efforts, therefore ensuring that revenues are not impacted. We have recently received a Letter of Intent (LOI) from the Ministry of Natural Resources, Environment and Climate Change for the development of a 2.1 GW combined-cycle power plant in Kapar, which is slated for a commercial operation date by 2031. Prior to that, we had received an LOI to repower the retired 1,400 MW Paka gas power plant. In 2021, we also commissioned the 1,440 MW Sultan Ibrahim Power Plant in Pasir Gudang, Johor, which is the world's first commercial power plant to use the latest and most technologically efficient gas turbines.

## PRESIDENT/CHIEF EXECUTIVE OFFICER'S REVIEW

With regards to renewable energy, we have made significant strides in advancing hydropower projects this year. Hydropower is a key renewable energy in Malaysia especially given its relative abundance and developing it provides benefits such as being able to regulate and reduce the risk of flooding in a flood-prone country like ours. In 2022, we received approval from the Energy Commission for our Hydro Life Extension Programme, which covers six (6) power stations in the Sungai Perak Hydro Scheme with a total capacity of 650.75 MW. The project has commenced in 2022 with a total investment of RM5.8 billion and will be operated under a new power purchase agreement for 40 years. The first unit is expected to begin commercial operations in 2025. Elsewhere in Malaysia, we have commenced the construction of the 300 MW Nenggiri Hydroelectric Power Plant which is scheduled for commercial operations in 2027. Installation works are also underway on the Large Scale Solar 4 project at TNB Bukit Selambau 2, which will add 50 MW of RE capacity.

Internationally, our United Kingdom (UK) - based subsidiary, Vantage RE, continues to expand its RE portfolio. Following our first foray into the offshore wind market last year, in 2022 we completed the acquisition of a 100% stake in a 97.3 MW onshore wind portfolio located in the UK. We have also ventured into our first UK- based solar greenfield development for the construction and commissioning of a 102 MW solar farm. The contract was signed with BELECTRIC GmbH and also includes an option to develop a 65 MW co-located battery energy storage system (BESS). We believe the benefits from our international business goes beyond financial gains as we are also obtaining new technologies and knowledge that our seconded employees will bring home which can assist with the energy transition.

Looking ahead, we have developed a strong pipeline of approximately 4.4 GW of RE capacity globally that we are at different stages of exploring. We will continue to grow our RE portfolio with quality assets both here in Malaysia and in the UK and pursue opportunities in the strategic regions identified such as Europe, Southeast Asia, and the broader Asia Pacific region.

### Grid of the Future



In the year under review, we have made significant progress in future-proofing our grid network and strengthening connections with our ASEAN peers. TNB advocates stronger interconnections to accelerate the energy transition as it provides greater energy security and will enable the region to decarbonise faster. We believe more can be done in this area to realise the ASEAN Power Grid (APG) and we encourage member countries of ASEAN to join hands to fully integrate Southeast Asia's power grid system.

One of the key milestones in our interconnection journey this year was the successful upgrade of the electricity interconnector between Malaysia and Singapore. First established in 1983, the interconnector has enabled mutual energy transfer between Singapore and Malaysia during times of power outages. Some 40 years later, the upgraded interconnector can now accommodate bidirectional electricity flows of around 1,000 megawatts between both countries, double its earlier capacity.

The interconnector is an important part of the Lao PDR-Thailand-Malaysia-Singapore Power Integration Project (LTMS-PIP), which aims to facilitate cross-border power trade and serves as a stepping stone towards the broader goal of the APG. Through the LTMS-PIP, an agreement was signed between Singapore and Lao PDR to import 100 MW of hydropower from Lao PDR to Singapore via Thailand and Malaysia. This also marks the first time that four ASEAN countries have engaged in multilateral cross-border electricity trade. Looking ahead, we plan to explore interconnection collaborations with countries like Thailand and Indonesia.

In the context of future-proofing our grid, an ongoing and crucial initiative is the installation of smart meters at customer premises as well as Distribution Automation (DA) systems in our grid. In 2022, we installed more than 800,000 smart meters bringing the total number to over 2.6 million meters, surpassing our target of 2.4 million meters. These smart meters enable the full automation of the billing process and provides granular information that empowers customers to take control of their electricity usage. For DA systems, in 2022 we installed and commissioned the systems in 3,541 substations. DA systems help reduce the amount of time and manpower needed to restore the distribution network in the event of an unplanned outage.

As a result of our efforts this year, we saw our Smart Grid Index (SGI) score improving to 71.4% from the 67.9% achieved in 2021. Our target is to raise our SGI to 85% by 2025 and this will largely be influenced by our progress in adding more smart meters and DA systems to our grid.

Moving forward, we have allocated a total amount of RM21 billion between 2022 and 2024 to be invested in our Grid of the Future programme to enhance Malaysia's transmission and distribution network readiness and reliability. We are also on track in implementing our pilot Pulau Tenaga Hijau (PTH) programme in Pulau Redang and Pulau Perhentian that will showcase how the combination of green energy sources such as low-speed wind turbines, rooftop solar and batteries together with other decarbonisation efforts can bring a community closer to net-zero.

## PRESIDENT/CHIEF EXECUTIVE OFFICER'S REVIEW

### Winning the Customer

At TNB, we fully recognise that the Energy Transition will require close collaboration between all stakeholders involved in the value chain. This is why we strongly believe that bringing our customers along on this journey is crucial to the overall viability of the energy transition. As the sole electricity retailer and supplier to over 10.6 million customers throughout Peninsular Malaysia and Sabah, we are well-positioned to take on the role to electrify the transportation sector and drive the expansion of rooftop solar capacity nationwide.

The decarbonisation of the transportation sector is integral to the success of the overall energy transition journey and we are keen to lead the acceleration of electric mobility adoption in Malaysia, in addition to our focus on decarbonising the electricity sector. There is a potential market value of RM1.3 billion market in this space by 2030 and we will be investing RM90 million over the span of three (3) years in five (5) focus areas to accelerate and support EV adoption. The five (5) focus areas include building charging infrastructure, reskilling and upskilling the workforce, TNB Fleet electrification, sponsoring EV-related studies and fostering a coalition among EV sector players. This year, we have also signed eight (8) memoranda of understanding (MoUs) with prominent partners in the e-Mobility space to stimulate the growth of the Battery Electric Vehicle (BEV) ecosystem.

Malaysia has seen impressive growth in EV adoption in 2022, with around 2,093 Battery Electric Vehicles (BEVs) on the road, an eight-fold increase from 2021, indicating strong demand. On the infrastructure side, the number of public Direct Current (DC) fast EV chargers has also proliferated rapidly from two charging points last year to 105 points in 2022. This is where TNB wants to be closely involved in the development of EV infrastructure and the EV ecosystem as we aim to eliminate the main issue of range anxiety felt by BEV owners.

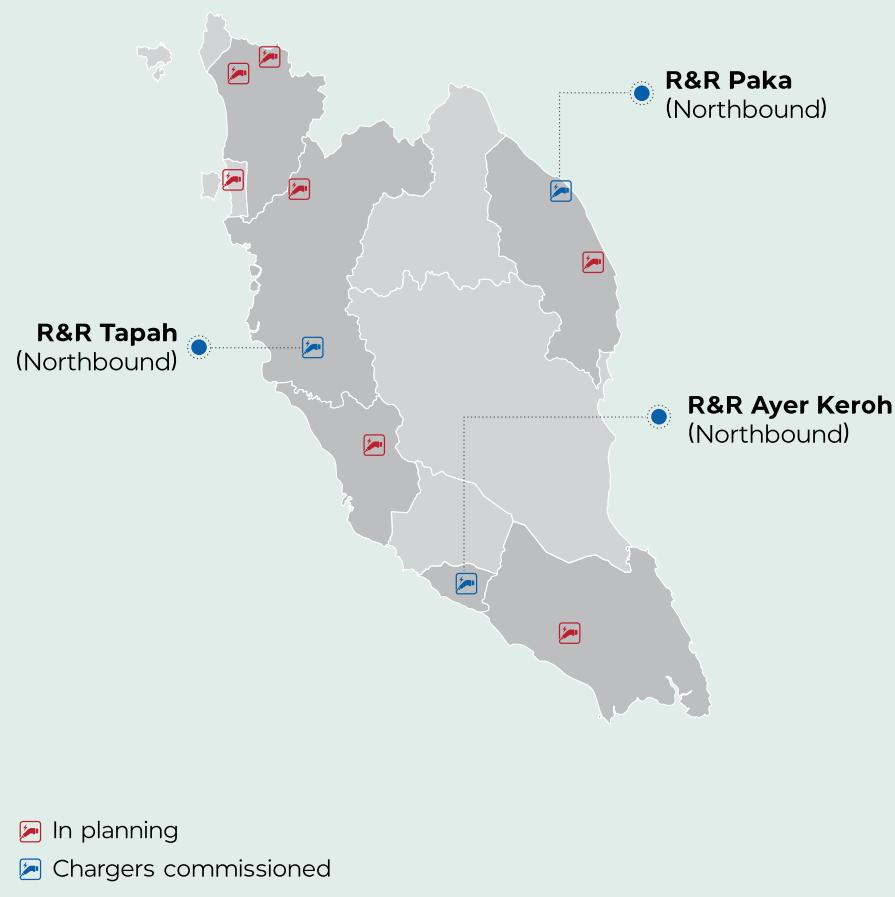
We have since put our EV infrastructure plan in motion in 2022, starting with the introduction of the Electron brand name that will represent TNB in the EV space. We also signed an agreement with Gamuda Berhad to build TNB Electron charging stations on their properties.

This year, we have identified 11 locations in the country to deploy 22 Electron EV fast-charging points, with 10 of these chargers being located along the north-south and east coast highway as indicated in the map. Three (3) of these chargers have already been commissioned in early 2023.

In the solar PV space, we are encouraging the take up of solar PV installations throughout our customer base via our wholly owned subsidiary, GSPARX, to drive the energy transition and assist our customers in their own decarbonisation journey. In 2022, we secured 240 MWp of rooftop solar PV capacity for customers that include Universiti Putra Malaysia, S P Setia, SMART Modular and FELDA. Looking ahead, GSPARX is expected to have 385 MWp of solar PV capacity by the end of 2023.

For customers who are unable to install rooftop solar panels, we offer the Green Electricity Tariff (GET), which is available on a subscription basis, enabling subscribers to use electricity generated from renewable energy sources to reduce their carbon footprint. In 2022, there were a total of 1,994 users who subscribed to the 4,000 GWh that was on offer. This quota has been increased to 6,600 GWh in 2023.

### ELECTRON CHARGING CONNECTIVITY



## PRESIDENT/CHIEF EXECUTIVE OFFICER'S REVIEW

### Future-Proof Regulations

TNB plays a key role as the largest utility in Peninsular Malaysia in contributing to ideas and conversations that help to formulate regulations and policy to future-proof the electricity supply industry. TNB continues to work closely with the government in the development of policy that helps to address the energy trilemma while ensuring a sustainable transition towards responsible energy. This is where we have contributed to the establishment of the National Energy Policy that was announced in September 2022 which will have 12 strategies and 31 action plans to realise Malaysia's Low-Carbon Aspiration 2040.

At the industry level, TNB firmly supports the Malaysian Electricity Supply Industry's (MESI) strategy to evolve in response to the emergence of disruptive technologies, particularly those using renewable energy

sources such as solar. TNB has been facilitating, supporting, and engaging the stakeholders in the development of the future-proofing MESI study led by MyPower. The study includes a roadmap and way forward plans that cover the landscape of the electricity industry and the readiness to facilitate the developing trend of new technologies, while also taking into account the future challenges concerning disruptive technologies (Decarbonisation, Decentralisation & Digitisation).

TNB will continuously support the initiatives under the roadmap for Peninsular Malaysia. We are committed to serving the people and will continue to collaborate with the government to embark on the MESI roadmap.



### OUTLOOK

As we look ahead to 2023, the world is preparing itself for slower economic growth as tighter monetary policy implemented throughout 2022 to curb inflation will be felt more heavily and is likely to reduce consumer demand and spending. The Russian-Ukraine conflict, which is a year old now, also has no end in sight and will continue to broadly impact energy prices. The International Monetary Fund predicts global economic growth to moderate further to 2.9% from the 3.4% recorded in 2022. In Malaysia, the forecast is for the economy to grow by 4.5% in 2023.

With this in mind, we expect the government to continue to prioritise the rakyat's well-being with a particular focus on the cost of living. We will continue to support government efforts, especially in the provision of targeted subsidies, to keep the economy going and to help lighten cost pressures on Malaysians.

On the business front, I am particularly excited about the future of EV. With supportive blueprints and policies in place, we are committed to nurturing this nascent industry to greater levels of maturity. As the largest utility in Peninsular Malaysia, we recognise our crucial role as a catalyst for EV adoption, especially through the provision of EV charging infrastructure.

From a broader perspective, the government has already set out a multitude of incentives to catalyse high-potential and high-growth areas such as energy storage, renewable energy, EVs and hydrogen to accelerate the nation's transition towards carbon-neutral status by 2050. Considering these opportunities, I believe that it is incumbent upon us and other corporations to step up to meet this challenge. On this note, I would like to put out a formal call to all private and public players to participate and contribute towards the nation's energy transition journey.

### ACKNOWLEDGEMENTS

I wish to thank the Board of Directors for their wisdom and counsel that has guided us throughout this year. I also want to recognise the efforts of my Management Team in striving to achieve our Reimagining TNB goal and making significant progress in this regard. Of course, none of this would be possible without the strong support of our employees who have delivered time and again, even through the most challenging of times.

I also bid farewell to our previous Chairman Dato' Sri Hasan Arifin, who stepped down on 1 January 2023. Thank you, Dato' Sri for your contribution to the organisation, we have certainly been enriched by your expertise and guidance.

On behalf of TNB, I warmly welcome Dato' Abdul Razak bin Abdul Majid, the newly appointed Chairman, who brings with him extensive experience in electricity generation, regulation and government and I am confident that he will be able to bring great value to the strategic direction of the Company. I look forward to working with him and receiving his guidance to elevate TNB's value creation journey.

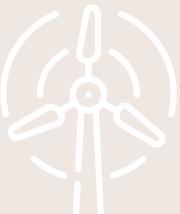
While we look back at a stable year with gratitude, we also anticipate exciting times ahead. It is only through the dynamic collaborations that we form with our stakeholders, that we can continue to achieve and create long-term value. It is also worth noting that TNB is progressing well in our strategy to accomplish a greener and more sustainable business for future generations. We are confident that with the support of our stakeholders, we can work together to build a brighter and better future.

Thank you.

**DATO' INDERA IR. BAHARIN BIN DIN**  
President/Chief Executive Officer

# ACHIEVING OUR STRATEGIC AMBITIONS

## FUTURE GENERATION SOURCES



**In 2022, TNB produced a total of 105,273.8 GWh of electricity, of which 88,343.2 GWh was generated from coal and gas sources and 9,167.8 GWh from renewable energy sources. Total renewable energy (RE) made up 8.7% of the total electricity sent out in 2022. This was an increase from the 7.94% in 2021 and demonstrates our commitment to RE making up 40% of our total capacity mix by 2025.**

### OVERVIEW

Diversifying our generation sources into more sustainable options remains a key part of our Future Generation Sources pillar under our Reimagining TNB strategy and is critical to our plans towards Net Zero by 2050. We see a lot of potential for TNB to grow its renewable energy generation internationally and will continue to do so, especially in the UK, where we have already established Vantage RE Ltd.

At the same time, we intend to gradually decarbonise our domestic generation portfolio in Malaysia. We fully support our government's aspiration to gradually adopt more renewable energy, while looking for ways to reduce the carbon footprint of thermal generation through new technologies such as hydrogen, ammonia and carbon capture, utilisation and storage (CCUS).

Ensuring the operational excellence of our generating fleet remains the key driver in maximising the long-term profitability of TNB. This will require our power plants to perform within the Power Purchase Agreements (PPA) stipulations throughout their operational tenure in an environmentally sustainable manner.

The standards that we need to uphold include delivering high plant reliability and availability, optimising plant efficiency, optimising Operation & Maintenance (O&M) costs and ensuring excellent operational, safety, environmental and regulatory compliance while minimising any environmental impacts.



*With the aim of achieving a 66% RE capacity mix by 2035, TNB's ambitious target showcases its unwavering commitment to sustainability and leadership in the worldwide shift towards clean energy sources.*

## ACHIEVING OUR STRATEGIC AMBITIONS

Key focus areas for further operational improvements that are being pursued include :

<b>Minimising any Extended Planned Outages with the implementation of an enhanced outage management strategy during major overhauls</b>	<b>Scaling up the Business Turnaround Programme to achieve rapid and radical operational and financial performance improvements</b>	<b>Reducing design and warranty issues at newly commissioned power plants</b>	<b>Reducing unplanned outages and other operational issues by enhancing plant maintenance programmes and addressing Boiler Tube Leak Failures at our coal plants</b>
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<b>Type</b>	<b>Number of Power Plants</b>	<b>Total Installed Capacity (MW)</b>	<b>Equity Capacity (MW)</b>	<b>Electricity Sent Out (GWh)</b>	<b>Capacity Under Construction (MW)</b>
		<b>2022</b>	<b>2022</b>	<b>2022</b>	<b>2022</b>
<b>Wholly owned</b>					
Coal	2	4,080	4,080	26,548.2	
Gas	8	4,027	4,027	17,618.9	
Non-carbon	96	3,125	3,125	7,485.7	300
Others	50	151	151	448.0	
<b>Majority-owned</b>					
Coal	2	3,600	2,360	19,898.5	
Gas	2	2,040	1,368	8,815.2	
Non-carbon	24	365	200	365.9	
<b>Minority-owned</b>					
Coal	3	2,000	547	11,160.0	350
Gas	2	1,265	369	4,302.3	
Non-carbon	16	1,708	436	1,316.2	1,380
Others	1	1,190	71	7,314.8	

## DEVELOPMENT HIGHLIGHTS

**International Generation**

**Key messages :**

**Pursuing exit strategies to enable TNB to refocus its resources and capital into Renewable Energy (RE) in key markets, in line with TNB's approved 'Reimagining TNB Strategy'.**

**Continuing to explore new markets for renewable energy opportunities.**

**Viewed as non-core assets for TNB and TNB is currently pursuing an exit strategy for GEL and a value protection strategy for GEAS. Nevertheless, both GEL and GEAS have been performing above budget on a YoY basis at the EBITDA level.**

**TNB is keen on both developed and developing markets, which carry different risk-return tradeoffs. We are also moving upstream into greenfield development to maximise returns to shareholders.**

**Expanding Our Presence in the United Kingdom (UK)**

Through Vantage RE Ltd., TNB is making significant inroads into the UK's renewable energy market which continues to grow in capacity. Vantage's focus is in solar, onshore wind, offshore wind and battery storage where it now has total gross capacity of 632 MW, which is predominantly solar. Vantage aims to rapidly grow its portfolio and pipeline of RE assets in the UK and Europe, which will help support TNB's commitment to sustainable energy.

## ACHIEVING OUR STRATEGIC AMBITIONS

### THE UK'S ECONOMIC, ENERGY TRANSITION AND ELECTRICITY MARKET LANDSCAPE

The United Kingdom's economy grew by 4.0% in 2022, moderating from the 7.6% achieved in 2021 as inflationary pressures took the wind out of consumer demand. Prospects going forward into 2023 appear to be challenging as well, with inflation expected to average at 7.1% throughout the year and the expectation of a recession. The Bank of England is expected to increase interest rates further, albeit at a slower pace than what occurred in 2022. However, no adverse impact is anticipated as Vantage's subsidy revenue is inflation-linked and likely to offset any increase in cost of operations.

The UK government introduced the Electricity Generator Levy (EGL) from 1 January 2023 to 31 March 2028. There will be a new 45% tax on receipts made by low-carbon generators above a benchmark power price of £75/MWh (referred to as Exceptional Generation Receipts), with an allowance of GBP10 mil per annum. The benchmark price will be indexed against the CPI from 2025 onwards and revenue relating to sale of Renewables Obligation Certificates (ROCs), REGOs and Feed-in-Tariff payments will be excluded. Vantage's asset wholesale market revenues will be slightly impacted as Vantage has managed to secure above-average prices for the short-term period.

In terms of the UK's energy transition journey, in 2022, about 31% of the UK's electricity was generated from wind (26.8%) and solar (4.4%) and there are plans to significantly increase both wind and solar capacity over the next few years. These would be positive developments for Vantage as they align with our core business and growth ambitions. From a policy perspective, the UK government launched the Review of Electricity Market Arrangements (REMA) in 2022 with the aim of enhancing energy security and reducing electricity costs for consumers. A potential outcome of this review is a structural change on how electricity is priced, which would peg it to more stable and cheaper electricity generated from renewables, given the volatility of energy prices such as gas.

The UK remains the key focus market to TNB while pursuing our expansion in the European RE market.

### KEY ACHIEVEMENTS IN 2022

#### Business Expansion

- Acquired a 97.3 MW operating onshore wind portfolio in the UK on 1 April 2022.
- Completed first greenfield acquisition – a 101.7 MW Ready-to-Build (RTB) solar portfolio with an option to develop a 65 MW Battery Energy Storage System (BESS) on 27 September 2022. The solar portfolio is expected to commence commercial operations by Q1 2024.
- Increased investment pipeline by leveraging our wide business network in the UK and new markets in Spain, Ireland and France.

#### Strategic Financial and Capital Management

- Completed a GBP275 million financing exercise of our solar portfolio assets on 23 February 2022, capitalising on the low interest rate environment.
- Completed a GBP72 million refinance package with two major lenders in the UK for TNB's offshore wind investment in Blyth Offshore Demonstrator Limited (BODL) on 16 December 2022.
- Vantage Solar and CEI UK have locked in record high Renewable Energy Guarantees of Origin (REGO) prices with expected upside over the next five years.
- Locked in higher PPA prices on a year-on-year basis from active asset management for the existing portfolio as a result of the high wholesale market prices following the Russia-Ukraine conflict.

#### Strengthening Our Human Capital

- Filled key positions such as Head of Solar Assets, Head of Wind Assets, Head of Structured Finance, Head of Legal and established a dedicated project team to manage greenfield projects.
- Seconded four TNB employees to key positions at Vantage RE, bringing the total number of seconded TNB employees to six as of Q4 2022. This facilitates knowledge and skill sharing and ensures that critical RE capabilities are transferred and strengthened within TNB.
- The team at Vantage consists of a diverse range of backgrounds and nationalities and over 40% of the workforce are female.

## ACHIEVING OUR STRATEGIC AMBITIONS

### **L Local Generation**

#### **EARLY RETIREMENT OF COAL PLANTS & REPOWERING WITH CLEANER FUEL SOURCES**

TNB has taken significant measures to realise our end goal of net zero ambition by 2050 by exploring the viability of retiring selected coal plants ahead of its Power Purchase Agreement (PPA) expiration and repowering these retired plants with new, cleaner and greener technology. While the early retirement is still subject to shareholders' agreement and approvals from the relevant authorities and regulators, the aggressive strategy demonstrates the force and clarity of the Company's decarbonisation vision.

As part of our Energy Transition agenda, the Company has laid out a structured repowering strategy. For plants retiring before 2030, the Company has planned to repower them using natural gas – a more sustainable alternative to coal – with an added hydrogen co-firing capability. This allows for a gradual yet steady transition to cleaner energy, while reducing the risks associated with low fuel supply and the energy crisis. We have recently received a Letter of Intent (LOI) from the Ministry of Natural Resources, Environment and Climate Change for the development of a 2.1 GW combined-cycle power plant in Kapar, which is slated for a commercial operation date by 2031. Prior to that, we received an LOI to repower the retired 1,400 MW Paka gas-powered plant with the intent to make it hydrogen-ready by 2030.

Beyond this, we are exploring other solutions and technologies to enable low-carbon fuel sources to be deployed at coal-fired power plants to help us decarbonise further. A key step we have taken in this context is a joint collaboration with PETRONAS Gas and IHI Corporation for a feasibility study on ammonia co-combustion in coal-fired power generation systems. The feasibility study was successfully completed and in addition, the outcome derived from the pilot-scaled combustion testing programme at TNBR proved the feasibility of co-firing ammonia within certain calorific ratios. Further research will be carried out to mitigate pollutant reductions.

#### **PROGRESS OF NENGGIRI HYDROELECTRIC PROJECT**

Hydropower remains a mainstay in TNB's RE journey and we will continue to prioritise this source of energy given the relative abundance of hydropower resources in Malaysia. In 2022, we began constructing the 300 MW Nenggiri hydropower plant in Kelantan and we have achieved good progress thus far by reaching a 22.9% completion rate as at end-2022. The plant is expected to commence operations by the middle of 2027. To support the funding required for this project, TNB Power Generation Sdn. Bhd. or TNB Genco tapped into the Sukuk market and issued a RM1.5 billion sustainability Sukuk in June 2022. The TNB GenCo Sustainability Sukuk Framework also earned a 'Gold' rating from MARC Ratings Berhad.

Project Nenggiri is expected to make an impactful contribution to Malaysia's aim of increasing the renewable energy share of the country's power capacity mix to 40% by 2035. Generating power from this hydropower plant will also help avoid some 0.3 million tons of emissions per year, equivalent to approximately the emissions of 70,000 cars per year. Besides electricity generation, the project is expected to benefit Kelantan in the area of flood mitigation, as well as the provision of cleaner water supply and raw water supply for irrigation. The Nenggiri Dam will help reduce the severity of floods that affect Kelantan by doubling up as a water catchment and control system where water levels in the main reservoir area will be lowered to hold rainwater during the monsoon season.

While we recognise that the construction of the dam has impacted local Orang Asli communities, we have successfully engaged with the impacted communities and will relocate them to new settlements, in addition to providing more secure sources of income for them. We believe that the building and completion of the plant will have a significantly positive impact on the wider economy through job opportunities, the creation of new industries and the reduction of flooding during the monsoon season.

### **E Exploring New Innovation**

In exploring new ways to add clean energy to the grid, TNB, through its Research arm TNB Research Sdn. Bhd. (TNBR), will be partnering with SEDANIA Technologies (SEDANIA) to explore the potential of generating electricity from excess water in dams and reservoirs throughout Malaysia.

SEDANIA will utilise TNBR's energy-efficient micro-hydropower turbines to produce electricity from released water at dams. The first project will be undertaken at a dam project in Kota Tinggi, Johor and SEDANIA will be

responsible for the financial and technical aspects of the project, while TNBR will provide technical expertise through turbine design and installation.

The micro-hydropower turbines have the potential to generate up to 305,000 kilowatt-hours of electricity per year. If this technology is deployed to the over 70 dams and reservoirs in Malaysia, it could potentially generate over 40 gigawatt-hours per year, which can provide carbon-free electricity to approximately 10 thousand homes.

### **OUTLOOK**

Going forward, we will prioritise operational excellence in meeting all obligations stipulated under the PPA by maintaining high availability, reliability and efficiency of our key generating assets. Being the largest power producer in Malaysia by installed capacity, we are fully cognisant of our responsibility to lead the power generation sector towards mitigating climate change and contributing to the transition to a low-carbon future, in line with TNB's Energy Transition and Sustainability Pathway (SP2050).

In the international markets, we are focusing on building up our pipeline to provide certainty in growth and enhancing our capability building in the greenfield and Corporate Power Purchase Agreements (CPPAs).

The growth opportunities pursued will see balanced capital deployment between operational and greenfield asset development to ensure investment returns and EBIT growth are sustained.

We will continue to build on our existing presence in the UK and Malaysia and pursue opportunities in the strategic regions identified such as Europe, Southeast Asia and the broader Asia Pacific region.

## ACHIEVING OUR STRATEGIC AMBITIONS

# GRID OF THE FUTURE



**As we move towards a more sustainable future, Grid plays a critical role in enabling efficient energy transition, enhancing energy security and improving the reliability of transporting renewable energy.**

Grid forms the critical backbone and infrastructure required to the development of energy supply in the country, facilitating economic growth and rapid development. We are continuously investing in our Grid network to ensure customers have reliable access to energy via a modern and efficient grid.

### OVERVIEW

TNB is the primary owner of the national grid of Peninsular Malaysia and Sabah and we aspire to be the leading grid entity that leverages on innovation, technology and expertise to grow new businesses.

Our grid assets for Peninsular Malaysia are handled by our two core divisions, Grid and Distribution (DN) and connects (Retail) million customers, including homes and businesses. Our high voltage transmission network is connected to Thailand's EGAT grid system in the north via HVDC system and to Singapore's grid system in the south through an AC network.

The state of Sabah and the Federal Territory of Labuan's energy infrastructure fall under the portfolio of our subsidiary, Sabah Electricity Sdn. Bhd. (SESB) and connects (SESB) million customers, including homes and businesses.

In 2022, we achieved positive operational results in terms of safety and technical performance. The divisions improved the safety action plans by working towards reducing and mitigating risks that could contribute to fatal accidents. We also encountered several events that challenged our technical operations, which we managed to overcome with our detail action plans to restore order ahead of time and prepare robust mitigation to avoid recurrences.



*As a step towards enhancing the reliability and security of supply to Penang Island, the construction of 275kV lines linking PMU New Prai to PMU The Light will become an iconic landmark in the country. This project will boost industrial growth and tourism of Penang Island.*

## ACHIEVING OUR STRATEGIC AMBITIONS

## GRID STATISTICS

Peninsular

Sabah + Labuan

**25,838.0**

Circuit-km

**3,153.9**

Circuit-km

**480**

substations

**49**

substations

**128,847**

GWh

**6,929.2**

GWh

**19,183**

MW

**1,032.1**

MWh

**741,764.2**

km

**27,871.0**

km

**87,947**

substations

**8,945**

substations

**118,838**

GWh

**5.7**

GWh

## DEVELOPMENT HIGHLIGHTS

**G**  
**Grid Division**

TNB's Grid division is committed in planning, developing, and maintaining a sustainable, secure, and reliable transmission network with investing prudently into grid modernization and grid digitalization to enhance system reliability and intelligence.

Grid further commits to our Grid of The Future (GOTF) journey by launching Grid Decadal Pathway program in supporting a wider ESG agenda of TNB Sustainability Pathway (SP2050) to achieve Net Zero aspiration by 2050. As part of the Decadal Pathway plan, we are continuing our Grid Digital Transformation (GDT) journey with the objectives to improve system efficiency and productivity towards a data driven, resilient and agile organization. We also continuing our Grid Green Code of Conduct (GGCC) program to drive environmental stewardship targeting reduction in Green House Gas (GHG), controlling deforestation and managing pollution/pollutants.

To increase our workforce capabilities, we continue to invest in the development of our employees through Grid Learning Journey (GLJ) and Grid Academy (GA) program.

## ACHIEVING OUR STRATEGIC AMBITIONS

### F

#### Focus on Environmental Sustainability

Grid in support of TNB's environmental stewardship through **Grid Green Code of Conduct (GGCC)** program focusing on Mitigation, Migration & Preservation initiatives to conserve environment and harden the transmission infrastructure against climate change. This strategic initiative is to achieve net zero carbon emission aspiration and zero pollution impact on nature, and to reduce deforestation activities for our projects.

- Our **SF6 Recycling Centre** is the first in Southeast Asia and 10<sup>th</sup> in the world.
- In our undivided commitment towards environment and safety, we had successfully passed the **SIRIM Surveillance Audit for ISO 14001:2015 (Environmental Management System) and 45001:2018 (Occupational Health & Safety Management System) with ZERO Non-conformance Reporting (NCR).**
- We also collaborated with Department of Environment (Malaysia) to establish **Environmental Best Management Practice (EMP)** handbook that can be emulated to effectively manage our project's environmental impact.
- We have also collaborated with TNB Research Sdn. Bhd. (TNBR), UITM and Forest Research Institute Malaysia (FRIM) to develop **Tree Hyperspectral Identification System (THySIS)**, an automated detection system for endangered trees species using the remote sensing technique for proposed transmission line route selection. This system enables us to avoid or prevent harm to any endangered species when planning our route, helping to conserve the environment and its inhabitants.

### R

#### Build Capabilities for a Sustainable Change

**Grid Academy** is a structured program that was crafted to enhance financial & leadership capabilities of our executives through projects focusing on financial efficiency, increase productivity and improve processes. We have completed the 1<sup>st</sup> program in 2020 and continuing GA 2.0 in 2022. The GA 2.0 program is coordinated and conducted internally with graduates from cohort 1 as coaches and coordinators.

The key projects from GA that have contributed of RM 1.668mn cost saving for Grid Division in FY2022 are :

- **Substation Air Conditioner Total Cost of Ownership** is a project to reduce operational cost and increase availability by strategizing on asset replacement after end of life. This project will be implemented in stages where we have completed the first stage of replacement for Southern region.
- **Internalize Dissolve Gas Analysis** is another GA project to reduce operational cost by conducting transformer test internally. This has significantly reduced the need to hire external parties to conduct the periodic testing.

#### KEY ACHIEVEMENTS IN 2022

- We have made tremendous progress to secure the Eastern Corridor power system by restoring Sultan Mahmud Power Station 3 months ahead of time. The hydro power station was impacted by massive landslide from heavy rainfall at Kenyir Dam which caused extensive damage to our high voltage transmission tower.
- YAB Tuan Chow Kan Yeow, Chief Minister of Penang, on 15 September 2022 had launched the high-profile project - 275 kV lines monopole transmission tower from PMU New Prai to PMU The Light. This project is to ensure sufficient and secure power supply to Penang island to drive industrial growth and will also serve as an iconic landmark to boost tourism.
- To support energy transition and securing our transmission network, we had successfully upgraded the electricity interconnection capacity between Malaysia and Singapore to 2 X 550 MVA submarine cables from Plentong to Woodland Avenue.
- Grid had connected 1,060 MW large scale RE capacity (solar) to the transmission network.
- Established Kuala Lumpur Competency Enhancement Center (KLCEC) and Grid Competency Enhancement Center (GCEC) are our one-stop training centers to continuously improve our technical competencies in substation primary and secondary equipment. This training center is also used to train external parties such as testers and contractors who will be carrying out testing works on substation digital projects.
- We had successfully developed our Construction Work Permit (CWP) which was launched by Chief Director Department of Occupational Safety and Health (DOSH). CWP is a new permit system implemented for Grid's projects to monitor and control site activities, safety and workers at the project site. We also collaborated with National Institute of Occupational Safety and Health (NIOSH) to develop and execute the safety training module that tailored to Grid Development Project and comply to the Occupational Safety & Health Act (OSHA) 1994 requirement.

### D

#### Driving Technology and Digital Initiatives

In driving innovation through technology and digitalization, our **Grid Digital Transformation** program is focused on value creation, productivity and high efficiency to create a flexible, resilient, and smart network to support smoother energy transition.

- **Grid Project Management System (GPMS)** is a digital platform to improve Grid Division project cycle processes and reporting. GPMS was launched in 2021 and presently undergoing continuous enhancements to enable proactive project management and increased work productivity.
- **Asset Investment Planning Management System (AIPM)**, launched in 2022, AIPM provides an enterprise-wide platform to optimize investment strategies to maximize value, mitigate risk and achieve strategic goals.

## ACHIEVING OUR STRATEGIC AMBITIONS



### Distribution Network Division (DN) – Distribution Network

Our DN division is focused on realising our efforts to modernise our distribution network through the RP2 extension's projects. Last year, we implemented our Advanced Metering Infrastructure (AMI), which surpassed the RP2 target of installing 2.4 million meters after installing 2.6 million meters by the end of 2022.

- Smart Grid Award winner at Power Gen Awards by Enlit Asia 2022 – Enlit Asia is an energy seminar focusing on initiatives and new innovation by energy companies with electricity as the main energy source in the Asian region.
- SESCO Berhad benchmarking visit – A delegation from SESCO Berhad visited Wisma TNB for a learning and development session on TNB's AMI project. The visit generated interest from our stakeholder to consider executing the AMI project in Sarawak.
- TNB represented the Malaysian economy at the 64<sup>th</sup> Asia Pacific Cooperation (APEC) Energy Working Group and Associated Meetings that was hosted by the Ministry of Energy and Natural Resources Malaysia (KeTSA), where TNB shared insights on the smart meter implementation that is currently ongoing in Malaysia.
- Knowledge-sharing sessions :
  - Digital sharing session with Meralco, Philippines – The session served as a highly insightful forum for information exchange on Meralco's pilot Smart Meters installation scheme and its plans for mass deployment.
  - AMI team webinars and workshops – To play our role in the ESG agenda, we proactively organised a webinar on 'Radio Frequency (RF) Radiation : Are We Safe?' to demystify misinterpretations of radiation effects on humans, as well as a workshop on 'Smart Meter : Study on Consumer Behavioural Change' with University Teknikal Malaysia Melaka (UTeM).

We also made deployment progress in 2022 by increasing climate resiliency for our distribution network asset. This was critically needed, especially due to the flooding season which annually forces the closure of TNB's substations in affected areas. Therefore, we built climate resiliency into the distribution network, especially in flood-prone areas. For example, we raised substation levels at high-risk substations to overcome the issue of forced closures in areas with a history of flooding.

Aside from that, we implemented Distributed Automation (DA) integrated SCADA technology with field equipment technology to enable remote supply restoration in the event of power outages or to manage network uncertainties.

We continued to implement DA systems in sensitive areas, including business centres and industrial zones, to expedite restoration time in the event of an outage. In 2022, we successfully installed and commissioned several additional substations for the benefit of our customers.

This was supported through an Advanced Distribution Management System (ADMS) to provide higher reliability, reduced technical losses, enhanced work safety, shortened service restoration time during outages and increased grid resiliency to natural disasters and other threats that could disrupt the flow of power to the end user.

TNB is also embarking on data analytics in order to gather insights by increasing our pool of data. These insights, from projects like Asset Performance Management System (APMS), i-NET (Integration Network Expansion Tool) or future known as Asset Investment Planning Management (AIPM), help improve load planning prioritisation of projects and enable predictive maintenance of assets to facilitate analysis operations, maintenance, risk mitigation, performance and sustainability of power assets.

In June 2022, DN established a Distributed Generation (DG) Hosting Capacity web portal which has a map view to assist potential Distributed Energy Resources (DER) developers and interested parties in determining the availability of DER connection points and capacity visibility of Medium Voltage connections for Distributed Generation.

## ACHIEVING OUR STRATEGIC AMBITIONS

The DN division continues to invest in our workforce to ensure that we possess the capabilities to maintain our work quality. Our employees are upskilled and reskilled in accordance with our SU 2025 Masterplan :

- Capability building through our DEC Executive programme – In 2022, we successfully completed our third and fourth batches of the DEC Executive Attachment programme, in accordance with the DN Engineering Centre (DEC) roadmap, which focuses on best engineering practices and working to reduce the asset failure rate among our talents.
- Leveraging digitalisation in our networks – We have been recognised for our successful implementation of digitalisation in our Geographic Information System (GIS), Smart Energy Manufacturing Infrastructure (SEMI) and Advanced Distribution Management System (ADMS) :
  - GE Digital Customer Award in the Precision & Vision Champion category (Innovation in Asset Management and GIS Projects), presented during the GE APAC Software User Group Conference 2022 in Brisbane, Australia.
  - Energy Advocate of the Year Award at the Enlit Asia Power & Energy Awards 2022, for our SEMI project's implementation of affordable, reliable and modern green energy solutions for the power sector and communities in ASEAN.
  - Schneider Electric was recognised for our digital collaboration in the Advanced Distribution Management System (ADMS) project team at Enlit Europe 2022, which supports our aspirations towards achieving net zero by 2050 through the provision of a sustainable core system in DN.

In addition, DN undertook key ESG initiatives which encompassed the exploration of future ESG-embedded business activities as part of our journey to achieve our sustainability ambitions. In line with our roadmap, we worked to :

ENVIRONMENT	SOCIAL	GOVERNANCE
<ul style="list-style-type: none"> <li>• Digitalise the grid through SU25 initiatives (smart grid)</li> <li>• Refurbish mini hydro and solar hybrid stations</li> <li>• Utilise Flood Analysis &amp; Risk Assessments (FARA)</li> <li>• Innovate existing operational assets to better withstand weather-related events (floods, etc.)</li> <li>• Replace existing HPSV streetlights with LED streetlights</li> <li>• Digitise and digitalise business processes (SWATS, ECM)</li> </ul>	<ul style="list-style-type: none"> <li>• Implement Nampak, Dengar &amp; Rasa Selamat (NDRS) initiatives and adopt the ISO 45001:2018 Health &amp; Safety Management System</li> <li>• Uplift workforce capability through DNA &amp; DEC</li> <li>• Install LED streetlights under the LJK programme</li> <li>• Facilitate BELB in electrifying kampungs and Orang Asli settlements</li> </ul>	<ul style="list-style-type: none"> <li>• Achieve good financial performance</li> <li>• Carry out loss management initiatives</li> <li>• Implement SAIDI 50 initiatives</li> </ul>

## OUTLOOK

Moving forward, the Grid division will continue investing in building a better transmission network. As part of its commitment to Tenaga's Sustainability Pathway 2050, Grid has specific roles identified within the Grid Decadal Pathway. These roles are aimed at promoting the decarbonisation of TNB and Malaysia, involving the contributions towards the three (3) primary functions :

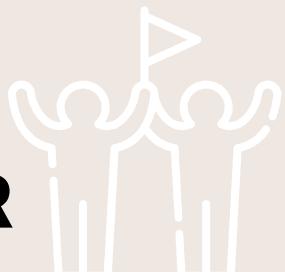
 <p><b>Spurring growth of Variable Renewable Energy (VRE) through improved grid flexibility.</b></p> <p><i>"Increasing share of grid-connected VRE, especially solar, in the grid threatens system stability and introduces operational complexity."</i></p> <ul style="list-style-type: none"> <li>■ Potentially <b>45% of LSS</b> in national capacity mix by 2050.</li> </ul>	 <p><b>Electrifying transportation and industrial customers.</b></p> <p><i>"Increasing EV penetration and electrification of industrial customers will increase peak load seen by the grid."</i></p> <ul style="list-style-type: none"> <li>■ <b>50% growth</b> in grid peak load by 2050 compared to 2050 level.</li> </ul>	 <p><b>Reducing the grid's own carbon footprint and preserving forests and the natural environment.</b></p> <p><i>"Expansion of grid infrastructure may lead to increased deforestation as well as potential emission and pollutant release."</i></p> <ul style="list-style-type: none"> <li>■ <b>Continuously conserving forests</b> by reducing deforestation in grid development activities.</li> </ul>
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Our DN division will continue its efforts for the GoTF journey by adopting further Smart Grid technologies as part of the Smart Utility 2025 Masterplan and working towards the aspired Smart Grid Index (SGI) of 85% by 2025. TNB demonstrated a tremendous SGI scoring achievement of 71.4% in 2022, an improvement of 19.4% from 2019.

More specifically, DN will focus on asset growth through capital investment in grid expansion and digitalisation, operational efficiency and greater productivity to achieve these targets.

**ACHIEVING OUR STRATEGIC AMBITIONS**

# WINNING THE CUSTOMER



**At TNB, our priority lies in delivering excellent customer experiences by creating innovative solutions and consistently engaging with our stakeholders.**

This is paramount in ensuring the long-term sustainability of our business, as well as in fostering cooperation with our customers in the energy transition. Our ultimate objective is to become the Retailer of Choice and we aim to achieve this by providing distinctive value propositions to our customers, cultivating a world-class team with the right cultural and DNA fit and continuing to generate value for our shareholders.

**OVERVIEW**

As outlined in our Reimagining TNB Winning the Customer pillar and TNB Sustainability Pathway (SP 2050) objectives, the Retail Division is critical to delivering solutions and services to our customers. This is enabled through a bold transformation programme to create long-term value creation for our Customers, People & Shareholders, which comprises 12 strategic initiatives. We prioritise customer-centricity and close collaborations with our Retail Partners to deliver exceptional customer experiences and achieve our position as a Retailer of Choice in the eyes of our customers.

In ensuring that our Retail business model is future-ready, we equip our talents with forward-thinking values that will spur innovation and sustainable solutions. We acknowledge our employees as one of the organisation's greatest assets and continuously invest in their knowledge and skills through the Retail Academy to unlock their potential.

In 2022, the Retail Division delivered exceptional customer experiences to more than 9.9 million customers via multiple interaction channels, inclusive of our efficient and reliable TNB CareLine contact centre, digital platforms via the myTNB portal and mobile application and TNB social media, as well as our physical Kedai Tenaga. We continued to introduce innovative digital solutions, empowering our customers to better manage their energy consumption habits and monthly spending. Our sustained efforts in engaging with our customers and providing customer service excellence resulted in a Customer Satisfaction Index (CSI) of 8.7, with each of our customer engagement channels achieving high ratings.

Our subsidiary in the state of Sabah, Sabah Electricity Sdn. Bhd. (SESB), with over 670,000 customers, also delivered excellent customer service in 2022, achieving a record-high CSI of 8.4. In 2022, SESB showed improvements in customer experiences across all customer categories, with notable improvements in meter reading, billing and payment services. As SESB continues to enhance its digital platform MySESB, the subsidiary strives to deliver the experiences its customers expect and keep pace with technological changes by embracing a digital customer journey moving forward.



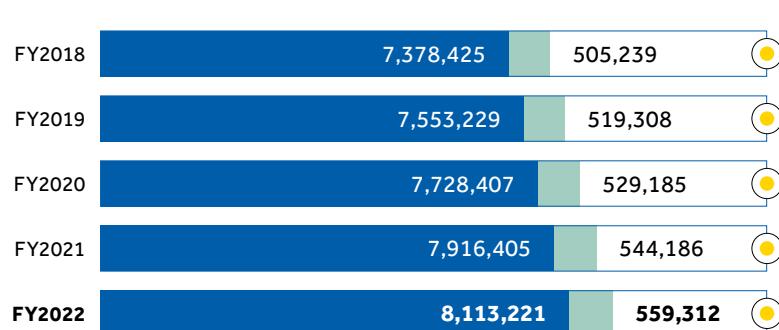
TNB strives to provide outstanding customer experiences and establish ourselves as the preferred choice of retailers among our customers.

## ACHIEVING OUR STRATEGIC AMBITIONS

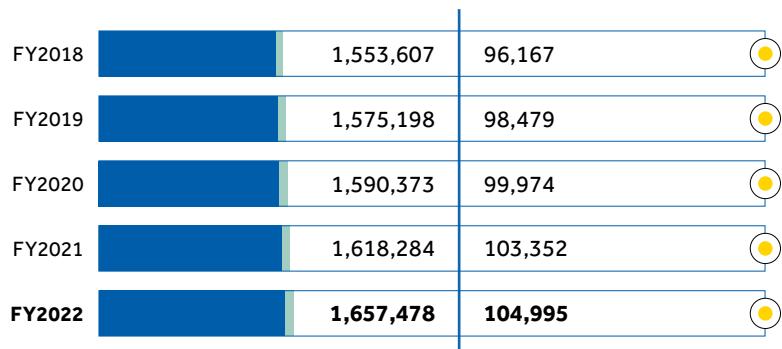
### BREAKDOWN OF CUSTOMERS ACROSS DIFFERENT SEGMENTS IN MALAYSIA

● Peninsular Malaysia ● Sabah

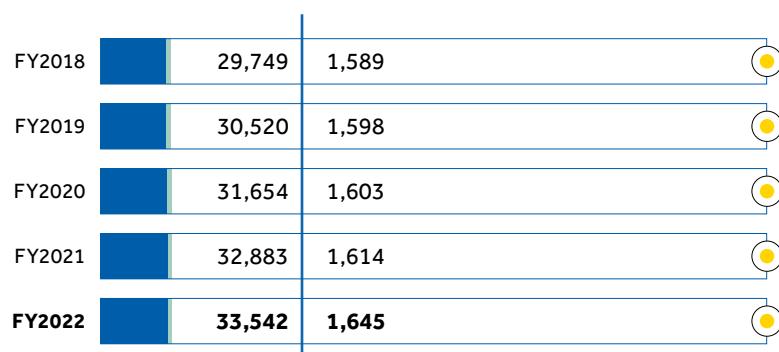
#### RESIDENTIAL (Tariff A - Domestic)



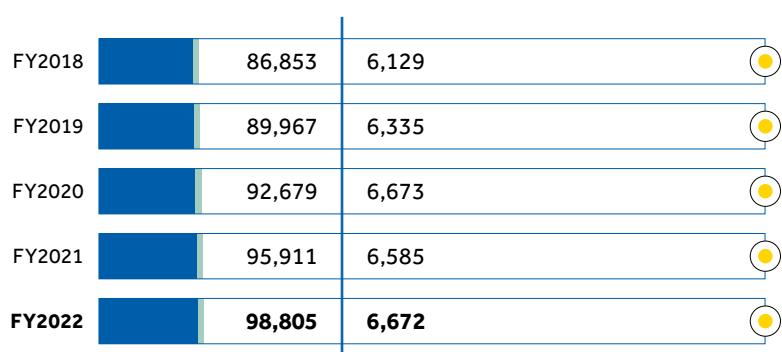
#### COMMERCIAL



#### INDUSTRIAL



#### OTHERS



### DEVELOPMENT HIGHLIGHTS



#### Continuous Enrichment of Customer Experience and Engagement

Our ability to continue delivering excellent customer service can be attributed to our customer strategies that focus on three (3) main areas :

Unique Customer Segments	Personalised Solutions to Meet Customer Needs	Promoting Customer Literacy
Our customer segments are divided into two categories, namely Government & Large Business (GLB) and Micro, Small and Medium Enterprise (MSME) & Residential. This has helped us to tailor solutions that are appropriate for each customer segment.	Our dedicated teams engage with customers via the Click, Call, Come-Over and Go-Over interaction channels to reach out, communicate and provide tailored solutions. We demonstrate empathy and agility to our customers by going the extra mile and personalising their experiences.	We continue to drive affinity towards energy efficiency (EE) and a smarter, greener lifestyle as part of the Malaysia Energy Literacy Programme (MELP) via both mass and targeted communication, campaigns, engagements and collaborations with key opinion leaders, non-governmental organisations and relevant ministries.

Our efforts to promote affinity for EE and a sustainable way of life were well received by our customers and we received feedback of improved satisfaction with a score of 8.8, which also helped 89% of customers adjust their consumption behaviour.

In terms of the Customer Experience Index (CEI), we achieved more than 90% across the four (4) interaction channels.

## ACHIEVING OUR STRATEGIC AMBITIONS

We continued our efforts to increase our customers' energy literacy and energy efficiency through our programmes, including but not limited to :

- Customer Energy Literacy on EE campaigns - We produced seven (7) educational videos and conducted one (1) Facebook live session through our collaboration with Persatuan Pengguna Islam Malaysia (PPIM) to raise awareness related to EE and energy lifestyles. Under the same objective, we organised a sharing session for the Putrajaya community and government staff via online platforms.
- Kuasa Di Tangan Anda ESG seminars – In collaboration with various parties, including the Ministry of Higher Education (MOHE), we organised ESG seminars at various educational institutions and ministries to educate students on how to use energy more wisely. We also leveraged social media platforms as an interactive channel to attract youngsters.
- Awareness seminars on the Connection Charge & Connected Load Charge policy – Organised to enhance understanding of the policy among various relevant groups.
- Electrical and gas safety seminars – Our teams visited villages, in collaboration with Jawatankuasa Pembangunan dan Keselamatan Kampung (JPKK), to disseminate safety information, including risks and dangers as well as efficient energy usage. For instance, the TNB Perak team set up a booth to interact directly with communities and raise awareness.

### D

#### Driving Green Solutions and Supporting the Growth of Non-Regulated Business

We continue to support the Government's green agenda to promote sustainable lifestyle through the expansion of green offerings. This commitment is seen from the high take-up for rooftop solar via NEM 3.0 (Rakyat, GoMEn, NOVA) and Green Electricity Tariff, or GET, which is a Government initiative to provide customers the option of green electricity coming from renewable energy sources without having to install their own rooftop solar or other renewable energy installations.

Our wholly-owned subsidiary, GSPARX Sdn. Bhd. (GSPARX), enables the adoption of rooftop solar solutions under the Net Energy Metering (NEM) and Supply Agreement with Renewable Energy (SARE) scheme, registering secured projects of 240 MWp solar capacity in 2022.

These achievements were made possible through various collaborative agreements, including but not limited to :

- Collaboration with University Putra Malaysia (UPM) for the largest solar system installation at 16 sites with a capacity of 16.18 MWp that was completed in July 2022.
- Rooftop solar installation at seven (7) identified S P Setia main commercial sites with 10 MWp of solar capacity.
- Partnership with SMART Modular Technologies Inc., the first multinational corporation in Penang and the first US-based electronics company in Malaysia, to fulfil its ESG commitment in attaining 100% electricity powered by renewable energy. 80% of electricity is powered via subscription to GET, with a total subscription of 6.96 GWh annually, with the remainder from a rooftop solar PV installation by GSPARX with a capacity of 1,051 kWp.
- Installation of rooftop solar at 14 FELDA sites with a total capacity of 1.6 MWp, which is expected to be completed in May 2023.

Another wholly-owned subsidiary of TNB, TNBX Sdn. Bhd. also enabled customers to meet their ESG and net zero targets through various solutions developed such as the flagship SARE, Malaysia Renewable Energy Certificates (mRECs), EV charging platforms and solar insurance (SuriaShield).

#### Supply Agreement with Renewable Energy



- A total of 138 MWp cumulative capacity of solar solutions has been secured through SARE.
- With SARE, customers can acquire green solutions at no upfront cost and receive consolidated billing under one TNB bill.
- Registered PV Investors (RPVIs) will enjoy benefits from SARE such as ease of collection and customer retention over the contracted years.

#### Malaysia Renewable Energy Certificates (mRECs)



- Under the national GET programme, residential and non-residential customers fully subscribed to the bundled electricity and mREC quota of 4,000 GWh within the first three months of launch.
- mRECs provide green energy options in areas where it may not be suitable for renewable resources to be obtained onsite.

## ACHIEVING OUR STRATEGIC AMBITIONS

### EV Charging Platforms



- TNBX has empowered EV users to reload, reserve and recharge their vehicles from the EV charge points that are listed on the GO TO-U mobile app.

EV users can also take advantage of extra services like battery health checks, regular maintenance and customer support.

### SuriaShield



- A residential solar PV insurance plan called SuriaShield offers thorough protection at very affordable premiums. The SuriaShield Insurance Policy was introduced by TNBX to support TNB's aspiration to encourage green energy.
- The advantages of SuriaShield are hassle-free repair and restoration of solar PV systems and FiT loss of income protection/NEM loss of savings protection.



### Steady Embrace of Digitalisation

The Retail Division recognises that digitalisation is a crucial component in achieving TNB's Net Zero 2050 goals. To enhance our services and reduce our carbon footprint, we have been striving to increase our digital capabilities. Our digital platform, **myTNB**, has seen a significant increase in connected accounts, growing from 5.5 million in 2021 to 6.29 million.

We have also successfully piloted a digital billing programme in Melaka with more than 43,000 customers opting to choose e-Bills. This initiative has helped us reduce our carbon footprint and paper usage, further contributing to our environmental goals. Additionally, myTNB's Energy Budget feature has enabled customers to better monitor their electricity usage. Out of the 184,000 accounts using this feature, 174,000 (95%) have shown improvements in their consumption patterns, which have helped them to save on their electricity bills.

In addition, our digital platform for businesses, **myTNBiz**, is a new portal equipped with service offerings like bill viewing and bulk online payment designed for TNB business customers, such as individuals with businesses, large and small corporations/entrepreneurs, contractors and developers. Since its release on 9 April 2022, myTNBiz has successfully registered 4,055 bulk billing customers on the platform.

## OUTLOOK

In 2023, TNB will reach the significant milestone of 10 million customers in Peninsular Malaysia. This is a meaningful accomplishment for TNB as we continue to provide a reliable and continuous supply of electricity while also enhancing customer experience.

Going forward, we will continue to advocate the adoption of a digital, smarter and greener lifestyle with great convenience, while improving energy literacy to deliver TNB's Energy Transition Plan SP2050 goals.

We shall continue to focus on these four (4) key areas to win our customers :

**Electrification via EV & urban farming**

**Energy Efficiency via energy monitoring solutions & systems**

**Prosumers via solar & battery**

**Digital Platform via digital marketing, EV & aggregation for green energy trading**

We are also enhancing our smart meter customer offerings, which will enable near real-time information on electricity consumption, with accurate and timely billing. With the continued growth of myTNB's connected accounts and the success of digital initiatives such as the Melaka pilot programme, we are on track to becoming a more sustainable and environmentally friendly organisation. We will further promote digital billing, the Energy Budget feature and the myTNBiz portal to meet our customers' evolving needs.

## ACHIEVING OUR STRATEGIC AMBITIONS

# FUTURE-PROOF REGULATIONS



TNB operates in a heavily regulated electricity supply industry landscape, where rules and regulations determined by the government and other regulatory authorities govern the way business is conducted.

TNB recognises the importance of engaging and collaborating with these stakeholders to find solutions that support the growth of the industry in a sustainable and responsible manner. This includes working towards the energy transition and promoting the adoption of electric vehicles (EVs) to reduce carbon emissions in the transportation sector. Through its collaboration with the government, TNB is committed to being a key player in building a more sustainable and responsible future for the nation.

## OVERVIEW

In 2022, TNB continued to make progress in adding value to its regulatory environment. During the year, we saw the ICPT mechanism continuing to play an important role in balancing the needs of the rakyat against the resources needed for stable electricity supply. TNB also progressed in building connections between ASEAN countries through the Lao PDR-Thailand-Malaysia-Singapore Power Integration Project. Additionally, TNB contributed to Malaysia's RE sector with the construction of its third solar power plant, TNB Bukit Selambau 2 and the Sungai Perak Hydro Life Extension Programme. The launch of Malaysia's National Energy Policy has paved the way to achieving a low-carbon economy and given greater impetus to TNB's own Energy Transition Plan. Finally, TNB intensified its efforts to develop the EV ecosystem by engaging with the government and industry stakeholders and signing several MoUs.



In collaboration with TNB and various stakeholders, the Malaysia Energy Literacy Program (MELP) launched by Minister Nik Nazmi bin Nik Ahmad seeks to cultivate energy-sensitive consumers by raising awareness about the importance of energy and promoting public participation in energy management.

## ACHIEVING OUR STRATEGIC AMBITIONS

### KEY HIGHLIGHTS

#### **I** Imbalance Cost Pass-Through (ICPT) Updates

Throughout 2022, the ICPT mechanism, together with the government's interventions, was able to strike the balance between protecting consumers from high fuel prices and ensuring that TNB would continue to have the resources to provide reliable electricity services to Malaysians.

Following on from the previous ICPT implementation from 1 July to 31 December 2021, the government maintained the prevailing ICPT rebate of 2.0 sen/kWh for all domestic consumers and the surcharge of 3.7 sen/kWh for non-domestic customers for the period 1 January to 30 June 2022. The ICPT amount for the period 1 January to 30 June 2022 totalled RM1.7 billion.

With the onset of the Russia-Ukraine conflict sending fuel prices even higher, the total ICPT amount for the period 1 July to 31 December 2022 was RM7 billion, where the average surcharge for all customers would have come up to 11.8 sen/kWh. However, after carefully considering the challenges and difficulties faced by the nation, especially with the rise in the average cost of living, the government maintained the same rebate for domestic customers and surcharge for non-domestic customers. This resulted in the government providing subsidies to TNB amounting to RM5.8 billion.

#### **F** Future-Proofing MESI

The Future-Proofing Malaysia Electricity Supply Industry (MESI) Study is a crucial step going forward to ensure MESI continues to evolve, with the emphasis on three (3) main elements : consumer-centric, industry resilience and agile governance. The focus on people-friendly initiatives and economic recovery are in tandem with the government's post-pandemic priorities. MyPOWER is currently leading the study with the aim of achieving a balanced approach to energy security, equity, sustainability, economic development and customer experience. The study includes a long-term roadmap and implementation plan to future-proof the industry against potential challenges.

TNB has been proactively preparing for future scenario reforms since 2015 through its Reimagining TNB business strategy. The Sustainability Pathway 2050 ensures that TNB's business is future-proofed by balancing the Energy Transition with financial sustainability and shareholder value protection. TNB is committed to providing the rakyat with a better world and brighter life and fully supports the development of MESI for the betterment of the industry and the nation. TNB is excited to continue collaborating with the Ministry of Natural Resources, Environment and Climate Change and MyPOWER during the implementation phases of future-proofing MESI.

#### **E** Enhancing Malaysia's RE Sector

TNB continues to contribute to the development of the nation's RE sector in line with the Malaysia Energy Renewable Roadmap to achieve 31% share of RE in the national energy capacity mix.

In 2022, we commenced work on TNB's third solar power plant, TNB Bukit Selambau 2, which is expected to be commissioned on 31 December 2023. At the same time, work on TNB's Nenggiri Hydro Project has commenced and it is expected to be commissioned by the second quarter of 2027 with 300 MW capacity. TNB also received the green light to proceed with the Sungai Perak Hydro Life Extension Programme to uprate and upgrade the Sungai Perak Hydroelectric Scheme with a capacity of 650.75 MW. The refurbishment works will commence in 2024 and commercial operations are expected to start in 2025.

TNB also welcomes the government's move to introduce the Corporate Green Power Programme (CGPP) which will enable solar energy producers to sell RE to corporate players through a virtual power purchase agreement (VPPA). The CGPP will start with a quota of 600 MW and all approved solar energy producers must have their power assets operational by 2025 at the latest before they can start bidding to sell the generated energy to the grid. TNB, on its part, will pay for the electricity generated while the corporate consumer will sign a VPPA with the solar power producer to determine volume and pricing. The corporate consumer will then obtain the RE supply through TNB's grid and also be able to secure a renewable energy certificate.

We believe that clean energy in the form of RE is the future of the power generation business. Moving forward, TNB will continue to participate in RE initiatives to increase penetration to the grid.

## ACHIEVING OUR STRATEGIC AMBITIONS

### N National Energy Policy

This year, Malaysia's energy industry greeted the launch of the National Energy Policy (NEP), which has the overall aim of guaranteeing energy supply in a responsible and sustainable way. The NEP has also laid out the roadmap for Malaysia to achieve its low-carbon economy aspirations. Many initiatives under the NEP are aligned with TNB's own Reimagining TNB strategy, Sustainability Pathway 2050 and Energy Transition Plan. This is important to ensure that we are moving forward in the right direction as a nation given our position as the largest utility.

The initiatives under the NEP that TNB is already actively advancing include :



Optimisation of regional and international grid connectivity



Unlocking opportunities for EVs



Enhancement of grid network and energy storage to cater for greater variable renewable energy



Unlocking the potential/synergy of solar and hydroelectric



The emerging hydrogen economy

In carrying out these heavy responsibilities, we have also endeavoured to keep all relevant stakeholders in the government duly updated regarding our plans and strategies. We also continue to find ways to assist the government and its agencies, either through collaboration or through the sharing of expertise and knowledge, to advance the nation's own net zero aspirations.

### M Malaysia Energy Literacy Programme (MELP)

In 2020, TNB embarked on the Malaysia Energy Literacy Program (MELP) to educate Malaysians on understanding the importance of energy and their role in managing energy. From a regulatory perspective, this programme serves as a long-term investment in creating energy-literate consumers who have a good understanding of the challenges and opportunities present in the energy industry as it transitions. With a literate consumer base that will also comprise government, ministries, regulators and members of Parliament, decision-makers will be able to make informed decisions on energy-related topics and policies. Other stakeholders we target with this programme include key thought influencers, school students and the youth, TNB employees and the media.

The MELP covers topics such as the energy value chain, renewable energy and Malaysia Energy & Supply Industry/Incentive-Based Regulation/Regulatory Period. Consumers are also being educated on the ICPT mechanism, smart meters, billing, safety and smart energy solutions, in addition to being informed on topics of the future such as sustainability and the energy transition, electric vehicles, telecommunications and network connectivity.

## OUTLOOK

As a responsible and forward-thinking energy company, TNB is committed to supporting the government's vision of a sustainable and low-carbon future for Malaysia. We are encouraged by the initiatives present in the National Energy Policy (NEP) 2022-2040 that will help to drive the energy transition and we will continue to forge a close working relationship with the Government to ensure regulatory stability and the opening up of more opportunities. We will also continue our efforts to ensure energy reliability while balancing energy affordability and sustainability in addressing the Energy Trilemma.

# THE MARKET LANDSCAPE

**As the nation moved beyond the COVID-19 pandemic, customers' electricity demand in Peninsular Malaysia grew by 6.0% in 2022, driven by the resumption of economic activities. The supply side saw coal contributing to 55.9% of the generation mix, followed by gas at 37.2%, hydro at 5.2% and solar at 1.2%.**

As the Malaysian economy is going through the process of recovering from the impact of the pandemic, other challenges arose. The exposure to a tight global fuel sources situation, as well as a series of unprecedented supply chain disruptions in key producing countries, impacted the electricity sector. Shortage of gas flows to Europe due to the prolonged Russia-Ukraine war, followed by Europe's reversion to coal power plants, propelled global coal prices to breach all-time highs across all coal indices in 2022. In addition, production cuts by members of the Organization of the Petroleum Exporting Countries (OPEC) contributed to elevated energy prices.



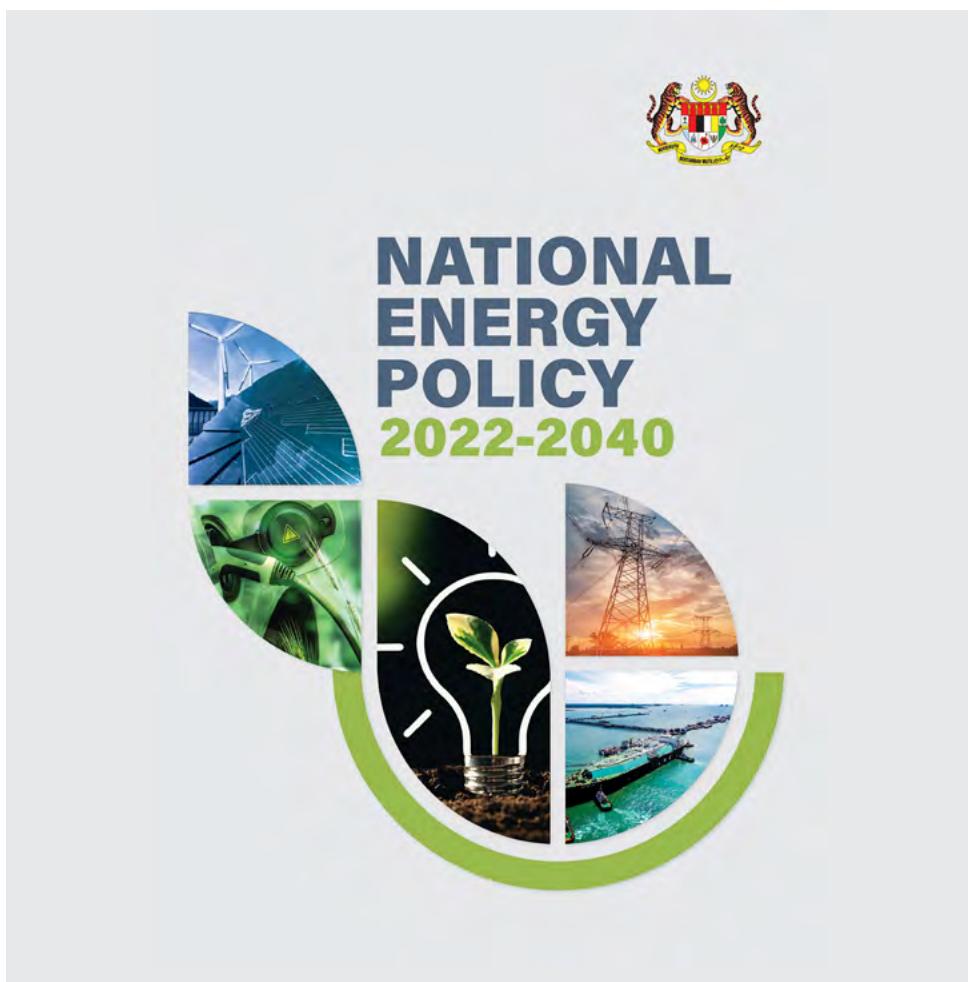
*Malaysia can experience economic growth and ensure long-term sustainability by carrying out a successful and responsible transition towards cleaner and more sustainable energy sources.*

## POWER SECTOR RESILIENCY AMID FUEL SUPPLY CHALLENGES

The global market coal price reached an all-time high above USD 415/MT in May 2022, trading at more than four (4) times of the base coal price of USD 79/MT in Regulatory Period 3 (RP3). As generation costs made up 65% of the electricity costs in the tariff, this posed a challenge to the system's financial sustainability. Furthermore, TNB's cash flow was stressed due to higher payment obligations to ensure security of supply to customers.

Against this backdrop, the government effectively implemented the ICPT mechanism to ensure continuous electricity supply to the rakyat. Through this mechanism, the volatility of the market fuel price was mitigated. On 24 June 2022, the government provided industry stability by maintaining the tariff rates for all customers, i.e. a 2 sen/kWh rebate for domestic customers and a 3.7 sen/kWh surcharge for non-domestic customers for the period 1 July until 31 December 2022. This was made possible through joint funding by Kumpulan Wang Industri Elektrik (KWIE) and Tabung Wang COVID under the Ministry of Finance.

On 16 December 2022, the tariff rate was maintained for domestic and Micro, Small and Medium Enterprises (MSMEs) and all Agricultural customers for the period 1 January 2023 until 30 June 2023. However, the ICPT mechanism has passed through a surcharge of 20 sen/kWh to Other Non-Domestic customers. Efforts were also taken to continuously increase customers' awareness on energy efficiency and the global trends impacting fuel prices, to better manage their electricity consumption. Customers were provided with options to consider cost-effective renewable energy (RE) solutions such as rooftop solar. We saw rooftop solar adoption rising during the period.

**THE MARKET LANDSCAPE****DRIVING A RESPONSIBLE ENERGY TRANSITION**

**As a critical player in Malaysia's energy sector with a portfolio extending across the value chain, TNB is focused on delivering the nation's energy transition through RE, grid infrastructure and customer participation, including adoption of electric mobility.**

The Malaysian government continues to advance the nation's aspiration to attain net zero greenhouse gas (GHG) emissions by 2050. One of the most significant developments in 2022 was the establishment of the Ministry of Natural Resources, Environment and Climate Change (NRECC), an amalgamation of the previous Energy and Natural Resources Ministry and the Environment and Water Ministry.

Under the same objective, the government launched the National Energy Policy (NEP) 2022-2040, with the goal of driving the country towards benefiting from and embracing energy transition megatrends. The policy promotes sustainable energy development and addresses the challenges faced by the energy sector. This establishes a series of initiatives for achieving energy transition towards a sustainable, low-carbon future, including the increase of RE generation sources and adoption of electric mobility, reduction of coal power plant capacity and intensifying industrial, commercial and residential energy efficiency. These initiatives were strengthened by the recently launched Malaysian Energy Transition Outlook (METO), a collaborative study between the International Renewable Energy Agency (IRENA) and NRECC.

Key to supporting this transition is focusing on grid infrastructure investment and deploying energy storage to accommodate distributed, bi-directional and intermittent RE penetration. This includes the digitalisation and modernisation of the power system, making the grid smart and flexible. The journey of energy transition entails the development of future sustainable ecosystems such as the hydrogen economy and exploration of carbon capture and storage (CCUS).

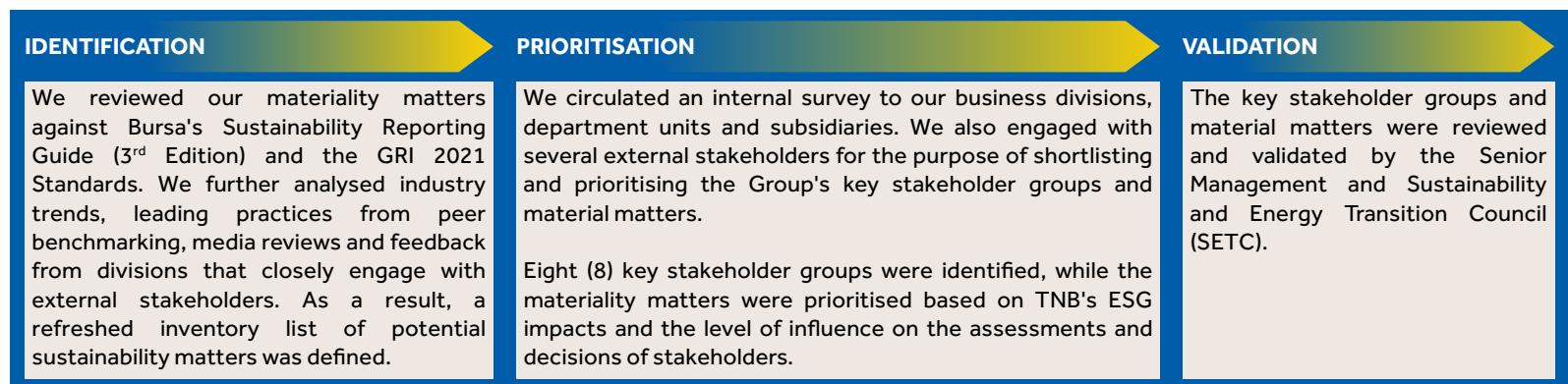
TNB recognises that climate action is multifaceted and that sources of emissions extend beyond the power generation industry. As a critical player in Malaysia's energy sector with a portfolio extending across the value chain, TNB is focused on delivering the nation's energy transition through RE, grid infrastructure and customer participation, including adoption of electric mobility. In supporting the climate action strategic objective, TNB announced its Energy Transition Plan in August 2022, aimed at achieving ESG targets and business growth. A successful and responsible energy transition is the catalyst for economic growth opportunities and long-term sustainability for Malaysia.

# DELIVERING SUSTAINABLE VALUE

## WHAT MATTERS TO OUR STAKEHOLDERS

Our sustainability agenda focuses on matters outlined in our materiality matrix that have been integrated into our strategy for value creation and growth. We envisage that the alignment of our strategic priorities will enable us to expand the value we create for our stakeholders and the nation. Every two years, we conduct a comprehensive analysis to review the sustainability issues and groups of stakeholders relevant to the Group to ensure that any significant changes in the internal and external context are taken into consideration. This enables us to stay ahead of emerging trends, changing customer demands and other operational challenges.

A critical component of this process is stakeholder engagement, which enables us to gain a better understanding of the issues that matter most to us and which can impact our ability to create value over the short, medium or long term. Stakeholder engagement also helps us to not only determine our material matters, but also to prioritise them based on their significance.



This year, in view of the enhancement of the materiality assessment methodology adopted, the number of material matters had effectively reduced from 18 in FY2021 to 10 in FY2022, with the objective of providing better focus and strategic management of the matters. The following is a summary of key updates :

- We made a distinction between material matters that are fundamental to us but are shared across multiple business sectors and strategic matters that have implications for the Group's transformation and business model.
- Climate Change and Emission is now of the highest priority to the Group as its importance to stakeholders has increased.
- Environmental-related matters remain a key strategic focus for TNB.

TNB's FY2022 Materiality Matrix is presented below :



1. Combination of Economic Performance, Tax, Responsible & Ethical Business Practices and Anti-corruption.
2. Combination of Asset Optimisation, Reliable Energy and Fair Tariffs and Emergency Preparedness.
3. Combination of Emissions Climate Change & Energy Efficiency and Energy.
4. Combination of Renewable Energy, Fuel Mix Policy and Efficient Technology and Innovation.
5. Combination of Occupational Health and Safety, Health and Well-being and Customer Health and Safety..
6. Combination of Material, Water and Effluents, Biodiversity Management and Waste Management.
7. Combination of Employment, Diversity and Equal Opportunity, Non-discrimination, Labour/Management Relations, Training and Education and Market Presence.
8. Combination of Indirect Economic Impact, Local Communities and Rights of Indigenous Peoples.
9. Combination of Cyber Security Management and Customer Privacy.
10. Combination of Procurement Practices, Human Rights Assessment, Supplier Social Assessment and Supplier Environmental Assessment.

## DELIVERING SUSTAINABLE VALUE

The 10 TNB strategic risks that were identified and approved by the Board Risk Committee (BRC) were mapped to the material matters. The strategic risks covered multiple risk categories, including external, sustainability, regulatory, market, customer, finance and capabilities. We mapped the 10 prioritised material matters for FY2022 to our corporate strategy, direct and indirect contributions to the United Nations Sustainable Development Goals (UN SDGs) and our 10 strategic risks.

10 Strategic Risks (SR)     RT Pillars     RT Enablers

### Legend:

<b>1</b>	Catastrophic disruptions from external factors	<b>2</b>	Inability to keep pace with ESG developments and transitions globally	<b>3</b>	Unfavourable energy transition and climate change policies and regulations	<b>4</b>	Unfavourable ESI regulatory implementation and outcomes	<b>5</b>	Inability to be competitive in non-regulated business (international & domestic)
<b>6</b>	Inability to remain as the electricity provider of choice for customers	<b>7</b>	Ineffective capital allocation to maximise value creation	<b>8</b>	Gaps in workforce capabilities to deliver RT strategy and sustainability aspiration	<b>9</b>	Failure to ingrain TNB culture in employees' behaviour in supporting RT strategy and sustainability aspiration	<b>10</b>	Regulatory uncertainty
 Future Generation Sources	 Grid of the Future	 Winning the Customer	 Future-Proof Regulations						
 Capital Allocation and Value Creation	 Corporate and Organisational Structure	 Digital and Data Analytics	 Culture, Capabilities and Performance Management						

Sustainability Pillar	Material Matter	Link to Strategic Risk, RT	UN SDGs
<b>Governance</b>			
Responsible Governance and Strengthening Business Resilience. <ul style="list-style-type: none"> <li>Providing reliable and efficient energy for customers.</li> <li>Supplying electricity domestically and internationally.</li> <li>Reinforcing ethical and safe business culture.</li> </ul>	<b>Responsible Business and Financial Performance</b> Ensuring robust corporate governance in TNB to achieve business and financial growth.	  	
	<b>Reliable Energy and Fair Tariffs</b> Ensuring the availability, affordability and reliability of electricity in the short, medium and long term, including in the event of emergencies and crises.	 	
	<b>Cyber Security Management</b> Safeguarding digital systems and customer privacy against cybersecurity risks, threats and attacks by ensuring data security.	 	

## DELIVERING SUSTAINABLE VALUE

Sustainability Pillar	Material Matter	Link to Strategic Risk, RT	UN SDGs
<b>Governance</b>			
	<p><b>Sustainable Supply Chain</b> Engaging in sustainable supply chain practices and strengthening the local energy ecosystem.</p>		
<b>Environment</b>			
Climate change and environment. <ul style="list-style-type: none"> <li>Supporting the transition to a low-carbon economy.</li> <li>Minimising environmental impacts.</li> </ul>	<p><b>Energy Transition and Innovation</b> Contributing to the national RE target and driving innovation to anticipate changing trends and build business resilience.</p>		
	<p><b>Environmental Management</b> Responsible consumption and effective management of environmental impacts.</p>		
	<p><b>Climate Change and Emission</b> Efforts to address climate change impacts and manage greenhouse gas (GHG) emissions.</p>		
<b>Social</b>			
Engaging Our People and Cultivating Talent. <ul style="list-style-type: none"> <li>Fostering a favourable working environment that boosts employee morale and development.</li> <li>Protecting the safety, health and well-being of our employees.</li> </ul> Creating Shared Values with Communities. <ul style="list-style-type: none"> <li>Enriching the lives of communities by driving socioeconomic upliftment.</li> </ul>	<p><b>Safety, Health and Well-being</b> Promoting a working culture that upholds high standards of occupational health and safety and protects employee welfare.</p>		
	<p><b>Employment Culture</b> Creating a diverse and inclusive culture while closely engaging with our employees.</p>		
	<p><b>Community Development and Human Rights</b> Channelling investments to the community as well as educational programmes to advance positive socioeconomic impacts.</p>		

## DELIVERING SUSTAINABLE VALUE

The table below demonstrates how our business strategy and initiatives contribute to the SDG targets, which are mapped to our material matters.

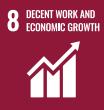
■ Environment ■ Social ■ Governance

Legend :

	Responsible Business and Financial Performance		Reliable Energy and Fair Tariffs		Climate Change and Emission		Energy Transition and Innovation		Safety, Health & Well-being
	Employment Culture		Community Development and Human Rights		Cyber Security Management		Environmental Management		Sustainable Supply Chain

	TNB's Material Matters	TNB's Metrics and Targets	FY2022 Performance	Focus beyond FY2023
<b>UN SDG 3 Good Health and Well-being</b> <p>We promote healthy living and the well-being of our people.</p> <ul style="list-style-type: none"> <li><b>Target 3.6 :</b> Reduce road injuries and deaths.</li> <li><b>Target 3.8 :</b> Improve health coverage.</li> </ul>		<ul style="list-style-type: none"> <li>Zero fatalities.</li> </ul>	<ul style="list-style-type: none"> <li>Motor vehicle fatalities : 0 fatalities.</li> <li>Motor vehicle incident reduction : -40% compared to FY2021.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to enhance our HSE standards and procedures to reduce fatalities and injuries.</li> <li>Continue to create a safe working environment.</li> </ul>
<b>UN SDG 4 Quality Education</b> <p>We provide quality education and financial support to the community.</p> <ul style="list-style-type: none"> <li><b>Target 4.3 :</b> Equal access to affordable technical, vocational and higher education.</li> <li><b>Target 4.4 :</b> Enhance youth and adult capabilities to increase employment.</li> </ul>		<ul style="list-style-type: none"> <li>Number of students and trainees in TNB education and learning centres.</li> <li>Expenditure on scholarships and convertible loans.</li> </ul>	<ul style="list-style-type: none"> <li>Number of students enrolled in UNITEN : 6,179 students.</li> <li>Number of scholarship and convertible loans recipients : 7,192 students.</li> <li>Expenditure on scholarships and convertible loans : RM107.81 mil.</li> <li>Number of trainees trained in TNB education and learning centres by ILSAS : 50,912 students.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to provide financial and non-financial support to develop future talents.</li> <li>Enhance our education facilities through digitalisation.</li> </ul>
<b>UN SDG 7 Affordable and Clean Energy</b> <p>We prioritise energy efficiency, clean energy technology and related infrastructure.</p> <ul style="list-style-type: none"> <li><b>Target 7.1 :</b> Access to modern energy.</li> <li><b>Target 7.2 :</b> Increase share of renewable energy in energy mix.</li> <li><b>Target 7.3 :</b> Improvement in energy efficiency.</li> </ul>		<ul style="list-style-type: none"> <li>Increase RE capacity to 7,000 MW by 2030.</li> <li>Maintain System Average Interruption Duration Index (SAIDI) under 50 minutes/customer/year through SAIDI 50 initiative.</li> <li>Achieve 85% on the Smart Grid Index by 2025.</li> </ul>	<ul style="list-style-type: none"> <li>Total renewable energy generation capacity : 3,780 MW.</li> <li>SAIDI in Peninsular Malaysia : 45.06 minutes/customer/year.</li> <li>Smart Grid Index : 71.4%.</li> </ul>	<ul style="list-style-type: none"> <li>Participate actively in the development of IBR's Regulatory Period 4 (RP4) to address the energy trilemma effectively.</li> <li>Aspire to grow TNB's domestic and international RE assets.</li> <li>Enhance and modernise our asset and infrastructure to support energy transition.</li> <li>Adopt and promote energy efficiency throughout our value chain.</li> </ul>

## DELIVERING SUSTAINABLE VALUE

	TNB's Material Matters	TNB's Metrics and Targets	FY2022 Performance	Focus beyond FY2023
 <b>UN SDG 8 Decent Work and Economic Growth</b>  We promote sustainable business performance and create employment opportunities. <ul style="list-style-type: none"> <li><b>Target 8.3 :</b> Promote policies to support job creation and growing enterprises.</li> <li><b>Target 8.5 :</b> Full employment and decent work with equal pay.</li> <li><b>Target 8.6 :</b> Promote youth employment, education and training.</li> <li><b>Target 8.8 :</b> Protect labour rights and promote safe working environments.</li> </ul>		<ul style="list-style-type: none"> <li>Zero fatalities.</li> <li>LTIF&lt;1.0.</li> <li>Tax and zakat contributions.</li> <li>TNB Reskilling Malaysia Programme.</li> <li>PROTÉGÉ training.</li> </ul>	<ul style="list-style-type: none"> <li>Fatalities : 0 (TNB employees), 2 (TNB contractors).</li> <li>LTIF : 0.82</li> <li>Group Tax and zakat contribution (excluding deferred taxation) : RM1,469 million.</li> <li>5,827 TNB Reskilling Malaysia trainees successfully matched with jobs.</li> <li>PROTÉGÉ trainees : 547 trainees.</li> </ul>	<ul style="list-style-type: none"> <li>Sustain strong revenue growth that subsequently leads to high tax and zakat contributions.</li> <li>Continue to drive education, training and capability building.</li> </ul>
 <b>UN SDG 9 Industry, Innovation and Infrastructure</b>  We build infrastructure and develop innovation to accommodate socioeconomic growth and the low-carbon transition of the nation. <ul style="list-style-type: none"> <li><b>Target 9.1 :</b> Develop sustainable, resilient and inclusive infrastructures.</li> <li><b>Target 9.5 :</b> Enhance research and upgrade industrial technologies.</li> </ul>		<ul style="list-style-type: none"> <li>Install 9 million smart meters across Peninsular Malaysia in phases under Advanced Metering Infrastructure (AMI) initiative by 2029.</li> <li>Allocate 3.5% of our PAT to our research and development (R&amp;D) activities.</li> </ul>	<ul style="list-style-type: none"> <li>Smart meters installed in FY2022 : 838,830 meters.</li> <li>Percentage of PAT for R&amp;D investment : 1%.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to fund R&amp;D into new emerging technologies that support our current business and future business areas, including decarbonisation, RE, energy storage, electric mobility, smart cities and digitalisation.</li> <li>Explore new business models for energy storage solutions.</li> <li>Provide investment to uplift EV development and ecosystem in Malaysia.</li> </ul>
 <b>UN SDG 10 Reduced Inequalities</b>  We combat inequality regardless of gender, race, religious beliefs or economic status within our organisation. <ul style="list-style-type: none"> <li><b>Target 10.2 :</b> Promote universal social, economic and political inclusion.</li> </ul>		<ul style="list-style-type: none"> <li>Increase the percentage of women in senior management roles.</li> </ul>	<ul style="list-style-type: none"> <li>Women in senior management roles : 24.3% (Increased from FY2021 : 23.1%)</li> </ul>	<ul style="list-style-type: none"> <li>Continue to empower women's employability and presence in management through talent and training programmes.</li> </ul>

## DELIVERING SUSTAINABLE VALUE

	TNB's Material Matters	TNB's Metrics and Targets	FY2022 Performance	Focus beyond FY2023
 <b>UN SDG 13 Climate Action</b> <p>We support Malaysia's commitment to the Paris Agreement and seek to mitigate our GHG emissions and environmental impacts, as well as adapt to climate risks.</p> <ul style="list-style-type: none"> <li><b>Target 13.2:</b> Integrate climate change measures into national policies, strategies and planning.</li> <li><b>Target 13.3:</b> Build knowledge and capacity to reduce climate change impact.</li> </ul>		<ul style="list-style-type: none"> <li>35% emissions intensity reduction by 2035, from base year FY2020.</li> <li>Halve coal generation capacity by 2035.</li> <li>Net zero emissions &amp; coal-free by 2050.</li> <li>Reskill and upskill TNB's employees to support TNB's sustainability plan and energy transition.</li> </ul>	<ul style="list-style-type: none"> <li>GHG emissions intensity reduction : Achieved 2% reduction from baseline in 2020.</li> <li>GHG emissions intensity : 0.55 million tCO<sub>2</sub>e/MWh.</li> <li>Participants in academies of business entities : 69 participants in GenCo Academy, 25 participants in Grid Academy, 32 participants in DN Academy, 3,214 participants in Retail Academy and 30 participants in HR Academy.</li> </ul>	<ul style="list-style-type: none"> <li>Implement ET plan and monitor performance.</li> <li>Reskill and upskill TNB employees to support Energy Transition Plan to contribute to climate change mitigation and adaptation.</li> <li>Account for Scope 3 GHG emissions.</li> </ul>
 <b>UN SDG 17 Partnerships for the Goals</b> <p>We continue to form partnerships with key stakeholders with the objectives of meeting future industry demands and contributing positively to the environment and the community.</p> <ul style="list-style-type: none"> <li><b>Target 17.17:</b> Encourage effective partnerships.</li> </ul>		<ul style="list-style-type: none"> <li>Commit 1% of our PAT to community programmes.</li> <li>Increase expenditure on community development programmes.</li> <li>Establish a wide range of partnerships to promote accessible and clean energy as well as uplift the communities.</li> </ul>	<ul style="list-style-type: none"> <li>Percentage of PAT spent on community programmes : 0.34% of PAT.</li> <li>Total contribution to community development programmes : RM12.20 million.</li> <li>Established several partnerships in FY2022.</li> </ul>	<ul style="list-style-type: none"> <li>Explore innovative and new technologies through strategic partnerships with public and private entities to accelerate energy transition.</li> <li>Strengthen collaborations for community development and environmental management.</li> </ul>



Please refer to pages 68-69 for TNB's list of partnerships and collaborations.

# OUR VALUE CREATION MODEL

## FUTURE GENERATION SOURCES

### Top Priorities

- Grow TNB's renewable generation capacity
- Expand into key international strategic markets with strong growth prospects
- Maintain optimal performance of existing generation fleet
- Gradually decarbonise existing thermal generation fleet

## GRID OF THE FUTURE

### Top Priorities

- Ensure the grid continues to operate reliably
- Constantly improve and modernise the network infrastructure to make it flexible, automated and secure
- Leverage innovation in the network to transform customer experience

## OUR STRATEGY

## WINNING THE CUSTOMER

### Top Priorities

- Enrich customer experiences across all customer journeys through personalised services, interactions, and communication channels
- Grow through innovation of new solutions and service offerings
- Strengthen digital presence via digital solutions, interactions and enterprise
- Grow customer participation through adoption of smarter, greener lifestyle and energy literacy

## FUTURE-PROOF REGULATIONS

### Top Priorities

- Work together through strategic engagement and collaboration with key stakeholders towards a stable and sustainable regulatory landscape



### Financial Capital

#### Shareholders' Funds

**RM60,966.2 million**

#### Effective Weighted Average Cost of Funds (%)

2022	4.6
2021	4.6
2020	4.9
2019	5.1



### Manufactured Capital



Oil<sup>(1)</sup>

**222.2 MW**

**1.3%**



Hydro

**2,978.9 MW**

**17.8%**



Coal

**6,987.2 MW**

**41.8%**



Gas

**5,764.3 MW**

**34.4%**



Renewable

**770.4 MW**

**4.6%**



Mini hydro

**11.9 MW**

**0.1%**

**798,626.59**

Circuit kilometres  
of transmission and  
distribution line<sup>(2)</sup>

**97,421**

Primary and secondary  
substations<sup>(2)</sup>

**105,952**

Primary and secondary  
transformers<sup>(2)</sup>



## OUR CAPITALS



### Natural Capital

COAL<sup>(3)</sup>

**552,801,922.9 TJ**

GAS<sup>(3)</sup>

**250,448,420.9 TJ**

OIL<sup>(1)(3)</sup>

**130,788,075.9 TJ**

DISTILLATE

**2,445,795.3 TJ**



### Intellectual Capital

Research and development

Operational and service innovations

Technology and business model innovations



### Human Capital

Employees

**34,699**

TNB GROUP

**RM161.40 million**

investment in learning and development

Reward structures linked to performance and value drivers

High Performance People & Culture



### Social and Relationship Capital

Build Trust

Customers | Investors

Government

Employees | NGOs

Trade Unions | Vendors

Communities

Create Value

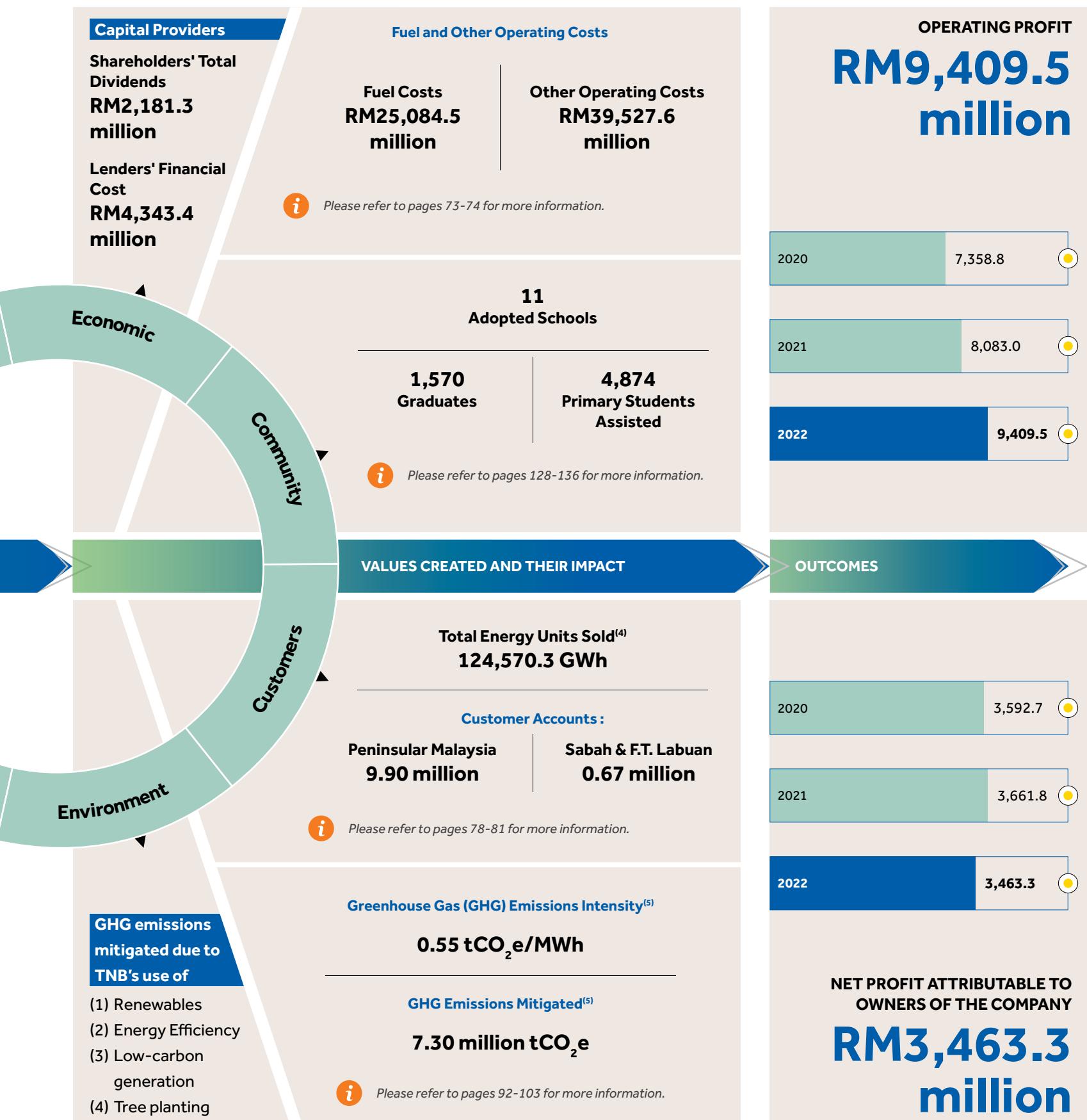
#### Notes:

(1) Oil refers to petroleum-based fuel (inclusive of diesel, oil and distillates).

(2) For operations in Peninsular Malaysia and Sabah.

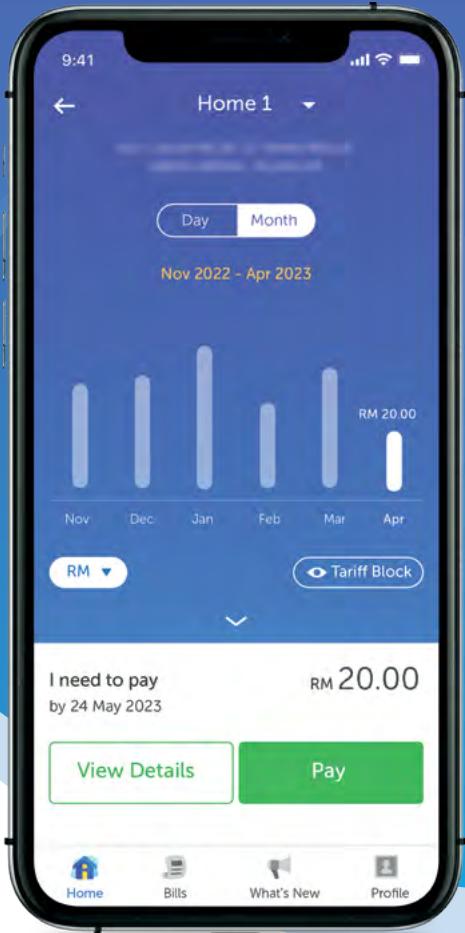
(3) From power plants in which TNB has controlling stake for period FY2022.

## OUR VALUE CREATION MODEL



(4) From domestic power plants which TNB has invested in and has power purchasing agreements for domestic customers.

(5) For TNB operations in Peninsular Malaysia only for the period of FY2022.



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Your account information and various TNB services are available at your fingertips with the myTNB App & Portal. Anytime, anywhere!



## Enjoy the exciting features!



Switch to e-Bill via myTNB today



Manage energy consumption with Energy Budget\*

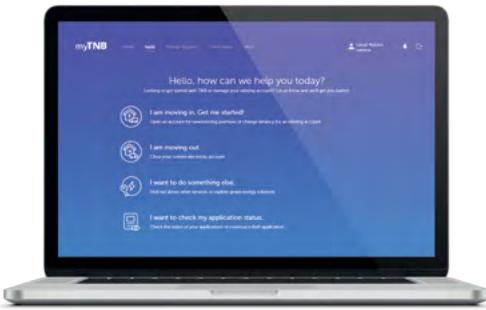


Check monthly or daily electricity usage\*



Submit feedback

\*features available with smart meter



**More convenience on the myTNB Portal!**



- Apply for a new electricity supply
- Change of Tenancy



Schedule an appointment to book a slot at Kedai Tenaga

**[www.mytnb.com.my](http://www.mytnb.com.my)**

# SUSTAINABILITY STATEMENT



## Outlining The Scope and Boundaries of This Statement 66

- ESG Scorecard for FY2022

## Championing Sustainability at TNB 67

- TNB's Sustainability Strategy
- Feature Story 1 : Strengthening and Promoting Strategic Partnership

## Responsible Governance and Strengthening Business Resilience 70

- Feature Story 2 : Accelerating Responsible Energy Transition
- Sustainable Infrastructure and Ecosystem
- Sustainable Business Expansion
- Customer Centricity
- Sustainable Supply Chain

## Climate Change and Environment 83

- Feature Story 3 : Decarbonisation through Innovative Solutions : Carbon Capture
- Our Response to Climate Change
- Feature Story 4 : Our Flagship Green Building - TNB Platinum Campus
- Minimising Our Environmental Impacts

## Engaging Our People and Cultivating Talent 111

- Employment Management and Growth
- Feature Story 5 : Empower Our People
- Feature Story 6 : Prioritising People : Safeguarding Safety and Well-Being
- Emphasis on Health, Safety and Well-Being

## Creating Shared Values With Communities 128

- Feature Story 7 : Enhancing the Well-Being of Orang Asli Communities
- Contributing to Community Development
- Engaging Indigenous People

# OUTLINING THE SCOPE AND BOUNDARIES OF THIS STATEMENT

This report has been prepared in accordance with Bursa Malaysia's Main Market Listing Requirements (MMLR), with reference to local sustainability guidelines as well as international reporting frameworks as shown below :

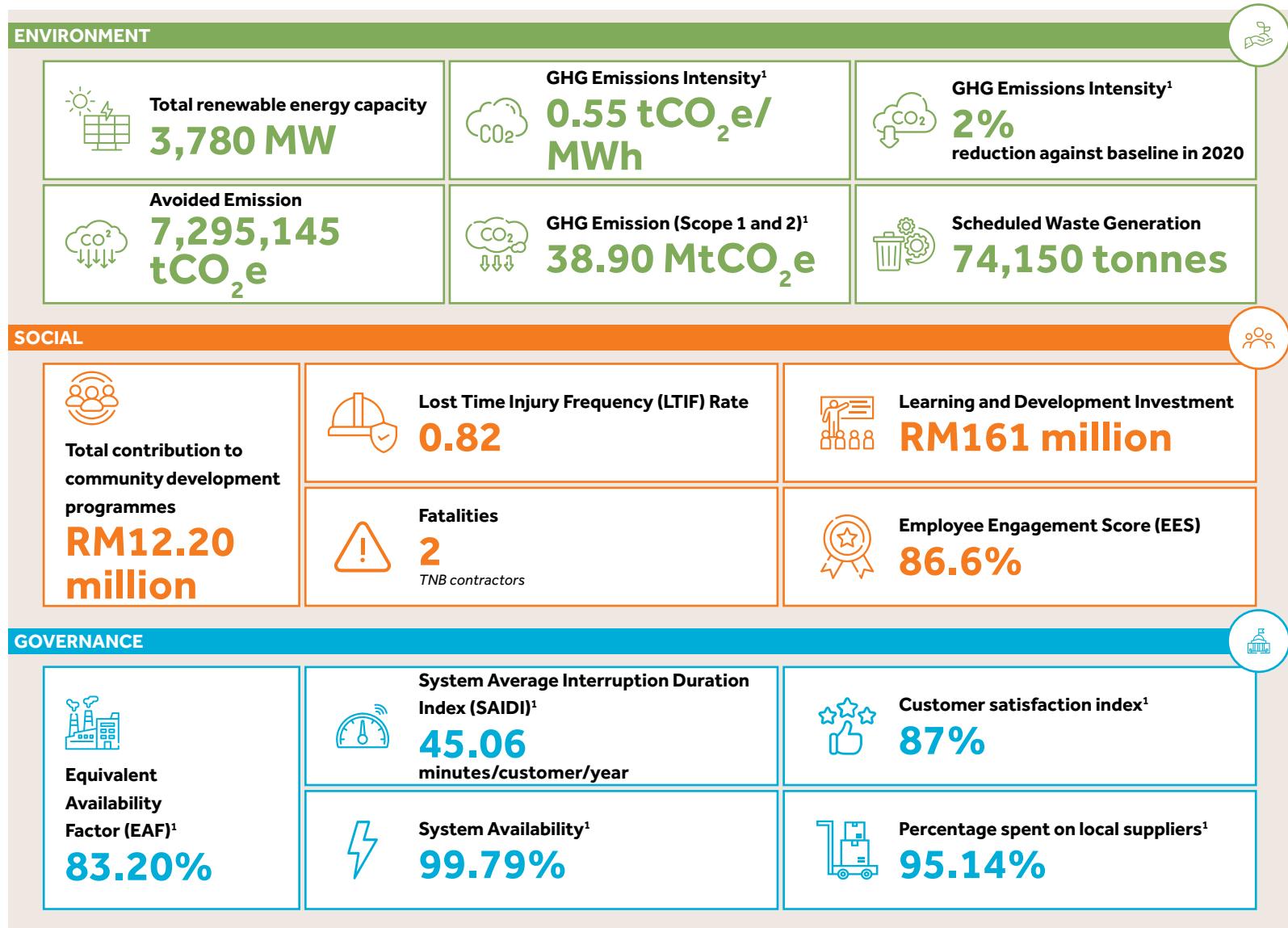
Reporting Framework, Scope and Boundaries	
	Bursa Malaysia Sustainability Reporting Guide (3rd Edition)
	Global Reporting Initiative (GRI) Standards GRI Electric Utilities Sector Disclosures
	Task Force on Climate-related Financial Disclosures (TCFD) framework
	United Nations Sustainable Development Goals (UN SDGs)

The scope and boundary of sustainability disclosures covers the activities of TNB and its subsidiaries ("TNB Group"). Where information is unavailable, we will cover at a minimum, our core and non-core business operations in Peninsular Malaysia under the purview of TNB divisions ("TNB Company"). Unless otherwise stated, this Statement excludes joint ventures and supplier activities.

This Sustainability Statement has not been subjected to an external verification process. Concurrently, we are preparing for internal assurance in FY2023 and to obtain external assurance in due course.

Our Statement contains data from the full Financial Year of FY2022 from 1 January 2022 to 31 December 2022. Please refer to our upcoming Sustainability Report 2022 for further information.

## ESG SCORECARD FOR FY2022

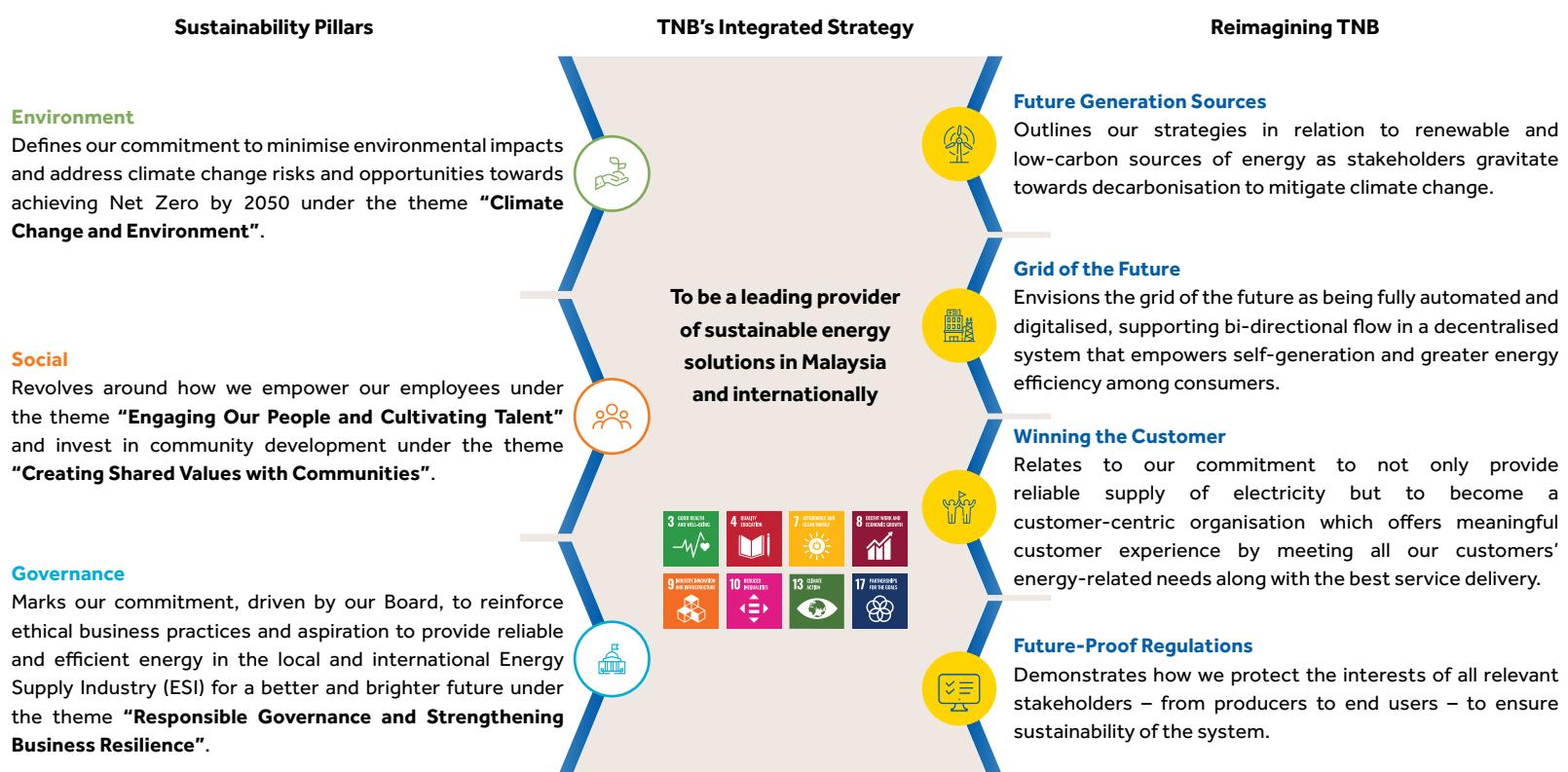


<sup>1</sup> TNB operations in Peninsular Malaysia

# CHAMPIONING SUSTAINABILITY AT TNB

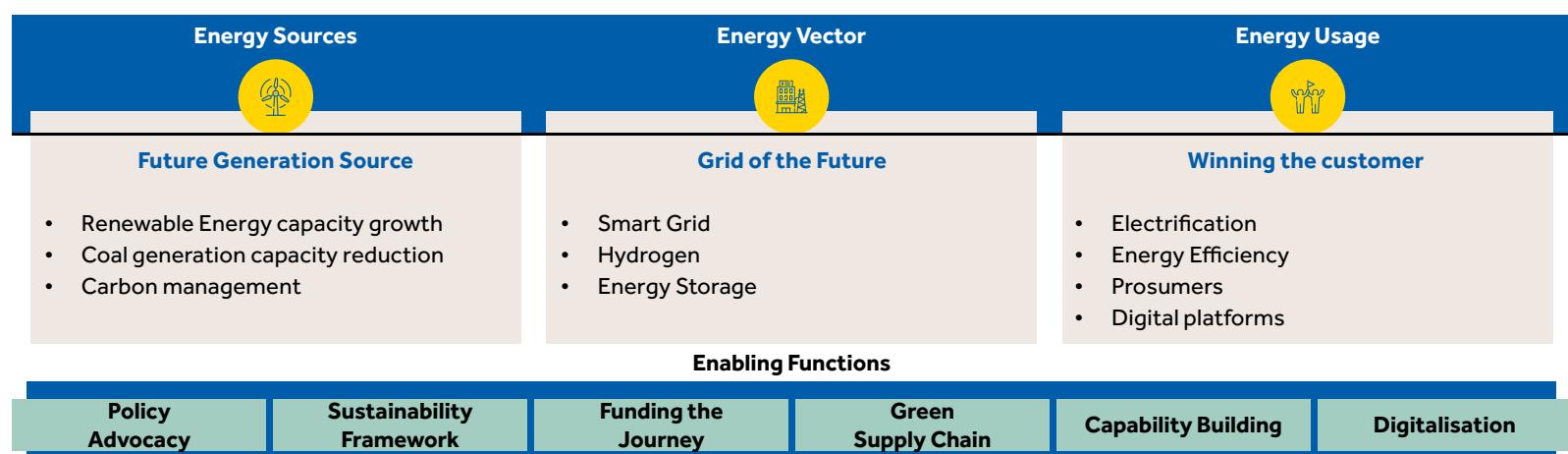
## TNB'S SUSTAINABILITY STRATEGY

Our integrated sustainability strategy connects sustainability pillars - Environmental, Social and Governance (ESG) matters with our corporate strategy : Reimagining TNB 2025 (RT) to enable us to contribute to the United Nations Sustainable Development Goals (UN SDGs) and be a leading provider of sustainable energy solutions in Malaysia and internationally. We have prioritised eight (8) SDGs to deliver sustainable value, empowering both our people and the wider community. TNB Sustainability Pathway 2050 (SP2050) which was developed in 2021 has enabled the Group to advance its Energy Transition (ET) Plan in 2022.



**i** For more information on TNB corporate strategy, please refer to Achieving Our Strategic Ambitions section, pages 38-53.

TNB's ET Plan is an extension of the RT, focusing on three (3) strategic pillars supported by key enablers in shifting from fossil-based energy mix to greener energy sources. These initiatives cut across the electricity value chain, from transitioning power generation to cleaner sources; enhancing the Grid of the Future (GoTF) to enable more green solutions; and facilitating consumer participation in the energy transition, including through digitalisation and electrification.



**i** For more information on TNB Energy Transition Plan, please refer to Climate Strategy section, pages 94-95.

## CHAMPIONING SUSTAINABILITY AT TNB

### Feature Story 1

#### STRENGTHENING AND PROMOTING STRATEGIC PARTNERSHIPS

Partnerships unlock growth opportunities in high-value market segments which are beyond the traditional electric utility value chain. In driving innovative solutions towards decarbonisation and energy transition in Malaysia, TNB has established strategic partnerships and collaboration with both public and private entities, especially with key players in the energy sector industry.

**FY2022**

### Highlight

TNB Fuel Services Sdn Bhd (TNBF) established a strategic partnership by signing a three-year memorandum of understanding (MoU) with three (3) local companies, MNA Fuel Services Sdn Bhd, Itochu (M) Sdn Bhd and Cement Industries of Malaysia Bhd. This entails a study on the development of biomass pellets produced from bamboo plants for use in power generation activities, research of ammonia supply chain as a new source of fuel and collaboration in various development areas including the supply of fuel, alternative raw materials, research and technical skills sharing, with the partners respectively.



TNBF signed a MoU with MNA Fuel Services Sdn Bhd, Itochu (M) Sdn Bhd and Cement Industries of Malaysia Bhd.

TNB is stepping up its responsible energy transition agenda through collaborative partnerships to promote the development of innovative solutions. The table below outlines TNB's partnership and collaboration in 2022.

Moving forward, we will continue to explore opportunities for strategic partnerships with potential in creating growth and value for our stakeholders.

Strategic partnership and collaboration	Description
1 TNB and PETRONAS partnership for green hydrogen and Carbon Capture, Utilisation and Sequestration (CCUS)	TNB and PETRONAS have signed a MoU to explore the development of new green technologies including green hydrogen ecosystem and CCUS.
2 TNB and Ipoh City Council (MBI) in MoU to Help Realise Ipoh as A Low Carbon Smart City and "Bestari Sejahtera" by 2030	<p>TNB is committed to helping Ipoh to achieve its aspiration of becoming a smart, livable, resilient and sustainable city by 2030. In February 2022, TNB established a strategic partnership with the MBI to supply energy efficiency products and services as well as a Supply Agreement for Renewable Energy (SARE) with TNB's wholly owned subsidiary, GSPARX Sdn. Bhd. (GSPARX) for RE solutions to promote sustainable and green living.</p> <p>This partnership will drive the installation of photovoltaic solar systems, smart LED street lighting, energy performance and monitoring system, electric vehicle charging ecosystem and smart meters, which are key initiatives in establishing Ipoh as a Smart City.</p>

**CHAMPIONING SUSTAINABILITY AT TNB****Feature Story 1****STRENGTHENING AND PROMOTING STRATEGIC PARTNERSHIPS****Strategic partnership and collaboration****Description**

3	TNB and Gamuda Land partners in the delivery of Malaysia's first solar powered electron stations	TNB entered into a strategic partnership with Gamuda Land in October 2022 to build two (2) TNB Electron Stations for electric vehicle charging at Gamuda Land's property development projects in Selangor. This will be the first TNB Electron stations with multiple chargers in one site and will be situated in Gamuda Cove in Southern Klang Valley and Gamuda Gardens in Northern Klang Valley. The stations are targeted to serve local communities as well as patrons to the theme parks and recreational areas within Gamuda Land developments.
4	TNB partners with S P Setia Bhd (S P Setia) to provide smart energy and renewable energy solutions	TNB is partnering with S P Setia to provide smart energy and renewable energy (RE) solutions for future property developments. The MoU was signed to enable the installation of rooftop solar PV system as well as ensuring properties are future-ready to support the installation of EV chargers and battery solutions in S P Setia's upcoming residential and commercial development projects.
5	TNB Power Generation Company Sdn. Bhd. (TNB GenCo), IHI Corporation and PETRONAS collaborate in Co-Firing Technology for Carbon-Free Ammonia	TNB GenCo, IHI and PETRONAS are collaborating on Co-Firing Technology for Carbon-Free Ammonia. The MoU includes a feasibility study on ammonia co-combustion in coal-fired power generation systems as part of initiatives to decarbonise the country's power sector. The scope of the study covers exploring the technology of co-firing ammonia at coal power plants in Malaysia and evaluating the technology and economics across the entire ammonia supply chain which includes green ammonia production from renewable energy sources and blue ammonia from natural gas.
6	TNB GenCo, Malaysia Solar Resources and Sungrow signed MoU for floating solar feasibility study	Conduct a feasibility study on the floating solar potential at hydro dams and opportunity to collaborate as a local floaters manufacturer.
7	TNB GenCo collaborated with Malaysian Space Agency (MYSA) to develop remote sensing-based application using a spatial database	This MoU aims to strengthen the use of remote sensing technology in the management of TNB's hydroelectric catchment areas in Malaysia. Through this strategic partnership, MYSA has developed and operated the TNB Hydro Dam Catchment Area Monitoring System (THyCAS) since 2020. The THyCAS system uses space technology (GPS) and other related technologies (GIS and ICT) which has been deployed in Perak, Kelantan, Pahang and Terengganu. With this system in place, the planning, management and monitoring of TNB's hydro dam catchment activities can be implemented more efficiently, effectively and systematically.
8	GSPARX Sdn. Bhd collaborates with AEON CO. (M) BHD. to install building integrated photovoltaic (BIPV) carpark	AEON CO. (M) BHD. has experienced a successful reduction of up to RM185,000 monthly in electricity bills since January 2022, thanks to the implementation of Solar PV by GSPARX which is a wholly owned subsidiary of TNB. GSPARX offers expert services from consultation, installation, maintenance and monitoring which guarantees optimal functioning of the solar PV system. This solution enables businesses to save 40-50% on their electricity bills without any upfront costs.

# RESPONSIBLE GOVERNANCE AND STRENGTHENING BUSINESS RESILIENCE



## Related Material Matters

- Responsible Business and Financial Performance
- Reliable Energy and Fair Tariff
- Cybersecurity Management
- Sustainable Supply Chain



TNB's Board of Director at the FY2022 Annual General Meeting (AGM).

## Feature Story 2

### ACCELERATING RESPONSIBLE ENERGY TRANSITION

As we move forward into the 21<sup>st</sup> century, the need for a just transition towards sustainable and decarbonised energy systems has become increasingly urgent. The energy supply industry plays a crucial role in this transition. The energy sector has been a significant contributor to greenhouse gas emissions and the shift towards renewable energy sources is necessary to reduce the nation's carbon footprint. To achieve a successful energy transition, it is essential to understand the challenges and opportunities that lie ahead.

With the presence of diverse socio-economic challenges and anticipated uncertainties in the present business environment, TNB acknowledges the need for substantial investment, innovation, as well as cross-sector and cross-border collaborations to facilitate a just transition. TNB, is taking the lead to spearhead the nation's decarbonisation agenda through its Energy Transition Plan towards a more sustainable and resilient energy future. Showcasing our commitment to execute this strategy, TNB has allocated RM14 billion of the Group's total budgeted Capital Expenditure (CAPEX) for 2025 towards its energy transition initiatives.

## RESPONSIBLE GOVERNANCE AND STRENGTHENING BUSINESS RESILIENCE

## Feature Story 2

## ACCELERATING RESPONSIBLE ENERGY TRANSITION

## Accelerating Decarbonisation

TNB is dedicated to achieving decarbonisation and a just energy transition through the implementation of initiatives aimed at reducing emissions and driving business growth. These strategies encompass the early retirement of coal plants, upgrading of existing plants with cleaner technology and collaborating with strategic partners to diversify its power generation portfolio towards cleaner and renewable sources. TNB will also prioritise the adoption of clean energy technologies such as hydro power, CCUS, hydrogen fuel and Small Modular Reactors. Furthermore, these initiatives are anticipated to expedite the economic feasibility of green technology adoption across the nation and beyond.



For more information on CCUS, please refer to Feature Story 3 : Decarbonisation through Innovative Solutions : Carbon Capture section, pages 83-84.

As the custodian of Malaysia's power infrastructure, TNB is committed to developing and investing in enhancing the grid and network infrastructure in Peninsular Malaysia. Our investments in grid modernisation and digitalisation efforts will lead to improved grid flexibility and regional interconnections, making it easier to integrate Variable Renewable Energy (VRE) and Distributed Energy Resources (DER). We are also committed to minimising our impact on the environment by carefully managing land use, preserving forests and utilising cleaner and greener technologies in modernising the grid.



For more information, please refer to Smart Grid section, pages 73-74.

## Expanding Renewable Energy Portfolio

TNB is expanding its portfolio of renewable energy (RE) through solar and wind energy assets (onshore and offshore), both domestically and internationally, as well as investing in energy storage. We aspire is to achieve 7,000 MW of RE installed capacity by 2030 and to capture over 14,000 MW of RE installed capacity by 2050.



For more information, please refer to Sustainable Business Expansion section, pages 75-77.

At TNB, we recognise the significant role that our customers can play in the energy transition journey. TNB encourages customers to take on an active role in monitoring their electricity consumption through smart meters and generating their own renewable electricity as prosumers. We aim to increase the adoption of electric vehicles by developing the EV ecosystem and digital interaction platforms.



For more information, please refer to Electrification section, pages 98-100.

## Modernisation of Grid of the Future

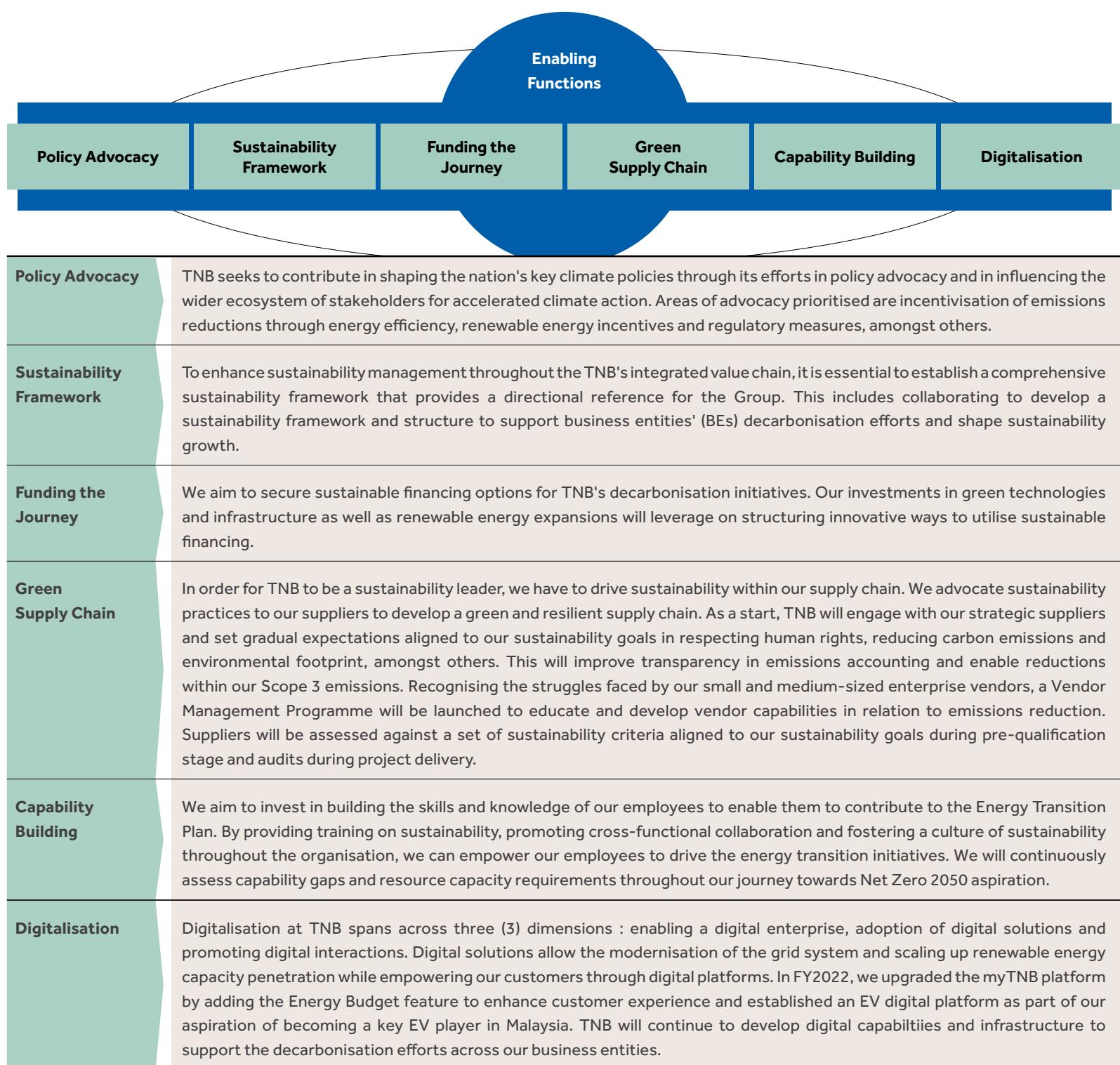
## Empowering Customers in the Energy Transition

## RESPONSIBLE GOVERNANCE AND STRENGTHENING BUSINESS RESILIENCE

### Feature Story 2

#### ACCELERATING RESPONSIBLE ENERGY TRANSITION

In order to remain competitive and meet the expectations of our stakeholders, it is crucial for TNB to develop a comprehensive plan that prioritises sustainability and builds resilience towards climate-related risks. In pursuit of these objectives, TNB has identified six (6) key enablers that can support the execution of the Energy Transition Plan :



## RESPONSIBLE GOVERNANCE AND STRENGTHENING BUSINESS RESILIENCE

### SUSTAINABLE INFRASTRUCTURE AND ECOSYSTEM

TNB's key focus is to accelerate the energy transition and address climate change by digitalising the utilities industry, utilising efficient technology and exploring greener energy sources for enhanced power security.

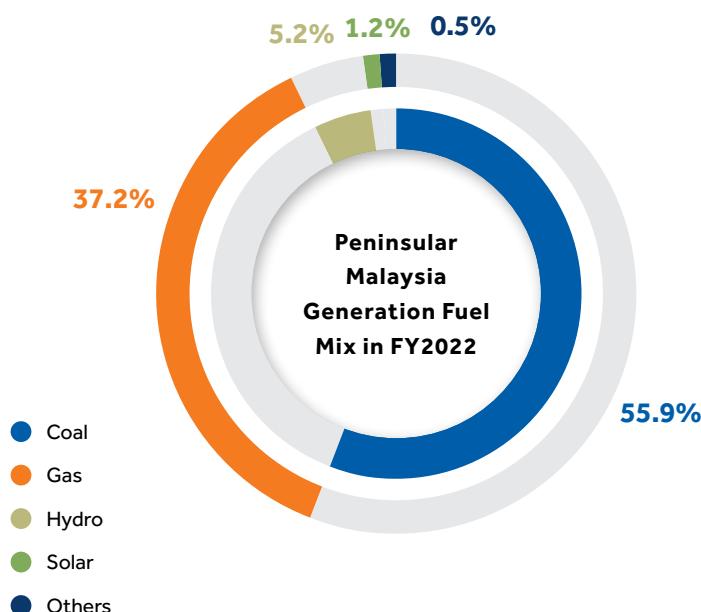
#### GENERATION FUEL MIX

As part of its 12<sup>th</sup> Malaysia Plan, the Malaysian Government has pledged to become a carbon-neutral country by 2050, ahead of COP26. To achieve this goal, the Government has committed to ending the construction of new coal-fired power plants. As a result, it is expected that the proportion of electricity generated from coal will decrease gradually in the coming years.

In balancing the energy trilemma, the Generation Development Plan will be based on a guiding principle of optimum fuel mix to achieve a *Herfindahl-Hirschman Index* (HHI)  $\leq 0.5$ . This would ensure optimum power security by providing adequate diversification of fuel and resources.

TNB's generation fuel mix depends on the Peninsular Malaysia's Generation Development Plan as approved by the Planning and Implementation Committee for Electricity Supply and Tariff (JPPPET), which is chaired by the Ministry of Natural Resources, Environment and Climate Change (NRECC). This plan is developed based on the underlying principle of balancing the security of electricity supply, affordability and environmental sustainability. TNB's target on renewable energy growth aligns with the nation's goal of increasing renewable energy capacity and reducing the greenhouse gas emission intensity of GDP by 45% by 2030.

Our two-prong strategy in greening our generation mix emphasises on reducing our coal capacity in a gradual manner while increasing our renewables energy portfolio.



#### SMART GRID

The Grid of the Future (GoTF) strategy, which is a part of TNB's Energy Transition Plan, aims to modernise and digitalise our grid and distribution infrastructures to support increased integration of distributed generations and renewables. This will lead to enhanced reliability and efficiency of our distribution network and system in delivering services to our customers. This is achieved by better management of distributed generation and possible interconnections with other countries. Additionally, digitalisation opens up possibilities to offer new products and services to meet our customers' needs and expectations.

TNB plans to invest a total of RM21 billion of Capital Expenditure (CAPEX) over a period of three (3) years from 2022 until 2024 in strengthening the grid and reliability of energy supply.

We strive to meet the increasing demand for cleaner electricity contributed by electrification and population growth by accelerating the integration of clean energy within the grid infrastructure. In tandem with this, we are expanding grid accessibility to connect new loads and data centres from potential customers and smart cities in new development areas that will also spur national economic growth.

We facilitate customer participation from two (2) dimensions :

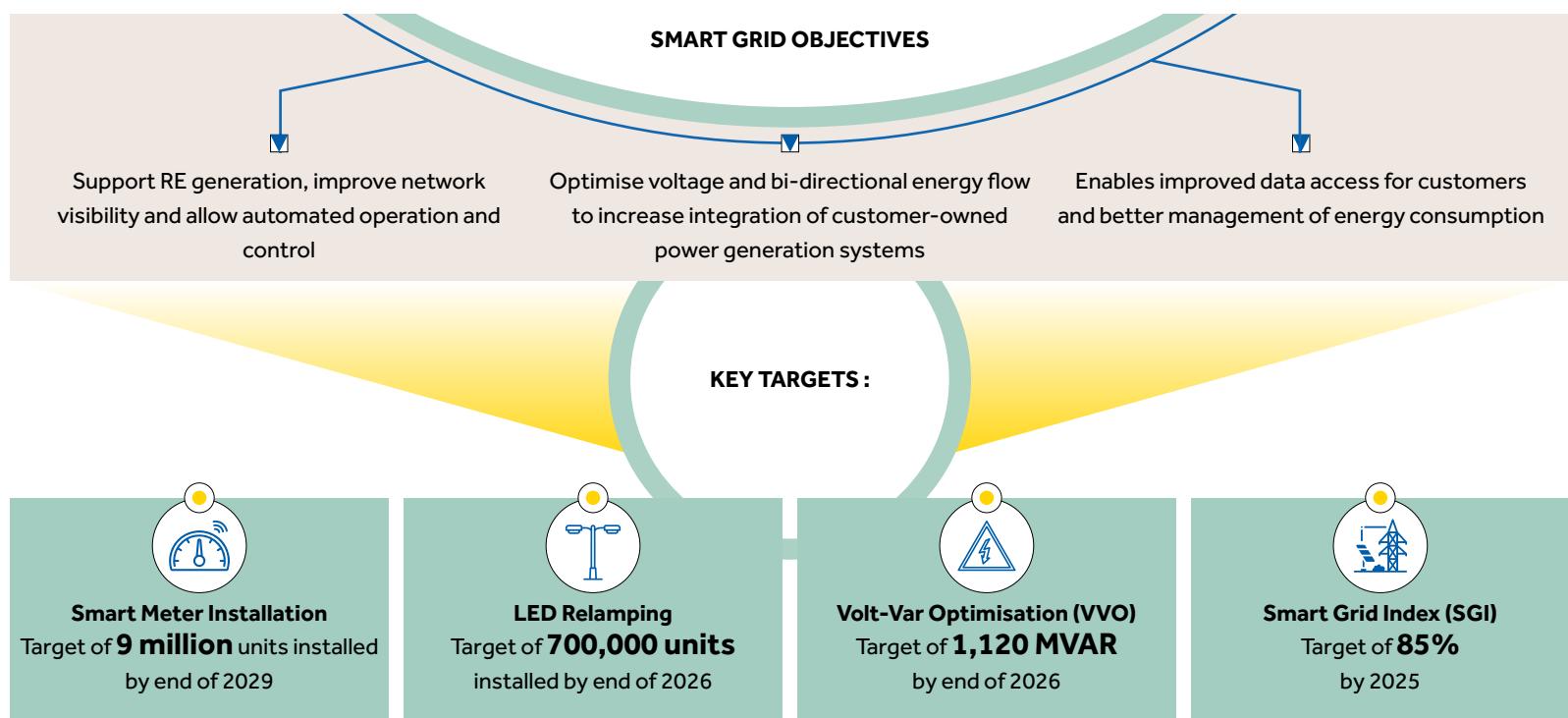
- Encouraging efficient electricity usage; and
- Self-generation of electricity. We enable customers to optimise their energy consumption using real-time electricity consumption data collected from Smart Meters and fed into myTNB app.

The installation of rooftop solar at customer's premises via initiatives such as Supply Agreement for Renewable Energy (SARE) and GSPARX to self-generate electricity on the other hand will encourage the growth of prosumers among TNB's customers.

TNB has made progress in integrating renewable energy into the grid by partnering with commercial customers to provide green energy solutions to reduce load on the grid, as well as conducting research and studies to identify suitable renewable energy solutions to increase RE capacity.

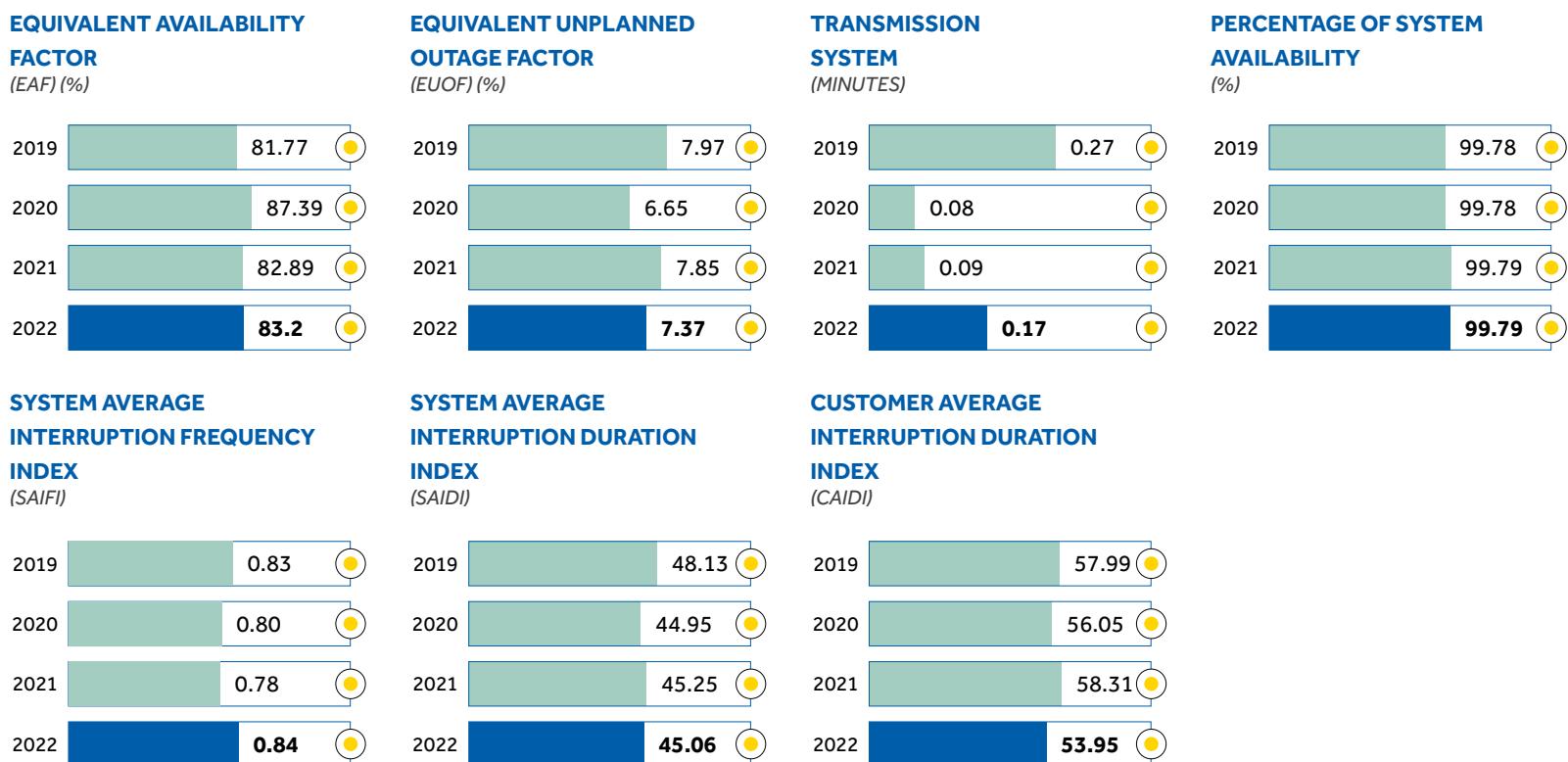
## RESPONSIBLE GOVERNANCE AND STRENGTHENING BUSINESS RESILIENCE

### SUSTAINABLE INFRASTRUCTURE AND ECOSYSTEM



As part of the GoTF, over 2.6 million smart meters have been installed to date. The result of the massive efforts and investments by TNB is manifested through an improvement of the Smart Grid Index (SGI) to 71.4% this year as compared to the preceding year. We aim to achieve a SGI of 85% by 2025. With our ongoing initiatives and strategies in place, we are confident of achieving this target.

### OUR PERFORMANCE FOR FY2022



## RESPONSIBLE GOVERNANCE AND STRENGTHENING BUSINESS RESILIENCE

### SUSTAINABLE BUSINESS EXPANSION

Our aspiration to become a leading provider of sustainable energy solutions aligns with our Energy Transition Plan, which we believe will create value for our stakeholders, spur growth in the energy industry and enhance our customer experience through diversified products and services. To ensure successful delivery of these strategic outcomes, we empower and provide support to relevant business entities to enable them to effectively execute plans and initiatives.

TNB is fully committed to reduce 35% of its carbon emission intensity by the year 2035 via adoption of new emerging technologies such as ammonia, biomass, hydrogen co-firing and Carbon Capture, Utilisation and Storage. These initiatives were intensified across TNB's business unit, divisions and subsidiaries.

We aim to deliver our SP2050 initiatives through a multi-faceted approach. The areas of focus for our energy transition strategy are as follows :

- 1) Reduce Coal Capacity
- 2) Expand TNB's Low Carbon Generation Portfolio
- 3) Increase Adoption of Cleaner Fuel and Green Technology
- 4) Accelerate Green Technologies via Strategic Partnership
- 5) Increase operational efficiency

With regards to our energy transition strategy, our primary goal is to maintain the highest level of reliability excellence in our generation capabilities. This will enable us to uphold the availability and reliability of our critical assets while transitioning towards more sustainable energy sources.

Additionally, we strive to align our efforts with the objective of achieving net-zero emissions. In effort to reduce emission, TNB carbon management plan outlines three (3) key components : reduce, capture and offset emissions.

 For more information, please refer to Carbon Management section, page 95.

TNB's multi-faceted approach towards energy transition :

**1.**

#### Reduce Coal Capacity

Retiring selected coal plants, earlier, than the expiration of their Power Purchase Agreements (PPA), subject to shareholders' agreements and approvals from the relevant authorities and regulators. Feasibility study of coal plants co-firing with ammonia, biomass and coal are ongoing for Jimah East Power (JEP) – 2,000 MW, Kapar Energy Ventures (KEV) – 2,200 MW and Janamanjung – 4,080 MW.

**2.**

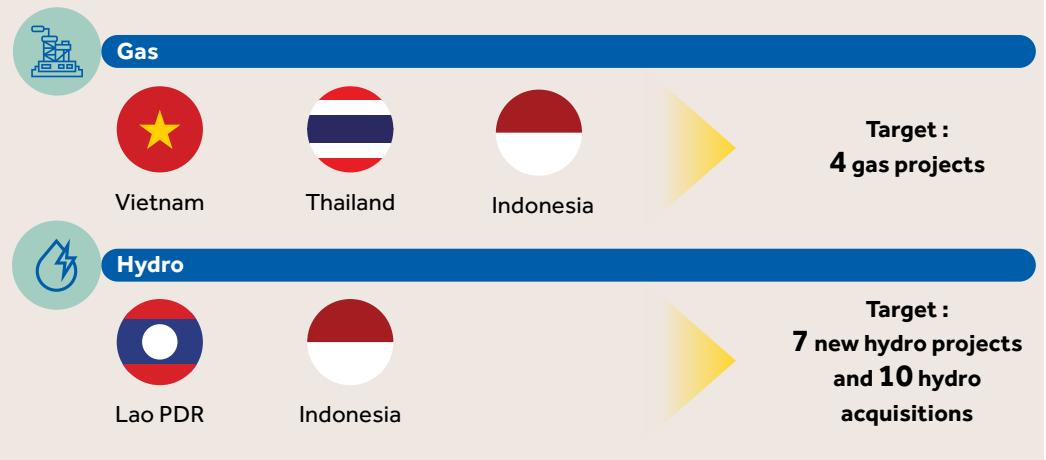
#### Expand TNB's Low Carbon Generation Portfolio

On the domestic front, development of Nenggiri hydro plant is expected to commence commercial operations in 2027. The hydro plant is expected to mitigate 0.3 million tonnes CO<sub>2</sub> yearly. Furthermore, the Energy Commission (EC) has approved TNB's Hydro Life Extension Programme for six (6) stations in the Sungai Perak Power Stations (SSJ Sungai Perak), with an investment of RM5.8 billion. This programme is set to begin in FY2022. As a result, we have increased renewables installed capacity to 3,780 MW representing a growth of 8% compared to FY2021. Overall, these domestic and international RE developments reflect our commitment to expanding its renewable energy portfolio and contributing to a more sustainable future.

On the international front, our New Energy Division (NED) was formed to venture and explore international opportunities. NED plans to expand renewable energy assets through strategic collaborations, mergers and acquisitions and asset development with leading renewable energy companies. We aim to realise our energy transition aspiration and provide better access to new technologies and markets while at the same time leveraging on opportunities to enhance capabilities and knowledge.

In FY2022, NED made significant progress in expanding its renewable energy portfolio. Through its subsidiary, NED has acquired CEI UK Ltd and added 97.3 MW onshore wind portfolio in the UK, increasing Vantage's installed capacity by 22% to 530 MW. In addition, GMR Energy Trading Limited, another shareholding company that operates in India, has successfully commissioned the 180 MW Bajoli Holi hydro power plant in June 2022. In parallel, TNB leveraged on seconndment opportunities in enhancing our people's capabilities.

As the ASEAN Power Grid strengthens the ties among ASEAN nations, TNB is simultaneously increasing its renewable energy presence in the ASEAN markets through gas and hydropower projects with a target share of 360 MW share by 2030 and 800 MW capacity by 2050.



## RESPONSIBLE GOVERNANCE AND STRENGTHENING BUSINESS RESILIENCE

### SUSTAINABLE BUSINESS EXPANSION

3.

#### Increase Adoption of Cleaner Fuel and Green Technology

TNB will construct gas-fired combined cycle gas turbine (CCGT) including hydrogen-ready technology plants, which are expected to be commissioned from 2030 and beyond.

4.

#### Accelerate Green Technologies via Strategic Partnership

TNB plans to collaborate with strategic partners in leveraging technology, expertise and capital to drive the energy transition. TNB GenCo is currently collaborating with Original Equipment Manufacturers (OEMs) of existing power plants in exploring future opportunities.

Strategic partnerships play a vital role in expediting TNB's venture into new green technology development and deployment in the power generation sector as well as provide better access to new technologies and markets.

5.

#### Increase operational efficiency

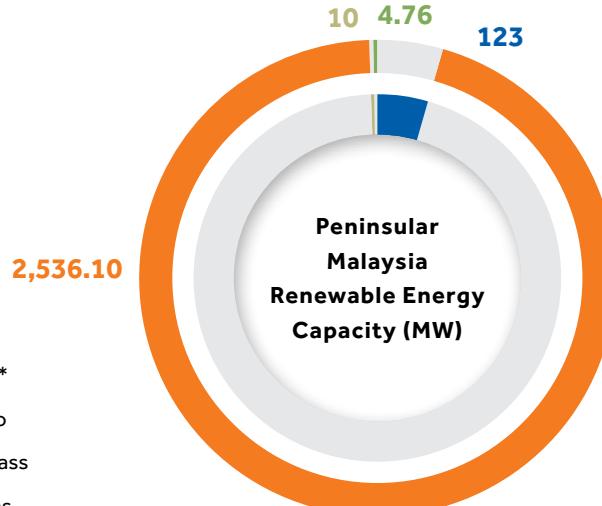
TNB aspires to become one of the top power generation solutions provider that sustainably delivers value to all stakeholders by focusing on key strategic initiatives : Turnaround Excellence, Productivity Uplift and Asset & Service Expansion while sustaining business-as-usual performance within Power Purchase Agreement (PPA) levels. This allows us to utilise our current assets for value uplifts while reducing environmental footprint of older and inefficient assets.

Our strategic imperatives under the ET Plan will enable us to deliver on our interim emission intensity target reduction of 35% by 2035 and put us on track to achieve our Net Zero aspiration by 2050.

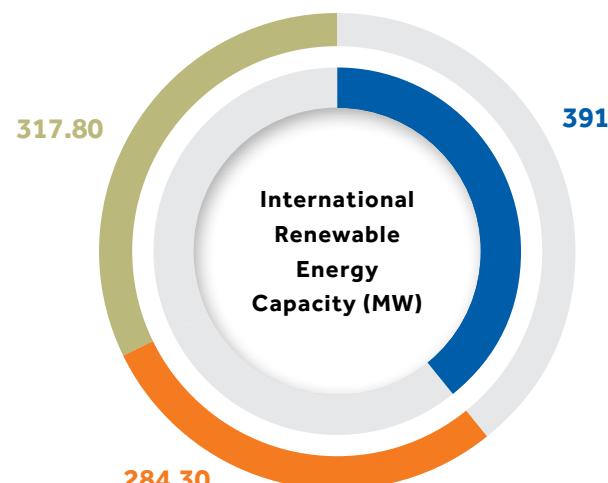
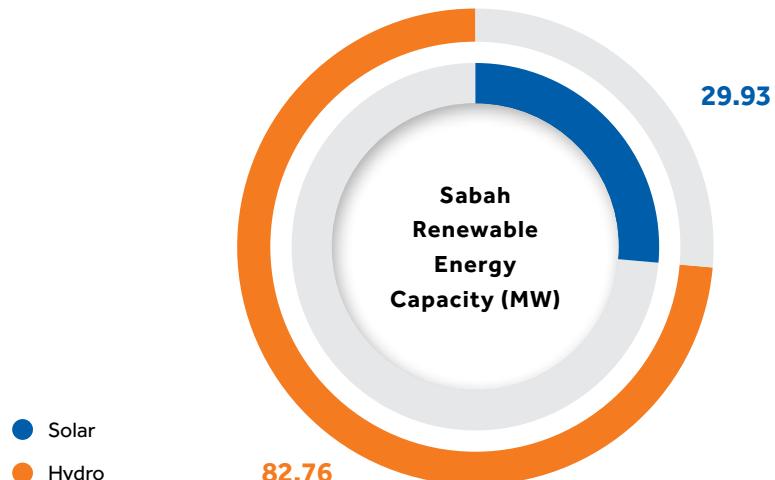


For more information on Renewable Energy Growth Strategy, please refer to Energy Transition Pillar 1 : Future Generation Sources section, pages 94-96.

### OUR PERFORMANCE FOR FY2022



\* Exclude rooftop solar owned by GSPARX



## RESPONSIBLE GOVERNANCE AND STRENGTHENING BUSINESS RESILIENCE

### SUSTAINABLE BUSINESS EXPANSION

To ensure consistent business growth and support our Energy Transition Plan, we have assembled a pipeline of cleaner and renewable energy projects in both the domestic and international markets.

Key Activities	Description
<b>New Combined Cycle Power Plant, Kapar</b>	A proposal for development of a greenfield project that is marked for a combined cycle gas-fired plant, replacing KEV coal capacity and supplying cleaner electricity.
<b>Solar Greenfield Development, UK</b>	TNB has plans to develop Solar greenfield projects and co-located battery energy storage systems, which includes the acquisition of a Ready-to-Build (RTB) stage 102 MW solar and 65 MW co-located battery storage portfolio developed by JBM Solar in the UK. These plans present opportunities for environmental initiatives that align with TBNB's wider biodiversity agenda.
<b>LSS4 Solar Farm development</b>	TNB through its wholly owned Special Purpose Vehicle company, TNB Bukit Selambau Solar Dua Sdn Bhd (TBSS2) has secured financing of up to RM185 million for its third Large Scale Solar (LSS) project in Bukit Selambau, Kuala Muda, Kedah under the Government's Large-Scale Solar 4 (LSS4) programme.

### EXPANDING ENERGY SERVICES

Our wholly owned subsidiary, TNB Energy Services Sdn. Bhd. (TNBES) offers solutions for grid and distribution as well as energy services such as energy audits, efficiency and performance contracting. TNBES aims to secure projects worth up to RM 1.9 billion by 2027 from TNB Distribution Network (TNB DN), TNB Grid and electricity customer markets. To reach this goal, TNBES will focus on developing new capabilities, implementing new technology, increasing visibility and fostering innovation. Digitalisation will also play a crucial role in enhancing operational efficiencies and reducing costs. Key projects undertaken by TNBES include :

Key Activities	Description
<b>Advance Metering Infrastructure (AMI)</b>	TNB is currently expanding the deployment of installation for Advance Metering Infrastructure (AMI) project in RP3 and enhancing feeder identification works. TNBES provides smart meter installation services.
<b>Distribution Network Infrastructure</b>	Upgrading of TNB Distribution Network (TNB DN) infrastructure in providing the basic necessity of access to energy through rural electrification.
<b>RE and Off Grid Power Plants</b>	Operation and maintenance for solar hybrid stations, mini hydro stations and biogas plants throughout Malaysia owned by TNB/TNB DN.
<b>Street Lighting</b>	Upgrade and install LED street lighting in ensuring safer community through brighter surroundings.
<b>Integrated Facilities Management (IFM)</b>	IFM at Platinum Campus, which is certified with Green Building Index (GBI) platinum rating.
<b>Supervisory Control and Data Acquisition (SCADA)</b>	Automated system for fast service restoration in the event of 11kV system breakdown. This improves customer experience and business continuity.
<b>Reliability</b>	Visual inspection and thermal imaging of the Grid Infrastructure to ensure reliability.
<b>Engineering, Procurement, Construction and Commissioning (EPCC)</b>	Design, build and implement RE Plants and Interconnection Infrastructure.
<b>Operation &amp; Maintenance (O&amp;M)</b>	Operate and maintain RE Plants including TNB Grid and TNB DN infrastructure.
<b>Energy Services</b>	Reduce energy consumption and optimise energy usage for commercial and industrial clients through power quality and power system study.

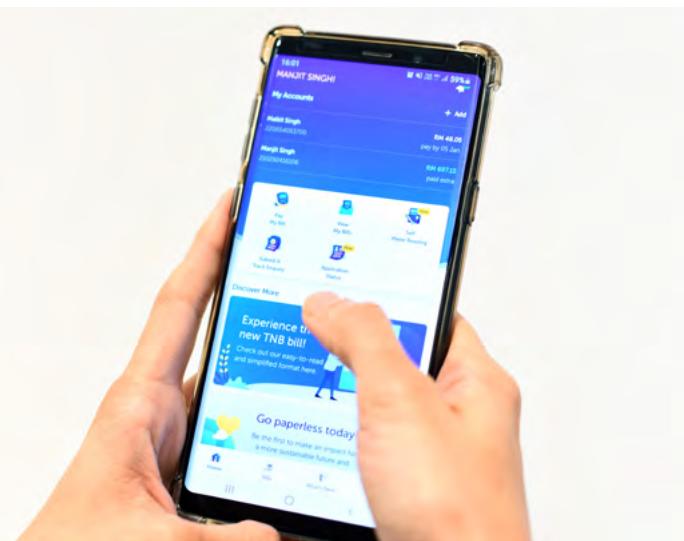
## RESPONSIBLE GOVERNANCE AND STRENGTHENING BUSINESS RESILIENCE

### CUSTOMER CENTRICITY

Our business purpose centres on our customers. We are dedicated to providing our customers with reliable, affordable and long-term services and solutions. We accomplish this by consistently engaging with our customers effectively, all the while preserving their trust in the quality of our products and services.

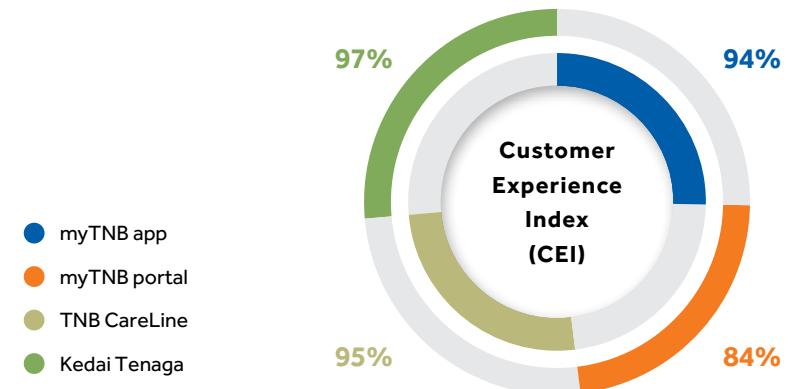
### CUSTOMER ENGAGEMENT AND SATISFACTION

While we have four (4) main communication channels : Click, Call, Come Over and Go Over, we have experienced a significant growth in our Click channel over the years, with the myTNB platform garnering 6.3 million subscribers, representing 63% of our customer base. In FY2022, we achieved a customer interaction index of 90.76%, compared to 89.90% in 2021. The majority of respondents who were satisfied with our customer interactions were digital users, reinforcing our engagement strategy with digital platform users. For customers who prefer in-person transactions, we made it possible to also book appointments for Kedai Tenaga visits through the myTNB web portal.



### CUSTOMER SATISFACTION INDEX (CSI)

(%)

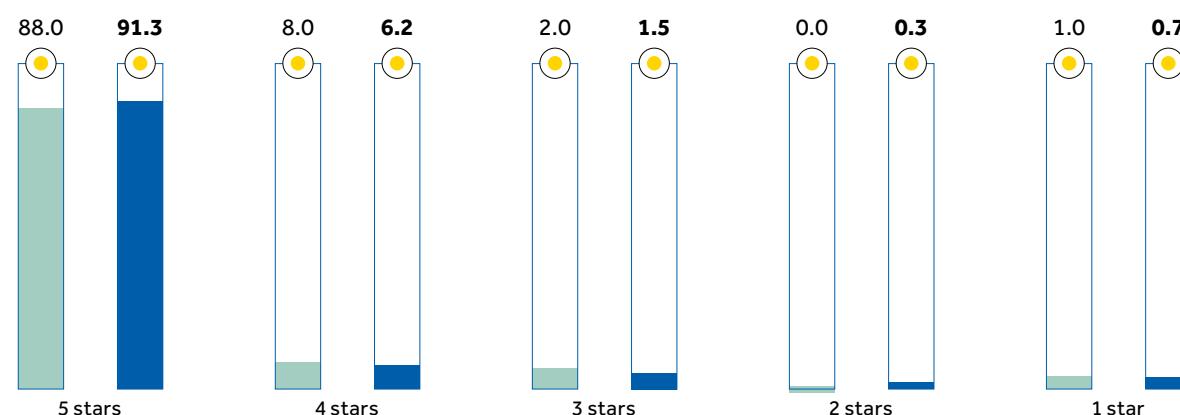


TNB has maintained 87% satisfaction in the Customer Satisfaction Index (CSI) for FY2022. We have successfully achieved the CSI target for FY2022 which was at 86%. The CSI methodology is based on customer segments such as Small Medium Enterprise (SME), Residential, Government and Large Business segment.

### OUR PERFORMANCE FOR FY2022

#### myTNB APP FEEDBACK

(%)

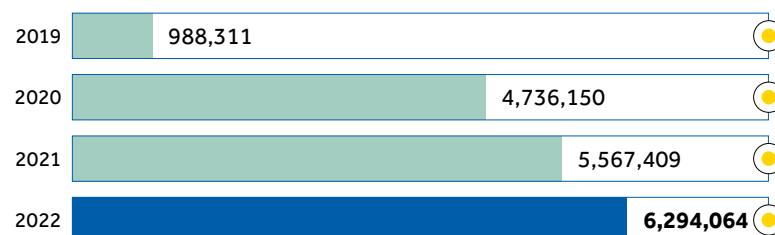
● 2021    ● 2022


## RESPONSIBLE GOVERNANCE AND STRENGTHENING BUSINESS RESILIENCE

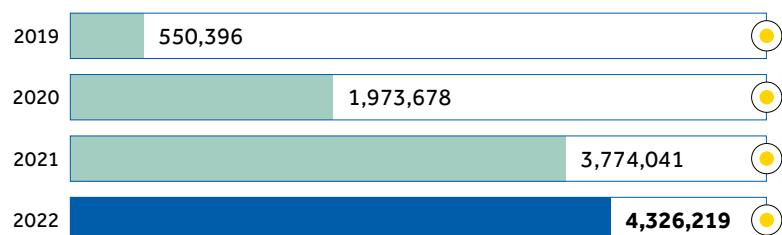
### CUSTOMER CENTRICITY

Feedback on our myTNB app has also achieved an impressive 91.29% of 5 Star ratings received in FY2022 as compared to the 88.2% in FY2021. The number of customers registered on the web and app has also increased in FY2022 to 2.69 million and 5.44 million respectively as compared to FY2021 being 2.36 million and 4.70 million respectively.

#### NUMBER OF CUSTOMER SUBSCRIBED TO myTNB



#### NUMBER OF ACCUMULATIVE DOWNLOADS OF THE myTNB MOBILE APPLICATION



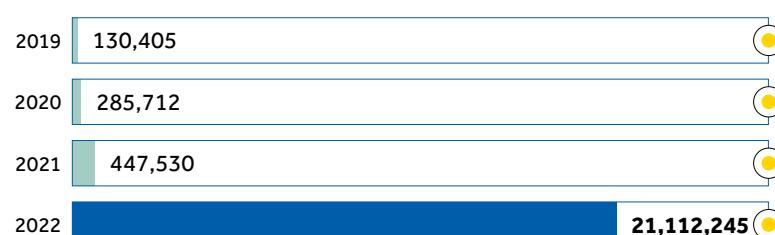
#### NUMBER OF COMPLAINTS RECEIVED



#### PERCENTAGE OF COMPLAINTS RESOLVED (%)



#### NUMBER OF SERVICE REQUESTS RECEIVED



#### PERCENTAGE OF SERVICE REQUEST RESOLVED (%)



#### DIGITALISING CUSTOMER SERVICES

To support our digitalisation efforts, we are continuously upgrading our digital customer platforms to offer more services that meet the needs and expectations of our customers. Our digitalisation initiatives for customers in FY2022 include :

##### myTNB Energy Budget

Enables myTNB smart meter customers to effectively manage their energy usage according to their consumption habits. The Energy Budget feature allows customers to manage their electricity consumption by setting threshold alerts. It proactively engages customers with automated push notifications through myTNB when they reach certain threshold levels (75% and 100%) of their overall budget. In FY2022, TNB had rolled out a new Energy Budget feature in myTNB apps to all residential smart meter customers nationwide. Around 178,000 customers had subscribed to the Energy Budget of which 95% of them have managed to reduce a total of 5.38 GWh which is equivalent to around 1,255 tonnes of CO<sub>2</sub> emission avoidance.

##### Digital Billing and Bill Redesign

Enhanced customer satisfaction and engagement by introducing a user-friendly digital billing layout and enabling customers to make informed choices by opting-in for digital billing and thus becoming more environmental friendly. Around 43,000 customers had successfully opted into digital billing.

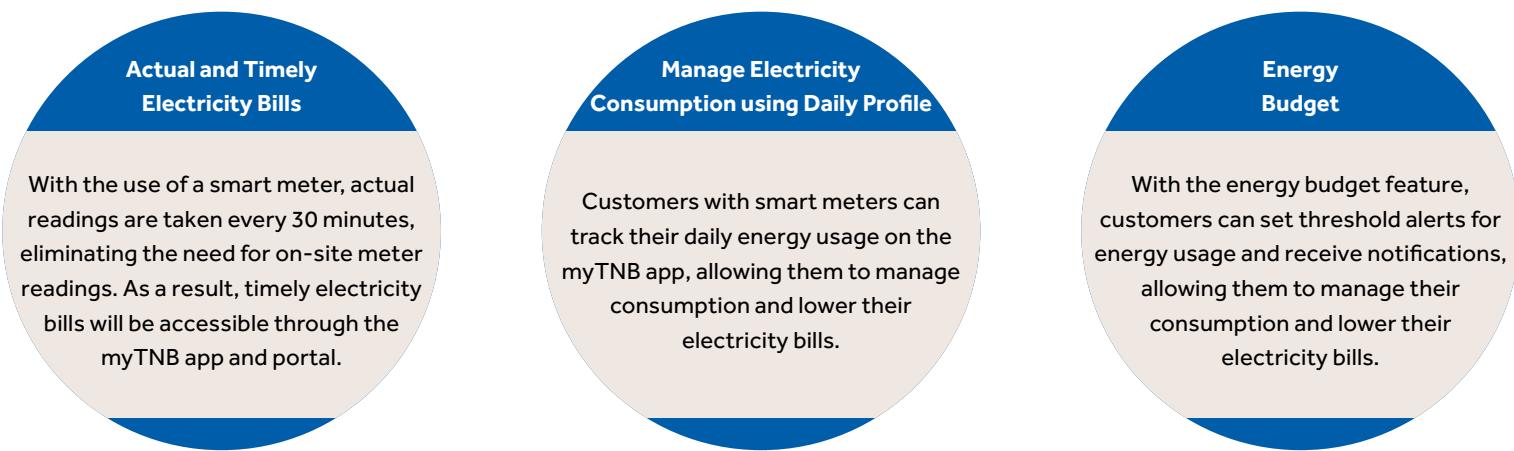
## RESPONSIBLE GOVERNANCE AND STRENGTHENING BUSINESS RESILIENCE

### CUSTOMER CENTRICITY

#### ELEVATING CUSTOMER EXPERIENCE THROUGH CUSTOMER EMPOWERMENT

TNB is vested in enabling greater customer participation in the energy transition journey, facilitated by the Advanced Metering Infrastructure (AMI). The AMI is a smart and integrated system which provides customers with greater control and transparency over their energy consumption. With near real-time access to energy usage data through myTNB web portal and myTNB apps, customers can make informed decisions about their energy usage and adjust their consumption behaviour accordingly. Prudent consumption patterns potentially result in cost savings and a more sustainable lifestyle.

Besides elevating customer experience by providing customers with the ability to monitor their electricity usage, smart meters are also able to monitor bi-directional energy from DER = Distributed Energy Resources such as rooftop solar and electric vehicles. TNB would be able identify issues within the grid in relation to power quality to consumers and understand consumer habits through the AMI and therefore enabling TNB to further improve its services. In 2022, AMI installations exceeded the 2022 target of 600,000 units by installing a total of 838,830 units, with a budget utilisation of RM511.52 million. The AMI deployment in Malaysia has been recognised internationally, as TNB recently won the "Energy Advocate of the Year" award in the smart grid category at Enlit Asia.



#### CUSTOMER PRIVACY

As we improve our customers' experience through digitalisation, we are committed to safeguarding their data privacy from cybersecurity risks and threats. We continuously implement various cybersecurity measures to safeguard our customers' data. The measures include robust initiatives identified in our cybersecurity operating model as well as compliance with the regulations such as Personal Data Protection Act (PDPA) and industry standards such as Payment Card Industry Data Security Standard (PCI DSS). We remain vigilant in our efforts to protect our customers' data from unauthorised access and use.

#### EMPOWERING CUSTOMERS TOWARDS ENERGY TRANSITION

We believe that our customers can play a role in supporting the energy transition by making smart choices and participating in the various Renewable Energy (RE) and Energy Efficiency (EE) programs that we have planned. Our key initiatives for FY2022 include :

Key Activities	Description	Key Contribution
<b>Feed-in Tariff (FIT) Programme</b>	A mechanism granted to selected customers to export all solar energy produced to the TNB grid at a fixed price.	9,482 FIT projects have been commissioned with an installed capacity of 558.09 MW.
<b>Net Energy Metering (NEM) Scheme</b>	Allows customers in Peninsular Malaysia to export excess energy produced from their solar PV systems back to the grid.	14,015 NEM participants making up a total capacity of 698.64 MW.

## RESPONSIBLE GOVERNANCE AND STRENGTHENING BUSINESS RESILIENCE

### CUSTOMER CENTRICITY

Key Activities	Description	Key Contribution
<b>Green Electricity Tariff (GET)</b>	<p>GET is a government initiative to provide any electricity customer an option to obtain renewable energy supply to reduce their carbon footprint.</p> <p>All consumers are eligible for the GET programme which are available in 100 kWh blocks for residential consumers and 1,000 kWh blocks for non-residential consumers at a rate of 3.7 sen/kWh.</p> <p>Consumers enrolled in the GET programme will receive internationally recognised Renewable Energy Certificate (REC) at the end of the calendar year.</p>	In FY2022, GET was fully subscribed from the annual quota of over 4,000,000 MWh.
<b>Supply Agreement for Renewable Energy (SARE)</b>	TNB offers beyond-the-meter scheme, which is a SARE that consists of Power Purchase Agreement (PPA) and Metering, Billing & Collection Agreement in one comprehensive document.	In FY2022, 723 contracts were secured by commercial and industrial customers through SARE. This resulted in a total SARE contracted capacity of 252.34 MWp.
<b>Rooftop Solar PV (GSPARX)</b>	<p>GSPARX is committed to generating new revenue stream for TNB as a preferred choice for one-stop rooftop solar solutions in Malaysia. The potential for rooftop solar projects in Peninsular Malaysia is immense, as it can generate up to 32,000 MW of electricity. Through GSPARX, we empower customers to transition to prosumers through self generation of electricity.</p> <p>GSPARX allows customers (residential, commercial and industrial) to install Solar PV at zero upfront cost and enjoy savings via self-consumption.</p>	<p>In FY2022, GSPARX obtained 248 MWp of rooftop solar PV projects that includes government buildings, universities, commercial and industrial segments.</p> <p>GSPARX has installed solar PV systems at 16 sites within UPM Serdang campus, comprising various buildings including a mosque, rooftop carpark and a floating solar system, making the project the largest solar installation amongst public institutions of learning in Malaysia.</p>
<b>Pelan Jalinan Digital Negara (JENDELA)</b>	Allo Technology Sdn. Bhd. (Allo) aims to extend TNB's fibre coverage throughout Peninsular Malaysia and support the JENDELA programme to build a robust digital infrastructure and bridge the digital divide between the rural and urban communities.	FY2022, Allo completed 178,514 home passes under the JENDELA programme across Melaka, Perak, Kedah, Penang, Selangor, Kuala Lumpur and Johor. Allo aims to expand our network coverage to over 600,000 premises by 2027.

We have also taken steps to increase energy efficiency awareness among our customers through key initiatives :

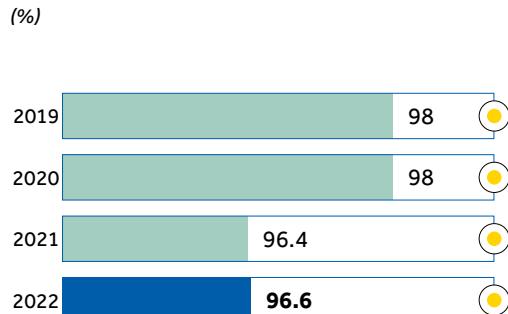
Initiative	Our Performance in FY2022
<b>Sustainability Achieved Via Energy Efficiency (SAVE) 3.0</b>	We supported the Government through the promotion of the SAVE 3.0 programme which offers a RM400 e-rebate programme for households that purchase energy efficient that has undergone a performance test for energy efficient appliances that received a 4 or 5-star energy efficiency labels from the Energy Commission (ST).
<b>Energy Efficiency Awareness Programmes</b>	In collaboration with <i>Persatuan Pengguna Islam Malaysia</i> (PPIM), we conducted <i>Kempen Kesedaran dan Didikan Pengguna Bijak Tenaga</i> via seven (7) videos posted on PPIM social media platforms to raise awareness related to electricity and saving energy. Additionally, we organised <i>Kuasa Di Tangan Anda</i> seminar programme from May to October 2022, in collaboration with Ministry of Higher Education (MOHE) and <i>Jabatan Pendidikan Politeknik dan Kolej Komuniti</i> (JPPKK), which involved conducting 10 seminars at eight (8) Polytechnics and two (2) Community Colleges. These seminars outreach to 1,362 student participants and helped them gain a better understanding about energy efficiency, electrical regulations and safety practices.

## RESPONSIBLE GOVERNANCE AND STRENGTHENING BUSINESS RESILIENCE

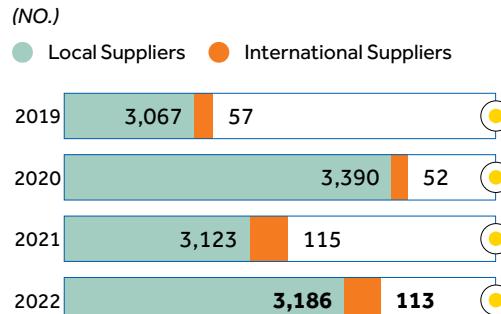
### SUSTAINABLE SUPPLY CHAIN

TNB aims to establish a sustainable supply chain ecosystem that upholds high standards of ethics, integrity and transparency. By integrating digitalisation into the procurement process and digitally transforming business processes, we hope to reduce the time spent on manual procurement systems. We support local Malaysian suppliers and understand the importance of our role in strengthening the local value chain ecosystem.

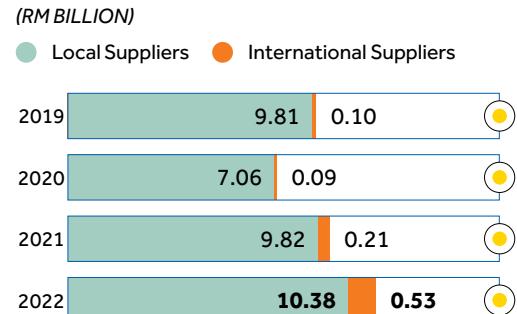
#### PERCENTAGE OF LOCAL SUPPLIERS (%)



#### TOTAL NUMBER OF SUPPLIERS (NO.)



#### TOTAL SPENT ON PROCUREMENT (RM BILLION)



#### PROCUREMENT & SUPPLY CHAIN (P&SC) 2.0

TNB has enhanced its P&SC organisational structure and operational model to support future-proofing initiatives and digital capability advancement. FY2022, P&SC has successfully completed and launched the Procurement Cycle Digitalisation (PCD) 2.0, a digital management platform that facilitates the End to End work flow in procurement and supply chain in TNB. To advance further, P&SC will upgrade the Procurement Backbone system that will position P&SC as a strategic business partner for procurement, aiding TNB in achieving its sustainability goals.

The new Procurement Backbone will improve the performance of P&SC's three functional pillars : Category Excellence (CATEX), Key Account and Service Excellence (KASE) and Supplier Excellence & Ecosystem Development (SEED). Additionally, it will increase P&SC efficiency through more accurate and holistic analysis, category management and cost/market intelligence. The Procurement Backbone will have advanced capabilities and functionalities supported by automation, analytic capabilities, Artificial Intelligence (AI) and Machine Learning (ML) which will ensure seamless operation and excellent customer experience.

Key areas of the Procurement Backbone :



# CLIMATE CHANGE AND ENVIRONMENT



## Related Material Matters

- Climate Change and Emission
- Energy Transition and Innovation
- Environmental Management

*TNB holds a stake in offshore wind turbines owned by Blyth Offshore Demonstrator Ltd (BODL) through its wholly owned subsidiary, Vantage RE Ltd.*



## Feature Story 3

### DECARBONISATION THROUGH INNOVATIVE SOLUTIONS : CARBON CAPTURE

Being a prominent power utility player, we acknowledge the significance of tackling climate-related risks for business resilience and addressing the interests of our stakeholders. We strive to minimise our carbon footprint as well as capitalising on decarbonisation opportunities. In line with our net zero aspiration, we have designed a holistic carbon management strategy that focuses on reducing emissions, capturing emissions and offsetting remaining emissions, net of reductions, via high-quality and credible carbon credits.

Since 2011, TNB has been extensively involved in research and development (R&D) as well as innovative projects to uncover promising initiatives and technologies through our research division, TNB Research

Sdn. Bhd. While amplifying efforts to reduce carbon emissions, in tandem, TNB has recognised carbon capture and utilisation (CCU) as a critical solution for the removal of emissions. TNB has made significant progress in the field of CCU R&D whereby our pilot plants has achieved promising results of absorbing up to 90% of carbon emissions from our coal-fired power plant flue gas. Nonetheless, we are refining the implementation of CCU technology on a larger-scale, with a focus on enhancing its economic viability and exploring its full potential. We believe that by working together with industry partners, academic institutions and government agencies, we can accelerate progress towards our commitment of SP2050.

Our CCU R&D journey thus far covers the following areas :

#### 1. Chemical Approach

Our research focuses on optimisation of chemical-based post combustion carbon capture process to reduce the energy requirement of CCU. We have completed five (5) projects with our chemical-based R&D facilities.

Through R&D at our pilot plants, we are able to absorb 90% of carbon emissions from coal fired power plant flue gas. Reduction of energy requirement was also observed through the optimisation of capture process. We hold two (2) patents and numerous publications in relation to our completed projects.

## CLIMATE CHANGE AND ENVIRONMENT

### Feature Story 3

#### DECARBONISATION THROUGH INNOVATIVE SOLUTIONS : CARBON CAPTURE

##### 2. Biological Approach

We have completed seven (7) projects using the direct carbon utilisation from flue gas emission through microalgae photosynthesis process, producing biomass as by-product. Our research includes monetisation of the biomass which can be cultivated and post processed for downstream applications:

## First pilot algae bio-CCU technology in Malaysia

tested with actual flue gas from live coal fire power plant

## Four (4)

local marine species of microalgae has been identified to capture CO<sub>2</sub>

Development of

## Microalgae Mass Cultivation and Monitoring Training Module

for local and international participants

Able to capture up to

## 2.3g CO<sub>2</sub> /litre

from 4,500 litre of outdoor microalgae culture facility

##### 3. Carbon Utilisation Approach

Carbon utilisation is the process of converting captured CO<sub>2</sub> into useful products such as chemicals, fuels and construction materials. We are conducting R&D on CO<sub>2</sub> Utilisation using Renewable Energy (CURE), where CO<sub>2</sub> from our thermal power plant is combined with hydrogen to produce methane as an alternative fuel. The project utilises green hydrogen which is produced using renewable energy. The products from carbon utilisation have the potential to create new revenue streams for TNB when commercialised.

### FY2022 Highlight

#### Partnering for a Sustainable Malaysia : Spearheading New Green Technologies in Malaysia

In accelerating decarbonisation in the energy sector, TNB has signed a MoU with PETRONAS to explore new green technologies against a mutually beneficial ambition of supporting the national aspiration to be a carbon neutral nation by 2050. The first initiative under the MoU is a collaborative study on the development of green hydrogen ecosystem and CCUS leveraging on TNB's power plant assets. The collaboration seeks to develop green hydrogen fuel for power generation and intensify efforts to co-create a green hydrogen ecosystem to provide cleaner energy solutions for Malaysia and international markets.

TNB plans to invest RM6.3 billion in the rebuild of TNB's retired Sultan Ismail Power Station in Paka, Terengganu using high-efficient Combined Cycle Gas Turbine by 2029 towards cleaner energy production. Paka power plant serves as a unique pioneering



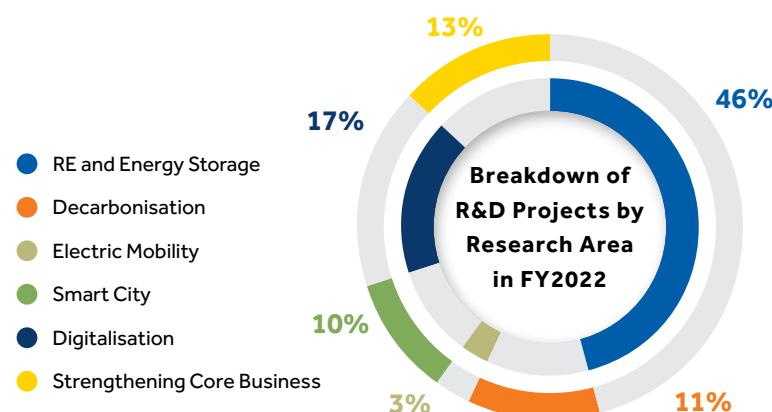
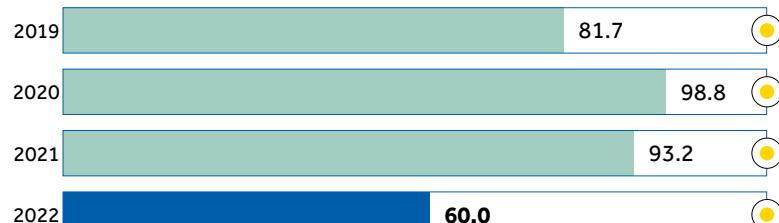
project in deploying green technologies that may be utilised in future power plants. The MoU will also include evaluating integrated onshore and offshore CO<sub>2</sub> facilities.

## CLIMATE CHANGE AND ENVIRONMENT

## ONGOING INNOVATION, RESEARCH AND DEVELOPMENT

TNB has been actively investing in R&D of new technologies which can assist in climate change mitigation. Commencing this year, we have centralised our R&D, innovation and technology expenditure under TNB Technology Fund, governed by the Technology Council. This fund is responsible for managing projects that promote the Energy Transition agenda, enabling greater focus on impact of investment. Although our investment in research and development decreased in FY2022 in comparison to previous years, we have entered into several MoUs, strategic partnerships and collaborations, providing additional resources for the ET agenda. For the year 2023, we have allocated RM60 million towards research and development efforts related to the Energy Transition.

**R&D INVESTMENT**  
(RM MIL)



Key Activities	Description
<b>Renewable Energy</b>	<p><b>Solar PV Cooling Technology</b> TNB Research Sdn Bhd (TNBR) has successfully developed two (2) types of retrofit PV cooling systems (active and passive cooling systems), which improve the energy yield of the PV system.</p> <p><b>Biogas production via Co-Digestion Technology using Palm Oil Mill Waste</b> TNB has concluded research on biogas production using anaerobic co-digestion method on a combination of substrates containing Palm Oil Mill Effluent (POME), empty fruit bunch (EFB) fibres and decanter cake. The research project determined biogas potential from different combination ratio of these substrates and provided recommendations to optimise the current biogas facility.</p> <p><b>Biogas source from non-POME organics</b> TNBR is collaborating with other divisions, subsidiaries and external parties to carry out feasibility study of biogas plants from non-POME organics, such as food and animal waste.</p> <p><b>Biodiesel Fuel for Greener and Sustainable Power Generation</b> This research aims to develop a fully automated, large-scale biodiesel processing unit to produce biodiesel from waste cooking oil for TNB Fleet Management, as well as to assess the potential savings from using biodiesel blended diesel in TNB mobile gensets and TNB vehicles.</p> <p><b>Small hydropower solution</b> TNBR collaborated with Sedania Technologies Sdn Bhd to develop small hydropower for installation at Gunung Pulai water treatment plant and Seluyut Dam.</p> <p><b>Melaka Smart Grid Demonstration</b> TNBR partnered with Malaysian Industry-Government Group for High Technology (MIGHT) and Majlis Perbandaran Alor Gajah (MPAG) for rooftop solar PV System installation.</p> <p><b>Exploring suitable crop alternatives for biomass energy generation</b> TNBR has developed a technology that improves the fuel properties of empty fruit bunch (EFB) for power generation.</p>

## CLIMATE CHANGE AND ENVIRONMENT

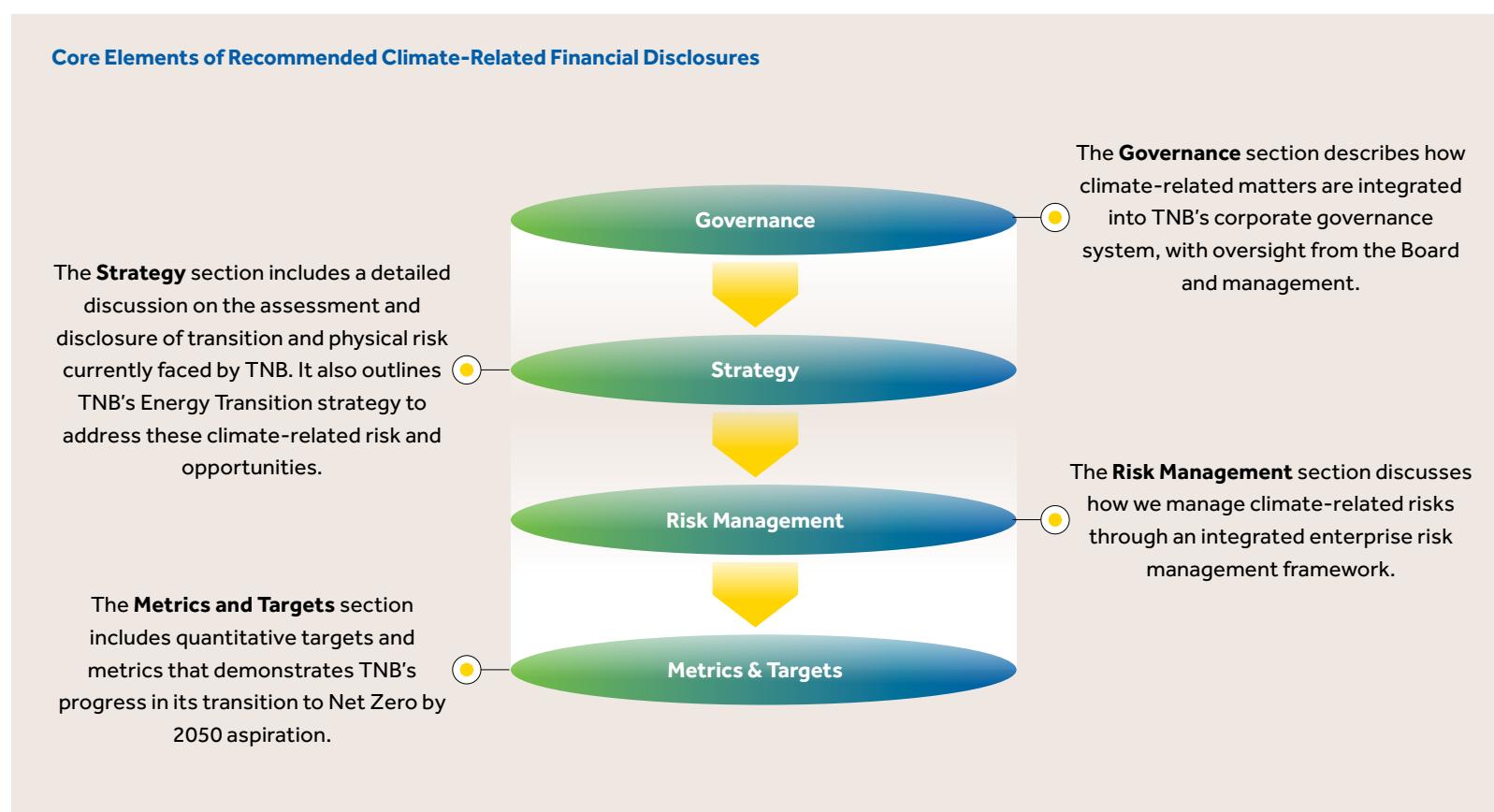
Key Activities	Description
<b>Renewable Energy</b>	<p><b>Pyrolysis of Organic and Plastic waste to Bio-oil (Waste-to-Energy)</b></p> <p>TNB is exploring waste to energy system which aims to divert the organic and plastic waste from the municipal solid waste (MSW) in landfills for this project. A trial of the systems is currently in progress.</p> <p><b>Green Hydrogen</b></p> <p>The research is in its initial stages whereby we are studying the potential use of Two Stage Anaerobic Digestion Technology (TSAD) on organic waste.</p> <p><b>Floating Solar</b></p> <p>TNB has also made use of its ash pool at Sultan Azlan Shah Power Station in Manjung Perak to construct its pilot floating solar plant with an installed capacity of 105.12 kWp. The 175-hectare pond which is a dumping ground for ash from the power plant, can now be potentially used as a floating solar farm to generate energy of at least 100 MW. TNB is also conducting a feasibility study on floating solar potential at hydro dams with local solar EPCC and solar float manufacturers.</p>
<b>Decarbonisation</b>	<p><b>Carbon Capture, Utilisation and Storage (CCUS)</b></p> <p>TNB has been conducting CCUS studies since 2021, including chemical, biological and utilisation approach.</p> <p> For more information on our CCUS R&amp;D, please refer to Feature Story 3 : Decarbonisation Through Innovative Solutions : Carbon Capture section on pages 84-85 for more details.</p> <p><b>Developed an algorithm for palm oil plant optimisation</b></p> <p>TNBR partnered with Sime Darby to achieve optimum output of oil extracted from palm oil plants.</p> <p><b>Empty Fruit Bunch (EFB) Co-firing Feasibility Study</b></p> <p>TNBR has embarked on a collaborative effort with TNB GenCo in carrying out a feasibility study for co-firing high quality empty fruit bunch (EFB) pellets in a power plant.</p> <p><b>Ammonia-Biomass Coal Firing (ABC) Feasibility Study</b></p> <p>GenCo, JEP, Mitsui &amp; Co and Chugoku collaboratively agreed to conduct a feasibility study on co-firing of biomass and ammonia in Jimah East Power Sdn. Bhd. to reduce our coal usage in tandem with efforts to reduce the emissions from plant operations. The first phase of the feasibility study has been completed in FY2022 and we are currently embarking on the second phase, which focuses primarily on small-scale ammonia, biomass and coal firing.</p> <p><b>Research Collaboration agreement for joint development of battery energy storage system</b></p> <p>TNBR partnered with Korean Technology Partner Research for joint development of battery energy storage system.</p>
<b>Biodiversity</b>	<p><b>Hydroelectric Dams Impact on Wildlife Diversity</b></p> <p>TNBR and PERHILITAN conducted a comprehensive environmental impact analysis for the impact on wildlife diversity and sustainability due to construction and impoundments of hydroelectric dams.</p>
<b>Water Management</b>	<p><b>Water Stress Assessment</b></p> <p>TNBR has also conducted assessment on potential water stress of its selected thermal power plants in Peninsular Malaysia. The assessment covers the water footprint and identifying various mitigation measures to reduce water consumption and achieve minimum water discharge. The outcome is to install a water reclamation plant to recycle water discharged from the thermal power plants and explore alternative water resources.</p>
<b>Building Resilience Towards Natural Disasters</b>	<p><b>Monitoring Flood Risk with the Latest Climate Technology</b></p> <p>TNB collaborated with Jabatan Pengaliran &amp; Saliran (JPS) and Malaysia Meteorology Department (MetMalaysia) to introduce the Flood Analysis and Risk Assessment (FARA) as a measure to monitor and analyse rainfall and water level in operating areas, as well as weather forecast information which is subsequently sent out to our Operation Team. We utilise information gathered from JPS website and geo-spatial mapping to identify and trigger flood warning to our team.</p>

## CLIMATE CHANGE AND ENVIRONMENT

### OUR RESPONSE TO CLIMATE CHANGE

As an energy utility company, we recognise the impact on climate change that we contribute, as well as the threats of climate change to our existing infrastructure as well as our business sustainability. To ensure continuous and reliable supply of electricity to the nation, we are actively transforming and decarbonising our operations.

Since 2019, TNB has voluntarily adopted the Task Force on Climate-related Financial Disclosures (TCFD) framework to address potential climate-related physical and transition risks and opportunities on our business strategy, as well as the resulting financial impact.



### CLIMATE GOVERNANCE

The Board is committed to strategically integrate sustainability across TNB's business and advancing our sustainability efforts, including climate-related matters. They will deliberate and approve the sustainability strategy and pathway while overseeing TNB's implementation and performance on sustainability – these include the materiality assessment, Energy Transition Plans and TNB Sustainability Pathway 2050 (SP2050).

TNB's Sustainability Governance outlines clear roles and responsibilities in relation to sustainability and climate change for each level of leadership. The establishment of the Sustainability and Energy Transition Council (SETC), chaired by the CEO and composed of TNB's corporate senior management team is tasked to oversee the progress of sustainability

and energy transition development and implementation. Business Units are responsible for managing sustainability and climate risks and opportunities as well as monitoring performance of related initiatives rolled out by TNB in their respective units. Business Units are required to report their sustainability performance to SETC on a regular basis.

The Corporate Strategy and Sustainability Department is assigned as SETC secretariat and administers council meetings and ensures that decisions are clearly communicated to respective parties.

Principles to guide climate action, particularly on GHG emissions, are covered under our Environmental Policy, Environmental Management System, Sustainability Energy Management (SEM) Framework based on the ISO 50001:2011 Energy Management System, ASEAN Energy Management System (AEMAS) and Grid Green Code of Conduct.



For more information on sustainability governance, please refer to Creating Value Through Strong Governance section, pages 162-163.

## CLIMATE CHANGE AND ENVIRONMENT

### OUR RESPONSE TO CLIMATE CHANGE

#### CLIMATE SCENARIO

Since 2021, we have conducted climate scenario analysis with reference to the IPCC RCP scenarios and Network of Central Banks and Supervisors for Greening the Financial System (NGFS) scenarios. TNB's climate change scenario analysis considers the following pathways :

Types of scenarios	Scenario Description	Temperature increase by 2100	Transition Consequence
<b>Business-as-usual</b> IPCC Representative Concentration Pathways (RCP) 8.5/4°C (high emission scenario)	The 'Business as usual' scenario suggests a likely outcome if society does not make concerted efforts to cut greenhouse gas emissions.	>4°C	High
<b>Limited Mitigation</b> IPCC Representative Concentration Pathways (RCP) 6.0/3°C (moderate emission scenario)	The scenario suggests a future in which greenhouse gas emissions continue to rise at a moderate rate but stabilised at 2070.	2.6°C	Moderate
<b>Strong Mitigation</b> NGFS' Nationally Determined Contributions (NDCs) scenario	The NDC scenario includes all pledged policies even if not yet implemented, based on the trajectory associated with global NDC commitments to limit the impact of climate change.	2°C to 3°C	Moderate
<b>Aggressive Mitigation</b> NGFS' Net Zero 2050 scenario	An ambitious scenario that limits global warming to 1.5°C through stringent climate policies and innovation, reaching net zero CO <sub>2</sub> emissions around 2050.	1.5°C to 2°C	Low

With reference to the scenario pathways above, we have identified both climate-related transition and physical risks and opportunities and the potential impact on our business across our operations over short-term, medium-term and long-term horizon. Overall, TNB will have high exposure to most transition risks identified by 2050 and this will be addressed via TNB's Strategic Pillars to ensure TNB maintains its competitive edge and remains resilient.

#### TRANSITION RISKS AND OPPORTUNITIES

Transition risk refers to risks related to the transition to a low-carbon economy. Given Malaysia's commitment to carbon neutrality by 2050, policy and regulatory changes are expected to be key drivers of decarbonisation. Due to the nature of long asset life of our utilities, TNB is exposed to the key transition risks outlined below.

Transition Risk	Impact	Division impacted	Net Zero <sup>1</sup>		NDC <sup>2</sup>		Management Approach
			2030	2050	2030	2050	
<b>Policy and legal</b>							
<b>Carbon price</b> Introduction of carbon pricing mechanisms on carbon emissions	Increase in operational expenditure Decrease in revenue	Group	●	●	●	●	TNB is minimising exposure to risks through responsible decarbonisation based on our Energy Transition strategy.   For more info, please refer to Energy Transition Pillar 1 : Future Generation Sources, pages 94-96.

Legend : ● Risk exposure is low ○ Risk exposure is moderate ■ Risk exposure is significant ▲ Risk exposure is high

- Net Zero Scenario is aligned to commitments countries are making, going beyond NDCs to achieve Net Zero Emissions by 2050 and restrict warming to well below 2°C (i.e. Paris Accord)
- Nationally Determined Contributions (NDCs) is based on the trajectory associated with global commitments that are aligned to current Nationally Determined Contributions (NDCs) to limit the impact of climate change.

## CLIMATE CHANGE AND ENVIRONMENT

## OUR RESPONSE TO CLIMATE CHANGE

Transition Risk	Impact	Division impacted	Net Zero <sup>1</sup>		NDC <sup>2</sup>		Management Approach
			2030	2050	2030	2050	
<b>Policy and legal</b>							
<b>Emissions reporting obligations</b>  Increased expectations from regulatory bodies for companies to track and publicly report on emission	Penalties for non-disclosure	GenCo and NED	●	●	●	●	TNB is reskilling talent with skills required across our Energy Transition with focus on analytics and strategy development capabilities.
<b>Exposure to litigation</b>  Fines and judgments driven by environmental and climate activism	Increase in operational expenditure	Group	●	●	●	●	TNB is minimising exposure to risks through responsible decarbonisation based on our Energy Transition strategy.   For more info, please refer to Feature Story 6 : Prioritising People : Safeguarding Safety and Well-Being, pages 94-96.
<b>Technology</b>							
<b>Low carbon technology</b>  Deployment of low emissions technology to meet decarbonisation commitments	Increase in Capital Expenditure (CAPEX)	GenCo and NED	●	●	●	●	TNB is maximising opportunities by increasing renewable energy, hydrogen-related technology and energy storage.   For more info, please refer to Energy Transition Pillar 1 : Future Generation Sources, pages 94-96.
<b>Talent</b>  The requirement to upskill and reskill talent to navigate new and emerging technologies	Increase in operational expenditure	GenCo	●	●	●	●	TNB is reskilling our talent with skills required across our Energy Transition strategy.
<b>Market</b>							
<b>Reduction in market share</b>  Changes in market demand or consumer sentiment from specific market (e.g. wholesale) which has a higher margin	Decrease in revenue	GenCo	●	●	●	●	TNB is minimising exposure to risks through responsible decarbonisation based on our Energy Transition strategy. TNB is also expanding the business beyond the meter involving the customers as prosumers in our Energy Transition journey.
<b>Shift in customer behavior</b>  Changing customer behavior and preference for low carbon options	Decrease in revenue	Retail	●	●	●	●	 For more info, please refer to Energy Transition Pillar 3 : Winning the Customer, pages 98-100.

Legend: ● Risk exposure is low ● Risk exposure is moderate ● Risk exposure is significant ● Risk exposure is high

- Net Zero Scenario is aligned to commitments countries are making, going beyond NDCs to achieve Net Zero Emissions by 2050 and restrict warming to well below 2°C (i.e. Paris Accord)
- Nationally Determined Contributions (NDCs) is based on the trajectory associated with global commitments that are aligned to current Nationally Determined Contributions (NDCs) to limit the impact of climate change.

## CLIMATE CHANGE AND ENVIRONMENT

### OUR RESPONSE TO CLIMATE CHANGE

Transition Risk	Impact	Division impacted	Net Zero <sup>1</sup>		NDC <sup>2</sup>		Management Approach
			2030	2050	2030	2050	
<b>Market</b>							
<b>Stranded assets</b>  Assets that have suffered from unanticipated or premature write-downs or devaluation due to change of demand	Decrease in revenue	GenCo	●	🟡	🟡	●	TNB is minimising exposure to risks through responsible decarbonisation based on our Energy Transition strategy.   For more info, please refer to Energy Transition Pillar 1 : Future Generation Sources, pages 94-96.
<b>Divestment</b>  Increased investor scrutiny over uncertain future sustainable earnings and their commitments to responsible financing leading to investment sell-off	Increase in cost of capital	GenCo	●	●	🟡	●	

Legend: ● Risk exposure is low   ● Risk exposure is moderate   ● Risk exposure is significant   ● Risk exposure is high

1. Net Zero Scenario is aligned to commitments countries are making, going beyond NDCs to achieve Net Zero Emissions by 2050 and restrict warming to well below 2°C (i.e. Paris Accord)  
2. Nationally Determined Contributions (NDCs) is based on the trajectory associated with global commitments that are aligned to current Nationally Determined Contributions (NDCs) to limit the impact of climate change.

Climate change is a key risk driver for the electric utility sector. It does, however, present opportunities in the transition to a low-carbon economy.

Transition Opportunities	Impact	Division impacted	Net Zero		NDC		Management Approach
			2030	2050	2030	2050	
<b>Products and Services</b>							
<b>Electrification</b>  Introduction of EV policy aimed at increasing electric vehicle uptake	Increased revenue from growth opportunities for e-Mobility services (EV charging infrastructure)	Retail	●	●	●	●	TNB is maximising opportunities through our Energy Transition strategy.   For more info, please refer to the 3 pillars of our Energy Transition strategy – Future Generation Sources, Grid of the Future and Winning the Customer , pages 94-100.
<b>Renewable energy growth</b>  Acceleration of renewables expansion in regional and international markets, leading to increased revenue	Increased revenue	GenCo, NED, Retail	●	●	●	●	

Legend: ● Risk exposure is low   ● Risk exposure is moderate   ● Risk exposure is high

## CLIMATE CHANGE AND ENVIRONMENT

## OUR RESPONSE TO CLIMATE CHANGE

Transition Opportunities	Impact	Division impacted	Net Zero		NDC		Management Approach
			2030	2050	2030	2050	
<b>Products and Services</b>							
<b>Low carbon options</b>  Opportunities beyond the kWh solutions (EE, rooftop solar, storage) due to a shift in customer behaviour (prosumers) leading to creation of new revenue streams	Creation of new revenue streams	Retail, Transmission and Distribution	●	●	●	●	TNB is maximising opportunities by our Energy Transition strategy.   For more info, please refer to the 3 pillars of our Energy Transition strategy – Future Generation Sources, Grid of the Future and Winning the Customer, pages 94-96.
<b>Diversification of business activities</b>  Diversifying business activities through the use of distributed generation, hydrogen, O&M as green technologies emerge (e.g. hydrogen, storage, CCU) through partnerships	Creation of new revenue streams	Group	●	●	●	●	
<b>Energy Source</b>							
<b>Shift towards decentralisation</b>  Increasing system efficiencies through the reduction of peak load to reduce transmission losses and allow for the extension of generational assets	Reduced operational expenditure and increased profit margins	GenCo, NED, Transmission and Distribution	●	●	●	●	TNB is maximising opportunities via our Energy Transition strategy.   For more info, please refer to the 3 pillars of our Energy Transition strategy – Future Generation Sources, Grid of the Future and Winning the Customer, pages 94-100.

Legend : ● Risk exposure is low ● Risk exposure is moderate ● Risk exposure is high

## PHYSICAL RISKS

Physical risks refer to risk related to the physical impact of climate change. Physical climate scenario modelling was carried out for three (3) power plants (Manjung, SPG and Sultan Mahmud (SM)) and a selection of 100 substations in 2021. The scenario modelling analysed climate-related failure and damage risks at each grid point of the asset sites selected to identify the spatial distribution of the eight (8) climate risks across each site. The summary of the outcome of the scenario modelling for TNB's assets are as follows :

- 100 substation : Riverine flooding is the dominant hazard
- Manjung : Coastal inundation is the clear dominant hazard
- SPG : Coastal inundation is the dominant hazard. Surface water flooding is the next most significant hazard
- SM : Riverine flooding is the dominant hazard

 For more information on the above physical risk assessment and outcome, please refer to TNB Sustainability Report 2021, page 59.

## CLIMATE CHANGE AND ENVIRONMENT

### OUR RESPONSE TO CLIMATE CHANGE

Based on the physical risk assessment conducted in 2021, risks related to flood, heat, dry spells and coastal inundation presents the highest risk to TNB's plants. Floods at dam catchments increase water storage in the hydropower dams and subsequently can lead to dam overflow and structure failure. On the other hand, a prolonged dry spell will reduce the water storage of dams, leading to insufficient water for operating hydropower plants. Meanwhile, both floods and dry spells also affect the operation of thermal power plants. Dry spells will disrupt the cooling process of the plants, while floods will affect the infrastructure at the plants.

In FY2022, we delved deeper into the assessment of 21 thermal power plants and 12 hydropower plants in Peninsular Malaysia against these risks based on the RCP 6.0 rainfall projection and RCP 8.5 coastal inundation projection to comprehend the exposure of our power plants and substations to the effects of climate change.

Type of asset	Region	RCP 6.0		IPCC RCP 8.5/4°C			Potential impact
		No. of plants exposed to floods by 2100	No. of plants exposed to dryspell by 2100	No. of plants exposed to coastal inundation and floods in 2022	No. of plants exposed to coastal inundation and floods in 2050	No. of plants affected by coastal inundation and floods in 2100	
Hydropower Plants	Perak	4	4				<ul style="list-style-type: none"> <li>Reduced revenue from decreased production capacity</li> <li>Increased operating costs</li> <li>Increased insurance premiums and potential for reduced availability of insurance on assets in "high-risk" locations</li> <li>Increased capital costs (e.g., damage to facilities)</li> </ul>
	Kelantan	1					
	Pahang	4	4				
	Coastal	3					
Thermal power plant	Kelang	1	1	1	1	1	
	Coastal	9	5	2	5	7	
Substations				4137	4991	8003	

With the high exposure of our plants to floods, coastal inundation and dry spells, we are guided by our current adaptation measures to minimise the impact of these risks. With the possibility of increased exposure and impact severity, we are committed to improve our adaptation plans.

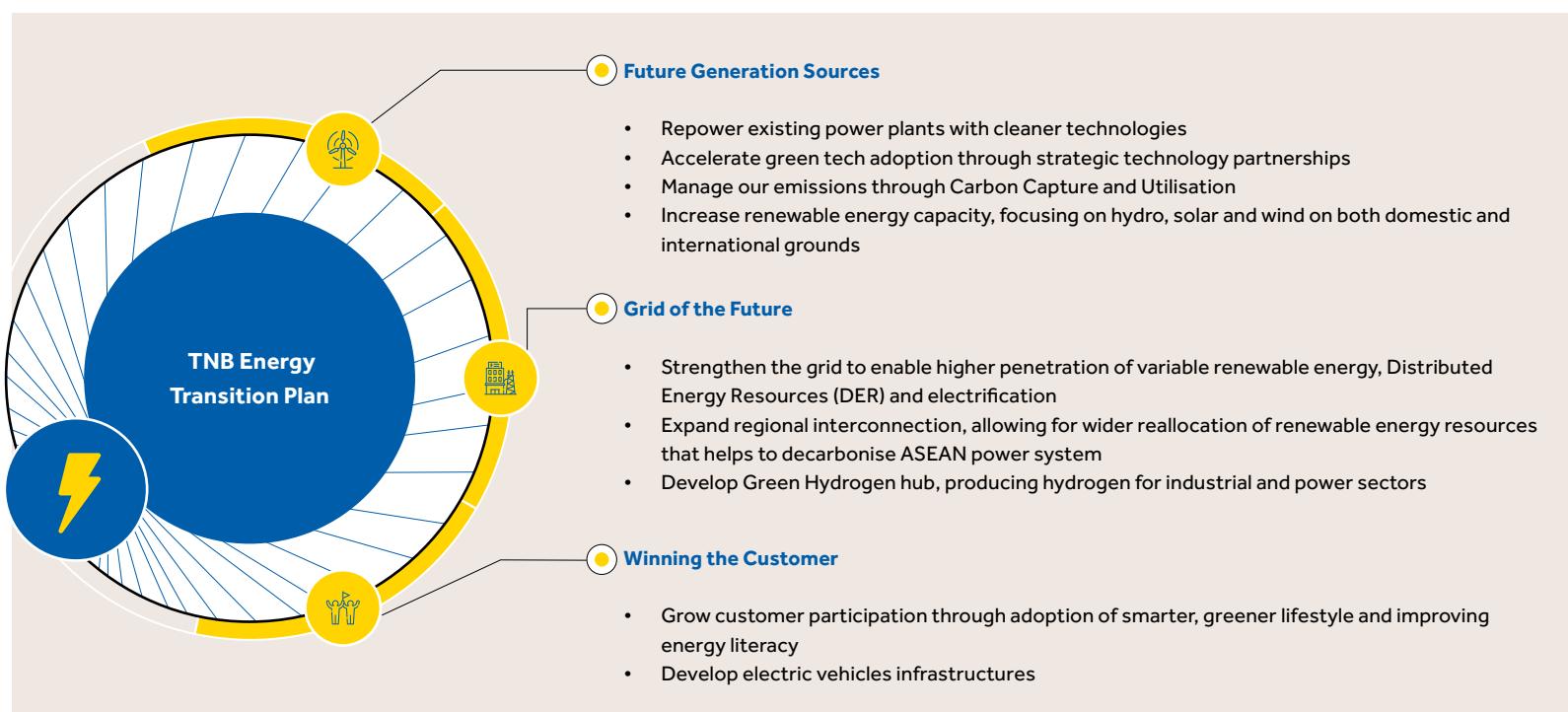
Floods	Dry spells
<b>Management approach</b>	
Our current adaptation measures include :	<p>Our current adaptation measures include :</p> <ul style="list-style-type: none"> <li>Temporary storage tanks or/and alternative water sources (groundwater, treated saline water and recycled brackish groundwater and municipal wastewater) as an addition to the existing water sources and increasing storage volumes to ensure ample water supply to thermal power plants at all times.</li> </ul>

**CLIMATE CHANGE AND ENVIRONMENT****OUR RESPONSE TO CLIMATE CHANGE**

Floods	Dry spells
<b>Future adaptation plans</b>	
<p>TNB will consider potential adaptation measures for hydropower plants including :</p> <ul style="list-style-type: none"> <li>Incorporate climate change factors into new site assessments and adopting new design standards taking into account projected increasing flood risks;</li> <li>Incorporate flood protection measures into plant design for protecting the key infrastructures such as intake structure, power house, etc.;</li> <li>Increase dam height and existing spillway discharge capacity wherever permitted structurally;</li> <li>Further enhance flood management plans with precision real-time monitoring and early warning systems;</li> <li>Continue development of integrated reservoir inflow and flood forecasting for the downstream area;</li> <li>Enhance satellite-based monitoring for hydro and thermal power plants;</li> <li>Continue basin-wide management strategies that take into account the full range of downstream environmental and human water uses may prove necessary;</li> <li>Restore, improve management and use of upstream catchments such as afforestation to reduce sedimentation; and</li> <li>Implement Risk Informed Decision Making (RIDM) approach to ensure Sustainable Hydropower Dam Safety Management.</li> </ul>	<p>TNB will consider potential adaptation measures for thermal power plants including :</p> <ul style="list-style-type: none"> <li>Install monitoring systems on source water supplies and develop standard operating procedures for low water conditions;</li> <li>Ensure proper design of cooling water intake and discharge systems;</li> <li>Enlarge or retrofit cooling systems such as water-saving cooling technology to overcome water stress issues;</li> <li>Diversify energy sources and/or the inclusion of supplemental technologies that are less dependent on water for cooling purposes;</li> <li>Incorporate climate change factors into site assessments to avoid siting new plants in water-stressed areas;</li> <li>Promote demand management and end-use energy efficiency measures.</li> </ul>

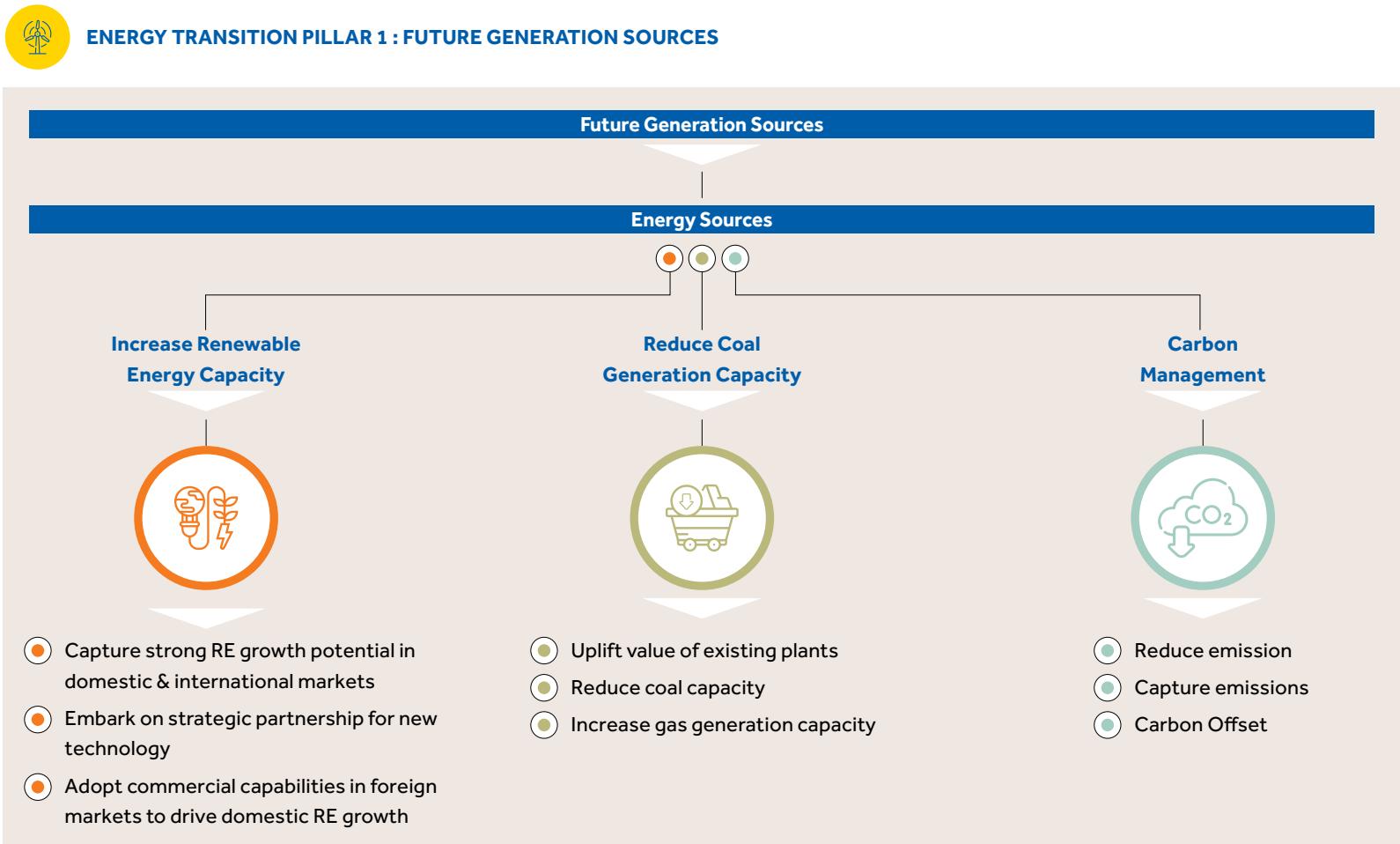
**CLIMATE STRATEGY**

The Plan is supported by three (3) RT2025 key pillars outlined below.



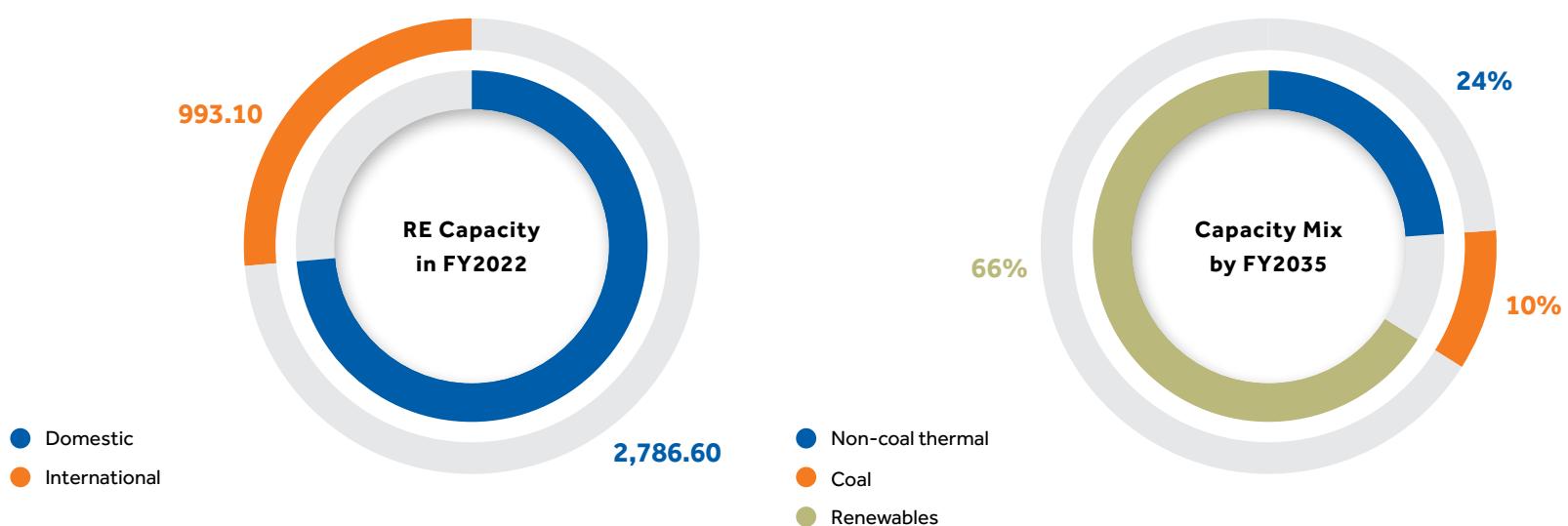
## CLIMATE CHANGE AND ENVIRONMENT

### OUR RESPONSE TO CLIMATE CHANGE



#### Increase Renewable Energy Capacity

In FY2022, TNB's RE capacity has reached 3,779.7 MW, a growth of 8% compared to FY2021 and we believe that we are on track to achieving our goal.



## CLIMATE CHANGE AND ENVIRONMENT

### OUR RESPONSE TO CLIMATE CHANGE

Expansion of international RE asset is a top priority for TNB as a growth enabler that will help our business thrive in the long-term by significantly ramping up our RE installed capacity to capture 66% of capacity mix by 2035. Our New Energy Division (NED) is positioned to grow RE portfolio in targeted international markets through strategic partnerships. NED oversees two (2) key entities responsible to explore opportunities at different market regions; Vantage RE to focus on UK and Europe markets and TNB Renewables that focus on the domestic and Southeast Asia market. NED targets to achieve an installed capacity of renewable energy of 14.3 GW by 2050 with an estimated equity investment of RM30 billion. Additionally, our subsidiary, Sabah Electricity Sdn. Bhd, (SESB) has set a target of 110 MW of RE installed capacity by 2025 from the current capacity of 99.84 MW.

In FY2022, Vantage RE has been awarded the Right-To-Build (RTB) for the construction and commissioning of 102 MW solar farms in the UK. The project also includes an option to develop 65 MW co-located Battery Energy Storage Systems (BESS), which upon development may enhance TNB's revenue streams through participation in ancillary services and the capacity market. This investment represents a significant milestone for TNB as it broadens into RE greenfield development in the UK. The solar farms are expected to achieve Commercial Operation Date (COD) by Q1 2024 and will be built on two sites. This project will provide stable long-term revenues under a 15-year Contract-for-Difference (CfD) subsidy scheme. Upon its commissioning, it is forecasted to generate enough clean energy to meet the equivalent annual needs of over 37,000 homes and save over 46,750 tonnes of CO<sub>2</sub> per annum compared to fossil fuel generation. Both sites also offer opportunities for environmental initiatives to promote biodiversity net gains, supporting TNB's wider biodiversity agenda. In 2023, we will broaden our focus beyond ASEAN and explore potential projects in Asia Pacific and Oceania to pursue opportunities in achieving out 2025 RE target.

 For more information on our strategy to increase our renewable energy capacity, please refer to Sustainable Business Expansion section, pages 75-77.

#### Reduce Coal Generation Capacity

TNB has committed to no longer investing in greenfield coal plants. Jimah East Power Plant, which was commissioned in 2019, is the last coal plant in our generation portfolio to be commissioned. The existing coal-fired plants will be phased out upon expiry of their Power Purchase Agreements (PPA), with consideration for early retirement. For plants retiring before 2030, TNB has planned to re-power them using natural gas. We have recently received a Letter of Intent (LOI) from the Ministry of Natural Resources, Environment and Climate Change for the development of 2.1 GW combined-cycle power plant in Kapar, which is slated for a commercial operation date by 2031. Prior to that, we have received an LOI to repower the retired 1,400 MW Paka gas power plant with cleaner technology.

Beyond this, we are exploring other solutions and technologies to enable low-carbon fuel sources to be deployed at coal-fired power plants to help us decarbonise further. A key step we have taken is a joint-collaboration with PETRONAS Gas and IHI Corporation for a feasibility study on ammonia co-combustion in coal-fired power generation systems. The feasibility study was successfully completed and the outcome derived from pilot-scaled combustion testing programme at TNBR has proven the feasibility of the technology.

#### Carbon Management

TNB's Carbon Management approach focuses on three (3) key pillars - **Reduce Emission, Carbon Capture and Carbon Offset**.

- 1) Reduce Emission :** TNB reduces emissions by reducing absolute emissions and emission intensity, phasing out coal capacity, increasing renewable energy capacity generation and increasing operational efficiency across the value chain.
- 2) Carbon Capture :** We have identified carbon capture and storage (CCS) as a solution in decarbonising the power sector and we are committed to play an active role in advancing this technology. To demonstrate our commitment, TNB has inked a Memorandum of Understanding (MoU) with PETRONAS to explore the application of CCS solutions in accordance with the National Energy Policy 2022-2040. In preparation of Malaysia's carbon taxonomy, our Universiti Tenaga Nasional (UNITEN) is conducting a study on carbon market opportunities.
- 3) Carbon Offset :** Carbon credits enable a company to offset a portion of its carbon emissions. TNB's stance is to reduce and capture emissions before looking at purchasing viable, high quality carbon credits. Additionally, TNB is exploring the development of carbon credit through removal or avoidance projects. The sale of these credits can then be used to support the energy transition at TNB.

 For more information on CCUS, please refer to Feature Story 3 : Decarbonisation Through Innovative Solutions : Carbon Capture section, pages 84-85.

## CLIMATE CHANGE AND ENVIRONMENT

### OUR RESPONSE TO CLIMATE CHANGE

TNB currently has a healthy pipeline of upcoming renewable energy and green technology projects to support the **Future Generation Sources** pillar :

Project	Description	Commercial Operation Date (COD)	Emission Avoidance (Equivalent to CO <sub>2</sub> emission)	
<b>Renewable Energy</b>	TNB Bukit Selambau 2 (LSS@MENTARI Scheme) <b>50 MW</b>	<ul style="list-style-type: none"> <li>Commencement of work has started since September 2022.</li> </ul>	2023	0.08 million tCO <sub>2</sub> e/year
	Sungai Perak Hydro Life Extension Programme <b>650.75 MW</b>	<ul style="list-style-type: none"> <li>Upgrade and upgrade the Sungai Perak Hydroelectric Scheme which consists of Stesen Janaelektrik (SJ) Temengor, SJ Bersia, SJ Kenering, SJ Chenderoh and SJ Sungai Piah with 18 generating units with the latest technology.</li> <li>The project will commence in Q3 of year 2024.</li> </ul>	2025	0.5 million tCO <sub>2</sub> e/year
	Nenggiri Hydro Project <b>300 MW</b>	<ul style="list-style-type: none"> <li>Commencement of work has started since 1 March 2022.</li> </ul>	2027	0.3 million tCO <sub>2</sub> e/year
	Solar Greenfield development, UK <b>102 MW</b>	<ul style="list-style-type: none"> <li>Greenfield project with option to develop co-located battery energy storage systems.</li> </ul>	2024	0.05 million tCO <sub>2</sub> e/year
<b>Green</b>	New Combined Cycle Power Plant at Paka <b>1,400 MW</b>	<ul style="list-style-type: none"> <li>Brownfield project to repower the retired SJSI PAKA using highly efficient CCGT by 2030.</li> </ul>	2030	3.2 million tCO <sub>2</sub> e/year
	New Combined Cycle Power Plant, Kapar <b>2,100 MW</b>	<ul style="list-style-type: none"> <li>Greenfield project that is marked for combined cycle gas-fired plant for supplying cleaner electricity.</li> </ul>	2031	4.7 million tCO <sub>2</sub> e/year



### ENERGY TRANSITION PILLAR 2 : GRID OF THE FUTURE



**CLIMATE CHANGE AND ENVIRONMENT****OUR RESPONSE TO CLIMATE CHANGE****ENERGY TRANSITION PILLAR 2 : GRID OF THE FUTURE****Smart Grid Enhances Grid Flexibility**

TNB will continue to prioritise investing into modernising our world class national grid into Grid of the Future – a smart grid which remains reliable, resilient, smart with digital technology and flexible in meeting the country's needs for energy transition. A smart grid is an advanced electricity network that incorporates the use of digital technologies to improve the efficiency, reliability and resilience of the grid. It allows for two-way communication between the grid and Distributed Energy Resources (DER), as well as real-time monitoring and control of the electricity flow. Expanding regional interconnection allows for a wider reallocation of RE resources that helps decarbonise the ASEAN power system.

Leveraging on the smart grid, DER can provide energy to the grid during periods of high demand and absorb excess energy during periods of low demand. Also, this helps to balance the grid and reduce the need for conventional power plants to ramp up or down production. This enables the grid to allow higher penetration rates of intermittent renewable energy sources, improve the efficiency of energy consumption while maintaining the high performance of the conventional power plants.

TNB is planning to invest a total of RM21 billion capital over a period of 3 years until 2024 in strengthening the grid and ensuring reliability of energy supply. Our grid reliability performance is exemplified by the fact that the recovery time has not surpassed our most recent approved Guaranteed Service Levels (GSL).

**Hydrogen Fuel of the Future**

TNB's strategy is to repower retired coal and gas plants with combined-cycle gas turbines (CCGTs) equipped with hydrogen-ready technology, as hydrogen is regarded as the fuel of the future, particularly green hydrogen produced from renewable energy sources. As such, a sustainable and economically viable supply of green hydrogen is required. TNB will undertake research on the production of green hydrogen using electrolyzers that are more efficient in an effort to reduce the levelised cost of energy for green hydrogen.

In parallel, TNB will collaborate with PETRONAS to develop the green hydrogen ecosystem by 2030. The ecosystem includes the whole value chain from the supply of green electricity, electrolyzers, compression, storage to transportation.

**Energy Storage Provides Security**

To support the National Energy Policy 2022-2040 and Malaysia's vision to include more renewable energy sources into our generation mix, battery storage plays a crucial role in our nation's grid reliability. By storing energy during period of low demand and releasing it during periods of high demand, battery storage can help to stabilise the grid and improve the overall efficiency of the power system.

TNBR has an ongoing pilot project for Virtual Power Plant (VPP) technology, which utilises software and energy storage to enable peer-to-peer generation among energy prosumers and demand response control for system stability in the future. TNB and South Korean companies invested USD 7 million in R&D on this project in order to better regulate the supply of electricity from renewable sources during peak demand on the national grid. The VPP project involves installation of four (4) battery energy storage systems (BESS) with a total of 2 MW capacity.



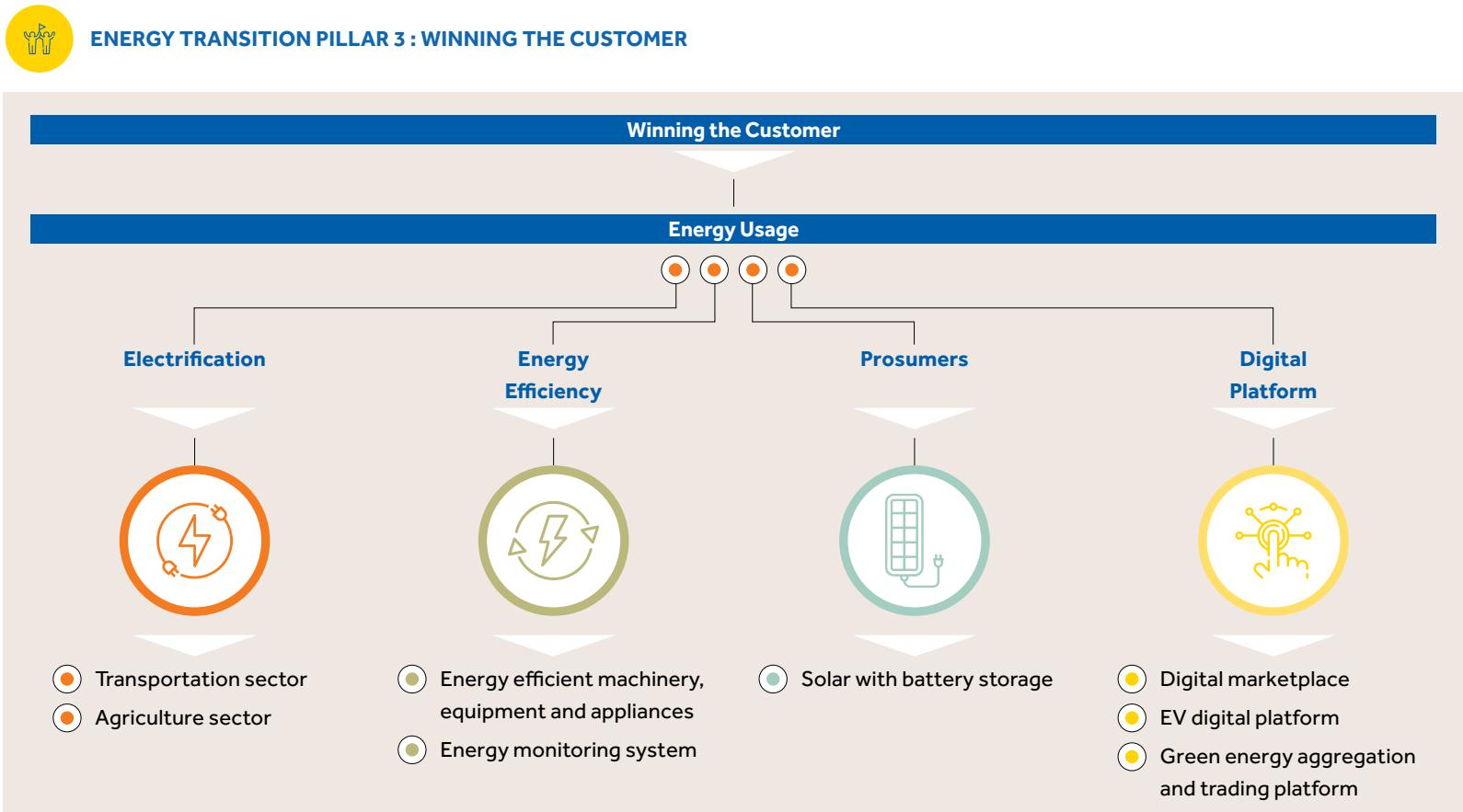
*TNB is partnering with Microsoft Corp to collaborate on discovering and validating potential opportunities through a series of projects over a period of two (2) years, to accelerate digital transformation to support TNB's Grid of the Future strategic pillar.*

*The MoU also covers digital skills and development initiatives for TNB employees where technical and digital competencies in using Microsoft tools and cloud services of varying complexity will be provided for both IT and non-IT roles within the Company.*

 For more information on our Smart Grid initiatives, please refer to Smart Grid section, pages 73-74.

## CLIMATE CHANGE AND ENVIRONMENT

### OUR RESPONSE TO CLIMATE CHANGE



#### Electrification

TNB is ready to lead Malaysia's transition towards low-carbon mobility. Understanding the increasing demand for electric vehicles and the current state of EV infrastructure in Malaysia, TNB aspires to play an active role in building charging infrastructure within strategic locations and delivering the right type of charging facilities needed. TNB has made provisions for 3,300 charging points across the country by 2025 and 18,000 charging points by 2030. TNB will be investing RM22 million in 2023 and RM90 million in the span of 3 years (2022-2024) to uplift the development of the EV ecosystem in Malaysia. TNBX Sdn. Bhd. (TNBX) plays an important role to position TNB in the EV marketplace as the Charge Point Operator (CPO), while Tenaga Switchgear Sdn. Bhd. (TSG) functions as a manufacturer of equipment and charger for TNB Electron stations. In 2023, we plan to deploy EV charging stations along Peninsular Malaysia's highways and trunk roads to enable seamless travels for Battery Electric Vehicle (BEV) owners throughout Peninsular Malaysia.

In building up the EV ecosystem, we have initiated strategic discussions via various platforms to bring EV players together and collaborate towards common objectives. This includes building charging infrastructure, fostering coalitions among EV players, sponsoring EV-related studies, electrification of TNB's own fleet and reskilling of employees for the electric vehicle (EV) industry. In 2023, ILSAS has established Electric Vehicle (EV) Training Hub to provide reskilling for the EV industry, focusing on fundamental knowledge such as basic battery storage and EV technology where the training sessions are certified by International bodies.

Our ongoing and new initiatives on low carbon mobility includes :

#### TNB and Sime Darby Motors Malaysia to explore various initiatives to accelerate the adoption of EV

TNB and Sime Darby Motors (SDM) Malaysia, have entered into a MoU in a collaboration to support the country's low carbon mobility ambitions. The collaboration will explore various initiatives to accelerate the adoption of electric vehicles (EV) as well as ensuring a network of highly efficient EV charging infrastructure and digital platform. The collaboration also aims to identify other energy-efficient and renewable energy initiatives to optimise the cost of EV charging infrastructure and to reduce carbon emissions.

## CLIMATE CHANGE AND ENVIRONMENT

### OUR RESPONSE TO CLIMATE CHANGE

#### TNB and Majlis Amanah Rakyat (MARA) collaborate for the development of EV charging infrastructure and learning

TNB and MARA entered into a strategic collaboration to install photovoltaic solar system panels for the generation of clean electricity at MARA educational institutions (IPMa) and the development of EV charging infrastructure for the operation and management of MARA Liner buses. The chargers are MARA Group's first DC fast chargers with a capacity of 120 kW for its MARA Liner pilot project in Langkawi. This electric bus project is a showcase of sustainable development agenda and is a major contribution towards realising Langkawi Low Carbon island vision. The MoU also includes the provision of telecommunication services and internet access at MARA educational institutions by TNB subsidiary, Allo Technology Sdn Bhd and the development of human capital with a target of over 30,000 students and trainees in the field of Technical and Vocational Education and Training (TVET), which will be empowered under the MARA and TNB ecosystem. The collaboration is in line with the National Renewable Energy Policy 2025 under the Sustainable Energy Development Authority (SEDA) Malaysia.

#### TNB MoU with Gamuda Land for EV charging infrastructure

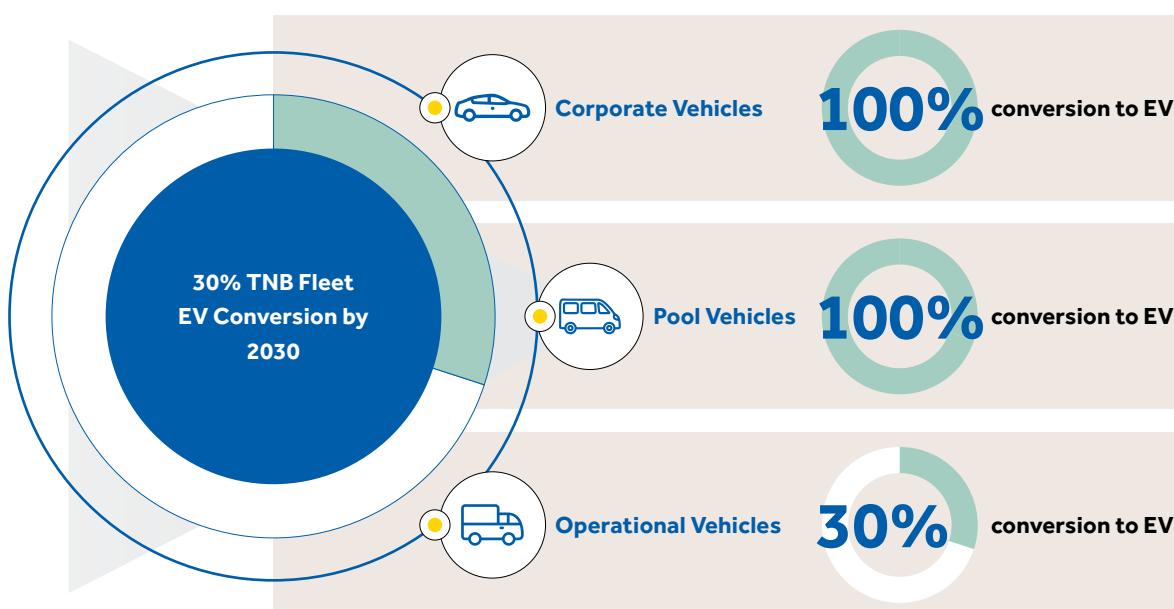
TNB has inked an MoU with Gamuda Land to build two (2) electron stations for electric vehicle (EV) charging at Gamuda Land's property development projects in Selangor. Malaysia's first electron stations will be developed at Gamuda Cove in southern Klang Valley and Gamuda Gardens in northern Klang Valley for communities in the projects and visitors to the water theme park at Gamuda Cove.

#### TNB collaborates with PLUS Malaysia in developing EV charging station network

TNB and PLUS Malaysia collaborated to reduce carbon emissions on PLUS highways through three sustainability initiatives – the development of charging station network, installation of energy efficiency monitoring and solar photovoltaic systems at selected R&Rs along the PLUS highway network. Fast EV charging points were installed at some RSAs along PLUS' North South Expressway (NSE) and Lebuhraya Pantai Timur 2 (LPT2). In FY2022, TNB launched three (3) EV charging stations dubbed "TNB Electron" at RSA Ayer Keroh Northbound, Tapah Northbound and Paka Eastbound which are equipped with Direct Current Fast Charger (DCFC) for pilot testing. TSG and TNBX will be involved in development and operations of the Electron stations.

#### TNB and Malaysia Automotive, Robotics and IOT Institute (MARii) partnership to develop the EV Ecosystem

TNB and MARii are in a Research and Development partnership to develop EV Telematics and Internet of Things (IoT) as part of the EV ecosystem. The partnership aims to set up Co-Joined Research and Reports to develop comprehensive telematics and IoT solutions related to EV ecosystem. It also focuses on the use and development of technologies to monitor and manage identified EV parameters for EV and EV Charger utilisation.



Through the Fleet Management Department (JFM), TNB set a target to replace 30% of its vehicles with electric vehicles (EV) by 2030, through three phases. Phase 1 (introducing EVs at TNB) and Phase 2 (introducing TNB operational EVs) have been implemented, with 15 vehicles from TNB fleet being replaced with EVs thus far. Currently, JFM is planning the implementation of Phase 3, to replace operational vehicles with EVs with an emphasis in strategic locations.

To facilitate the transition of EV replacement in TNB's fleet, TNB is also installing EV chargers at TNB premises, with a total of 13 installed chargers in FY2022.

## CLIMATE CHANGE AND ENVIRONMENT

### OUR RESPONSE TO CLIMATE CHANGE

#### Energy Efficiency

TNB actively assesses and adopts efficient technologies and ensures that all plants are properly maintained and where possible, upgraded to maintain their efficiency. To improve energy efficiency, TNB systematically assesses and adopts efficient technologies whilst pursuing operational excellence by undertaking plant-level business turnaround, improving the overall production processes, ensuring all power plants are promptly overhauled and adequately maintained and implementing technical upgrades, where possible. Increasing energy efficiency enables our power plants to conserve energy, allowing efficient use of the fuels we burn and reduces our overall emission intensity. TNB's aim has always been to harness as much energy as possible from each unit of fuel burned. This will enable us to minimise our environmental footprint and fuel costs. To deliver a sustainable low carbon future, we have been modernising our fleet by retiring inefficient and ageing Combined Cycle Gas Turbine (CCGT) plants and replacing them with best-in-class and highly efficient technologies. For example, our newest addition power plant that was commissioned in 2021, the 1,440 MW Sultan Ibrahim Power Plant in Pasir Gudang utilises the first-of-its-kind turbine technology with a net thermal efficiency of 60%, thus contributing to a lower carbon footprint.

TNB is continuously growing and expanding its energy efficiency expertise including conducting energy audits and integrating energy efficiency improvements. This service is conducted throughout TNB's assets such as buildings, fuel stations and fuel terminals and subsequently integrates energy efficiency improvements.

#### Prosumers

Over the years, through various RE programmes in Malaysia, we have seen an increasing shift from consumer to prosumer. An electricity prosumer refers to a consumer who also generates their own electricity, typically through the adoption of rooftop solar. This allows for a more efficient and resilient energy system, as the electricity generated by prosumers can be used to meet the needs of their own households or businesses, as well as to supply excess electricity to the grid during times of high demand.

With TNB's strategic pillar of Grid of the Future, the smart grid is expected to be able to support a higher volume of bi-directional power sources from prosumers' own distributed energy sources and renewable energy.

**i** For more information on our prosumers initiatives, please refer to Customer Centricity section pages 78-80.

#### Digital Platform

TNB complements its initiatives with digital platforms such as myTNB mobile application and TNBX EV application. These technologies are recognised as the key milestone of empowering customers towards the sustainable energy industry of the future.

**i** For more information on our prosumers initiatives, please refer to Empowering customers towards energy transition under the Customer Centricity section pages 80-81.

*For more information on our Smart Meter initiatives, please refer to Elevating Customer Experience Through Customer Empowerment under the Customer Centricity section page 80.*

#### CLIMATE RISK MANAGEMENT

TNB business entities are guided by the TNB Risk Assessment Process that provides a structured approach to identify, analyse, evaluate and treat risks. TNB business entities apply the process in a systematic, iterative and collaborative manner, drawing on the knowledge and views of stakeholders to develop their respective risk profiles. Climate related risks are integrated in our 10 strategic risks covering external, sustainability, market, customer, finance, capabilities and regulatory risk categories. Moreover, climate-related risks and opportunities are managed in accordance with the ISO 14001:2018 Environmental Management System.

In addition to the above, climate related risks and opportunities are assessed using scenario analysis, across short-term, medium-term and long-term horizons considering the expected lifetime of the assets or activities.

In managing the climate risks along with other business risks, the Board Risk Committee (BRC) oversees the establishment and implementation of the TNB Risk Management Framework that is embedded into the culture, processes and structures of the Group and is responsive to changes in the business environment. Sustainability and climate risks are included as part of the enterprise risk management process.

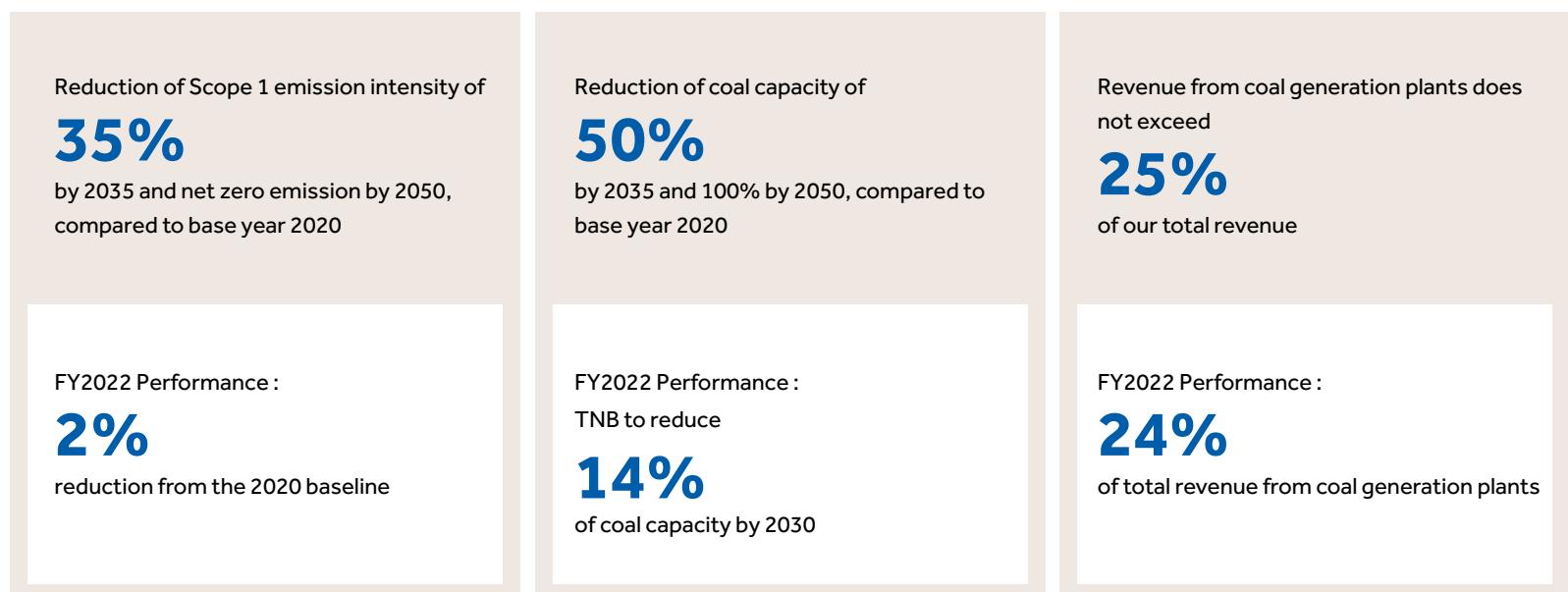
Following the TNB Risk Assessment Process, risks identified by business entities are registered and monitored through the TNB Risk Information System (TRIS), an online real-time tool and risk database that is accessible to all employees. Risks are reviewed annually by business entities with participation and eventual approval from the risk owners.

Half-year risk reports are submitted by business entities to the Risk Management Department for consolidation. Group-wide consolidated half-year risk reports, which include reports of emerging risks and climate related risks, are deliberated and endorsed by the Group Risk Management Working Committee (GRMWC) for onward internal dissemination.

**i** For more information on risk management, please refer to our Statement on Risk Management and Internal Control on pages 201-207.

**CLIMATE CHANGE AND ENVIRONMENT****OUR RESPONSE TO CLIMATE CHANGE****METRICS AND TARGETS**

The SP2050 enabled us to establish clear climate related targets :

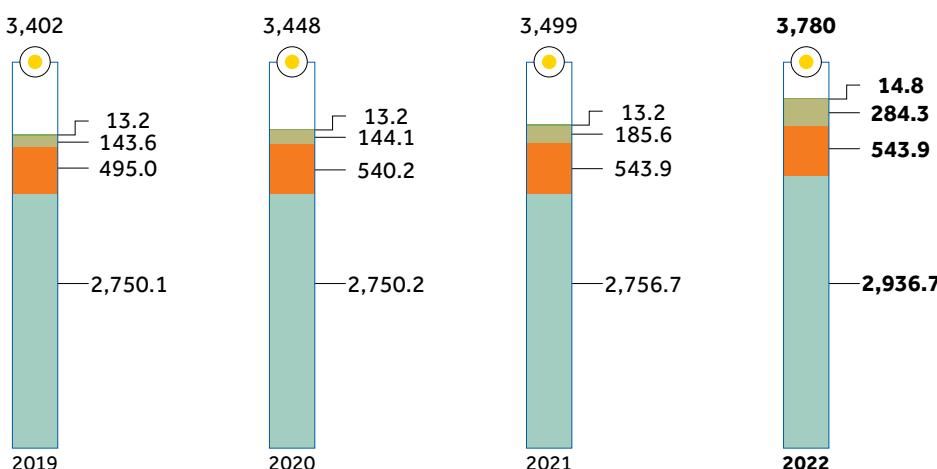
**Renewable Energy Installed Capacity**

In FY2022, our installed capacity for renewable energy is 3,780 MW. With NED's strategy in expanding our renewable capacity, we are on track to achieve our 2030 aspiration of 7,000 MW.

**INTERNATIONAL AND DOMESTIC RENEWABLE ENERGY INSTALLED CAPACITY**

(MW)

- Hydro
- Solar
- Wind
- Other (Biomass and Biogas)



## CLIMATE CHANGE AND ENVIRONMENT

### OUR RESPONSE TO CLIMATE CHANGE

#### Greenhouse Emissions

We utilise our GHG Emissions Management System (GEMS), a web-based data input and processing system for regular monitoring of Scope 1 and 2 emission data. We intend to expand the monitoring of our other environmental data via GEMS progressively.

In FY2022, our Scope 1 and Scope 2 emissions has decreased due to higher operation of our gas and hydro power plants.

We are in the process of assessing our Scope 3 emissions focusing on several categories relevant to our business. We will commence Scope 3 emission disclosures in FY2023.

#### SCOPE 1 AND 2 GHG EMISSIONS

(million tCO<sub>2</sub>e)

● Scope 1 ● Scope 2

2019	33.79	0.24	
2020	39.04	0.22	
2021	39.77	0.28	
2022	38.58	0.32	

#### GHG EMISSIONS INTENSITY (SCOPE 1)

(tCO<sub>2</sub>e/MWh)

Target by 2035  
0.37

2019	0.56	
2020	0.57	
2021	0.54	
2022	0.55	

#### AVOIDED EMISSIONS

(million tCO<sub>2</sub>e)

2019	5.39	
2020	5.99	
2021	7.96	
2022	7.30	

● Advanced Combined Cycle Technology

● Large Hydro

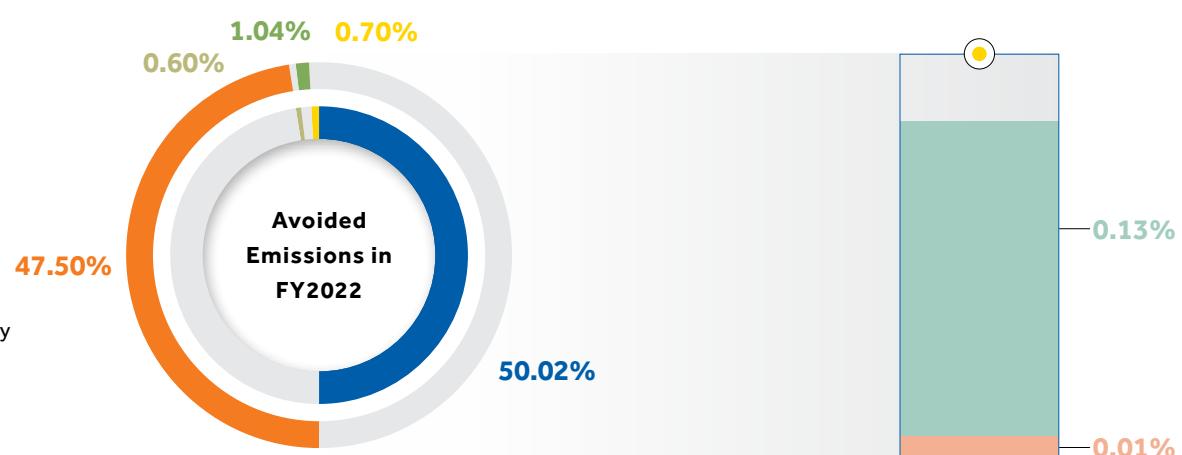
● Clean Coal Technology

● Large Scale Solar

● Small Renewable Energy

● Others (Electric Vehicle, Energy Efficiency and Tree Planting Programme)

● New Streetlight Fittings (LED)



The following guidelines and methodologies are utilised in preparing our GHG emissions calculation :

- GHG emissions methodologies applied were 2006 IPCC Guidelines for National Greenhouse Gas Inventories, GHG Protocol and Clean Development Mechanism (CDM).
- Consolidation of data was based on equity share approach.
- GHG emissions are assessed annually for TNB operations in Peninsular Malaysia only.

Our GHG emission assessment was subjected to a verification and assurance process based on ISO 14064-1:2018 part 1 (Specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals) and part 3 (Specification with guidance for the verification and validation of greenhouse gas statements).

## CLIMATE CHANGE AND ENVIRONMENT

## OUR RESPONSE TO CLIMATE CHANGE

## Reducing Our Coal Capacity

We are actively reducing our coal capacity through ongoing initiatives under our **Future Generation Sources** strategy and we are on track to achieving our target of reduction of coal capacity by 50% by 2035 and 100% by 2050, compared to baseline of year 2021. We continue to maintain our revenue from coal generation plants to be below 25% of our total revenue in FY2022.

## GROUP REVENUE\*

(%)  
● Coal   ● Renewable Energy   ● Others\*\*



\* Total revenue includes ICPT

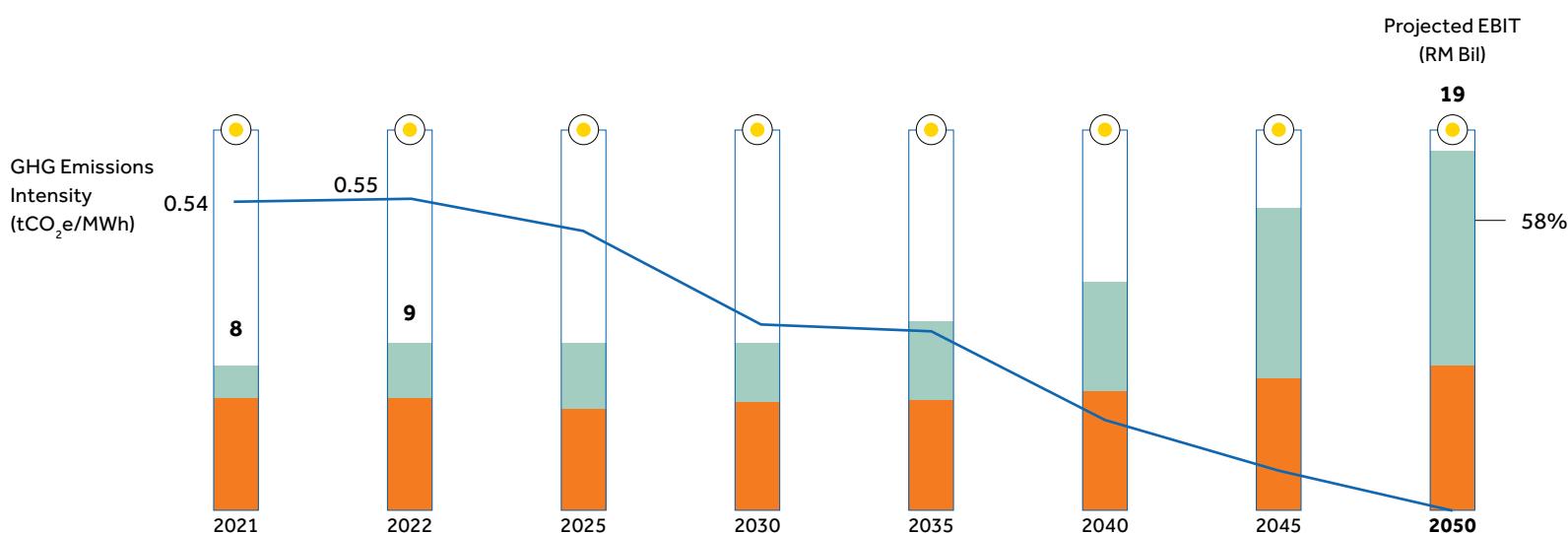
\*\* Others include revenue from regulated business, subsidiaries and generation from gas

We recognise the importance of investing in our ET strategy to achieve our SP2050 ambition. While the transition to low carbon may require substantial investments, we believe that these investments in capitalising the low carbon economy and diversifying our revenue streams will ultimately increase our earnings in the long run. TNB's ET strategy could grow TNB's Earnings Before Interest and Taxes (EBIT) up to 140% to RM19 billion by 2050 as we decarbonise our carbon footprint at the same time.

## PROJECTED EBIT (RM BIL) AND GHG EMISSION INTENSITY

(tCO<sub>2</sub>e/MWh)

● Future Generation Sources & New Green Business   ● Grid of the Future   — Emission Intensity



i For more information on other climate related indicators and performance, please refer to Minimising our Environmental Impact section pages 105-110.

## CLIMATE CHANGE AND ENVIRONMENT

### Feature Story 4

#### OUR FLAGSHIP GREEN BUILDING - TNB PLATINUM CAMPUS

TNB Platinum Campus, our new headquarters located at Jalan Bangsar, Kuala Lumpur consists of four (4) Office Towers, a Convention Centre, Childcare and Pelitawanis and Central Plaza. The horizontal tower connects all four (4) offices and the convention centre. In the intersections between blocks, high-ceilinged atria in the spaces create a continuous horizontal plane that enhances the scheme's connectivity. At the lower levels of the horizontal tower, it includes link bridges, stairs and collaborative areas that emphasise its communal functions, distinct from the more specialised departmental requirements above. The central plaza with an arcing forecourt of generous landscaping and foliage consolidates the connectivity as a hub to its four (4) cascading office blocks, convention centre and ancillary buildings.

Envisioned as a sprawling campus, the design is aimed to create a contemporary and futuristic workplace that meets the requirements of the highest rating under the Green Building Index (GBI), the Platinum certification. The green features include green-roofed buildings oriented to the sun's path to reduce the amount of solar heat gain; double-glazed facades with low emissivity that not only help control heat and noise but also harvest natural daylight; and overhangs that provide shade and improve thermal comfort. This sustainable architecture is expected to bring about a transformative change in its workplace culture and workforce development.

TNB Platinum Campus is designed according to GBI principles with the following key design features :

Energy Efficiency	Responsible Material Selection	Occupant Safety & Comfort
<ul style="list-style-type: none"> <li><b>25%</b> less electricity consumption compared to conventional building designs.</li> <li>Exceptional building envelop for both glazing and roof to <b>reduce external heat transmissibility</b>.</li> </ul>	<ul style="list-style-type: none"> <li>More than <b>10%</b> recycled content in construction material.</li> <li>More than <b>50%</b> of the timber used has Forest Stewardship Council (FSC) &amp; Malaysian Timber Certification Council (MTCC) Certified.</li> </ul>	<ul style="list-style-type: none"> <li><b>Excellent</b> daylighting and external views with less obstruction to the glazing.</li> <li><b>Reducing</b> harmful indoor pollutants by avoiding usage of hazardous chemicals such as Volatile Organic Compound (VOC) and formaldehyde.</li> </ul>
Water Efficiency	Innovation	
<ul style="list-style-type: none"> <li>Usage of <b>highly efficient water fittings</b> throughout the building to reduce potable water consumption.</li> <li><b>Rainwater harvesting system</b> to be used for irrigation.</li> </ul>	<ul style="list-style-type: none"> <li><b>EV charging station.</b></li> <li><b>Automated Waste Management System (AWCS).</b></li> <li><b>Photovoltaic system</b> with capability to cater up to 10% of the building's electricity consumption.</li> </ul>	



The new TNB Platinum buildings are environmentally friendly in design with energy efficient and water efficient features.

#### Additional Green Building Features

- Automation include lighting zoning control, motion sensors and daylight sensors.
- Integrated Building Management System Energy Sub-Metering System.
- At least 2% reused building materials utilised during construction.
- More than 50% of the construction material is a regional material (500km radius from project site).
- Carbon dioxide monitoring and control to avoid CO<sub>2</sub> level exceeding 1000ppm.
- Provides occupants thermal comfort and ease of control.
- Enables adjustments to the background noise level for occupant comfort with acoustic treatment.
- Parking guidance system for non-allocated parking.
- Energy and water usage display.
- Deployment of metering and leak detection system for domestic water supply to avoid water wastage.
- Grey water recycling system to reduce potable water consumption.

## CLIMATE CHANGE AND ENVIRONMENT

### MINIMISING OUR ENVIRONMENTAL IMPACTS

TNB strives to minimise the environment impacts caused by our business operations and value chains, in line with our commitment to progressively improve our environmental performance.

### GOVERNING ENVIRONMENTAL MATTERS

The generation of electricity from our thermal plants inevitably leaves a large environmental impact, in the form of carbon release, water consumption for power plants and fuel consumption. Our environmental management is principally guided by TNB Environmental Policy which was reviewed in FY2021 to reflect the latest changes in environmental requirement and emerging issues.

The Health, Safety and Environmental (HSE) Council oversees the Group's environmental performance and compliance.

Six (6) divisions divisions in TNB have been certified ISO 14001:2015 compliant in Environmental Management System (EMS). We are also guided by TNB's Health Safety and Environmental Management System (HSEMS) which outlines environmental risk identification and control requirements across all divisions, departments and business units in TNB. The introduction of HSEMS has strengthened the governance of environmental management across the Group.

Since 2021, Guided Self-Regulation (GSR), the self-monitoring environmental management tool, has been implemented across all TNB divisions and subsidiaries. The GSR scoresheet has been analysed for gaps in order to continuously enhance our operations.

Our overall commitment towards reducing our environmental impact is encapsulated in our comprehensive environmental management policies and guidelines :

- TNB Environmental Policy 2021
- Environmental Impact Assessment (EIA) Guidelines 2022
- 2<sup>nd</sup> Edition of Scheduled Waste Guidelines 2021
- Polychlorinated Biphenyls (PCB) Guidelines 2021
- e-Waste Management Policy 2022
- Grid Division Green Code Conduct

In supporting our Net Zero by 2050 aspiration, the Grid Division introduced its Grid Green Code Conduct. The Green Code Conduct shows our commitment towards ESG that mirrors our efforts to create a greener future. We aim to lead as a green responsible grid owner by reducing our climate footprint and promoting sustainability through the supply chain.

#### Grid Division Green Code of Conduct 2021 - 2050



##### Align with TNB's Net Zero by 2050 aspiration

*TNB Grid aims to lower its SF6 emissions by recycling and replacing SF6 gas in its assets. Additionally, TNB Grid will tackle losses through the adoption of new technologies.*

##### ► FY2022 Performance :

**3,266 kg SF6 gas recycled**



##### Achieve zero pollution impact on nature

*Manage potential pollutants from TNB transformer operations while leveraging new environment friendly products to reduce the impact of pollution.*

##### ► FY2022 Performance :

**100%** of transformers were tested for Polychlorinated biphenyl (PCB) and no contamination was found.



##### Achieve 30% reduction in deforestation by 2050

*To minimise the impact of deforestation in accordance with the environmental standards and promoting biodiversity.*

##### ► FY2022 Performance :

**Continuously**

conserving forests by reducing deforestation from grid development activities.

## CLIMATE CHANGE AND ENVIRONMENT

### MINIMISING OUR ENVIRONMENTAL IMPACTS

TNB Grid Initiatives and FY2022 key highlights are outlined below :

Grid Division Initiatives	FY2022 Highlights
<b>GHG Reduction</b>	<ul style="list-style-type: none"> <li>Gas Insulated Switchgear (GIS) refurbishment and sulphur hexafluoride (SF6) leak management to achieve &lt;0.5% SF6 leak rate.</li> <li>SF6 Gas Recycling and Reconditioning Centre to promote circular economy by reusing recycled and reconditioned SF6 gas without the need to purchase new gas or dispose used and poor quality gas.</li> <li>Replacement of old R22 air conditioners as part of energy efficiency efforts to reduce impact to environment.</li> <li>Change of CO<sub>2</sub> firefighting system to environmentally neutral inert gas system.</li> </ul>
<b>Pollutant Management Initiatives</b>	<ul style="list-style-type: none"> <li>Replacement of Oil Impregnated Paper (OIP) to Resin Impregnated Paper (RIP) transformer bushing replacement to reduce the impact of pollution from bushing failure.</li> <li>Elimination of PCB content in oil-filled transformer that has dangerous impact on the environment and our health.</li> <li>Usage of bio-based ester oil for new transformer to be implemented in the year 2024 to reduce the impact of pollution.</li> <li>Transformer oil-water separation pit for better effluent management.</li> </ul>
<b>Deforestation Control Initiatives</b>	<ul style="list-style-type: none"> <li>Environment Impact Assessment (EIA) process improvement in project delivery.</li> <li>Tree Hyperspectral Identification System (Thysis) that will identify endangered species to ensure less impact of deforestation and preserve biodiversity and natural habitats during project development.</li> </ul>

Our Approach and Key Highlights	Our Performance in FY2022																				
<b>Water Management</b> <p>We closely monitor our water withdrawal at operational sites to minimise the risk of water overuse and contamination. In addition, we investigate any deviation from the norm in water consumption at all power plants and carry out any necessary mitigation measures and implementation plans.</p>	<p>There is a slight increase in total water withdrawal for FY2022 compared to FY2021, due to increasing business operations and office occupancy post COVID-19 pandemic.</p> <p><b>TOTAL WATER WITHDRAWAL ACROSS TNB'S OPERATIONS (Megalitres)</b></p> <table border="1"> <thead> <tr> <th>Year</th> <th>Peninsular Malaysia (Megalitres)</th> <th>SESB (Megalitres)</th> <th>Total (Megalitres)</th> </tr> </thead> <tbody> <tr> <td>2019</td> <td>7,269</td> <td>785</td> <td>7,054</td> </tr> <tr> <td>2020</td> <td>7,065</td> <td>725</td> <td>7,790</td> </tr> <tr> <td>2021</td> <td>7,771</td> <td>660</td> <td>8,431</td> </tr> <tr> <td>2022</td> <td>9,821</td> <td>709</td> <td>10,530</td> </tr> </tbody> </table>	Year	Peninsular Malaysia (Megalitres)	SESB (Megalitres)	Total (Megalitres)	2019	7,269	785	7,054	2020	7,065	725	7,790	2021	7,771	660	8,431	2022	9,821	709	10,530
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## CLIMATE CHANGE AND ENVIRONMENT

## MINIMISING OUR ENVIRONMENTAL IMPACTS

## Our Approach and Key Highlights

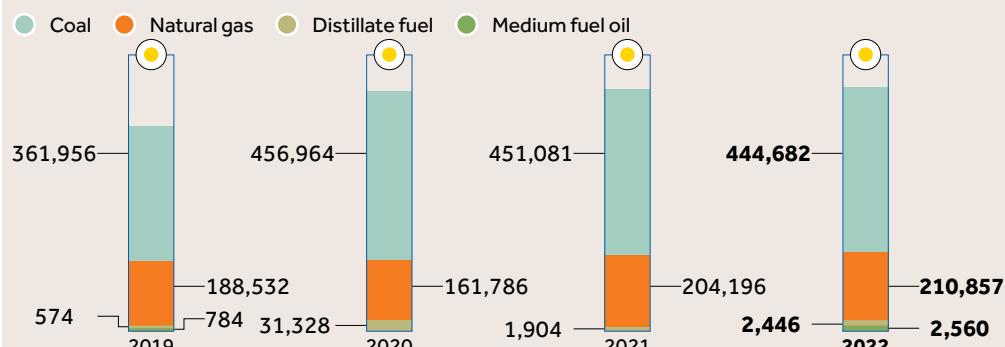
## Fuel Management

TNB is committed to ensuring a sustainable, reliable and cost-effective fuel supply and consumption for power generation.

In line with SP2050, TNBF has launched an in-house sustainability framework in December 2022 to be the sustainable fuel thought leader and supplier for the regulated industry.

In addition, we have optimised our plants to ensure they operate at optimal efficiency.

Fuel consumption from non-renewable sources to power the generation plants are shown below. In an effort to reduce coal capacity, we continue to explore the viability of increasing natural gas in our energy mix as a transition fuel while we research the commercialisation of green fuel.

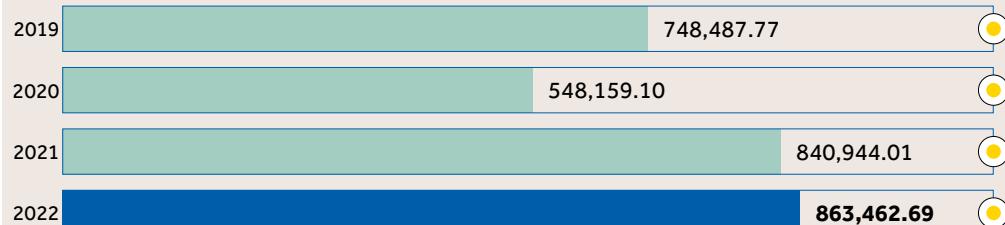
TOTAL FUEL CONSUMPTION  
(GJ)

## Energy Management

At TBNB, we integrate energy efficiency initiatives and programmes across our buildings.

TNB new buildings including Balai Islam and TNB Platinum campus incorporated energy efficiency design features as an effort to reduce our energy consumption.

There is a slight increase in total energy consumption for FY2022 compared to FY2021, due to increasing business operations and office occupancy post COVID-19 pandemic.

TOTAL ENERGY CONSUMPTION  
(MWh)

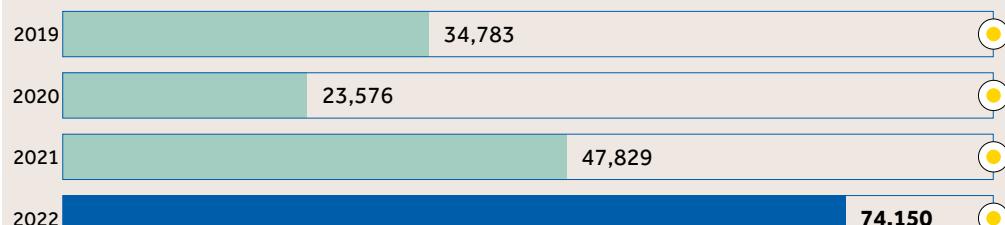
## Waste Management

We manage all hazardous waste centrally in accordance with our Health, Safety and Environment (HSE) guidelines on Scheduled Waste Management, which are in compliance with regulatory requirements set by Department of Environment (DOE).

We continuously improve our waste management process through site inspection and internal audit.

In FY2022, we have developed our E-Waste Management Policy which is enforced across all TNB premises. All electronic waste categorised under SW110 will be managed and disposed in accordance with DOE guidelines. To track our progress, we are in the process of developing an online reporting system for E-Waste inventory.

TNB monitors its scheduled waste generation directed to disposal and diverted from disposal regularly. The scheduled waste are disposed responsibly through licensed waste contractors.

TOTAL SCHEDULED\* WASTE GENERATED  
(Metric Tonnes)

\* We refer to DOE's terminology of scheduled waste which means waste that has hazardous characteristics and thus has the potential to negatively affect the environment and public health

## CLIMATE CHANGE AND ENVIRONMENT

### MINIMISING OUR ENVIRONMENTAL IMPACTS

#### Our Approach and Key Highlights

##### Biodiversity Management

In FY2022, we increased our efforts in conserving biodiversity surrounding our operation sites :

##### Nenggiri Hydroelectric Project

- TNB conducted a study on threatened flora species (based on the International Union for Conservation of Nature's (IUCN) Red List of Threatened Species) found at the project site area.
- TNB has also developed a Wildlife Management Plan with consultation from Jabatan PERHILITAN that will outline implementation steps in monitoring and managing wildlife.

##### Sungai Perak Hydroelectric Station – Temenggor Dam

- TNB conducted a study on threatened flora species based on the IUCN's Red List of Threatened Species found at the Temenggor Dam.

##### Cameron Highlands – Jor and Ringlet Lakes

- TNB is running a Pilot Development of Habitat Rehabilitation and Restoration for Sediment Deposit Area in Cameron Highlands. This project is in collaboration with the Pahang State Forestry Department to rehabilitate and restore dredging disposal sites at Jor and Ringlet Lakes.
- The pilot development aims to identify suitable tree species and soil treatment required, as well as identification of routine practices that will enhance tree growth.

##### Bukit Selambau Large – Scale Solar (LSS) Plant

- TNB's study to manage human-macaque conflict through Behavioral Ecology and DNA Metabarcoding has concluded in 2022.
- The results of the study has allowed TNB to understand the daily activity, behaviour and dietary requirements of the macaques which will be utilised to reduce human-macaque conflicts.

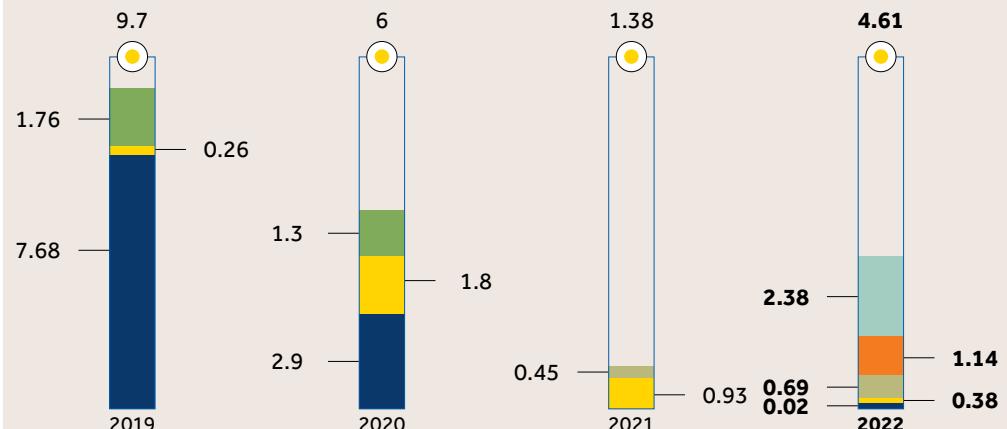
##### Hulu Terengganu Hydroelectric Station

- TNB conducts annual assessment on changes in aquatic life population.
- The findings from the annual assessment are important for us to understand and evaluate impacts from the station's operation to surrounding aquatic habitat.

In FY2022, a total of RM4.61 million was spent on biodiversity studies at Nenggiri Hydroelectric Project, Cameron Highlands – Jor & Ringlet Lakes, Solar Farm Bukit Selambau, Temenggor Dam and Hulu Terengganu Hydroelectric Station.

#### TOTAL SPEND (RM MILLION) ON BIODIVERSITY STUDIES

● Nenggiri Hydroelectric Project    ● Cameron Highlands – Jor and Ringlet Lakes  
● Solar Farm Bukit Selambau    ● Pergau Dam, Sungai Perak Hydroelectric Station  
● Temenggor Dam, Sungai Perak Hydroelectric Station    ● Hulu Terengganu Hydroelectric Station



#### KEY FINDINGS OF TNB'S IUCN RED LIST STUDIES AS OF FY2022

Site	Species Group	Number of Species							Total Expenditure in FY2022 (RM'mil)
		Critically Endangered (CR)	Endangered (CN)	Vulnerable (NT)	Near Threatened (NT)	Least Concern (LC)	Data Deficient	Not Evaluated	
Nenggiri Hydroelectric Project	Fish	0	1	0	0	28	4	0	2.38
	Bird	1	4	8	31	142	0	0	
	Terrestrial	6	21	7	13	95	4	4	
	Flora	1	2	3	10	137	7	658	
Cameron Highlands – Jor and Ringlet Lakes	Fish	0	0	0	0	0	0	0	1.14
	Bird	0	0	0	0	0	0	0	
	Terrestrial	0	0	0	0	0	0	0	
	Flora	0	73	168	20	533	0	0	
Bukit Selambau Large – Scale Solar (LSS) Plant	Fish	0	0	0	0	0	0	0	0.69
	Terrestrial	0	1	0	1	0	0	0	
Sungai Perak Hydroelectric Station (Temenggor Dam)	Fish	1	0	0	1	57	2	2	0.38
	Terrestrial	20	32	46	0	0	0	0	
	Flora	20	32	103	47	0	0	3339	

● Critically Endangered (CR)    ● Endangered (CN)    ● Vulnerable (NT)    ● Near Threatened (NT)  
● Least Concern (LC)    ● Data Deficient    ● Not Evaluated

**CLIMATE CHANGE AND ENVIRONMENT****MINIMISING OUR ENVIRONMENTAL IMPACTS****Our Approach and Key Highlights**

SESB conserves the forest and wildlife of Sabah through a joint partnership with the Sabah Forestry Department (SFD).

SESB recognises the importance of conservation of our natural environment for future generations and is proud to contribute to organisations that share the same values and objectives. As part of the commitment, SESB has contributed RM20,000 to Sabah Wetlands Conservation Society (SWCS) to fund their operations. SWCS aims to promote the conservation of wetlands in Sabah and the variety of plants, birds and other living organisms that call these wetlands home.

In addition, SWCS is committed to raising public awareness and appreciation of wetlands, as well as encouraging public involvement in protecting them. Furthermore, SWCS manages the Kota Kinabalu Wetlands as a model wetland centre for the purpose of conservation, education, recreation, tourism and research. By demonstrating the importance of wetlands through practical examples, they hope to inspire others to take action to protect wetlands in their own communities.

**SITE AND HABITAT PROTECTION**

At TNB, we implement preventive and restorative measures to reduce our impact on local biodiversity, including minimising our operations within areas of high biodiversity value. However, there are several areas in which TNB conducts its activities and are home to an abundance of flora and fauna. Some species in these areas are protected under domestic and/or international declarations by public authorities.

Our current activities situated in areas of high biodiversity value has either commenced prior to the issuance of declarations of protections or after exhaustive analysis of alternatives and environment assessment with oversight from competent authorities where it was determined that there were no viable alternatives. The following table outlines the TNB facilities located within or adjacent to protected areas of high biodiversity value and our key ongoing initiatives on habitat protection and restoration :

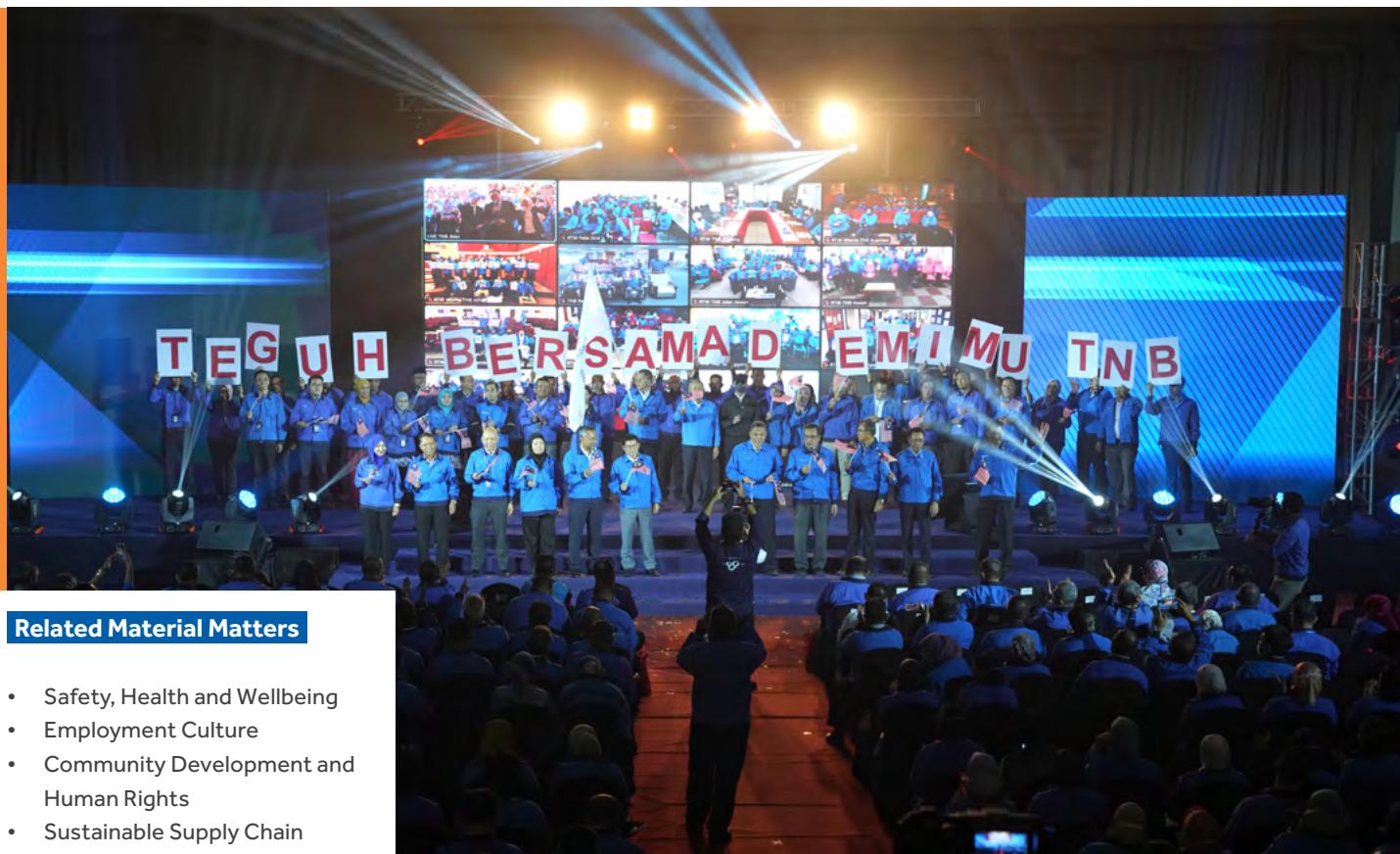
<b>Project, Location and Area</b>	<b>Biodiversity Value</b>	<b>Methodologies</b>	<b>Third Party Partnerships</b>
<b>Fish Management &amp; Eco – Tourism</b>  Sungai Tiang, Royal Belum State Park (12 km)	<ul style="list-style-type: none"> <li>• IUCN Red List.</li> <li>• Aquatic freshwater fauna.</li> <li>• Culture and tradition of Jahai Tribe.</li> </ul>	<ul style="list-style-type: none"> <li>• Release of fish fry at Tiang River.</li> <li>• Quarterly fish and water quality assessment.</li> <li>• Tourist satisfaction surveys.</li> </ul>	<ul style="list-style-type: none"> <li>• Perak State Parks Corporation : monitoring implementation progress.</li> <li>• Fishery Department of Perak : provided fish fry for the sustainability efforts of the fish sanctuary.</li> <li>• Department of Orang Asli Development Perak : provided additional funding, moral and material support such as boats, and ICT equipment for the successful implementation of this project.</li> <li>• Malaysia Co-Operative Societies Commission : Provide skill and technical development through various training initiatives.</li> </ul>

## CLIMATE CHANGE AND ENVIRONMENT

### MINIMISING OUR ENVIRONMENTAL IMPACTS

Project, Location and Area	Biodiversity Value	Methodologies	Third Party Partnerships
<b>Sediment Deposit Habitat Rehabilitation and Restoration</b>  Jor Lake (20.23 hectares) and Ringlet Lake (87.34 hectares), Cameron Highlands	<ul style="list-style-type: none"> <li>IUCN Red List.</li> <li>Tree species available within PDA3 of dumping site Jor (HS Bukit Tapah) and Cell 5 of dumping site Jasik (HSK Ringlet).</li> </ul>	<ul style="list-style-type: none"> <li>Terrestrial Flora Revegetation.</li> <li>Biomass Estimation.</li> <li>Carbon sink extrapolation.</li> <li>Cost Benefit Analysis.</li> </ul>	<ul style="list-style-type: none"> <li>Forestry Department of Pahang : commitment to rehabilitate the disposal area with Eucalyptus.</li> <li>Forestry Department of Pahang : TNBR to seek agreement to utilise suitable land for control plot within Cameron Highlands area as in kind contribution and support for this study.</li> </ul>
<b>Human – Monkey Conflict Management</b>  Solar Farm : TNB Bukit Selambau LSS Plants Adjacent Areas (600 hectares)	<ul style="list-style-type: none"> <li>IUCN Red List.</li> <li>National Policy on Biological Diversity (NPBD) 2016-2025.</li> <li>National commitment to the Convention on Biological Diversity (CBD).</li> </ul>	<ul style="list-style-type: none"> <li>Fecal sampling of existing monkey population for DNA sequencing works.</li> <li>Social survey to understand community's perception.</li> <li>Behavioural study of the monkey population.</li> <li>Installation of electric fence as per Energy Commission Guidelines.</li> </ul>	Department of Wildlife and National Parks : <ul style="list-style-type: none"> <li>Collaboration to eradicate monkey population as a last option if all mitigation measures applied are unsuccessful.</li> <li>Inputs on Management Plan document.</li> <li>Supported awareness session conducted with local community.</li> </ul>
<b>Manage and mitigate impacts on wildlife population due to project development</b>  Nenggiri Hydroelectric Project Site Area	<ul style="list-style-type: none"> <li>IUCN Red List.</li> </ul>	<ul style="list-style-type: none"> <li>Data collection using satellite collar and camera traps.</li> <li>Wildlife inventory.</li> <li>Wildlife conflict and management.</li> <li>Habitat rehabilitation and wildlife corridor.</li> </ul>	Department of Wildlife and National Parks : gathering input on Wildlife Management Plan.

# ENGAGING OUR PEOPLE AND CULTIVATING TALENT



## Related Material Matters

- Safety, Health and Wellbeing
- Employment Culture
- Community Development and Human Rights
- Sustainable Supply Chain

## EMPLOYMENT MANAGEMENT AND GROWTH

In TNB, our people stand at the core of our operations. Their efforts and diligence in contributing towards TNB's aspirations whilst upholding company values are highly appreciated. In FY2022, there has been a heightened awareness in operationalising the sustainability agenda in tandem with TNB's journey to achieve net zero emissions. This requires more proactive initiatives in building up the needed talent and right skillset for our employees. Numerous initiatives and measures have been put in place to retain and attract employees. Along with that, we aim to cultivate a strong culture of diversity, professionalism, leadership and competency in our workforce.

### CREATING A CONDUCIVE WORKPLACE

In the countries where we operate, we comply with all relevant labour laws and we support the rights of freedom of association and collective bargaining. Additionally, our executive and non-executive employees' rights are well-protected through our unions, which enable us to

provide better working conditions. We uphold human rights by treating all employees with respect and have zero tolerance for discrimination, harassment, or bigotry, ensuring fair and humane treatment of everyone.

From January until December 2022, TNB conducted a pilot phase of TNB Ways of Working (TWW), which involved more than 8,500 people from selected departments from eight (8) divisions and subsidiaries. Depending on the nature of the job (i.e., field force, office-based or customer-facing), a suitable hybrid work arrangement encompassing options to Work In Office (WIO), Work From Home (WFH), Work Home Based (WHB). Three (3) key elements of TWW implementation are flexible and hybrid working location (WIO & WFH), flexible and staggered working hours, as well as smart casual dress code. At the end of the pilot programme, it was approved for implementation throughout TNB effective 1 January 2023. This aligned with TNB's timeline to implement flexible working throughout the organisation and to comply with the amendment of Malaysia's Employment Act 1955 which begins in January 2023.

## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

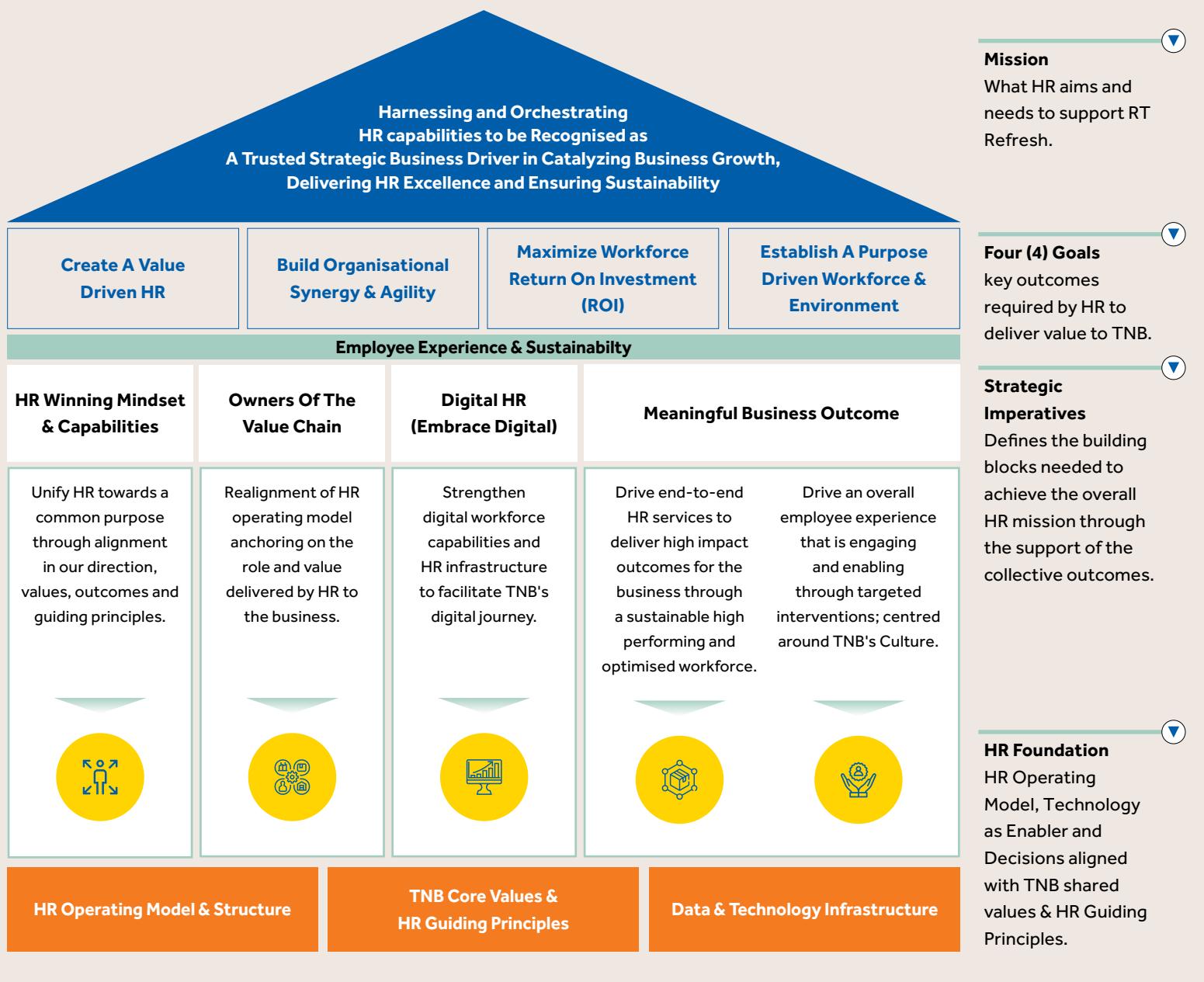
### EMPLOYMENT MANAGEMENT AND GROWTH

#### HR GUIDING PRINCIPLE AND STRATEGY

We continue to execute the intended action plan guided by our HR Master Plan support and align to our Transformation Journey – Reimagining TNB (RT) through our Human Resources (HR) strategy which comprises the HR Leap 6, HR Guiding Principles and the HR Master Plan 2020 – 2025. In 2022, we revised our mission statement as part of our commitments in building up our workforce in meeting the Company's sustainability agenda throughout the organisation. The revised mission statement is "Harnessing and Orchestrating HR capabilities to be Recognised as A Trusted Strategic Business Driver in Catalysing Business Growth, Delivering HR Excellence and Ensuring Sustainability". We continue to create new initiatives and measures to ensure the sustainability of our workforce and operations.

#### HR Master Plan 2020-2025

**Building blocks to deliver the desired outcomes in support of Reimagining TNB's Aspiration and Towards High Performing Culture**



## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

### **EMPLOYMENT MANAGEMENT AND GROWTH**

Reimagining Culture (RC) was established in FY2020 to redefine our core values and culture – Integrity, Collaborative, Professionalism, Customer-centricity, Forward thinking and Mindfulness – that would drive our business transformation along with the development for high performance culture. As part of this journey, we launched our TNB Identity comprising our Purpose, Aspirations, Culture and Behaviours.

- 1 Established **Corporate and Divisional High Performance Culture Action Plan** which entails programmes and initiatives to be conducted to drive High Performance Culture in TNB throughout FY2022.
- 2 On-going communication efforts on the **TNB Identity** at Corporate and Divisional Levels via Internal Bulletins, Facebook and other platforms. We also embedded elements of TNB Identity in the TNB Appointment and Offer letters as well as People Development courses and trainings.
- 3 Organised **Majlis CEO Turun Padang & Pengiktirafan Wira Budaya** which aims to provide recognitions to employees that have demonstrated exemplary acts and contributions beyond their essential duties through their involvement towards the Company, community, country and at the international level guided by the TNB Core Values. Sessions were held at four (4) states with accumulated attendees of 1,723. During those sessions, 55 employees were awarded with the Wira Budaya award based on the specific TNB Core Values.
- 4 Organised **Majlis Anugerah Kecemerlangan TNB 2022 (ACE TNB 2022)**, an appreciation ceremony held to recognise the contribution and service of TNB employees identified from all divisions, departments and subsidiaries within TNB. Awards presented include Anugerah Wira Budaya Kebangsaan, Anugerah Kecemerlangan Pekerja, Anugerah Nampak, Dengar dan Rasa Selamat (NDRS), Anugerah TNB Performance Leaderboard, and Anugerah Khas Presiden.
- 5 Conducted **Change Engagement Circle (CEC)**, which are quarterly engagement sessions with representatives from all divisions and subsidiaries, to update and share on High Performance Culture initiatives and programmes.

### **TALENT RETENTION AND ATTRACTION**

At TNB, we value the retention and attraction of good talent. To support employees in working as effectively and efficiently as possible in line with TNB's business strategic objectives and goals, we developed TNB Performance Management as an integrated and continuous approach. In promoting healthy and constructive relationships between immediate managers and subordinates, performance discussions are mandated throughout the management cycle. Through these discussions, employees are empowered to constantly strive for improvement, measure progress and work towards achieving better career progress.

Our approach in managing and nurturing our human resources :

Approach	Key highlights for FY2022
<b>Talent attraction, recruitment and retention is vital to build a strong workforce pipeline</b>	We conducted various programmes and initiatives to retain and develop our talent pool : <ul style="list-style-type: none"> <li>95 employees were enrolled in Transition Leadership Programme.</li> <li>1,438 training programmes were conducted for TNB employees.</li> <li>5,800 individuals were certified as Orang Kompeten Suruhanjaya Tenaga (OKST) certification holders.</li> <li>183 employees obtained non-technical certification, such as ACCA, CPA and CIMA.</li> <li>In FY2022, Distribution Network Engineering Centre (DEC) conducted DEC Executive Attachment programme, which successfully attracted 60 talents into DEC Graduates pools.</li> </ul>

## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

### EMPLOYMENT MANAGEMENT AND GROWTH

Approach	Key highlights for FY2022
We offer employees a competitive benefits package to maintain employee morale and attract and retain talent	<p>We have developed a compelling Employee Value Proposition (EVP) which is a competitive remuneration and benefit package that supports work-life balance as well as the mental and physical health of our employees that includes :</p> <ul style="list-style-type: none"> <li>• Competitive benefits package.</li> <li>• Childcare facilities and nurseries.</li> <li>• Housing accommodation and quarters for employees.</li> <li>• Counselling services.</li> <li>• Sports and recreational facilities.</li> <li>• Career and development opportunities.</li> <li>• Religious facilities.</li> <li>• The EVP Policy was established in April 2022 for all TNB employees and serves as a guide and reference for TNB subsidiaries appointed employees.</li> </ul>
Hiring of gig workers (On Demand Free Agents)	<ul style="list-style-type: none"> <li>• TNB has started the hiring of gig workers, providing flexible short term employment opportunities since 2018.</li> <li>• TNB On Demand Free Agent (ODFA) guideline was developed to specify the provisions for appointment of ODFA in TNB. This guideline does not apply to TNB's subsidiaries but may be used as a reference, subject to their respective terms and conditions.</li> <li>• An ODFA refers to a free agent, freelancer, or gigger hired by TNB on a contract for service basis. The establishment of this contract for service is between TNB and the respective appointed ODFA individual.</li> <li>• An appointed ODFA is not considered as an employee and is therefore not covered under the Industrial Relations Act and Employee Act.</li> </ul>
Employee engagement for open communication and sharing of different perspectives	<ul style="list-style-type: none"> <li>• We encourage two-way communication with our employees through various engagement channels.</li> <li>• Grievance mechanisms are outlined in our Grievance policy which is supported by our Whistleblowing policy and channels such as the Whistleblowing Information System (WBIS). This serves as a safe platform for employees to channel their feedback and concerns.</li> <li>• Our extensive workforce is represented by three (3) Registered Unions and two (2) Workers Associations comprising both executives and non-executive employees. We have always maintained harmonious relations with the unions and are pleased to note that our union leaders are actively involved in all employee engagement sessions such as labs, syndications, joint meetings and technical/field trips.</li> <li>• Through our biannual Employee Engagement Survey (EES) and Culture Barometer, we are able to gain an understanding of our strengths and areas for improvement. Our engagement scores have been improving across all surveys conducted. The EES and Culture Barometer conducted in December 2022 received a score of 86.6% in comparison to the previous score of 85% in 2021.</li> <li>• In FY2022, we have maintained a low turnover rate of 3.93% which reaffirms our exemplary efforts in employee management.</li> </ul>
Using digital platforms to attract talented workforce	<ul style="list-style-type: none"> <li>• We have conducted talent and workplace showcase under Employee Branding strategy such as promotion through social media platforms and participation in industry awards events.</li> <li>• We also engaged with future talents through our postings on social media via Instagram@electrifyingcareers to showcase TNB's initiatives as well as to promote job openings to the public.</li> </ul>

## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

## EMPLOYMENT MANAGEMENT AND GROWTH

**Feature Story 5**  
**EMPOWERING OUR PEOPLE**

We encourage our employees to embark on lifelong learning, enabling them to achieve their personal and career goals. We aspire to be a learning organisation, focused on creating, acquiring and transferring knowledge and skills that continuously evolves with new business needs and global trends. We are committed to ensure that all our employees have access to learning and development opportunities. We aim to develop our employees' capabilities and ensure they carry out their roles to meet TNB's strategic objectives primarily, considering global trends and predictions for the future. This is achieved through huge allocation and funding of various learning programmes and initiatives in various learning institutions under TNB.

## Learning and Development Investment

**RM 161 million**

## Total Learning and Development hours

**1,024,777 learning hours**

## TNB Top Talent Development Programmes

*Development programmes that aim to develop a surplus of leaders that embody TNB identities*

- 130 talents were equipped with Individual Development Plan (IDP), which resulted in 97.6% critical positions that have ready successors and 86.7% succession realisation.
- 6 women from TNB successors have completed Women Leadership Accreditation Certificate Programme.

## Upskilling and Reskilling Programmes

*Programmes targeted to upgrade employee skills*

- A total of 749 staff were enrolled in upskilling/reskilling programmes.

## Reskilling employees for energy transition

*Programmes targeted to upgrade employee skills especially in energy transition-related skills*

- Solar technology training : 21 people.
- Smart meter training : 332 people.
- ILSAS EV Training Hub to provide reskilling training for the EV industry.

## Digital Skills Training

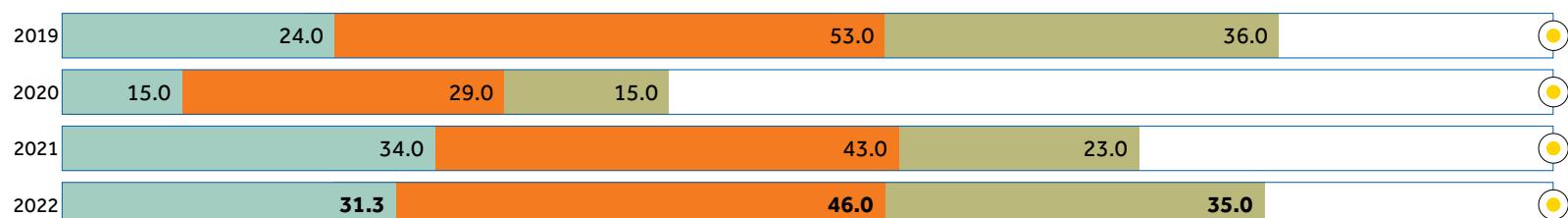
*Digital learning solutions for TNB employees*

- 821 sessions conducted with 15,178 participants from TNB employees.

## EMPLOYMENT MANAGEMENT AND GROWTH

## AVERAGE HOURS OF LEARNING BY EMPLOYEE CATEGORY (HOURS)

● Senior Management ● Executives ● Non-Executives



Our learning and development initiatives developed to enhance existing talent :

Initiative	Key highlights for FY2022
Division Academies Participants of Academy in Business Entities	<ul style="list-style-type: none"> <li>• GenCo Academy : 69 participants</li> <li>• Grid Academy : 25 participants</li> <li>• Distribution Network (DN) Academy : 32 participants</li> <li>• Retail Academy : 3,214 participants</li> <li>• HR Academy : 30 participants</li> <li>• ILSAS (TOT certified) : 794 participants</li> </ul>

## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

### EMPLOYMENT MANAGEMENT AND GROWTH

Initiative	Key highlights for FY2022
<b>Upskilling &amp; Reskilling Programmes</b> Programmes targeted to upgrade employee skills especially in energy transition-related skills	<ul style="list-style-type: none"> <li>A total of 749 staff were enrolled in upskilling/reskilling programmes in FY2022, namely :           <ul style="list-style-type: none"> <li>- PPKK - Program Pendidikan Kemahiran Ketukangan</li> <li>- PPKJ - Program Pendidikan Kemahiran Juruterenik</li> <li>- PPPS - Program Pendidikan Penyelenggara Stor</li> <li>- PPPT - Program Pendidikan Pembantu Tadbir</li> <li>- Conversion Programme - Juruteknik Mechanical to Electrical</li> </ul> </li> <li>63 people underwent Conversion Programmes to facilitate continued employability among TNB employees.</li> <li>32 employees benefitted from the Degree reimbursement programme, with a total of RM413,000 invested for partial course fee sponsorship to assist executives in their professional advancement.</li> <li>55 employees participated in the Transition Leadership Programme for Executive programme with a total of RM328,000 investment, whereas 40 employees participated in the Transition Leadership Programme for Non-Executive programme with a total of RM173,000 investment.</li> <li>332 people underwent reskilling programmes to train meter operators on ways to install and collect readings from smart meters, in an effort to support transition towards smart meter &amp; digital billing.</li> <li>ILSAS conducted training for 21 individuals on solar technology for TNB Reskilling Programme.</li> <li>The newly launched ILSAS EV Training Hub is expected to provide reskilling training for the EV industry, focusing on fundamental knowledge covering basic battery storage and EV technology. This will align with the government's initiative to improve EV technology in the country.</li> </ul>
<b>Digital Skills Training</b> A collaboration with ILSAS to accelerate digital learning solutions for TNB employees. A wide variety of e-learning modules allows employees to pace their learning and development	<ul style="list-style-type: none"> <li>TNB aims to fulfil the demand for digital talents across TNB business entities through the development of internal talent.</li> <li>TNB will implement a series of development programmes for three job roles in the organisation , namely Data Scientist, Data Analyst and Data Engineer, in order to establish the Digital Academy.</li> <li>Many face to face (f2f) classroom activities were enhanced to provide a digital learning option, or an alternative hybrid approach combining the best of both approaches.</li> <li>Digital learning platform and contents employed include bite-sized learning, webinars, virtual learning and e-learning.</li> <li>ILSAS e-Learning Programme : 821 sessions conducted with 15,178 participants from TNB employees.</li> </ul>
<b>TNB Leadership Development</b>	<p><b>TNB Leadership Competencies :</b></p> <ul style="list-style-type: none"> <li>Conducted continuous leadership learning and development initiatives such as Leadership Webinar series featuring internal and external speakers on various current and future leadership topics. This year, 26,900 employees participated in the programme with a total of RM77,380 in investment. TNB conducted 68 webinars to date. 21 webinars were conducted in FY2022.</li> <li>Developed First-Time Manager Programme (FTM) for 55 aspiring managers to re-strategise (review) development content for 144 Young Executive Development Programme (YEDP) participants to strengthen leadership capabilities when employees transition to different roles within the organisation.</li> <li>Provided Informal Learning through Group Coaching in FTM.</li> </ul> <p><b>TNB Leadership Development Centre</b></p> <ul style="list-style-type: none"> <li>52 talents participated in strategic management breakouts.</li> <li>20 talents placed in roles along pathways leading to critical positions.</li> <li>44 talents participated in strategic dialogues with Board members.</li> <li>525 top management and talents participated in premium leadership webinars and training.</li> <li>6 women successors have completed ASB - WLF Women Leadership Accreditation Certificate Programme, a collaboration between ASB and MIT Sloan.</li> <li>100% of 130 talents were equipped with Individual Development Plan (IDP), which resulted in 97.6% critical positions with ready successors and 86.7% succession realisation. They were chosen through 10 sessions of TNB's Group-wide Succession Management Committee's deliberation.</li> </ul>

**ENGAGING OUR PEOPLE AND CULTIVATING TALENT****EMPLOYMENT MANAGEMENT AND GROWTH**

<b>Initiative</b>	<b>Key highlights for FY2022</b>
<b>TNB Reskilling Malaysia Programme</b>  Spearheaded by ILSAS, this initiative provides job matching opportunities to unemployed members of the public as well as training of necessary skills for their new roles	<ul style="list-style-type: none"> <li>Introduced in 2020, the programme helps empower and provide reskilling for retrenched and unemployed Malaysians.</li> <li>5,827 participants from the programme were successfully matched with employers during the year.</li> <li>5,072 participants successfully completed the training.</li> <li>More than RM45 million has been allocated for the programme.</li> </ul>
<b>Digital Learning Initiatives</b>  Utilising various platforms and content providers to conduct learning courses for TNB employees virtually	<p><b>TNB Corporate Digital Learning Platform Experience (LXP) :</b></p> <ul style="list-style-type: none"> <li>Digital Learning experience with external content providers and platforms.</li> <li>A robust strategy to ensure the success of delivery and cultivating self-directed and self-paced digital learning culture in TNB.</li> <li>TNB LXP aims to provide TNB Executives with external content provider via its digital platform.</li> <li>LinkedIn Learning enrolment for 1,000 executives in Pilot Phase prior to roll out for the whole company in 2023.</li> </ul>
<b>Graduate and Apprenticeship Programme</b>  The PROTÉGÉ programme creates a pool of competent, well trained, knowledgeable and skilled graduates through industrial attachment	<ul style="list-style-type: none"> <li>The PROTÉGÉ programme (previously known as SL1M) supports the Malaysian Government and the Ministry of Entrepreneur Development and Cooperatives (MEDAC) initiative to create a pool of skilled graduates through industrial attachments that will help them to attain relevant competencies to enhance their marketability and employability.</li> <li>Since November 2011, TNB has trained about 6,110 trainees with RM143 million investment from AAIBE (RM66.5 mil) and TNB (RM76.5 mil) and the average employability rate (FY2011 - FY2021) was 73%.</li> <li>TNB has trained 547 PROTÉGÉ trainees during the year.</li> <li>TNB has managed to secure RM12.13 million from Akaun Amanah Industri Bekalan Elektrik (AAIBE) to fund the implementation of PROTÉGÉ Phase 8 programme.</li> <li>At the end of the programme, TNB PROTÉGÉ trainees were able to acquire new skills and gain industrial exposure from both soft-skills training and On-the-Job Training throughout the 8-month period.</li> </ul>

**ADVOCATING FOR DIVERSITY AND INCLUSIVENESS**

We embrace diversity and inclusivity among our employees, as part of our human rights efforts. This allows us to gain perspectives from different viewpoints, enabling our employees to feel trusted and appreciated for their ideas, presence and contributions to the organisation regardless of their age, gender, religious affiliation and disability.

Diversity and inclusion are specifically highlighted in the new TNB Identity. It is stipulated in one of the TNB Core Values which is Collaborative, where we embrace diversity and inclusivity and value outside in perspectives. This reflects its importance for TNB, now and moving forward by leveraging a greater variety of perspectives and more comprehensive viewpoints, as well as talents that enable us to have higher flexibility in adapting to dynamic markets, as well as promoting creativity and innovation. We also want to ensure our diversity and inclusivity efforts empowers our people to feel that their ideas, presence and contributions are truly valued, regardless of their position or entities in the organisation, to deliver and contribute towards TNB's greater good.

In FY2022, the Group's Human Resource Division introduced its Diversity and Inclusion Policy to further improve diversity and inclusivity within its workforce. This policy aims to address the gaps related to this matter.

## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

### EMPLOYMENT MANAGEMENT AND GROWTH

#### OUR PERFORMANCE FOR FY2022

	FY2019	FY2020	FY2021	FY2022
Total TNB Group Employees	36,307	35,576	34,938	34,699

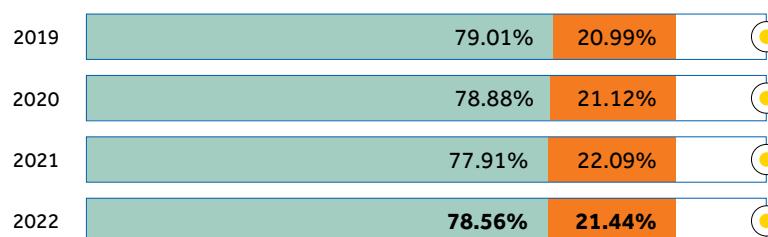
#### GENDER DIVERSITY BY RANK

(%)  
Male Female



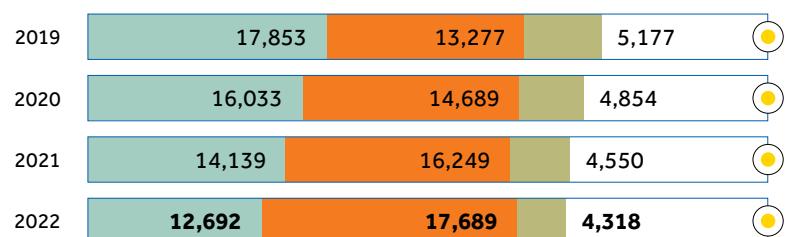
#### EMPLOYEE BREAKDOWN BY GENDER

(%)  
Male Female



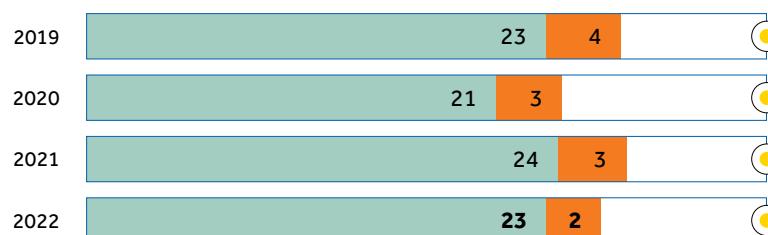
#### EMPLOYEE BY AGE GROUP

(No.)  
< 35 35-50 > 50



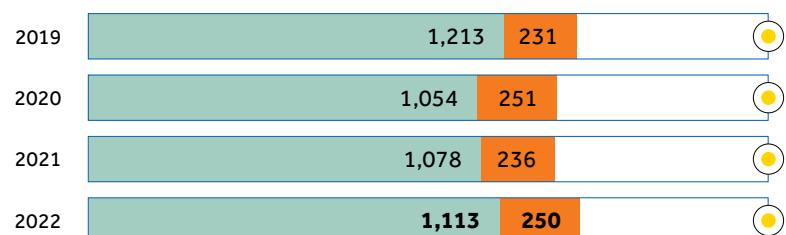
#### DIFFERENTIALLY ABLED EMPLOYEES BY GENDER

(No.)  
Male Female



#### EMPLOYEE TURNOVER BY GENDER

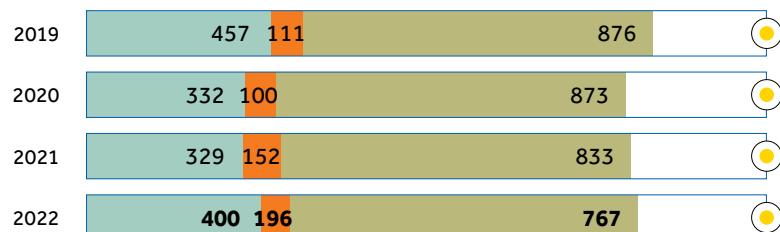
(No.)  
Male Female



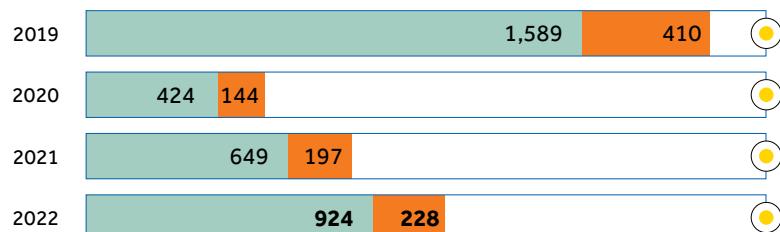
## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

## EMPLOYMENT MANAGEMENT AND GROWTH

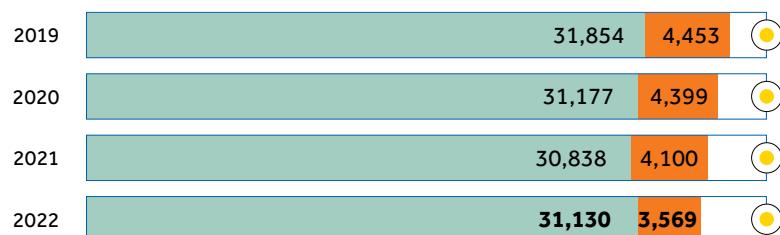
## EMPLOYEE TURNOVER/ATTRITION BY AGE GROUP

(NO.)  
● < 35 ● 36-50 ● > 50

## NEW HIRES BY GENDER

(NO.)  
● Male ● Female

## EMPLOYEE BY TYPE OF EMPLOYMENT

(NO.)  
● Permanent employees ● Contract/Temporary employees

## EMPLOYEE ENGAGEMENT

Employee engagement is an essential aspect that drives TNB's success. We believe that engaged employees are more motivated, productive and committed to delivering their tasks and roles. They feel appreciated and are willing to go the extra mile to perform their job and duties, resulting in improved work quality, customer service, work efficiency and performance, as well as a healthy work culture. Furthermore, engaged employees are likely to stay with the Company, reducing turnover and serving as TNB's ambassadors and advocates. Formal and informal engagement sessions are conducted across different levels of employees, supplemented by communication through various print, social media and audio-visual channels, both online and offline.

This year, we conducted TNB Employee Engagement Survey (EES) and Culture Barometer as a form of employee pulse check to assess and measure the awareness, understanding, attitude and ambassadorship amongst our employees towards the TNB Identity, which consists of TNB's Purpose, Aspiration and Core Values. This survey, which was initiated in 2020, also focused on measuring the extent of our employees' engagement with TNB. The survey also served its purpose to identify the efficacy of programmes and initiatives that have been organised to drive High Performance Culture in TNB. By soliciting feedback from the employees and taking their suggestions into account, we aim to continuously foster a culture that is more responsive to the needs and concerns of our employees.

Following the result of the survey, a workshop was conducted with representatives from each division, department and subsidiaries to look for trends and patterns in the survey results and identify areas for improvements to increase employee engagement. Based on the results of the survey and the areas identified for improvements, each representative is responsible to develop a plan to address the issues and enhance employee engagement. The plan is aligned together with the initiatives and programmes planned to drive High Performance Culture within TNB. Additionally, constant follow up and measure of progress was done to ensure initiatives and programmes were executed accordingly.

## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

### EMPLOYMENT MANAGEMENT AND GROWTH

We engaged and communicated with our employees through several platforms :

Initiative	Description
Face-to-face	Staff gatherings, outreach sessions, morning talks, online engagements, meetings.
Intranet	News from TNB Group and Divisions are channeled via respective intranet subpages to ensure effective and targeted communication.
Publications	Various bulletins from Corporate Communications and various Divisions are communicated on Tenagawan Daily (newsletter) sent via email to all staff and published on TNB's internal social media group (Facebook).
TV TNB	TV sets strategically located in office lobbies, common areas such as lift lobbies and cafeterias, etc.
Social Media	Active interactions between TNB staff and management representatives in TNB Powerfaces Facebook group.
Engagement with Employee Representatives	<ul style="list-style-type: none"> <li>Through Unions, employees raised issues on staff benefits in the Collective Agreement negotiation platform.</li> <li>Engagement sessions with all TNB's Unions &amp; Associations on the amendment of the Employment Act 1955.</li> </ul>

### Key Highlights For FY2022

**10**

Women leaders were featured in TNB's Women's Day Celebration

A Board Engagement Programme was conducted focusing on women's leadership. The programme consisted of

**40%**

women attendees throughout the organisation

We continue to be a member of the

**30% Club**

which advocates for at least 30% women's representation on all boards and in top management globally

A Diversity and Inclusion (D&I) policy was launched in 2022 which explicitly details TNB's commitment to ensuring a diverse and inclusive workplace without consideration of age, gender, race, religion, nationality, background or previous experiences. This will also attract talents from diverse backgrounds. The effectiveness of the policy will be gauged on yearly surveys conducted by Group HR. Additionally, the Employee Experience Policy was established to cover the Employee Experience phase starting from Plan, Recruit, Develop, Retain, Growth and Exit, which is aligned with the six (6) pillars of HR Leap 6 to complement GHR's strategy and operating model.

**PLAN**

Business Driven

**RETAIN**

Total Motivation

**RECRUIT**

Agile Workforce

**GROW**

Adaptive Mindset

**DEVELOP**

Learning Organisation

**EXIT**

Legacy

## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

## EMPLOYMENT MANAGEMENT AND GROWTH

## Key Highlights

For FY2022

The D&I Policy Statement focuses on :

Membership of TNB Top Management Group

Diversity of employees in terms of background

Expatriate recruitment

Fair & equitable treatment and job opportunities for persons with disabilities (PWDs)

Employee participation in career development

Prioritising safety, health and well-being

Promoting the practice of TNB's Core Values

Creating a safe and free workplace atmosphere from any form of harassment whether verbal, physical, visual or statements in the form of discrimination

Appreciating and rewarding employees based on their contributions towards the Company

In FY2022, TNB Group saw an increase in the number of women in senior management roles from 100 people in FY2021 to

**103**  
people

We continue to provide employment opportunities for  
**25**  
Persons With Disabilities (PWD) as at FY2022

TNB supports the right to freedom of association and collective bargaining and promotes

## equal pay

for men and women based on their roles and responsibilities, as outlined in our HR manuals and Collective Agreement (CA) document. The Company maintains a basic salary and remuneration ratio of 1:1.



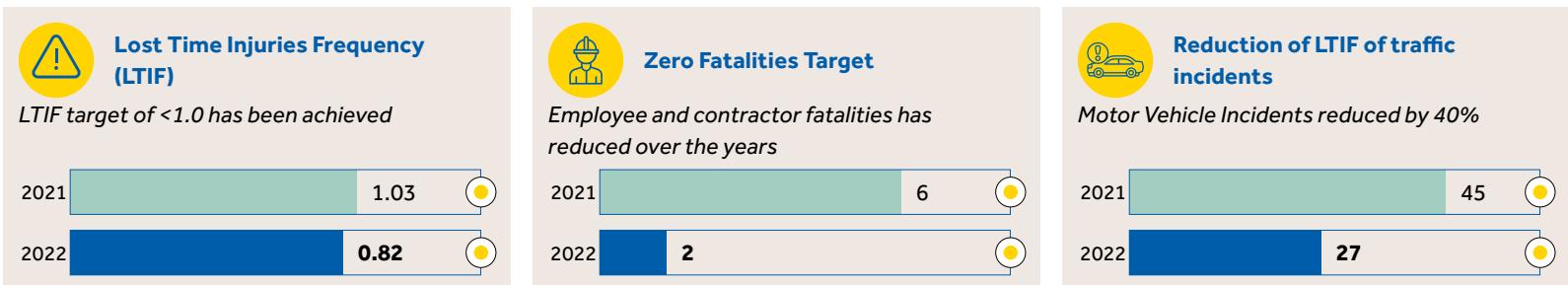
TNB conducted annual ethical standard training for all their employees, contractors and vendors based on the Training & Communication Plan (TCP). The progress is reported to the Board Integrity Committee (BIC) quarterly. The TCP is designed to meet the demands of Integrity Development to carry out integrity related training. This includes introducing an Integrity e-learning module for vendors. The TCP was also developed to close the gaps resulting from the IHI survey conducted by the Integrity Department. A total of 16,588 participants attended the training, accumulating 77,095 training hours.

## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

### Feature Story 6

#### PRIORITISING PEOPLE : SAFEGUARDING SAFETY AND WELL-BEING

At TNB, we place high importance in ensuring the safety of our employees and providing them with a safe working environment. This can be seen clearly through the improvement of our HSE performance in FY2022, where we successfully achieved our target of reducing LTIF to <1.00, recording LTIF of 0.82 in FY2022 compared to 1.03 in FY2021. TNB also recorded zero (0) employee fatalities and two (2) contractor fatalities when conducting operations on sites last year. This can be attributed to the effectiveness of the many guidelines, policies and training undertaken by the Group HSE to safeguard our employees that is in line with our values in ensuring the well-being for all.

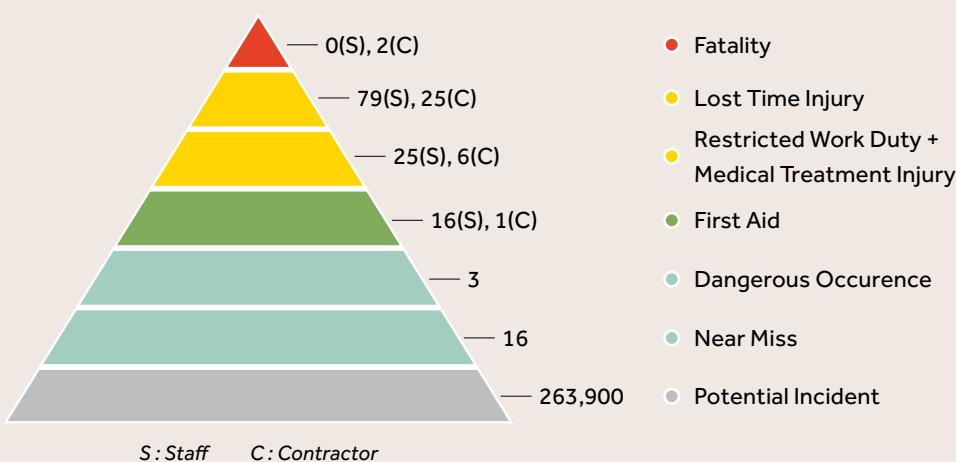


In FY2022, the Intervention Stop Work (ISW) guidelines was put into effect, allowing all employees and contractors to take responsibility for their safety and trigger a stop work intervention under unsafe work conditions. The guidelines mandates employees and contractors to identify unsafe work behaviour, conditions, or activities that do not follow existing compliance requirements.

TNB introduced the HSE Wallet Application to enable easier and timely reporting of these potential incidents. A total of 263,900 reports has been lodged, indicating that awareness on employee safety and wellbeing continues to be taken seriously. These initiatives have received positive reviews from our workforce, as it has helped to keep them safe throughout their time working on sites.

To appreciate the effort of our employees in sustaining high HSE performance and driving the safety culture transformation, the *Nampak, Dengar dan Rasa Selamat (NDRS)* Awards recognition programme was implemented. Under NDRS Awards programme, we have the NDRS League Awards, Potential Incident (PI) Reporting Awards, Authorised Person (AP) & Competent Person (CP) Awards as well as the Best Safety Health Committee (SHC) Awards. This prestigious NDRS Leagues Award was presented to the league champions on 6 September 2022 during the *Hari Anugerah Kecemerlangan TNB*.

#### Incidents reported according to incident categories



#### Intervention Stop Work (ISW) Guidelines

The guidelines highlight unsafe work behaviour, conditions, or activities that do not comply to safety standards for employees and contractors

#### HSE Wallet Application

Digital platform that enables timely reporting for employees to report hazards and potential incidents

#### Nampak, Dengar dan Rasa Selamat (NDRS) Awards

To recognise our employees efforts in sustaining high HSE performance

#### ENHANCING OCCUPATIONAL HEALTH AND SAFETY PRACTICES

Safeguarding the lives of both our employees and contractors through robust occupational safety and health systems and best practices is one of our top priorities. We strongly advocate and implement strong safety standards to prevent occurrence of work-related injuries and illnesses, as well as to achieve our targets of having zero fatality at the workplace and maintaining our Lost Time Injury Frequency (LTIF) rate at below 1.0. We are also well prepared in dealing with emergency situations that may cause potential impact to health, safety as well as the environment.

## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

### **EMPHASIS ON HEALTH, SAFETY AND WELL-BEING**

#### **IMPLEMENTING SAFETY CULTURE**

We believe that safety at our workplace goes beyond standards and policies and should be embedded as a culture within our organisation. In 2021, we attained our targeted Proactive Safety Culture Level whereby our Safety Culture Assessment (SCA) score was 4.02. The assessment is due every two years, with the next assessment due in year 2023, holding the aim to achieve a higher score.

FY2022 Approach	Key Highlights
<b>Tenaga Safety Culture</b>	<p>We have implemented nine (9) Safety Culture Values Activation &amp; Spiritual hour sessions in FY2022 focusing on divisions and subsidiaries that have recorded fatality cases, LTIF more than 1.0 and high numbers of compounds issued in the previous year. This is to instil and sustain the safety culture values of Nampak, Dengar &amp; Rasa Selamat (NDRS) in the hearts and minds of employees at all times.</p> <p>We have implemented, the NDRS Awards recognition program i.e NDRS League Awards, PI Reporting Awards, Authorised Person (AP) &amp; Competent Person (CP) Awards as well as the Best Safety Health Committee (SHC) Awards to recognise the efforts and contributions of our employees in elevating HSE performance.</p> <p>A new initiative introduced under the NDRS (Education) is the HSE Culture Change Agent (HSE CCA) programme which was launched by the HSE Department of TGBS in collaboration with TNB ILSAS on 20 June 2022. The objective of implementing this programme is to inculcate the HSE culture among all TNB employees and subsidiaries. The appointed HSE CCA will play a role as a liaison for interaction and communication of the HSE culture, monitor and evaluate aspects of safety in the workplace and support and encourage the implementation of HSE initiatives. A total of 51 HSE CCA were appointed. A comprehensive plan covering governance, engagements and promotion, competency, rewards and recognition were crafted with HSE CCA to ensure the sustainability and expansion of this programme in TNB.</p>
<b>Life Saving Rules (LSR)</b>	<p>TNB has established nine (9) lifesaving rules as part of injury prevention measures</p> <div style="text-align: center; margin-bottom: 10px;"> <span style="background-color: #0070C0; color: white; padding: 5px 10px; font-weight: bold;">Core Rules</span> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Isolate, earth and test before touch</p> </div> <div style="text-align: center;">  <p>Valid permit to work mandatory</p> </div> <div style="text-align: center;">  <p>Wear arc flash suit when switching</p> </div> </div> <div style="text-align: center; margin-bottom: 10px;"> <span style="background-color: #0070C0; color: white; padding: 5px 10px; font-weight: bold;">Supplementary Rules</span> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Use fall protection</p> </div> <div style="text-align: center;">  <p>Obtain authorisation before entering confined space</p> </div> <div style="text-align: center;">  <p>Wear helmet/safety belt.No speeding</p> </div> <div style="text-align: center;">  <p>Caution. Suspended load</p> </div> <div style="text-align: center;">  <p>No phones while driving</p> </div> <div style="text-align: center;">  <p>No drugs. No alcohol</p> </div> </div>

## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

### EMPHASIS ON HEALTH, SAFETY AND WELL-BEING

FY2022 Approach	Key Highlights
<b>Risk Assessment</b>	<p>In TNB, all work-related hazards are identified, its related risks are assessed and relevant controls to eliminate hazards and reduce risks are determined. This is performed throughout the Company with reference to the Hazard Identification, Risk Assessment and Determining Control (HIRADC) procedure. To determine the controls required to eliminate hazards and reduce risks, a hierarchy of controls such as elimination, substitution, engineering control, administrative control and Personal Protective Equipment (PPE) is used. The effectiveness of the risk assessment is reviewed annually, or when there are incidents and changes in work processes. Additionally, PI reported in the digital platform also will be assessed to alleviate any potential risk.</p> <p>The Hazard Identification, Risk Assessment and Risk Control (HIRARC) was developed based on the HIRARC Guideline from Malaysia's Department of Occupational Safety and Health (DOSH). Training on HIRARC was conducted periodically with employee &amp; employer representatives. Gaps from these risk assessments were translated as input for improvement in the future. Additionally, any industrial hygiene and occupational health assessments like the CHRA, NRA and ERA are conducted by competent persons registered with DOSH.</p> <p>These gaps from risk assessments are evaluated through the HSE management system (HSEMS) audit, inspection and enforcement activities. Gaps identified during the audit, inspection and enforcement activities are closely followed up using NCR online system. All these findings are presented in the quarterly DOSH meetings.</p> <p><b>Risk assessments conducted by TNB include conducting :</b></p> <ul style="list-style-type: none"> <li>• HSE Risk Assessment (HSERA), Environmental Impact Assessment (EIA), Quantitative Risk Assessment (QRA), Fire Risk Assessment (FRA) and Process Hazard Analysis (PHA) as a standard procedure.</li> <li>• Chemical Health Risk Assessment (CHRA) for any work activities that relates to hazardous chemicals.</li> <li>• Noise Risk Assessment (NRA) to identify work related activities with exposure to noise.</li> <li>• Ergonomic Risk Assessment (ERA) to identify ergonomic related risks at the workplace.</li> </ul>
<b>Improvements on Ergonomic Risk Assessment (ERA)</b>	<p>As we have almost 20,000 employees using computers as daily, HSE has developed an e-learning module on office ergonomics in the TNB Learning Management System (LMS) to educate all TNB office workers to improve their posture when using computers at workstations. This will help TNB staff to maintain good physical health. As of 31 December 2022, 11,693 TNB staff have completed the e-learning module. In order to tighten TNB's HSE standard, new specifications for office workstations have been developed in collaboration with TNB Property Service Department (PSD) to ensure the new TNB Platinum Campus, Bangsar is provided with the highest ergonomic standard workstation.</p>
<b>Improvements on Chemical Health Risk Assessment (CHRA)</b>	<p>Completion and rolldown of Online Chemical Register is a best practised initiative in ensuring only approved chemicals are used in TNB operations. Three (3) divisions in TNB have been approved by JKKP Malaysia to implement Generic Chemical Health Risk Assessment (CHRA).</p>
Our Approach	Key Highlights for FY2022
<b>HSE Digitalisation (eHSE online system)</b>	<p>In line with greening our office practises, we continue to take strides towards digitalising our HSE practises by progressively rolling out modules in preparation for the full implementation of our eHSE online system in FY2022.</p> <p><b>Key highlights for FY2022 include :</b></p> <ul style="list-style-type: none"> <li>• Enhancement of HSE wallet platform that allows all TNB staffs to report any potential incidents (PI) at their workplace. The objective of this process is to promote intervention of any PI.</li> <li>• Introduced three (3) new modules in eHSE online system consisting of Legal Compliance, Inspection Module &amp; We Care Kami Kisah. The online systems are currently conducted as pilot projects at a few divisions/departments in TNB.</li> </ul>

**ENGAGING OUR PEOPLE AND CULTIVATING TALENT****EMPHASIS ON HEALTH, SAFETY AND WELL-BEING****Our Approach****Key Highlights for FY2022****Health, Safety and Environmental Management System (HSEMS)**

We are guided by TNB's Safety and Health Policy to implement our safety governance framework. The TNB Health, Safety and Environment Management System (HSEMS) has progressively been cascaded across divisions to ensure standardisation of HSE management and governance across the Group.

Since the introduction of HSEMS in year 2019, rolldown to divisions and subsidiaries are still ongoing. Along with that, HSE Corporate Audit has been conducted at a few divisions/departments to measure compliance status based on HSEMS elements.

The TNB Group HSE Council, which is supported by division-level HSE Committees, convenes quarterly to discuss safety performance, mitigation measures and the overall strategic direction for HSE management at TNB.

**Key highlights for FY2022 include :**

- HSE Corporate audit has been conducted for TNB divisions to measure compliance based on HSEMS elements.
- TNB Stop Work Policy has been reviewed and endorsed by our CEO on 30 August 2022.
- Three (3) TNB HSE Council was held quarterly as a form of HSE top management review platform. The 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> meeting was conducted on 4 February 2022, 28 April 2022 and 31 October 2022.
- Contractors under the Distribution Network Division are required to provide safety quality assurance through self-declaration of safety compliance before commencing work.

**Accident reduction programmes**

The TNB Safety Information System (TSIS) captures reports of incidents and near misses which are then investigated for corrective and preventive actions for improvement to be identified and taken. The Intervention Stop Work (ISW) programme was developed to ensure our workers are able to safely remove themselves from work situations that they believe could cause injury or ill health.

**Key highlights for FY2022 include :**

- Endorsement of Intervention Stop Work (ISW) guideline. Through this guideline, all TNB employees and contractors can rightfully issue a stop work order at any premise or workspace, given that any unsafe behaviour, unsafe conditions, or regulatory non-compliance are detected.
- *Ops Sikap* is an initiative that has been proposed during HSE Lab 2022. The purpose of implementing this initiative is among the identified quick wins to maintain LTIF performance until the end of 2022 by monitoring HSE compliance at work sites. In FY2022, 15 inspections were carried out and four (4) stop work orders were issued. The results of this initiative showed positive outcomes as the LTIF ratings in November 2022 stood at 0.86 and decreased to 0.82 in December 2022. HSE Compliance among staff has improved over time. However, there is still a lot of room for improvement for HSE compliance by contractors. All staff and contractors are encouraged to continue practicing safe work practises to reduce the risk of accidents at the work site.
- A webinar on Fatigue Management was held to educate staff on ways to manage fatigue and work stress to subsequently improve their work quality.
- SUTRa (Station Under The Radar) is a new initiative introduced to assist business units, zones and sub-zones to increase the level of compliance with legislation and Distribution Network's (DN) internal directives towards the achievement of zero fatal accidents in DN. It was carried out in key locations, namely Kelantan and Kedah. This initiative resulted in TNB receiving no compounds or lawsuits in year 2022 in these locations.

## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

### EMPHASIS ON HEALTH, SAFETY AND WELL-BEING

#### EMERGENCY RESPONSE – FLOOD

We intensified our flood preparations as the country received warnings of flash floods across the country from the Department of Meteorology. Since July 2022, we undertook efforts to reduce water levels in hydroelectric dams, construct retaining walls at the entrance of main intake substations and raise the level of equipment platforms at identified flood prone areas. These steps will assist in preventing flood damage to TNB's operations. Machinery and assets, such as mobile and portable generators, were also put on standby and ready to be deployed when needed. Additionally, employees undergo flood response training even before the start of the monsoon season to ensure that they are able to handle unprecedented situations in case of emergency. Personnel from DN division were engaged as part of the Security Emergency Team to provide round-the-clock assistance to affected customers.

As flood levels rose in several areas of Peninsular Malaysia, we took proactive measures to shut down affected power substations, due to safety considerations. We are saddened to report that an incident involving electrocution of three (3) people occurred on 19 December 2022. This incident happened while they were wading floodwaters near their house in Tumpat, Kelantan. Members of the public are reminded to exercise caution to avert electrical hazards during floods and report to TNB for further action. We have also published flood safety guidelines on our online platform for public action.

#### EMERGENCY RESPONSE – EQUIPMENT FAILURE

This year, an isolated case of blackout caused by equipment failure in one of our substations had caused blackouts in several parts of the country. The blackout occurred in July and had affected our customers in several areas of Klang Valley, Negeri Sembilan, Penang, Pahang and Johor. Power was restored within 20 minutes from the occurrence of the incident. The quick restoration of power supply proved that TNB's continued improvement of the national grid supply, including our smart grid, is able to overcome problems of power supply efficiently. An investigation was carried out by Energy Commission on this incident and has confirmed that TNB was clear from any misconduct and adheres to its best practices and maintenance schedule.

#### EMERGENCY RESPONSE – CREW FATALITY

On 18 April 2021, a fatality incident involving Distribution Network division's field crew member occurred in Kuala Lipis, Pahang. The crew member was electrocuted while working on an electric pole. The victim was given emergency CPR rescue until paramedics arrived. The victim was rushed to the hospital for further treatment and passed away on the same day.

Measures were quickly taken to ensure no reoccurrence of a similar incident. whereby all DN division workers were ordered to stand down by Chief Distribution Network Officer (CDNO). An Incident Alert report was issued on the next day together with a stop work order also issued for all electrical work by DN division nationwide to ensure the safety of workers while tools and equipment were inspected.

The incident case has since been concluded. Contributions from Tabung Prihatin DN were channelled to the victim's family by Head of Zone Asset (HoZA) East on 29 April 2021 to assist the family.

## OUR PERFORMANCE IN FY2022

We have seen an improvement in our safety performance reflected by the decrease in our Group-wide Lost Time Injury Frequency (LTIF) from 1.03 in FY2021 to 0.82 in FY2022.

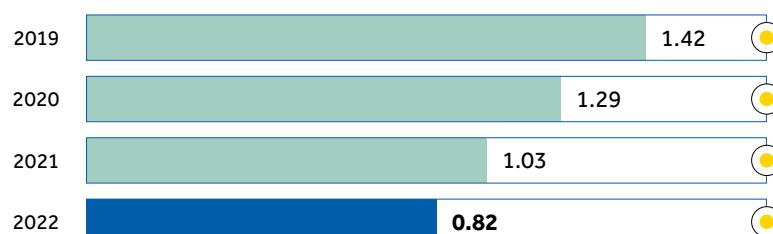
Indicators	2019	2020	2021	2022
<b>Lost Time Injuries (LTI) Frequency Rate of employees</b>	1.42	1.29	1.03	<b>0.82</b>
<b>Fatalities of employees</b>	2	1	2	<b>0</b>
<b>Lost Days Severity Rate (per million-man hours)</b>	153.14	93.09	87.12	<b>16.69</b>

## ENGAGING OUR PEOPLE AND CULTIVATING TALENT

## EMPHASIS ON HEALTH, SAFETY AND WELL-BEING

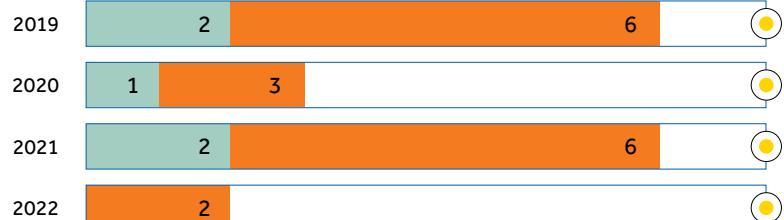
## LOST TIME INJURIES (LTI) FREQUENCY RATE OF EMPLOYEES

(Per million-man hours)



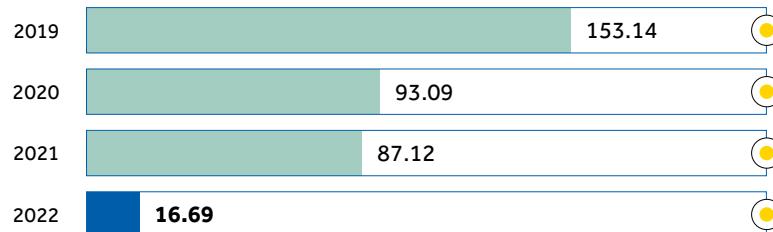
## NUMBER OF FATALITIES

Fatalities of employees      Fatalities of contractors



## LOST DAYS SEVERITY RATE OF EMPLOYEES

(per million-man hours)



Total Recordable Incident and Number of Potential Incident Reported for FY2022.

Indicators	2022
Total recordable incident	120
Number of Potential Incident Reported	<b>263,900</b>

In 2022, 12% (4,047) of total employees completed HSE trainings, achieving a cumulative of 27,252.5 training hours.

Training	2019	2020	2021	2022
Number of employees completed HSE training	4,539	1,027	5,943	<b>4,047</b>
Percentage of employee trained	16	4	22	<b>12</b>
Training Hours	69,190	16,813	103,225	<b>27,253</b>

We also reduced motor vehicle accidents from 45 cases in FY2021 to 27 cases in FY2022. Meter reading accident also reduced by 50% this year.

We are however deeply saddened to report that there were two (2) work-related fatalities this year involving two (2) contractors. In our efforts to mitigate these events in the future, we are enhancing our safety procedures and conducting more safety awareness and training sessions across the Group. These include :

- Enhancing safety management procedures, especially for contractors
- Strengthening competencies of contractors
- Continual improvement of our eHSE online system

## SUPPORTING EMPLOYEES HEALTH AND WELLNESS

As part of our commitment towards Environmental, Social & Governance (ESG) initiatives, TNB encourages our employees to lead an active lifestyle that will nurture good health, promote work-life balance and overall well-being.

Various wellness initiatives conducted for our employees such as :

- Basic health screening for all our employees nationwide to monitor their health status.
- Subscription to the BookDoc mobile application to encourage employees to be active by tracking their daily steps.
- Anugerah Piala Presiden – An annual TNB-wide awards ceremony to reward top steppers in various categories.
- Wellness Wednesday programmes in collaboration with our panel hospitals on health-related topics.
- Empower Your Health programmes to encourage a healthy lifestyle among TNB employees.

In recognition of our commitment and initiatives to improve our employees' well-being, TNB has won Gold in the Activ@Work Challenge Perkeso Award for three (3) consecutive years in a row. This award is presented by the Social Security Organisation (PERKESO).

# CREATING SHARED VALUES WITH COMMUNITIES

## CREATING SHARED VALUES WITH COMMUNITIES

### Feature Story 7

#### ENHANCING THE WELL-BEING OF ORANG ASLI COMMUNITIES



As part of TNB's continuous goals to build sustainable communities, we have launched a new initiative to provide scholarships to Orang Asli children. This special scholarship will provide monetary assistance to help Orang Asli children from B40 households to further their studies up to tertiary level. It is also part of TNB's commitment to improve the lives of Orang Asli settlement communities living near TNB operation centres.

The Jabatan Kemajuan Orang Asli (JAKOA) were roped in to propose potential scholarship receivers and 10 students were chosen to be enrolled into business and accounting programmes at Diploma levels in UNITEN's Sultan Haji Ahmad Shah Campus (KSHAS). Through this initiative, TNB aspire to uplift the communities through higher education and open up more job opportunities in order to deliver improvement in socioeconomic levels, towards a better future.

In addition to our decarbonisation initiative, Nenggiri Hydroelectric Project (HEP) engaged the local communities including the Orang Asli communities residing in Gua Musang, Kelantan with the aim to positively impact these communities in our operating areas. During the development phase, we will continue to ensure that their welfare and well-being are addressed within our best capabilities. The project will address several issues that have been plaguing the area, such as reducing the impacts of floods in the state, improving irrigation systems and clean water supply, as well as better access to amenities, jobs and entrepreneurial opportunities. TNB continues to engage with stakeholders, such as local communities and regulators to ensure their interests and concerns are communicated and taken care of. This project will also align with the government's agenda of increasing green power generation from RE sources.

## CONTRIBUTING TO COMMUNITY DEVELOPMENT

We believe in building the nation through provision of reliable and affordable electricity, as well as contributions that engage and develop the community. We aspire to drive progress and bring positive impact in the community through our various programmes.

In FY2022, we invested a total of RM12.20 million into community programmes which were allocated according to the four (4) focus areas of :

SOCIAL	ENVIRONMENT	SPORTS
 <p>We believe that capability, social and community development supports livability and enhances livelihood by uplifting the economic and social quality of life.</p> <p><b>FY2022 Contributions :</b> <b>RM4.27 million</b></p>	 <p>We believe that the future of our planet and next generation depends on our responsible behaviour today.</p> <p><b>FY2022 Contributions :</b> <b>RM0.48 million</b></p>	 <p>We believe that sports play an important role to unify our community and build a healthy nation.</p> <p><b>FY2022 Contributions :</b> <b>RM5.18 million</b></p>
GOVERNANCE		
	 <p>We believe that education can transform lives of not just one individual but families and generations.</p> <p><b>FY2022 Contributions :</b> <b>RM2.27 million</b></p>	

## CREATING SHARED VALUES WITH COMMUNITIES

### CONTRIBUTING TO COMMUNITY DEVELOPMENT

#### ECONOMIC AND SOCIAL TRANSFORMATION

We strive to accelerate growth in local communities by conducting initiatives parallel to the needs of the people.

##### Community and Rural Development

###### Rural Electrification (BELB) Programme



TNB, with support from Ministry of Rural And Regional Development, supplies power to rural areas such as villages and Indigenous People settlements that are not within the operational area of local authorities through the Rural Electrification Programme (BELB). We connect these villages to our grid lines, where possible. For settlements too remote to be connected to our grid lines, we utilise off-grid alternatives such as solar hybrids, generator sets and mini hydro. In FY2022, we have improved connectivity of around 18 villages.

###### Village Street Lighting (LJK) Programme



The government introduced the Village Street Lighting (LJK) programme in 2002 with the purpose to ensure public areas in remote villages are well lit at night, facilitating community safety. Since 2002, 420,696 streetlights were successfully installed.

###### Sumbangan Kenderaan Terpakai

Through this initiative, TNB spent RM205,837 to acquire and donate six (6) used vehicles, consisting of one (1) pick-up truck, four (4) funeral vans, and one (1) passenger van to underprivileged communities and NGOs.

Through this initiative, TNB spent

**RM205,837**

to acquire and sustainability

donate

**6**

used vehicles

consisting of

**1**

pick-up truck

**4**

funeral vans

**1**

passenger van

###### Sumbangan Komputer Riba Terpakai

This initiative was introduced to provide laptops and tablets to students from low-income families. TNB contributed RM40,700 for this initiative.

###### Pos Kawalan Tempat Kejadian (PDKT) in Lembah Bertam, Cameron Highlands

As a contribution to the local community of Lembah Bertam, Cameron Highlands, TNB allocated RM2.58 million to construct a multipurpose hall that will serve as a community centre and emergency assembly point for the local community during floods or other natural disasters. This hall includes facilities such as a covered futsal court, operations room and prayer room. The facility, which will be managed by the Cameron Highlands District Council (CHDC), was handed over in 2022. As of FY2022, RM2.41 million has been spent on the development of this project.

TNB contributed

**RM40,700**

for Pos Kawalan Tempat Kejadian (PDKT) in Lembah Bertam, Cameron Highlands

## CREATING SHARED VALUES WITH COMMUNITIES

### CONTRIBUTING TO COMMUNITY DEVELOPMENT

#### Promoting Energy Efficiency



##### **LED Streetlight Replacement Programme**

Since 2018, we have begun replacing High-Pressure Sodium Vapour streetlights with LED lights which are more cost and energy efficient. The lower wattage from LED lights resulted in an estimated kWh and cost savings of about 30%-40%. In FY2022, this initiative was introduced in 10 more cities, with an additional 50,866 lights installed across Peninsular Malaysia, bringing the cumulative total up to 595,427 units.

The lower wattage from LED lights resulted in an estimated kWh and cost savings of about

**30%-40%**

#### Providing Homes for Community Well-Being



##### **Home for the Needy**



Through our Home for the Needy programme, we have helped refurbish and build new homes for 40 families, mainly B40 communities and hardcore poor including single parents, senior citizens and differently-able individuals. In FY2022, we spent RM1.26 million on this initiative. This programme is carried out under two (2) concurrent projects namely Program Baiti Jannati (PBJ) and Program Mesra Rakyat (PMR). To date, we have contributed more than RM31.11 million and provided 1,287 new and refurbished homes to the needy.



##### **Better Brighter Shelter**



Through this programme, we provided accommodation facilities to family members of those who have come from rural areas to receive medical treatment in the city such as dormitories and transit homes. This service is provided to the underserved communities from rural areas or the outskirts of Kuala Lumpur. We partnered with Melaka Hospital's National Welfare Foundation, the National Heart Institute (IJN) Foundation and Melaka Hospital. In FY2022, around RM245,000 was allocated for this programme, with a breakdown of RM200,000 and RM45,000 spent on IJN and Melaka Hospital respectively.

## ENVIRONMENTAL SUSTENANCE PROGRAMMES WITH THE COMMUNITY

Conservation of the environment and natural resources is crucial in safeguarding both the diversity of flora and fauna, as well as the livelihoods of surrounding communities.

TNB's environmental sustenance programmes conducted are as follows :

#### Mangrove Planting Programme

As a part of our reforestation efforts, we conducted the second phase of mangrove planting programme which started in FY2021. The second phase involved planting 2,000 mangrove trees at Sg Limau, Manjung, Perak with a cost of RM100,062.

## CREATING SHARED VALUES WITH COMMUNITIES

### CONTRIBUTING TO COMMUNITY DEVELOPMENT

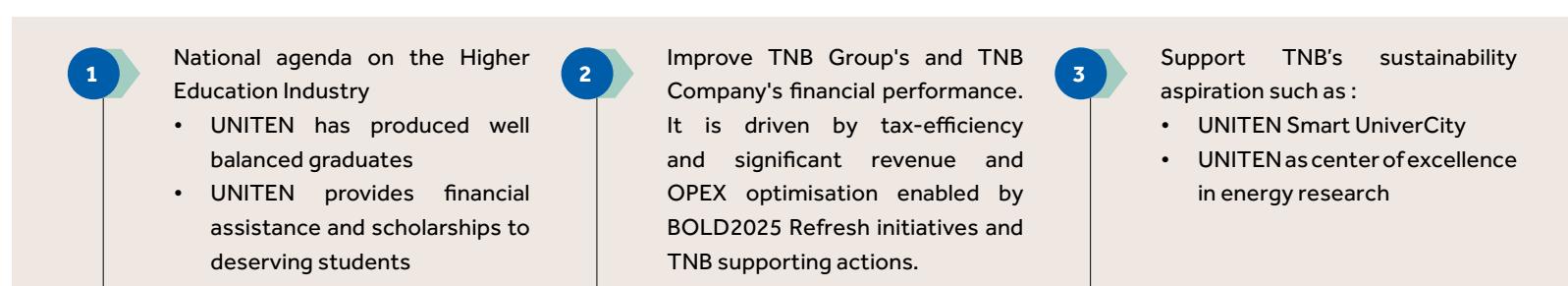
#### TRANSFORMING LIVES THROUGH EDUCATION

In FY2022, we continued our commitment to provide accessibility to quality education through significant investments in our key educational institutions – UNITEN, TNB ILSAS, Yayasan Tenaga Nasional (YTN).

#### UNITEN – THE ENERGY UNIVERSITY

The establishment of UNITEN in 1997 exemplifies TNB's unwavering commitment to provide top-notch education to the masses, aimed at producing a generation that is competitive, innovative and resilient in the long run. As part of its BOLD2025 Refresh strategic plan, UNITEN is dedicated to supporting TNB in realising this vision by offering a diverse range of academic programmes, including Engineering, Computer Science & Information Technology, Business & Accounting and Energy Economics. The university also provides cutting-edge teaching and learning facilities on campus. BOLD2025 Refresh has five (5) primary objectives – Ranking, Enrolment, Teaching, Research and Financials – and results for FY2022 show that all the five (5) goals have been accomplished.

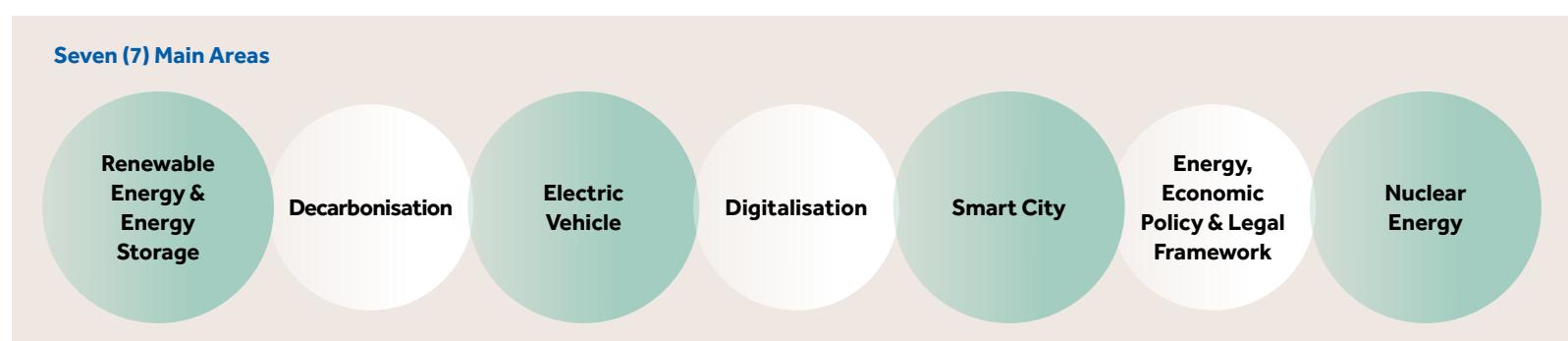
BOLD2025 Refresh is a strategic plan that comprises three strategic goals : teaching and learning excellence, research excellence and financial sustainability. Through this BOLD2025 Refresh, UNITEN contributes to TNB in aspect of :



UNITEN is also embarking on energy-related research that facilitates the solution to any operational challenges faced by TNB and the industry, as well as creating wealth from innovation. Through its financial ecosystem that involves *Yayasan Canselor UNITEN* (YCU) and *Tabung Amanah Zakat UNITEN* (TAZU), UNITEN is able to offer various scholarships and financial assistance for students to pursue their studies at UNITEN, which addresses the nationwide issue of affordability in tertiary education.

In June 2022, UNITEN established the National Energy Excellence Centre (NEC) to strengthen energy transition. This centre of excellence aims to cover issues of climate change, sustainable development and renewable energy (RE) at the national and global levels. NEC will play a strategic role in strengthening Malaysia's commitment to make the country carbon

neutral as early as 2050 and meet TNB's aspirations of achieving net zero emissions by 2050. NEC as National Key Labs will form a Strategic National Energy Framework with the target of Malaysia as an energy hub and industry players having the opportunity to become strategic partners by opening a branch or satellite incubator laboratory. Currently, UNITEN has five (5) centres of excellence namely; Institute of Sustainable Energy (ISE), Institute of Power Engineering (IPE), Institute of Energy Infrastructure (IEI), Institute of Energy Policy & Research (IEPRe) and Institute of Informatics & Computing in Energy (IICE). These centres will be incorporated in the National Key Labs which will encompass other universities, local and abroad, with HICoE standard or equivalent. NEC will be focusing on seven (7) main areas :



## CREATING SHARED VALUES WITH COMMUNITIES

### CONTRIBUTING TO COMMUNITY DEVELOPMENT

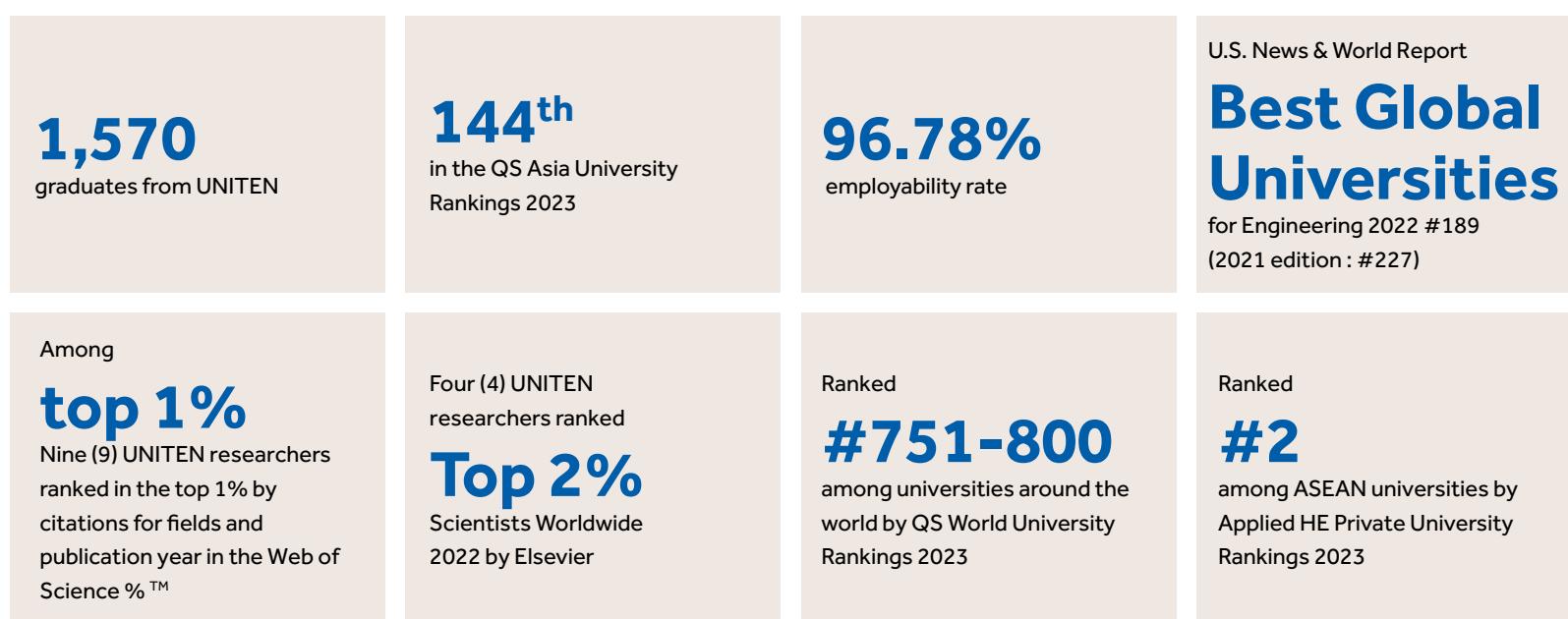
This year, UNITEN awarded RM6.81 million to a total of 1,361 recipients, a decrease from the RM6.79 million awarded to 1,766 students last year.

#### UNITEN FUNDING AND SCHOLARSHIPS

UNITEN BRIGHT Scholarship	UNITEN BRIGHT B40 Scholarship	UNITEN Merit 50% KSHAS Scholarship	Dana Pendidikan UNITEN	Projek Perintis APEL MBA UNITEN
<b>UNITEN BRIGHT/MERIT-Dato Low Tuck Kwong Scholarship</b>	<i>Dermasiswa Yayasan Canselor UNITEN (YCU)</i>	<i>Biasiswa Pelajaran Tabung Amanah Zakat UNITEN (TAZU) (B40)</i>	<i>Biasiswa Pelajaran *TAZU (YPPB)</i>	<i>Biasiswa Pelajaran TAZU (BPT)</i>
<i>Dermasiswa B40 JPA in cooperation with YCU</i>	<i>Biasiswa UNITEN (Postgraduate) Master Talent</i>	<i>Biasiswa UNITEN (Postgraduate) PhD Talent</i>	<i>Biasiswa UNITEN (Postgraduate) Master Excellence</i>	<i>Biasiswa UNITEN (Postgraduate) PhD Excellence</i>

\**Danasiswa Pensijilan Tahfiz TAZU (MARA)*  
(Formerly known as *Dermasiswa Pelajar Cemerlang*)

#### UNITEN PERFORMANCE IN FY2022



**CREATING SHARED VALUES WITH COMMUNITIES****CONTRIBUTING TO COMMUNITY DEVELOPMENT**

<b>Key Activities</b>	<b>FY2022 Key Highlights</b>
<b>TNB Corporate Integrity Health Index (IHI) 2.0</b>	<ul style="list-style-type: none"> <li>The Integrity Health Index (IHI) Dashboard was first developed in 2021 as a systematic method for information gathering to assess and ascertain TNB's standings on integrity issues. The second revamped version aims to broaden the scope of IHI to include other TNB stakeholders.</li> </ul>
<b>Student Information Management System (SIMS)</b>	<ul style="list-style-type: none"> <li>The Student Information Management System (SIMS) was developed for YTN. The system integrated the functionality that previously required the use of three separate systems - Microsoft Great Plains (MSGP), MicroPac and Legal Management System (LMS).</li> </ul>
<b>Blueprint for Electrifying Public Transportation (Studies For Ministry Of Transport As Part Of TNB's EV Advocacy Programme)</b>	<ul style="list-style-type: none"> <li>The aim of this project is to develop a blueprint for electrifying public transportation. This includes conducting benchmarking studies on best practices of EV infrastructure development and electricity pricing. The study will encompass the evaluation towards social, economic and technological aspects of EV adoption in Malaysia. It also provides policy recommendation related to the economic viability of electrifying TNB's fleet of vehicles.</li> </ul>
<b>Power Studies For the Construction and Completion of LRT3 from Bandar Utama to Johan Setia</b>	<ul style="list-style-type: none"> <li>This project aims to provide design services for the power supply and distribution system of LRT3. The main scope and responsibility of this project is to perform simulation studies and analysis in the power supply and distribution system which includes, Alternating Current (AC) simulation, harmonics, protection coordination, insulation coordination, substation earthing/touch potential, lightning protection and electromagnetic compatibility studies.</li> </ul>

**TNB INTEGRATED LEARNING SOLUTION SDN. BHD. (ILSAS)**

TNB ILSAS is a premier training institution for professionals in the wider power and utility industry and the official training institute for Tenaga Nasional Berhad (TNB). All of the technical capability development programmes conducted by ILSAS are in line with the Malaysia standard requirements. The training modules in ILSAS are also accredited by City & Guilds UK (for technical programmes) and Institute Leadership & Management (ILM) UK (for leadership & management training modules).

The ILSAS International Conference on Learning & Development 2022 (ICLAD2022) is an initiative designed to support the ASEAN Sustainability Pathways 2050 and serves as platform to spread awareness of ESG for a sustainable future. ICLAD aims to be the leading platform for people from various vocations to learn, discuss, present and build network with subject matters experts around the world. The 6<sup>th</sup> ICLAD conference was held on from 29 November to 1 December 2022 with the theme "Towards Energy Transition : Harmonizing With The New Norm".

The main objectives of ICLAD2022 are :

1. To support the ASEAN Sustainability Pathway 2050 and awareness of ESG for a sustainable future.
2. To equip participants with the relevant knowledge and chance to listen to different points of view, learn new ideas and trends in ESG matters from other organisations.
3. To encourage leaders and participants from other organisations to meet and establish collaboration early through networking and exchanging of ideas.
4. To elevate the motivation amongst participants to build in confidence to lead and contribute towards organisation to become a global company.
5. To provide participants with the necessary skills such as research, public speaking, critical thinking, creative thinking, system/apps development to be able to compete in the modern labour market.

2,071 participants attended the conference, with 15 keynote guests presenting at the event. The event is designed with the main objective to support the ASEAN Sustainability Pathways 2050 and an awareness of ESG for a sustainable future. We are delighted with the collaboration with PT Perusahaan Listrik Negara to co-organise the event in which strengthened the relationship between the two national utility companies.

## CREATING SHARED VALUES WITH COMMUNITIES

### CONTRIBUTING TO COMMUNITY DEVELOPMENT

#### Key Highlights In FY2022

**6<sup>th</sup>**

ILSAS International Conference on Learning and Development (ICLAD) was conducted under a hybrid mode and received commendable feedback from participants

Received

#### **Malaysia's Best Technical & Vocational Education & Training (TVET) Institution (Sustainability) 2022 Award**

by Education & TVET Asia

Won the Malaysia Education & TVET Awards (META) 2022 for

#### **Malaysia Best TVET Institution (Sustainability) category**

**288**

employees with

**133**

trainers

**50,912**

individuals trained

Received the Energy Institute Awards 2022 for

#### **Talent Development & Learning Category**

by Energy Institute (UK)

8<sup>th</sup> Annual International Smart Grid Action Network (ISGAN) Awards (USA)  
Excellence in Smart Grid Workforce Development (Honorable Mention)

**3<sup>rd</sup> place**

TNB Reskilling Malaysia – In Supporting AIMI Workshop Development Programme

Intelligent Cloud Base VR LMS Technical Competency Assessment Solution

#### **Selangor R&D and Innovation Expo (SRIE) 2022 Award**

#### YAYASAN TENAGA NASIONAL (YTN)

Yayasan Tenaga Nasional (YTN) was established with the mission to transform lives through excellent education opportunities. Since its inception in 1993, YTN has been governed by a Board of Trustees and an organisation committee to provide financial assistance through the award of scholarships and study loans to suitable candidates based on merit to pursue higher education locally and abroad. To date, we have invested over RM1.80 billion in and helped over 20,500 students achieve their dreams.

The My Brighter Future (MyBF) Program is one of the initiatives set up under YTN which aims to provide opportunities to marginalised youth and families in the B40 bracket to pursue tertiary education in Science, Technology, Engineering & Mathematics (STEM) and TVET at any of seven (7) selected public universities, community colleges and polytechnic institutions in Malaysia. The MyBF Program covers tuition fees, boarding and living expenses of recipients pursuing tertiary education.

## CREATING SHARED VALUES WITH COMMUNITIES

## CONTRIBUTING TO COMMUNITY DEVELOPMENT

## Key Highlights

In FY2022

**RM45.90  
million**

in financial aid provided to MyBF scholars

**4,354**

students benefitted from MyBF scholarships

YTN provided a total of **RM101 million to 5,753 recipients** through financial aid and scholarship

Initiated a new student development program named

**PRIME (Professional, Reliable, Innovative, Marbel and Edge)**

under the MyBF Student Development Program. The objective of this programme is to build up competencies based on actual experience by students in doing social business, CSR and digital marketing.

**Scholarship for Orang Asli children**

was established to provide financial assistance in education.

## Support for Education and Sports

**Program Ceria ke Sekolah Programme**

Every year, TNB holds the Ceria Ke Sekolah Programme to provide the primary school students from low-income families with adequate school supplies such as school uniform, shoes, socks, school bag and stationeries. In FY2022, 4,874 students benefitted from RM1 million channelled by TNB into this programme.

**PINTAR School Adoption Programme**

The PINTAR School Adoption Programme was continued in FY2022 with 11 primary schools adopted across Peninsular Malaysia. TNB allocated RM315,000 for three (3) years (until FY2023) under this programme. This year, we allocated RM318,000 for the programme, involving 150 students from standard four (4) class.

**TNB Prime Scholarship**

This education fund was established to sponsor high academic achievers regardless of household income group to further study overseas, in UNITEN and in public universities, benefitting 128 students.

## CREATING SHARED VALUES WITH COMMUNITIES

### CONTRIBUTING TO COMMUNITY DEVELOPMENT

#### Support for Education and Sports



##### TNB Shine Sponsorship

This programme provides education loan assistance for average academic achievers regardless of household income group to study in UNITEN, public universities and polytechnics around the country, benefitting 783 students.



##### Biasiswa Khas TNB for Orang Asli Children

This scholarship serves as a contribution from TNB to the local indigenous communities, especially for Orang Asli communities living in settlement locations near TNB's operational centres such as power stations and others. 10 students were sponsored to further their studies in business and accounting fields at Diploma level.



##### National Hockey Development and Thunderbolts Programme

Through this programme, TNB employees who were former national hockey players volunteered to coach promising students from Sekolah Sukan Bukit Jalil in Kuala Lumpur, Sekolah Sukan Tunku Mahkota Ismail in Johor, Sekolah Menengah Kebangsaan Seberang in Temerloh, Pahang, Sekolah Menengah Kebangsaan Anderson in Perak and Sekolah Menengah Kebangsaan Pengkalan Permatang in Kuala Selangor, Selangor. Since its inception in 2006, this programme has successfully nurtured several national hockey players and in FY2022, we contributed RM5.18 million.

### ENGAGING INDIGENOUS PEOPLE

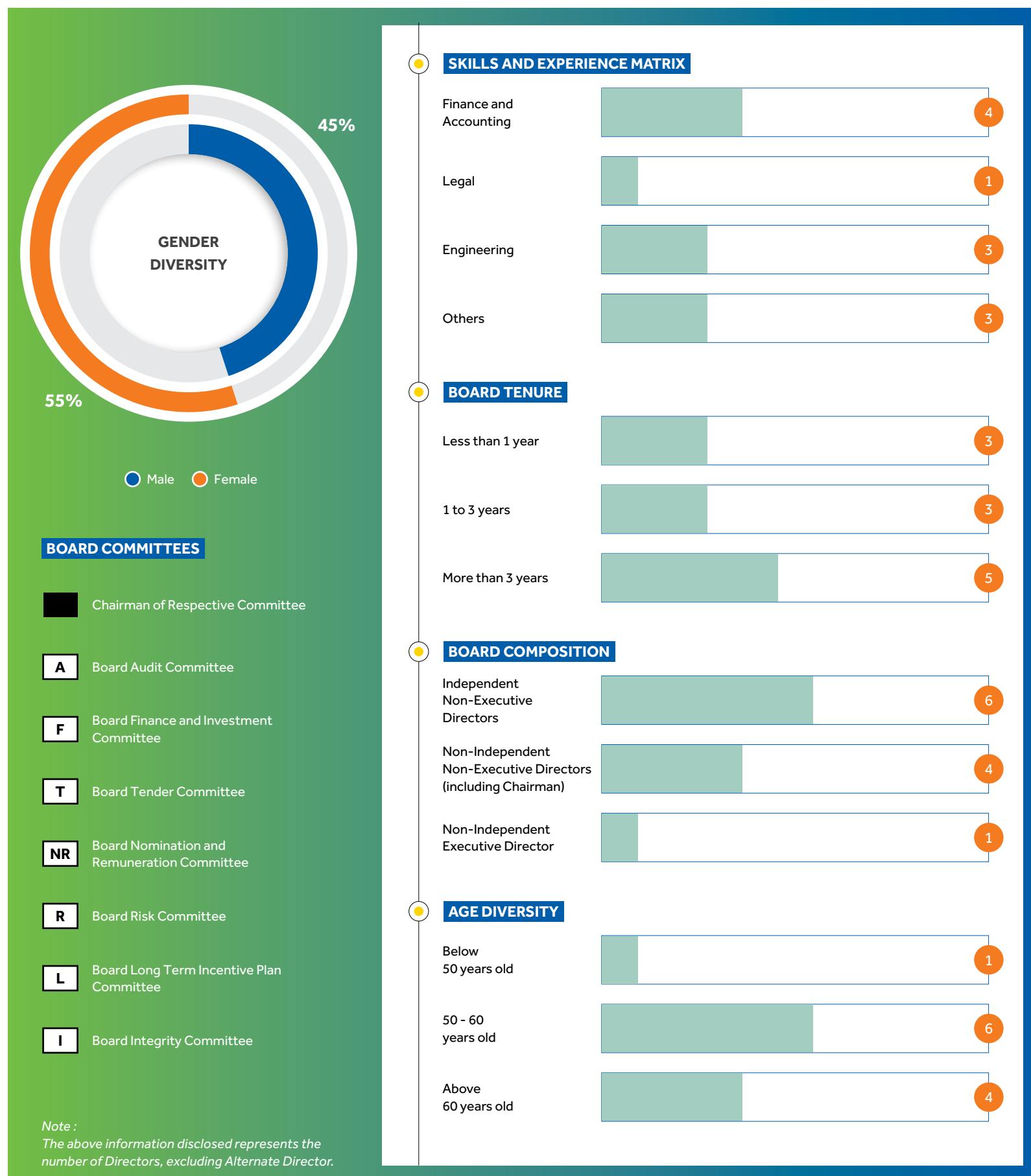
Engaging with the communities we serve, including Indigenous Peoples or Orang Asli communities, is a fundamental commitment of TNB.

#### INITIATIVES TO ENGAGE INDIGENOUS COMMUNITIES

We actively engage communities, including the Orang Asli communities, who live near our operation sites and roll out initiatives with the purpose of protecting their well-being and generating socioeconomic benefits. To provide educational assistance to them, TNB has also set up a new scholarship fund to be distributed to underprivileged Orang Asli children. This makes education accessible to the Orang Asli and thereby providing an opportunity to alleviate their living standards and pursue ambitious academic and career goals.



# OUR BOARD AT A GLANCE



# BOARD OF DIRECTORS' PROFILE



## DATO' ABDUL RAZAK BIN ABDUL MAJID

Chairman, Non-Independent Non-Executive Director  
Appointed Director by Minister of Finance (Incorporated) (MoF Inc.),  
the Special Shareholder of TNB

<b>Nationality :</b>	Malaysian	<b>Age :</b>	72	<b>Gender :</b>	Male
<b>Date of Appointment :</b>	27 March 2023	<b>Year(s) of Directorship :</b>	Less than one (1) year		
<b>Date of Last Re-Election :</b>	Nil	<b>Board Committee(s) :</b>	Nil		
<b>Board meetings attended in the Financial Year :</b>					N/A

### Academic/Professional Qualification(s) :

- Masters Degree in Business Administration, Ohio University, United States of America
- Bachelor of Electrical Engineering, Brighton University, United Kingdom

### Skills, Experience and Expertise :

- Chairman of two (2) Energy Commission Committees (Supply Chain and Licensing) (2022 - Present)
- Member of Action Committee for the establishment of National Energy Centre (2022 - Present)
- Member of the Independent Advisory Panel, Malaysian Petroleum Resources Corporation (2021 - Present)
- Senior Independent Non-Executive Director (February 2023 - March 2023) and Independent Non-Executive Director (2018 - 2023) of PETRONAS Gas Berhad
- Chief Executive Officer, MyPOWER Corporation (2<sup>nd</sup> term) (2018 - 2020)
- Chairman, Energy Commission of Malaysia (2014 - 2018)
- Chief Executive Officer, MyPOWER Corporation (1<sup>st</sup> term) (2009 - 2014)
- Senior Vice President (Corporate Affairs), Tenaga Nasional Berhad (TNB) (2008 - 2009)
- Vice President (Generation), TNB (2004 - 2008)
- Has served Lembaga Letrik Negara/TNB for 36 years since 1973, where his career achievements in TNB included assignments in Planning, Construction and Operations in all three (3) core divisions of Generation, Transmission and Distribution of TNB
- Seconded to the Economic Planning Unit, Prime Minister's Department (1998 - 2001)

### Other Directorship(s) :

#### Listed Issuers :

- Nil

#### Public Companies :

- Nil

## BOARD OF DIRECTORS' PROFILE



## DATO' INDERA IR. BAHARIN BIN DIN

President/Chief Executive Officer,  
Non-Independent Executive Director  
Appointed Director by MoF Inc., the Special Shareholder of TNB

**Nationality :** Malaysian      **Age :** 59      **Gender :** Male

**Date of Appointment :** 1 March 2021      **Year(s) of Directorship :** Two (2) years

**Date of Last Re-Election :** 10 May 2021      **Board Committee(s) :** Attends Board Committees' Meetings (By Invitation)

**Board meetings attended in the Financial Year :**

15/16

### Academic/Professional Qualification(s) :

- Master of Business Administration - joint MBA programme between Universiti Tenaga Nasional, Malaysia and Bond University, Australia
- Bachelor of Science (Electrical Engineering), Syracuse University, New York, United States of America
- Certified Professional Engineer of the Board of Engineers (BEM), Malaysia
- Member of the Institution of Engineers, Malaysia
- Qualified Competent Engineer (up to 33kV)
- Qualified Service Engineer (up to 33kV)

### Skills, Experience and Expertise :

- President/Chief Executive Officer, TNB (2021 - Present)
- Chief Distribution Network Officer, TNB (2018 - 2021)
- Vice President (Distribution), TNB (2012 - 2018)
- Senior General Manager (Customer Service and Metering), Distribution Division, TNB (2011 - 2012)
- Managing Director, Sabah Electricity Sdn. Bhd. (2007 - 2011)
- Seconded to the Ministry of Energy, Green Technology and Water (KeTTHA), for two (2) and a half years, where he served as the Deputy Director for the Electrical Inspectorate Department in Sabah. He then became the Director for the Electrical Inspectorate Department in Pahang
- Built his career in TNB where he had served in various engineering and managerial positions within the Company, including Business Development, Network Maintenance, Network Planning, Construction Services, Metering Service and Engineering Services

### Other Directorship(s) :

#### Listed Issuers :

- Nil

#### Public Companies :

- Malaysian Industry-Government Group For High Technology

## BOARD OF DIRECTORS' PROFILE



### DATIN RASHIDAH BINTI MOHD SIES

Non-Independent Non-Executive Director

Appointed Director by the MoF Inc., the Special Shareholder of TNB

<b>Nationality :</b>	Malaysian	<b>Age :</b>	59	<b>Gender :</b>	Female
<b>Date of Appointment :</b>	10 April 2023	<b>Year(s) of Directorship :</b>	Less than one (1) year		
<b>Date of Last Re-Election :</b>	Nil	<b>Board Committee(s) :</b>	Nil		
<b>Board meetings attended in the Financial Year :</b>					N/A

#### Academic/Professional Qualification(s) :

- Masters in Business Administration, US International University California, United States of America
- Bachelor in Business Administration, Idaho State University, United States of America
- Diploma in Public Administration, National Institute of Public Administration (INTAN), Malaysia

#### Skills, Experience and Expertise :

- Deputy Secretary General of Treasury (Management), Ministry of Finance (22 March 2021 - Present)
- Under-Secretary, Government Investment Companies Division, Ministry of Finance (1 April 2018 - 2021)
- Deputy Under-Secretary, Commercial Sector, Government Investment Companies Division, Ministry of Finance (2016 - 2018)
- Head of Commercial Unit, Government Investment Companies Division, Ministry of Finance (2009 - 2016)
- Principal Assistant Secretary of Investment, Finance Division, Minister of Finance (Incorporated) (2003 - 2016)
- Assistant Secretary, Investment Section, Finance Division, Ministry of Finance (1989 - 1997) and Privatisation Section, Finance Division, Ministry of Finance (1998 - 2003)

#### Other Directorship(s) :

##### Listed Issuers :

- Nil

##### Public Companies :

- Technology Depository Agency Berhad
- Uda Holdings Berhad
- Danainfra Nasional Berhad
- Bank Pembangunan Malaysia Berhad
- Syarikat Jaminan Kredit Perumahan Bhd.
- Syarikat Jaminan Pembiayaan Perniagaan Berhad

## BOARD OF DIRECTORS' PROFILE



## DATUK AMRAN HAFIZ BIN AFFIFUDIN

Non-Independent Non-Executive Director  
Representing Khazanah Nasional Berhad, a Major Shareholder of TNB

**Nationality :** Malaysian      **Age :** 48      **Gender :** Male

**Date of Appointment :** 22 June 2017      **Year(s) of Directorship :** Five (5) years

**Date of Last Re-Election :** 2 June 2022      **Board Committee(s) :**

F	T	NR	L	I
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**Board meetings attended in the Financial Year :**

16/16

### Academic/Professional Qualification(s) :

- Bachelor of Science in Commerce (Majoring in Accounting and Finance), the McIntire School of Commerce, University of Virginia, Charlottesville, United States of America
- Attended executive/professional courses at Harvard Business School and London Business School

### Skills, Experience and Expertise :

- Executive Director, Head, Malaysian Investments, Khazanah Nasional Berhad (2023 - Present)
- Executive Director, Investments, Head of Energy, Iskandar, Leisure and Tourism, Khazanah Nasional Berhad (2022)
- Executive Director, Head of Energy and Infrastructure, Khazanah Nasional Berhad (2020 - 2021)
- Executive Director, Investments, Khazanah Nasional Berhad (2018 - 2020)
- Director, Investments, Khazanah Nasional Berhad (2013 - 2018)
- Senior Vice President, Investments (Property/Healthcare), Khazanah Nasional Berhad (2011 - 2013)
- Investment Manager, Ethos Capital Sdn. Bhd. (2009 - 2011)
- Principal Consultant/Advisor, Nusa Capital Sdn. Bhd. (2006 - 2009)
- Director, Juwana Group of Companies (2005 - 2006)
- Senior Vice President, Namirah Ventures Pte. Ltd. (2000 - 2005)
- Analyst, Equities Investment, Petroliam Nasional Berhad (PETRONAS) (1998 - 2000)
- Corporate Finance Executive, Group Finance Division, PETRONAS (1997 - 1998)

### Other Directorship(s) :

#### Listed Issuers :

- Nil

#### Public Companies :

- Iskandar Investment Berhad
- Malaysia Programme Office for Power Electricity Reform Corporation
- UEM Group Berhad
- Yayasan Hijau Malaysia

## BOARD OF DIRECTORS' PROFILE



### ROHAYA BINTI MOHAMMAD YUSOF

Non-Independent Non-Executive Director  
Representing Employees Provident Fund, a Major Shareholder of TNB

<b>Nationality :</b>	Malaysian	<b>Age :</b>	57	<b>Gender :</b>	Female
<b>Date of Appointment :</b>	20 March 2023	<b>Year(s) of Directorship :</b>	Less than one (1) year		
<b>Board Committee(s) :</b>	Nil				
<b>Board meetings attended in the Financial Year :</b>					N/A

#### Academic/Professional Qualification(s) :

- Bachelor of Commerce (Accountancy), Australian National University, Canberra, Australia
- Associate Member of CPA, Australia

#### Skills, Experience and Expertise :

- Chief Investment Officer, Employees Provident Fund (EPF) (2020 - Present)
- Head of Private Market, Investment Division, EPF (2017 - 2020)
  - managed global investments in private equity, infrastructure and real estates
- Head of Capital Market Department, EPF (2011 - 2017)
  - oversaw global and domestic fixed income
- Head of Corporate Finance, Investment Division, EPF (2008 - 2010)
- Executive Vice President, Corporate Investment Banking, Maybank Investment Bank (2005 - 2008)
- Held various positions in Corporate Investment Banking, Maybank Investment Bank (previously known as Aseambankers Malaysia Berhad) (1990 - 2005)
- Senior Financial Consultant, Audit Division, Arthur Andersen & Co. (1988 - 1990)

#### Other Directorship(s) :

##### Listed Issuers :

- Malaysia Airports Holdings Berhad
- United Plantations Berhad
- Yinson Holdings Berhad

##### Public Companies :

- Nil

## BOARD OF DIRECTORS' PROFILE

**ONG AI LIN**

Senior Independent Non-Executive Director

**Nationality :** Malaysian      **Age :** 67      **Gender :** Female

**Date of Appointment :**  
• 30 September 2022 (Redesignated as Senior Independent Non-Executive Director)  
• 1 August 2018 (Independent Non-Executive Director)

**Year(s) of Directorship :**  
Four (4) years

**Date of Last Re-Election :** 2 June 2022      **Board Committee(s) :** R A I

**Board meetings attended in the Financial Year :**

16/16

**Academic/Professional Qualification(s) :**

- Bachelor of Arts (Hons) in Economics, University of Leeds, United Kingdom
- Associate of the Institute of Chartered Accountants in England and Wales (ICAEW)
- Member of the Malaysian Institute of Accountants (MIA)
- Past President of Information Systems Audit and Control Association (ISACA), Malaysia

**Skills, Experience and Expertise :**

- Held various positions in PricewaterhouseCoopers Malaysia :
  - Partner/Senior Executive Director (1993 - 2016)
  - Senior Manager (1991 - 1992)
- Kassim Chan & Co. (DH&S Malaysia) and DH&S Singapore (1986 - 1991)
- Deloitte Haskins & Sells (DH&S), London, United Kingdom (1978 - 1986)

**Other Directorship(s) :****Listed Issuers :**

- IHH Healthcare Berhad
- RHB Bank Berhad

**Public Companies :**

- RHB Islamic Bank Berhad

## BOARD OF DIRECTORS' PROFILE



### JUNIWATI RAHMAT HUSSIN

Independent Non-Executive Director

<b>Nationality :</b>	<b>Age :</b>	<b>Gender :</b>
Malaysian	64	Female
<b>Date of Appointment :</b>	<b>Year(s) of Directorship :</b>	
1 June 2017	Five (5) years	
<b>Date of Last Re-Election :</b>	<b>Board Committee(s) :</b>	
10 May 2021	I A T R	
<b>Board meetings attended in the Financial Year :</b>		
		16/16

#### Academic/Professional Qualification(s) :

- Bachelor of Science (Hons.) in Chemistry, University of Kent, Canterbury, United Kingdom
- Certificate in International Management, GE
- Attended the INSEAD Senior Management Development Programme and Advanced Management Programme
- Attended the Henley Business School Advanced Management Programme, United Kingdom

#### Skills, Experience and Expertise :

- Vice President and Venture Director, Pengerang Integrated Complex and Chief Executive Officer, PETRONAS Refinery and Petrochemical Corporation Sdn. Bhd. (2013 - 2016)
- Vice President, Human Resource Management Division, PETRONAS (2010 - 2012)
- Vice President, Education Division, PETRONAS (2009 - 2010)
- Chief Executive Officer, Malaysian Philharmonic Orchestra & Dewan Filharmonik PETRONAS (2005 - 2009)
- General Manager (Marketing and Trading-Chemicals), MITCO Sdn. Bhd. (2003 - 2005)
- Senior Manager (Marketing and Trading-Chemicals), MITCO Sdn. Bhd. (2001 - 2003)
- Manager, Human Resource Management, PETRONAS (1997 - 2001)
- Manager, Petrochemicals Business Planning Unit, Petrochemical Division and Manager, Business Evaluation Department, Corporate Planning Division, PETRONAS (1994 - 1997)
- Executive (Analyst), Refining and Marketing Planning Unit, PETRONAS (1991 - 1994)
- Executive (Refinery), PETRONAS Penapisan (Melaka) Sdn. Bhd. (1991)
- Production Planner (Refinery), PETRONAS Penapisan (Terengganu) Sdn. Bhd. (1988 - 1990)
- Chemist, Process Engineering and Technical, PETRONAS Penapisan (Terengganu) Sdn. Bhd. (1982 - 1987)
- Chemist, Laboratory Services, PETRONAS (1981 - 1982)
- She has a wide range of hands-on experience in Refinery Operations, Project Management, Corporate Planning, Human Resource and Marketing and Trading

#### Other Directorship(s) :

##### Listed Issuers :

- Dialog Group Berhad

##### Public Companies :

- Malaysia Petroleum Resources Corporation

## BOARD OF DIRECTORS' PROFILE

**GOPALA KRISHNAN  
K.SUNDARAM**

Independent Non-Executive Director

**Nationality :** Malaysian      **Age :** 68      **Gender :** Male

**Date of Appointment :** 4 July 2018      **Year(s) of Directorship :** Four (4) years

**Date of Last Re-Election :** 10 May 2021      **Board Committee(s) :**

T	A	F	R
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**Board meetings attended in the Financial Year :**

16/16

**Academic/Professional Qualification(s) :**

- Bachelor in Law LL.B. (Hons.), Universiti Malaya, Malaysia
- Advocate and Solicitor of the High Court of Malaya

**Skills, Experience and Expertise :**

- Partner, Abdullah Chan & Co., Advocates & Solicitors (2012 - Present)
- Consultant, Asian Development Bank (2018 - 2021)
- Leading adviser on the Financial Services Act 2013 and the Islamic Financial Services Act 2013
- Independent International Consultant, World Bank (2017 - 2018)
- Director, Kuwait Finance House (Malaysia) Berhad (2012 - 2016)
- Held various positions in Bank Negara Malaysia (Central Bank of Malaysia) (1982 - 2012):
  - Project Advisor (2011 - 2012)
  - Assistant Governor (2006 - 2011)
  - Assistant Manager/Deputy Director/Director, Legal Department (1990 - 2006)
  - Senior Executive/Assistant Manager, Secretary's Department (1985 - 1990)
  - Senior Executive, Banking Department (1982 - 1985)

**Other Directorship(s) :****Listed Issuers :**

- Nil

**Public Companies :**

- Nil

## BOARD OF DIRECTORS' PROFILE



### DATO' ROSLINA BINTI ZAINAL

Independent Non-Executive Director

<b>Nationality :</b>	<b>Age :</b>	<b>Gender :</b>
Malaysian	60	Female
<b>Date of Appointment :</b>		
<ul style="list-style-type: none"> <li>28 April 2020 (Redesignated as Independent Non-Executive Director)</li> <li>15 March 2019 (Non-Independent Non-Executive Director)</li> </ul>		
<b>Year(s) of Directorship :</b>		
Four (4) years		
<b>Date of Last Re-Election :</b>	<b>Board Committee(s) :</b>	
2 June 2022	<span style="border: 1px solid black; padding: 2px;">NR</span> <span style="border: 1px solid black; padding: 2px;">L</span> <span style="border: 1px solid black; padding: 2px;">F</span> <span style="border: 1px solid black; padding: 2px;">T</span>	
<b>Board meetings attended in the Financial Year :</b>		
16/16		

#### Academic/Professional Qualification(s) :

- Master of Business Administration, University of New England, New South Wales, Australia
- Bachelor of Electrical Engineering, Lakehead University, Canada

#### Skills, Experience and Expertise :

- Member of Tan Sri Leo Moggie Distinguished Chair in Energy Informatics, Universiti Tenaga Nasional, Malaysia (UNITEN) (2021 - Present)
- Advocate, 30% Club, Malaysian Chapter (2021 - Present)
- Director, Universiti Teknikal Malaysia Melaka (UTeM) (2019 - 2020)
- Director, Sapura Energy Berhad (2019 - 2020)
- Senior Fellow, Khazanah Research & Investment Strategy, Khazanah Nasional Berhad (2018 - 2019)
- Adjunct Professor, College of Business, Universiti Tenaga Nasional, Malaysia (2016 - 2018)
- Held various positions in TNB :
  - Vice President (Regulatory Economics and Planning) (2015 - 2018)
  - Vice President (Planning) (2009 - 2015)
  - General Manager (VPP/Energy Procurement), Planning Division (2008 - 2009)
- Has served Lembaga Letrik Negara/TNB for 33 years in various divisions, such as Distribution, Planning, Business Strategy, Regulations, Transmission and Corporate Planning
- Seconded to the Economic Planning Unit of the Prime Minister's Department (1990 - 1992)

#### Other Directorship(s) :

##### Listed Issuers :

- Malaysia Smelting Corporation Berhad

##### Public Companies :

- Nil

## BOARD OF DIRECTORS' PROFILE

**DATUK RAWISANDRAN  
A/L NARAYANAN**

Independent Non-Executive Director

**Nationality :** Malaysian      **Age :** 59      **Gender :** Male

**Date of Appointment :** 16 October 2020      **Year(s) of Directorship :** Two (2) years

**Date of Last Re-Election :** 10 May 2021      **Board Committee(s) :**

A	R	L	I
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**Board meetings attended in the Financial Year :**

16/16

**Academic/Professional Qualification(s) :**

- Professional Diploma in Business Management, Asian Management Development Academy PLT, Malaysia (Oxford Business College, United Kingdom)
- Diploma in Business Management, Asian Management Development Academy PLT, Malaysia (Oxford Business College, United Kingdom)

**Skills, Experience and Expertise :**

- Director, National Land Finance Co-Operative Society Limited (2021 - Present)
- Director (Business Development), CSEM Sri Meru Sdn. Bhd. (2010 - Present)
- Secretary of Malaysian Indian Congress (MIC), Selangor (2016 - 2018)
- Senator (2007 - 2010)
- Member of Kajang Municipal Council (2003 - 2008)
- Member of Sepang District Council (1997 - 2003)

**Other Directorship(s) :****Listed Issuers :**

- Nil

**Public Companies :**

- Nil

## BOARD OF DIRECTORS' PROFILE



### DATO' MERINA BINTI ABU TAHIR

Independent Non-Executive Director

<b>Nationality :</b>	Malaysian	<b>Age :</b>	57	<b>Gender :</b>	Female
<b>Date of Appointment :</b>	1 February 2022	<b>Year(s) of Directorship :</b>	One (1) year		
<b>Date of Last Re-Election :</b>	2 June 2022	<b>Board Committee(s) :</b>	A F NR		
<b>Board meetings attended in the Financial Year :</b>	14/14 (since appointment date)				

#### Academic/Professional Qualification(s) :

- Fellow Member of the Association of Chartered Certified Accountants (ACCA), FCCA (UK)
- Member of the Malaysian Institute of Certified Public Accountants (MICPA), CPA
- Member of the Malaysian Institute of Accountants (MIA), CA (M)
- Member of the ASEAN Chartered Professional Accountant (ASEAN CPA)
- Professional Member of the Institute of Internal Auditors Malaysia (IIAM), CMIIA

#### Skills, Experience and Expertise :

- Global Council Member, ACCA (2022 - Present)
- Director, Lembaga Tabung Haji Property Holdings Ltd Group of Companies (2020 - 2021)
- Chief Financial Officer, Lembaga Tabung Haji (2020 - 2021)
- Chairman, ACCA Malaysia Advisory Committee (2017 - 2019)
- Council Member, MIA (2016 - 2019)
- Malaysia Airlines Berhad/Malaysian Airline System Berhad (2004 - 2020) :
  - Chief Internal Auditor (2011 - 2014, 2015 - 2020)
  - Director, Corporate Services (2014 - 2015)
  - Senior Vice President, Commercial Office (2011)
  - Regional Senior Vice President, Middle East, Africa and South America (MEASA) (2008 - 2011)
  - General Manager, Finance Support Services (2004 - 2007)
- Head, Group Finance, IT and Property, Amanah Capital Partners Berhad (1997 - 2004)
- Sime Darby Berhad (1991 - 1997) :
  - Business Development Manager (1996 - 1997)
  - Finance and Administration Manager, Sime Darby Travel Sdn. Bhd. and Sime Holidays Sdn. Bhd. (1994 - 1996)
  - Assistant Audit Manager (1991 - 1993)
- Audit Semi-Senior, Messrs Price Waterhouse (now known as Messrs PricewaterhouseCoopers) (1991)
- Audit Senior, Messrs Ivor Barry & Co., England (1988 - 1991)
- Reconciliation Analyst, IBM (UK) Ltd., England (1987)

#### Other Directorship(s) :

##### Listed Issuers :

- S P Setia Berhad

##### Public Companies :

- Nil

## BOARD OF DIRECTORS' PROFILE

**ELAINE ONG YEE LYNN**

Alternate Director to YBhg. Datuk Amran Hafiz bin Affifudin

<b>Nationality :</b>	Malaysian	<b>Age :</b>	39	<b>Gender :</b>	Female			
<b>Date of Appointment :</b>	20 March 2023	<b>Year(s) of Directorship :</b>	Less than one (1) year					
<b>Board Committee(s) :</b>	Nil							
<b>Board meetings attended in the Financial Year :</b>	N/A							

**Academic/Professional Qualification(s) :**

- BSc (Honours) in Accounting and Finance, University of Warwick, United Kingdom
- Associate Chartered Accountant (ACA) of the Institute of Chartered Accountants in England and Wales (ICAEW)

**Skills, Experience and Expertise :**

- Senior Vice President, Investments, Khazanah Nasional Berhad (2018 - Present)
- Director of Southrop Sdn. Bhd. (2015 - 2018)
- Assistant Vice President, Investments, Khazanah Nasional Berhad (2010 - 2015)
- Assistant Manager, Assurance - Financial Services, PricewaterhouseCoopers, Malaysia (2006 - 2010)

**Other Directorship(s) :****Listed Issuers :**

- Nil

**Public Companies :**

- Cenergi SEA Berhad

**Declaration by the Board :****Family relationship with any Director and/or major shareholder of TNB :**

- None of the Directors has any family relationship with any Director and/or major shareholder of TNB.

**Conflict of interest with TNB :**

- Save as disclosed above, none of the Directors has any conflict of interest with TNB.

**Other than traffic offences, any conviction for offences within the past five (5) years and any public sanction or penalty imposed by the relevant regulatory bodies during the Financial Year under review :**

- Other than traffic offences, none of the Directors has been convicted for any offences within the past five (5) years nor has been imposed of any public sanction or penalty by the relevant regulatory bodies during the Financial Year under review

# COMPANY SECRETARY'S PROFILE



**NORAZNI BINTI  
MOHD ISA**

Company Secretary

**Nationality :**  
Malaysian

**Age :**  
59

**Gender :**  
Female

**Date of Appointment :**  
31 May 2012

**Academic/Professional Qualification(s) :**

- Master of Laws, Universiti Malaya, Malaysia
- Advanced Diploma in Law, Institut Teknologi MARA, (now Universiti Teknologi MARA), Malaysia
- Diploma in Law, Institut Teknologi MARA, (now Universiti Teknologi MARA), Malaysia

**Skills, Experience and Expertise :**

- More than 30 years of experience within TNB where she has served in various positions, specifically in legal services, tender and contract management and regulatory management
- Deputy Company Secretary and Joint Company Secretary, TNB (2011 - 2012)
- Head of Tender Management Unit, Procurement Division, TNB (2006 - 2011)
- Manager of Licensing and Compliance Unit, Corporate Communications Department, TNB (2003 - 2006)
- Manager of Contract Management, Procurement Division, TNB (2002 - 2003)
- Legal Executive, Legal Services Department, Company Secretary's Office, TNB (1990 - 2001)

**Other Directorship(s) :**

**Listed Issuers :**

- Nil

**Public Companies :**

- Nil

**Additional Information :**

**Family relationship with any Director and/or major shareholder of TNB :**

- Nil

**Conflict of interest with TNB :**

- Nil

**Other than traffic offences, any conviction for offences within the past five (5) years and any public sanction or penalty imposed by the relevant regulatory bodies during the Financial Year under review :**

- Nil

# SENIOR MANAGEMENT PROFILE



## DATO' INDERA IR. BAHARIN BIN DIN

President/Chief Executive Officer

### Qualification(s) :

- Master of Business Administration – joint MBA programme between Universiti Tenaga Nasional, Malaysia and Bond University, Australia
- Bachelor of Science (Electrical Engineering), Syracuse University, New York, United States of America
- Certified Professional Engineer of the Board of Engineers (BEM), Malaysia
- Member of the Institution of Engineers, Malaysia
- Qualified Competent Engineer (Up to 33kV)
- Qualified Service Engineer (Up to 33kV)

### Working Experience :

- Dato' Indera Ir. Baharin bin Din built his career in TNB serving in various engineering and managerial positions within the Company, including Business Development, Network Maintenance, Network Planning, Construction Services, Metering Service and Engineering Services.
- He was seconded to the Ministry of Energy, Green Technology and Water (KeTTHA), for two (2) and a half years, where he served as the Deputy Director for the Electrical Inspectorate Department in Sabah. He then became the Director for the Electrical Inspectorate Department in Pahang.
- He was the Managing Director of Sabah Electricity Sdn. Bhd. from 2007 to 2011 and was promoted to Senior General Manager (Customer Service and Metering) of TNB in December 2011.
- Dato' Indera Ir. Baharin was made Vice President, Distribution, in January 2012 until July 2018 and was re-designated as Chief Distribution Network Officer from 1 August 2018.
- He was appointed as President/Chief Executive Officer of TNB on 1 March 2021.

### Directorships In Public Companies and Listed Issuers :

- Nil

## DATO' NOR AZMAN BIN MUFTI

Managing Director, TNB Power Generation Sdn. Bhd.

### Qualification(s) :

- Master of Engineering Management, Universiti Tenaga Nasional, Malaysia
- Bachelor of Engineering (Mechanical), University of Strathclyde, Glasgow, Scotland, United Kingdom
- Diploma in Mechanical Engineering, Universiti Teknologi Malaysia

### Working Experience :

- Dato' Nor Azman bin Mufti has served for 42 years in TNB, holding various positions in Power Generation portfolios namely Managing Director of TNB REMACO Sdn. Bhd. and Vice President of the Energy Ventures Division.
- Prior to his current appointment, he was the Chief Power Generation Officer of the Power Generation Division, TNB.
- As the Managing Director of TNB Power Generation Sdn. Bhd., he is responsible for leading and driving GenCo journey towards sustainability with focus on new growth, increased efficiencies and business synergies and greater business development.

### Directorships In Public Companies and Listed Issuers :

- Nil



**Nationality:** Malaysian    **Age:** 62    **Gender:** Male

**Date of Appointment:**  
1 October 2020

**Management Committee(s):**  
**GEMC**   **GPC**   **COMPEC**   **IEC**



## SENIOR MANAGEMENT PROFILE



**IR. DEV ANANDAN A/L M.S. ANANDAN**

Chief Grid Officer

**Nationality :** Malaysian    **Age :** 58    **Gender :** Male

**Date of Appointment :** 1 January 2023

**Management Committee(s) :** GEMC, GPC, GMTC

### IR. DEV ANANDAN A/L M.S. ANANDAN

Chief Grid Officer

**Qualification(s) :**

- Master of Engineering (MEng) in Engineering Management, Universiti Tenaga Nasional (UNITEN)
- Bachelor of Science (Bsc) in Electrical Engineering, Universiti Teknologi Malaysia (UTM)

**Working Experience :**

- Ir. Dev Anandan has served for more than 34 years in TNB, holding various positions in Transmission Division, now known as Grid Division.
- As the Chief Grid Officer, he is responsible for the overall performance of TNB's transmission business, which focuses on transporting electricity, managing the Division's existing assets as well and delivering new projects for Grid reliably and safely, within constraints of time and cost.
- Ir. Dev Anandan is also responsible for ensuring the long-term sustainable growth and profitability of the Division through effective management and optimisation of resources. He plays a major role in realising the ASEAN Power Grid and driving the Energy Transition agenda.

**Directorships In Public Companies and Listed Issuers :**

- Nil



**WAN NAZMY BIN WAN MAHMOOD**

Chief Distribution Network Officer

**Nationality :** Malaysian    **Age :** 59    **Gender :** Male

**Date of Appointment :** 1 March 2021

**Management Committee(s) :** GEMC, GPC, GMTC

### WAN NAZMY BIN WAN MAHMOOD

Chief Distribution Network Officer

**Qualification(s) :**

- Master of Engineering (M.Eng.), Universiti Tenaga Nasional, Malaysia
- Bachelor of Science, Rensselaer Polytechnic Institute, United States of America

**Working Experience :**

- Wan Nazmy has served for more than 37 years in TNB in various engineering and managerial positions. These positions include Assistant Engineer, Assistant District Engineer, District Manager, Principal Engineer, General Manager and Senior General Manager. He has served in various capacities, including in Business Development, Network Maintenance and Planning, Construction Services, Engineering Services, Distribution Network Operations and Asset Management.
- He was appointed to lead TNB's Business Global Solutions Division as the Chief Global Business Solutions, prior to his current appointment as the Chief Distribution Network Officer (CDNO).
- Wan Nazmy aspires to take the Distribution Network Division to greater heights in its business and operational performance.
- To align with the national agenda of reaching net zero by 2050, Wan Nazmy is also committed to realising the Distribution Network Division's Smart Utility 2025 target.

**Directorships In Public Companies and Listed Issuers :**

- Nil

## SENIOR MANAGEMENT PROFILE



**KAMAL ARIFIN A RAHMAN**

Chief Retail Officer

**Nationality :** Malaysian    **Age :** 56    **Gender :** Male

**Date of Appointment :** 3 October 2022

**Management Committee(s) :** GEMC, GPC, GMTC, IEC

**KAMAL ARIFIN A RAHMAN**

Chief Retail Officer

**Qualification(s) :**

- Master of Business Administration, University of Athens, Ohio, United States
- Bachelor of Science in Electrical Engineering, University of Texas at El Paso (UTEP), United States
- Member of CIRED Malaysia

**Working Experience :**

- Kamal Arifin has served more than 32 years, holding various portfolios in TNB, namely Special Officer in the offices of TNB Chairman and Senior Vice President, Chief Operating Officer of Malaysia Transformer Manufacturing and State General Manager (Negeri Sembilan), TNB Distribution.
- Prior to his current appointment as Chief Retail Officer, he was the Head of Centralised Operations and Centre of Excellence in Retail Division.
- As the Chief Retail Officer of TNB, he is responsible for delivering TNB's aspirational vision of becoming a leading Retail company of the future.
- Among his main tasks are to enable the growth of TNB's new retail business, covering both core business on the kWh and new products and services beyond energy and to deliver quality customer experience by expanding TNB digital services.

**Directorships In Public Companies and Listed Issuers :**

- Nil



**NAZMI BIN OTHMAN**

Chief Financial Officer

**Nationality :** Malaysian    **Age :** 59    **Gender :** Male

**Date of Appointment :** 1 August 2018

**Management Committee(s) :** GEMC, GPC, GMTC, COMPEC, IEC

**NAZMI BIN OTHMAN**

Chief Financial Officer

**Qualification(s) :**

- Fellow of the Certified Practising Accountants (CPA Australia)
- Certified Public Accountant of the Malaysian Institute of Certified Public Accountants (MICPA)
- Chartered Accountant of the Malaysian Institute of Accountants (MIA)
- Bachelor of Commerce (Accounting), University of Wollongong, Australia

**Working Experience :**

- Nazmi has served for more than 25 years in various positions before becoming the Chief Investment Management Officer in 2014.
- He was appointed as Chief Financial Officer, Group Finance with effect from 1 August 2018. Some of his tasks include monitoring finance-related activities and advising the CEO and the Board of Directors on key financial decisions.
- Prior to joining TNB, Nazmi served in various positions in other companies such as Island & Peninsular Berhad and MRCB as the Financial Controller of Port Dickson Power Sdn. Bhd., an independent power producer.
- He leads Group Finance as an active strategic financial partner in driving TNB's business aspirations and achieving the Group's objectives. He also ensures continuous improvement and review in key financial areas such as finance policies and procedures, system efficiency and processes, strategic financial risks and staff competency.

**Directorships In Public Companies and Listed Issuers :**

- Nil

## SENIOR MANAGEMENT PROFILE



**Nationality :** Malaysian    **Age :** 57    **Gender :** Male

**Date of Appointment :**  
12 December 2022

**Management Committee(s) :**  
**GEMC**   **GPC**   **COMPEC**   **IEC**

### DATUK TS. SHAMSUL BIN AHMAD

Chief Regulatory & Stakeholder Management Officer

#### Qualification(s) :

- Bachelor of Science in Mechanical Engineering, North Carolina A&T State University, United States of America
- Master of Business Administration, Universiti Tenaga Nasional, Malaysia
- Professional Technologists, Malaysia Board of Technologists (MBOT)

#### Working Experience :

- Datuk Ts. Shamsul bin Ahmad has served TNB for more than 34 years with and has extensive experience and has held numerous portfolios, including being the former Managing Director of TNB Janamanjung Sdn. Bhd. (TNBJ) for 10 years.
- Prior to his current appointment, he was the Managing Director of TNB Fuel Sdn. Bhd.
- As a Chief Regulatory & Stakeholder Management Officer, he is responsible for shaping the industry's future and regulatory landscape while driving high stakeholders' trust towards achieving TNB's aspirations and vision.
- He is currently the Country Coordinator for the Heads of ASEAN Power Utilities/Authorities (HAPUA).

#### Directorships In Public Companies and Listed Issuers :

- Nil



**Nationality :** Malaysian    **Age :** 57    **Gender :** Male

**Date of Appointment :**  
3 October 2022

**Management Committee(s) :**  
**GEMC**   **GPC**   **IEC**

### DATUK IR. MEGAT JALALUDDIN BIN MEGAT HASSAN

Chief Strategy & Ventures Officer

#### Qualification(s) :

- Member of the Institution of Engineers, Malaysia
- Certified Professional Engineer of the Board of Engineers (BEM), Malaysia
- Bachelor of Engineering (Hons) (Electrical Engineering), University of Wollongong, Sydney, Australia

#### Working Experience :

- Datuk Ir. Megat Jalaluddin bin Megat Hassan has served in various positions in TNB.
- He was the Chief Strategy Officer for six years, starting in 2012, and was the Chief Retail Officer for four years, where he successfully delivered quality digital customer service experience and growth of the TNB Retail business.
- As the Chief Strategy & Ventures Officer, he leads the development and implementation of TNB's corporate and business strategy, incorporating Energy Transition trends and the Environmental, Social and Governance (ESG) agenda. His responsibility includes searching for, identifying and evaluating new businesses in the energy industry and adjacent industries. He also guides and promotes innovation, research and development in fields relevant to TNB's current and prospective business.

#### Directorships In Public Companies and Listed Issuers :

- Nil

**SENIOR MANAGEMENT PROFILE**

**WAHIZAN BIN ABD RAHMAN**  
Chief People Officer

**Nationality :** Malaysian    **Age :** 58    **Gender :** Male

**Date of Appointment :** 1 April 2021

**Management Committee(s) :** GEMC, GPC

**WAHIZAN BIN ABD RAHMAN**

Chief People Officer

**Qualification(s) :**

- Bachelor of Science (Electrical & Electronic), George Washington University, Washington DC, United States of America
- Masters in Business Administration, Universiti Tenaga Nasional, Malaysia

**Working Experience :**

- Wahizan bin Abd Rahman has served in various positions in TNB in the past 35 years. He started his career at Generation Power Plants before moving to the Distribution Division where he had stints at the Distribution Engineering Department and managing business operations in Kuala Lumpur.
- He was the General Manager for Distribution – Putrajaya and Cyberjaya before shifting to TNB Headquarters to continue his career in Human Resource Management.
- His experience in Human Resources include serving as the General Manager for Human Resource Planning and Staffing, Senior General Manager for Human Resource Planning and Development and Senior General Manager for Human Resource Strategy and Transformation.
- Prior to his appointment as Chief People Officer, he was the Head of People Strategy and Organisation Effectiveness of the Group Human Resource Division.

**Directorships In Public Companies and Listed Issuers :**

- Nil



**MOHD ZARIHI MOHD HASHIM**  
Chief New Energy Officer

**Nationality :** Malaysian    **Age :** 46    **Gender :** Male

**Date of Appointment :** 12 January 2022

**Management Committee(s) :** GEMC, GPC, GMTC

**MOHD ZARIHI MOHD HASHIM**

Chief New Energy Officer

**Qualification(s) :**

- MBA from INSEAD
- Bachelor of Engineering (Hons) in Electrical and Electronic Engineering from University College London

**Working Experience :**

- Zarihi's role as part of the New Energy Division is to expand Tenaga Nasional Berhad's renewable energy business in domestic and international markets.
- Prior to joining Tenaga Nasional Berhad, Zarihi held senior roles with investment and private equity firms. He also has experience in management and IT consulting with local and international consulting companies.
- Early in his career, he was an engineer at a leading semiconductor company.

**Directorships In Public Companies and Listed Issuers :**

- Nil

## SENIOR MANAGEMENT PROFILE



**AZLAN BIN AHMAD**

Chief Information Officer

**Nationality :** Malaysian    **Age :** 52    **Gender :** Male

**Date of Appointment :** 18 July 2022

**Management Committee(s) :** GEMC, GPC, GMTC

### AZLAN BIN AHMAD

Chief Information Officer

#### Qualification(s) :

- Master of Business Administration, International Islamic University Malaysia (IIUM), Malaysia
- Bachelor of Science (Computation), University of Manchester Institute of Science and Technology (UMIST), United Kingdom
- BTEC National Diploma in Computer Studies, Coventry Technical College, United Kingdom

#### Working Experience :

- Azlan Ahmad has served for more than 28 years in TNB, holding various positions in the ICT Division with extensive IT management and technical experience.
- Prior to his current appointment, he was appointed to lead the ICT delivery and operation arm as the Senior General Manager of Center of Delivery and Operation Services.
- As Chief Information Officer, he leads TNB's IT strategy and operations across the IT value chain, which includes IT infrastructure, network telecommunication, application and cybersecurity.
- He is also responsible for deploying holistic, secure and sustainable technology solutions across the organisation as well as driving the corporate digitalisation agenda.
- Azlan Ahmad currently serves on the Board of Directors of TNB-IT Sdn. Bhd. and Allo Technology Sdn. Bhd., both wholly-owned subsidiaries of TNB.

#### Directorships In Public Companies and Listed Issuers :

- Nil



**AMIR MAHMOD BIN ABDULLAH**

Chief Procurement Officer

**Nationality :** Malaysian    **Age :** 56    **Gender :** Male

**Date of Appointment :** 1 January 2020

**Management Committee(s) :** GEMC, GPC, GMTC, COMPEC

### AMIR MAHMOD BIN ABDULLAH

Chief Procurement Officer

#### Qualification(s) :

- MSc In Engineering Business Management (Integrated Graduate Development Scheme, IGDS), University of Warwick, United Kingdom/University of Technology, Malaysia
- BEng (Hons) in Electrical and Electronic Engineering, Brighton Polytechnic, United Kingdom
- Post Graduate Diploma In Engineering Business Management (Integrated Manager Development Scheme, IMDS), University of Warwick, United Kingdom/University of Technology, Malaysia
- Other learning exposure and experiences includes attachment at Melbourne Business School (Australia), National University of Singapore and Disney University, Florida, United States of America

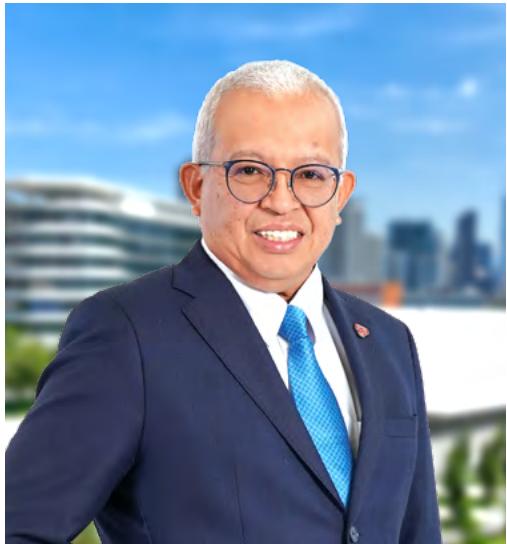
#### Working Experience :

- Amir Mahmud Abdullah started his career in 1988 with LLN/TNB. He has vast experience in Customer Service, Maintenance, Planning and Construction, and was the Head of several Cost and Profit Centres.
- Among the special projects led by Amir were the development of online application systems such as the Competency Based Performance Management System, Online Employee Feedback and Integrated Development of Proton City.
- In 2009, Amir served as the Head of TNB Metering and Revenue Management and later, in 2014, he was appointed as the first Programme Director of TNB's Smart Meter under Advanced Metering Infrastructure (AMI), which is part of Connected Grid of the Future.
- In 2016, Amir was assigned to Tenaga Cable Industries Sdn. Bhd. a subsidiary of TNB to transform the loss-making cable company into a more profitable and sustainable company.
- In 2018, Amir served as a Program Director of Procurement Hub Functions and was later appointed as Chief Procurement Officer in January 2020.
- Amir was one of the first participants of TNB's Leadership Drive programme and is now an accredited trainer in several business areas.

#### Directorships In Public Companies and Listed Issuers :

- Nil

## SENIOR MANAGEMENT PROFILE



**AHMAD HUSHAIRI BIN IBRAHIM**  
Chief Global Business Solutions Officer

**Nationality :** Malaysian    **Age :** 59    **Gender :** Male

**Date of Appointment :** 15 November 2021

**Management Committee(s) :** GEMC, GPC, GMTC

**AHMAD HUSHAIRI BIN IBRAHIM**

Chief Global Business Solutions Officer

**Qualification(s) :**

- Bachelor of Science (Electrical Engineering), Syracuse University, New York

**Working Experience :**

- Ahmad Hushairi bin Ibrahim has held various critical positions within TNB, including Head (Retail Operations) and Head of Strategy for the Retail Division in his 36 years of service in TNB.
- He was appointed as Chief Global Business Solutions Officer in 2021 and is responsible for the provision of shared services solutions for TNB and its subsidiaries. TNB shared services solutions comprise Service Delivery, Security Services, Property Services, Fleet Management, Health Care, Corporate Affairs and Health, Safety and Environment.
- The provision of centralised shared services will result in higher quality services and cost-effectiveness, enabling the business entities within the TNB Group to focus on their core businesses. He aims to further TBGS's digitally enhanced and augmented platform and provide excellent employee-led experience solutions and value-for-money services to customers.

**Directorships In Public Companies and Listed Issuers :**

- Nil



**NORAZNI BINTI MOHD ISA**  
Company Secretary

Norazni's profile is set out in Company Secretary's Profile on page 150 of the Integrated Annual Report.

**Nationality :** Malaysian    **Age :** 59    **Gender :** Female

**Date of Appointment :** 31 May 2012

**Management Committee(s) :** GEMC, GPC

**NORAZNI BINTI MOHD ISA**

Company Secretary

Norazni's profile is set out in Company Secretary's Profile on page 150 of the Integrated Annual Report.

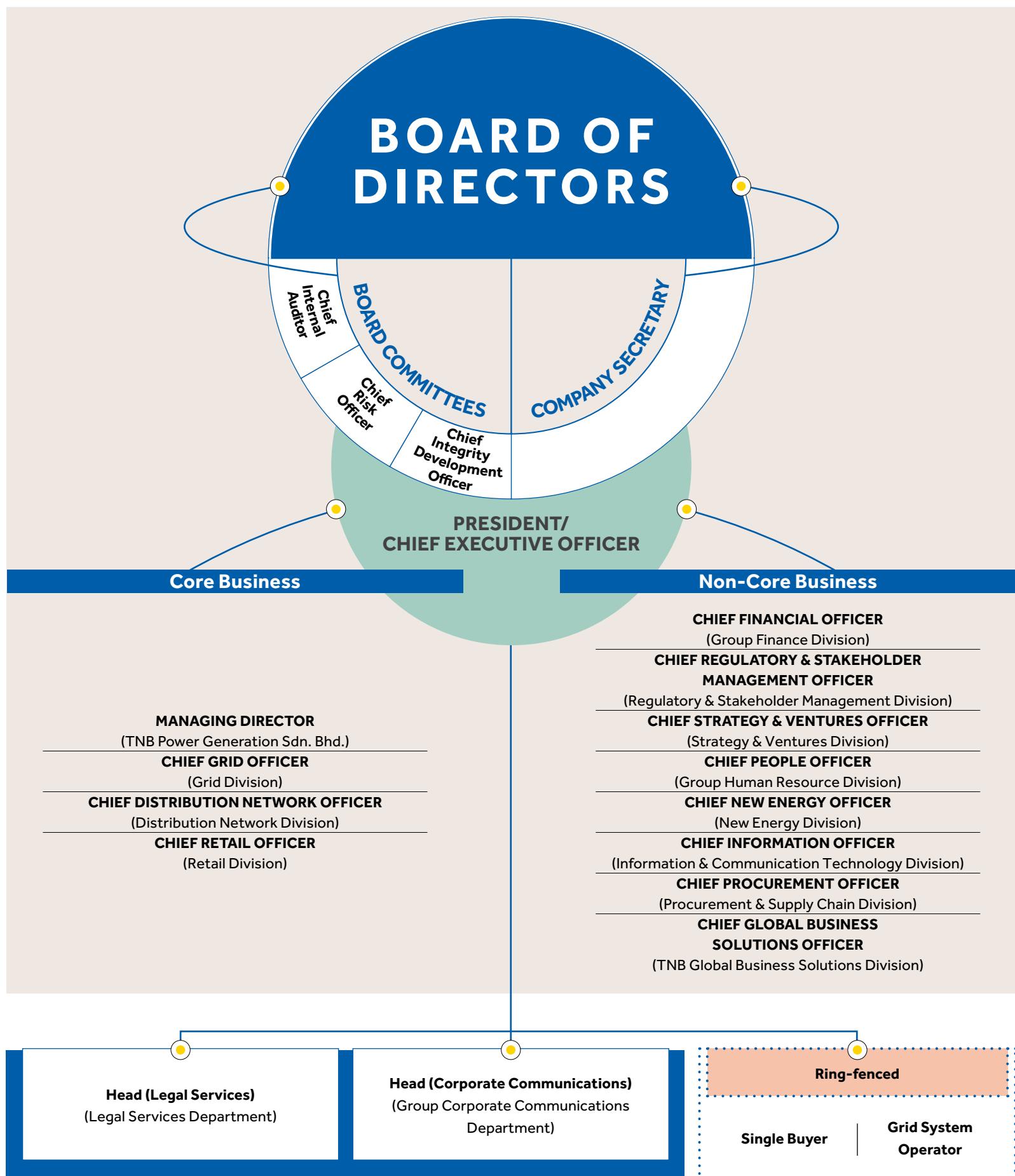
**Additional Information on Our Management Team :**

- None of our Management Team has any family relationship with any Director and/or major shareholder of TNB.
- None of our Management Team has any conflict of interest with TNB.
- None of our Management Team has been convicted of any offences (save for minor traffic offences) within the past five (5) years, nor has been imposed any public sanction or penalty by the relevant regulatory bodies during the Financial Year under review.

**MEMBERSHIP KEY**

GEMC	Group Executive Management Committee
GPC	Group People Committee
COMPEC	Commodity Procurement Executive Committee
GMTC	Group Management Tender Committee
IEC	Investment Executive Committee

# ORGANISATIONAL STRUCTURE



Developing renewable energy  
for a brighter future



[www.vantagere.co.uk](http://www.vantagere.co.uk)



# CHAIRMAN'S INTRODUCTION TO CORPORATE GOVERNANCE

**Dear Shareholders,**

## I am pleased to present the Corporate Governance Overview Statement for 2022.

Together with our Corporate Governance Report, which is available on our corporate website, these statements explain how we as a Board have assessed the Group's operating environment and taken informed decisions to secure a sustainable and leading position on behalf of our key stakeholders, all underpinned by a long-standing and deeply embedded commitment to high standards of corporate governance. The strength of the Board's leadership is assessed through the clarity of the actions we take and transparency surrounding the standards, processes and culture we ultimately set.

### ENGAGING AND RECONNECTING

Throughout the pandemic, virtual channels worked well and are continued to be used in the Company as we responded to employee feedback on the benefits of our hybrid approach to work, enabled by technology.

We have resumed hybrid meetings for the Board in 2022 and for many of our shareholder engagements. The 2023 Annual General Meeting (AGM) will be held virtually and I look forward to meeting those of you who are able to attend and answering questions from those of you who join us virtually.

The Board takes very seriously the views of employees, shareholders and wider stakeholders to ensure we are pursuing actions that are acceptable to those we work with. This is evidenced across this Integrated Annual Report – the network in which we gather relevant insights is extensive. At Board level, we enhance our understanding of views through work which complements the daily contact our businesses have.

The Board agenda further includes a stakeholder assessment of our strategy, an annual update on supply chains, confirmation of sustainability priorities and an annual report of key stakeholder work. Specifically, in 2022, we considered the development of our Energy Transition Plan, the Board of Directors' Fit and

Proper Policy and the wider issue of energy affordability, to name just a few examples.

### DRIVING SUSTAINABILITY

Our commitment to Environmental, Social and Governance (ESG), on which there has been considerable focus during the year, continues to be central to the way we operate. In particular, ESG targets are now included as a measure within our performance targets by way of an ESG scorecard. We have endeavoured to further enhance our reporting in this area and have now aligned our reporting with the Global Reporting Initiative (GRI) index in addition to the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. Further details of the Company's approach to ESG and activity during the year are included in the section of this report entitled "Sustainability Statement" on pages 65-136 and in our separate Sustainability Report.

### EFFECTIVENESS

As Chairman, I am responsible for providing leadership to ensure that the Board operates effectively. I have been supported in this by all the Directors. The annual reviews of Board effectiveness help the Board to consider how it operates and how its operations can be improved. This year, the review was undertaken internally and the findings of this review have provided us with ideas to further improve the manner in which the Board operates. This review, together with progress against recommendations from evaluations undertaken in 2021, are set out on page 178.

### BOARD CHANGES

The Board continuously seeks to ensure it has an appropriate mix of diversity, skills, experience and expertise to enable it to discharge its responsibilities effectively and to be well equipped in assisting the Company in navigating the range of opportunities and challenges ahead.

In view of the need to ensure that there are proper processes to manage succession issues at the Board level, an appropriate process for the selection, nomination and appointment of suitable candidates to the Board has been put in place.

The Board Nomination and Remuneration Committee (BNRC) is entrusted with the

responsibility of assessing and considering the capabilities, commitment and qualities of candidates to be appointed as Board Members and Committee Members, taking into account the diversity, required mix of skills, fit and proper assessment, background, experience/expertise/knowledge relevant to the Company's business, existing commitment and potential conflict of interest prior to recommending candidates to the Board.

The Board may appoint a new Director either to fill a casual vacancy or to add to the existing Directors. The Minister of Finance (Incorporated) (MoF Inc.), being the Special Shareholder of TNB, possesses the right to appoint up to six (6) Directors. The Company's Constitution provides that the Company must have at least two (2) Directors but not more than 12 Directors.

Currently, there are 11 members on the Board, excluding the Alternate Director; one (1) Executive Director and 10 Non-Executive Directors, six (6) of whom are Independent Directors.

These Independent Directors are considered by the Board to be independent of Management and free of any business or other relationship or circumstance that could materially interfere with the exercise of objective, unfettered or independent judgement. The Board has continued to reshape its membership through the right balance of experience, expertise and fresh thinking.

To date, there are several movements of the Board. The Board welcomed Dato' Abdul Razak bin Abdul Majid who was appointed as Chairman/Non-Independent Non-Executive Director, with the concurrence of MoF Inc., with effect from 27 March 2023 in place of Dato' Sri Hasan bin Arifin who had ceased office with effect from 1 January 2023.

With 36 years of working experience in TNB, his understanding and knowledge of the Company's operations and the industry will facilitate effective decision-making by the Board. Further to that, his qualifications and experience fills the gap identified through the Board Skills Matrix, of having a Director with technical experience on the Board. His extensive knowledge, experience and reputation in the energy-related industry is incomparable and the Board believes that he will not only continue the great work of his predecessors but also

## CHAIRMAN'S INTRODUCTION TO CORPORATE GOVERNANCE

maintain the practice of good governance, transparency and accountability. His wealth of knowledge will be instrumental in the ongoing initiatives of the TNB Energy Transition Plan.

Prior to that, the Board on 20 March 2023 approved the appointment of Rohaya binti Mohammad Yusof as a Non-Independent Non-Executive Director, representing the Employees Provident Fund (EPF), a major shareholder of TNB.

She is the Chief Investment Officer of EPF and has a wealth of experience in areas of corporate finance, investment banking, capital markets and private markets, both domestic and global. She is an Associate Member of CPA, Australia and also sits on the boards of Malaysia Airports Holdings Berhad, United Plantations Berhad and Yinson Holdings Berhad.

The Board on 10 April 2023 had approved on the appointment of Datin Rashidah binti Mohd Sies, with the concurrence of MoF Inc. as Non-Independent Non-Executive Director of TNB. She is the Deputy Secretary General of Treasury (Management) Ministry of Finance.

The cessation of office of Datuk Seri Asri bin Hamidin @ Hamidon as an Appointed Director/Non-Independent Non-Executive Director of TNB took effect from 5 January 2023. Concurrently, he also ceased as the Chairman of Board Tender Committee (BTC) and a member of the BNRC and Board Long Term Incentive Plan Committee (BLTIP) on the same day. Faisal @ Pisal bin Abdul Ghani, his Alternate Director, had ceased office in accordance with Clause 61(2) of the Company's Constitution with effect from 5 January 2023.

In addition to the above, Datuk Lau Beng Wei, an Independent Non-Executive Director, had resigned with effect from 6 March 2023.

The Board of Directors of TNB would like to express its appreciation to Dato' Sri Hasan bin Arifin, Datuk Seri Asri bin Hamidin @ Hamidon, Datuk Lau Beng Wei and Faisal @ Pisal bin Abdul Ghani for their contribution and services rendered to the Company during their tenure as Company Directors. With deep regret we report the demise of Dato' Ir. Nawawi bin Ahmad, an Independent Non-Executive Director, on 28 November 2022. The Board of Directors expresses its gratitude and appreciation for the guidance and contribution given by the late Dato' Ir. Nawawi bin Ahmad to the Board during

his tenure as a Director. He was the Chairman of Board Integrity Committee (BIC) and Member of BTC, BNRC and BLTIP. His stewardship, integrity and wisdom will be deeply missed.

The Board fulfils Practice 5.2 of the Malaysian Code of Corporate Governance 2021 (MCCG) for Large Companies having a majority of Independent Directors, with the number exceeding the minimum requirement as prescribed by the Main Market Listing Requirements of Bursa Malaysia Securities Berhad (MMLR).

The Board/BNRC continuously reviews the Board Skills Matrix, which serves to identify the skills, knowledge, experience and capabilities desired of the Board to enable it to meet both current and future challenges to the Company. It reflects the appropriate mix of skills, expertise and experience required to address existing and emerging business and governance issues, to enable Directors to effectively review Management's performance.

The Board approved the BNRC's recommendation that in order to strengthen the Board's composition to be more dynamic, the skills and gaps that have been identified as critical and need to be filled are technical experience, international business experience and customer centricity. The Board agreed that all Directors appointed during the Financial Year under review had met the required skills.

The Board believes that it presently has an appropriate balance of skills, experience, knowledge and independence to deliver the Group's strategy, to enable the Non-Executive Directors to effectively challenge the views of Management and to satisfy the requirements of good governance.

### DIVERSITY

The Board is committed in ensuring the diversity of the Company's senior management and annually reviews its recommendations on diversity for senior management roles. It recognises that there is more to do, not just at the Board level, but also at the Senior Leadership level.

While the women representation on the Board had increased, culminating, to date, with six (6) members of the Board or 55%, we recognise we still have more to do, not least with regard to other areas of diversity at the Board level.

Women now comprise 21% of the organisation. While our gender balance differs based on specific roles, geographies and bands, we are pleased that female representation in our leadership has increased to 26% compared to 21% in the previous Financial Year.

While good progress is being made across the Group in many aspects of diversity and inclusion, sustainable change requires a long-term perspective and this continues to be a key focus for the Company. The Board will continue to address diversity and inclusion when considering refreshment of the Board.

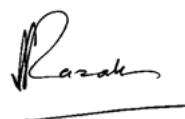
### FOCUSED ON THE FUTURE

In August 2021, the Group announced its net zero ambitions, representing the optimum growth pathway identified by the Board to capitalise on the opportunities across the value chain in which TNB participates. In all our deliberations, we focused on long-term success, financial resilience and shareholder value and ensured thorough debate based on robust inputs which capture all of the available information.

The Board Committees' support has been strong and provided in multiple ways. The BNRC has overseen proposed updates to Remuneration Policy to align with our growth ambitions, in addition to championing talent and capability across our most important asset, people. The Board Risk Committee (BRC) has monitored the development of our risk and opportunity reporting under the TCFD framework. As indicated last year, the Sustainability and Energy Transition Council (SETC) has progressed in its ESG role, deepening its focus on performance across ESG indices and reviewing climate resilience and adaptation plans.

### LOOKING FORWARD

The Board will continue to focus on the key issues, challenge the Group's leadership and collectively seek to make informed decisions. In an ever-changing world, we pledge to you that whatever lies ahead, we have the best interests of the Company, its customers and its people central to our deliberations.



**DATO' ABDUL RAZAK BIN ABDUL MAJID**  
Chairman

# PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

## THE BOARD AND ITS GOVERNANCE FRAMEWORK

The purpose of the Board is to provide leadership and direction to the Group's Management within a framework of controls which enable risk to be adequately assessed and managed. The Board is responsible and accountable to shareholders for the sustainable long-term success of the Company.

The Company's governance framework underpins the Company's operations. In addition to the seven (7) Board Committees detailed below, the Board is supported by the Group Executive Management Committee (GEMC), which comprises the Top Management.

 The Terms of References (TORs) of the BAC and BNRC are available at [www.tnb.com.my](http://www.tnb.com.my).

## SUPPORTS EFFECTIVE DECISION- MAKING AND THE DELIVERY OF OUR STRATEGY

Total Hours of  
Board Meetings  
**31.58**

Overall Percentage  
of Board Meetings  
Attended by Directors  
**96.88%**

Total Hours of Board  
and Board Committees  
Meetings  
**152.75**

All Directors have complied with the minimum attendance stipulated in the MMLR, of which being present not less than 50% of the Board meetings held during the Financial Year.

## THE BOARD

### Key Roles and Responsibilities

- Provides leadership to the Company and direction for Management.
- Has collective responsibility and accountability to shareholders for the long-term success of the Group.
- Reviews the performance of Management and the operating and financial performance of the Group.
- Sets strategy.
- Determines risk appetite.
- Ensures good governance.
- Deliberates and approves the sustainability strategy and pathway while overseeing TNB's implementation and performance on sustainability.

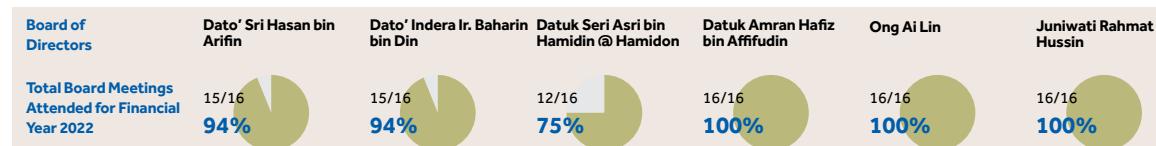
### Chairman

- Leads the Board
- Ensures an effective Board, including contributions and challenges from the Directors.
- Ensures that the Group maintains effective communication with its shareholders.

### President/CEO

- Has day-to-day responsibility for running the Group's operations.
- Makes recommendations to the Board and implements Group strategy.
- Applies Group policies.
- Promotes TNB's culture and standards.
- Ensures the Directors are properly informed and that sufficient information is provided to the Board to enable the Directors to form appropriate judgements.

The roles of Chairman and President/CEO are held by two (2) separate individuals.



## TNB BOARD COMMITTEES

Board Audit Committee (BAC)	Total <b>33.07</b> meeting hours	Board Finance and Investment Committee (FIC)	Total <b>19.58</b> meeting hours	Board Tender Committee (BTC)	Total <b>23.30</b> meeting hours
<b>Chairman</b> Dato' Merina binti Abu Tahir <sup>1</sup> Attendance <b>12/12</b> (100%)		<b>Chairman</b> Datuk Amran Hafiz bin Affudin Attendance <b>10/11</b> (91%)		<b>Chairman</b> Datuk Seri Asri bin Hamidin @ Hamidon Attendance <b>8/13</b> (62%)	
<b>Members</b> Ong Ai Lin Attendance <b>11/12</b> (92%)		<b>Members</b> Dato' Roslina binti Zainal Attendance <b>11/11</b> (100%)		<b>Members</b> Dato' Roslina binti Zainal Attendance <b>13/13</b> (100%)	
Gopala Krishnan K.Sundaram Attendance <b>12/12</b> (100%)		Gopala Krishnan K.Sundaram Attendance <b>11/11</b> (100%)		Juniwati Rahmat Hussin Attendance <b>12/13</b> (92%)	
Datuk Rawisandran a/l Narayanan Attendance <b>12/12</b> (100%)		Datuk Lau Beng Wei Attendance <b>9/11</b> (82%)		Dato' Ir. Nawawi bin Ahmad <sup>2</sup> Attendance <b>13/13</b> (100%)	
Juniwati Rahmat Hussin Attendance <b>12/12</b> (100%)		Dato' Merina binti Abu Tahir <sup>1</sup> Attendance <b>9/10*</b> (90%)		Faisal @ Pisel bin Abdul Ghani <sup>3</sup> Attendance <b>3/11*</b> (27%)	
Datuk Lau Beng Wei Attendance <b>10/12</b> (83%)				Azmin bin Ishak <sup>4</sup> Attendance <b>0/1</b> (0%)	
<b>Key Roles and Responsibilities</b>					
To oversee the integrity of the financial statements in compliance with legal and regulatory requirements and applicable accounting standards.	To review and recommend to the Board for approval and to approve investment/divestment proposals recommended by Management balancing strategic, financial and risk and return.	To establish the framework of TNB's Procurement & Supply Chain Policy and Procedures.			
To assess the effectiveness of the Group's internal control framework as well as internal and external audit functions.	To review and approve investment risks and risk treatment proposed by Management for new investment/divestment proposals for investment of value up to RM200.0 million per transaction.	To advise the Board regarding the details and implementation of TNB's Procurement & Supply Chain Policy and Procedures framework.			
	To review and recommend to the Board for approval investment risks and risk treatments proposed by Management for new investment/divestment proposals for investment of value above RM200.0 million per transaction.	To assist the Board in regulating the compliance of Top Management and Executive Directors with TNB's Procurement & Supply Chain Policy and Procedures.			
	To review, monitor and make recommendations to the Board for approval in matters pertaining to finance, including but not limited to budgets and funding activities.	To ensure TNB complies with the applicable laws, regulations, rules and guidelines to achieve best business practices in its procurement of equipment, materials, works and services.			

**AUDIT AND FINANCIAL GOVERNANCE**  
Internal Audit  
External Audit  
Financial Controls

**BOARD RESERVED AUTHORITIES**  
**DELEGATED AUTHORITY TO MANAGEMENT**  
**PRESIDENT/CHIEF EXECUTIVE OFFICER (President/CEO)**  
**GROUP EXECUTIVE MANAGEMENT COMMITTEE (GEMC)**

**APPROVAL COMMITTEES**

**GPC**  
Group People Committee

**GMTC**  
Group Management Tender Committee

**CONSULTATIVE COUNCILS**

**RC**  
Regulatory Council

**TC**  
Technology Council

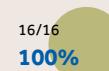
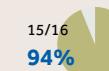
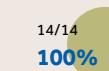
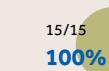
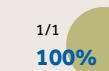
### Notes:

<sup>1</sup> Appointed as Director, Chairman of BAC and member of FIC & BNRC w.e.f. 1 February 2022.

<sup>2</sup> Ceased as Chairman of BIC and member of BTC, BNRC & BLTIP on 28 November 2022 upon his demise.

<sup>3</sup> Appointed as Alternate Director to Datuk Seri Asri bin Hamidin @ Hamidon w.e.f. 1 March 2022.

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

Senior Independent Non-Executive Director (SID)	Non-Executive Directors	Chief Financial Officer	Company Secretary				
<ul style="list-style-type: none"> <li>Provides a sounding board for the Chairman.</li> <li>Acts, if necessary, as a focal point and intermediary for the other Directors.</li> <li>Ensures that any key issues not addressed by the Chairman or the Executive Management are taken up.</li> <li>Is available to shareholders should they have concerns.</li> </ul>	<ul style="list-style-type: none"> <li>Constructively challenge the Management in all areas.</li> <li>Scrutinise Management's performance.</li> <li>Help develop proposals on strategy.</li> <li>Satisfy themselves on the integrity of financial information and on the effectiveness of financial controls and risk management systems.</li> <li>Determine appropriate level of remuneration for Senior Management.</li> </ul>	<ul style="list-style-type: none"> <li>Has day-to-day responsibility for the management of the finance function.</li> <li>Leads the Group's finance activities, risks and controls.</li> <li>Represents TNB externally to stakeholders, shareholders, customers, suppliers, regulatory and government authorities and the community.</li> </ul>	<ul style="list-style-type: none"> <li>Advises the Board on corporate disclosures and compliance with the Companies Act 2016, securities regulations and the MMLR.</li> <li>Together with the Chairman, keeps the effectiveness of the Company's and the Board's governance processes under review.</li> <li>Provides advice on corporate governance issues.</li> <li>Facilitates the orientation of new Directors and assists the Directors' training and development.</li> </ul>				
Gopala Krishnan K.Sundaram   16/16 <b>100%</b>	Dato' Roslina binti Zainal   16/16 <b>100%</b>	Datuk Rawisandran a/l Narayanan   16/16 <b>100%</b>	Datuk Lau Beng Wei   15/16 <b>94%</b>	Dato' Merina binti Abu Tahir <sup>1</sup>   14/14 <b>100%</b>	Dato' Ir. Nawawi bin Ahmad <sup>2</sup>   15/15 <b>100%</b>	Faisal @ Pisal bin Abdul Ghani <sup>3</sup> (Alternate Director to Datuk Seri Asri bin Hamidin @ Hamidon) <sup>3</sup>   1/1 <b>100%</b>	Azmin bin Ishak (Alternate Director to Datuk Seri Asri bin Hamidin @ Hamidon) <sup>4</sup>   1/1 <b>100%</b>

Board Nomination and Remuneration Committee (BNRC) Chairman	Total <b>11.25</b> meeting hours	Board Risk Committee (BRC) Chairman	Total <b>22.67</b> meeting hours	Board Long Term Incentive Plan Committee (BLTIP) Chairman	Total <b>2.25</b> meeting hours	Board Integrity Committee (BIC) Chairman	Total <b>9.05</b> meeting hours
<p>Dato' Roslina binti Zainal Attendance <b>7/7</b> (100%)</p> <p><b>Members</b></p> <p>Datuk Seri Asri bin Hamidin @ Hamidon Attendance <b>1/7</b> (14%)</p> <p>Datuk Amran Hafiz bin Affifudin Attendance <b>6/7</b> (86%)</p> <p>Dato' Ir. Nawawi bin Ahmad<sup>2</sup> Attendance <b>7/7*</b> (100%)</p> <p>Dato' Merina binti Abu Tahir<sup>1</sup> Attendance <b>6/6*</b> (100%)</p> <p>Azmin bin Ishak<sup>4</sup> Attendance <b>1/1</b> (100%)</p> <p>Faisal @ Pisal bin Abdul Ghani<sup>3</sup> Attendance <b>4/5*</b> (80%)</p>	<b>11.25</b>	<p>Ong Ai Lin Attendance <b>7/7</b> (100%)</p> <p><b>Members</b></p> <p>Juniwati Rahmat Hussin Attendance <b>7/7</b> (100%)</p> <p>Gopala Krishnan K.Sundaram Attendance <b>7/7</b> (100%)</p> <p>Datuk Rawisandran a/l Narayanan Attendance <b>7/7</b> (100%)</p>	<b>22.67</b>	<p>Dato' Roslina binti Zainal Attendance <b>4/4</b> (100%)</p> <p><b>Members</b></p> <p>Datuk Seri Asri bin Hamidin @ Hamidon Attendance <b>2/4</b> (50%)</p> <p>Datuk Amran Hafiz bin Affifudin Attendance <b>4/4</b> (100%)</p> <p>Dato' Ir. Nawawi bin Ahmad<sup>2</sup> Attendance <b>4/4</b> (100%)</p> <p>Datuk Rawisandran a/l Narayanan Attendance <b>4/4</b> (100%)</p> <p>Faisal @ Pisal bin Abdul Ghani Attendance <b>2/4</b> (50%)</p>	<b>2.25</b>	<p>Dato' Ir. Nawawi bin Ahmad<sup>2</sup> Attendance <b>5/5</b> (100%)</p> <p><b>Members</b></p> <p>Datuk Amran Hafiz bin Affifudin Attendance <b>3/5</b> (60%)</p> <p>Juniwati Rahmat Hussin Attendance <b>5/5</b> (100%)</p> <p>Ong Ai Lin Attendance <b>5/5</b> (100%)</p>	<b>9.05</b>
<p><b>Key Roles and Responsibilities</b></p> <p>To identify and recommend new nominees to the Board, Board Committees and Boards of TNB Group.</p> <p>To consider/review the Executive Director and Top Management's succession planning.</p> <p>To review the Board's required mix of skills, experience and other qualities, including core competencies which Non-Executive Directors should bring to the Board.</p> <p>To implement the process formulated by the Board to assess the effectiveness of the Board, Board Committees, Self and Peers.</p> <p>To determine and recommend to the Board the remuneration packages of Non-Executive Directors/Executive Directors/Top Management.</p> <p>To align the Board and Top Management reward/remuneration with the Key Performance Indicators (KPIs).</p>		<p>To oversee the establishment and implementation of the risk management framework that is embedded into the culture, processes and structures of the Group and is responsive to changes in the business environment.</p> <p>To approve the Risk Management Framework and policies on behalf of the Board.</p> <p>To ensure the principles and requirements of managing risk are consistently communicated and adopted throughout the Company.</p> <p>To inform business strategy based on the impact of identified sustainability risks and opportunities.</p> <p>To consider sustainability risks as part of the enterprise risk management process.</p>		<p>To oversee the administration of TNB LTIP and the shares granted (LTIP Shares) subject to the by-laws.</p> <p>To approve and determine the manner in which the LTIP Shares are granted and subsequently vested to the selected employees in accordance with the by-laws, including inter alia, the determination of eligibility, grant level, terms of acceptance of offers, terms of vesting of shares, performance conditions and any other terms and conditions imposed at the discretion of the BLTIP.</p>		<p>To oversee and conduct disciplinary matters for TNB personnel, including acting on the advice of the Management, hearing and deciding on appeals and enforcing disciplinary proceedings against staff convicted of misconduct.</p> <p>To review and make recommendations to the Board of Directors on steps to be taken to establish a culture of integrity and honesty in all of the Company's business dealings.</p>	

Integrity  
Risk Management  
Strategy  
Sustainability

COMPEC	IEC	ICTGC	ESC
Commodity Procurement Executive Committee	Investment Executive Committee	Information & Communication Technology (ICT) Governance Committee	Energy Supply Committee

SETC	EVC	SMC	HSEC	ISC
Sustainability and Energy Transition Council	Electric Vehicle Council	Smart Meter Council	Health, Safety & Environment Council	Integrity Steering Council

<sup>4</sup> Cessation of office as Alternate Director to Datuk Seri Asri bin Hamidin w.e.f. 10 February 2022.

<sup>^</sup> Reflects the number of meetings attended during the time the Director held office/was Chairman/member of committee(s).

\* Reflects the number of meetings since his/her respective appointment to the Board/relevant Board Committee(s).

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

### SUSTAINABILITY GOVERNANCE

A strong sustainability governance and leadership structure are vital to spearhead our sustainability agenda and provide us with clear and definitive guidance to achieve our net zero aspirations. Our sustainability governance is an expansion of TNB's Governance Model that is aligned with the principles of the MCCG.

We believe that a robust sustainability governance framework underpinned by a supportive leadership structure are key components to ensure our sustainability agenda can be materialised through informative and comprehensive decision-making. Our sustainability governance is an essential part of TNB Group Governance Platform, which is the framework of TNB management committees and subcommittees.

Our sustainability governance framework was reformed in Financial Year (FY) 2022 through the formation of the Sustainability and Energy Transition Council (SETC), with the objective of deliberating on energy transition initiatives to coordinate and oversee TNB's Energy Transition Plan and providing a platform for discussion on the sustainability agenda, development and implementation. This includes the energy transition direction and climate-related matters. The SETC has combined the roles of the former Sustainability Development Council (SDC) and the former TNB Energy Transition Steering Committee (TEXC).

SETC key roles include :

- Determining sustainability visions, targets and commitments that align with and support TNB's overarching sustainability pillars as well as coordinating and integrating the organisation's sustainability commitments.
- Proactively addressing sustainability challenges, including climate-related matters, faced by the organisation.
- Influencing sustainability outcomes in the areas of ESG by creating a framework, disclosing information and implementing policies related to climate-related matters.
- Communicating with internal and external parties, including the Board, investors, financiers, insurers, regulators and the government on sustainability matters.
- Establishing Energy Transition related programmes and their goals and objectives and shaping energy transition outcomes that align with TNB's corporate strategy, fostering growth and creating value for the organisation.

The SETC meeting is conducted monthly, chaired by the President/CEO and composed of TNB's corporate senior management team. They then escalate the Group's strategic direction for sustainability to other committees and/or the Board of Directors for approval. The Board establishes the direction for incorporating sustainability into the strategic direction, operational performance of the organisation with the goal of developing and preserving shareholder value.

### Our Sustainability Governance Structure

#### TNB Board of Directors

TNB's Board deliberates on and approves TNB's sustainability strategy and pathway while overseeing its implementation and performance.

#### President/Chief Executive Officer (CEO)

#### Group Executive Management Committee (GEMC)

GEMC will reviews and endorses the sustainability strategy prior to presentation to the Board.

#### Sustainability and Energy Transition Council (SETC)

The SETC is responsible for aligning sustainability visions, targets and commitments with TNB's overarching sustainability pillars, shaping energy transition outcomes that align with TNB's corporate strategy and fostering growth while creating value for the organisation.

#### Group Function and Business Units

- Implementation of sustainability strategy and initiatives.
- Manage sustainability related risks and opportunity.

#### Corporate Strategy & Sustainability Department

Ensures overall strategic planning, target setting and sustainability initiatives are tracked and reported through comprehensive performance reporting and are aligned with long-term sustainability roadmaps.

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

### REMUNERATION POLICIES

The Board, with the assistance of the BNRC, reviews the overall remuneration policy for Non-Executive Directors, Executive Directors and Top Management. The policy aims to attract, retain and motivate executives and Directors who will create sustainable value and generate returns for the Company. The remuneration package is structured to link rewards to corporate and individual performance, reflecting the contributions towards the Group's achievements for the year.

#### FY2022 ESG KPIs for TNB Top Management

ESG Elements	TNB Top Management
<b>1. Overall TNB ESG Rating</b>	<ul style="list-style-type: none"> <li>• TNB President/CEO</li> <li>• Managing Director, TNB Power Generation Sdn. Bhd.</li> <li>• Chief Grid Officer</li> <li>• Chief Distribution Network Officer</li> <li>• Chief Retail Officer</li> <li>• Chief New Energy Officer</li> <li>• Chief Financial Officer</li> <li>• Chief Strategy &amp; Ventures Officer</li> <li>• Chief Regulatory &amp; Stakeholder Management Officer</li> <li>• Chief People Officer</li> <li>• Chief Information Officer</li> <li>• Chief Global Business Solutions Officer</li> <li>• Company Secretary</li> <li>• Chief Risk Officer</li> </ul>
<b>2. Environment</b>	<ul style="list-style-type: none"> <li>• TNB President/CEO</li> <li>• Managing Director, TNB Power Generation Sdn. Bhd.</li> <li>• Chief New Energy Officer</li> <li>• Chief Grid Officer</li> <li>• Chief Distribution Network Officer</li> <li>• Chief Retail Officer</li> </ul>
<b>3. Social</b>	<ul style="list-style-type: none"> <li>• Chief People Officer</li> </ul>
<b>4. Governance</b>	<ul style="list-style-type: none"> <li>• TNB President/CEO</li> <li>• Company Secretary</li> <li>• Chief Integrity Development Officer</li> <li>• Chief Procurement Officer</li> <li>• Chief Internal Auditor</li> </ul>



For more information, please refer to Sustainability Statement section, which can be found on pages 65-136.

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

### RISK MANAGEMENT

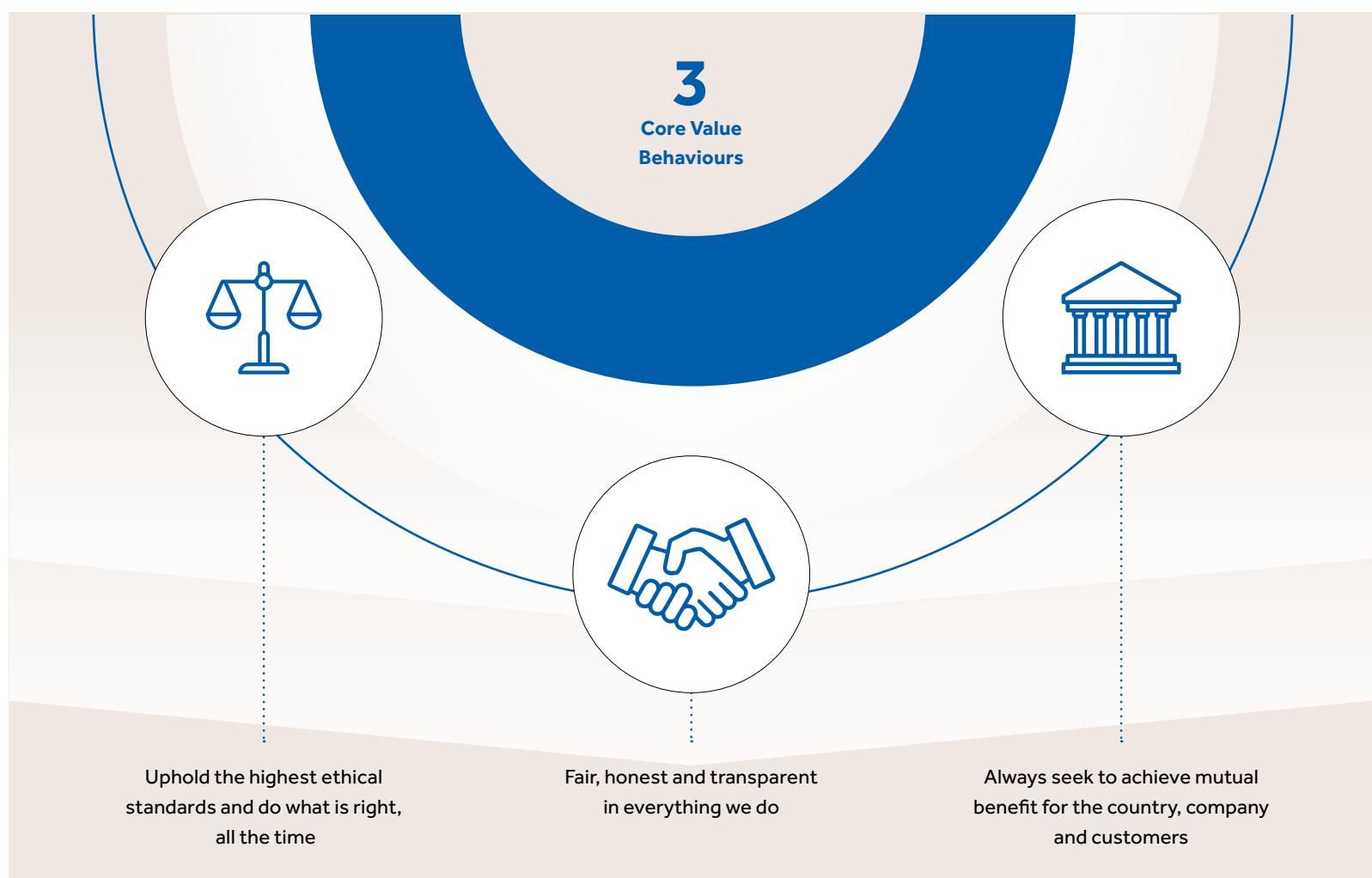
Approved by the BRC in FY2019, our Risk Management Framework was developed in line with ISO 31000:2018 Risk Management – Guidelines. The purpose is to provide a structured and consistent approach to risk management, comprising the assessment of sustainability-related risks for informed decision-making.

Our risk management and internal control systems are designed to manage risks within acceptable levels as opposed to eliminate risks. We regularly review our risks to ensure their relevance to the Group. The Board and Management also review and approve policies, codes and procedures to consistently enhance risk mitigation.

 For more information on risk management, please refer to the Risk Management and Internal Control section on pages 202-209.

### UPHOLDING A STRONG SENSE OF INTEGRITY

At TNB Group, we maintain high standards of integrity and go beyond compliance to establish a culture of excellence and integrity, which is ingrained as a Core Value in our TNB Reimagining Culture initiative.



## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

Key highlights and initiatives for FY2022 :

Key Activities	Description
<b>Zero-tolerance rule</b>	The zero-tolerance rule towards bribery and corruption was maintained. Avenue to report suspicious and unethical conduct is outlined in our Whistleblowing Policy.
<b>TNB's Risk Management Framework</b>	Our Risk Management Framework is in line with ISO 31000:2018 Risk Management – Guidelines and provides a structured approach to risk management, comprising the assessment of sustainability-related risks for informed decision-making.
<b>TNB Corporate Integrity Management System (TCIMS) and Anti-Bribery Management System (ABMS) Implementation (ISO 37001 Certified)</b>	<p>1. We conducted 10 Fraud and Bribery Workshops.</p> <p>2. We conducted four (4) sessions of Internal Auditors Training.</p> <p>3. A series of consultation sessions on ABMS and TCIMS was held for TNB's subsidiaries.</p> <p>4. ILSAS was certified with ISO 37001 by SIRIM in 2022.</p> <p>5. The Retail Division maintained its ISO 37001 certification.</p>
<b>Three (3) Integrity Mandatory Requirements</b>	All employees are required to sign the Integrity Pledge, declare any conflicts of interest and complete the Integrity E-Learning Module on an annual basis.
<b>Collaboration with the Malaysian Anti-Corruption Commission (MACC)</b>	On 4 October 2022, we signed a Memorandum of Understanding (MoU) with the MACC to enhance our bilateral cooperation. In addition, we also pledged to uphold ethical standards by signing the Corruption Free Pledge ( <i>Ikrar Bebas Rasuah</i> ) with MACC at our headquarters, which was followed by similar ceremonies in seven (7) other states.
<b>Integrity Engagement Programme (IEP)</b>	We collaborated with MACC in 2022 to conduct six (6) sessions of Anti-Corruption Programmes and activities. As part of our efforts to combat corruption, TNB established a comprehensive Training and Communication Plan (TCP) that includes 18 activities.
<b>TNB Integrity Health Index</b>	In FY2022, we conducted an internal survey to evaluate TNB's integrity practices, which saw a high level of participation from 19,989 staff members. The results of the survey were impressive, with TNB achieving a score of 79.36%, indicating that the organisation is committed to maintaining the highest ethical standards in its operations. The score reflects the effectiveness of TNB's policies and practices in promoting ethical behaviour and ensuring compliance with regulations and standards.

Moving forward, we intend to introduce our Code of Business Ethics (COBE) and Organisational Anti-Corruption Plan. To further reinforce the institutionalisation of integrity in TNB, our Management has incorporated the Integrity Health Index (IHI) as part of its Key Performance Indicator in FY2022.

 For more information, please refer to *Ethics, Integrity & Trust*, which can be found on pages 182-183.

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

### ADOPTING TCFD RECOMMENDATIONS

#### TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

##### Core Elements of Recommended Climate-Related Financial Disclosures



The imminent threats of climate change will impact not only our business sustainability but also the wider economy and the well-being of the community. We believe that every one of us will need to play a role in transforming and decarbonising the energy industry.

*(i) For more information on the TCFD Recommendations, please refer to the Climate Change and Environment section under the Sustainability Statement on page 87.*

### GOVERNANCE

The Board is committed to strategically integrating sustainability across TNB's business and advancing our sustainability efforts, including climate action. TNB's Board will deliberate and approve the sustainability strategy and pathway, while also overseeing TNB's sustainability implementation and performance. This will include the materiality assessment, the scenario analysis study and Sustainability Pathway (SP) 2050. SETC and the respective Management Committees are responsible for managing sustainability and climate risks and opportunities, as well as monitoring the performance of related initiatives rolled out by TNB, with oversight from the Board. TNB's Sustainability Governance outlines clear roles and responsibilities in relation to sustainability and climate action for each level of leadership.

The BRC oversees the establishment and implementation of the risk management framework that is embedded in the culture, processes and structures of the Group and is responsive to changes in the business environment. Sustainability and climate risks are included as part of the enterprise risk management process.

The principles to guide climate action, particularly on GHG emissions, are covered under our Environmental Policy, Environmental Management System and Sustainability Energy Management (SEM) Framework based on the ISO 50001:2011 Energy Management System, ASEAN Energy Management System (AEMAS) and Grid Green Code of Conduct.

*(i) For more information on sustainability and climate governance, please refer to the Our Sustainability Governance Structure under Sustainability Governance, page 164.*

### OPERATIONS OF THE BOARD

Prior to each Board meeting, the Board receives the Chairman Reports of each Board Committee on their deliberations and recommendations for each meeting. This ensures that each Director is informed of the decisions made, including the views raised. The Chairman of each Board Committee then tables to the Board its report and present the Committee's recommendation for the Board's approval accordingly. This permits the Board to express its views on all deliberations of the Committees. All deliberations and recommendations must be minuted and approved by each Board Committee and confirmed by the Chairman at their respective Board Committee meetings.

Under the guidance of the Chairman, all matters placed before the Board are discussed openly. Presentations and advice are received frequently from Senior Executives within the Group and from external advisers (if any) to facilitate the decision-making of the Board. In the year under review, the Board considered a wide range of matters in order to meet its obligations with discussions revolving around strategy, sustainability and operations of the Group, including that of both main operating subsidiaries, financial aspects of the Group and on legal, compliance, governance and risk matters. The Board and Committees meetings were held via online and hybrid mode throughout the Financial Year.

### BOARD COMPOSITION AND INDEPENDENCE

The Board has reviewed the independence of each Independent Non-Executive Director. None of the Independent Non-Executive Directors who served during the year had any material business or other relationship with the Group and there were no other matters that were likely to affect their independence of character and judgement as guided by the MMLR. The Board recognises that in view of the characteristics of independence set out in the MCCG, length of service is an important factor when considering the independence of Independent Non-Executive Directors.

The Board adopts a policy that limits the tenure of its Independent Non-Executive Directors to nine (9) years without further extension, pursuant to Step Up 5.4 of MCCG. Currently, none of the Independent Non-Executive Directors has served the Board for more than nine (9) years.

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

### SUMMARY OF BOARD ACTIVITIES IN 2022

#### BOARD CHARTER

The Board is guided by its Charter which sets out the Board's roles, powers, duties and functions in accordance with the MCCG, MMLR, Companies Act 2016, Board current process and procedures, latest respective Board Committees' TOR, applicable rules/regulation and governance best practices.

#### MATTERS DELIBERATED BY THE BOARD AND ITS COMMITTEES DURING THE FINANCIAL YEAR ENDED 31 DECEMBER 2022

The list below is not exhaustive of all Key Areas of Focus/Matters Deliberated by the Board and its Committees throughout the Financial Year, but serves to provide stakeholders with an insight into some of the key matters considered by the Board :

##### BOARD

- Revenue, Operational and Capital Expenditure (CAPEX) Budget for Financial Year 2023
- Approval/Status Update on TNB's potential investments/divestment projects
- Approval/Status Update/Issues Raised on Operational matters of TNB and its Group of Companies
- TNB's Sustainability Pathway 2050 : Low Carbon Pathway and Key Action Items
- Quarterly Group Performance
- Audited Financial Statements for Financial Year 2021
- Quarterly Financial Results
- 2022 Integrated Annual Report Statements
- Appointment and Resignation of Chairman and Directors
- Proposed FY2023 KPIs for President/CEO
- Interim and Final Dividends
- Quarterly Risk Dashboard Report
- Quarterly Report on Non-Audit Services
- Approval of Procurement within its Approving Authority
- TNB Divisions/Departments Risk Profiles and Convergence Initiatives
- Quarterly Report on TNB's Litigation and Arbitration Cases
- Corporate Governance Report 2022
- Board Evaluation Assessment (BEA) for Board of Directors, Board Committees and Self and Peer FY2022
- PwC Malaysia Transparency Report
- Proposed Funding Options and Plans for FY2022 and onwards
- Proposals for TNB's contribution/sponsorship to flood victims through Government Linked Companies/Government Linked Investment Companies Disaster Response Network
- Indonesia Coal Supply Interruption Risk and Mitigation
- Impact of Rising Fuel Price and the Russia–Ukraine Conflict to TNB
- TNB Equity Portfolio Performance Report for the period ended 31 December 2021
- Notice of 33<sup>rd</sup> AGM

##### FIC

- Potential Proposals of Local and International Investment with focus on Renewable Energy
- Strategic Report of Subsidiary Management Department's Subsidiaries
- Commercialisation of TNB's Real Estate Assets
- TNB Hurdle Rate Monitoring Update
- 2022 Review of TNB Risk Adjusted Rate of Return for Future Investments
- Reviewed/Evaluated Investments in Subsidiaries and Associated Companies and Made Appropriate Proposals for any New Investments/Divestments
- TNB International Investments' Quarterly Performance
- Proposed capital structure and financing of TNB's wholly-owned subsidiaries
- Proposals for Voluntary Winding up of relevant subsidiaries
- Investment Executive Committee (IEC) Report
- Revision of IEC TOR

##### BTC

- Approval of Procurement within its Approving Authority
- Procurement Plan and Strategy
- Procurement Issues
- Procurement Policies and Procedures

##### BLTIP

- Approval on Granting and Vesting of LTIP Shares

##### BIC

- Management of Disciplinary Cases
- Quarterly Statistics of Disciplinary Cases
- Governing Body Review ISO 37001: Anti-Bribery Management System
- Semi Annual Reporting to the Malaysian Anti-Corruption Commission
- Approval on Amendments to Disciplinary Procedures
- Endorsement of TNB Code of Business Ethics
- Amendment of TNB Corporate Integrity Management System
- Review of BIC TOR
- Training Communication Plan and its Quarterly Updates

##### BAC

- Summaries of the activities of BAC, BNRC and BRC are available in their respective reports in this Integrated Annual Report.

##### BNRC

##### BRCA

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

### SUMMARY OF BOARD ACTIVITIES IN 2022

#### **Matters Considered by the Board**

The Board plays a pivotal role in reviewing the Company's strategic direction and approving corporate strategic initiatives developed by the Management. The Board deliberates annually the Company's strategic and business plan as proposed by the Management, including the annual capital and revenue budget for the ensuing year as well as the KPIs. This ensures that the KPIs correspond with the Company's annual strategic and business plan. The Board reviews and deliberates on the Management's views/assumptions in ensuring the best decisions are reached after considering all relevant aspects.

A separate and informal session between the Board and Top Management, known as the Board Breakout Session (BBO), serves as a platform for the Board and Management to deliberate and exchange views as well as opinions in formulating strategic plans/issues and to chart the direction of the Group, including the reporting of its progress. The BBO is coordinated by the Company Secretary's Office, with the engagement of the respective Divisions, as and when the need arises.

Half-year reviews of the business plan and the budget were conducted whereby comparisons of approved targets against the Company's actual performance were made.

During the Financial Year under review, three (3) BBOs were held, focusing on the way forward for the TNB ESG Strategy : Net Zero Commitment and Pathways as well as the Regulatory Period 3 (RP3) (2022-2024) Roll-Down for the Company.

During the BBOs, the Management shared with the Board that to achieve our Sustainability Pathway aspiration and targets, TNB is working on a smooth transition to 2050 with sustained business growth. This transition calls for actionable items that take into account two (2) key objectives, i.e. making the core sustainable and building new sustainable businesses. With Net Zero 2050 as TNB's aspiration, more details on the low carbon pathway are required.

The Management also shared with the Board the outcomes and current progress of TNB's Sustainability Pathway. Our net zero goal requires commitment to these changes.

TNB had seriously considered of how to best manage risk and achieve the best outcomes for TNB, TNB Power Generation Sdn. Bhd., the investors and Malaysia.

The Management also shared the outcome of RP2 Performances, RP3 Key Parameters and held discussions on RP3 Risks and Opportunities as well as value creation priorities in RP3.

The Board will deliberate and approve the sustainability strategy and pathway forward, while also overseeing TNB's sustainability implementation and performance.

More information on the Strategic Direction is available in From Our Leadership on pages 38-63 of this report.

Based on the evaluation for the Financial Year under review, the Board collectively concurred that it has reviewed the Company's strategic and financial plan as well as monitored its implementation, including the setting of suitable KPIs in achieving the Company's objectives.

#### **Link to Strategy**

- Grid of the Future
- Future-Proof Regulations
- Future Generation Sources
- Winning the Customer

#### **Material Matters Reserved for the Board**

#### **Formulating, reviewing and approving the Company's strategic business plan**

**PRINCIPLE A :  
BOARD LEADERSHIP & EFFECTIVENESS****SUMMARY OF BOARD ACTIVITIES IN 2022****Matters Considered by the Board**

The Board, through the BRC, is responsible for overseeing the effectiveness and adequacy of the Group's risk management framework and ensuring that it forms part of the Group's corporate culture. The BRC's key responsibilities include approving the risk management framework and policies on behalf of the Board and deliberating the Group's strategic and key operating risks as well as ensuring appropriate mitigations are implemented to manage these risks.

During the Financial Year under review, there were seven (7) BRC sittings. The BRC reviewed the Statement on Risk Management and Internal Control, which summarises the risk management practices and internal controls implemented by Management. It also deliberated on KRI that were developed in alignment with BRC's and Management's risk appetite.

The BRC is assisted by the Chief Risk Officer and the Risk Management Department (RMD) in discharging its duties and responsibilities. The RMD is responsible for the effective implementation of the TNB Risk Management Framework for informed decision-making. The framework is developed in alignment with ISO 31000:2018.

The BRC continues to diligently exercise its risk oversight responsibilities by ensuring that risk management is an integral part of strategic planning and decision-making for the achievement of the Group's strategic outcomes and long-term objectives.

Based on the evaluation for the Financial Year under review, the Board collectively agreed that it has discharged its roles in identifying principal risks and in ensuring that the Group has put in place an adequate risk management framework to effectively monitor and manage the risks of its operational businesses.

**Link to Strategy**

- Grid of the Future
- Future-Proof Regulations
- Future Generation Sources
- Winning the Customer

**Material Matters Reserved for the Board****Identifying and managing principal risks affecting the Company****Matters Considered by the Board**

The Board is responsible for ensuring that a sound reporting framework of internal controls and regulatory compliance is in place throughout the Company. Based on the evaluation for the Financial Year under review, the Board collectively concurred that it has discharged its roles through the BRC/BAC whereby regular meetings were held in reviewing the effectiveness of the Company's internal control system.

**Link to Strategy**

- Future-Proof Regulations

**Material Matters Reserved for the Board****Reviewing the adequacy and integrity of the Company's internal control system**

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

### SUMMARY OF BOARD ACTIVITIES IN 2022

#### Matters Considered by the Board

The President/CEO is responsible for managing the day-to-day operations of the Company and implementing the Group strategies and policies as agreed by the Board. In doing so, he is well supported by the respective Management Committees. The performance of Management is measured through the Company's and Group's quarterly financial performance. The Board, on a continuous basis, is well informed of the progress of Company's strategic initiatives and critical operational issues as well as the Group's performance based on approved KPIs.

#### Link to Strategy

- Grid of the Future
- Future Generation Sources
- Winning the Customer

#### Material Matters Reserved for the Board

### Overseeing and evaluating the conduct and performance of the Company's businesses

#### Matters Considered by the Board

The Board, assisted by the BNRC, is responsible for developing plans to identify the necessary and desirable competencies and skills of Directors and succession plans to ensure there is appropriate dynamics of skills, experience, expertise and diversity on the Board. In addition, the Board/BNRC also oversees the appointment and succession planning of the Top Management.

The selection of candidates and appointment of Independent Non-Executive Directors by the Board/BNRC are made with the assistance of an independent consultant, whenever necessary.

During the Financial Year under review, there were several changes to the Board. This includes the departures of Dato' Sri Hasan bin Arifin as Chairman/Non-Independent Non-Executive Director, with effect from 1 January 2023 and Datuk Seri Asri bin Hamidin @ Hamidon, Non-Independent Non-Executive Director, as well as his Alternate Director, Faisal @ Pisal bin Abdul Ghani with effect from 5 January 2023, and the demise of Dato' Ir. Nawawi bin Ahmad, an Independent Non-Executive Director on 28 November 2022. The resignation of Datuk Lau Beng Wei took place with effect from 6 March 2023.

Several new additions were made to the Board duly appointed by BNRC/Board. Dato' Abdul Razak bin Abdul Majid was appointed as the Chairman/Non-Independent Non-Executive Director with effect from 27 March 2023,

with the concurrence of MoF Inc. Rohaya binti Mohammad Yusof was appointed as Non-Independent Non-Executive Director with effect from 20 March 2023, representing EPF, a major shareholder of TNB.

The Board on 10 April 2023 had approved on the appointment of Datin Rashidah binti Mohd Sies with the concurrence of MoF Inc. as Non-Independent Non-Executive Director of TNB.

During the Financial Year under review, several movements in the Top Management took place. The Board/BNRC deliberated on the succession planning for critical positions in TNB, intended to discover and manage the development of TNB's future leaders.

Ir. Dev Anandan was appointed as Chief Grid Officer with effect from 1 January 2023 in place of Datuk Ir. Husaini bin Husin who retired on 31 January 2023. Datuk Ts. Shamsul bin Ahmad was made the Chief Regulatory & Stakeholder Management Officer with effect from 12 December 2022, to lead the Regulatory & Stakeholder Management Division following the retirement of Datuk Wira Roslan bin Ab Rahman.

Following the resignation of Datuk Fazlur Rahman bin Zainuddin on 8 November 2022, the Strategy & Ventures Division is now led by Datuk Ir. Megat Jalaluddin bin Megat Hassan, who was redesignated with effect from 3 October 2022. Kamal Arifin A Rahman was appointed as Chief Retail Officer with effect

from 3 October 2022 in place of Datuk Ir. Megat Jalaluddin bin Megat Hassan following the change of portfolio. With the retirement of Datuk Fazil bin Ibrahim, Azlan bin Ahmad was made Chief Information Officer with effect from 18 July 2022.

These appointment were made after intensive deliberations and also after taking into account their qualifications, working experience, expertise, professionalism and knowledge of the Company and industry.

The Board is satisfied that the BNRC has efficiently discharged its duties pertaining to the nomination, remuneration and succession management functions as set out in its TOR.

The BNRC annually evaluates the performance of the President/CEO and Top Management, whose remunerations are directly linked to their respective KPIs. The President/CEO's remuneration package is reviewed by the BNRC to reflect the contributions made towards the Group's achievements for the year. The BNRC's views and recommendations on this are submitted to the Board for its deliberation/approval.

Based on the evaluation for the Financial Year under review, the Board collectively concurred that the succession planning for President/CEO and Top Management as well as for the Company's future leaders has been appropriately developed.

#### Link to Strategy

- Winning the Customer

#### Material Matters Reserved for the Board

### Succession Planning

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

### SUPPLY OF INFORMATION AND ACCESS TO ADVICE

A Pre-Board meeting is held prior to any Board meeting for the Management to provide the Chairman with insights into the papers that will be deliberated. The agenda of Board meetings is drawn up upon consultation between the Chairman, President/CEO and Company Secretary at the Pre-Board meeting. Copies of the agenda and Board papers are circulated to Board Members via an advanced meeting software which allows the Directors to securely access, read and review Board/Committees Documents and collaborate with Directors and the Company Secretary electronically at least five (5) working days prior to the meetings.

Aside from Board papers, presentations are provided by the Management to better facilitate the discussion of the subject matter. This permits prior review by the Directors and, if necessary, further clarification and additional information are sought upon deliberation to facilitate informed decision-making. The core activities of the Board and its Committees are well documented and planned on a forward agenda. A list of matters arising from each meeting is maintained and followed up at subsequent meetings.

The Company Secretary advises the Board on governance matters, ensuring good information flows within the Board, its Committees, the GEMC and senior management. The Company Secretary is responsible for ensuring the Board complies with all relevant processes and for assessing compliance with the MMLR, Corporate Disclosure Guidance, the MCCG and the Companies Act 2016. An important part of this is effective collaboration with other parties across all Group functions. Good training, regular discussions on key issues and support from those in areas of critical operational risk in evaluating areas for change are also imperative.

The Board and each Director are at liberty to obtain external independent or professional advice as deemed appropriate at the Company's expense to assist with decision-making. This includes the attendance of external advisers at meetings and seeking required information from any member of the Group's workforce.

### DIVERSITY

The table below shows the gender diversity of the Board and in the workforce to date :

Gender	Male		Female		Total
	No.	%	No.	%	
TNB Board (excluding Alternate Director)	5	45%	6	55%	11
Top Management (comprising GEMC, C-Suite, Senior General Managers)	266	74%	92	26%	358
Senior Managers	601	64%	331	36%	932
Managers	1,364	60%	913	40%	2,277
Executives	1,750	58%	1,260	42%	3,010
Non-Executives	17,334	85%	3,015	15%	20,349
<b>Total</b>	<b>21,320</b>	<b>79%</b>	<b>5,617</b>	<b>21%</b>	<b>26,937</b>

### RE-ELECTION OF DIRECTORS

Clause 64(1) of the Company's Constitution provides, among others, that one-third (1/3) of the Directors at the time being of whom have been longest in office shall retire by rotation at the AGM of the Company and shall be eligible for re-election.

Clause 63(2) of the Company's Constitution provides, among others, that the Directors shall have power at any time and from time to time to appoint any other person to be a Director of the Company either to fill a casual vacancy or as an addition to the existing Directors. Any Director so appointed shall hold office only until the next following AGM of the Company and shall then be eligible for re-election.

Juniwati Rahmat Hussin, Gopala Krishnan K.Sundaram and Datuk Rawisandran a/l Narayanan are retiring by rotation in accordance with Clause 64(1) of the Company's Constitution and being eligible, have offered themselves for re-election.

The Board recognises that the Directors' performance are used as basis in recommending their re-election to the shareholders. This, in turn, is determined through their annual evaluation and independence assessment, which are assessed by the BNRC before any recommendation is made to the Board for deliberation and approval.

Based on the annual independence assessment undertaken by the Independent Directors of whom are retiring at the coming AGM, namely Juniwati Rahmat Hussin, Gopala Krishnan K.Sundaram and Datuk Rawisandran a/l Narayanan, the BNRC/Board are satisfied that these Independent Directors have complied with the independence criteria as prescribed by the MMLR and continue to bring independent and objective judgement to the Board.

They have exercised the duty of care and diligence as Directors in the best interest of the Company, its shareholders and stakeholders. All retiring Directors named above, through the Board Evaluation Assessment including Self and Peer Assessment, have met the performance criteria required of an effective and high-performance Board.

In respect of the new appointments made to the Board, Dato' Abdul Razak bin Abdul Majid, Datin Rashidah binti Mohd Sies and Rohaya binti Mohammad Yusof shall retire at the forthcoming AGM in accordance with Clause 63(2) of the Company's Constitution and being eligible, have offered themselves for re-election.

Dato' Abdul Razak bin Abdul Majid and Datin Rashidah binti Mohd Sies are the Appointed Directors by MoF Inc., while Rohaya binti Mohammad Yusof represents the EPF.

In addition, all retiring Directors have declared that they did not have any existing or potential conflict of interest within or outside the Company that could affect the execution of their roles as Company Directors.

Having considered their fit and proper assessment, due diligence for the newly appointed Directors, professionalism, vast experience, material relationship, competency, commitment and individuals' contributions in performing their respective duties, the Board and the BNRC are satisfied that all Directors who are standing for re-election at the 33<sup>rd</sup> AGM have met the Board's expectation by continuously discharging their duties diligently as Company Directors.

With that, upon the BNRC's assessment, the Board resolved to support and recommend the re-election of each Director who is retiring at the upcoming 33<sup>rd</sup> AGM.

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

### DIRECTORS' DEVELOPMENT AND INDUCTION

To assist the Board in undertaking its responsibilities, a programme of training and development is available to all Directors, with training needs assessed as part of the Board evaluation procedure. The Board programme includes regular presentations from Management and informal meetings to build understanding of the business and sector, or in areas recognised as being technically complex. Such training is intended to support a deeper understanding as well as equipping the Non-Executive Directors with insight into how TNB's approach compares with the practices of its peers. All new Directors receive a comprehensive and tailored induction programme, including meetings with Top Management, site visits and briefings on key operational matters, Board procedures and governance matters.

The existing Directors excluding the Alternate Director had attended their Mandatory Accreditation Programme for Directors of Public Listed Companies (MAPs) as prescribed under Paragraph 15.08 and Practice Note 5 by the MMLR.

The Company Secretary's Office facilitates the Board in organising internal and arranging external programmes/seminars that are relevant to the Directors. These include the annual Board Development Programme (BDP) which is organised in-house as part of TNB's Board Continuing Development Programme.

BDP 2022 was held virtually in collaboration with PricewaterhouseCoopers Risk Services Sdn. Bhd. with the topic "Information Technology & Operational Technology". It was held on 18 October 2022 and attended by the Board and Top Management. The topic was relevant following the trends observed post the COVID-19 pandemic as it became endemic, where cyber threats grew pervasive due to widespread internet access.

Subsequent to that, the Integrity Department, assisted by the Company Secretary's Office, organised a specific programme, "Corporate Liabilities", presented virtually by Herbert Smith Freehills, Malaysia, on 26 September 2022 for the Board and Top Management to provide the latest developments in Corporate Liability in accordance with Section 17A of the Malaysian Anti-Corruption Commission Act 2009. This was in line with the Training Communication Plan 2022 approved by the BIC, which required TNB's Integrity Department to organise specific training for the Board and Top Management once in the third quarter of 2022.

On 1 November 2022, TNB Group Human Resource Division in collaboration with the Company Secretary's Office held the Successors Engagement Programme with the Board and Top Management with the theme "Realising Sustainability Through Diversity" which focused on the development of Women's Leadership through discussion on the role, development and leadership among women to achieve the Company's goals and aspirations. The theme was chosen to support the Company's efforts to empower the Diversity and Inclusion element. Through this session the Board and Top Management were able to interact with potential successors and were exposed to the role and importance of women's development in TNB.

To date, the following Directors' Induction Programmes were held :

- Integrity Department : Overview Briefing by Chief Integrity & Development Officer
- Real Estate Ventures: Overview Briefing by Head, Real Estate Ventures

During the Financial Year under review, the Directors attended, among others, the following conferences and professional trainings :

NAME OF DIRECTOR	DATE	CONFERENCE/TRAINING ATTENDED
<b>Dato' Indera Ir. Baharin bin Din</b>	29 November - 1 December 2022	Enlit Europe Conference 2022, as Panelist
<b>Datuk Amran Hafiz bin Affifudin</b>	25 May 2022	2022 Exco Workshop Agenda
	10 June 2022	Khazanah Sustainability Framework & Targets Launch : Investing in a Sustainable 2022
	29-30 August 2022	5 <sup>th</sup> International Sustainability Energy Summit
	3-4 October 2022	Khazanah Megatrends Forum 2022
	18 October 2022	BDP 2022 : Information Technology & Operational Technology (IT & OT)
	29 November - 1 December 2022	Enlit Europe Conference 2022
<b>Ong Ai Lin</b>	27 January 2022	BNM-FIDE Forum MyFintech Week Masterclass
	8 March 2022	BNM-FIDE Forum Dialogue : Climate Risk Management and Scenario Analysis
	9 March 2022	Overview On Corruption Risk Management & Organizational Anti-Corruption Plan
	9 March 2022	Climate Disclosure Training Programme
	15 March 2022	BNM-World Bank Group Report Launch

**PRINCIPLE A :  
BOARD LEADERSHIP & EFFECTIVENESS**

NAME OF DIRECTOR	DATE	CONFERENCE/TRAINING ATTENDED
<b>Ong Ai Lin (cont.)</b>	28 April 2022	The Golden Key to Zero Trust Security
	8-9 June 2022	MIA International Accountants Conference 2022
	7 November 2022	Inflation, Looming Recession & Climate Change : A Tricky Balancing Act by Professor Roberto Rigobon and Mr. Allen Ng
	24 November 2022	The Emerging Trends – Threats and Risks to the Financial Services Industry : Managing Global Risk Investment and Payment System
<b>Juniwati Rahmat Hussin</b>	20 January 2022	MIA Conference : Woman of Substance Symposium 2021
	28 April 2022	The Golden Key to Zero Trust Security
	22-23 June 2022	Sustainable and Responsible Investment (SRI 2022) : Preserving the Climate Through Sustainable Business and Living
	6 July 2022	Sustainability and Its Impact On Organizations : What Directors Need to Know
	9 August 2022	SDG 7 Seminar : Affordable and Clean Energy - A Journey Towards Energy Transition
	20 September 2022	Sustainability Is the Future?
	26 September 2022	Corporate Liabilities
	3-4 October 2022	Khazanah Megatrends Forum 2022
	18 October 2022	BDP 2022 : IT & OT
	5 December 2022	Accelerating Implementation of Climate Strategies
<b>Gopala Krishnan K.Sundaram</b>	6 December 2022	Invitation to Security Commission Malaysia's Audit Oversight Board Conversation With Audit Committees
	20 January 2022	Updated Malaysian Code on Corporate Governance 2021
	2 March 2022	Economic Outlook - Taking Temperature for 2022 and Beyond
	9-10 March 2022	FCD Series Module B : Stakeholder Voice in the Boardroom
	23 March 2022	FCD Series Module E : Digital Awareness and Upskilling for Board
	6 April 2022	Sustainability Management and Reporting
	20 April 2022	Fraud Risk Management
	22 April 2022	Pre-IPO Briefing
	11 May 2022	Governance, Risk and Control (GRC)
	18 May 2022	Drafting Sustainability Statement or Report
	19 May 2022	Roles & Responsibilities of a Director in a Public Listed Company : What You Need to Know
	24 May 2022	Corruption Risk Management
	7 June 2022	Artificial Intelligence (AI) for Company Directors and Executives
	9 June 2022	Related Party Transactions and Conflict of Interest Including the Arms Length Definition on Transaction
	16 June 2022	Law Behind Corporate Governance
	23 June 2022	Introduction to Natural Capital
	28 June 2022	Stakeholder Communication
	6 July 2022	Sustainability and Its Impact On Organizations : What Directors Need to Know
	1-2 August 2022	Strategic Supply Chain
	18 August 2022	Securities Commission Guidelines On the Conduct of Directors of Listed Corporations and Their Subsidiaries : Implications to the Listed Corporations, Their Subsidiaries, Directors and Management, Including What Needs to be Done to Demonstrate Compliance

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

NAME OF DIRECTOR	DATE	CONFERENCE/TRAINING ATTENDED
<b>Gopala Krishnan K.Sundaram (cont.)</b>	6 September 2022	Corporate Governance & Remuneration Practice for the ESG World
	13 September 2022	Corporate Governance Guide 4 <sup>th</sup> Edition – Rise Together
	21 September 2022	Sustainability Management and Reporting
	26 September 2022	Corporate Liabilities
	28 September 2022	Governance, Risk and Controls (GRC)
	3-4 October 2022	Khazanah Megatrends Forum 2022
	5-6 October 2022	Supply Chain Resilience
	17-18 October 2022	Sustainable Supply Chain
	18 October 2022	BDP 2022 : IT & OT
	12 October 2022	Understanding Sustainability Taxonomies Globally and Regionally
	19 October 2022	BFF 2022 : Scaling Up Innovation Towards Future Sustainable Business Now
	8-9 November 2022	Personal Integrity Development Programme
<b>Dato' Roslina binti Zainal</b>	6 December 2022	Invitation to Security Commission Malaysia's Audit Oversight Board Conversation With Audit Committees
	7 December 2022	Seminar on Sustainability Governance, Management and Reporting
<b>Dato' Rawisandran a/l Narayanan</b>	20 January 2022	MIA Conference : Woman of Substance Symposium 2021
	10-11 May 2022	Technical Visit to Rahman Hydraulic Berhad Tin Mine, Perak
	8-11 June 2022	Transition to a Net-Zero Emissions Economy
	17 June 2022	ICDM BNRC Dialogue and Teh Tarik Session With Shai Ganu
	26 September 2022	Corporate Liabilities
	3-4 October 2022	Khazanah Megatrends Forum 2022
	18 October 2022	BDP 2022 : IT & OT
	29 November - 1 December 2022	Enlit Europe Conference 2022
<b>Dato' Merina binti Abu Tahir</b>	26 September 2022	Corporate Liabilities
	6 December 2022	Invitation to Security Commission Malaysia's Audit Oversight Board Conversation With Audit Committees
<b>TENAGA NASIONAL BERHAD • Integrated Annual Report 2022</b>	14 February 2022	Understanding Climate Risks : Launch of the ASEAN Climate Governance Network
	15-17 February 2022	Mandatory Accreditation Programme
	21 February 2022	Sustainability and Its Impact On Organisations : What Directors Need to Know
	2 March 2022	MIA Digital Month 2022 : Leading the Digital Transformation of the Accounting Profession
	16 March 2022	Global Outlook for ESG Finance and Digital Transformation
	23 March 2022	FCD Series Module E : Digital Awareness and Upskilling for Board
	12 April 2022	Energy Outlook 2022 : Malaysia's Energy Transition Outlook
	20 April 2022	ACCA Annual Virtual Conference 2022
	21 April 2022	PNB Knowledge Forum 2022 : Sustainable Investing : ESG at the Forefront
	10 May 2022	Climate Governance Malaysia : Conversation on Climate Governance Session 1 & 2

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

NAME OF DIRECTOR	DATE	CONFERENCE/TRAINING ATTENDED
<b>Dato' Merina binti Abu Tahir (cont.)</b>	25 May 2022	APAC Thought Leadership Virtual Forum - Sustainability Reporting : Get Ready For New ISSB Standards
	26 May 2022	MIA Virtual CFO Event : Advancements on ESG Reporting
	8-9 June 2022	MIA International Accountants Conference 2022 : Leading ESG, Charting Sustainability
	17 June 2022	ICDM BNRC Dialogue and Teh Tarik Session With Shai Ganu
	6 July 2022	Sustainability and Its Impact On Organizations : What Directors Need to Know
	12 July 2022	3 <sup>rd</sup> Malaysian Energy Roundtable
	13 July 2022	Navigating through the Evolution of Corporate Governance with the Introduction of Tax Corporate Governance Framework
	27 July 2022	PowerTalk ESG Series 2022 (Part II) : Session #4 - ESG Disclosure At a Glance – Key Developments and Future Trends
	28 July 2022	No Planet B – A Call to Climate Action
	3 August 2022	PowerTalk ESG Series 2022 (Part II) : Session #5 - Climate Change and Carbon From the Financial Risk & Reporting Perspectives
	9 August 2022	SDG7 Seminar, Affordable and Clean Energy : A Journey Towards Energy Transition
	10 August 2022	PNB Knowledge Forum 2022 : Tall Buildings and Living in the Space Age : The Enigma and Convergence of Science and Art
	11 August 2022	PowerTalk ESG Series 2022 (Part II) : Session #6 - Characteristics of ESG & Sustainability Leadership
	20 September 2022	Advocacy Session for Directors and Senior Management of Main Market Listed Issuers
	3-4 October 2022	Khazanah Megatrends Forum 2022
	18 October 2022	BDP 2022 : IT & OT
	6 December 2022	Security Commission Malaysia's Audit Oversight Board Conversation With Audit Committees

Trainings attended by the Company Secretary during the Financial Year under review :

- Integration of ESG and Corporate Sustainability in a Company
- SSM National Conference 2022: Corporate Governance and Sustainability Needed Now More Than Ever
- Role of Company Secretaries as Reporting Institution in Combating Money Laundering and Terrorism Financing under Anti-Money Laundering Act 2001
- Sustainability Management and Reporting "What This Entails & How The Board and Management Go About Managing & Reporting Sustainability Practices"
- Drafting Sustainability Statement or Report: Identifying and Scoping the Contents for Meaningful Disclosure and Monitoring
- The Updated Malaysian Code on Corporate Governance
- Board Assessment: A Key Cog in an Effective Governance Structure
- ESG Reporting for ESG Leaders & Managers
- ESG Reporting for Business & Government

### BOARD EVALUATION

The Board recognises that an objective and well-managed board evaluation process can lead to substantial improvement in Board effectiveness, bringing significant benefits to the Company. This is achieved through annual performance evaluations, induction programmes for new Board members and ongoing Board development activities.

TNB supports Practice 6.1 of MCCG whereby for Large Companies, the Board engages independent experts at least every three (3) years to facilitate objective and candid Board evaluations. The last assessment carried out by the independent expert, Willis Towers Watson (WTW), was in 2021.

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

### 2022 BOARD EVALUATION ASSESSMENT RESULTS

The 2022 BEA was conducted internally and facilitated by the Company Secretary through questionnaires guided by the Bursa Corporate Governance Guide (4<sup>th</sup> Edition). The questionnaires for the 2022 BEA were divided into several sections :

- Questionnaire Relating to ESG or Sustainability
- Board & Board Committees Effectiveness Assessment
- Directors and Board Committee Members' Self and Peer Assessment (SPA), including Fit & Proper Assessment
- Board Audit Committee Evaluation
- Board Audit Committee Members' SPA

The effectiveness of the Board is assessed in the areas of the Board's responsibilities and composition, Quality of Information and Decision-making, Boardroom Activities and Board's Relationship with the Management as well as the effectiveness of the Chairman and the President/CEO.

The assessment of individual Directors' contribution and performance is conducted based on performance criteria which are incorporated in the Directors' SPA questionnaires. This included, among others :

- will and ability to critically challenge and ask the right questions
- confidence to stand up for a point of view and offer advice/guidance
- character and integrity in dealing with potential conflict of interest situations
- calibre and personality
- commitment to serve the Company
- due diligence and integrity
- fit and proper
- independence and objectivity
- skills and competencies
- contribution and performance

Performance evaluations of the Board include reviews of its performance in addressing the Company's material sustainability risks and opportunities.

The effectiveness of Board Committees is assessed in terms of structure and processes, accountabilities and responsibilities, as well as the effectiveness of the Chairmen of the respective Board Committees. The SPA for the Board Committee members is similar to the Directors' SPA, which is intended to assess their contribution, performance, calibre and personality in relation to the skills, experience and other qualities they bring to the Board/Board Committees.

The SPA also examines the ability of each Board or Committee member to give input at meetings and to demonstrate a high level of professionalism and integrity in the decision-making process. It also takes into account the ability of each individual member to exercise independent judgement and demonstrate objectivity and clarity of thought on issues during deliberations at meetings, provide logical honest opinion and offer practical and realistic advice to the discussions.

Based on the 2022 BEA results, the overall ratings for the 2022 BEA were in average of 4.0, indicating that the performances of the Board, each Board Committees, individual Directors and members of each Board Committees had been satisfactory. Each Director was generally effective in discharging his/her duties/responsibility.

It was clear that the effectiveness of both the Chairman and President/CEO is reflective of the Board's confidence in them, indicating strong and effective leadership in spearheading the Company's direction.

The Board is seen to be effective and ensures the integrity of the Company is aligned with regulatory requirements, internal standards and best practices. The Board is committed to its fiduciary duties and assumes the core responsibilities of reviewing and monitoring the Group's strategic plan, overseeing and evaluating the conduct of the Group's business and establishing sound risk management and internal control frameworks for the Group.

Based on 2021 BEA findings, the Board recognised the need to continuously strengthen its composition in terms of diversity, in line with its strategic direction and enhance the succession planning of the Board/Top Management. Based on the 2022 BEA findings, areas that required ongoing attention for continuous improvement were sustainability strategies and Directors' trainings need to be tailored according to the Directors' need.

Responsibility and Conduct	Process and Administration	Composition
<ul style="list-style-type: none"> <li>• Business strategy and governance and implementation oversight</li> <li>• Risk management and integrity</li> <li>• Implementation oversight and monitoring of strategies and policies</li> </ul>	<ul style="list-style-type: none"> <li>• Board Charter and Committee TORs</li> <li>• Agenda and frequency of meetings</li> <li>• Sufficient information availability and on a timely basis</li> <li>• Culture and dynamics</li> </ul>	<ul style="list-style-type: none"> <li>• Diversity</li> <li>• Competencies of the members</li> <li>• Board and Committee compositions</li> </ul>
<b>This year's process</b>		
Each Director completed the BEA for the Board and their respective Committees, including Self and Peer Assessment.	The BEA analysis was presented to the BNRC for deliberation	A summarised report of BEA was tabled to the Board by the Chairman of the BNRC with a view to discuss areas of improvement

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

### EXECUTIVE DIRECTOR AND TOP MANAGEMENT REMUNERATION

The remuneration package for the Executive Director is structured to link rewards to corporate and individual performance. It comprises salary, allowances, bonuses and other customary benefits as accorded by comparable companies. A significant portion of an Executive Director's compensation package has been made variable and is determined by performance during the year against individual KPIs in a scorecard aligned with the corporate objectives as approved by the Board. The Executive Director recuses himself from deliberation and voting on his remuneration at Board meetings.

The BNRC reviews the performance of the Executive Director annually and submits views/recommendations to the Board on adjustments in remuneration and/or rewards to reflect the Executive Director's contributions towards the Group's achievements for the year.

The key elements of remuneration package for Top Management are structured into three (3) components namely (i) the base salary, fixed allowances and benefits, (ii) Short Term Incentive (STI) and (iii) Long Term Incentive Plan (LTIP).

The base salary needs to be competitive enough to attract and retain the relevant talents, and is determined by the scope of work, experience and expected performance of a talent. The fixed allowances are for certain benefits in cash and are not linked to the base salary.

STI is based on yearly performance and paid as bonuses, subject to the profitability of the Company and the performance of Top Management. Performance is measured based on quantitative targets and their alignment to the values the Company stands for, which would be qualitative in nature. The LTIP is to retain and reward Top Management to see out the growth and business strategy aligning with the long-term success of the Company.

In summary, TNB strongly believes in performance culture and the remuneration policy serves to pay competitively for sustainable performance while being in line with the shareholders' interest.

The Company has opted not to disclose the components of the remuneration of its Top Management as per Practice 8.2 of MCCG, as such disclosure may bring disadvantages to the Company's business interest. This is further explained in the CG Report.

### NON-EXECUTIVE DIRECTORS' REMUNERATION

The Non-Executive Directors are remunerated through fixed monthly fees, meeting allowances and benefits-in-kind, inclusive of the reimbursement of utilities bills and business peripherals.

The level of remuneration of Non-Executive Directors reflects the current demanding challenges in discharging their fiduciary duties, roles and responsibilities, whether individually or collectively, as well as the complexity of the Company's operations and the industry. The Non-Executive Directors' remuneration/benefits have remain unchanged since 2013.

In 2021 WTW, as an independent expert, conducted a holistic and independent review of TNB's Non-Executive Directors' remuneration to determine its market competitiveness in Malaysia. Based on the findings, the structure of Non-Executive Directors' remuneration (including benefits) was generally aligned with the market practice and was recommended to be retained and reviewed in three (3) years' time.

### OUR REMUNERATION APPROACH

The Board, through the BNRC, is to determine an appropriate remuneration policy that aligns remuneration with strategy to drive the long-term success of the Company and ensures that the Company may continue to attract, retain and motivate quality leaders.

The Directors' Remuneration Policy is shaped by the following underlying principles :

**Alignment with strategy and business objectives**

**Alignment with shareholders' interest**

**Long-term success of the Company**

**Consistency and transparency**

**Reward performance with competitive remuneration**

**Alignment with market/industry practices**

**Support Company values**

**Remuneration policy**

**Fixed remuneration**

**Benefits-in-kind**

## PRINCIPLE A : BOARD LEADERSHIP & EFFECTIVENESS

### DISCLOSURE ON DIRECTORS' REMUNERATION

Details of each Director's remuneration for the Financial Year ended 31 December 2022 :

Name of Directors	Salary (RM)	Director's Fees		Meeting Allowances		Emoluments <sup>1</sup> (RM)	Benefits-in- Kind <sup>2</sup> (RM)	Total (RM)
		Company (RM)	Subsidiaries (RM)	Company (RM)	Subsidiaries (RM)			
<b>Executive Director</b>								
Dato' Indera Ir. Baharin bin Din	1,560,000.00	-	-	-	-	- 2,616,780.00	107,519.60	4,284,299.60
<b>Non-Executive Directors</b>								
Datuk Amran Hafiz bin Affifudin	-	-	-	-	-	-	35,996.65	35,996.65
Ong Ai Lin <i>(Redesignated w.e.f. 30 September 2022)</i>	- 240,000.00	-	- 72,000.00	-	-	- 35,382.17	347,382.17	
Juniwati Rahmat Hussin	- 240,000.00	-	- 88,000.00	-	-	- 4,675.55	332,675.55	
Gopala Krishnan K.Sundaram	- 240,000.00	-	- 79,500.00	-	-	- 26,390.30	345,890.30	
Dato' Roslina binti Zainal	- 240,000.00	-	- 94,500.00	-	-	- 27,645.80	362,145.80	
Datuk Rawisandran a/l Narayanan	- 240,000.00	-	- 68,500.00	-	-	- 40,011.75	348,511.75	
Dato' Merina binti Abu Tahir	- 220,000.00	-	- 76,500.00	-	-	- 41,853.16	338,353.16	
Datuk Lau Beng Wei <i>(Resigned w.e.f. 6 March 2023)</i>	- 240,000.00	-	- 60,500.00	-	-	- 18,000.00	318,500.00	
Datuk Seri Asri bin Hamidin @ Hamidon <i>(Cessation of Office as Director w.e.f. 5 January 2023)</i>	- 240,000.00	-	- 46,500.00	-	-	-	-	286,500.00
Dato' Sri Hasan bin Arifin <i>(Cessation of Office as Chairman w.e.f. 1 January 2023)</i>	- 360,000.00	- 60,000.00 <sup>3</sup>	- 40,000.00	- 7,500.00 <sup>3</sup>	-	- 68,013.36	535,513.36	
Dato' Ir. Nawawi bin Ahmad <i>(Demised on 28 November 2022)</i>	- 218,666.66	-	- 76,000.00	-	-	- 48,219.42	342,886.08	
Faisal @ Pisel bin Abdul Ghani <i>(Cessation of Office as Alternate Director w.e.f. 5 January 2023)</i>	-	-	- 15,500.00	-	-	- 20,500.00	36,000.00	
Azmin bin Ishak <i>(Cessation of Office as Alternate Director w.e.f. 10 February 2022)</i>	-	-	- 3,500.00	-	- 50,000.00	- 25,292.00	78,792.00	
<b>Total</b>	<b>1,560,000.00</b>	<b>2,478,666.66</b>	<b>60,000.00</b>	<b>721,000.00</b>	<b>7,500.00</b>	<b>2,666,780.00</b>	<b>499,499.76</b>	<b>7,993,446.42</b>

#### Notes:

1. Contribution to EPF, bonus, car allowance, LTIP, ex gratia and gratuity
2. Utility bills, business peripherals, purchase of handphone, medical, travelling, uniforms and club memberships.
3. Payment made by respective subsidiaries.

**PRINCIPLE A :  
BOARD LEADERSHIP & EFFECTIVENESS****ENSURING SOUND FINANCIAL MANAGEMENT AND ROBUST CONTROLS****NR BOARD NOMINATION AND REMUNERATION COMMITTEE REPORT****BOARD NOMINATION  
AND  
REMUNERATION  
COMMITTEE****Chairman****Dato' Roslina binti Zainal**

Independent Non-Executive Director

**Members****Datuk Amran Hafiz bin Affudin**

Non-Independent Non-Executive Director

**Dato' Merina binti Abu Tahir**

Independent Non-Executive Director

**Datuk Lau Beng Wei**

Independent Non-Executive Director

(Appointed as member w.e.f. 1 February 2023)

(Ceased as member w.e.f. 6 March 2023)

**Dato' Ir. Nawawi bin Ahmad**

Independent Non-Executive Director

(Demised on 28 November 2022)

**Datuk Seri Asri bin Hamidin @ Hamidon**

Non-Independent Non-Executive Director

(Ceased as member w.e.f. 5 January 2023)

The Committee last reviewed its TOR in  
January 2021.**Key Activities of the Committee**

During the Financial Year under review, the BNRC held seven (7) meetings. To date, the BNRC's key activities included the approval/deliberation of the following :

- Annual Assessment of Independence of Independent Non-Executive Directors
- BEA of the Board of Directors, its Committees and each Individual Director
- Assessment of fit and proper and performance review of Directors for re-appointment/re-election
- Recommendation to the Board with regards to Directors who sought re-election at the AGM
- Assessment of fit and proper of potential candidates for proposed appointment as TNB Non-Executive Directors
- Review of the Board Skills Matrix, upon any appointment of potential candidates to the Board
- Appointment and resignation of Chairman
- Appointment of Senior Independent Non-Executive Director
- Appointment and resignation of Non-Executive Directors
- Review of the composition of the Board Committees upon appointment/resignation/demise of Directors
- Fit and proper assessment of potential candidates for Top Management
- Appointment of Top Management due to establishment of respective Divisions/succession planning
- Review of composition of the Boards of TNB Group for BNRC approval
- Review of succession planning of Top Management
- Assessment and recommendation to the Board on the promotion and renewal of service contracts of Top Management
- Review of performance evaluation against assigned KPIs of President/CEO and Top Management
- TNB Notice of 33<sup>rd</sup> AGM
- TNB Board of Directors' Fit and Proper Policy.

The Board on 30 June 2022 approved TNB Board of Directors' Fit and Proper Policy as guidance for the appointment and re-appointment of directors of TNB and its Group of Companies. TNB Board of Directors' Fit and Proper Policy is categorised into character and integrity; experience and competence; and time and commitment. In drafting the TNB Board of Directors' Fit and Proper Policy, references to and benchmarking against other Government Linked Companies/ Public Listed Companies policies were made. The Policy is also available on the Company's website at [www.tnb.com.my](http://www.tnb.com.my).

**KEY ROLES & RESPONSIBILITIES**

For details of the roles and responsibilities of the Committee, please refer to page 163.

# PRINCIPLE B : EFFECTIVE AUDIT AND RISK MANAGEMENT

## ETHICS, INTEGRITY & TRUST

In 2017, TNB was one of the first listed corporation to embark on the ISO 37001:2016 Anti-Bribery Management System (ABMS) certification. Towards achieving the certification, TNB launched the TNB Corporate Integrity Management System (TCIMS) to drive an integrity-based culture and a high level of compliance with local and international anti-bribery standards. On 15 November 2018, TNB was awarded with the ABMS Certification from SIRIM and to further reinforce this culture, launched the TCIMS Handbook. TNB has a well thought out set of Shared Values made publicly available and communicated to the workforce. First among the TNB Shared Values is Integrity. The three (3) behaviours of Integrity are :



The Handbook covers five (5) TCIMS policies, namely the Anti-Bribery Policy; the Gifts, Hospitality and Related Benefits Policy; the Conflicts of Interest Policy; the Whistleblowing Policy; and the Integrity Pact and Committee Integrity Pledges Policy.

In 2022, TNB reviewed the four (4) main policies to reflect the current policies, circulars and practices. The reviewed policies are as follows :

- (i) Anti-Bribery Policy
- (ii) Gifts, Hospitality and Related Benefits Policy
- (iii) Conflict of Interest Policy
- (iv) Whistleblowing Policy.

During the Financial Year under review, a surveillance audit by SIRIM was conducted involving the Procurement & Supply Chain Division, the Retail Division and two (2) wholly-owned subsidiaries of TNB, namely Tenaga Cable Industries Sdn. Bhd. and TNB Repair and Maintenance Sdn. Bhd. where all the entities successfully retained the ISO 37001 Anti-Bribery Management System certification by SIRIM. One of TNB subsidiary, TNB Integrated Learning Solution Sdn. Bhd. (ILSAS) was also certified with ISO 37001 Anti-Bribery Management System by SIRIM.

In 2022, TNB signed a Memorandum of Understanding (MoU) with the Malaysian Anti-Corruption Commission (MACC) and signed the Corruption Free Pledge. This pledge emphasises the pledges and promises made by the leadership of TNB and its staff voluntarily in their capacity as an organisation to ensure that each of us will be more responsible in carrying out our duties and curbing corruption.

TNB also conducted the Integrity Health Survey in 2022 through UNITEN Research & Development Sdn. Bhd. and based on the survey TNB received a 79.36% score. Based on this score, TNB was categorized as world class best practices according to the Global Ethics & Integrity Benchmarks 2020 by Joan Elise Dubinsky and Alan Richter. TNB has also established a systematic approach through the Annual Training and Communication Plan (TCP) for the areas of improvement identified through the Integrity Health Survey conducted in 2021.

In 2022, all activities under the TCP were successfully completed, including training for Board of Directors. A series of trainings & awareness sessions were conducted during the Financial Year by the Integrity Department to better equip the Company for the implementation of Section 17A of the Malaysian Anti-Corruption Commission (MACC) Act 2009. These included the following :

- 10 sessions of Fraud and Bribery Risk Management Workshops
- All staff and active vendors/business partners/associates were required to complete the Integrity E-learning
- All staff are required to sign the integrity pledge and declare any conflicts of interest via Employee Self Services Online System annually
- ISO 37001 Internal Audit was carried out Company-wide
- TNB Integrity Health Index (IHI) was established to access and capture relevant information on different attributes and dimensions of Integrity Health status and performance of the Integrity Health system
- 19,989 staff participated in the IHI survey FY2022 and the score was 79.36%
- Published 18 Integrity bulletins and articles

In 2022, TNB was named among the top five Gold winners of the 2022 National Integrity, Governance and Anti-Corruption Award (AIGA). It marks TNB's achievements in their commitment to the Environmental, Social and Governance (ESG) agenda, particularly in governance and the personal integrity of employees, through improving organisational integrity.

## LIMITS OF AUTHORITY

The Limits of Authority outlines principles to govern decision-making within the Group, including appropriate escalation and reporting to the Board. The Board has also delegated to the President/CEO and through the President/CEO to other Executives, responsibility to manage the Company's day-to-day activities. The Limits of Authority encompasses both monetary and non-monetary limits of authority for recommending and approving operational and management decision-making activities prior to their execution. This allows for balanced effective oversight with appropriate empowerment and accountability of the Management.

## PRINCIPLE B : EFFECTIVE AUDIT AND RISK MANAGEMENT

### CODE OF ETHICS

The Board of Directors is guided by a high standard of ethical conduct in accordance with the Code of Ethics for Company Directors as established by the Companies Commission of Malaysia. Each Non-Executive Director is supplied with the Non-Executive Directors' Handbook as reference for their professional responsibilities as well as the terms and conditions of their service. The Non-Executive Directors' Handbook is updated as and when the need arises to reflect any changes to the applicable rules and regulations as well as in the policies/procedures that govern the conduct of the Directors.

TNB has a Code of Ethics to govern the conduct of its employees. The provisions set out in the Code of Ethics ensure compliance with laws and regulations, sound employment practices, confidentiality and privacy. It also includes provisions on conflicts of interest, giving and accepting business courtesies and the protection and proper use of TNB's assets and resources. TNB's Code of Ethics also defines how TNB relates to its shareholders, employees, customers, suppliers and the communities in which it operates. It includes TNB's general principles on business integrity. All employees are expected to conduct business in accordance with the applicable laws, rules and regulations and in a manner that enhances and protects the reputation of TNB.

TNB's Procurement Code of Conduct guides TNB's Directors and employees as well as all existing and potential suppliers/contractors, including their directors and employees. TNB believes that all supplier/contractor relationships should be based on principles of good governance such as integrity, accountability, fairness and a zero-tolerance rule towards bribery and corruption. These principles are enforced in the Procurement Code of Conduct, which is constantly revised to reflect changes in regulations, reputational demands and business challenges.

The Procurement & Supply Chain Policy and Procedures provides a set of general policy and procedures as guidance in executing procurement within TNB. The Policy and Procedures enables TNB to obtain the best value in procurement, adopt leading business practices, advance TNB's business priorities, add value to customers and uphold good corporate governance. TNB's Code of Ethics and Procurement Code of Conduct are available in their respective sections of the Company's website at [www.tnb.com.my](http://www.tnb.com.my).

### CONFLICTS OF INTEREST

To foster ethical and independent decision-making, the Company requires Directors with any direct or indirect interest in a proposal or transaction being considered by the Board or its Committees to declare that interest and recuse himself/herself from the deliberations. The affected Director will take no part in the decision-making. As initiated by the Procurement & Supply Chain Division in collaboration with the Integrity Department to further strengthen our integrity and transparency in dealing with the Company's procurement activities, at each Board meeting, each Director shall sign an Integrity Pact, declaring his/her interest involving procurement/matters to be discussed at the meeting, to prevent corruption, conflict of interest and to maintain confidentiality of information.

### WHISTLEBLOWING PROCEDURE

The Whistleblowing Procedure embodies TNB's commitment to maintaining an open working environment in which employees, contractors and members of the public are able to report instances of unethical, unlawful or undesirable conduct on a confidential basis without any fear of intimidation or reprisal. An independent investigation team investigates all reported concerns and, where applicable, provides feedback regarding the investigation's outcome.

The objectives of the Whistleblowing Procedure are as follows :

- to detect and address unacceptable conduct
- to provide employees and contractors with a supportive working environment in which they feel able to raise issues of legitimate concern to them and to TNB, and
- to protect people who report unacceptable conduct in good faith.

Reporting channels :

- Online Whistleblowing Information System (WBIS) - [wbis.tnb.com.my](http://wbis.tnb.com.my)
- Email to one (1) of the designated officers by using the Whistleblowing Complaint Form, available in Malay & English :

NAME	DESIGNATION	EMAIL ADDRESS
Ong Ai Lin	Senior Independent Non-Executive Director	<a href="mailto:ongailin.integrity@tnb.com.my">ongailin.integrity@tnb.com.my</a>
Kalivann Palanivelu	Chief Integrity Development Officer	<a href="mailto:kalivann.integrity@tnb.com.my">kalivann.integrity@tnb.com.my</a>
Hasbah binti Hasbullah	Head, Integrity Development & Culture	<a href="mailto:hasbakh.integrity@tnb.com.my">hasbakh.integrity@tnb.com.my</a>

- Whistleblowing toll free number : 1-800-888-862

### ANTI-BRIBERY POLICY

TNB aims to state its position on bribery and related matters and to establish key pillars in its structure to protect the Company against any form of bribery. Bribery in all its forms related to TNB's activities is prohibited. It is the responsibility of personnel at all levels to act with integrity. TNB holds a 'No Gifts' policy, although certain exceptions are allowed. Integrity Pledges must be signed by personnel on a regular basis, as well as a conflict of interest declaration. Business associates acting on behalf of the Company are managed carefully. Reporting of misconduct by personnel or third parties is expected, with protection provided for all disclosers acting in good faith. TNB is committed to enforcing its position, with the Integrity Department taking on this role. The TCIMS will be assessed and updated on a regular basis to ensure its effectiveness is maintained.

## PRINCIPLE B : EFFECTIVE AUDIT AND RISK MANAGEMENT

### BOARD AUDIT COMMITTEE REPORT

#### BOARD AUDIT COMMITTEE

##### Chairman

**Dato' Merina binti Abu Tahir**

Independent Non-Executive Director

##### Members

**Ong Ai Lin**

Senior Independent Non-Executive Director  
(Redesignated w.e.f. 30 September 2022)

**Gopala Krishnan K.Sundaram**

Independent Non-Executive Director

**Datuk Rawisandran a/l Narayanan**

Independent Non-Executive Director

**Juniwati Rahmat Hussin**

Independent Non-Executive Director

**Datuk Lau Beng Wei**

Independent Non-Executive Director  
(Ceased as member w.e.f. 6 March 2023)

The Board Audit Committee (BAC) was established to assist the Board in carrying out their oversight and fiduciary duties and responsibilities.

BAC's objectives, authorities and functions are governed by the Terms of Reference (ToR) which is reviewed annually. The ToR was last revised in November 2021 to incorporate changes in regulations. The ToR is accessible on the Company's official website at [www.tnb.com.my](http://www.tnb.com.my).

##### MEMBERSHIP AND MEETINGS

As of 31 December 2022, the BAC comprises six (6) members, all of whom are Independent Non-Executive Directors. This composition is aligned with Paragraph 15.09 (1) (a) and (b) of the Bursa Malaysia Securities Berhad Main Market Listing Requirements (MMLR), which states that the Audit Committee must be composed of not fewer than three (3) members and all the Audit Committee members must be Non-Executive Directors, with a majority of them being Independent Directors.

The BAC is chaired by Dato' Merina binti Abu Tahir effective from 1 February 2022. The BAC continues to fulfil the practice stipulated in the Malaysian Code on Corporate Governance (MCCG) 2021, whereby the Chairman of the BAC was not the Chairman of the TNB Board during the year under review.

The governance practices are further strengthened as the BAC fulfils the requirements of Paragraph 15.09 (1) (c) of MMLR, which requires that at least one (1) member of the Committee must be a member of the Malaysian Institute of Accountants (MIA). As of 31 December 2022, two (2) members of the BAC, Dato' Merina binti Abu Tahir and Ong Ai Lin, are members of MIA.

During FY2022, 12 BAC meetings were held and this fulfils the requirement in the BAC ToR where the BAC is to meet at least six (6) times a year. Attendance at all meetings met the requisite quorum as stipulated in the BAC ToR. The Company Secretary, who is the Secretary to the BAC, and the Chief Internal Auditor (CIA) were in attendance during the meetings. The President/CEO and other officers were invited to the meetings to deliberate on matters within their purview.

After each meeting, the BAC Chairman submits a report on matters deliberated to the Board of Directors' meeting for information and attention. Matters reserved for the Board's approval are tabled at the TNB Board meetings. Action sheets are issued by the Company Secretary on the decisions made and actions required. These are circulated to Management and relevant parties for their actions.

##### MAIN ACTIVITIES OF BAC IN FY2022

Based on the 12 meetings held in FY2022, BAC had carried out the following to effectively discharge its duties and responsibilities as set forth in the BAC ToR :

###### 1. INTERNAL AUDIT

- i. Deliberated the adequacy and effectiveness of governance, risk management and internal control systems based on the findings and outcomes of audits conducted and reported by Group Internal Audit Department (GIA) during the year. The audit findings were presented and deliberated in BAC meetings and where relevant, BAC requested Management to rectify the weaknesses based on recommendations provided by GIA. GIA's areas of coverage for FY2022 are summarised in the Statement of Internal Audit Function.
- ii. Reviewed TNB's quarterly State of Internal Controls (SOIC) on the adequacy, effectiveness and reliability of internal control systems based on the overall risks/areas covered and issues reported by GIA and subsidiary's internal audit functions, as well as the status of corrective actions implemented by Management.
- iii. BAC took note of TNB's FY2021 Integrated Assurance Report for GIA and other assurance providers i.e. subsidiary's internal audit functions, compliance function in divisions, Health, Safety and Environment Department and Risk Management Department, which was intended to demonstrate the organisation's risk coverage and help identify gaps and overlaps. Additionally, the report demonstrates the overall governance and state of internal controls in TNB based on reviews performed by the various assurance providers.

##### KEY ROLES & RESPONSIBILITIES



For detailed roles & responsibilities of the Committee, please refer to page 162.

## PRINCIPLE B : EFFECTIVE AUDIT AND RISK MANAGEMENT

- iv. Approved GIA's Annual Audit Plan and reviewed the methodology applied in preparing a risk-based audit plan to ensure adequacy of audit scope and comprehensive coverage of the Group's activities. The BAC also took cognisance of the resource and budgetary requirements for the successful completion of the audit plan.
- v. Approved GIA's revised Annual Audit Plan to ensure it remained agile, in view of emerging risks arising from changes in the business environment and regulatory requirements, as well as in response to requests from the BAC and Management.
- vi. On a quarterly basis, the BAC reviewed the effectiveness of GIA through evaluation of its performance comprising, among others, contribution to cost saving and process improvement, BAC survey index, completion of audit plan and audit turnaround. The BAC also appraised the overall FY2021 performance for GIA.
- vii. Approved GIA's 3-year Strategic Plan which was developed based on International Professional Practices Framework (IPPF) Practice Guide on 'Developing the Internal Audit Strategic Plan'. Additionally, the BAC approved GIA's Quality Assurance and Improvement Programme (QAIP) initiatives identified as a result of assessment of the internal audit function on conformance to the IPPF.
- viii. Reviewed GIA's organisational independence declaration for FY2021 to facilitate the BAC in making relevant disclosures as required in the MCCG pertaining to independence and objectivity of the internal audit function. GIA discharged its duties objectively and independently through the current reporting arrangements, which allow GIA to report functionally to the BAC. There were no conflict of interest situations reported for FY2021. GIA has in place mechanisms to report conflict of interest situations at department, engagement and individual levels.
- ix. Approved GIA's revised Internal Audit Charter which was reviewed to assess whether the purpose, authority and responsibilities of the internal audit function continue to enable it to accomplish its objectives. The revision was made in line with the global trend in ESG, particularly in sustainability landscape, where companies consider subjecting their sustainability statements to an assurance process to ensure the integrity of the data reported.

### 2. EXTERNAL AUDIT

- i. In assessing the suitability, independence and objectivity of the External Auditor, the BAC reviewed the following in line with the MCCG Guidance :
  - The overall performance and effectiveness of the External Auditor for the period from 1 January 2021 to 31 December 2021. For this purpose, a survey was coordinated by GIA and assessments on the effectiveness of the External Auditor were performed by members of the BAC and Management covering the areas of (1) quality of service, (2) sufficiency of resources, (3) communication and interaction and (4) independence, objectivity and professional scepticism.
  - The audit fees for quarterly review of the unaudited consolidated results and annual statutory audit of TNB and its subsidiaries for Board's approval.
  - The External Auditor's Annual Transparency Report which outlines amongst others, the legal and governance structure as well as measures undertaken by the External Auditor to uphold audit quality and manage risks.
  - Non-audit services provided by the External Auditor for TNB and the Group. The fees for non-audit services carried out by the External Auditor were within the allowed threshold set in TNB's Implementation Guideline on Provision of Services by External Auditors.

- ii. Took note of TNB's Internal Control Recommendations and Control Environment Report for FY2021 which provides status updates on control recommendations to address the accounting, systems and process weaknesses; and areas of enhancement over financial reporting and information technology general control (ITGC) respectively.
- iii. Reviewed TNB's revised External Auditors Policy which was amended to be in line with the updated MCCG 2021.
- iv. The BAC exercised its rights, as stipulated in the ToR, to hold meetings with the External Auditor without the presence of Management, Executive Directors or Non-Independent Directors to enable open discussion with the BAC. This is also in line with the terms stipulated in MMLR issued by Bursa Malaysia Securities Berhad.

In FY2022, two (2) meetings were held with the External Auditor without the presence of Management and Executive Director to reinforce independence of the External Auditor of the Company.

### 3. FINANCIAL REPORTING

The BAC reviewed and endorsed the following financial matters before recommending them to the Board for approval :

- i. Quarterly unaudited financial results of the Group and the draft announcements with considerations on key developments during the period, significant accounting matters and other review matters.
- ii. Audited financial statement of the Group and of the Company for the Financial Year ended 31 December 2021 and agreed that the financial statements were prepared in accordance with the relevant standards and regulatory requirements as to give a true and fair view of the Group's financial performance.

### 4. RELATED PARTY TRANSACTIONS

In February 2022, the BAC reviewed and recommended to the Board to approve the related party/recurrent related party transactions entered into by TNB Group for the year ended 31 December 2021.

### 5. ANNUAL REPORTING

The BAC recommended for the Board's approval the reports to be incorporated in the Integrated Annual Report 2021, namely (i) BAC Report, (ii) Statement of Internal Audit Function, (iii) Statement of Risk Management and Internal Control, (iv) TNB Sustainability Statement and (v) Corporate Governance Overview Statement and Corporate Governance Report.

### 6. OTHERS

- i. Reviewed the proposal for granting and vesting of performance shares as well as restricted shares under the Long Term Incentive Plan (LTIP) for Board's approval.
- ii. Discussed on other key operational matters, amongst others on summons/compounds imposed on TNB by regulatory authorities, integrity and governance reporting matters and safety and health governance practices across TNB.
- iii. Attended technical visits to Sabah Electricity Sdn. Bhd. and National Load Dispatch Centre in the effort of understanding the business operations and relationship building.

## PRINCIPLE B : EFFECTIVE AUDIT AND RISK MANAGEMENT

### BOARD RISK COMMITTEE REPORT

#### BOARD RISK COMMITTEE

##### Chairman

##### Ong Ai Lin

Senior Independent Non-Executive Director  
(Redesignated w.e.f. 30 September 2022)

##### Members

##### Juniwati Rahmat Hussin

Independent Non-Executive Director

##### Gopala Krishnan K.Sundaram

Independent Non-Executive Director

##### Datuk Rawisandran a/l Narayanan

Independent Non-Executive Director

**The Board Risk Committee (BRC) was established on 5 June 2013 by the Board of Directors (Board) to assist the Board in carrying out its responsibilities. The Board, through the BRC, is responsible of overseeing the effectiveness and adequacy of the Group's risk management framework and ensuring that it forms part of the Group's corporate culture.**

#### ROLE OF THE BOARD RISK COMMITTEE

The main role of the BRC is to assist the Board in ensuring that the Group has in place a sound and robust enterprise risk management framework and that such framework has been effectively implemented to enhance the Group's ability to achieve its strategic objectives. This is in line with the requirements stated in the Malaysian Code on Corporate Governance and Bursa Malaysia's Main Market Listing Requirements.

#### KEY RESPONSIBILITIES

The BRC is guided by its Terms of Reference in carrying out these responsibilities :

- Oversee the establishment and implementation of the risk management framework that is embedded into the culture, processes and structures of the Group and is responsive to changes in the business environment.
- Approve the risk management framework and policies on behalf of the Board.
- Ensure that the principles and requirements of managing risk are consistently communicated and adopted throughout the Group.
- Deliberate the Group's strategic risks as well as key operating risks and risk issues through timely and regular reports and ensure the implementation of appropriate systems to manage these risks. It has the authority to direct special investigations, on behalf of the Board, into significant risk management activities, as and when necessary.
- Approve, on behalf of the Board, the risk appetite for the strategic risks and key operating risks and ensure that actions are taken in a timely manner when risks are outside tolerable ranges.
- Review the adequacy of and provide independent assurance to the Board of the effectiveness of the risk management framework implemented in the Group on an annual basis.

#### HOW THE COMMITTEE OPERATES

The BRC meetings are pre-determined for the following Financial Year and is thereafter, communicated to the members with the specific meeting agenda prior to each meeting.

In FY2022, there were seven (7) BRC meetings. Prior to the meetings, BRC members were provided with papers approved for tabling and updates of outstanding matters from previous meetings for the members' perusal.

The President/CEO, the Chief Risk Officer and the Company Secretary, who is also secretary to the BRC, attended the meetings. Other attendees, internal or external, were invited to deliberate on matters within their purview. Action sheets were issued by the Company Secretary on decisions made and action required. These were circulated to Management for further action. The BRC Chairman Reports were tabled at the Board meetings for notification and/or further deliberation on matters within the purview of the Board.

#### KEY ROLES & RESPONSIBILITIES



For detailed roles & responsibilities of the Committee, please refer to page 163.

## PRINCIPLE B : EFFECTIVE AUDIT AND RISK MANAGEMENT

### MAIN ACTIVITIES OF THE BRC

The BRC, assisted by the Chief Risk Officer and the Risk Management Department (RMD), had carried out the following to effectively discharge its responsibilities set forth in its ToR :

#### TNB RISK MANAGEMENT FRAMEWORK

The BRC had approved the TNB Risk Management Framework that provides a structured and consistent approach to risk management across the Group. The implementation of the framework is governed through the TNB risk governance documents, which are guidance documents for the business entities across the Group to implement and integrate risk management into its business operations for informed decision-making and to achieve objectives and targets. These risk governance documents are reviewed annually with the criteria for revision and levels of approving authority clearly stated to ensure the documents are robust, practical for implementation and reflective of the internal and external context.

#### RISK GOVERNANCE

The TNB Risk Management Structure described in the TNB Risk Management Framework governs the risk management implementation in the Group. The oversight role is executed by the TNB Board of Directors and the BRC, whilst cross-functional risk management matters are deliberated at the Group Risk Management Working Committee (GRMWC) and Subsidiaries Risk Management Working Committee (SRMWC). Both working committees meet quarterly to ensure that the TNB Risk Management Framework is effectively implemented in business entities and sufficient resources are committed for continuous improvement and integration of risk management in business processes.

The BRC had approved the TNB 3-Year Cycle Risk Governance Plan for implementation from FY2022 to FY2024. This plan is implemented by RMD to assist the BRC in ensuring that TNB business entities are effectively implementing the TNB Risk Management Framework and is embedded into the culture, processes and structures of the Group. The plan outlines three (3) risk governance activities, which are risk review, risk maturity assessment and desktop risk assessment. Over a span of three (3) years, the risk governance activities shall be completed for identified business entities in the Group. According to plan, RMD in collaboration with TNB business entities conducted 15 risk reviews, five (5) risk maturity assessments and eight (8) desktop risk assessments in FY2022. Recommendations for improvement were deliberated with the respective business entity to strengthen the implementation and integration of risk management in day-to-day operations and decision-making.

### TNB STRATEGIC RISKS

The BRC had approved revisions to the TNB Strategic Risks in FY2022. These strategic risks are assessed in the context of the Reimagining TNB strategy and long-term objectives. The annual revision ensures that the strategic risk exposures of the Group are comprehensively assessed in view of changes in the external and internal environments and are mitigated accordingly. The TNB Strategic Risks cover risk areas related to the external context, sustainability, regulatory, market, customer, finance and capabilities.

#### KEY OPERATING RISKS

The BRC deliberated the key operating risks of nine (9) TNB business entities in FY2022. Based on an annual schedule, a TNB business entity tables its operational risk profile to the BRC, highlighting key risks and mitigations taken to address root causes, emerging risks related to its business and lessons learned from risk events that are communicated to employees to strengthen the risk management culture. Direction and advice from the BRC were duly noted for progressive improvements in embedding risk management principles in day-to-day operations and decision-making at the respective business entity.

Additionally, the BRC deliberated on reports of specific risk exposures in the areas of safety and security, floods, legal and compliance and data management.

#### TNB RISK DASHBOARD

The BRC deliberated the Key Risk Indicators (KRIs) that are reported in the TNB Risk Dashboard. These KRIs provide early warning of increasing risk exposures and potential risk events and are developed in alignment with the risk appetite of the BRC and Management. The BRC approved the annual revisions of the KRIs to ensure the KRIs are relevant to current business strategies and risk exposures of the Group.

The status of the KRIs is reported quarterly in the TNB Risk Dashboard and reflects the risk exposures of the Group according to five (5) impact areas, which are operations, financial standing, reputation, regulatory and international investment. The quarterly reporting and monitoring of KRIs ensures that actions are taken in a timely manner when risks are outside tolerable ranges.

## PRINCIPLE B : EFFECTIVE AUDIT AND RISK MANAGEMENT

### BOARD RISK COMMITTEE REPORT

#### REPORTING

The BRC jointly reviewed and endorsed the Statement of Risk Management and Internal Control with the Board Audit Committee, which was thereafter approved by the Board for reporting in the TNB Integrated Annual Report. The statement reports the risk management practices and internal controls implemented in the Group as well as assurances from the President/CEO and Chief Financial Officer to the Board that the Group's risk management and internal control system is operating adequately and effectively, in all material aspects.

Business entities across the Group submitted two half-year risk reports to the RMD according to the TNB Risk Report Guide. Each business entity reported its risk profile, key mitigations, KRIs, lessons learned from risk events and emerging risks unique to its business and RMD thereafter collated and reported the TNB Half-Year Risk Reports to Management for a holistic perspective of the Group's strategic, operational and emerging risks.

#### CAPABILITY BUILDING

The BRC mandated for risk practitioners in the Group to be adequately trained and certified by recognised local or international professional bodies to ensure quality risk management practices are effectively implemented at all levels. Risk management trainings at fundamental and intermediate levels are conducted by the RMD and administered by the TNB Integrated Learning Solutions Sdn. Bhd. (ILSAS) to increase the risk competency of employees across the Group. In FY2022, 55 executives completed the fundamental module with 70 executives at the intermediate level. Additionally, in a collaborative effort between RMD and the business entities, six (6) risk management webinars were conducted that engaged 458 employees in total. These webinars aim to strengthen employees' risk-thinking mindset through practical applications of the TNB Risk Management and TNB Business Continuity Management frameworks.

The Risk Manager Circle, of which the RMD is secretariat, is a community of risk practitioners from across the Group with the aim of promoting capability enhancement among peers. The Circle collaborates quarterly to spearhead risk initiatives and share knowledge and feedback on effective practices and lessons learnt, drawing from their experiences in implementing risk management at respective business entities.

#### COMMUNICATION

The BRC continually communicates its tone from the top, emphasising the importance of effective risk management and a strong risk culture. Pre-pandemic, an annual risk forum was conducted in-person for that purpose. However, in FY2022, a video of BRC members was produced

for the same purpose and communicated to Management and employees at relevant platforms such as management meetings and risk conferences. In 2023, BRC will continue to communicate its tone from the top through the annual risk forum.

The tone from the top on risk management and its benefits was further cascaded by Management to employees via videos of each member of Management that were produced and uploaded into TNB intranet for easy viewing, downloading and sharing.

In addition, five (5) risk conferences were organised by the RMD in FY2022 with total participation from approximately 466 executives and non-executives. These events were organised once restrictions were relaxed post-pandemic and the face-to-face interactions were well-received by the participants and achieved the objective driving the message on the importance of integrating risk management in daily operations and decision-making.

#### BUSINESS CONTINUITY MANAGEMENT

The BRC deliberated the TNB Business Continuity Management (BCM) Framework and its implementation in the Group. The framework provides a structured approach in managing business continuity that enables prompt, coordinated and effective response to a crisis and maintains continuity of essential activities as well as protecting human life, assets, reputation and the environment. The framework is the focal point of reference for business entities to formulate and implement relevant business continuity strategies tailored to respective business objectives and critical functions.

The BRC emphasised the importance of enhancing preparedness through drills of various scenarios and close collaboration with external stakeholders to ensure prompt and adequate response when crisis occurs. The RMD, as the Corporate BCM Secretariat, under the leadership of the TNB Corporate BCM Steering Committee, carried out three (3) drills in FY2022 with involvement from Management and support from BCM practitioners across the Group. In addition, drills to test readiness of business entities in crisis scenarios such as floods and dam safety were carried out according to plan and improvements identified from post-mortems were implemented to close gaps.

#### CONCLUSION

The BRC continues to diligently exercise its risk oversight responsibilities by ensuring that risk management is an integral part of strategic planning and decision-making for the achievement of the Group's strategic outcomes and long-term objectives.

This statement was made in accordance with the resolution of the Board of Directors dated 20 March 2023.

## PRINCIPLE B : EFFECTIVE AUDIT AND RISK MANAGEMENT

### STATEMENT ON INTERNAL AUDIT FUNCTION

TNB's internal audit function, which is under the purview of Group Internal Audit Department (GIA), is established by the Board to provide independent, objective assurance and consulting services designed to add value and improve TNB's operations.

GIA assists TNB in accomplishing its business objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of governance, risk management and control processes.

GIA reports directly to the Board Audit Committee (BAC) to preserve its independence and objectivity and administratively to President/CEO to enable the required stature to fulfil its responsibilities.

GIA is led by Lizah Abd Wahab, who was appointed as the Chief Internal Auditor (CIA) on 1 April 2021. She holds a Bachelor of Accounting and Finance degree from Manchester Metropolitan University, United Kingdom and a Master of Business Administration from Universiti Tenaga Nasional and Graduate Certificate in Management from the University of Melbourne. Additionally, she is a Certified Internal Auditor and obtained a Certification of Risk Management Assurance from the Institute of Internal Auditors (IIA). She brings over 20 years of experience in internal auditing at various areas or functions within TNB.

#### PRACTICES AND FRAMEWORK

GIA endeavours to protect and enhance organisational value by providing risk-based and objective assurance, advice and insight through innovative solutions.

GIA is guided by the Internal Control Framework of Committee of Sponsoring Organisation of the Treadway Commission (COSO) and Control Objectives for Information and Related Technology (COBIT) in assessing and reporting the adequacy and effectiveness of the design and implementation of the organisation's overall system of internal control, risk management and governance.

GIA's processes and activities are governed by the standards and principles outlined in the International Professional Practices Framework (IPPF) issued by IIA, which comprises Core Principles for the Professional Practice of Internal Auditing, International Standards for the Professional Practice of Internal Auditing, Definition of Internal Auditing and Code of Ethics. The effectiveness and quality of the internal audit function are assessed externally at least every three (3) years and the report is presented to the BAC.

#### SCOPE AND COVERAGE

GIA's responsibilities and scope of internal audit activities are outlined in the Internal Audit Charter which was approved by the BAC. The Internal Audit Charter is reviewed annually to ensure relevance and alignment with the requirements of IPPF.

GIA continues to formulate the annual audit plan using a risk-based approach, taking into consideration TNB's risk profile, strategic objectives, regulatory requirements as well as inputs from BAC and senior management.

Beginning FY2022, GIA introduced the thematic auditing approach where audits were clustered into predetermined high-risk areas. The review for each theme was carried out across TNB and its subsidiaries to provide assurance on the overall governance and state of internal controls for the audit area.

During FY2022, GIA issued a total of 143 reports arising from planned audits, follow-up audits and quality assurance reviews. Audit findings were presented to the BAC for deliberation and where relevant, the BAC requested Management to rectify the weaknesses based on recommendations provided by GIA. Subsequently, GIA monitored the implementation of corrective actions through an online platform, the Audit Management System and reports the status to the BAC and Management on a quarterly basis.

GIA has categorised the areas of review according to five (5) audit hotspots based on the current trends, changes in risk landscape and revolving roles of internal auditors. Among the key areas reviewed during FY2022 include :

HOTSPOTS	AREAS OF REVIEW
Governance and Ethics	<ul style="list-style-type: none"> <li>• Corporate Governance Compliance</li> <li>• Whistleblowing Management</li> <li>• Strategic Initiatives</li> <li>• Business Continuity Management*</li> </ul>
Environment and Social	<ul style="list-style-type: none"> <li>• Environmental Management*</li> <li>• Scheduled Waste Management</li> <li>• Safety and Health Management*</li> <li>• Human Resource Management</li> <li>• Corporate Social Responsibility (CSR) Management</li> </ul>
Information Technology and Cybersecurity	<ul style="list-style-type: none"> <li>• Operational Technology (OT) Security and Governance</li> <li>• Data Centre Readiness</li> <li>• Information Communication &amp; Technology (ICT) Management</li> </ul>

## PRINCIPLE B : EFFECTIVE AUDIT AND RISK MANAGEMENT

### STATEMENT ON INTERNAL AUDIT FUNCTION

HOTSPOTS	AREAS OF REVIEW
Operations and Supply Chain	<ul style="list-style-type: none"> <li>• Operation and Maintenance</li> <li>• Billing Management</li> <li>• Asset Management*</li> <li>• Warehouse Management</li> <li>• Budget, Insurance and Treasury Management</li> <li>• Financial Management*</li> <li>• Security Management</li> <li>• Fleet and Workshop Management</li> <li>• Logistics and Freight Management</li> <li>• Management of Claim and Compensation for Third Party Damage</li> <li>• Procurement, Contract and Vendor Performance Management*</li> </ul>
Project Management	<ul style="list-style-type: none"> <li>• Project Governance</li> <li>• Project Planning and Implementation</li> <li>• Verification of Works</li> </ul>

**Note :**

\* Indicates thematic audits.

In providing value to the Company and maintaining the efficiency of the audit works, the internal auditors' key performance indicators include value creation in terms of cost saving/recoveries or business process improvements implemented, completion of the audit plan and audit turnaround.

In addition to the audit engagements performed, GIA carried out two (2) quality assurance reviews of subsidiary's internal audit functions to check compliance with the IPPF elements. GIA was also actively involved in strengthening the internal control system in the Company through sharing of best practices and knowledge on internal auditing, risk management and internal controls.

Additionally, GIA presented TNB's FY2021 Integrated Assurance Report to the BAC, which demonstrates the organisation's overall risk coverage and the state of governance and internal controls in TNB based on reviews performed by the various assurance providers, i.e. GIA, subsidiary's internal audit functions, compliance function in divisions, Health, Safety and Environment Department and Risk Management Department.

#### RESOURCES

The internal audit activities in FY2022 (as at 31 December 2022) were performed in-house by a group of 62 internal auditors with diverse disciplines, as summarised below :

DISCIPLINE	NO. OF AUDITORS	PERCENTAGE (%)
Accounting, Finance and Business	30	48
Engineering	25	40
Quantity Surveying	2	4
System and Data Analyst/ Information Technology	5	8
<b>Total</b>	<b>62</b>	<b>100</b>

The total cost incurred in managing the internal audit function for FY2022 is RM14.9 million, comprising mainly staff costs and audit activities related spending, as follows :

CATEGORY	RM (MILLION)	% OF TOTAL COST
Staff costs	12.9	87
Operating costs	2.0	13
<b>Total</b>	<b>14.9</b>	<b>100</b>

#### PROFESSIONAL QUALIFICATION AND CONTINUOUS DEVELOPMENT

GIA strongly supports continuous learning and development of the internal auditors to ensure that high level of proficiency and due professional care are demonstrated in fulfilling auditors' responsibilities.

As at 31 December 2022, there are 27 GIA staff with various professional certifications as shown below :

CERTIFICATION	NO. OF CERTIFICATIONS OBTAINED
Certified Internal Auditor (CIA)	12
Certified Information System Auditor (CISA)	4
Certification in Risk Management Assurance (CRMA)	4
Association of Chartered Certified Accountants (ACCA)	3
Chartered Institute of Management Accountants (CIMA)	1
Chartered Accountant (Malaysia)	3
Professional Engineer	2
Professional Technologist	10
CISCO Certified Network Associate (CCNA)	3
Certified COBIT 5	3
<b>Total</b>	<b>45</b>

**PRINCIPLE B :  
EFFECTIVE AUDIT AND RISK MANAGEMENT**

In addition to the above, 34% (21 auditors) are in the midst of pursuing their professional certifications at various levels.

GIA commits to ensure that the level of auditors' skills, knowledge and competencies are maintained as reflected in the Internal Audit Charter. These are accomplished through the following :

- Involvement of auditors in national conferences and trainings in the areas of auditing, strategic initiatives, leadership and communication, business acumen, data analytics and personal development.
- Participation in environmental, social and governance (ESG) related trainings to gain understanding and insights on fundamentals of ESG and roles on internal auditor in providing ESG-related assurance, in line with the global trend on sustainability landscape.
- Maintain corporate membership status in IIA Malaysia, which provides access to internal auditors for trainings, reading materials and audit resources and current happenings in audit fraternity.

As of 31 December 2022, GIA incurred a total cost of RM222,955 on internal and external trainings/conferences to enhance auditors' skills, knowledge and competencies.

**SUMMARY OF GIA'S ACTIVITIES IN FY2022**

The key activities undertaken by GIA in FY2022 are as follows :

- Provided independent and objective assurance on the adequacy of internal controls implemented to mitigate risk exposures. The reports on audits performed, which consist of observations, improvement opportunities, management responses, deadline and person in charge for implementation of corrective actions were issued to respective client, senior management and BAC.
- Presented TNB's State of Internal Controls to the BAC on a quarterly basis covering the following :
  - Audit completion status against the approved audits
  - Risks reviewed during audits
  - Results of internal control assessment
  - Status of corrective actions including aging for pending actions
- Performed follow-up audits on corrective actions agreed by Management to assess if the actions have been implemented adequately and timely.
- Attended periodic management and board breakouts to provide independent feedback on governance, risk and controls as well as understanding the Company directions, to be able to provide value-added assurance roles.
- Coordinated and attended meetings with Risk Management Department to deliberate on the Company's risk indicators, emerging risks and relevant mitigation plans. Coordination meetings were also conducted with the External Auditor on a quarterly basis to discuss the audit scope/issues to ensure adequate coverage or minimise duplication of effort.
- Held syndication with TNB's senior management to understand emerging risks and concerns facing TNB to be considered during the development of Annual Audit Plan.
- Maintained a Quality Assurance and Improvement Program (QAIP) covering all aspects of the internal audit activities and evaluated conformance of these activities with the standards established in IPPF issued by the IIA.
- Organised GIA's Webinar Series to provide awareness on risk and internal controls to all TNB employees. Three (3) webinar sessions were conducted in FY2022 relating to ICT systems and infrastructure, internal controls and project management.
- Hosted the Head of ASEAN Power Utilities/Authorities (HAPUA) Internal Audit Summit 2022 entitled Cybersecurity and Information Technology/Operational Technology with participation from internal audit functions from Singapore, Thailand, the Philippines and Vietnam.
- Implemented guest auditor initiative involving subject matter experts on safety and health as well as TNB subsidiaries' internal audit personnel.
- Coordinated training on sustainability related matters for GIA staff and demonstrated commitment towards sustainability goals through GIA's corporate social responsibility (CSR) programme by organising a beach cleaning activity.

# PRINCIPLE C : INTEGRITY IN CORPORATE REPORTING AND MEANINGFUL RELATIONSHIP WITH STAKEHOLDERS

## BOARD LEADERSHIP OF STAKEHOLDER ENGAGEMENT

We have a well-established programme of engaging with a wide range of stakeholders who are key to the successful delivery of our strategy. These include shareholders, the government, regulators, environmental bodies and trade unions. We know that actions taken today will shape the longer-term performance of TNB and determine our impact on the wider world, including our contribution to action on climate change. Such engagement broadens our understanding of the issues we take into account, informs our decision-making and helps to protect the long-term interests of stakeholders.

The Board is responsible for engagement with stakeholders and ensures that appropriate Board time is given to discussing their concerns and that sufficient resources are available for the Group to effectively engage with stakeholders. Internally, divisions across the organisation maintain engagement



### CUSTOMERS

Our customers comprise residential and non-residential segments. The non-residential or business customers come from the commercial, industrial customer segments, including Government, Large Businesses, MSMEs (Micro, Small and Medium Enterprises).



### GOVERNMENT

The Malaysian Federal and State Governments, parliamentarians, municipal councils and regulators.

#### Engagement Platform

- Customer service outlets
- Call centre
- myTNB mobile application and online portal
- Customer surveys
- Social media
- Roadshows
- Campaigns

#### Engagement Platform

- Meetings and briefings
- ◆ Site visits
- ◆ Round table sessions
- One-to-one engagements
- Outreach programmes
- Summits/conferences

#### Areas of Interest or Concern

1. New technologies (e.g. implementation of the smart meter and its offerings, smart solutions, solar solutions and platform solutions)
2. Customer experience and service delivery
3. Accessible, affordable and reliable supply of electricity
4. Regulated & non-regulated innovative solutions
5. Customer education on energy literacy
6. Increasing customer take-up rates on green/sustainable solutions (e.g. REC, GET)

#### Areas of Interest or Concern

1. Regulatory and operational compliance
2. Changes in the regulatory framework and electricity supply industry
3. National Disaster Management (Flood, Dam Safety Management) and cybersecurity management
4. Nation-building initiatives, including community and capability development
5. Energy Trilemma (Accessibility, Affordability and Sustainability)
6. ESG initiatives (e.g. Environmental management)
7. Rakyat well-being, targeted subsidies, stimulate economic growth through green energy and create job opportunities
8. TNB's role as a GLC in making Malaysia a developed nation
9. Local Bumiputera Vendor Development Programme
10. Implementation of Projek Internet Luar Bandar

#### Our Response

- Sustainable Infrastructure and Ecosystems, pages 73-74.
- Customer Centricity, pages 78-81
- Contributing to Community Development, pages 128-136.

#### Our Response

- Creating Value Through Strong Governance, pages 137-209.
- Sustainability Governance, page 164.
- Sustainable Infrastructure and Ecosystems, pages 73-74.
- Minimising Environmental Impacts, pages 105-110.
- Contributing to Community Development, pages 128-136.

## PRINCIPLE C : INTEGRITY IN CORPORATE REPORTING AND MEANINGFUL RELATIONSHIP WITH STAKEHOLDERS

with key stakeholders, ensuring effective communications channels and mitigation of any concerns. Members of executive management, including the Executive Director, provide regular updates to the Board, to ensure awareness and inform discussions. The Board takes these opportunities to assess and challenge Management's approach relating to engagement.

### TNB'S STAKEHOLDER ENGAGEMENT

We are dedicated to building strong relationships with key stakeholder groups. Through meaningful interactions with our stakeholders, we can leverage their insights and address any pressing emerging interests or concerns, keeping us focused on key sustainability matters. Ultimately, this will translate into the strategic management of sustainability in delivering long-term value for our stakeholders.

Legend:   ▲ Daily   ■ All the time   ● Ongoing   ◆ As needed   ◆ Quarterly   ■ Annually   ★ Biannually

INVESTORS	EMPLOYEES
Institutional and retail investors, analysts and potential investors with interest.	Our 34,699 full-time employees throughout TNB Group. Only full-time employees, excluding contractors.
<b>Engagement Platform</b> <ul style="list-style-type: none"> <li>◆ Quarterly and Full Year Financial Results Announcements</li> <li>◆ Engagement sessions with the investment community through one-on-one/group meetings &amp; investor conferences and Non-Deal Roadshows</li> <li>◆ Annual General Meeting</li> <li>◆ TNB corporate website's Investor Relations section</li> <li>◆ Bursa filings and Press Releases</li> <li>◆ Annual Integrated and Sustainability Reports</li> <li>◆ Email updates to investment community</li> </ul>	<b>Engagement Platform</b> <ul style="list-style-type: none"> <li>● Townhalls</li> <li>● <i>Turun padang</i>, brown-bag sessions and other outreach programmes</li> <li>● Online portal (intranet), newsletters, emails and TV TNB Employee surveys</li> <li>● One-to-one engagements (online-based)</li> <li>◆ Social media</li> <li>◆ Corporate Social Responsibility (CSR) events</li> <li>■ Webinars</li> </ul>
<b>Areas of Interest or Concern</b> <ol style="list-style-type: none"> <li>1. Business strategy and performance</li> <li>2. Regulatory risk due to high fuel cost environment</li> <li>3. Environmental, Social &amp; Governance (ESG) and Energy Transition (ET) Plan</li> <li>4. Financial sustainability and returns</li> <li>5. Growth catalyst</li> </ol>	<b>Areas of Interest or Concern</b> <ol style="list-style-type: none"> <li>1. Performance, Rewards and Benefits</li> <li>2. Health and safety of employees</li> <li>3. Employee well-being and workplace culture</li> <li>4. Talent and skills development</li> <li>5. Employee satisfaction</li> <li>6. TNB's strategies and initiatives</li> </ol>
<b>Our Response</b> <ul style="list-style-type: none"> <li>• Strategic Review, pages 38-53.</li> <li>• Sustainable Infrastructure and Ecosystems, pages 73-74.</li> <li>• Customer Centricity, pages 78-81.</li> <li>• Minimising Environmental Impacts, pages 105-110.</li> <li>• Climate Change, page 87.</li> <li>• Employment Management and Growth, pages 111-122.</li> <li>• Emphasis on Health, Safety and Well-being, pages 123-127.</li> </ul>	<b>Our Response</b> <ul style="list-style-type: none"> <li>• Employment Management and Growth, pages 111-122.</li> <li>• Emphasis on Health, Safety and Well-being, pages 123-127.</li> <li>• Contributing to Community Development, pages 128-136.</li> </ul>

## PRINCIPLE C : INTEGRITY IN CORPORATE REPORTING AND MEANINGFUL RELATIONSHIP WITH STAKEHOLDERS



### TRADE UNIONS/ASSOCIATIONS

Three (3) registered unions and two (2) workers associations that cover all categories of employees.



### VENDORS

3,299 active contractors and suppliers.

#### Engagement Platform

- ◆ Joint Consultative Council (JCC)
- ◆ Negotiations for Collective Agreements (CA)
- ◆ Syndication & engagements

#### Engagement Platform

- ◆ Engagement Sessions with Suppliers and Contractors
- ◆ Road Tour Dialogues
- ◆ Vendor Training & Awareness
- ◆ Joint Operation Center

#### Areas of Interest or Concern

1. Mitigation & Resolution of issues
2. Employee well-being
3. Employee engagement regarding strategies and initiatives
4. Impact of new policies or policy revision to employees

#### Areas of Interest or Concern

1. Industry support for business growth through technology and solutions
2. Training and capability development
3. Potential health and safety impacts
4. Procurement processes
5. Fraud and bribery awareness
6. New business opportunities and future developments

#### Our Response

- Employment Management and Growth, pages 111-122.

#### Our Response

- Sustainable Infrastructure and Ecosystems, pages 73-74.
- Emphasis on Health, Safety and Well-being, pages 123-127.

#### Our Stakeholder Engagement Approach :



Strategic alignment with Government agenda and future-proof policies and regulations

## PRINCIPLE C : INTEGRITY IN CORPORATE REPORTING AND MEANINGFUL RELATIONSHIP WITH STAKEHOLDERS

Legend:   ▲ Daily   ■ All the time   ● Ongoing   ◆ As needed   ◆ Quarterly   ■ Annually   ★ Biannually



### COMMUNITIES

Local communities in or near areas where we operate, including those affected by our operations.

#### Engagement Platform

- ◆ Outreach programmes
- ◆ CSR events
- ◆ Townhalls
- ◆ Dialogue sessions
- ◆ Sporting events

#### Areas of Interest or Concern

1. Potential public facilities and basic infrastructure
2. Full compliance with the legal and regulatory requirements
3. Coordination of drill, ERP, crisis
4. Energy literacy
5. Accessible and reliable supply of electricity
6. Efficiency of services

#### Our Response

- Strategic Review, pages 38-53.
- Minimising Environmental Impacts, pages 105-110.
- Contributing to Community Development, pages 128-136.

Develop the capability of our people and communities to inculcate a high performing culture and increase the level of energy literacy



### NON-GOVERNMENTAL ORGANISATIONS (NGOS) AND INTERNATIONAL ASSOCIATIONS

Consumer associations, think tank groups, environmental groups, chambers of commerce and international associations, for example the Heads of ASEAN Power Utilities/Authorities (HAPUA) and Association of the Electricity Supply Industry of East Asia and Western Pacific (AESIEAP).

#### Engagement Platform

- ◆ One-to-one engagements
- ◆ Outreach programmes
- ◆ Seminars and knowledge sharing sessions
- ◆ Collaboration sessions
- ◆ Social media
- ★ Meetings

#### Areas of Interest or Concern

1. Affordable tariffs
2. Innovation in technology and RE
3. Quality of service
4. Supply reliability
5. Current and planned ESG efforts
6. Energy literacy
7. Environment & Occupational safety/health
8. Full compliance with the legal and regulatory requirements

#### Our Response

- Strategic Review, pages 38-53.
- Sustainable Infrastructure and Ecosystems, pages 73-74.
- Minimising Environmental Impacts, pages 105-110.

Resolve issues and create excellent engagement experiences with all key stakeholders

## PRINCIPLE C : INTEGRITY IN CORPORATE REPORTING AND MEANINGFUL RELATIONSHIP WITH STAKEHOLDERS

### ANNUAL GENERAL MEETING

We value and facilitate a direct, two-way dialogue with the shareholders and investors. It is our top priority to provide relevant information to shareholders, listen to and understand their perspectives and respond to their feedback.

Our AGM plays an important role in providing the shareholders with an opportunity to communicate directly with the Chairman and President/CEO about the business, governance, financial performance and prospects. It also provides an opportunity for shareholders to raise questions for the Board, Top Management and the External Auditors on the management and performance of the Company.

The Board ensures that shareholders are given sufficient notice and time to consider the resolutions that will be tabled and discussed at the AGM. The AGM Notice includes explanatory notes that contain further information on the proposed resolutions. It has been the Company's practice since 2017 as per the MCCG, to issue out the Notice of AGM to the shareholders at least 28 days prior to the meeting.

TNB hosted its 32<sup>nd</sup> AGM on 2 June 2022 virtually via Remote Participation and Voting (RPV) at Dewan Seminar, Kompleks Balai Islam An-Nur, Ibu Pejabat Tenaga Nasional Berhad, No. 129, Jalan Bangsar, 59200 Kuala Lumpur, Malaysia, the Broadcast Venue. Holding a virtual AGM allows our shareholders with the opportunity to participate in the AGM regardless of their geographical differences.

A dedicated link was created in our website within a stipulated timeframe so as to provide the shareholders with all information they needed to attend the meeting, including our virtual AGM online guide on how to use the online facility.

In line with the Group's commitment in promoting ESG as well as to achieve greater cost efficiencies, TNB encouraged its shareholders to go paperless and to access the digital copy of TNB's Integrated Annual Report 2021 by downloading it from the Company's website. Aside from that, TNB issued out postcards with QR code to the shareholders, consisting the Notice of 32<sup>nd</sup> AGM, Administrative Details of the 32<sup>nd</sup> AGM, Integrated Annual Report 2021 and Proxy Form to the shareholders, which were also available at the Company's website.

A total of 1,598 shareholders and proxies representing 3,786,076,952 ordinary shares participated online in TNB Virtual 32<sup>nd</sup> AGM as per the Attendance Record issued by TNB Share Registrar. All Directors attended the AGM,

including the Chairmen of respective Board Committees. The Engagement Partner of PricewaterhouseCoopers PLT (PwC) was also in attendance at the AGM to answer shareholders' questions on the conduct of the audit, the preparation and content of the audit report, the accounting policies adopted by the Company and the independence of auditors in the audit process.

Shareholders were provided with similar opportunities online as they would have had attending the AGM in person. They were able to view presentation on the Company's financial and technical/operational highlights by the President/ CEO, as well as vote and ask questions during the meeting. During the Meeting, the Chairman encouraged the shareholders to post questions to the Board and Management on the proposed resolutions tabled at the AGM. All questions submitted during the meeting were answered by the President/CEO, Chief Financial Officer and Company Secretary accordingly during the meeting.

The 32<sup>nd</sup> AGM was conducted online via BoardRoom's LUMI AGM. Shareholders/proxies were able to view the live webcast of the AGM proceedings, post questions to the Board/Management and submit their votes in real-time whilst the meeting was in progress. The procedures for RPV facilities were explained in the Administrative Details of 32<sup>nd</sup> AGM issued to the shareholders on 29 April 2022.

All resolutions of 32<sup>nd</sup> AGM were tabled and approved by the shareholders. All resolutions were voted by poll and the results were validated by Boardroom Corporate Services Sdn. Bhd., the independent scrutineer appointed by the Company. The outcomes of poll voting were announced to the market and posted on the Company's website on the same day of the AGM.

The minutes of meeting was made available on TNB's website at [www.tnb.com.my](http://www.tnb.com.my) no later than 30 business days after the AGM.

## PRINCIPLE C : INTEGRITY IN CORPORATE REPORTING AND MEANINGFUL RELATIONSHIP WITH STAKEHOLDERS

### FINANCIAL CALENDAR

#### Announcements of Consolidated Results



**30 May 2022**

- Unaudited consolidated results for the first (1<sup>st</sup>) quarter ended 31 March 2022



**30 August 2022**

- Unaudited consolidated results for the second (2<sup>nd</sup>) quarter ended 30 June 2022



**23 November 2022**

- Unaudited consolidated results for the third (3<sup>rd</sup>) quarter ended 30 September 2022



**27 February 2023**

- Unaudited consolidated results for the fourth (4<sup>th</sup>) quarter ended 31 December 2022

#### Dividends

Interim Single-Tier Dividend of 20.0 sen per ordinary share for the Financial Year ended 31 December 2022



**30 September 2022**

- Entitlement Date



**14 October 2022**

- Payment Date

Final Single-Tier Dividend of 26.0 sen per ordinary share for the Financial Year ended 31 December 2022



**31 March 2023**

- Entitlement Date



**14 April 2023**

- Payment Date

#### Annual General Meetings



**29 April 2022**

- Notice of Virtual 32<sup>nd</sup> Annual General Meeting and Issuance of Integrated Annual Report and Audited Financial Statements for the Financial Year ended 31 December 2021



**2 June 2022**

- Virtual 32<sup>nd</sup> Annual General Meeting



**17 April 2023**

- Notice of Virtual 33<sup>rd</sup> Annual General Meeting and Issuance of Integrated Annual Report and Audited Financial Statements for the Financial Year ended 31 December 2022



**18 May 2023**

- Virtual 33<sup>rd</sup> Annual General Meeting

#### FOSTERING BENEFICIAL RELATIONSHIPS THROUGH PROACTIVE AND TRANSPARENT COMMUNICATION WITH THE INVESTMENT COMMUNITY

The Group commits to effective communication and proactive engagements with the investment community to foster purposeful and strategic relationships for sustainable long-term success. The Investor Relations (IR) team supports the Senior Management and maintains an inclusive practice of disseminating relevant and material information on the development of the Group to the investment community. We communicate formally with our investment community via various channels, namely:

- Quarterly and Full Year Financial Results Announcements
- Engagement sessions with the investment community through one-on-one/group meetings and investor conferences and Non-Deal Roadshows
- Annual General Meeting
- TNB corporate website's Investor Relations section
- Bursa filings and Press Releases
- Annual Integrated and Sustainability Reports, and
- Email updates to investment community.

Active communication with existing and potential investors through various platforms keeps the investment community abreast of our strategic developments, financial and technical performance and other areas of interest as outlined under the "Investment Community Feedback" section below.

Our dedicated Investor Relations section on TNB's corporate website at [www.tnb.com.my](http://www.tnb.com.my) provides an access to our corporate financial information as well as investor presentation to the investment community. The team welcomes any investor related queries and feedback at [tenaga\\_ir@tnb.com.my](mailto:tenaga_ir@tnb.com.my).

#### ACTIVE DIALOGUE WITH THE INVESTMENT COMMUNITY

Year 2022 was a challenging year as the country's economic environment remained fragile due to the emergence of the Omicron variant, higher fuel prices and widespread global inflation. Nevertheless, the IR team continued to maintain an active dialogue with the investment community through various available meeting platforms.

During the year, the number of engagements with analysts and investors was 598 through a planned investor relations programme, i.e. investor conferences/non-deal roadshows and corporate days, engagement sessions with the investment community through one-on-one/group meetings, analyst briefings for financial results as well as engagement through other communication platforms.

## PRINCIPLE C : INTEGRITY IN CORPORATE REPORTING AND MEANINGFUL RELATIONSHIP WITH STAKEHOLDERS

### IR CALENDAR OF EVENTS FOR FY2022

EVENT			
 7 January 2022	— CIMB Annual Malaysia Corporate Day	 16 August 2022	— TNB Energy Transition with GLICs and Investor Day
 25 February 2022	— Analyst Briefing 4QFY2021 Quarterly Results Announcement	 1 September 2022	— Analyst Briefing 2QFY2022 Quarterly Results Announcement
 10 March 2022	— 18 <sup>th</sup> Annual CITIC CLSA Asean Forum 2022	 15 September 2022	— CLSA Conference 2022
 22 March 2022	— Bursa – HLIB Stratum Focus Series XIII : Electric Vehicles (EV)	 22 September 2022	— ESG Corporate Day - CGS-CIMB
 1 June 2022	— Analyst Briefing 1QFY2022 Quarterly Results Announcement	 4 October 2022	— Site Visit to TNB Sepang Solar with Kenanga Investment Bank and Clients
 9 June 2022	— Nomura Investment Forum	 12 October 2022	— Nomura Malaysia Corporate Day 2022
 10 June 2022	— UBS One Asean Conference	 27 October 2022	— RHB Conference on EV
 7 July 2022	— Maybank IBG Invest Asean 2022 Corporate Access Malaysia Week	 28 November 2022 – 2 December 2022	— CLSA & UBS Non-Deal Roadshow in the United Kingdom and Europe
 21 July 2022	— Site Visit to TNB Sepang Solar with UOB Kay Hian Securities and Clients	 8 December 2022	— Analyst Briefing 3QFY2022 Quarterly Results Announcement
 28 July 2022	— Site Visit to Jimah East Power with CLSA and Clients		

### INVESTMENT COMMUNITY FEEDBACK

Based on IR's engagement sessions with the investment community, the key areas of interest include :

- Business strategy and performance
- Regulatory risk due to high fuel environment
- Energy Transition (ET) Plan initiatives and progress :
  - GenCo decarbonisation plan
  - Renewable Energy growth opportunities
  - Capital Expenditure (CAPEX) plan for ET
  - TNB's plan on electric vehicle (EV) ecosystem
- Financial sustainability and return :
  - Working capital management initiatives
  - Cash flow situation due to higher fuel prices
  - Gearing and financial position
  - Dividend

### BUILDING LONG-TERM SHAREHOLDER VALUE

In 2022, TNB Board of Directors approved a final single tier dividend of 26.0 sen per share, raising the single tier dividend total to 46.0 sen per share. This translates to a dividend payout ratio of 55.2% from the Group's Adjusted PATAMI, honouring the Company's 30% to 60% dividend policy consistently for the last five (5) Financial Years.

## PRINCIPLE C : INTEGRITY IN CORPORATE REPORTING AND MEANINGFUL RELATIONSHIP WITH STAKEHOLDERS

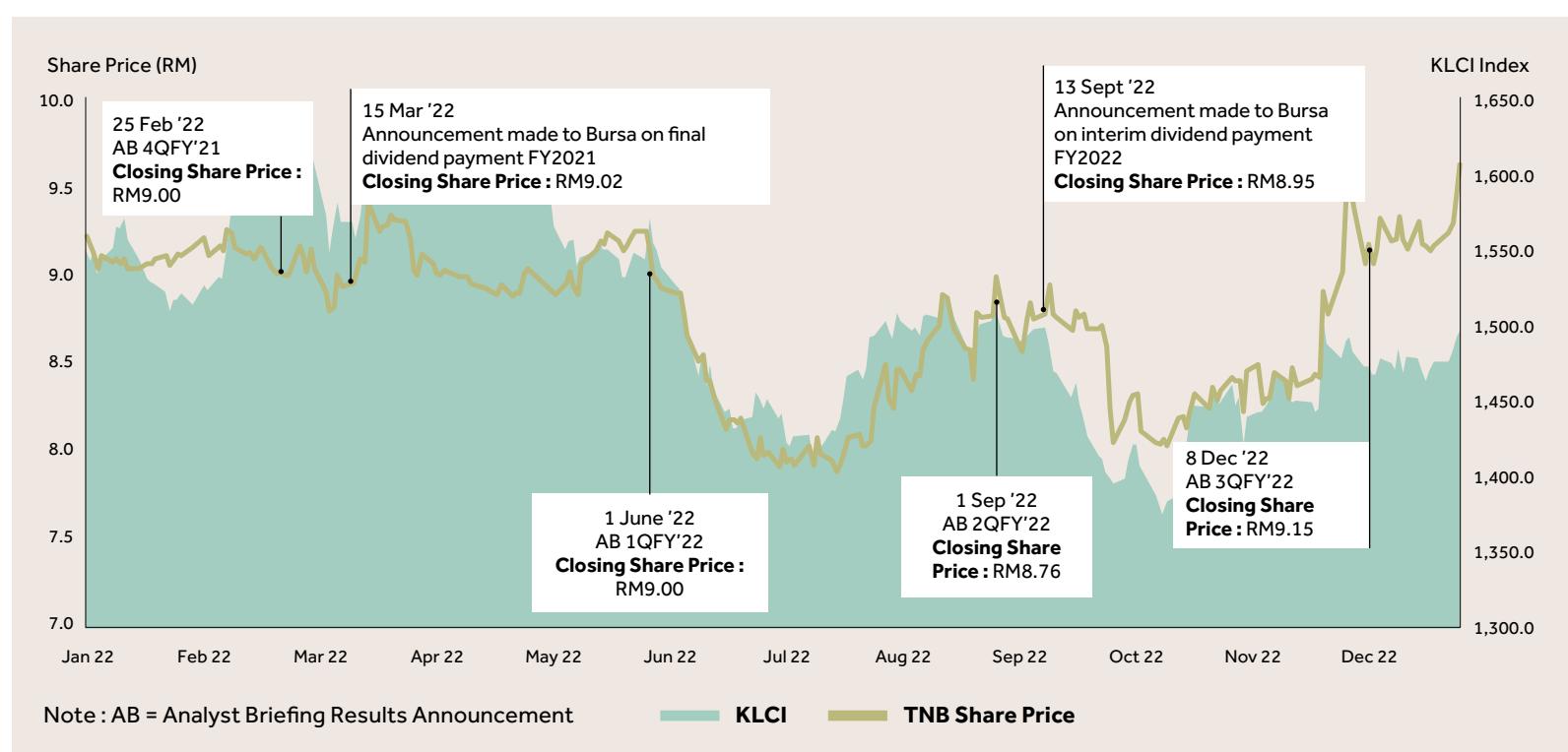
### ANALYST COVERAGE

As one of the largest companies by market capitalisation on Bursa Malaysia, we have a broad range of analyst coverage, with 20 sell-side research analysts covering the stock of which 45% are from foreign research houses. We maintained close relationships with our analysts to ensure that all information provided to the market is accurate and consistent with the Company's performance and latest developments.

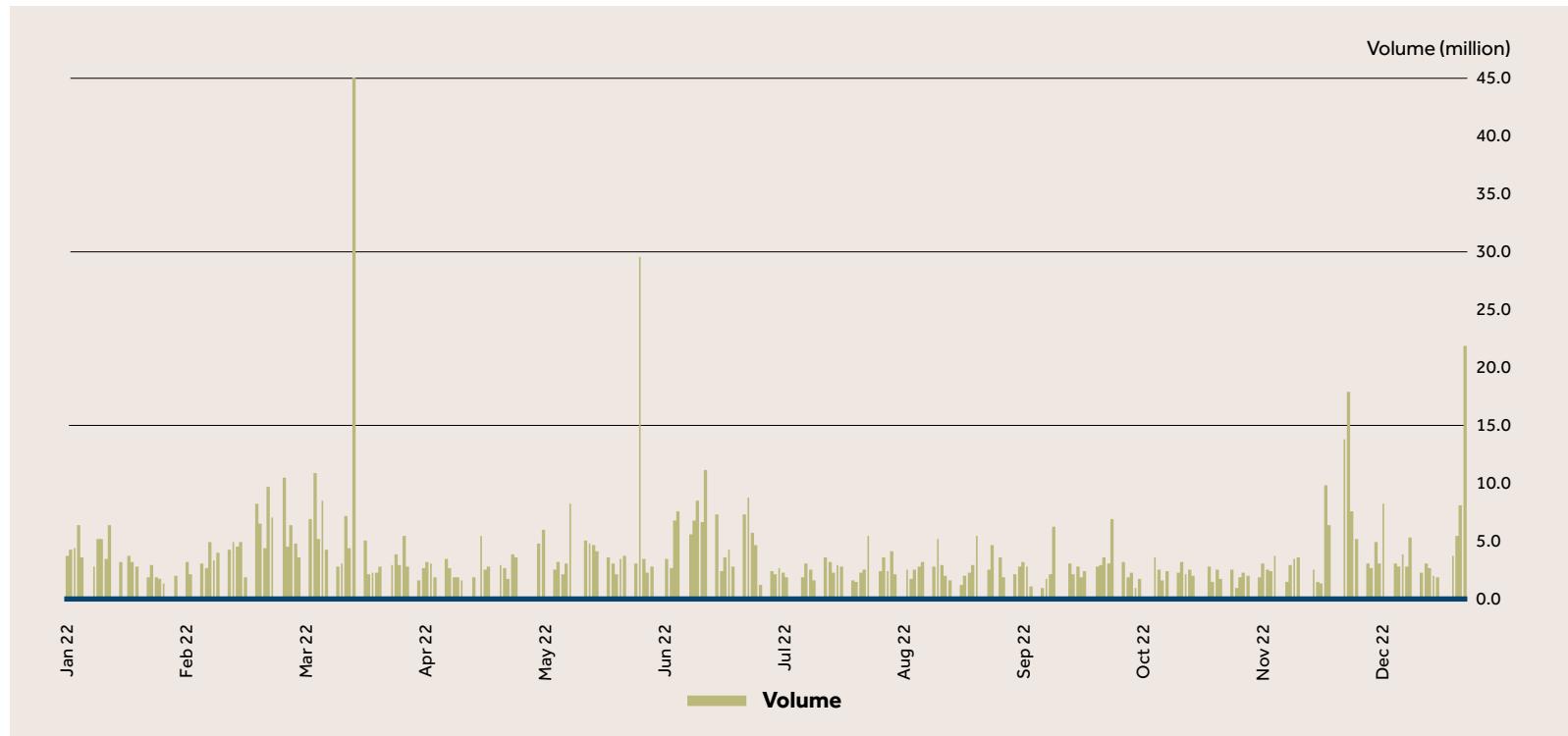
Affin Hwang Investment Bank	AmInvestment Bank	CGS-CIMB Securities	Citi Research	CLSA
Credit Suisse	Hong Leong Investment Bank	J.P. Morgan	KAF-Seagroatt & Campbell Securities	Kenanga Investment Bank
Macquarie Capital Securities	Maybank Investment Bank	MIDF Amanah Investment Bank	Morgan Stanley Research	Nomura
Public Investment Bank	RHB	TA Securities	UBS Global Research	UOB Kay Hian Securities

### SHARE PRICE PERFORMANCE

TNB SHARE PRICE, FBM KLCI INDEX AND VOLUME TRADED IN FY2022



## PRINCIPLE C : INTEGRITY IN CORPORATE REPORTING AND MEANINGFUL RELATIONSHIP WITH STAKEHOLDERS



### RELATIONSHIP WITH EXTERNAL AUDITORS

The Board maintains a transparent and professional relationship with the External Auditors, with the BAC responsible for recommending the appointment or removal of the External Auditors, the approval of their remuneration and the terms of their engagement to the Board.

The Board and the BAC are responsible for reviewing, assessing and monitoring the performance, suitability and independence of External Auditors. The Board has set a policy on External Auditors which stipulates the guidelines and procedures for the Board and the BAC to assess and monitor the performance and independence of the External Auditors.

The policy covers Selection and Appointment, Independence, Conflict of Interest, Non-Audit Services, Rotation of Audit Partner (applies to lead audit engagement partner), Annual Reporting, Annual Assessment and Audit Fees.

The appointed Audit Partner by the External Auditors is subject to rotation at least every five (5) Financial Years, and a two (2) year gap before returning as Audit Partner for the engagement.

The External Auditors can also be engaged to perform non-audit services provided such services do not impair either in fact or appearance the auditors'

objectivity, judgment or independence. The External Auditors are required to provide their written assurance of meeting the independence requirements for each non-audit service undertaken by them for TNB Group.

The prohibition of non-audit services is based on three (3) basic principles, that the External Auditors cannot function in the role of Management; cannot audit their own work; and cannot serve in an advocacy role of TNB Group.

The External Auditors shall observe and comply with the By-Laws of MIA in relation to the provision of non-audit services and, if necessary, apply safeguards as stipulated in the By-Laws of MIA.

The Board, through the BAC, at its meeting on 24 February 2022 had approved the review of External Auditors Policy in accordance with Practice 9.2 of the MCCG, whereby the BAC has a policy that requires a former partner of the External Auditors of TNB to observe a cooling-off period of at least three (3) years before being appointed as a member of the BAC. Apart from that, the said review also is in line with the inclusion of Guidance 9.3 of the MCCG, of which the annual assessment of External Auditors should also consider information presented in the Annual Transparency Report of the audit firm.

## PRINCIPLE C : INTEGRITY IN CORPORATE REPORTING AND MEANINGFUL RELATIONSHIP WITH STAKEHOLDERS

The BAC assists the Board in assessing whether the independence of the External Auditors has been maintained, having regard to any non-audit related services. The BAC considered the provision of non-audit fees by the External Auditors for the non-audit services provided to the Group and the Company during the Financial Year and concluded that the provision of these fees does not compromise or impair the External Auditors' independence or objectivity.

The amount of Audit and Non-Audit Fees paid or payable to PwC or its affiliates by the Company and TNB Group for the Financial Year ended 31 December 2022 is as follows :

	Group RM million	Company RM million
Statutory Audit	8.5	1.4
Audit Related Services	1.9	1.4
<b>Total</b>	<b>10.4</b>	2.8
Non-Audit Services :		
- Tax Related Services	0.2	0.1
- Other Non-Audit Services	1.5	0.2
<b>Total</b>	<b>1.7</b>	0.3

The Non-Audit Fees did not exceed 50% of the Audit Fees for the Financial Year under review, in line with TNB's External Auditors Policy.

All services were procured competitively in accordance with TNB's Procurement & Supply Chain Policy and Procedures and External Auditors Policy. Non-audit services can be offered by the External Auditors of the Group if there are clear efficiencies and value added benefits to the Group.

Based on the External Auditors Assessment Results for the Financial Year 2022, overall, the Company was highly satisfied/satisfied, with a score of 93.3%, a slight decrease of 2.8% compared to the previous Financial Year, with the services provided by PwC in term of quality, sufficiency of resources, communication and interaction and independence, objectivity and professional skepticism. All comments made were forwarded to PwC in order to further improve their services.

With that, the Board/BAC are satisfied with the quality of service, sufficiency of resources, communication and interaction and independence, objectivity and professional skepticism demonstrated by PwC in carrying out its duties as External Auditors.

Being satisfied with the External Auditors' performance, the Board recommends their re-appointment for shareholders' approval at the AGM.

### INSIDER TRADING

The Directors and Top Management of TNB are prohibited from trading in securities or any kind of price-sensitive information and knowledge which have not been publicly announced, in accordance with the MMLR and relevant provisions of the Capital Markets & Services Act 2007. Notices on the closed period for trading in TNB's securities are circulated on a quarterly basis in advance of each closed period to Directors and Top Management who are deemed to be privy to any price-sensitive information and related actions.

### RESPONSIBILITY STATEMENT IN RESPECT OF THE FINANCIAL YEAR UNDER REVIEW

The Board is fully accountable for ensuring the Audited Financial Statements are prepared in accordance with the Companies Act 2016 and the applicable approved accounting standards set out by the Malaysian Accounting Standards Board so as to present a true and fair view of the Group's state of affairs and of the profit or loss and cash flow as at the end of the accounting period. In preparing the Audited Financial Statements, the Directors are satisfied that the applicable approved accounting standards in Malaysia have been complied with and reasonable and prudent judgements and estimates have been made. The Audited Financial Statements are also prepared on a going concern basis as the Board has a reasonable expectation, after having made enquiries, that the Group has adequate resources to continue its operational existence for the foreseeable future.

# STATEMENT ON RISK MANAGEMENT AND INTERNAL CONTROL

The Board of Directors (the Board) is pleased to present its Statement on Risk Management and Internal Control (SORMIC) for the Financial Year ended 31 December 2022 that has been prepared and jointly endorsed by the Board Risk Committee and Board Audit Committee. This Statement is prepared pursuant to paragraph 15.26(b) of the Main Market Listing Requirements of Bursa Malaysia Securities Berhad (Bursa) and guided by the Statement on Risk Management and Internal Control – Guidelines for Directors of Listed Issuers issued by Bursa.

This Statement outlines the nature and scope of the risk management and internal control systems within TNB Group during the year under review. The scope of this disclosure excludes associated companies and joint ventures.

The Board affirms its overall responsibility and is committed to establishing and maintaining sound, effective and efficient risk management and internal control systems to safeguard shareholders' investment and the Group's assets. These systems are designed to manage rather than eliminate risks and therefore provide reasonable rather than absolute assurance against material losses, misstatements or other significantly adverse consequences.

## THE BOARD COMMITTEES

The Board acknowledges the importance of maintaining robust risk management practices and sound internal controls for good corporate governance.

The following Board Committees were established with clearly defined terms of reference to promote governance, transparency and accountability :

Board Audit Committee	Board Risk Committee
Board Tender Committee	Board Integrity Committee
Board Nomination & Remuneration Committee	Board Finance & Investment Committee
Board Long Term Incentive Plan Committee	

## THE MANAGEMENT COMMITTEES

TNB Management is accountable to the Board for ensuring effective implementation of the Group's risk management and internal controls. The Management is responsible for implementing the processes to identify, evaluate, monitor and report risks and for ensuring the effectiveness of internal controls, taking appropriate and timely action as required.

The following Management Committees are in place to implement and execute the Group's risk management and internal control systems for the achievement of short- and long-term business objectives.

Group Executive Management Committee	Group People Committee
Group Management Tender Committee	Commodity Procurement Executive Committee
Investment Executive Committee	Energy Supply Committee
Regulatory Council	Sustainability and Energy Transition Council
Electric Vehicle Council	Technology Council
Information & Communication Technology Governance Council	Smart Meter Council
Health, Safety and Environment Council	Integrity Council

## STATEMENT ON RISK MANAGEMENT AND INTERNAL CONTROL

### RISK MANAGEMENT

#### RISK MANAGEMENT FRAMEWORK

Risk management in TNB is governed by the TNB Risk Management Framework, which adopts the principles and guidelines set out in ISO 31000:2018, 'Risk Management - Guidelines'. This framework provides a structured and consistent approach for risk management implementation across the Group. The purpose of risk management is to create and protect value and this is exemplified through each element in the TNB Risk Management Framework.



The framework has been approved by the Board Risk Committee (BRC) and is reviewed annually. The implementation of the TNB Risk Management Framework is documented through six risk governance documents, which are the TNB Risk Management Framework, TNB Risk Management Policy, TNB Risk Assessment Process, Risk Review, Risk Report and Key Risk Indicator.



The TNB Risk Management Framework document describes the criteria and frequency of revision of these risk governance documents and the levels of approving authority to ensure the documents are robust, practical for implementation and reflective of the internal and external context. In the year under review, revisions for clarity in the TNB Risk Management Framework document were deliberated on and approved by the Group Risk Management Working Committee (GRMWC).

#### RISK MANAGEMENT POLICY

The TNB Risk Management Policy is a statement of the overall intention and direction of the Group on risk management. It describes the commitment of the Group to assessing risks in alignment with business objectives, integrating risk management in all decision-making processes, anticipating potential risks in response to changes in the internal and external environments and ensuring that risk information is communicated through a clear and robust monitoring and reporting structure.

The policy emphasises the role of all TNB employees, who are responsible and accountable for managing risks related to their actions and decisions by taking all reasonable care to minimise losses, maximise opportunities and ensure TNB's reputation is upheld.

## STATEMENT ON RISK MANAGEMENT AND INTERNAL CONTROL

### LEADERSHIP AND COMMITMENT

The TNB Risk Management Structure depicts the leadership and commitment of the Board and Management in the escalation and cascading of risk information across all levels.



The establishment of the BRC reaffirms the Board's commitment to ensuring that the Group has in place a sound and robust enterprise risk management framework and that the framework has been effectively implemented to enhance the Group's ability to achieve its strategic objectives. The BRC is supported by Management through the Group Executive Management Committee chaired by the President/Chief Executive Officer, the cross-functional GRMWC and Subsidiaries Risk Management Working Committee (SRMWC), as well as the Risk Management Department led by the Chief Risk Officer. Assurances are provided to the Board and Management through internal and external audits.

In the year under review, the BRC convened seven sittings to deliberate risk issues and key risk indicators, as well as reviewing the effectiveness of appropriate systems to manage risks. The business entities provided assurances to the BRC of their risk management and internal controls, assisting the Board in its decision-making, especially in the management of potential risks that could prevent the Group from achieving its objectives.

### RISK ASSESSMENT PROCESS

TNB business entities are guided by the TNB Risk Assessment Process that provides a structured approach to identifying, analysing, evaluating and treating risks. TNB business entities apply the process in a systematic, iterative and collaborative manner, drawing on the knowledge and views of stakeholders to develop their respective risk profiles.

The TNB Risk Assessment Process was applied in the assessment of the TNB Strategic Risks that could prevent the Group from achieving its Reimagining TNB strategies, considering internal and external factors. Annual revisions of these risks were approved by the BRC in the year under review and the 10 TNB Strategic Risks are described below :

CATEGORY	NO. RISK
External	<p><b>1. Catastrophic disruptions from external factors</b>            TNB business entities are exposed to unpredictable external events that could catastrophically impact business operations, profitability and reputation. Examples of external factors are pandemics, cybersecurity attacks, economic trade wars, extreme weather events, etc.</p>

## STATEMENT ON RISK MANAGEMENT AND INTERNAL CONTROL

CATEGORY	NO. RISK
Sustainability	<p><b>2. Inability to keep pace with Environmental, Social &amp; Governance (ESG) developments and transitions globally</b>            It is vital that TNB aligns itself with global ESG commitments and frameworks to fulfil its purpose of brightening lives through innovative and sustainable solutions for a better world. Failure to do so could erode market confidence in TNB as a sustainable company, adversely affecting employee morale and damaging TNB's reputation.</p>
Regulatory	<p><b>3. Unfavourable energy transition &amp; climate change policies &amp; regulations</b>            TNB has established its Reimagining TNB aspiration, strategies and targets to be met in 2025, anchored on the energy transition theme. Changes in policies and regulations relating to energy transition and climate change may impact TNB's ability to achieve the 2025 aspiration and targets.</p> <p><b>4. Unfavourable ESI regulatory implementation and outcomes</b>            The energy sector is a highly regulated sector, and any changes in regulations will heavily impact our business continuity. TNB's regulated business is dependent on favourable decisions arising from other regulated policies and directions, e.g. ICPT, Annual Regulatory Adjustment, political scenario, MESI reform, etc.</p> <p><b>5. Regulatory uncertainty</b>            Due to their nature of business, TNB business entities are susceptible to decisions by regulatory stakeholders at the federal, state and international levels. Business operations may be delayed or encumbered due to measures and decisions in relation to investment and divestment, use of natural resources, right-of-way, etc.</p>
Market	<p><b>6. Unable to be competitive in non-regulated business (international &amp; domestic)</b>            TNB is diversifying its business into non-regulated segments, both domestically and internationally. However, these markets are highly competitive and challenging, making it difficult for TNB to participate in and compete.</p>
Customers	<p><b>7. Inability to remain as the electricity provider of choice for customers</b>            TNB supplies electricity to the entire nation and needs to continue doing so in a reliable, safe and high-quality manner to retain the trust and confidence of customers. Failure to deliver the above could lead to customer dissatisfaction and disengagement, inability to capture potential business growth and a negative image and reputation.</p>
Finance	<p><b>8. Ineffective capital allocation to maximise value creation</b>            Effective sourcing and allocation of funds is important to enhance operational efficiency, growth and financial stability to ensure fair returns to shareholders. Ineffectiveness could lead to missed opportunities, reduction of financial profits and decreased market confidence.</p>
Capabilities	<p><b>9. Gaps in workforce capabilities to deliver Reimagining TNB strategy and sustainability aspiration</b>            It is critical for TNB to develop and deploy new institutional capabilities to the right areas in the organisation and to increase workforce diversity (skill sets, exposure, gender, etc.) in line with TNB's sustainability aspiration. Failure to close the capabilities gap could impact TNB's ability to achieve its long-term strategy and aspirations.</p> <p><b>10. Failure to ingrain TNB culture in employees' behaviour in supporting Reimagining TNB strategy and sustainability aspiration</b>            Culture moulds the direction, beliefs and shared values that shape employee perception, behaviour and understanding across all levels in TNB, including the Board. Failure to effectively ingrain the Reimagining Culture values in the organisation and processes may result in lower productivity, fraud and bribery, a silo mentality, etc.</p>

## STATEMENT ON RISK MANAGEMENT AND INTERNAL CONTROL

### REVIEW, MONITOR AND REPORT

The BRC approved the TNB Three-Year Cycle Risk Governance Plan for implementation from FY2022 to FY2024. This plan was implemented by the Risk Management Department to assist the BRC in ensuring that TNB business entities have in place a sound and robust enterprise risk management framework which is being implemented effectively. The plan outlines three (3) risk governance activities, which are risk review, risk maturity assessment and desktop risk assessment. In accordance with the plan, the Risk Management Department, in collaboration with TNB business entities, conducted 15 risk reviews, five (5) risk maturity assessments and eight (8) desktop risk assessments in the year under review.

As per the TNB Risk Management Framework, TNB business entities are responsible for assessing their respective risks and registering them in the TNB Risk Information System (TRIS), a centralised online real-time tool and database, for monitoring and reporting. Risks are also reviewed annually by the business entities with participation and eventual approval from the risk owners.

Half-yearly risk reports are submitted by the business entities to the Risk Management Department for consolidation. Group-wide consolidated half-yearly risk reports, which include reports of emerging risks, are deliberated on and endorsed by the GRMWC for onward internal dissemination.

### KEY RISK INDICATORS

Key Risk Indicators (KRIs) that provide early warning of increasing risk exposures and potential risk events have been developed by the business entities. These KRIs are developed with the risk appetite of the BRC and TNB Management in mind. The status of KRIs is reported quarterly to the BRC, GRMWC and SRMWC and mitigating measures are deliberated on to prevent risk exposures from escalating beyond tolerable levels.

The KRIs are escalated and reported to the BRC to monitor risks that would impact five (5) areas, which are operations, financial standing, regulatory, reputation and international investment. Other operational KRIs that are deliberated on by the GRMWC and SRMWC enable inter-business collaboration to mitigate risks from a Group-wide perspective.

The KRIs are reviewed annually for relevancy and adequacy, considering short- and long-term business objectives and changes in the internal and external environments.

### COMMUNICATION & INTEGRATION

The business entities regularly communicate with internal and external stakeholders with up-to-date risk information and timely feedback is

collated for continual improvement. It is the role of the business entity to ensure risk management forms part of and is not separate from, its objectives, governance, leadership and commitment, operations and performance management.

In the year under review, five (5) risk conferences were organised by the Risk Management Department with total participation from approximately 466 TNB executives and non-executives. These events were organised once restrictions were relaxed post-pandemic and the face-to-face interactions were well received by participants and achieved the objective of driving the message on the importance of integrating risk management in daily operations and decision-making.

Additionally, webinars continued to be conducted in collaboration with the TNB business entities and in the year under review, 458 employees were engaged through six (6) webinars. These webinars aimed to strengthen employees' risk-thinking mindsets through practical applications of the TNB Risk Management and TNB Business Continuity Management frameworks.

The BRC continually communicates its tone from the top, emphasising the importance of effective risk management and strong risk culture. Pre-pandemic, an annual risk forum held with the BRC was conducted in-person for that purpose. However, in FY2022, a video of BRC members was produced for the same purpose and communicated to Management and employees through relevant platforms such as management meetings and risk conferences. In 2023, the BRC will continue to communicate its tone from the top through the annual risk forum.

The tone from the top on risk management and its benefits was further cascaded by Management to employees via videos of each member of Management that were produced and uploaded to TNB's intranet for easy viewing, downloading and sharing.

In collaboration with TNB Integrated Learning Solution (ILSAS), the centre for energy learning, advisory, services and consultancy, the Risk Management Department continued to drive risk management training modules at the fundamental and intermediate levels. In the year under review, a total of 55 employees completed the fundamental module and 70 employees completed the intermediate module. In addition, five (5) employees from the Risk Management Department successfully obtained the professional risk certification from the Academy of Risk Management Malaysia (ARiMM) and were recognised as Certified Risk Managers.

### CULTURE

The risk culture described in the TNB Risk Management Framework is aligned with the six (6) TNB core values and behaviours. The application of these core values and behaviours are described in a risk management context to provide clear guidance and communicate the expected behaviour of employees in building a sustainable risk culture.

## STATEMENT ON RISK MANAGEMENT AND INTERNAL CONTROL

### INTERNAL CONTROL

#### GROUP POLICIES AND PROCEDURES

Group-wide policies and procedures have been approved by the Board and Management to ensure ethics and internal control principles and mechanisms are embedded in business operations. These policies and procedures are consistently reviewed for relevance and effectiveness.

Among others, the Group policies and procedures in place are :

TNB Code of Ethics	TNB Environmental Policy
TNB Ethics & Integrity Policy	TNB Security Policy
TNB Risk Management Policy	TNB Communication Policy
TNB Confidentiality Policy	TNB Personal Data Protection Policy
TNB Asset Management Policy	TNB Disciplinary Procedures
TNB Limits of Authority	TNB Investment Process Control : Updated Investment Process and Investment Risk Methodology
TNB Procurement and Supply Chain Policy and Procedures	TNB Group Financial Policies and Procedures
TNB ICT Security Policy and ICT Codes of Practice	TNB Group Human Resource circulars and guidelines
TNB Safety & Health Policy	

#### FINANCIAL AND OPERATIONAL CONTROL FRAMEWORK

TNB Group Financial Policies and Procedures (GFPP) serve as a compulsory source of reference for the Group in conducting its operations to manage associated risks. The Group has acted in accordance with generally accepted accounting principles and the Malaysian Financial Reporting Standards. Periodic reviews of actual performance versus budgets, targets and performance in prior periods for key functions and major initiatives are carried out and appropriate mitigating and follow-up actions are taken.

The Board Audit Committee (BAC) reviews the Group's quarterly financial performance together with TNB Management and this is subsequently reported to the Board. The quarterly reviews enable the BAC to deliberate on and assess the Group's financial results and operational performance.

TNB continues to proactively engage with relevant stakeholders for smooth implementation of the IBR framework. The performance of the regulated business is meticulously monitored through the IBR performance indicators and dashboards. These are reported regularly to relevant decision-making committees to ensure effective implementation of the IBR framework, as well as to the Energy Commission in compliance with the IBR guidelines.

The procedures for critical functions and key activities are documented, communicated to employees and periodically reviewed. Relevant business entities have been consistently maintaining their certifications in ISO 9001, ISO 14001, ISO 27001, ISO 37001, ISO 45001 and ISO 55001. Internal audits are conducted to ensure compliance with relevant standards and procedures.

#### STRATEGIC PLANNING AND PERFORMANCE MANAGEMENT CYCLE

A holistic strategic planning process is integral to providing focus and alignment between aspiration, strategies, performance management and the desired strategic outcomes. The Strategic Planning and Performance Management (SPPM) cycle approved by the Board depicts a 5-part cycle that integrates the capital and budget allocation process with the performance management cycle. It includes the identification of strategy-driven Key Performance Indicators (KPIs) based on long-term business plans and annual operating plans, which are thereafter cascaded to all levels of employees. The strategy-driven KPI methodology is derived from the Balanced Scorecard concept that focuses on performance measures from four perspectives, which are financial, customer, internal process and learning and growth.

## STATEMENT ON RISK MANAGEMENT AND INTERNAL CONTROL

### HUMAN RESOURCE MANAGEMENT AND DEVELOPMENT

Job descriptions and responsibilities of approved positions are clearly defined and communicated through the internal online platform, People Matters. Workforce requirements planning is carried out and led by Group Human Resource, mirroring the budget planning cycle with the aim of optimising staffing levels and increasing productivity. Employee training needs are regularly assessed and various programmes are in place to address competency gaps.

Moreover, effective succession management improves organisational ability to maintain continuity of operations with minimal disruption and benefits both the employees by preparing them to be strong talents and the organisation by facilitating smooth transitions. The TNB Succession Management Framework aims to ensure the succession management strategy is agile and in line with current and projected business objectives by defining critical positions, nominating and evaluating talents, identifying development needs and reviewing and adapting to business needs.

### HEALTHCARE & WELLNESS MANAGEMENT

The TNB Total Wellness Programme, which aims to educate and influence employees towards a healthy lifestyle and work-life balance, continues to be implemented through the 'Vibrant Living – Healthier Together' initiative. This initiative focuses on six (6) scopes, which are healthy diet, no smoking/vaping, active lifestyle, weight management, basic health screening and mental well-being. Weekly "Wellness Wednesday" health talks and awareness sessions conducted online are open to all employees and retirees with the aim of increasing awareness on common health issues and encouraging healthier habits.

### TNB DIGITAL STRATEGY

The TNB Digital Strategy was established to lay the necessary digital foundations and direction in supporting the RT strategies. The digital strategy is implemented through five (5) streams : first, identifying the digital vision and value levers for ten key business entities; second, developing a clear plan for attracting and developing the right digital talents and for cultural change; third, enhancing digital architecture readiness to support business imperatives; fourth, establishing a digital operating model, factory and skills hub to host critical in-demand skills and fifth, building a governance and value realisation framework.

### MANAGEMENT INFORMATION SYSTEMS

Leveraging information and communications technology is vital in promoting effective and efficient business operations as well as timely and accurate communications with internal and external stakeholders.

Examples of key information systems utilised by the Group for this purpose are :

Enterprise Resource Management System (ERMS)

Enterprise Human Resources Management System (EHRMS)

Supervisory Control and Data Acquisition System (SCADA)

TNB Outage Management Systems (TOMS)

Billing Customer Relation Management (BCRM)

Employee Self Service (ESS)

Super User Privilege Management and Governance, Risk and Compliance system have been implemented to control and govern access to core systems and servers. This is to ensure that access to critical information systems and confidential information is adequately monitored and controlled. Annual disaster recovery tests are carried out at the data centres and ICT security assessments are regularly carried out on systems at the business entities. In addition, various enhancements are implemented to strengthen cybersecurity for Information Technology and Operational Technology systems. In the event of system failure, various mitigations are in place to minimise disruptions to operations.

### PERSONAL DATA PROTECTION

TNB is committed to safeguarding customers' privacy rights and personal data in accordance with the Personal Data Protection Act 2010 (PDPA). TNB was an active contributor to the development of the Personal Data Protection Code of Practice for the Utilities Sector (Electricity) Version 2.0 (Code of Practice), which serves as a guide for the processing and handling of customers' personal data. The Code of Practice is aligned with Section 23 of the PDPA, which protects the personal information of an individual being processed for commercial transaction purposes. The Legal Services Department is committed to consistently educating and communicating the requirements of the PDPA and the Code of Practice across the Group to heighten awareness and compliance, as well as enhancing controls.

### TNB Corporate Integrity Management System

The TNB Corporate Integrity Management System (TCIMS) is in place to improve the integrity culture in the Group, reduce the impact of corruption or mismanagement and position TNB at par internationally through a strategic and structured integrity management system. TNB is certified with ISO 37001:2016 Anti-Bribery Management Systems and has put in place a management system designed to help prevent, detect and respond to bribery and comply with anti-bribery laws and voluntary commitments applicable to its activities. Annually, TNB employees complete the Integrity Pledge and Conflict of Interest declarations via the Employee Self Service system and the Integrity E-learning module via the People Matters Better Brighter system.

In addition, the Integrity Department designs and implements an annual training and communication

## STATEMENT ON RISK MANAGEMENT AND INTERNAL CONTROL

plan to ensure a comprehensive and diversified approach in institutionalising the integrity culture in TNB. Highlights of the training and communication plan include an Integrity Day, integrity e-learning for staff and vendors and joint programmes with the Malaysian Anti-Corruption Commission. The progress of the plan is updated to the Board Integrity Committee on a quarterly basis, which is a part of the monitoring and reporting mechanism in place for integrity development.

### TENAGA SAFETY CULTURE

The Tenaga Safety Culture programme aims to inculcate safety as part of the everyday working culture, transforming it from a mere compliance activity. It is based on four core behaviours, which are 'Assess', 'Comply', 'Intervene' and 'Actively Caring'. Various initiatives are implemented to instil these core behaviours in each employee, including from a spiritual approach to align good safety practices with religious teachings. With the convenience of a mobile application called HSE Wallet that was developed in-house, employees are encouraged to proactively observe and report unsafe acts or conditions as potential incidents and notices, compounds or lawsuits.

The Nampak, Dengar & Rasa Selamat (NDRS) programme was launched to reinforce strong safety culture values in all employees. The NDRS programme encourages employees to be sensitive to their surroundings, evaluate potential health and safety risks, comply with safety requirements and take proactive action to prevent risks from materialising. The NDRS framework includes three elements, which are engineering, education and enforcement and is supported by a consequence management process that rewards safe behaviour and practices and penalises non-compliance.

### CUSTOMER EXPERIENCE

With regard to customer-centricity, a variety of channels, utilising the 'Click, Call, Come Over' platform, are made available to customers. The platform covers a wide range of touchpoints that enable quality solutions, services and continuous interaction options to enhance customer experience. A systematic approach is in place for timely resolution of feedback such as service requests, complaints, comments, enquiries and concerns. In addition, the myTNB web portal and mobile application are available to customers to manage their electricity account(s) in one location. myTNB allows customers to make express payment of electricity bills without needing to log in.

### BUSINESS CONTINUITY MANAGEMENT

The TNB Business Continuity Management (BCM) Framework was developed in alignment with ISO 22301:2019 Security and Resilience – Business Continuity Management Systems. The framework provides a structured approach to managing business continuity in the Group, allowing for a quick, coordinated and effective response to a crisis while maintaining the continuity of essential activities and protecting human life, assets, reputation and the environment. The framework is the focal point of reference for the business entities to formulate and implement business continuity strategies tailored to their respective business objectives and critical functions.

The preparedness and effectiveness of the Corporate Crisis Command Structure, of which the President/Chief Executive Officer and TNB Management are members, is tested annually through planned drills.

Improvements identified in drill post-mortems are implemented to enhance capabilities and readiness. Additionally, in preparation for the anticipated monsoon season, drills with flood scenarios were conducted at state and regional levels in collaboration with the relevant business entities to enhance coordination and resiliency. Specific business continuity plans were also developed and tested to ensure available and reliable electricity supply throughout the period of the nation's 15<sup>th</sup> General Election.

To further strengthen prompt and coordinated response during crises, in the year under review, strategic engagements were carried out with relevant government agencies. Knowledge exchange engagements with government agencies such as the National Security Council and National Disaster Management Agency (NADMA) were mutually beneficial in ensuring effective and efficient response and recovery to crises affecting the nation. A key outcome of the engagements was a successful tabletop exercise carried out in collaboration with NADMA in September 2022, replicating the landslide crisis at Kenyir that occurred in February 2022, with the objective of enhancing preparedness and coordination between relevant parties at the state and federal levels.

The TNB BCM Framework and continuity strategies at corporate and business entity levels were essential in the management of crises in the year under review such as the pandemic, floods, landslides and electricity supply interruptions. In the management of these crises, key information was escalated to the Corporate Crisis Management Team chaired by the President/Chief Executive Officer via dashboard reporting at regular intervals.

### CONCLUSION

The Board has obtained assurances from the President/Chief Executive Officer and Chief Financial Officer that the Group's risk management and internal control system is operating adequately and effectively, in all material aspects. Where weaknesses were identified, rectification steps have been put in place.

The Board is of the view that the risk management and internal control system in place for the year under review and up to the date of approval of this statement for inclusion into the annual report is adequate and effective to safeguard shareholders' investments, the interests of customers, regulators and employees and the Group's assets.

### REVIEW OF THE STATEMENT BY EXTERNAL AUDITOR

As required by Paragraph 15.23 of the Bursa Malaysia Securities Berhad Main Market Listing Requirements, the external auditors have reviewed this Statement on Risk Management and Internal Control. Their limited assurance review was performed in accordance with Audit and Assurance Practice Guide (AAPG) 3 issued by the Malaysian Institute of Accountants. AAPG 3 does not require the external auditors to form an opinion on the adequacy and effectiveness of the risk management and internal control systems of the Group.

This statement is made in accordance with the resolution of the Board of Directors dated 20 March 2023.

# ADDITIONAL COMPLIANCE INFORMATION

## (1) UTILISATION OF PROCEEDS RAISED FROM CORPORATE PROPOSALS

Utilisation of Proceeds Raised from Corporate Proposals by the Company during the Financial Year under Review :

### Multicurrency Sukuk Issuance Programme of USD2.5 billion (or its Equivalent In Other Currencies) by TNB Global Ventures Capital Berhad with TNB as the Obligor

First issuance on 19 October 2016	USD750.0 million
Balance of proceeds as at 31 December 2022	- Nil -
Second issuance on 1 November 2018	USD750.0 million
Balance of proceeds as at 31 December 2022	- Nil -

### Sukuk Wakalah Programme of Up to RM10.0 billion by TNB

Second issuance on 25 November 2021	RM3.0 billion
Balance of proceeds as at 31 December 2022	- Nil -
Third issuance on 30 June 2022	RM4.0 billion
Balance of proceeds as at 31 December 2022	- Nil -

## (2) MATERIAL CONTRACTS

There were no material contracts entered into by the Company and its Subsidiaries involving the interests of the Directors or Major Shareholders, either still subsisting at the end of the Financial Year or, if not then subsisting, entered into since the end of the previous Financial Year.

## (3) RELATED PARTY TRANSACTIONS

The Group has established appropriate procedures to ensure it complies with the MMLR with regards to related party transactions. All related party transactions are reviewed by the Group Internal Audit Department, following which a Group-Wide Report is submitted to the BAC on a quarterly basis for monitoring purposes. The Group did not seek any mandate from its shareholders pertaining to related party transactions during the Financial Year under review.

## STATEMENT ON COMPLIANCE WITH THE REQUIREMENTS OF BURSA MALAYSIA IN RELATION TO APPLICATION OF PRINCIPLES AND ADOPTION OF BEST PRACTICES LAID DOWN IN THE MALAYSIAN CODE ON CORPORATE GOVERNANCE 2021 (Pursuant to paragraph 15.25 of the MMLR)

The Board has reviewed, deliberated and approved this Statement on 27 February 2023. The Board is pleased to report to its shareholders that to the best of its knowledge, the Company has complied with and shall remain committed to attaining the highest possible standards of corporate governance through the continuous adoption of the principles and best practices of the MCCG and all other applicable laws, save as disclosed above.

# FINANCIAL STATEMENTS

Directors' Report	212
Consolidated Statement of Financial Position	222
Consolidated Statement of Profit or Loss	224
Consolidated Statement of Comprehensive Income	225
Consolidated Statement of Changes in Equity	226
Consolidated Statement of Cash Flows	229
Notes to the Financial Statements	233
Note 1: General Information	
Note 2: Basis of Preparation	
Note 3: Summary of Significant Accounting Policies	
Note 4: Critical Accounting Estimates and Judgements	
Note 5: Property, Plant and Equipment ('PPE')	
Note 6: Right-of-Use ('ROU') Assets	
Note 7: Subsidiaries	
Note 8: Joint Arrangements	

Note 9: Associates	
Note 10: Intangible Assets	
Note 11: Investment in Unquoted Debt Securities	
Note 12: Deferred Taxation	
Note 13: Long Term Receivables	
Note 14: Amounts Due From/(To) Subsidiaries	
Note 15: Leases	
Note 16: Financial Assets at FVOCI	
Note 17: Contract Balances	
Note 18: Financial Assets at FVTPL	
Note 19: Derivative Financial Instruments	
Note 20: Inventories	
Note 21: Receivables, Deposits and Prepayments	
Note 22: Deposits, Bank and Cash Balances	
Note 23: Payables	
Note 24: Employee Benefits	
Note 25: Consumer Deposits	
Note 26: Borrowings	
Note 27: Government Development Grants	
Note 28: Other Liabilities	
Note 29: Share Capital	
Note 30: Other Reserves	
Note 31: Revenue	
Note 32: Imbalance Cost Pass-Through ('ICPT') Under Recovery	
Note 33: Operating Expenses	
Note 34: Staff Cost	
Note 35: Other Operating Income	
Note 36: Foreign Exchange Loss	
Note 37: Finance Income/Cost and Fair Value Changes of Financial Instruments	
Note 38: Taxation and Zakat	
Note 39: Earnings Per Share ('EPS')	
Note 40: Dividends	
Note 41: Commitments	
Note 42: Contingent Liabilities	
Note 43: Significant Related Party Disclosures	
Note 44: Segmental Reporting	
Note 45: Financial Instruments	
Note 46: Capital Risk Management	
Note 47: Effect of Change in Presentation	
Note 48: Significant Acquisitions During Current and Preceding Financial Years	
Statement by Directors	382
Statutory Declaration	382
Independent Auditors' Report	383

# DIRECTORS' REPORT

The Directors hereby submit their report and the audited financial statements of the Group and of the Company for the financial year ended 31 December 2022.

## PRINCIPAL ACTIVITIES

The Group and the Company are primarily involved in the business of the generation, transmission, distribution and sales of electricity and those tabulated in Note 7 to the financial statements, which also includes the details of the subsidiaries of the Group.

There have been no significant changes in these activities during the financial year.

## FINANCIAL RESULTS

	Group RM'million	Company RM'million
Profit for the financial year attributable to:		
- Owners of the Company	3,463.3	2,425.8
- Non-controlling interests	94.1	0
Profit for the financial year	3,557.4	2,425.8

## DIVIDENDS

The dividends paid or declared by the Company since the previous financial year ended 31 December 2021 were as follows:

	RM'million
In respect of the financial year ended 31 December 2021:	
Final single tier dividend of 18.0 sen per ordinary share, paid on 15 April 2022	1,030.7
In respect of the financial year ended 31 December 2022:	
Interim single tier dividend of 20.0 sen per ordinary share, paid on 14 October 2022	1,150.6

The Directors have approved a final single tier dividend of 26.0 sen per share on 5,753,077,371 ordinary shares in respect of the financial year ended 31 December 2022 amounting to a total of RM1,495.8 million. The dividends will be paid on 14 April 2023.

## RESERVES AND PROVISIONS

All material transfers to or from reserves and provisions during the financial year are shown in the financial statements.

## ISSUE OF SHARES

During the financial year, the paid-up share capital of the Company increased due to the vesting of Long Term Incentive Plan ('LTIP') granted to eligible employees, details of which are disclosed in Note 34 to the financial statements. The new ordinary shares rank pari passu in all respects with the existing ordinary shares of the Company.

**DIRECTORS' REPORT****TENAGA NASIONAL BERHAD'S LONG TERM INCENTIVE PLAN ('LTIP')**

The Company implemented a LTIP on 30 April 2015 for a period of 10 years. The LTIP is governed by the by-laws, which are approved by the shareholders at an Extraordinary General Meeting on 18 December 2014.

The main features and details of the number of grants over the shares of the Company are set out in Note 34 to the financial statements.

The Company has been granted an exemption by the Companies Commission of Malaysia via letter dated 26 January 2023 from having to disclose in this report the names of the persons to whom LTIP have been granted under the scheme and details of their holdings pursuant to Section 255(1) and Paragraph 5, Part 1, Fifth Schedule of the Companies Act 2016 except for information on employees who were granted the offering of up to 310,300 and more ordinary shares under the LTIP scheme.

The employees of the Company who were granted the offering of up to 310,300 and more ordinary shares under the LTIP scheme are as follows:

	Number of ordinary shares granted under PS*	Number of ordinary shares granted under RS**	Total
Dato' Indera Ir. Baharin bin Din	503,900	251,400	755,300
Datuk Wira Roslan bin Ab Rahman	388,500	209,500	598,000
Dato' Nor Azman bin Mufti @ Jaafar	384,700	206,800	591,500
Nazmi bin Othman	310,700	191,700	502,400
Datuk Ir. Husaini bin Husin	268,900	167,200	436,100
Datuk Ir. Megat Jalaluddin bin Megat Hassan	255,700	157,400	413,100
Wan Nazmy bin Wan Mahmood	234,000	159,300	393,300
Wahizan bin Abd Rahman	230,500	154,900	385,400
Dato' Ir. Roslan bin Abd Rahman	211,800	160,900	372,700
Amir Mahmud bin Abdullah	173,900	136,400	310,300

\* PS - Performance Share Grant

\*\* RS - Restricted Share Grant

None of the subsidiaries' employees were granted offering representing 310,300 or more ordinary shares under the LTIP scheme.

**DIRECTORS**

The Directors who have held office during the financial year and during the period from the end of the financial year to the date of the report are:

Company

Dato' Indera Ir. Baharin bin Din		
Datuk Amran Hafiz bin Affifudin		
Rohaya binti Mohammad Yusof		Appointed w.e.f. 20 March 2023
Ong Ai Lin		
Juniwati Rahmat Hussin		
Gopala Krishnan K.Sundaram		
Dato' Roslina binti Zainal		
Datuk Rawisandran a/l Narayanan		
Dato' Merina binti Abu Tahir		
Elaine Ong Yee Lynn (Alternate Director to Datuk Amran Hafiz bin Affifudin)		Appointed w.e.f. 20 March 2023
Dato' Ir. Nawawi bin Ahmad		Demised on 28 November 2022
Dato' Sri Hasan bin Arifin		Cessation of Office as Chairman w.e.f. 1 January 2023

## DIRECTORS' REPORT

### DIRECTORS (CONTINUED)

The Directors who have held office during the financial year and during the period from the end of the financial year to the date of the report are:  
(continued)

#### Company (continued)

Datuk Seri Asri bin Hamidin @ Hamidon	Cessation of Office as Director w.e.f. 5 January 2023
Faisal @ Pisal bin Abdul Ghani	Cessation of Office as Alternate Director w.e.f. 5 January 2023
Datuk Lau Beng Wei	Resigned w.e.f. 6 March 2023

#### Subsidiaries

Abd Rahim bin Mohd Yusof  
Abdul Halim bin Abdullah Shukor  
Abdul Rahim bin Abdul Rahman  
Academician Tan Sri Dr. Ts. Ir. Ahmad Zaidee bin Laidin  
Ahlan Nasri bin Mohd Nazir @ Nasir  
Ahmad Afzainizam bin Mokhtar  
Ahmad Faraid bin Mohammed Yahaya  
Ahmad Kamal bin Abd Ghaffar  
Ahmad Nizam bin Hassan  
Ahmad Sazree bin Abd Aziz  
Ahmad Shakir bin Mohd Asri  
Aida Zahara binti Ahmad  
Akmal Halimy bin Haron  
Ali Munawar bin Haji Salim  
Amir Mahmud bin Abdullah  
Anis binti Ramli  
Anwar Syahrin bin Abdul Ajib  
Azlan bin Abdullah  
Azlan bin Ahmad  
Azlinda binti Safian  
Charmaine Chin  
D. Miguel Vega Otiñano  
Dato' Anuar bin Ahmed  
Dato' Daing A. Malek bin Daing A. Rahaman  
Dato' Indera Ir. Baharin bin Din  
Dato' Ir. Roslan bin Abd Rahman  
Dato' Mohd Yusof bin Ibrahim  
Dato' Nor Azman bin Mufti @ Jaafar  
Dato' Norzaity binti Othman  
Dato' Seri Ir. Dr. Zaini bin Ujang  
Dato' Zaiviji Ismail bin Abdullah  
Datu Sharbini bin Suhaili  
Datuk (Datu) Rosmadi bin Datu Sulai  
Datuk Ir. Megat Jalaluddin bin Megat Hassan  
Datuk Ir. Yong Ah Huat  
Datuk Mohd Hisham bin Ab Halim  
Datuk Seri Panglima Safar bin Untong  
Datuk Ts. Shamsul bin Ahmad  
Dev Anandan a/l M S Anandan

**DIRECTORS' REPORT****DIRECTORS (CONTINUED)**

The Directors who have held office during the financial year and during the period from the end of the financial year to the date of the report are:  
(continued)

Subsidiaries (continued)

Dr. Ir. Ahmad Jaafar bin Abd Hamid

Dr. Ir. Norshah Hafeez bin Shuaib

Dr. Mohamed bin Awang Lah

Dr. Mohd Hariffin bin Boosroh

Elmie Fairul bin Mashuri

Fabrice Rota

Fadzlan bin Rosli

Fahmi bin Md Nor

Fauzan bin Mohamad

Fernando Zabalgogeazcoa Burgos

Fikri Abazah bin Haji Jaffar

Ghazalie bin Haji Ansing

Habib bin Husin

Hafiz bin Ismail

Haizar Razif Hisyam bin Ajaz Nabijan

Hisham bin Abd Rahman

Huzairi bin Zainal Abidin

Idham bin Ismail

Ir. Azlan bin Abdullah

Ir. Dr. Mohd Fadzil bin Mohd Siam

Ir. Mahathir Nor bin Ismail

Ir. Mohamed Ghous bin Ahmad

Ir. Mohd Yusrizal bin Mohd Yusof

Jeffery Nor bin Mohamed

Joel Cardenas San Martin

Johan bin Mohd Roslie

Junaidah binti Mat Pilus

Leo Pui Yong

Lim Fu Yen

Lisa Wan Siew Han

Loh Wai Yee

Md Razip bin Mohd Yusof

Megat Ardian Wira bin Mohd Aminuddin

Mehazatul Amali binti Meor Hassan

Mhd. Shukree bin Shahabudin

Michael Watrin

Mohamed Akhbar bin Muslim

Mohamed Azrin bin Mohamed Ali

Mohammad Zahir bin Ismail

Mohammed Azmil bin Ismail

Mohd Yusmanizam bin Mohd Yusof

Mohd Zaini bin Jaafar

Muhamad Nazri bin Pazil

Muhd Israr Syahrir bin Shaari

Nazmi bin Othman

## DIRECTORS' REPORT

### DIRECTORS (CONTINUED)

The Directors who have held office during the financial year and during the period from the end of the financial year to the date of the report are:  
(continued)

#### Subsidiaries (continued)

Nik Aziron binti Nik Hassan	
Nik Hishamuddin bin Mohamed	
Norazni binti Mohd Isa	
Norshaliza binti Azman	
Nor Azlina binti Mohd Isa	
Nurulhayati binti Jasni	
Pamela Valasuo	
Prof. Dato' Dr. Kamaruzzaman bin Sopian	
Prof. Ir. Kumaran a/l Palanisamy	
Raslan bin Sallehuddin	
Rosaini bin Wan Hassan	
Rosemi binti Muhammad Ghazi	
Rupavathy a/p A.V Govindasamy	
Sabirah binti Arifin	
Shahrir bin Haji Abdul Latiff	
Sirajul Huda bin Mohamad Zain	
Siti Norbaya binti Dinyati	
Siti Sarah Johana binti Mohd Said	
Siva Kameswari Vissa	
Syed Haroon bin Omar Alshatrie	
Theresa Ho Nyoke Shiam	
Vian Robert Davys	
Wahizan bin Abd Rahman	
Wan Nazmy bin Wan Mahmood	
Wan Norazri bin Ab Aziz	
Wan Zuraidah Hanum binti Wan Ali	
Zainal Abidin Shah bin Mahamood Yahya	
Zainudin Sabai bin Mohd Salleh Sabai	
Zuraida binti Abdul Hamid	
Ahmad Hushairi bin Ibrahim	Appointed w.e.f. 15 April 2022
Azizan bin Zakaria	Appointed w.e.f. 8 March 2023
Azrul Azizul Baharin bin Jamaluddin	Appointed w.e.f. 25 January 2023
Benyamen bin Marzahan	Appointed w.e.f. 27 July 2022
Dato' Sri Ramlan bin Dato' Harun	Appointed w.e.f. 9 March 2022
Emeritus Professor Dato' Dr. Hassan bin Said	Appointed w.e.f. 26 October 2022
Eng Soo Kam	Appointed w.e.f. 31 May 2022
Fam Wee Leck	Appointed w.e.f. 27 July 2022
Farah Farena binti Ibrahim	Appointed w.e.f. 27 July 2022
Feldatun binti Sharif	Appointed w.e.f. 1 January 2022
Hanif bin Siraf	Appointed w.e.f. 17 May 2022
Haslinda binti Hasni	Appointed w.e.f. 10 January 2023
Ir. Azmi bin Md Yusof	Appointed w.e.f. 15 June 2022
Ir. Saravaiswaran a/l Ramakrishnan	Appointed w.e.f. 24 January 2022
Ir. Ts. Mohd Yaakob bin Jaafar	Appointed w.e.f. 3 June 2022
Izham bin Ismail	Appointed w.e.f. 16 August 2022

**DIRECTORS' REPORT****DIRECTORS (CONTINUED)**

The Directors who have held office during the financial year and during the period from the end of the financial year to the date of the report are:  
(continued)

Subsidiaries (continued)

Jamal bin Yusoff	Appointed w.e.f. 1 January 2022
Jorge Andres Gonzalez Somavilla	Appointed w.e.f. 27 July 2022
Kamal Arifin bin A.Rahman	Appointed w.e.f. 1 January 2023
Li Hong Jun	Appointed w.e.f. 27 February 2023
Mahanum binti Mansor	Appointed w.e.f. 17 August 2022
Mohd Fathi Kamal bin Mohd Ridzuan	Appointed w.e.f. 27 July 2022
Mohd Razif bin Abd Halim	Appointed w.e.f. 28 October 2022
Mohd Zaid bin Mohd Nordin	Appointed w.e.f. 27 July 2022
Mohd Zarihi bin Mohd Hashim	Appointed w.e.f. 8 March 2022
Muhammad Khairul Za'im bin Abd Hafidz	Appointed w.e.f. 27 July 2022
Ng Jui Shan	Appointed w.e.f. 28 April 2022
Nik Zanariah Azlin binti Nik Ismail	Appointed w.e.f. 24 August 2022
Nor Azlin Mahani binti Mohamad	Appointed w.e.f. 1 January 2023
Norazlinda binti Aziz Zuddin	Appointed w.e.f. 23 February 2022
Norshafiza binti Shamsuddin	Appointed w.e.f. 27 July 2022
Prof. Dato' Ts. Dr. Mohd Zamri bin Yusoff	Appointed w.e.f. 6 October 2022
Profesor Ir. Dr. Noor Azuan bin Abu Osman	Appointed w.e.f. 25 July 2022
Sarah Keok Chui San	Appointed w.e.f. 9 January 2023
Shahannom binti Izham	Appointed w.e.f. 11 August 2022
Shahida binti Azizan	Appointed w.e.f. 27 July 2022
Tsutomu Fujita	Appointed w.e.f. 20 July 2022
Ung Sing Kwong	Appointed w.e.f. 1 May 2022
Wong Kok Kiong	Appointed w.e.f. 1 January 2022 and Resigned w.e.f. 23 August 2022
Yasmin binti Mohd Ramzi	Appointed w.e.f. 1 January 2022
Yukio Saito	Appointed w.e.f. 1 February 2023
Zahari bin Dollah	Appointed w.e.f. 2 February 2023
Zuraidah binti Hassan	Appointed w.e.f. 8 August 2022
Datuk Dr. Rujhan bin Mustafa	Deceased on 4 July 2022
Dato' Prof. Ir. Dr. Kamal Nasharuddin bin Mustapha	Resigned w.e.f. 8 June 2022
Dato' Sri Hasan bin Arifin	Resigned w.e.f. 1 January 2023
Datuk Abdul Naseer bin Abdul Wahid	Resigned w.e.f. 3 June 2022
Datuk Fazil bin Ibrahim	Resigned w.e.f. 8 August 2022
Datuk Fazlur Rahman bin Zainuddin	Resigned w.e.f. 30 November 2022
Datuk Ir. Husaini bin Husin	Resigned w.e.f. 31 January 2023
Datuk Wira Roslan bin Ab Rahman	Resigned w.e.f. 30 May 2022
Edmund Lee Kwing Mun	Resigned w.e.f. 28 April 2022
Haji Ahmad Khalif bin Tan Sri Datuk Dr. Haji Mustapha Kamal	Resigned w.e.f. 21 March 2022
Ir. Khirul Nizam bin Shamsudin	Resigned w.e.f. 15 June 2022
Ir. Nirinder Singh a/l Jasbir Singh	Resigned w.e.f. 1 June 2022
Ivan Oh Boon Wee	Resigned w.e.f. 31 May 2022
Javier Francisco Bicarregui Garay	Resigned w.e.f. 27 July 2022
Kamarol Zaman bin Radzak	Resigned w.e.f. 11 March 2022
Keenan Hendroff	Resigned w.e.f. 20 January 2023
Kew Thean Yew	Resigned w.e.f. 30 April 2022
Lei Ming	Resigned w.e.f. 27 February 2023

## DIRECTORS' REPORT

### DIRECTORS (CONTINUED)

The Directors who have held office during the financial year and during the period from the end of the financial year to the date of the report are:  
(continued)

#### Subsidiaries (continued)

Lu Yew Hung @ Lu Yew Hong	Resigned w.e.f. 5 January 2022
Mohd Junaizee bin Mohd Noor	Resigned w.e.f. 11 August 2022
Mohd Najib bin Mohammad	Resigned w.e.f. 31 December 2022
Muhammad Faisal bin Sidek	Resigned w.e.f. 13 December 2022
Noraini binti Taib	Resigned w.e.f. 12 August 2022
Nyonya binti Kasim	Resigned w.e.f. 12 August 2022
Prof. Dato' Dr. Siti Salbiah binti Mohamed Shariff	Resigned w.e.f. 28 September 2022
Redhauddin bin Kamaruzaman	Resigned w.e.f. 27 January 2022
Rosidah binti Shamsul Annuar	Resigned w.e.f. 17 August 2022
Rumaizi bin Hamid	Resigned w.e.f. 24 March 2022
Shamsul Azham bin Mohd Isa	Resigned w.e.f. 31 March 2022
So Horikiri	Resigned w.e.f. 20 July 2022
Tomonori Suzuki	Resigned w.e.f. 1 February 2023
Amer Aqel bin Amer Nordin	Alternate Director to Hafiz bin Ismail
Harizan bin Mahmud	Alternate Director to Dato' Norzaity binti Othman
Mohd Helmy bin Ibrahim	Alternate Director to Mohammed Azmil bin Ismail
Mohd Nazerham bin Mansor	Alternate Director to Anwar Syahrin bin Abdul Ajib
Johar bin Julasbi	Appointed as Alternate Director to Dato' Sri Ramlan bin Dato' Harun w.e.f. 5 September 2022
Shinichiro Kobayashi	Appointed as Alternate Director to Yukio Saito w.e.f. 1 February 2023
Masao Fujii	Appointed as Alternate Director to Tsutomu Fujita w.e.f. 20 July 2022
Akihiro Katsume	Appointed as Alternate Director to So Horikiri w.e.f. 13 April 2022 and Resigned w.e.f. 20 July 2022
Daiji Kojima	Alternate Director to Tomonori Suzuki and Resigned w.e.f. 26 January 2022
Khairunnizam bin Naharudin	Alternate Director to Anis binti Ramli and Resigned w.e.f. 17 January 2023
Makoto Ayukawa	Alternate Director to So Horikiri and Resigned w.e.f. 13 April 2022

### DIRECTORS' BENEFITS

During and at the end of the financial year, no arrangements subsisted to which the Company is a party, being arrangements with the object or objects of enabling Directors of the Company to acquire benefits by means of the acquisition of shares in or debentures of the Company or any other body corporate, other than as disclosed in the Directors' interests in shares and debentures.

Since the end of the previous financial year, no Director has received or become entitled to receive a benefit (other than benefits shown under Directors' Remuneration below and in Note 33 to the financial statements) by reason of a contract made by the Company or a related corporation with the Director or with a firm of which the Director is a partner, or with a company in which the Director has a substantial financial interest.

### INDEMNITY AND INSURANCE COSTS

The Group and the Company have their own Directors and Officers Liability Insurance at a premium of RM474,350 to cover the liability of Directors and Officers in discharging their duties for the period of 1 November 2022 until 31 October 2023.

**DIRECTORS' REPORT****DIRECTORS' INTERESTS IN SHARES AND DEBENTURES**

According to the Register of Directors' Shareholdings required to be kept under Section 59 of the Companies Act 2016, none of the Directors who held office at the end of the financial year held any shares or debentures in the Company or its subsidiaries during the financial year except as follows:

	Number of ordinary shares			
	As at 1.1.2022	Vested/ Acquired	Disposed	As at 31.12.2022
Dato' Indera Ir. Baharin bin Din	80,700	36,000	0	116,700
Datuk Seri Asri bin Hamidin @ Hamidon	10,000	0	0	10,000
Dato' Roslina binti Zainal	18,400	0	0	18,400
	Number of ordinary shares			
	As at 1.3.2022	Acquired	Disposed	As at 31.12.2022
Faisal @ Pidal bin Abdul Ghani	25,000	0	0	25,000

Ordinary shares granted pursuant to the Company's LTIP granted to the Director during the financial year are as follows:

	As at 1.1.2022				As at 31.12.2022
	Granted	Vested	Forfeited		
Dato' Indera Ir. Baharin bin Din					
Performance Share Grant ('PS Grant')					
PS Grant 5	41,800	0	0	(41,800)	0
PS Grant 6	47,400	0	0	0	47,400
PS Grant 7	98,700	0	0	0	98,700
PS Grant 8	0	164,300	0	0	164,300
Restricted Share Grant ('RS Grant')					
RS Grant 5	8,000	0	(8,000)	0	0
RS Grant 6	18,100	0	(9,100)	0	9,000
RS Grant 7	56,600	0	(18,900)	0	37,700
RS Grant 8	0	70,600	0	0	70,600

**DIRECTORS' REMUNERATION**

	Group		Company	
	2022 RM	2021 RM	2022 RM	2021 RM
Non-Executive Directors' fees	2,538,667	2,541,269	2,478,667	2,423,871
Non-Executive Directors' other emoluments	1,170,480	1,804,282	1,162,980	1,798,282
Executive Directors' remuneration and other emoluments	4,284,299	4,999,050	4,284,299	4,999,050
	7,993,446	9,344,601	7,925,946	9,221,203

In respect of the Directors or past Directors of the Company, there were benefits receivable by the Directors from the Company and its subsidiaries as Directors' other emoluments for their services. The estimated monetary value of benefits received by the Directors was RM441,980 (2021: RM984,022) for the Group and the Company.

## DIRECTORS' REPORT

### STATUTORY INFORMATION ON THE FINANCIAL STATEMENTS

- (a) Before the financial statements of the Group and of the Company were prepared, the Directors took reasonable steps:
  - (i) to ascertain that proper action had been taken in relation to the writing off of bad debts and the making of provision for doubtful debts and satisfied themselves that all known bad debts had been written off and that adequate provision had been made for doubtful debts; and
  - (ii) to ensure that any current assets, which were unlikely to be realised in the ordinary course of business, including the values of current assets as shown in the accounting records of the Group and of the Company had been written down to an amount which the current assets might be expected so to realise.
- (b) At the date of this report, the Directors are not aware of any circumstances:
  - (i) which would render the amount written off for bad debts or the amount of the provision for doubtful debts inadequate to any substantial extent; or
  - (ii) which would render the values attributed to current assets in the financial statements of the Group and of the Company misleading; or
  - (iii) which have arisen and would render adherence to the existing method of valuation of assets or liabilities of the Group and of the Company misleading or inappropriate.
- (c) At the date of this report:
  - (i) there are no charges on the assets of the Group and of the Company which have arisen since the end of the financial year which secures the liabilities of any other person; and
  - (ii) there are no contingent liabilities in the Group and in the Company which have arisen since the end of the financial year.
- (d) No contingent or other liability of any company in the Group has become enforceable or is likely to become enforceable within the period of twelve months after the end of the financial year which, in the opinion of the Directors, will or may affect the ability of the Company and its subsidiaries to meet their obligations when they fall due.
- (e) At the date of this report, the Directors are not aware of any circumstances not otherwise dealt with in this report or the financial statements of the Group and of the Company which would render any amount stated in the respective financial statements misleading.
- (f) In the opinion of the Directors:
  - (i) the results of the operations of the Group and of the Company during the financial year were not substantially affected by any item, transaction or event of a material and unusual nature; and
  - (ii) there has not arisen in the interval between the end of the financial year and the date of this report any item, transaction or event of a material and unusual nature likely to affect substantially the results of the operations of the Group and of the Company for the financial year in which this report is made.

**DIRECTORS' REPORT****AUDITORS' REMUNERATION**

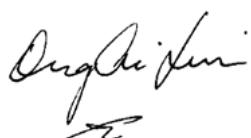
Total fees for statutory audits and audit-related services provided by the auditors, PricewaterhouseCoopers PLT, and its member firms amounted to RM10.4 million (2021: RM6.8 million) for the Group and RM2.8 million (2021: RM2.7 million) for the Company, while total fees for assurance related and non-audit services amounted to RM1.7 million (2021: RM2.0 million) for the Group and RM0.3 million (2021: RM0.2 million) for the Company respectively. Non-audit services provided by the auditors and its member firms comprise tax related services and other advisory services.

Details of the auditors' remuneration are set out in Note 33 to the financial statements.

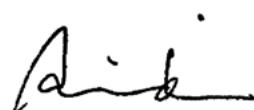
**AUDITORS**

The auditors, PricewaterhouseCoopers PLT (LLP0014401-LCA & AF 1146), have expressed their willingness to accept re-appointment as auditors.

This report was approved by the Board of Directors on 20 March 2023. Signed on behalf of the Board of Directors:



**ONG AI LIN**  
SENIOR INDEPENDENT  
NON-EXECUTIVE DIRECTOR



**DATO' INDERA IR. BAHARIN BIN DIN**  
PRESIDENT/CHIEF EXECUTIVE OFFICER

# CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 31 December 2022

	Note	Group		Company	
		2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<strong>NON-CURRENT ASSETS</strong>					
Property, plant and equipment	5	<strong>116,577.1</strong>	114,105.6	<strong>75,185.5</strong>	72,910.5
Right-of-use assets	6	<strong>37,405.1</strong>	34,711.2	<strong>71,879.1</strong>	71,222.0
Subsidiaries	7	<strong>0</strong>	0	<strong>7,848.0</strong>	7,463.2
Joint ventures	8	<strong>249.5</strong>	230.7	<strong>0</strong>	0
Associates	9	<strong>1,429.7</strong>	1,636.4	<strong>75.7</strong>	75.7
Intangible assets	10	<strong>593.6</strong>	438.4	<strong>0</strong>	0
Investment in unquoted debt security	11	<strong>253.4</strong>	250.1	<strong>253.4</strong>	250.1
Tax recoverable		<strong>3,522.4</strong>	3,522.4	<strong>3,522.4</strong>	3,522.4
Deferred tax assets	12	<strong>377.5</strong>	372.6	<strong>0</strong>	0
Long term receivables	13	<strong>250.5</strong>	167.1	<strong>141.1</strong>	41.6
Amounts due from subsidiaries	14	<strong>0</strong>	0	<strong>4,416.1</strong>	5,010.4
Finance lease receivables	15	<strong>7.4</strong>	8.7	<strong>0</strong>	0
Financial assets at fair value through other comprehensive income ('FVOCI')	16	<strong>70.7</strong>	62.8	<strong>70.0</strong>	62.1
Contract cost assets	17	<strong>1.3</strong>	0.8	<strong>0</strong>	0
Financial assets at fair value through profit or loss ('FVTPL')	18	<strong>55.6</strong>	70.0	<strong>53.1</strong>	68.9
Derivative financial instruments	19	<strong>72.3</strong>	1.2	<strong>0</strong>	0
		<strong>160,866.1</strong>	155,578.0	<strong>163,444.4</strong>	160,626.9
<strong>CURRENT ASSETS</strong>					
Inventories	20	<strong>3,290.8</strong>	1,977.1	<strong>331.0</strong>	167.5
Receivables, deposits and prepayments	21	<strong>22,827.0</strong>	10,547.7	<strong>19,824.4</strong>	8,260.2
Contract assets	17	<strong>3,825.9</strong>	3,318.2	<strong>3,430.0</strong>	2,982.0
Contract cost assets	17	<strong>165.5</strong>	111.0	<strong>0</strong>	0
Tax recoverable		<strong>1,207.5</strong>	1,472.7	<strong>817.6</strong>	1,088.1
Finance lease receivables	15	<strong>1.2</strong>	1.3	<strong>0</strong>	0
Amounts due from subsidiaries	14	<strong>0</strong>	0	<strong>5,600.8</strong>	2,990.6
Amounts due from joint ventures	8	<strong>44.6</strong>	43.5	<strong>0</strong>	0
Amounts due from associates	9	<strong>659.1</strong>	342.7	<strong>5.6</strong>	10.5
Derivative financial instruments	19	<strong>0.2</strong>	0	<strong>0</strong>	0
Financial assets at FVTPL	18	<strong>8,141.0</strong>	2,452.3	<strong>6,222.9</strong>	631.8
Investment in unquoted debt security	11	<strong>0</strong>	50.0	<strong>0</strong>	50.0
Deposits, bank and cash balances	22	<strong>4,893.4</strong>	6,706.1	<strong>748.2</strong>	3,346.1
		<strong>45,056.2</strong>	27,022.6	<strong>36,980.5</strong>	19,526.8

## CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 31 December 2022

	Note	Group		Company	
		2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<b>CURRENT LIABILITIES</b>					
Payables	23	(11,509.7)	(8,596.7)	(6,741.2)	(4,978.9)
Contract liabilities	17	(573.4)	(492.3)	(237.1)	(241.9)
Derivative financial instruments	19	(2.9)	(0.4)	(2.9)	(0.4)
Lease liabilities	15	(3,140.5)	(3,098.9)	(5,054.2)	(5,393.5)
Amounts due to subsidiaries	14	0	0	(6,709.1)	(4,136.3)
Amounts due to associates	9	(777.6)	(183.8)	(765.9)	(173.7)
Current tax liabilities		(187.9)	(43.9)	(37.2)	(17.8)
Employee benefits	24	(592.5)	(768.2)	(569.6)	(745.7)
Consumer deposits	25	(7,550.6)	(7,040.2)	(7,185.7)	(6,685.1)
Short term borrowings	26	(13,262.2)	(6,992.5)	(11,112.2)	(4,104.0)
		(37,597.3)	(27,216.9)	(38,415.1)	(26,477.3)
<b>NET CURRENT ASSETS/(LIABILITIES)</b>		<b>7,458.9</b>	(194.3)	<b>(1,434.6)</b>	(6,950.5)
<b>TOTAL ASSETS LESS CURRENT LIABILITIES</b>		<b>168,325.0</b>	155,383.7	<b>162,009.8</b>	153,676.4
<b>NON-CURRENT LIABILITIES</b>					
Borrowings	26	(50,620.0)	(44,685.7)	(25,119.7)	(20,932.3)
Derivative financial instruments	19	(2.3)	(38.7)	0	0
Contract liabilities	17	(4,783.1)	(4,355.7)	(4,039.7)	(3,631.6)
Government development grants	27	(875.4)	(948.4)	0	0
Lease liabilities	15	(30,137.9)	(26,143.0)	(68,750.9)	(65,797.0)
Deferred tax liabilities	12	(8,820.3)	(8,178.2)	(6,640.3)	(6,265.3)
Other liabilities	28	(1,154.1)	(975.3)	(714.0)	(683.8)
Employee benefits	24	(10,965.7)	(11,666.3)	(10,334.5)	(10,965.1)
		(107,358.8)	(96,991.3)	(115,599.1)	(108,275.1)
<b>TOTAL NET ASSETS</b>		<b>60,966.2</b>	58,392.4	<b>46,410.7</b>	45,401.3
<b>EQUITY</b>					
Share capital	29	<b>12,204.3</b>	11,927.6	<b>12,204.3</b>	11,927.6
Other reserves	30	(6,463.3)	(6,813.3)	(5,453.4)	(5,941.6)
Retained profits		<b>52,776.1</b>	51,494.1	<b>39,659.8</b>	39,415.3
<b>CAPITAL AND RESERVES ATTRIBUTABLE TO OWNERS OF THE COMPANY</b>					
<b>NON-CONTROLLING INTERESTS ('NCI')</b>	7(b)	<b>58,517.1</b>	56,608.4	<b>46,410.7</b>	45,401.3
<b>TOTAL EQUITY</b>		<b>60,966.2</b>	58,392.4	<b>46,410.7</b>	45,401.3

The notes set out on pages 233 to 381 form an integral part of these consolidated financial statements.

# CONSOLIDATED STATEMENT OF PROFIT OR LOSS

For The Financial Year Ended 31 December 2022

	Note	Group		Company	
		2022 RM'million	2021 RM'million Restated	2022 RM'million	2021 RM'million Restated
Revenue	31	<b>50,867.7</b>	48,119.9	<b>46,879.7</b>	44,321.7
Imbalance Cost Pass-Through ('ICPT') under recovery	32	<b>22,315.3</b>	4,509.6	<b>21,942.2</b>	4,509.6
Operating expenses	33	(64,612.1)	(44,524.4)	(61,193.1)	(42,283.8)
Net (loss)/gain on impairment of financial instruments	45	(101.4)	(940.2)	10.2	(342.1)
Other operating income	35	<b>940.0</b>	918.1	<b>1,054.8</b>	763.9
Operating profit		<b>9,409.5</b>	8,083.0	<b>8,693.8</b>	6,969.3
Foreign exchange loss	36	(223.5)	(168.5)	(328.2)	(46.9)
Share of results of joint ventures	8	<b>21.0</b>	29.3	<b>0</b>	0
Share of results of associates	9	<b>76.6</b>	164.2	<b>0</b>	0
Profit before finance cost		<b>9,283.6</b>	8,108.0	<b>8,365.6</b>	6,922.4
Finance income	37	<b>277.7</b>	221.8	<b>420.9</b>	394.1
Finance cost	37	(4,343.4)	(3,793.3)	(5,451.4)	(4,980.0)
Fair value changes of financial instruments	37	<b>130.7</b>	201.8	(15.2)	(2.5)
Profit before taxation and zakat		<b>5,348.6</b>	4,738.3	<b>3,319.9</b>	2,334.0
Taxation and zakat	38	(1,791.2)	(873.6)	(894.1)	(348.7)
Profit for the financial year		<b>3,557.4</b>	3,864.7	<b>2,425.8</b>	1,985.3
Profit attributable to:					
- Owners of the Company		<b>3,463.3</b>	3,661.8	<b>2,425.8</b>	1,985.3
- Non-controlling interests		<b>94.1</b>	202.9	<b>0</b>	0
Profit for the financial year		<b>3,557.4</b>	3,864.7	<b>2,425.8</b>	1,985.3
		Sen	Sen		
Earnings per share:					
- Basic	39	<b>60.35</b>	64.05		
- Diluted	39	<b>59.98</b>	63.73		

The notes set out on pages 233 to 381 form an integral part of these consolidated financial statements.

# CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For The Financial Year Ended 31 December 2022

Note	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Profit for the financial year	<b>3,557.4</b>	3,864.7	<b>2,425.8</b>	1,985.3
Other comprehensive income/(expense)				
Item that will not be reclassified subsequently to profit or loss:				
Defined benefit plan actuarial gain	<b>653.4</b>	989.1	<b>494.4</b>	928.7
Items that may be reclassified subsequently to profit or loss:				
Foreign currency translation differences	(222.3)	384.9	0	0
Financial assets at FVOCI	<b>7.9</b>	5.2	<b>7.9</b>	5.2
Share of other comprehensive (expense)/income ('OCI') of associates accounted for using the equity method	(55.2)	17.5	0	0
Total other comprehensive income	<b>383.8</b>	1,396.7	<b>502.3</b>	933.9
Total comprehensive income for the financial year	<b>3,941.2</b>	5,261.4	<b>2,928.1</b>	2,919.2
Attributable to:				
- Owners of the Company	<b>3,827.4</b>	5,048.1	<b>2,928.1</b>	2,919.2
- Non-controlling interests	<b>113.8</b>	213.3	0	0
Total comprehensive income for the financial year	<b>3,941.2</b>	5,261.4	<b>2,928.1</b>	2,919.2

The notes set out on pages 233 to 381 form an integral part of these consolidated financial statements.

# CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For The Financial Year Ended 31 December 2022

	Note	Attributable to owners of the Company			Non-controlling interests RM'million	Total equity RM'million
		Ordinary shares RM'million	Other reserves RM'million	Retained profits RM'million		
<b>Group</b>						
<b>At 1 January 2022</b>		<b>11,927.6</b>	<b>(6,813.3)</b>	<b>51,494.1</b>	<b>1,784.0</b>	<b>58,392.4</b>
Defined benefit plan actuarial gain	30	0	626.9	0	26.5	653.4
Fair value changes of financial assets at FVOCI	30	0	7.9	0	0	7.9
Foreign currency translation differences	30	0	(215.5)	0	(6.8)	(222.3)
Profit for the financial year		0	0	3,463.3	94.1	3,557.4
Share of OCI of associates accounted for using the equity method	30	0	(55.2)	0	0	(55.2)
Total comprehensive income for the financial year		0	364.1	3,463.3	113.8	3,941.2
LTIP:						
- Share-based payment expense		0	299.1	0	0	299.1
- Reversal of share-based payment expense		0	(36.5)	0	0	(36.5)
- Shares issued		276.7	(276.7)	0	0	0
Dividends paid:						
- Final dividend for FY2021	40	0	0	(1,030.7)	0	(1,030.7)
- Interim dividend for FY2022	40	0	0	(1,150.6)	0	(1,150.6)
Dividends paid to NCI		0	0	0	(17.7)	(17.7)
Increase in equity shares of NCI		0	0	0	15.7	15.7
Conversion to NCI equity	7(b)	0	0	0	626.8	626.8
Redemption of Redeemable Preference Shares by NCI	7	0	0	0	(73.5)	(73.5)
Total transactions with owners		276.7	(14.1)	(2,181.3)	551.3	(1,367.4)
<b>At 31 December 2022</b>		<b>12,204.3</b>	<b>(6,463.3)</b>	<b>52,776.1</b>	<b>2,449.1</b>	<b>60,966.2</b>

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For The Financial Year Ended 31 December 2022

Note	Attributable to owners of the Company			Non-controlling interests RM'million	Total equity RM'million
	Ordinary shares RM'million	Other reserves RM'million	Retained profits RM'million		
<b>Group</b>					
<b>At 1 January 2021</b>	11,675.2	(8,242.7)	52,400.7	1,616.7	57,449.9
Defined benefit plan actuarial gain	30	0	978.7	0	989.1
Fair value changes of financial assets at FVOCI	30	0	5.2	0	5.2
Foreign currency translation differences	30	0	384.9	0	384.9
Profit for the financial year		0	3,661.8	202.9	3,864.7
Share of OCI of associates accounted for using the equity method	30	0	17.5	0	17.5
Total comprehensive income for the financial year		0	1,386.3	3,661.8	213.3
LTIP:					
- Share-based payment expense		0	332.5	0	332.5
- Reversal of share-based payment expense		0	(37.0)	0	(37.0)
- Shares issued		252.4	(252.4)	0	0
Dividends paid:					
- Final dividend for FY2020		0	0	(1,026.8)	(1,026.8)
- Special dividend for FY2020		0	0	(2,281.9)	(2,281.9)
- Interim dividend for FY2021	40	0	0	(1,259.7)	(1,259.7)
Dividend paid to NCI		0	0	0	(1.0)
Redemption of Redeemable Preference Shares by NCI	7	0	0	0	(45.0)
Total transactions with owners		252.4	43.1	(4,568.4)	(46.0)
<b>At 31 December 2021</b>	11,927.6	(6,813.3)	51,494.1	1,784.0	58,392.4

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For The Financial Year Ended 31 December 2022

	Note	Attributable to owners of the Company			
		Ordinary shares RM'million	Other reserves RM'million	Retained profits RM'million	Total equity RM'million
<b>Company</b>					
<b>At 1 January 2022</b>		<b>11,927.6</b>	<b>(5,941.6)</b>	<b>39,415.3</b>	<b>45,401.3</b>
Defined benefit plan actuarial gain	30	0	494.4	0	494.4
Fair value changes of financial assets at FVOCI	30	0	7.9	0	7.9
Profit for the financial year		0	0	2,425.8	2,425.8
Total comprehensive income for the financial year		0	502.3	2,425.8	2,928.1
LTIP:					
- Share-based payment expense		0	299.1	0	299.1
- Reversal of share-based payment expense		0	(36.5)	0	(36.5)
- Shares issued		276.7	(276.7)	0	0
Dividends paid:					
- Final dividend for FY2021	40	0	0	(1,030.7)	(1,030.7)
- Interim dividend for FY2022	40	0	0	(1,150.6)	(1,150.6)
Total transactions with owners		276.7	(14.1)	(2,181.3)	(1,918.7)
<b>At 31 December 2022</b>		<b>12,204.3</b>	<b>(5,453.4)</b>	<b>39,659.8</b>	<b>46,410.7</b>
<b>At 1 January 2021</b>		<b>11,675.2</b>	<b>(6,918.6)</b>	<b>41,998.4</b>	<b>46,755.0</b>
Defined benefit plan actuarial gain	30	0	928.7	0	928.7
Fair value changes of financial assets at FVOCI	30	0	5.2	0	5.2
Profit for the financial year		0	0	1,985.3	1,985.3
Total comprehensive income for the financial year		0	933.9	1,985.3	2,919.2
LTIP:					
- Share-based payment expense		0	332.5	0	332.5
- Reversal of share-based payment expense		0	(37.0)	0	(37.0)
- Shares issued		252.4	(252.4)	0	0
Dividends paid:					
- Final dividend for FY2020		0	0	(1,026.8)	(1,026.8)
- Special dividend for FY2020		0	0	(2,281.9)	(2,281.9)
- Interim dividend for FY2021	40	0	0	(1,259.7)	(1,259.7)
Total transactions with owners		252.4	43.1	(4,568.4)	(4,272.9)
<b>At 31 December 2021</b>		<b>11,927.6</b>	<b>(5,941.6)</b>	<b>39,415.3</b>	<b>45,401.3</b>

The notes set out on pages 233 to 381 form an integral part of these consolidated financial statements.

# CONSOLIDATED STATEMENT OF CASH FLOWS

For The Financial Year Ended 31 December 2022

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>				
Profit for the financial year	<b>3,557.4</b>	3,864.7	<b>2,425.8</b>	1,985.3
Adjustments for:				
Taxation and zakat	<b>1,791.2</b>	873.6	<b>894.1</b>	348.7
Property, plant and equipment:				
- Depreciation	<b>7,500.7</b>	7,193.4	<b>4,790.2</b>	4,640.8
- Written off	<b>61.8</b>	199.5	<b>33.5</b>	197.2
- (Gain)/Loss on disposals	<b>(35.6)</b>	2.4	<b>(8.3)</b>	2.4
- Abandoned projects	<b>35.1</b>	106.7	<b>35.1</b>	5.5
Right-of-use ('ROU') assets:				
- Depreciation	<b>3,901.8</b>	3,498.1	<b>6,236.0</b>	5,898.5
- Gain on disposals	<b>(7.5)</b>	(4.1)	<b>(7.5)</b>	(4.1)
Provision for post-employment benefits	<b>659.7</b>	645.7	<b>604.9</b>	587.6
LTIP:				
- Share-based payment expense	<b>299.1</b>	332.5	<b>203.7</b>	229.2
- Reversal of share-based payment expense	<b>(36.5)</b>	(37.0)	<b>(23.4)</b>	(19.8)
Foreign exchange translation loss	<b>249.5</b>	67.4	<b>326.8</b>	18.6
(Gain)/Loss on disposal of subsidiaries	<b>0</b>	(25.1)	<b>0</b>	29.3
Share of results of joint ventures	<b>(21.0)</b>	(29.3)	<b>0</b>	0
Share of results of associates	<b>(76.6)</b>	(164.2)	<b>0</b>	0
Dividend income	<b>(2.4)</b>	(2.4)	<b>(156.4)</b>	(50.8)
Finance income	<b>(277.7)</b>	(221.8)	<b>(420.9)</b>	(394.1)
Finance cost on:				
- Borrowings	<b>2,403.9</b>	2,175.9	<b>984.2</b>	755.6
- Lease liabilities	<b>1,756.4</b>	1,460.1	<b>4,239.3</b>	4,047.8
- Consumer deposits	<b>183.8</b>	170.3	<b>175.1</b>	161.8
- Others	<b>24.1</b>	12.4	<b>52.8</b>	14.8
Release of:				
- Customers' contributions	<b>(276.3)</b>	(269.1)	<b>(229.3)</b>	(224.5)
- Deferred income	<b>(146.1)</b>	(247.0)	<b>0</b>	0
Government development grants:				
- Other operating income	<b>(63.4)</b>	(62.8)	<b>0</b>	0
- Finance cost	<b>(24.8)</b>	(25.4)	<b>0</b>	0
Impairment losses on:				
- Receivables	<b>183.9</b>	1,003.6	<b>174.2</b>	804.5
- Contract assets	<b>37.7</b>	70.8	<b>34.4</b>	64.0
- Amounts due from subsidiaries	<b>0</b>	0	<b>66.1</b>	343.5
- Amounts due from joint ventures	<b>3.8</b>	0	<b>0</b>	0
- Amounts due from associates	<b>0.1</b>	0.2	<b>0.1</b>	0.1
- Financial guarantees	<b>37.6</b>	8.2	<b>37.6</b>	8.2
- Investment in unquoted debt security	<b>3.1</b>	102.1	<b>3.1</b>	102.1

## CONSOLIDATED STATEMENT OF CASH FLOWS

For The Financial Year Ended 31 December 2022

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<b>CASH FLOWS FROM OPERATING ACTIVITIES (CONTINUED)</b>				
Adjustments for: (continued)				
Reversal of impairment losses on:				
- Receivables	(56.5)	(85.3)	(26.6)	(79.8)
- Contract assets	(71.0)	(44.3)	(64.0)	(36.7)
- Amounts due from subsidiaries	0	0	(210.8)	(751.3)
- Amounts due from joint ventures	(13.7)	(2.6)	0	0
- Amounts due from associates	(0.1)	(0.2)	(0.1)	(0.2)
- Financial guarantees	(18.1)	0	(18.8)	0
- Investment in unquoted debt security	(5.4)	(112.3)	(5.4)	(112.3)
Impairment losses on investment in:				
- Subsidiaries	0	0	18.9	719.4
- Joint ventures	2.3	0	0	0
- Associates	68.6	291.8	0	0
Impairment losses on intangible assets	22.7	0	0	0
Inventories:				
- Provision for obsolescence	83.6	182.8	65.2	85.2
- Write back of obsolescence	(90.7)	(85.4)	(85.5)	(65.4)
- Written off	119.1	172.9	111.1	73.8
Changes in fair value of financial instruments	(130.7)	(201.8)	15.2	2.5
Capacity charges differential	(533.8)	(75.7)	(828.0)	(520.9)
Cash from operations before working capital changes	<b>21,099.1</b>	20,739.3	<b>19,442.4</b>	18,866.5
Working capital changes:				
- Inventories	(1,425.7)	(663.5)	(254.3)	115.4
- Receivables	(12,388.2)	(4,393.1)	(11,796.4)	(3,568.7)
- Contract balances	(427.1)	17.8	(418.4)	75.1
- Payables	2,899.2	(1,899.6)	1,736.4	(3,031.4)
- Subsidiaries balances	0	0	1,270.1	2,274.9
- Associates balances	299.4	(212.0)	597.1	(61.5)
- Joint ventures balances	8.8	(22.3)	0	0
Cash generated from operations	<b>10,065.5</b>	13,566.6	<b>10,576.9</b>	14,670.3
Post-employment benefits paid	(808.9)	(781.5)	(779.6)	(757.8)
Contract liabilities received	828.7	1,038.7	632.6	817.8
Consumer deposits received	326.6	263.9	325.5	260.2
Net taxation and zakat paid	(1,034.0)	(743.8)	(359.6)	(118.9)
Net cash flows generated from operating activities	<b>9,377.9</b>	13,343.9	<b>10,395.8</b>	14,871.6

## CONSOLIDATED STATEMENT OF CASH FLOWS

For The Financial Year Ended 31 December 2022

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>				
Acquisition of a subsidiary net of cash and cash equivalent	(710.8)	0	0	0
Net cash inflow from disposal of subsidiaries	0	221.7	0	221.7
Cash consideration paid to acquire an associate	0	(674.7)	0	0
Additional investments in:				
- Subsidiaries	0	0	(9.0)	0
- Financial assets at FVTPL	(97,219.4)	(68,344.7)	(95,181.0)	(66,826.5)
- Joint venture	(0.1)	0	0	0
Proceeds from redemptions:				
- Investment in unquoted debt security	50.0	0	50.0	0
- Redeemable Preference Shares ('RPS') in associates	2.6	6.6	0	0
Disposals of financial assets at FVTPL	91,605.8	73,024.2	89,662.7	71,521.5
Dividend income received	98.1	65.3	152.8	47.1
Finance income received	145.9	116.4	69.1	46.3
Property, plant and equipment:				
- Additions	(8,428.9)	(8,411.3)	(6,876.9)	(7,710.7)
- Proceeds from disposals	41.3	30.4	14.0	32.7
Intangible assets:				
- Addition	(145.8)	0	0	0
Proceeds from disposals of ROU assets	8.2	3.5	8.2	3.5
Advances granted to subsidiaries	0	0	(1,072.0)	(671.9)
Repayment of advances from subsidiaries	0	0	376.4	0
Net cash flows used in investing activities	(14,553.1)	(3,962.6)	(12,805.7)	(3,336.3)
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>				
Government development grants received	3.3	2.2	0	0
Long term borrowings:				
- Drawdowns	7,493.7	3,000.0	4,000.0	3,000.0
- Repayments	(2,556.3)	(4,379.3)	(105.5)	(3,505.5)
Short term borrowings:				
- Drawdowns	17,427.9	4,266.1	16,475.0	3,750.0
- Repayments	(10,304.2)	(1,000.8)	(9,490.0)	(450.0)
Finance cost paid	(2,657.2)	(2,280.3)	(1,212.2)	(982.0)
Repayments of lease obligations:				
- Principal	(2,116.7)	(2,700.2)	(3,475.5)	(3,853.0)
- Interest	(1,656.1)	(1,459.8)	(4,213.8)	(4,018.8)

## CONSOLIDATED STATEMENT OF CASH FLOWS

For The Financial Year Ended 31 December 2022

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<b>CASH FLOWS FROM FINANCING ACTIVITIES (CONTINUED)</b>				
Dividends paid to shareholders	(2,181.3)	(4,568.4)	(2,181.3)	(4,568.4)
Dividends paid to NCI	(17.7)	(1.0)	0	0
Redemption of RPS by NCI	(73.5)	(45.0)	0	0
Net increase in debt reserve accounts	(4.1)	(12.5)	0	0
Net decrease in cash at bank, held in trust	58.3	77.3	0	0
Net (increase)/decrease in restricted cash	(7.2)	105.9	0	0
Net decrease in deposits maturing more than 90 days	186.9	176.6	0	0
Net cash flows generated from/(used in) financing activities	3,595.8	(8,819.2)	(203.3)	(10,627.7)
<b>NET (DECREASE)/INCREASE IN CASH AND CASH EQUIVALENTS</b>	<b>(1,579.4)</b>	562.1	<b>(2,613.2)</b>	907.6
<b>EFFECTS OF CHANGES IN FOREIGN CURRENCY</b>	<b>0.6</b>	49.8	<b>15.3</b>	43.5
<b>CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE FINANCIAL YEAR</b>	<b>5,634.9</b>	5,023.0	<b>3,346.1</b>	2,395.0
<b>CASH AND CASH EQUIVALENTS AT THE END OF THE FINANCIAL YEAR (NOTE 22)</b>	<b>4,056.1</b>	5,634.9	<b>748.2</b>	3,346.1

The changes in liabilities arising from financing activities have been disclosed in Notes 15, 26 and 27 respectively.

*The notes set out on pages 233 to 381 form an integral part of these consolidated financial statements.*

# NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 1 GENERAL INFORMATION

The Group and the Company are primarily involved in the business of the generation, transmission, distribution and sales of electricity and those tabulated in Note 7 to these financial statements, which also includes the details of the subsidiaries of the Group.

There have been no significant changes in these activities of the Group and of the Company during the financial year.

The Group and the Company follow the Incentive Based Regulation ('IBR') framework for the regulated business.

The Company is a public limited liability company, incorporated and domiciled in Malaysia and is listed on the Main Market of Bursa Malaysia Securities Berhad.

The address of the registered office of the Company is Pejabat Setiausaha Syarikat, Tenaga Nasional Berhad ('TNB'), Tingkat 16, Tower A, TNB Platinum, No. 3, Jalan Bukit Pantai, Bangsar, 59100 Kuala Lumpur, Malaysia.

The financial statements of the Group and the Company have been approved for issuance in accordance with a resolution of Board of Directors on 20 March 2023.

## 2 BASIS OF PREPARATION

The financial statements of the Group and of the Company have been prepared in accordance with the provisions of the Malaysian Financial Reporting Standards ('MFRS'), International Financial Reporting Standards ('IFRS') and the requirements of the Companies Act 2016 in Malaysia. The Directors continue to consider it appropriate to adopt the going concern basis of accounting in preparing the financial statements.

The financial statements have been prepared under the historical cost convention, except as disclosed in Note 3 and respective notes in the financial statements.

The preparation of financial statements in conformity with MFRS requires the use of certain critical accounting estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reported period. It also requires Directors to exercise their judgement in the process of applying the Group's and the Company's accounting policies. Although these estimates and judgements are based on the Directors' best knowledge of current events and actions, actual results may differ. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note 4.

(a) Amendments to published standards that are effective and applicable to the Group and the Company.

Effective for financial year beginning on 1 January 2022:

Amendments to MFRS 3 Business Combinations	Reference to the Conceptual Framework
Amendments to MFRS 9 Financial Instruments	Fees in the '10 per cent' test for Derecognition of Financial Liabilities
Amendments to MFRS 16 Leases	COVID-19-Related Rent Concessions beyond 30 June 2021
Amendments to MFRS 116 Property, Plant and Equipment	Proceeds before Intended Use
Amendments to MFRS 137 Provisions, Contingent Liabilities and Contingent Assets	Onerous Contracts – Cost of Fulfilling a Contract

The amendments to published standards listed above did not have any significant impact on the amounts recognised in prior periods and are not expected to significantly affect the current or future periods.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 2 BASIS OF PREPARATION (CONTINUED)

- (b) New standard and amendments to the published standards that are applicable to the Group and the Company but not yet effective.

Effective for financial year beginning on 1 January 2023:

MFRS 17	Insurance Contracts
Amendments to MFRS 101 Presentation of Financial Statements	Classification of Liabilities as Current or Non-current
Amendments to MFRS 101 Presentation of Financial Statements	Disclosure of Accounting Policies
Amendments to MFRS 108 Accounting Policies, Changes in Accounting Estimates and Errors	Definition of Accounting Estimates
Amendments to MFRS 112 Income Taxes	Deferred Tax related to Assets and Liabilities arising from a Single Transaction

Effective for financial year beginning on 1 January 2024:

Amendments to MFRS 16 Leases	Lease Liability in a Sale and Leaseback
Amendments to MFRS 101 Presentation of Financial Statements	Non-current Liabilities with Covenants

Effective date deferred by Malaysian Accounting Standards Board:

Amendments to MFRS 10 Consolidated Financial Statements and MFRS 128 Investments in Associates and Joint Ventures	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture
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The adoption of the above applicable new standard and amendments to published standards are not expected to have a material impact on the financial statements of the Group and of the Company.

Based on the assessments performed, adoption of MFRS 17 is not expected to have a material impact on the financial statements of the Group and therefore, it will be applied prospectively.

There are no other standards, amendments and improvements to published standards and interpretations to existing standards that are not effective that would be expected to have a material impact on the Group and the Company.

### 3 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Unless otherwise stated, the following accounting policies have been applied consistently in dealing with items that are considered material in relation to the financial statements. These policies have been consistently applied to all the years presented, unless otherwise stated.

- (a) Subsidiaries and basis of consolidation

- (i) Subsidiaries

Subsidiaries are all entities (including structured entities) over which the Group has control. The Group controls an entity when:

- exposed to, or has rights to, variable returns from its involvement with the entity;
- has the ability to affect those returns through its power to direct the relevant activities of the entity; and
- the existence and effect of potential voting rights are considered only when such rights are substantive when assessing control.

In the Company's separate financial statements, investments in subsidiaries are stated at cost less accumulated impairment losses. On disposal of such investments, the difference between net disposal proceeds and their carrying amounts are included in the statement of profit or loss.

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**3 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

## (a) Subsidiaries and basis of consolidation (continued)

## (ii) Basis of consolidation

The consolidated financial statements comprise the financial statements of the Company and its subsidiaries. The characteristics of those financial statements are:

- the financial statements of the subsidiaries are prepared for the same reporting date as the Company.
- subsidiaries are consolidated from the date on which the Group obtains control, and continue to be consolidated until the date that such control ceases.
- intragroup balances, transactions and unrealised gains or losses are eliminated in full.
- uniform accounting policies are adopted in the consolidated financial statements for like transactions and events in similar circumstances.

The Group applies the acquisition method to account for business combinations. The consideration transferred for acquisition of a subsidiary is the fair value of the assets transferred, the liabilities incurred and the equity interests issued by the Group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement and fair value of any pre-existing equity interest in the subsidiary. Acquisition-related costs are expensed as incurred. Identifiable assets acquired, liabilities and contingent liabilities assumed in a business combination are, with limited exceptions, measured initially at their fair value at the acquisition date.

In a business combination achieved in stages, the carrying value of the acquirer's previously held equity interest in the acquiree is remeasured at its acquisition-date fair value and the resulting gain or loss is recognised in the statement of profit or loss.

The excess of the consideration transferred, the amount of any NCI in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the Group's share of the identifiable net assets acquired is recorded as goodwill. If this is less than the fair value of the net assets of the subsidiary acquired in the case of a bargain purchase, the gain is recognised in the statement of profit or loss. Refer to Note 10 for accounting policy on goodwill.

NCI is the equity in a subsidiary not attributable, directly or indirectly, to a parent. On an acquisition-by-acquisition basis, the Group measures any NCI in the acquiree either at fair value or at the NCI's proportionate share of the acquiree's identifiable net assets. At the end of the reporting period, NCI consists of amount calculated on the date of combinations and its share of changes in the subsidiary's equity since the date of combination.

All earnings and losses of the subsidiary are attributed to the parent and the NCI, even if the attribution of losses to the NCI results in a debit balance in the shareholders' equity.

## (iii) Changes in ownership interest

When the Group ceases to consolidate because of loss of control, any retained interest in the entity is remeasured to its fair value with the change in carrying amount recognised in the statement of profit or loss. This fair value becomes the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognised in OCI in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognised in OCI are reclassified to statement of profit or loss. Gains or losses on the disposal of subsidiaries include the carrying amount of goodwill relating to the subsidiaries sold.

## (b) Transactions with NCI

Transactions with NCI that do not result in loss of control are accounted for as transactions with equity owners of the Group. A change in ownership interest results in an adjustment between the carrying amounts of the controlling and NCI to reflect their relative interests in the subsidiary. Any differences between the amount of the adjustment to NCI and any consideration paid or received are recognised in equity attributable to owners of the Group.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 3 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### (c) Impairment of non-financial assets

Assets that are subject to amortisation are reviewed for impairment losses whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Impairment loss is recognised in the statement of profit or loss for the amount by which the carrying amount of the asset exceeds its recoverable amount. The recoverable amount is the higher of fair value less cost to sell and its value in use ('VIU'). For the purpose of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows which are largely independent of the cash inflows from other assets or groups of assets (cash-generating units).

Non-financial assets other than goodwill previously impaired are reviewed for possible reversal of the impairment at each reporting date. Any subsequent increase in recoverable amount is recognised in the statement of profit or loss.

#### (d) Research and development

Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognised in the statement of profit or loss as an expense as incurred.

Expenditure on development activities, whereby the application research findings are applied to a plan or design for the production of new or substantially improved products and processes, is capitalised only when all of the following criteria are fulfilled:

- (i) it is technically feasible to complete the intangible asset so that it will be available for use or sale;
- (ii) management intends to complete the intangible asset and use or sell it;
- (iii) there is an ability to use or sell the intangible asset;
- (iv) it can be demonstrated how the intangible asset will generate probable future economic benefits;
- (v) adequate technical, financial and other resources to complete the development and to use or sell the intangible asset are available; and
- (vi) the expenditure attributable to the intangible asset during its development can be reliably measured.

Capitalised development costs are recognised as intangible assets and amortised from the point at which the asset is ready for use on a straight line method over its useful life.

The expenditure capitalised includes the cost of materials, direct labour and overheads costs that are directly attributable to preparing the assets for its intended use. Other development expenditure is recognised in the statement of profit or loss as incurred. Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.

All other significant accounting policies are disclosed in their respective notes.

### 4 CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Estimates and judgements are continuously evaluated by the Directors and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The Group and the Company make estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, rarely equate to the related actual results. To enhance the information content of the estimates, certain key variables that are anticipated to have a material impact on the Group's and the Company's results and financial positions are tested for sensitivity to changes in the underlying parameters.

The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are outlined below:

#### (a) Impairment of associates

The Group and the Company assess impairment of its investment in associates whenever the events or changes in circumstances indicate that the carrying amount may not be recoverable, i.e. the carrying amount is more than the recoverable amount. Recoverable amount is measured at the higher of the fair value less cost to sell and its VIU. The VIU is the net present value of the projected future cash flow derived from the investment discounted at an appropriate discount rate. Projected future cash flows are based on the Group's estimates calculated based on historical, sector and industry trends, general market and economic conditions, changes in technology and other available information. The assumptions used, results and sensitivity of the impairment assessments are disclosed in Note 9.

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**4 CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS (CONTINUED)**

The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are outlined below: (continued)

## (b) Impairment of intangible assets

The Group tests intangible assets which includes goodwill for impairment annually in accordance with its accounting policy and whenever events or change in circumstances indicate that this is necessary within the financial period. This requires an estimation of the VIU of the cash generating unit ('CGU') to which the goodwill is allocated. Estimating the VIU requires the Group to make an estimate of the expected future cash flows from the CGU to the Group and also to apply a suitable discount rate in order to calculate the present value of those cash flows. The assumptions used, results and sensitivity of the impairment assessment of goodwill are disclosed in Note 10.

## (c) Measurement of expected credit loss ('ECL') allowance for financial assets

The loss allowances for financial assets are based on assumptions about risk of default and expected loss rates. The Group and the Company use judgements in making these assumptions and selecting the inputs to the impairment calculation, based on the Group's and the Company's past history, existing market conditions as well as forward looking estimates at the end of each reporting period. Details of key assumptions and inputs used are disclosed in Note 45.

## (d) Restoration costs of leased assets

The Group recognises a provision for restoration costs for leased assets where contracts contain an obligation to remove the asset after the end of the contract and to restore the site to its original condition. The estimates of the restoration costs are based on the quoted price given by the external contractor for a particular asset. The provision recognised is the present value of the estimated restoration costs discounted using a risk free pre-tax rate. An amount equivalent to the provision is recognised within PPE and ROU assets depending on which category the underlying asset is recognised, and is depreciated over the useful lives of the related assets. The unwinding of the discount on the provision is included in finance cost. The details of the provision are as disclosed in Note 28.

## (e) Estimation of income taxes

## (i) Income tax

Income tax is estimated based on the rules governed under the Income Tax Act, 1967.

Differences in determining the capital allowances, deductibility of certain expenses and subsequent utilisation of reinvestment allowance may arise during the estimation of the provision for income tax between tax calculated at the statement of financial position date, and the final submission to the tax authority as a result of obtaining further detailed information that may become available subsequent to the statement of financial position date.

Where the final tax outcome of these matters is different from the amounts that were initially recognised, such differences will impact the income tax provisions and deferred tax balance in the period in which such determination is made.

The Group and the Company have recorded tax recoverable for which the Group and the Company believe that there is a reasonable basis for recognition. Where the final tax outcome of this matter is different from the amount that was initially recorded, such difference may cause a material adjustment to the carrying amount of the tax recoverable balance recorded in the period in which such determination is made.

Reinvestment allowance ('RIA') litigation

The Company and the Inland Revenue Board ('IRB') have entered into varies of litigation cases in respect of the Company's eligibility for RIA. The details of the cases are as disclosed in Note 42.

As at 31 December 2022, the Group and the Company recorded a tax recoverable of RM3,522.4 million from the IRB arising from:

- Resubmission of tax computations for the Years of Assessment ('YAs') 2003 to 2006 and 2008 to 2012 pursuant to the explicit approval given by the IRB on 21 January 2013 on the eligibility of the Company in claiming the RIA; and
- The payment which had been made to IRB in December 2020 in respect of YAs 2016 and 2017.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 4 CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS (CONTINUED)

The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are outlined below: (continued)

(e) Estimation of income taxes (continued)

(i) Income tax (continued)

The Group and the Company have not recorded the potential additional tax liability arising from the tax impact if the RIA claimed is disallowed and the Company loses its litigation. The realisation of this tax recoverable and the potential tax liability are dependent on the outcome of judgement on the RIA claims by the Special Commissioners of Income Tax ('SCIT') and by the Kuala Lumpur High Court, including the subsequent notice of appeal filed by IRB before the Court of Appeal.

The Directors have performed an assessment on the tax recoverable of RM3,522.4 million and the potential tax liability based on legal view obtained from external legal counsel and the facts surrounding its RIA claims. The Directors have exercised judgement that there is sufficient evidence and case law to support the Company's appeal against the Notices.

(ii) Deferred tax assets

Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences or unused tax losses can be utilised. This involves judgement regarding the future financial performance of the particular entity in which the deferred tax asset has been recognised, as disclosed in Note 12.

(f) Post-employment employee benefits

The Group and the Company provide both Retirement Benefit Plan and Post Retirement Medical Plan for certain employees. The present value of the employee benefits obligations depends on a number of factors that are determined on an actuarial basis using certain assumptions. The key assumptions used in determining the net cost/(income) for the employee benefits include discount rate, medical claim inflation rate and salary increment rate. Any changes in these assumptions will impact the carrying amount of employee benefits obligations, as disclosed in Note 24.

- Discount rate

The Group and the Company determine the appropriate discount rate at the end of each financial period. This is the interest rate that should be used to determine the present value of estimated future cash outflows expected to be required to settle the pension obligations. In determining the appropriate discount rate, the Group and the Company consider the interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid and that have terms to maturity approximating the terms of the related employee benefits obligations.

- Medical claim inflation rate

The medical claim inflation rate for general practitioner, hospitalisation, specialist and dialysis medical claims, as determined by the Group and the Company are based on the annualised increase in average claims over the past 5 years.

- Salary increment rate

The salary increment rate for employees receiving the Retirement Benefit Plan as determined by the Group and the Company is based on the average salary increment rate for the past 13 years and considerations for price inflation, real salary increase, promotions and Collective Agreement ('CA') negotiation.

(g) Group's sustainability pathway consideration

The Group's sustainability pathway is to reduce emission intensity by 35.0% and halve coal generation capacity by 2035; and aspire to achieve net zero emissions and be coal free by 2050. Based on this sustainability pathway, the Group has assessed whether climate change risks have affected the reasonable and supportable assumption used to estimate the cash flow projections and the estimated useful lives of the generation assets. The revisions and assessments in relation to the climate change and sustainability pathway do not have a material impact on the financial statements of the Group and the Company other than as disclosed in Note 9.

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**5 PROPERTY, PLANT AND EQUIPMENT ('PPE')****Accounting Policy**

PPE are stated at cost less accumulated depreciation and accumulated impairment losses. Cost includes expenditure that is directly attributable to the construction or acquisition of the items and bringing them to the location and condition so as to render them operational in the manner intended by the Group and the Company and allocated according to its components.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the items can be measured reliably. The carrying amount of the replaced part is derecognised.

The cost of major overhaul/inspection is recognised in the asset's carrying amount as a replacement and the remaining carrying amount of the previous major overhaul/inspection is derecognised.

Major spare parts and standby equipment are recognised as assets when the Group and the Company expect to use for more than one period. Similarly, if the spare parts and servicing equipment can be used only in connection with an item of PPE, they are accounted for as PPE.

Gains or losses on disposal of PPE are determined by reference to their carrying amount and are recognised in statement of profit or loss.

Freehold land and capital work-in-progress are not depreciated. Other PPE are depreciated on the straight line method to allocate the cost to their residual values over their estimated useful lives, summarised as follows:

Buildings and civil works	10 - 100 years
Plant and machinery	3 - 50 years
Lines and distribution mains	10 - 50 years
Distribution services	25 years
Meters	10 - 15 years
Public lighting	15 - 25 years
Furniture, fittings and office equipment	3 - 15 years
Motor vehicles	5 - 15 years

Residual values and useful lives of assets are reviewed and adjusted if appropriate, on an annual basis.

At the end of the reporting period, the Group and the Company assess whether there is any indication of impairment. If such indications exist, an analysis is performed to assess whether the carrying amount of the asset is fully recoverable. An impairment loss is recognised if the carrying amount exceeds the recoverable amount (Note 3(c)).

During the financial year 2021, the Group has revised the estimated useful lives of generation assets based on the trend within the power generation industry and the Group's sustainability pathway. Accordingly, the useful lives of the gas-fired power plants' plant and machinery and hydro power plant dams have been extended for additional 5 years and 40 years respectively, based on the track records and research information available. There was a revision to the useful lives of the coal-fired power plants related assets which is in line with the Group's aspiration to discontinue coal plants.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 5 PROPERTY, PLANT AND EQUIPMENT ('PPE') (CONTINUED)

	As at 1.1.2022 RM'million	Exchange rate RM'million	Acquisition of subsidiary RM'million	Additions RM'million	Disposals RM'million	Transfers/ Adjustments/ Reclassification/ Write offs RM'million	As at 31.12.2022 RM'million
<b>2022</b>							
<b>Group</b>							
<u>Cost</u>							
Freehold land	3,166.0	0	0	227.6	0	(5.8)	3,387.8
Buildings and civil works	25,379.2	0	0	44.7	(25.8)	1,323.4	26,721.5
	28,545.2	0	0	272.3	(25.8)	1,317.6	30,109.3
Plant and machinery	94,296.6	(272.1)	1,584.4	128.2	(476.0)	2,982.8	98,243.9
Lines and distribution mains	54,401.4	0	0	3.3	(47.4)	2,509.2	56,866.5
Distribution services	5,330.7	0	0	0.7	0	280.7	5,612.1
Meters	4,011.5	0	0	3.8	(137.4)	443.0	4,320.9
Public lighting	1,961.7	0	0	0	(0.1)	253.8	2,215.4
Furniture, fittings and office equipment	3,869.0	0	0	398.6	(13.4)	11.2	4,265.4
Motor vehicles	845.2	0	0	39.5	(17.8)	(1.5)	865.4
	193,261.3	(272.1)	1,584.4	846.4	(717.9)	7,796.8	202,498.9
Capital work-in-progress	12,230.7	0	0	7,738.6	(11.5)	(7,662.2)	12,295.6
	205,492.0	(272.1)	1,584.4*	8,585.0	(729.4)	134.6	214,794.5

\* It relates to the recognition of Clean Energy and Infrastructure UK Limited Group ('CEI UK') as a subsidiary during the current financial year as disclosed in Note 48.

	As at 1.1.2022 RM'million	Exchange rate RM'million	Charged for the financial year RM'million	Released on disposals/ Transfers/ Write offs RM'million	As at 31.12.2022 RM'million
<b>2022</b>					
<b>Group</b>					
<u>Accumulated depreciation</u>					
Buildings and civil works	8,834.3	0	672.6	(16.3)	9,490.6
Plant and machinery	43,265.0	(24.8)	4,033.9	(425.9)	46,848.2
Lines and distribution mains	29,305.6	0	1,853.6	(33.6)	31,125.6
Distribution services	3,396.7	0	193.3	0	3,590.0
Meters	2,384.4	0	221.6	(137.3)	2,468.7
Public lighting	676.8	0	132.3	(0.1)	809.0
Furniture, fittings and office equipment	2,925.5	0	352.0	(13.8)	3,263.7
Motor vehicles	598.1	0	41.4	(17.9)	621.6
	91,386.4	(24.8)	7,500.7	(644.9)	98,217.4

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 5 PROPERTY, PLANT AND EQUIPMENT ('PPE') (CONTINUED)

	As at 1.1.2021 RM'million	Exchange rate		Additions RM'million	Disposals RM'million	Transfers/ Adjustments/ Reclassification/ Write offs RM'million	As at 31.12.2021 RM'million					
		adjustments RM'million										
<b>2021</b>												
<b>Group</b>												
<u>Cost</u>												
Freehold land	2,843.6	0	324.9	0	(2.5)	3,166.0						
Buildings and civil works	24,075.7	0	20.5	13.3	1,269.7	25,379.2						
	26,919.3	0	345.4	13.3	1,267.2	28,545.2						
Plant and machinery	88,784.1	102.7	295.4	(685.5)	5,799.9	94,296.6						
Lines and distribution mains	52,247.2	0	218.2	(83.0)	2,019.0	54,401.4						
Distribution services	5,099.3	0	3.6	0	227.8	5,330.7						
Meters	3,604.1	0	3.6	(86.8)	490.6	4,011.5						
Public lighting	1,676.6	0	0	(0.2)	285.3	1,961.7						
Furniture, fittings and office equipment	3,427.5	0.1	457.1	(17.4)	1.7	3,869.0						
Motor vehicles	787.0	0	83.8	(30.5)	4.9	845.2						
	182,545.1	102.8	1,407.1	(890.1)	10,096.4	193,261.3						
Capital work-in-progress	14,872.0	0	7,484.9	(259.8)	(9,866.4)	12,230.7						
	197,417.1	102.8	8,892.0	(1,149.9)	230.0	205,492.0						

	As at 1.1.2021 RM'million	Exchange rate		Charged for the financial year RM'million	Released on disposals/ Transfers/ Write offs RM'million	As at 31.12.2021 RM'million				
		adjustments RM'million								
<b>2021</b>										
<b>Group</b>										
<u>Accumulated depreciation</u>										
Buildings and civil works	8,157.7	0	645.5	31.1	8,834.3					
Plant and machinery	39,954.9	3.2	3,806.0	(499.1)	43,265.0					
Lines and distribution mains	27,583.3	0	1,786.7	(64.4)	29,305.6					
Distribution services	3,207.8	0	188.9	0	3,396.7					
Meters	2,249.6	0	197.7	(62.9)	2,384.4					
Public lighting	559.4	0	117.6	(0.2)	676.8					
Furniture, fittings and office equipment	2,518.0	0	412.9	(5.4)	2,925.5					
Motor vehicles	590.3	0	38.1	(30.3)	598.1					
	84,821.0	3.2	7,193.4	(631.2)	91,386.4					

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 5 PROPERTY, PLANT AND EQUIPMENT ('PPE') (CONTINUED)

	As at 1.1.2022 RM'million	Additions RM'million	Disposals RM'million	Transfers/ Adjustments/ Reclassification/ Write offs RM'million	As at 31.12.2022 RM'million				
<b>2022</b>									
<b>Company</b>									
<u>Cost</u>									
Freehold land	3,013.3	227.6	0	(5.8)	3,235.1				
Buildings and civil works	15,740.8	0	(6.9)	1,320.2	17,054.1				
	18,754.1	227.6	(6.9)	1,314.4	20,289.2				
Plant and machinery	45,323.6	0	(366.2)	2,308.0	47,265.4				
Lines and distribution mains	51,328.5	0	(46.0)	2,405.6	53,688.1				
Distribution services	4,982.6	0	0	259.7	5,242.3				
Meters	3,897.1	0	(137.3)	441.7	4,201.5				
Public lighting	1,960.0	0	(0.1)	253.7	2,213.6				
Furniture, fittings and office equipment	3,324.2	356.4	(11.8)	0.1	3,668.9				
Motor vehicles	663.2	32.4	(16.3)	(1.1)	678.2				
	130,233.3	616.4	(584.6)	6,982.1	137,247.2				
Capital work-in-progress	9,203.9	6,606.0	(2.5)	(7,097.4)	8,710.0				
	139,437.2	7,222.4	(587.1)	(115.3)	145,957.2				
 <b>2022</b>									
<b>Company</b>									
<u>Accumulated depreciation</u>									
Buildings and civil works	5,158.3	383.6	(5.0)	5,536.9					
Plant and machinery	24,278.9	1,822.7	(341.5)	25,760.1					
Lines and distribution mains	28,034.3	1,726.3	(33.6)	29,727.0					
Distribution services	3,166.8	174.7	0	3,341.5					
Meters	2,300.7	215.5	(137.3)	2,378.9					
Public lighting	675.9	132.1	(0.1)	807.9					
Furniture, fittings and office equipment	2,460.6	304.8	(11.5)	2,753.9					
Motor vehicles	451.2	30.5	(16.2)	465.5					
	66,526.7	4,790.2	(545.2)	70,771.7					

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 5 PROPERTY, PLANT AND EQUIPMENT ('PPE') (CONTINUED)

	As at 1.1.2021 RM'million	Additions RM'million	Disposals RM'million	Transfers/ Adjustments/ Reclassification/ Write offs RM'million	As at 31.12.2021 RM'million				
<b>2021</b>									
<b>Company</b>									
<u>Cost</u>									
Freehold land	2,558.5	324.9	0	129.9	3,013.3				
Buildings and civil works	15,258.0	0	0	482.8	15,740.8				
	17,816.5	324.9	0	612.7	18,754.1				
Plant and machinery	43,489.7	0	(661.6)	2,495.5	45,323.6				
Lines and distribution mains	49,389.3	0	(82.9)	2,022.1	51,328.5				
Distribution services	4,762.4	0	0	220.2	4,982.6				
Meters	3,495.1	0	(86.7)	488.7	3,897.1				
Public lighting	1,675.5	0	(0.2)	284.7	1,960.0				
Furniture, fittings and office equipment	2,903.1	425.0	(0.8)	(3.1)	3,324.2				
Motor vehicles	613.3	71.7	(27.7)	5.9	663.2				
	124,144.9	821.6	(859.9)	6,126.7	130,233.3				
Capital work-in-progress	7,896.2	7,130.7	(26.2)	(5,796.8)	9,203.9				
	132,041.1	7,952.3	(886.1)	329.9	139,437.2				

	As at 1.1.2021 RM'million	Charged for the financial year RM'million	Released on disposals/ Transfers/ Write offs RM'million	As at 31.12.2021 RM'million		
<b>2021</b>						
<b>Company</b>						
<u>Accumulated depreciation</u>						
Buildings and civil works	4,796.1	362.3	(0.1)	5,158.3		
Plant and machinery	23,022.4	1,727.5	(471.0)	24,278.9		
Lines and distribution mains	26,431.7	1,667.0	(64.4)	28,034.3		
Distribution services	2,994.1	172.7	0	3,166.8		
Meters	2,172.4	191.2	(62.9)	2,300.7		
Public lighting	558.6	117.5	(0.2)	675.9		
Furniture, fittings and office equipment	2,086.1	375.3	(0.8)	2,460.6		
Motor vehicles	451.0	27.3	(27.1)	451.2		
	62,512.4	4,640.8	(626.5)	66,526.7		

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 5 PROPERTY, PLANT AND EQUIPMENT ('PPE') (CONTINUED)

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<u>Net book value</u>				
Freehold land	<b>3,387.8</b>	3,166.0	<b>3,235.1</b>	3,013.3
Buildings and civil works	<b>17,230.9</b>	16,544.9	<b>11,517.2</b>	10,582.5
	<b>20,618.7</b>	19,710.9	<b>14,752.3</b>	13,595.8
Plant and machinery	<b>51,395.7</b>	51,031.6	<b>21,505.3</b>	21,044.7
Lines and distribution mains	<b>25,740.9</b>	25,095.8	<b>23,961.1</b>	23,294.2
Distribution services	<b>2,022.1</b>	1,934.0	<b>1,900.8</b>	1,815.8
Meters	<b>1,852.2</b>	1,627.1	<b>1,822.6</b>	1,596.4
Public lighting	<b>1,406.4</b>	1,284.9	<b>1,405.7</b>	1,284.1
Furniture, fittings and office equipment	<b>1,001.7</b>	943.5	<b>915.0</b>	863.6
Motor vehicles	<b>243.8</b>	247.1	<b>212.7</b>	212.0
	<b>104,281.5</b>	101,874.9	<b>66,475.5</b>	63,706.6
Capital work-in-progress	<b>12,295.6</b>	12,230.7	<b>8,710.0</b>	9,203.9
	<b>116,577.1</b>	114,105.6	<b>75,185.5</b>	72,910.5

The title deeds of certain lands are in the process of being registered in the name of the Company and certain subsidiaries.

Net book value of PPE pledged as security for borrowings are disclosed in Note 26.

Included in the capital work-in-progress is interest capitalised during the financial year for the Group and the Company of RM286.5 million (2021: RM274.4 million) and RM263.6 million (2021: RM249.4 million) respectively.

The capitalisation rate used to determine the amount of borrowing cost eligible for capitalisation is 5.2% (2021: 5.3%).

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**6 RIGHT-OF-USE ('ROU') ASSETS****Accounting Policy**

A lease is a contract, or part of a contract, whereby the lessor conveys to the lessee the right to control the use of an identified asset for a period of time in exchange for consideration.

To assess whether a contract conveys the right to control the use of an identified asset, the Group and the Company assess whether:

- The contract involves the use of an identified asset – this may be specified explicitly or implicitly, and should be physically distinct or represent substantially all of the capacity of a physically distinct asset. If the supplier ('lessor') has a substantive substitution right, then the asset is not identified;
- The customer ('lessee') has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use; and
- The customer ('lessee') has the right to direct the use of the asset. In rare cases where the decision about how and for what purpose the asset is used is predetermined, the customer ('lessee') has the right to direct the use of the asset if either the customer ('lessee') has the right to operate the asset; or the customer designed the asset in a way that predetermines how and for what purpose it will be used.

**The Group and the Company as lessees**

The Group and the Company lease various buildings, plant and machinery, furniture and fittings, office equipment and motor vehicles. These leases have tenures between 1 and 25 years. Lease terms are generally negotiated on an individual basis. As for leasehold land, the remaining period of the respective leases ranges from 4 to 99 years.

**(i) Initial recognition**

The Group and the Company recognise a ROU asset and a lease liability for all leases conveying the right to control the use of an identified asset for a period of time.

The ROU assets recognised by the Group and the Company are initially recorded at cost, which comprise the following:

- The amount of the initial measurement of the lease liability;
- Any lease payments made on or before the commencement date of the lease, less any lease incentives received;
- Any initial direct costs incurred by the Group and the Company; and
- An estimate of costs to be incurred by the Group and the Company in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the lessor.

The lease liability is initially measured at the present value of the lease payments that are not paid at that date. The lease payments are discounted using the Group's incremental borrowing rate.

Lease liabilities include the net present value of the following lease payments:

- Fixed payments (including in-substance fixed payments), less any lease incentives receivable;
- Variable lease payments that are based on an index or a rate;
- Amounts expected to be payable by the lessee under residual value guarantees;
- The exercise price of a purchase option if the lessee is reasonably certain to exercise that option; and
- Payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 6 RIGHT-OF-USE ('ROU') ASSETS (CONTINUED)

#### Accounting Policy (continued)

The Group and the Company as lessees (continued)

(ii) Subsequent measurement

After initial recognition, the Group and the Company measure ROU assets at cost:

- Less any accumulated depreciation;
- Less any accumulated impairment losses; and
- Adjusted for any remeasurement of the lease liabilities.

The Group and the Company measure the lease liability by increasing the carrying amount to reflect interest on the lease liability, reducing the carrying amount to reflect lease payments made, and remeasuring the carrying amount to reflect any reassessments or lease modifications. The interest on the lease liability is recognised as finance cost in the statement of profit or loss.

(iii) Extension and termination options

Extension and termination options are included in a number of property and equipment leases across the Group. In determining the lease term, management considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. Extension options (or periods after termination options) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated).

The assessment of reasonable certainty is reviewed if a significant event or a significant change in circumstances occurs which affects this assessment and that is within the control of the lessee.

The Group and the Company have elected not to recognise ROU assets and lease liabilities for leases of low-value assets.

If an arrangement contains lease and non-lease components, the Group and the Company apply MFRS 15 to allocate the consideration in the contract based on the stand-alone selling prices.

A ROU asset and its corresponding lease liability are recognised at the date the leased asset is available for used by the Group and the Company. Each lease payment is allocated between the principal and finance cost. The finance cost is charged to statement of profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The ROU asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis.

At the end of the reporting period, the Group and the Company assess whether there is any indication of impairment. If such indication exist, an analysis is performed to assess whether the carrying amount of the asset is fully recoverable. An impairment loss is recognised if the carrying amount exceeds the recoverable amount (Note 3(c)).

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 6 RIGHT-OF-USE ('ROU') ASSETS (CONTINUED)

	As at 1.1.2022 RM'million	Exchange rate adjustments RM'million	Acquisition of subsidiary RM'million	Additions RM'million	Transfers/ Adjustments/ Reclassification RM'million	As at 31.12.2022 RM'million
<b>2022</b>						
<b>Group</b>						
<u>Cost</u>						
Leasehold land	2,640.4	(16.6)	79.4	0	12.9	2,716.1
Buildings	146.4	0.1	0	29.8	(2.8)	173.5
	2,786.8	(16.5)	79.4	29.8	10.1	2,889.6
Plant and machinery	46,110.6	0	0	6,487.0	0	52,597.6
Furniture, fittings and office equipment	75.7	0	0	2.7	0	78.4
Motor vehicles	2.8	0	0	0	0	2.8
	48,975.9	(16.5)	79.4*	6,519.5	10.1	55,568.4

\* It relates to the recognition of CEI UK as a subsidiary during the current financial year as disclosed in Note 48.

	As at 1.1.2022 RM'million	Exchange rate adjustments RM'million	Charged for the financial year RM'million	Transfers/ Adjustments/ Reclassification RM'million	As at 31.12.2022 RM'million
<b>2022</b>					
<b>Group</b>					
<u>Accumulated depreciation</u>					
Leasehold land	579.8	(1.3)	45.5	(0.2)	623.8
Buildings	110.3	0	29.5	(1.7)	138.1
	690.1	(1.3)	75.0	(1.9)	761.9
Plant and machinery	13,526.0	0	3,812.5	0	17,338.5
Furniture, fittings and office equipment	46.8	0	13.7	0	60.5
Motor vehicles	1.8	0	0.6	0	2.4
	14,264.7	(1.3)	3,901.8	(1.9)	18,163.3

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 6 RIGHT-OF-USE ('ROU') ASSETS (CONTINUED)

	As at 1.1.2021 RM'million	Exchange rate adjustments RM'million	Additions RM'million	Transfers/ Adjustments/ Reclassification RM'million	As at 31.12.2021 RM'million
<b>2021</b>					
<b>Group</b>					
<u>Cost</u>					
Leasehold land	2,566.3	6.5	68.5	(0.9)	2,640.4
Buildings	129.4	0	16.6	0.4	146.4
	2,695.7	6.5	85.1	(0.5)	2,786.8
Plant and machinery	42,935.7	0	3,174.9	0	46,110.6
Furniture, fittings and office equipment	42.1	0	33.6	0	75.7
Motor vehicles	1.4	0	1.4	0	2.8
	45,674.9	6.5	3,295.0	(0.5)	48,975.9
	As at 1.1.2021 RM'million	Exchange rate adjustments RM'million	Charged for the financial year RM'million	Transfers/ Adjustments/ Reclassification RM'million	As at 31.12.2021 RM'million
<b>2021</b>					
<b>Group</b>					
<u>Accumulated depreciation</u>					
Leasehold land	540.8	0.1	41.2	(2.3)	579.8
Buildings	81.5	0	28.6	0.2	110.3
	622.3	0.1	69.8	(2.1)	690.1
Plant and machinery	10,114.1	0	3,411.9	0	13,526.0
Furniture, fittings and office equipment	31.0	0	15.8	0	46.8
Motor vehicles	1.2	0	0.6	0	1.8
	10,768.6	0.1	3,498.1	(2.1)	14,264.7

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 6 RIGHT-OF-USE ('ROU') ASSETS (CONTINUED)

	As at 1.1.2022 RM'million	Transfers/ Adjustments/ Reclassification			As at 31.12.2022 RM'million		
		Additions RM'million	RM'million	RM'million			
<b>2022</b>							
<b>Company</b>							
<u>Cost</u>							
Leasehold land	1,260.2	0	0.3	1,260.5			
Buildings	186.0	14.4	0	200.4			
	1,446.2	14.4	0.3	1,460.9			
Plant and machinery	96,682.1	6,876.2	0	103,558.3			
Furniture, fittings and office equipment	66.5	2.0	0	68.5			
Motor vehicles	0.5	0	0	0.5			
	98,195.3	6,892.6	0.3	105,088.2			
 <b>2022</b>							
<b>Company</b>							
<u>Accumulated depreciation</u>							
Leasehold land	329.6	18.9	(0.2)	348.3			
Buildings	98.8	30.0	0	128.8			
	428.4	48.9	(0.2)	477.1			
Plant and machinery	26,502.3	6,174.5	0	32,676.8			
Furniture, fittings and office equipment	42.1	12.6	0	54.7			
Motor vehicles	0.5	0	0	0.5			
	26,973.3	6,236.0	(0.2)	33,209.1			

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 6 RIGHT-OF-USE ('ROU') ASSETS (CONTINUED)

	As at 1.1.2021 RM'million	Additions RM'million	Transfers/ Adjustments/ Reclassification RM'million	As at 31.12.2021 RM'million
<b>2021</b>				
<b>Company</b>				
<u>Cost</u>				
Leasehold land	1,240.7	22.7	(3.2)	1,260.2
Buildings	108.4	77.6	0	186.0
	1,349.1	100.3	(3.2)	1,446.2
Plant and machinery	86,772.2	9,909.9	0	96,682.1
Furniture, fittings and office equipment	37.7	28.8	0	66.5
Motor vehicles	0.5	0	0	0.5
	88,159.5	10,039.0	(3.2)	98,195.3
	As at 1.1.2021 RM'million	Charged for the financial year RM'million	Transfers/ Adjustments/ Reclassification RM'million	As at 31.12.2021 RM'million
<b>2021</b>				
<b>Company</b>				
<u>Accumulated depreciation</u>				
Leasehold land	313.6	17.8	(1.8)	329.6
Buildings	68.2	30.6	0	98.8
	381.8	48.4	(1.8)	428.4
Plant and machinery	20,666.6	5,835.7	0	26,502.3
Furniture, fittings and office equipment	27.7	14.4	0	42.1
Motor vehicles	0.5	0	0	0.5
	21,076.6	5,898.5	(1.8)	26,973.3

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 6 RIGHT-OF-USE ('ROU') ASSETS (CONTINUED)

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<u>Net book value</u>				
Leasehold land	<b>2,092.3</b>	2,060.6	<b>912.2</b>	930.6
Buildings	<b>35.4</b>	36.1	<b>71.6</b>	87.2
	<b>2,127.7</b>	2,096.7	<b>983.8</b>	1,017.8
Plant and machinery	<b>35,259.1</b>	32,584.6	<b>70,881.5</b>	70,179.8
Furniture, fittings and office equipment	<b>17.9</b>	28.9	<b>13.8</b>	24.4
Motor vehicles	<b>0.4</b>	1.0	<b>0</b>	0
	<b>37,405.1</b>	34,711.2	<b>71,879.1</b>	71,222.0

The title deeds of certain leasehold lands classified as ROU assets are in the process of being registered in the name of the Company and certain subsidiaries.

Net book value of ROU pledged as security for borrowings are disclosed in Note 26.

## 7 SUBSIDIARIES

	Note	Company	
		2022 RM'million	2021 RM'million
At cost:			
Unquoted Ordinary Shares		<b>1,571.8</b>	1,571.8
Redeemable Preference Shares	(a)	<b>9,654.1</b>	9,332.7
Shares/Options granted to employees of subsidiaries		<b>390.1</b>	307.8
		<b>11,616.0</b>	11,212.3
Less: Accumulated impairment losses		<b>(3,768.0)</b>	(3,749.1)
		<b>7,848.0</b>	7,463.2

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 7 SUBSIDIARIES (CONTINUED)

(a) Movement in RPS in investments in subsidiaries:

- (i) The Company subscribed to 9,011,236 new RPS issued by TNB Renewables Sdn. Bhd. ('TRe'), by cash amounting to RM9.0 million on 28 January 2022 (RM1.6 million) and 30 March 2022 (RM7.4 million), respectively.
- (ii) On 22 February 2022, the Company subscribed to 52,032,127 new RPS issued by TNB Retail Sdn. Bhd. ('RETAIL'), by conversion of amounts due from RETAIL amounting to RM52.0 million.
- (iii) On 25 November 2022, the Company subscribed to 205,351,693 new RPS issued by TNB International Sdn. Bhd. ('TNBI'), by conversion of amounts due from TNBI amounting to RM205.4 million.
- (iv) On 19 December 2022, the Company subscribed to 55,000,000 new RPS issued by TNB Engineering Corporation Sdn. Bhd. ('TNEC'), by conversion of amounts due from TNEC amounting to RM55.0 million.

The details of the subsidiaries are as follows:

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
Allo Technology Sdn. Bhd.	100%	100%	Information technology related services	Malaysia
Aruna Servicios Integrales S.L.U.*	100%	100%	Investment holding	Spain
<u>Subsidiary of Aruna Servicios Integrales S.L.U.</u>				
Global Power Enerjî Sanayî Ve Ticaret Anonîm Şirketi*	100%	100%	To engage in activities related to building and operating electricity production facilities, producing electricity and/or capacity and distributing the generated electricity and/or capacity to customers and/or to legal entities with wholesale trade licences or retail sale licences and to free consumers	Türkiye
Malaysia Transformer Manufacturing Sdn. Bhd.	100%	100%	Principally engaged in the business of manufacturing, selling and repairing distribution, power and earthing transformers	Malaysia
Orion Mission Sdn. Bhd. (Dissolved w.e.f. 12.06.2022)	-	100%	Dormant	Malaysia
<u>Subsidiary of Orion Mission Sdn. Bhd.</u>				
Lahad Datu Holdings Sdn. Bhd. (Dissolved w.e.f. 26.05.2022)	-	100%	Dormant	Malaysia
<u>Subsidiary of Lahad Datu Holdings Sdn. Bhd.</u>				
Lahad Datu Energy Sdn. Bhd. (Dissolved w.e.f. 08.03.2022)	-	100%	Dormant	Malaysia

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**7 SUBSIDIARIES (CONTINUED)**

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
Power and Energy International (Mauritius) Ltd.*  <u>Subsidiary of Power and Energy International (Mauritius) Ltd.</u>	<b>100%</b>	100%	Investment holding	Mauritius
Independent Power International Ltd.*	<b>100%</b>	100%	Investment holding	Mauritius
REV Property Holdings Sdn. Bhd.  <u>Subsidiaries of REV Property Holdings Sdn. Bhd.</u>	<b>100%</b>	100%	Investment holding company, property asset management and property facility management	Malaysia
REV Horizon Sdn. Bhd.	<b>100%</b>	100%	Property asset management, property project management and property facility management	Malaysia
REV Kapar Sdn. Bhd.	<b>100%</b>	-	Property investment, property development, project management, asset management, facility management	Malaysia
REV Perai Sdn. Bhd.	<b>100%</b>	-	Property investment, property development, project management, asset management, facility management	Malaysia
REV Platinum Sdn. Bhd.	<b>100%</b>	-	Property investment, property management, asset management and facility management	Malaysia
REV Zenith Sdn. Bhd.	<b>100%</b>	-	Property investment, property development, project management, asset management, facility management	Malaysia
Sabah Electricity Sdn. Bhd.  <u>Subsidiary of Sabah Electricity Sdn. Bhd.</u>	<b>83%</b>	83%	Business of generation, transmission, distribution and sales of electricity and services in Sabah and the Federal Territory of Labuan	Malaysia
Elopura Power Sdn. Bhd.	<b>83%</b>	83%	Dormant	Malaysia
Sepang Power Sdn. Bhd.* (In members' voluntary winding up)	<b>70%</b>	70%	Dormant	Malaysia
Tenaga Switchgear Sdn. Bhd.	<b>60%</b>	60%	Principally engaged in the business of assembling and manufacturing of high voltage switchgears and contracting of turnkey transmission substations	Malaysia

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 7 SUBSIDIARIES (CONTINUED)

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
<u>Subsidiaries of Tenaga Switchgear Sdn. Bhd.</u>				
PT. Tenaga Nusa Bakti*	<b>57%</b>	57%	Dormant	Indonesia
TSG Ormazabal Sdn. Bhd.	<b>36%</b>	36%	Assembling, manufacture, test, reconditioning, distribution and other sources of medium voltage switchgear and control gear for transmission and distribution of electric power	Malaysia
TNB Capital (L) Ltd.* (In members' voluntary winding up)	<b>100%</b>	100%	Dormant	Malaysia
TNB Distribution Sdn. Bhd.* (In members' voluntary winding up)	<b>100%</b>	100%	Dormant	Malaysia
TNB Energy Services Sdn. Bhd.	<b>100%</b>	100%	Generating, distributing, supplying, dealing, selling of different kinds of energy sources and related technical services	Malaysia
<u>Subsidiaries of TNB Energy Services Sdn. Bhd.</u>				
MAEVI Sdn. Bhd.	<b>70%</b>	70%	Dormant	Malaysia
Tenaga E Mobility Solutions Sdn. Bhd.	<b>100%</b>	100%	Dormant	Malaysia
TNB Engineering Corporation Sdn. Bhd.	<b>100%</b>	100%	Principally engaged as turnkey contractors, energy project development specialising in district cooling system and co-generation including operation and maintenance works	Malaysia
<u>Subsidiaries of TNB Engineering Corporation Sdn. Bhd.</u>				
Bangsar Energy Systems Sdn. Bhd.	<b>100%</b>	100%	Operating an integrated district cooling system for air conditioning systems of office buildings	Malaysia
<u>Subsidiary of Bangsar Energy Systems Sdn. Bhd.</u>				
Selesa Energy Systems Sdn. Bhd.	<b>70%</b>	70%	Dormant	Malaysia
<u>Subsidiaries of TNB Engineering Corporation Sdn. Bhd. (continued)</u>				
Cooling Energy Supply Sdn. Bhd.	<b>70%</b>	70%	Operation of the concession to operate, maintain and upgrade an existing district cooling co-generation plant and to supply electricity and chilled water to customer	Malaysia
TNEC Construction Sdn. Bhd.	<b>100%</b>	100%	Dormant	Malaysia

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 7 SUBSIDIARIES (CONTINUED)

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
<u>Subsidiaries of TNB Engineering Corporation Sdn. Bhd. (continued)</u>				
TNEC Operations And Maintenance Sdn. Bhd.	<b>100%</b>	100%	Investment holding Company	Malaysia
<u>Subsidiary of TNEC Operations and Maintenance Sdn. Bhd.</u>				
Tomest Energy Management Sdn. Bhd.* (In members' voluntary winding up)	<b>51%</b>	51%	Dormant	Malaysia
TNB Engineers Sdn. Bhd.	<b>100%</b>	100%	Dormant	Malaysia
TNB Fuel Services Sdn. Bhd.	<b>100%</b>	100%	Supplying fuel and coal for power generation	Malaysia
TNB Generation Sdn. Bhd.	<b>100%</b>	100%	Dormant	Malaysia
TNB Global Captive (L) Ltd.	<b>100%</b>	100%	Insurance and reinsurance related business	Malaysia
TNB Global Ventures Capital Berhad	<b>100%</b>	100%	Investment holding company	Malaysia
TNB Hidro Sdn. Bhd.	<b>100%</b>	100%	Dormant	Malaysia
TNB Integrated Learning Solution Sdn. Bhd.	<b>100%</b>	100%	Providing training courses	Malaysia
TNB International Sdn. Bhd.	<b>100%</b>	100%	Investment holding company	Malaysia
<u>Subsidiary of TNB International Sdn. Bhd.</u>				
Vantage RE Ltd.#	<b>100%</b>	100%	Investment holding company	United Kingdom
<u>Subsidiaries of Vantage RE Ltd.</u>				
Clean Energy and Infrastructure UK Limited#	<b>100%</b>	-	Investment holding company	United Kingdom
<u>Subsidiaries of Clean Energy and Infrastructure UK Limited</u>				
Clean Energy and Infrastructure UK Wind Limited#	<b>100%</b>	-	Investment holding company	United Kingdom
<u>Subsidiaries of Clean Energy and Infrastructure UK Wind Limited</u>				
Daintree Wind Farm Limited#	<b>100%</b>	-	Operation of wind assets for the generation and sale of electricity	United Kingdom
Dunmore Wind Farm Limited#	<b>100%</b>	-	Operation of wind assets for the generation and sale of electricity	United Kingdom
East Youlstone Wind Farm Limited#	<b>100%</b>	-	Operation of wind assets for the generation and sale of electricity	United Kingdom

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 7 SUBSIDIARIES (CONTINUED)

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
<u>Subsidiaries of Clean Energy and Infrastructure UK Wind Limited (continued)</u>				
Falkirk Tod Hill Wind Limited#	100%	-	Operation of wind assets for the generation and sale of electricity	United Kingdom
Garlenick Wind Farm Limited#	100%	-	Operation of wind assets for the generation and sale of electricity	United Kingdom
Harthill Wind Limited#	100%	-	Operation of wind assets for the generation and sale of electricity	United Kingdom
Mossmorran Wind Farm Limited#	100%	-	Operation of wind assets for the generation and sale of electricity	United Kingdom
Potato Pot Wind Farm Limited#	100%	-	Operation of wind assets for the generation and sale of electricity	United Kingdom
Wythegill Wind Farm Limited#	100%	-	Operation of wind assets for the generation and sale of electricity	United Kingdom
Ysgellog Wind Farm Limited#	100%	-	Operation of wind assets for the generation and sale of electricity	United Kingdom
<u>Subsidiaries of Clean Energy and Infrastructure UK Limited (continued)</u>				
Clean Energy and Infrastructure UK Wind 2 Limited#	100%	-	Investment holding company	United Kingdom
<u>Subsidiary of Clean Energy and Infrastructure UK Wind 2 Limited</u>				
Norman 1985 Limited#	100%	-	Investment holding company	United Kingdom
<u>Subsidiary of Norman 1985 Limited</u>				
Whiteside Hill Windfarm (Scotland) Limited#	100%	-	Operation of wind assets for the generation and sale of electricity	United Kingdom
<u>Subsidiaries of Vantage RE Ltd. (continued)</u>				
JBM Solar Projects 18 Limited#	100%	-	Investment holding company	United Kingdom
JBM Solar Projects 23 Limited#	100%	-	Investment holding company	United Kingdom
Tenaga Wind Ventures UK Ltd.#	100%	100%	Investment holding company	United Kingdom
<u>Subsidiaries of Tenaga Wind Ventures UK Ltd.</u>				
Bluemerang Capital Ltd.#	100%	100%	Investment holding company	United Kingdom

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 7 SUBSIDIARIES (CONTINUED)

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
<u>Subsidiaries of Bluemerang Capital Ltd.</u>				
BCL Castlerigg Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
BCL Gwynt Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
BCL Harmeston Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
BCL Murex Bennacott Ltd.#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
BCL Hunday Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
Ili (Wellgreen) Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
LE18 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
LE19 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
Murex Bennacott Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
<u>Subsidiaries of Tenaga Wind Ventures UK Ltd. (continued)</u>				
GVO Wind Limited#	<b>100%</b>	100%	Investment holding company	United Kingdom
<u>Subsidiaries of GVO Wind Limited</u>				
Boghead WT Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
Durpley WT Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind F-1 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 1 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 2 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 3 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 7 SUBSIDIARIES (CONTINUED)

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
Subsidiaries of GVO Wind Limited (continued)				
GVO Wind No. 4 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 5 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 6 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 7 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 9 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 10 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 11 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 12 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 13 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 14 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 16 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 20 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 21 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 22 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 23 Limited#	100%	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 7 SUBSIDIARIES (CONTINUED)

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
<u>Subsidiaries of GVO Wind Limited</u> (continued)				
GVO Wind No. 24 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 25 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 27 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 28 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 29 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 30 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 31 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 32 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 35 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 36 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 39 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 40 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 41 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 42 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO Wind No. 43 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 7 SUBSIDIARIES (CONTINUED)

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
<u>Subsidiaries of GVO Wind Limited</u> (continued)				
GVO Wind No. 44 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO/CME Wind No. 17 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
GVO/CME Wind No. 18 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
OGPW No.1 Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
Warren WT Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
Weston Town WT Limited#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
<u>Subsidiaries of Vantage RE Ltd.</u> (continued)				
TWV No. 1 Ltd.#	<b>100%</b>	100%	Operation of wind assets for the generation and sale of electricity	United Kingdom
Vantage RE No. 1 Ltd.#	<b>100%</b>	100%	Investment holding company	United Kingdom
Vantage Solar Investments S.A.R.L.#	<b>55%</b>	55%	Investment holding company	Luxembourg
<u>Subsidiary of Vantage Solar Investments S.A.R.L.</u>				
Vantage Solar UK4 Limited#	<b>55%</b>	55%	Investment holding company	United Kingdom
<u>Subsidiary of Vantage Solar UK4 Limited</u>				
Vantage Solar UK3 Limited#	<b>55%</b>	55%	Investment holding company	United Kingdom
<u>Subsidiary of Vantage Solar UK3 Limited</u>				
Vantage Solar UK2 Limited#	<b>55%</b>	55%	Investment holding company	United Kingdom
<u>Subsidiary of Vantage Solar UK2 Limited</u>				
Vantage Solar UK Limited#	<b>55%</b>	55%	Investment holding company	United Kingdom

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 7 SUBSIDIARIES (CONTINUED)

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
<u>Subsidiary of Vantage Solar UK Limited</u>				
TerraForm UK2 Intermediate Holdings, Ltd.#	<b>55%</b>	55%	Investment holding company	United Kingdom
<u>Subsidiary of TerraForm UK2 Intermediate Holdings, Ltd.</u>				
TerraForm UK3 Intermediate Holdings Limited#	<b>55%</b>	55%	Investment holding company	United Kingdom
<u>Subsidiaries of TerraForm UK3 Intermediate Holdings Limited</u>				
Cambridge Solar Power Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
SunE Green Holdco2 Ltd.#	<b>55%</b>	55%	Investment holding company	United Kingdom
<u>Subsidiaries of SunE Green Holdco2 Ltd.</u>				
AEE Renewables UK 31 Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
SunE Project1 Ltd.#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
<u>Subsidiaries of TerraForm UK3 Intermediate Holdings Limited (continued)</u>				
SunE Green Holdco3 Limited#	<b>55%</b>	55%	Investment holding company	United Kingdom
<u>Subsidiaries of SunE Green Holdco3 Limited</u>				
Sunsave 10 (Fareham) Ltd.#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
Sunsave 15 (Westwood) Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
Sunsave 20 (Knowlton) Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 7 SUBSIDIARIES (CONTINUED)

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
<u>Subsidiaries of TerraForm UK3 Intermediate Holdings Limited (continued)</u>				
SunE Green Holdco4 Limited#	<b>55%</b>	55%	Investment holding company	United Kingdom
<u>Subsidiaries of SunE Green Holdco4 Limited</u>				
Boyton Solar Park Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
KS SPV 24 Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
Sunsave 6 (Manston) Ltd.#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
<u>Subsidiaries of TerraForm UK3 Intermediate Holdings Limited (continued)</u>				
SunE Green Holdco5 Limited#	<b>55%</b>	55%	Investment holding company	United Kingdom
<u>Subsidiaries of SunE Green Holdco5 Limited</u>				
MSP Fairwind Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
Sunsave 14 (Fenton) Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
<u>Subsidiaries of TerraForm UK3 Intermediate Holdings Limited (continued)</u>				
SunE Green Holdco7 Limited#	<b>55%</b>	55%	Investment holding company	United Kingdom
<u>Subsidiaries of SunE Green Holdco7 Limited</u>				
Brynteg Solar Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
Daisy No. 1 Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 7 SUBSIDIARIES (CONTINUED)

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
<u>Subsidiaries of SunE Green Holdco7 Limited (continued)</u>				
SE Bury Lane Solar Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
SunE Green Energy Ltd.#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
SunE Green Holdco6 Limited#	<b>55%</b>	55%	Investment holding company	United Kingdom
<u>Subsidiary of SunE Green Holdco6 Limited</u>				
Sunsave 43 (Epwell) Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
<u>Subsidiaries of TerraForm UK3 Intermediate Holdings Limited (continued)</u>				
SunE Green Holdco9 Limited#	<b>55%</b>	55%	Investment holding company	United Kingdom
<u>Subsidiaries of SunE Green Holdco9 Limited</u>				
SunE Burthy Farm Solar Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
SunE Little Neath Solar Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
<u>Subsidiaries of TerraForm UK3 Intermediate Holdings Limited (continued)</u>				
SunE Green Holdco13 Limited#	<b>55%</b>	55%	Investment holding company	United Kingdom
<u>Subsidiary of SunE Green Holdco13 Limited</u>				
SunE Prestop Park Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 7 SUBSIDIARIES (CONTINUED)

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
<u>Subsidiaries of TerraForm</u>				
<u>UK3 Intermediate Holdings Limited</u> (continued)				
SunE Hill Farm Solar Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
SunE Sundorne Grove Solar Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
Sunsave 11 (Wrockwardine Farm) Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
Sunsave 17 (Castle Combe) Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
Sunsave 31 (Horam) Limited#	<b>55%</b>	55%	Operation of solar assets for the generation and sale of electricity	United Kingdom
TNB Power Generation Sdn. Bhd.	<b>100%</b>	100%	Ownership, management and operation of the domestic power plants, renewable energy generation business, power plant operation and maintenance business and dry bulk terminal operation business	Malaysia
<u>Subsidiaries of TNB Power Generation Sdn. Bhd.</u>				
Integrax Berhad	<b>100%</b>	100%	Investment holding company	Malaysia
<u>Subsidiaries of Integrax Berhad</u>				
Integrax Maritime Services Sdn. Bhd.	<b>100%</b>	100%	Dormant	Malaysia
Pelabuhan Lumut Sdn. Bhd.	<b>100%</b>	100%	Investment holding company	Malaysia
<u>Subsidiary of Pelabuhan Lumut Sdn. Bhd.</u>				
Lekir Bulk Terminal Sdn. Bhd.	<b>100%</b>	100%	Development, ownership and management of a dry bulk terminal	Malaysia
<u>Subsidiaries of TNB Power Generation Sdn. Bhd. (continued)</u>				
Jimah East Power Sdn. Bhd.	<b>70%</b>	70%	Generate and deliver electricity energy and generating capacity to TNB	Malaysia
Kapar Energy Ventures Sdn. Bhd.	<b>60%</b>	60%	Generate and deliver electricity energy and generating capacity to TNB	Malaysia

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**7 SUBSIDIARIES (CONTINUED)**

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
<u>Subsidiaries of TNB Power Generation Sdn. Bhd.</u> (continued)				
Manjung Island Energy Berhad	-	-	Special purpose company to raise Islamic securities under the Islamic Securities Programme	Malaysia
Southern Power Generation Sdn. Bhd.	70%	70%	Generate and deliver electricity and maintain generating capacity to TNB	Malaysia
TNB Connaught Bridge Sdn. Bhd.	100%	100%	Generate and deliver electricity energy and maintain generating capacity to TNB	Malaysia
TNB Janamanjung Sdn. Bhd.	100%	100%	Generate and deliver electricity energy and maintain generating capacity to TNB	Malaysia
TNB Manjung Five Sdn. Bhd.	100%	100%	Generate and deliver electricity energy and maintain generating capacity to TNB	Malaysia
<u>Subsidiary of TNB Manjung Five Sdn. Bhd.</u>				
TNB Western Energy Berhad	100%	100%	Principally engaged in the construction of 1,000MW coal-fired power plant in Lumut, Perak, Malaysia	Malaysia
<u>Subsidiaries of TNB Power Generation Sdn. Bhd.</u> (continued)				
TNB Pasir Gudang Energy Sdn. Bhd.	100%	100%	Carry business of any matter relating to electricity especially the business of generation and supply of electricity for any purpose in Malaysia	Malaysia
TNB Prai Sdn. Bhd.	100%	100%	Generate and deliver electricity energy and maintain generating capacity to TNB	Malaysia
<u>Subsidiary of TNB Prai Sdn. Bhd.</u>				
TNB Northern Energy Berhad	100%	100%	Principally to construct a 1,071MW gas-fired power plant in Seberang Perai Tengah, Seberang Perai, Pulau Pinang, Malaysia	Malaysia
<u>Subsidiaries of TNB Power Generation Sdn. Bhd.</u> (continued)				
TNB Repair And Maintenance Sdn. Bhd.	100%	100%	Providing repair and maintenance services to heavy industries and other related services	Malaysia

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 7 SUBSIDIARIES (CONTINUED)

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
<u>Subsidiaries of TNB Repair And Maintenance Sdn. Bhd.</u>				
Tenaga WHR 1 Sdn. Bhd.	<b>100%</b>	100%	To carry on the business of establishing, constructing, commissioning, setting up, operating and maintaining electric power generation systems, transmission systems/networks, power systems, generating stations/plants based on waste heat recovery and/or power efficiency technology	Malaysia
TNB Operations & Maintenance International Ltd.	<b>100%</b>	100%	Investment holding company	Mauritius
<u>Subsidiary of TNB Operations &amp; Maintenance International Ltd.</u>				
Oasis Parade Sdn. Bhd.	<b>100%</b>	100%	Investment holding company	Malaysia
<u>Subsidiaries of TNB Repair And Maintenance Sdn. Bhd. (continued)</u>				
TNB REMACO Pakistan (Private) Limited <sup>#</sup>	<b>100%</b>	100%	Providing repair and maintenance services to heavy industries and other related services	Pakistan
Trichy Energy Limited* (In members' voluntary winding up)	<b>100%</b>	100%	Dormant	India
Trichy Power Limited* (In members' voluntary winding up)	<b>100%</b>	100%	Dormant	India
<u>Subsidiaries of TNB Power Generation Sdn. Bhd.</u> (continued)				
TNBPG Hydro Nenggiri Sdn. Bhd.	<b>100%</b>	100%	Responsible for the domestic power generation assets, with fully integrated end-to-end capabilities	Malaysia
TNBPG Hydro Sungai Perak Sdn. Bhd.	<b>100%</b>	-	Responsible for the domestic power generation assets, with fully integrated end-to-end capabilities	Malaysia
TNB Properties Sdn. Bhd.	<b>100%</b>	100%	Dormant	Malaysia
<u>Subsidiary of TNB Properties Sdn. Bhd.</u>				
TNP Construction Sdn. Bhd.	<b>100%</b>	100%	Dormant	Malaysia

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**7 SUBSIDIARIES (CONTINUED)**

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
TNB Renewables Sdn. Bhd.	<b>100%</b>	100%	Investment holding company	Malaysia
<u>Subsidiaries of TNB Renewables Sdn. Bhd.</u>				
TNB Bukit Selambau Solar Sdn. Bhd.	<b>100%</b>	100%	Operation of generation facilities that produce electric energy	Malaysia
TNB Bukit Selambau Solar Dua Sdn. Bhd.	<b>100%</b>	100%	Operation of generation facilities that produce electric energy	Malaysia
TNB Sepang Solar Sdn. Bhd.	<b>100%</b>	100%	Operation of generation facilities that produce electric energy	Malaysia
TNB Research Sdn. Bhd.	<b>100%</b>	100%	Research and development, consultancy and other services	Malaysia
<u>Subsidiary of TNB Research Sdn. Bhd.</u>				
TNB Labs Sdn. Bhd.	<b>100%</b>	100%	Technical and laboratory services, consultancy and other services	Malaysia
TNB Retail Sdn. Bhd.	<b>100%</b>	100%	Managing customer relationships and responsible for sale of electricity and beyond	Malaysia
<u>Subsidiaries of TNB Retail Sdn. Bhd.</u>				
GSPARX Sdn. Bhd.	<b>100%</b>	100%	Invest and develop renewable energy projects for self-consumption/self-generation and its related business	Malaysia
TNBX Sdn. Bhd.	<b>100%</b>	100%	To act as the single-fronting Malaysia entity for customers to purchase/obtain solutions beyond the meter. The solutions comprise non-regulated products and services such as energy efficiency, renewable energy and smart cities	Malaysia
TNB Risk Management Sdn. Bhd.	<b>100%</b>	100%	Dormant	Malaysia
TNB Topaz Energy Sdn. Bhd.	<b>100%</b>	100%	Investment holding for developing and investing in overseas power generation projects	Malaysia
TNB Transmission Network Sdn. Bhd.	<b>100%</b>	100%	Dormant	Malaysia
TNB Ventures Sdn. Bhd.	<b>100%</b>	100%	Investment holding company	Malaysia
<u>Subsidiary of TNB Ventures Sdn. Bhd.</u>				
Tenaga Cable Industries Sdn. Bhd.	<b>76%</b>	76%	Manufacturing and distribution of power and general cables, aluminium rods and related activities	Malaysia

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 7 SUBSIDIARIES (CONTINUED)

The details of the subsidiaries are as follows: (continued)

Name of subsidiary	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
TNB-IT Sdn. Bhd.	100%	100%	Provision of telecommunication and IT infrastructure solutions and operation and maintenance services on the telecommunication equipment and data centre	Malaysia
Universiti Tenaga Nasional Sdn. Bhd.  <u>Subsidiaries of Universiti Tenaga Nasional Sdn. Bhd.</u>	100%	100%	Providing higher education	Malaysia
UNITEN R&D Sdn. Bhd.	100%	100%	Providing research and development in areas related to engineering, information technology, business, accountancy, liberal studies and other services	Malaysia
Yayasan Canselor Universiti Tenaga Nasional	-	-	A trust established under the provision of Trustees (Incorporation) Act 1952 (Act 258) to receive and administer funds for educational and charitable purposes	Malaysia
Yayasan Tenaga Nasional	-	-	A trust established under the provision of Trustees (Incorporation) Act 1952 (Act 258), for promotion and advancement of education and for charitable purposes	Malaysia

# Audited by a member firm of PricewaterhouseCoopers International Limited which is a separate and independent legal entity from PricewaterhouseCoopers PLT ('PwC'), Malaysia.

\* Not audited by PwC.

Capital and other commitments for the subsidiaries are disclosed in Note 41. Contingent liabilities for the subsidiaries are disclosed in Note 42.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 7 SUBSIDIARIES (CONTINUED)

## (b) Non-controlling interests ('NCI')

The NCI is not material to the financial performance, financial position and cash flows of the Group. The NCI information for Sabah Electricity Sdn. Bhd. ('SESB'), Kapar Energy Ventures Sdn. Bhd. ('KEV') and Jimah East Power Sdn. Bhd. ('JEP'), which contribute to substantial portion of total NCI is set out below:

	SESB		KEV		JEP		Other individually immaterial NCI			Total	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million	
	Carrying amount of NCI	372.5	369.6	771.5*	45.8	892.9*	941.5*	412.2	427.1	2,449.1	1,784.0
Total comprehensive income/(expenses) allocated to NCI	20.1	99.4	98.9	10.7	24.9	63.8	(30.1)	39.4	113.8	213.3	

\* Included in the carrying amount of NCI in JEP is a redemption of RPS from NCI amounting to RM73.5 million (2021: RM45.0 million).

# Included in the carrying amount of NCI in KEV is a conversion to NCI equity amounting to RM1626.8 million (2021: NIL) as disclosed in Note 26.

The summarised financial information of SESB, KEV and JEP before intercompany eliminations are as follows:

	SESB		KEV		JEP	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Summarised statement of financial position						
Non-current assets	8,074.4	8,359.6	1,425.0	1,513.5	10,562.4	11,033.8
Current assets	2,123.3	2,253.5	2,481.5	1,466.6	2,226.6	1,698.4
Non-current liabilities	(6,566.6)	(6,977.6)	(565.2)	(2,276.9)	(8,803.4)	(8,753.2)
Current liabilities	(1,905.7)	(1,942.7)	(1,418.6)	(596.0)	(1,087.7)	(919.1)
Net assets	1,725.4	1,692.8	1,922.7	107.2	2,897.9	3,059.9
Summarised statement of comprehensive income						
Revenue	2,561.2	2,258.6	4,312.6	1,382.8	4,452.8	3,264.0
(Loss)/Profit after tax	(37.1)	516.4	247.2	26.8	83.1	212.7
Other comprehensive income	153.8	60.1	0	0	0	0
Total comprehensive income	116.7	576.5	247.2	26.8	83.1	212.7
Summarised statement of cash flows						
Net cash flows generated from/(used in) operating activities	306.3	1,095.6	(77.6)	275.3	732.4	850.6
Net cash flows generated from/(used in) investing activities	22.8	(129.7)	7.8	7.5	706.5	(695.4)
Net cash flows used in financing activities	(684.5)	(688.1)	(159.9)	(153.7)	(928.8)	(902.6)
Net (decrease)/increase in cash and cash equivalents	(355.4)	277.8	(229.7)	129.1	510.1	(747.4)

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 8 JOINT ARRANGEMENTS

#### Accounting Policy

A joint arrangement is an arrangement over which there is contractually agreed sharing of control by the Group with one or more parties where decisions about the relevant activities relating to the joint arrangement require unanimous consent of the parties sharing control. The classification of a joint arrangement as a joint operation or a joint venture depends upon the rights and obligations of the parties to the arrangement. A joint venture is a joint arrangement whereby the joint venturers have rights to the net assets of the arrangement. Joint operations are joint arrangements whereby the Company has the rights to the assets and obligations for the liabilities. In respect of its interests in joint operations, the Company shall recognise in its financial statements the assets that it controls and the expenses and liabilities that it incurs and its share of the income that it earns from the sale of goods or services.

The Group's interest in joint ventures is accounted for in the consolidated financial statements using the equity method of accounting.

Equity accounting involves recognising in the consolidated statement of profit or loss, consolidated statement of OCI and consolidated statement of changes in equity, the Group's share of profits less losses of the joint ventures based on the latest audited financial statements or management accounts of the joint ventures, made up to the financial year end of the Group. Where necessary, adjustments are made to the results and net assets of the joint ventures to ensure consistency of accounting policies with those of the Group. The Group's investments in joint ventures are recorded at cost inclusive of goodwill and adjusted thereafter for accumulated impairment losses and the post-acquisition change in the Group's share of net assets of the joint ventures.

Unrealised gains on transactions between the Group and its joint ventures are eliminated to the extent of the Group's interest in joint ventures. Unrealised losses are also eliminated on the same basis but only to the extent of the costs that can be recovered, and the balances that provide evidence of reduction in net realisable value or an impairment of the asset transferred are recognised in the consolidated statement of profit or loss.

(a) Joint ventures

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Unquoted shares	88.4	88.3	7.9	7.9
Share of post-acquisition results and reserves	171.8	150.8	0	0
	260.2	239.1	7.9	7.9
Less: Accumulated impairment losses	(10.7)	(8.4)	(7.9)	(7.9)
	249.5	230.7	0	0
Share of net assets of joint ventures	249.5	230.7		

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 8 JOINT ARRANGEMENTS (CONTINUED)

## (a) Joint ventures (continued)

None of the joint ventures are material individually to the financial position, financial performance and cash flows of the Group.

The aggregated financial information of the Group's joint ventures is as follows:

	2022 RM'million	2021 RM'million
Group's share of results:		
Profit after tax and total comprehensive income	21.0	29.3
<u>Amounts due from joint ventures</u>		
Amounts due from joint ventures*	56.9	65.7
Less: Accumulated impairment losses	(12.3)	(22.2)
	<b>44.6</b>	43.5

\* The Group's credit policy provides amounts due from joint ventures with a 30 days (2021: 30 days) credit period.

The details of the Group's joint ventures are as follows:

Name of joint venture	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
Seatrac Sdn. Bhd.	50%	50%	Dormant	Malaysia
<u>Joint ventures of TNB Energy Services Sdn. Bhd.</u>				
FTJ Bio Power Sdn. Bhd.	40%	40%	Generation and distribution of electricity using palm empty fruit bunches as its main fuel source	Malaysia
Metrosphere Hydro Tersat Sdn. Bhd.*	49%	49%	Business related in hydro power plant and general trading	Malaysia
<u>Joint venture of TNB Engineering Corporation Sdn. Bhd.</u>				
Airport Cooling Energy Supply Sdn. Bhd.	77%	77%	To develop, design, engineer, procure, construct and finance district cooling projects in the airport sector, to undertake the comprehensive operational and maintenance of district cooling projects in the airport sector and to carry on the business of producing, distributing, applying, dealing and selling of chilled water	Malaysia
<u>Joint venture of TNB Repair And Maintenance Sdn. Bhd.</u>				
GMR Tenaga Operations And Maintenance Private Limited*	50%	50%	Operation and maintenance of power plants	India

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 8 JOINT ARRANGEMENTS (CONTINUED)

#### (b) Joint operations

The details of the Group's joint operations are as follows:

Name of joint operation	Group's effective interest		Principal activities	Principal place of business
	2022	2021		
<u>Joint operation of TNB Engineering Corporation Sdn. Bhd.</u>				
TNB Engineering Corporation Sdn. Bhd. & ERS Energy Sdn. Bhd. ('TNEC-ERS')	<b>60%</b>	60%	Project Large Scale Solar Photovoltaic Plant at Kuala Muda, Kedah	Malaysia
<u>Joint operations of TNB Repair And Maintenance Sdn. Bhd.</u>				
TNB Repair And Maintenance Sdn. Bhd. & Al-Dhow Engineering ('TNB REMACO & Al-Dhow JV') <sup>#</sup>	<b>50%</b>	50%	Maintenance works for instrumental & control systems and mechanical equipment services	Kuwait
TNB Repair And Maintenance Sdn. Bhd. & Kharafi National ('TNB REMACO & KN JV') <sup>*</sup>	<b>50%</b>	50%	Operation and maintenance services to heavy industries and other related services	Kuwait

The impact of the Group's joint operations to the Group is immaterial.

#     Audited by a member firm of PricewaterhouseCoopers International Limited which is a separate and independent legal entity from PwC, Malaysia.  
 \*     Not audited by PwC.

### 9 ASSOCIATES

#### Accounting Policy

Associates are all entities over which the Group has significant influence but not control or joint control, generally accompanying a shareholding of between 20.0% and 50.0% of the voting rights.

Investments in associates are accounted for in the consolidated financial statements using the equity method of accounting and are initially recognised at cost. Equity accounting is discontinued when the Group ceases to have significant influence over the associates.

The Group's share of its associates' post-acquisition profits or losses are recognised in the statement of profit or loss, and its share of post-acquisition movements in OCI are recognised in OCI. The cumulative post-acquisition movements are adjusted against the carrying amount of the investment. When the Group's share of losses in an associate equals or exceeds its interests in the associate, including any long term interests that, in substance, form part of the Group's net investment in the associate, the Group does not recognise further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the associate. If the associate subsequently reports profits, the Group resumes recognising its share of those profits only after its share of the profits equals the share of losses not recognised. The Group's investments in associates include goodwill identified on acquisition, net of any accumulated impairment losses (Note 3(c)).

Profits and losses resulting from upstream and downstream transactions between the Group and its associates are recognised in the Group's financial statements only for the unrelated investor's interests in the associates. The accounting policies of associates are adjusted where necessary to ensure consistency with the policies adopted by the Group.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**9 ASSOCIATES (CONTINUED)****Accounting Policy (continued)**

Dilution of gains and losses in associates are recognised in the consolidated statement of profit or loss.

If the ownership interest in an associate is reduced but significant influence is retained, only a proportionate share of the amounts previously recognised in OCI is reclassified to statement of profit or loss where appropriate.

Note	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Unquoted shares	(a) <b>3,307.9</b>	3,307.9	<b>75.7</b>	75.7
Share of post-acquisition results and reserves	<b>(465.2)</b>	(340.3)	<b>0</b>	0
Redeemable Preference Shares	<b>0</b>	13.2	<b>0</b>	0
	<b>2,842.7</b>	2,980.8	<b>75.7</b>	75.7
Less: Accumulated impairment losses	(b) <b>(1,413.0)</b>	(1,344.4)	<b>0</b>	0
	<b>1,429.7</b>	1,636.4	<b>75.7</b>	75.7
Share of net assets of associates	<b>1,429.7</b>	1,636.4		

(a) During the financial year 2021, the Group through its wholly-owned subsidiary, Vantage RE Ltd., acquired 49.0% stake in an offshore wind farm company, Blyth Offshore Demonstrator Limited ('BODL') from EDF Renewables, a subsidiary of the French utility company, Électricité de France for a purchase consideration of RM674.7 million as disclosed in Note 48.

(b) (i) Impairment assessment for Lumut Maritime Terminal Sdn. Bhd. ('LMT')

2022

During the financial year, the Group had undertaken the impairment assessment of its investment in LMT, an associate. LMT's main business activity is to provide operation and maintenance services to Lekir Bulk Terminal ('LBT'), the port that handles coal deliveries for two of the coal-fired power plants in Manjung area. In tandem with the Group's sustainability pathway, the extension of the Power Purchase Agreement ('PPA') for the coal-fired power plants are not probable. This would lead to a loss of expected future revenue stream for LMT. Based on the impairment assessment, the carrying amount of the Group's investment in LMT as at 31 December 2022 exceeded its recoverable amount by RM68.6 million (2021: NIL), hence an impairment loss was recognised.

*Key assumptions used*

The recoverable amount was determined based on VIU calculations, which applied a discounted cash flow model of LMT for the remaining operation and maintenance contract period which expires on 2042 and its other sources of income. The cash flows used in the calculations are the most recent forecasts and projections approved by the Board of Directors and management of LMT.

The key assumptions used in determining the VIU were:

	2022 %
Terminal growth rate	2.0
Cost of equity	9.0

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 9 ASSOCIATES (CONTINUED)

- (b) (i) Impairment assessment for Lumut Maritime Terminal Sdn. Bhd. ('LMT') (continued)

The cash flows were discounted using cost of equity based on the risk specific to the industry. The key assumptions includes optimisation of LMT's assets and no new source of business.

The Group's review includes impact assessment of changes in key assumptions. The effects of the movement in the key assumptions to the recoverable amount are as follows:

	Changes in assumptions %	Impact on recoverable amount	
		Increase RM'million	Decrease RM'million
Terminal growth rate	1.0	5.9	(4.4)
Cost of equity	1.0	(17.5)	23.1

- (b) (ii) Impairment assessment for GMR Energy Limited ('GEL')

#### 2022

The value of the investment in associate has been fully written down in the previous financial year.

The Group has reviewed the basis of the impairment parameter used in 2021. It was concluded that there was no material change in the base case assumptions that would require an adjustment to the carrying amount of the investment.

#### 2021

The Group had undertaken the impairment assessment of its investment in GEL. During the financial year 2021, amid a prolonged COVID-19 and additional indications such as poor outlook of thermal plants in India as initiatives were renewable energy focused, tight gas supply and the non-recoverability of regulatory claims caused by uncertainty from the Government of India. An impairment charge of RM291.8 million was recognised as at 31 December 2021 as its recoverable amount was lower than the carrying amount.

#### *Key assumptions used*

The recoverable amount was determined based on VIU calculations, which applied a discounted cash flow model of GEL Group for the period of the remaining useful lives of the respective power plants which range between 14 to 23 years. The cash flows used in the calculations are the most recent forecasts and projections approved by the Board of Directors and management of GEL Group.

The key assumptions used in determining the VIU were:

#### 2021

Number of operating plants	3
Average Plant Load Factor (%)	80.0 – 85.0
Cost of equity (%)	12.8 – 14.0

The cash flows were discounted using cost of equity based on the risk specific to the plants. The key assumptions take into account the macroeconomic environment in India and the type of plant.

There were 2 plants that were not operating and have been considered for disposal, which contributed to a reduction in the recoverable amount of GEL.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**9 ASSOCIATES (CONTINUED)**

The aggregated financial information of the Group's associates is as follows:

	2022 RM'million	2021 RM'million		
Group's share of results:				
- Profit after tax	76.6	164.2		
- Total other comprehensive (expense)/income	(55.2)	17.5		
Dividend received	120.1	66.5		
Foreign exchange (loss)/gain	(26.2)	7.2		
<u>Amounts due from/(to) associates</u>				
	<b>Group</b>	<b>Company</b>		
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Amounts due from associates*	666.4	350.0	5.7	10.6
Less: Loss allowances	(7.3)	(7.3)	(0.1)	(0.1)
	659.1	342.7	5.6	10.5
Amounts due to associates^	(777.6)	(183.8)	(765.9)	(173.7)

\* The Group's and the Company's credit policy provides amounts due from associates with a 30 days (2021: 30 days) credit period.

^ Credit terms of amounts due to associates is 30 days (2021: 30 days) depending on the terms of the contracts.

The unrecognised cumulative losses of the Group's associates are as follows:

	<b>Gama Enerji</b>	<b>GEL</b>	
	2022 RM'million	2021 RM'million	2022 RM'million
As at the beginning of the financial year	(393.1)	(395.3)	0
Arising in the financial year	367.7*	2.2	(26.6)
As at the end of the financial year	(25.4)	(393.1)	(26.6)

\* During the current financial year, Gama Enerji Anonim Şirketi ('Gama Enerji') adopted MFRS 129 Financial Reporting in Hyperinflationary Economies (effective date 30 June 2022) and recognised a monetary gain of RM505.7 million.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 9 ASSOCIATES (CONTINUED)

In the opinion of the Directors, the associates that are material to the Group are BODL, Jimah Energy Ventures Holdings Sdn. Bhd. ('JEV'), and LMT. The following summarises the financial information of the associates and reconciled the information to the carrying amount of the Group's interest in those associates.

(i) The summarised statement of comprehensive income:

	BODL		JEV		LMT	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Revenue	<b>147.2</b>	22.5	<b>4,656.6</b>	2,674.1	<b>127.1</b>	121.7
(Loss)/Profit after tax	<b>(56.5)</b>	(11.0)	<b>186.8</b>	467.7	<b>13.3</b>	17.4
Other comprehensive (expense)/income	<b>(123.9)</b>	17.8	<b>0</b>	0	<b>0</b>	0
Total comprehensive (expense)/income	<b>(180.4)</b>	6.8	<b>186.8</b>	467.7	<b>13.3</b>	17.4

(ii) The summarised statement of financial position:

	BODL		JEV		LMT	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Non-current assets	<b>1,223.8</b>	1,441.0	<b>2,740.8</b>	2,947.6	<b>320.3</b>	316.0
Current assets	<b>120.9</b>	152.4	<b>1,932.5</b>	1,395.7	<b>201.9</b>	207.6
Non-current liabilities	<b>(267.5)</b>	(316.9)	<b>(1,730.5)</b>	(1,653.7)	<b>(15.9)</b>	(20.8)
Current liabilities	<b>(285.7)</b>	(80.6)	<b>(1,342.0)</b>	(1,275.6)	<b>(19.9)</b>	(19.8)
	<b>791.5</b>	1,195.9	<b>1,600.8</b>	1,414.0	<b>486.4</b>	483.0

(iii) Reconciliation of the summarised financial information:

	BODL		JEV		LMT	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Group's share of net assets	<b>387.8</b>	586.0	<b>400.2</b>	353.5	<b>243.2</b>	241.5
Goodwill	<b>83.4</b>	68.5	<b>0</b>	0	<b>37.8</b>	37.8
Less: Accumulated impairment losses	<b>0</b>	0	<b>0</b>	0	<b>(68.6)</b>	0
Transaction cost capitalised	<b>6.3</b>	6.6	<b>0</b>	0	<b>0</b>	0
Carrying amount	<b>477.5</b>	661.1	<b>400.2</b>	353.5	<b>212.4</b>	279.3

Individually immaterial associates:

	2022 RM'million	2021 RM'million
Aggregate carrying amount of individually immaterial associates	<b>339.6</b>	342.5
Aggregate amounts of the Group's share of profit:		
- Profit after tax	<b>50.9</b>	59.7
- Other comprehensive income	<b>5.5</b>	9.2

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**9 ASSOCIATES (CONTINUED)**

The details of the Group's associates are as follows:

Name of associate	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
Fibrecomm Network (M) Sdn. Bhd.*	<b>49%</b>	49%	Provision of fibre optic transmission network services	Malaysia
GB3 Sdn. Bhd.*	<b>20%</b>	20%	Design, construction, operation and maintenance of a combined cycle power plant, generation and sale of electrical energy and generating capacity of the power plant	Malaysia
Jimah Energy Ventures Holdings Sdn. Bhd.*	<b>25%</b>	25%	Investment holding	Malaysia
Teknologi Tenaga Perlis Consortium Sdn. Bhd.*	<b>20%</b>	20%	Operating and maintaining an electricity generating plant owned	Malaysia
<u>Associate of Global Power Enerji Sanayi Ve Ticaret Anonim Şirketi</u>				
Gama Enerji Anonim Şirketi*	<b>30%</b>	30%	To enter into commitments related to energy investments and to carry out industrial, commercial and business activities	Türkiye
<u>Associate of Independent Power International Ltd.</u>				
Malaysian Shoiba Consortium Sdn. Bhd.*	<b>20%</b>	20%	Acquiring and hold for investment, shares, stocks, debentures in Malaysia or elsewhere	Malaysia
<u>Associate of Oasis Parade Sdn. Bhd.</u>				
Saudi Malaysia Operation & Maintenance Services Company Limited*	<b>30%</b>	30%	Operation and maintenance of electricity generation stations and water desalination plants	Kingdom of Saudi Arabia
<u>Associate of Orion Mission Sdn. Bhd.</u>				
Eastern Sabah Power Consortium Sdn. Bhd. (Dissolved w.e.f. 27.01.2022)	-	50%	Dormant	Malaysia
<u>Associate of Pelabuhan Lumut Sdn. Bhd.</u>				
Lumut Maritime Terminal Sdn. Bhd.*	<b>50% less 1 share</b>	50% less 1 share	Operations of multi-purpose port facilities, operation and maintenance of a bulk terminal, sales and rental of port related land and other ancillary activities	Malaysia
<u>Associate of Power and Energy International (Mauritius) Ltd.</u>				
GMR Energy Limited*	<b>30%</b>	30%	Development, operation and maintenance of power generation projects and sale of power to off-takers	India

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 9 ASSOCIATES (CONTINUED)

The details of the Group's associates are as follows: (continued)

Name of associate	Group's effective interest		Principal activities	Country of incorporation
	2022	2021		
<u>Associate of Elopura Power Sdn. Bhd.</u>				
Oriole Hydro Padas Sdn. Bhd.*	<b>17%</b>	17%	Proposed development of a mini hydroelectronic power plant project in Sungai Padas, Sipitang, Sabah	Malaysia
<u>Associate of TNB Energy Services Sdn. Bhd.</u>				
Jana Landfill Sdn. Bhd.*	<b>20%</b>	20%	Generation and distribution of heat and electricity using methane gas from landfill sites	Malaysia
<u>Associate of TNB Renewables Sdn. Bhd.</u>				
SD Plantation TNB Renewables Sdn. Bhd.	<b>49%</b>	49%	To develop, set up, construct, install, operate and maintain renewable energy or biogas power plant which uses the palm oil mill effluent as its main source of fuel	Malaysia
<u>Associate of TNB Engineering Corporation Sdn. Bhd.</u>				
Abraj Cooling LLC*	<b>49%</b>	49%	Contracting works for the construction of district cooling plants	United Arab Emirates
<u>Associate of TNB Properties Sdn. Bhd.</u>				
KM Metro-TNB Properties Sdn. Bhd.*	<b>40%</b>	40%	Dormant	Malaysia
<u>Associate of TNB Research Sdn. Bhd.</u>				
Gunung Tenaga Sdn. Bhd.*	<b>40%</b>	40%	Dormant	Malaysia
<u>Associate of Vantage RE No. 1 Ltd.</u>				
Blyth Offshore Demonstrator Limited*	<b>49%</b>	49%	Ownership, construction and operation of a 42MW offshore wind farm	United Kingdom

\* Not audited by PwC.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**9 ASSOCIATES (CONTINUED)**

The list of contingent liabilities of material associates are as follows:

	Potential exposure to Group	
	2022 RM'million	2021 RM'million
<u>GEL</u>		
(a) Corporate guarantees	0	100.8
(b) Bank guarantees outstanding/Letter of credit outstanding	65.1	81.4
(c) Claims against the GEL Group not acknowledged as debts	46.2	35.5
(d) Matters relating to income tax under dispute	1.6	2.2
(e) Disputed entry tax liabilities	36.6	34.7
(f) Disputed demand for deposit of fund setup by Water Resource Department	11.9	8.8
(g) Dispute on relinquishment charges for modification of transmission lines granted under long term access	0.5	0.5
(h) Custom duties refunds	9.5	10.1
In 2010, a subsidiary of GEL was granted a refund of customs duty which was paid earlier towards the import of plant and machinery. In 2011, the subsidiary received an intimation from the Office of the Joint Director General of Foreign Trade ('DGFT') for cancellation of duty drawback refund order granted thereby seeking refund of the amount that has been received earlier.		
Based on expert opinion, the management is confident that the duty drawback refund granted earlier was appropriate and that the cancellation of the duty drawback refund is not tenable. During the financial year ended 31 March 2015, the matter has been transferred to the Hon'ble Supreme Court of India and will be concluded along with other similar cases if it is pending finalisation.		
(i) Payment of electricity duty towards Chief Electrical Inspectorate, Government of Andhra Pradesh ('GoAP')	12.4	13.1
The associate and a subsidiary received demands from the Chief Electrical Inspectorate, GoAP for electricity duties on generation and sale of electrical energy since the commencement of commercial operations date of its plants.		
Based on internal assessment and expert legal opinion, the management of GEL is confident that the provisions of Electricity Duty Act and Rules, 1939 in respect of payment of electricity duty are not applicable to GEL.		
(j) Appeals and disputes	47.4	49.8
GEL is in dispute with its fuel supplier which is currently being heard at the District Civil Court of Bangalore.		
Based on independent legal opinion and internal assessment, the management of GEL is confident that it has a strong defense against these claims.		
(k) Amount payable to vendors	11.0	9.9
GEL Group has an amount payable in foreign currency to certain vendors, which are outstanding for more than 3 years. The GEL Group has applied for condonation of delay with the Reserve Bank of India.		

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 9 ASSOCIATES (CONTINUED)

The list of contingent liabilities of material associates are as follows: (continued)

	Potential exposure to Group	
	2022 RM'million	2021 RM'million
<u>GEL</u> (continued)		
(II) General Electricity International Inc ('GE') Arbitration	0	1.6
GEL has a remaining amount payable in foreign currency to GE for the outstanding invoices for scheduled maintenance of gas turbines.		
Pursuant to the above, GEL Group and GE entered into a settlement, wherein GEL has agreed to pay the outstanding dues to GE as per the proposed payment plan mentioned in the settlement agreement.		
During the year, GEL has received Reserve Bank of India ('RBI') approval and pursuant to that has made payments to GE. The matter is currently pending before the International Court of Arbitration.		
	242.2	348.4

### 10 INTANGIBLE ASSETS

#### Accounting Policy

##### Goodwill

Goodwill arises from a business combination and represents the excess of the aggregate of fair value of consideration transferred, the amount of any NCI in the acquiree and the fair value of any previous equity interest in the acquiree over the fair value of the net identifiable assets acquired and liabilities assumed on the acquisition date. If the fair value of consideration transferred is less than the fair value of the net identifiable assets of the acquire in the case of a bargain purchase, the resulting gain is recognised in statement of profit or loss.

Goodwill is recognised in the statement of financial position as non-current asset at cost less accumulated impairment losses and tested for impairment annually. For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the CGUs, or groups of CGUs, that is expected to benefit from synergies of the combination. Each unit or group of units to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes. The carrying value of goodwill is compared to the recoverable amount, which is the higher of VIU and the fair value less costs of disposal. Any impairment is recognised immediately to the statement of profit or loss and is not subsequently reversed. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity disposed.

##### Rights to build

The rights to build are stated at cost less any accumulated amortisation and impairment losses. The rights to build are considered to have a finite life and are amortised on a straight-line basis over the period of expected future economic benefits of the asset. The asset is reviewed annually for adjustments to the useful economic life and any indications of impairment. Impairment losses are recognised when the carrying value of the intangible asset exceeds its recoverable amount, which is the higher of its fair value less costs to sell and its value in use.

Subsequent costs involved in renewing or maintaining the rights to build are charged to the statement of profit and loss as and when incurred.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 10 INTANGIBLE ASSETS (CONTINUED)

	Goodwill RM'million	Rights to build RM'million	Total RM'million
<b>2022</b>			
<b>Group</b>			
As at the beginning of the financial year	438.4	0	438.4
Acquisition of a subsidiary*	17.9	0	17.9
Additions <sup>#</sup>	0	168.6	168.6
Impairment	(22.7)	0	(22.7)
Effect of changes in exchange rate	(12.2)	3.6	(8.6)
As at the end of the financial year	421.4	172.2	593.6

\* Goodwill arising from the acquisition of CEI UK (Note 48).

# Acquisition of rights to build for a portfolio of 101.7MW solar capacity and 65MW battery storage in United Kingdom.

	Goodwill RM'million
<b>2021</b>	
<b>Group</b>	
As at the beginning of the financial year	434.0
Effect of changes in exchange rate	4.4
As at the end of the financial year	438.4

	Group	
	2022 RM'million	2021 RM'million
Classification of goodwill by CGU		
Local (In Malaysia)	211.0	211.0
Foreign (Other than Malaysia)	210.4	227.4
	421.4	438.4

Impairment assessment for goodwill

The carrying value of goodwill is allocated to the Group's CGUs. The recoverable amount of the CGU including goodwill, is determined based on its VIU. This VIU calculation applies a discounted cash flow model using cash flow projections based on forecast approved by management. The forecasts reflect management's expectations of revenue growth, operating costs and margins for the CGUs based on current assessment of market share, expectations of market and industry growth.

The discount rate applied to the cash flow forecast refers to the industry's pre-tax Weighted Average Cost of Capital ('WACC').

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 10 INTANGIBLE ASSETS (CONTINUED)

#### *Impairment assessment for goodwill (continued)*

##### (a) Local investments and operations goodwill

The discounted cash flow model used cash flow projections which covered a five-year period and cash flows beyond the projection years are extrapolated using an estimated terminal growth rate.

The following key assumptions have been applied in the VIU calculation:

	2022	2021
	%	%
Revenue growth rate	<b>1.8</b>	2.1
Pre-tax discount rate	<b>8.1</b>	9.9
Terminal growth rate	<b>1.8</b>	1.4

Based on the Group's assessment, no impairment losses were required as at 31 December 2022 as the recoverable amount exceeded the carrying amount.

The Group's review includes an impact assessment of changes in key assumptions used. Based on the sensitivity analysis performed, it was concluded that no reasonable change in the base case assumptions would cause the carrying amount of the CGU to exceed its recoverable amount.

##### (b) Foreign investments and operations goodwill

The discounted cash flow model used cash flow projections which covered a 28-year period (2021: 29-year period).

The following key assumptions has been applied in the VIU calculation:

	2022	2021
	%	%
Revenue growth rate	<b>(3.2)</b>	(1.6)
Pre-tax discount rate	<b>7.8</b>	4.4

The Group tests whether the goodwill has suffered any impairment on an annual basis. The Group has determined the recoverable amount of foreign CGU by assessing the VIU of the underlying assets. Based on the impairment assessment, the carrying value of the goodwill as at 31 December 2022 exceeded its recoverable amount by RM22.7 mil (2021: NIL), mainly due to the lower revenue growth forecast.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**10 INTANGIBLE ASSETS (CONTINUED)***Impairment assessment for goodwill (continued)*

- (b) Foreign investments and operations goodwill (continued)

The Group's review includes an impact assessment of changes in key assumptions used. The effects of the movement in the key assumptions to the recoverable amount are as follows:

		Changes in assumptions %	Impact on recoverable amount	
			Increase RM'million	Decrease RM'million
<b>2022</b>				
Revenue growth rate		1.0	45.3	(45.1)
Pre-tax discount rate		1.0	(158.1)	176.3
<b>2021</b>				
Revenue growth rate		1.0	44.3	(44.3)
Pre-tax discount rate		1.0	(222.0)	255.8

**11 INVESTMENT IN UNQUOTED DEBT SECURITIES****Accounting Policy**

Investment in unquoted debt securities are financial instruments and the accounting policy is disclosed in Note 45.

Note	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<b>Current</b>				
Sukuk Prihatin	(a) 0	50.0	0	50.0
<b>Non-current</b>				
Unsecured Loan Notes	278.5	277.5	278.5	277.5
Less: Loss allowance	(25.1)	(27.4)	(25.1)	(27.4)
(b)	253.4	250.1	253.4	250.1
	253.4	300.1	253.4	300.1

- (a) The Sukuk Prihatin, issued by the Government, is a Commodity Murabahah (via Tawarruq) with a maturity period of 2 years and matured on 22 September 2022.
- (b) The Unsecured Loan Notes primarily related to the Islamic Medium Term Notes ('MTN') facility subscription with a maturity period of 14 years and matures on 5 May 2034.

Credit risks relating to debt instruments above are disclosed in Note 45(b) of the financial statements.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 12 DEFERRED TAXATION

#### Accounting Policy

Deferred tax is recognised on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements including those arising from business combinations. Deferred tax is not recognised on goodwill and those arising from initial recognition of an asset or liability which at the time of the transaction affects neither accounting nor taxable profit or loss.

Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, unused tax losses and unutilised tax credits can be utilised. Deferred tax is recognised on temporary differences arising on investment in subsidiaries, joint ventures and associates except where the timing of the reversal of the temporary difference can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Tax benefit from reinvestment allowance is recognised when the tax credit is utilised and no deferred tax asset is recognised when the tax credit is receivable.

Deferred tax is measured at the tax rates (and laws) that have been enacted or substantially enacted at the end of the reporting period and are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

The Group and the Company will recognise a deferred tax asset and a deferred tax liability for any temporary differences arising on initial recognition of a lease transaction. Where applicable, a deferred tax asset is recognised as the Group and the Company is able to benefit from the tax deductions in the future. Any differences between the deferred tax asset and deferred tax liability will be recognised in the profit and loss. Upon adopting the amendments, the Group and the Company do not expect material adjustments to the retained earnings as the initial recognition of the lease transactions gave rise to equal and offsetting temporary differences.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when the deferred taxes relate to the same tax authority. The following amounts, determined after appropriate offsetting, are shown in the statement of financial position:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<b>Deferred tax assets:</b>				
- Deferred tax assets to be realised after more than 12 months	246.4	305.4	0	0
- Deferred tax assets to be realised within 12 months	131.1	67.2	0	0
	<b>377.5</b>	<b>372.6</b>	<b>0</b>	<b>0</b>
<b>Deferred tax liabilities:</b>				
- Deferred tax liabilities to be settled after more than 12 months	(8,496.2)	(7,634.7)	(6,337.4)	(6,000.9)
- Deferred tax liabilities to be settled within 12 months	(324.1)	(543.5)	(302.9)	(264.4)
	<b>(8,820.3)</b>	<b>(8,178.2)</b>	<b>(6,640.3)</b>	<b>(6,265.3)</b>
<b>Net total</b>	<b>(8,442.8)</b>	<b>(7,805.6)</b>	<b>(6,640.3)</b>	<b>(6,265.3)</b>

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**12 DEFERRED TAXATION (CONTINUED)**

The movements during the financial year relating to deferred tax are as follows:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
As at the beginning of the financial year	(7,805.6)	(7,674.8)	(6,265.3)	(6,006.9)
(Charged)/Credited to statement of profit or loss: (Note 38)				
- Property, plant and equipment	(1,262.4)	2,317.6	(554.9)	(464.9)
- Post-employment benefits	(135.4)	129.7	(37.5)	(37.4)
- Tax losses and capital allowances	340.2	319.3	0	0
- Provisions and allowances	866.9	(1,631.5)	17.8	183.9
- Contract assets	(98.6)	24.0	(96.2)	24.3
- Lease liabilities	(32.9)	(996.6)	451.9	396.5
	(322.2)	162.5	(218.9)	102.4
Credited to OCI:				
- Post-employment benefits	(73.7)	(293.3)	(156.1)	(293.3)
Transfer as part of internal reorganisation	0	0	0	(67.5)
Acquisition of a subsidiary (Note 48)	(241.3)	0	0	0
<b>As at the end of the financial year</b>	<b>(8,442.8)</b>	<b>(7,805.6)</b>	<b>(6,640.3)</b>	<b>(6,265.3)</b>
<u>Subject to income tax</u>				
Deferred tax assets (before offsetting):				
- Provisions and allowances	1,330.1	463.2	828.5	810.7
- Post-employment benefits	2,766.2	2,975.3	2,614.6	2,808.2
- Tax losses and capital allowances	2,828.2	2,488.0	0	0
- Lease liabilities	1,211.6	24.9	380.6	0
- Property, plant and equipment	58.2	46.7	0	0
Offsetting	(7,816.8)	(5,625.5)	(3,823.7)	(3,618.9)
<b>Deferred tax assets (after offsetting)</b>	<b>377.5</b>	<b>372.6</b>	<b>0</b>	<b>0</b>
Deferred tax liabilities (before offsetting):				
- Property, plant and equipment	(12,932.0)	(11,416.8)	(9,632.5)	(9,077.6)
- Contract assets	(834.2)	(735.6)	(831.5)	(735.3)
- Right-of-use assets	(2,870.9)	(1,651.3)	0	(71.3)
Offsetting	7,816.8	5,625.5	3,823.7	3,618.9
<b>Deferred tax liabilities (after offsetting)</b>	<b>(8,820.3)</b>	<b>(8,178.2)</b>	<b>(6,640.3)</b>	<b>(6,265.3)</b>

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 12 DEFERRED TAXATION (CONTINUED)

The amount of deductible temporary differences, unused tax losses, reinvestment allowance and investment tax allowance for which no deferred tax assets are recognised in the statement of financial position are as follows:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Deductible temporary differences	278.9	572.9	0	0
Tax losses*	874.7	636.7	0	0
Reinvestment allowance and investment tax allowance	5,925.1	5,826.0	0	0

No deferred tax assets are recognised from the above due to uncertainty of their recoverability. The unabsorbed capital allowances and investment tax allowance do not expire under current tax legislation.

\* The unutilised tax losses arising from a year of assessment ('YA') are allowed to be carried forward for utilisation up to 10 consecutive YAs from that YA. The accumulated unabsorbed tax losses brought forward are expected to expire between YA2028 to YA2030.

### 13 LONG TERM RECEIVABLES

#### Accounting Policy

Long term receivables is a financial instrument and the accounting policy is disclosed in Note 45.

Note	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Financial asset				
- Other receivables	(a) 54.3	79.9	46.9	56.4
Less: Loss allowances	(14.7)	(14.8)	(14.7)	(14.8)
	39.6	65.1	32.2	41.6
Non-financial assets	(b) 210.9	102.0	108.9	0
	250.5	167.1	141.1	41.6

(a) Included in the Group and the Company are advances given to staff and other non trade receivables, which are not expected to be received within 12 months from the statement of financial position date.

Credit risks are disclosed in Note 45(b) to the financial statements.

(b) Non-financial assets primarily relates to deposits and indirect tax receivables which are not expected to be received within 12 months from the statement of financial position date.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**14 AMOUNTS DUE FROM/(TO) SUBSIDIARIES****Accounting Policy**

The amounts due from/(to) subsidiaries are financial instruments and its accounting policy is as disclosed in Note 45.

	Note	Company	
		2022 RM'million	2021 RM'million
<u>Non-current</u>			
Amounts due from subsidiaries		4,681.8	5,403.0
Less: Loss allowances		(265.7)	(392.6)
	(a)	4,416.1	5,010.4
<u>Current</u>			
Amounts due from subsidiaries		5,909.0	3,316.6
Less: Loss allowances		(308.2)	(326.0)
	(b)(c)	5,600.8	2,990.6
Amounts due to subsidiaries	(c)	(6,709.1)	(4,136.3)

(a) The amounts due from subsidiaries is mainly in relation to shareholder loan to TNB Power Generation Sdn. Bhd. ('TPGSB') amounting to RM3,305.9 million (2021: RM4,242.0 million), which based on the Islamic financing structure, for a profit rate of 3.75% per annum repayable over 15 years.

(b) The amounts due from subsidiaries includes amount due from Vantage RE No. 1 Ltd. which is subject to an interest rate of 2.0% per annum, is unsecured and has no fixed term of repayment has been fully settled on 21 December 2022.

During the current financial year, the Company recognised an amount due from Vantage RE Ltd. in relation to CEI UK acquisition (Note 48). The amount is subject to an interest rate of 4.5% per annum, is unsecured and has no fixed term of repayment.

(c) Amounts due from/(to) subsidiaries classified as current are unsecured, interest free and repayable on demand.

Credit risks are disclosed in Note 45(b) to the financial statements.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 15 LEASES

#### Accounting Policy

##### The Group and the Company as lessors

When the Group and the Company act as lessors, they determine at lease inception whether each lease is a finance lease or an operating lease.

To classify each lease, the Group and the Company make an overall assessment of whether the lease transfers substantially all of the risks and rewards incidental to ownership of the underlying asset. If this is the case, then the lease is a finance lease; otherwise, then it is an operating lease.

##### Operating leases

Leases where the Group and the Company retain substantially all of the risks and rewards of ownership of the leased assets are classified as operating leases. The Group and the Company recognise lease payments received under operating leases as operating income on a straight-line basis over the lease term.

##### Finance leases

If the Group and the Company transfer substantially all of the risks and rewards incidental to ownership of the leased assets, leases are classified as finance leases. The Group and the Company derecognise the leased assets and recognise the net investment in the lease as a receivable. The difference between the gross receivable and the present value of the receivable is recognised as unearned finance income. Lease income is recognised over the term of the lease using the net investment method, which reflects a constant periodic rate of return.

##### The Group and the Company as lessees

The accounting policy on ROU assets and lease liabilities for lessees are disclosed in Note 6.

#### (a) Finance lease receivables

The Group's finance lease receivables arise predominantly from Cooling Energy Supply Agreement ('CESA') and Energy Performance Contract ('EPC'). The EPC lease ended in July 2022.

	Group			
	Minimum lease payments		Present value of minimum lease payments	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Within 1 year	2.0	2.2	1.2	1.3
After 1 year and not later than 2 years	2.0	2.0	1.3	1.2
After 2 years and not later than 3 years	2.0	2.0	1.5	1.3
After 3 years and not later than 4 years	2.0	2.0	1.6	1.5
After 4 years and not later than 5 years	2.0	2.0	1.7	1.6
After 5 years	1.6	3.7	1.3	3.1
	9.6	11.7	7.4	8.7
	11.6	13.9	8.6	10.0
Less: Unearned finance income	(3.0)	(3.9)		
Present value of minimum lease payment receivable	8.6	10.0		

The effective interest rate implicit in the finance lease is approximately 9.5% (2021: 9.5%). The carrying amount of the finance lease receivables approximate to their fair values.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 15 LEASES (CONTINUED)

## (b) Lease liabilities

The Group's and the Company's obligations under lease liabilities arise predominantly from the power purchase agreements with several Independent Power Producers ('IPPs').

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<b>Minimum lease payments:</b>				
- Within 1 year	<b>4,757.1</b>	4,550.0	<b>9,096.9</b>	9,335.3
- After 1 year and not later than 2 years	<b>3,875.4</b>	3,674.5	<b>7,788.4</b>	7,339.3
- After 2 years and not later than 3 years	<b>3,973.0</b>	3,536.4	<b>7,491.6</b>	7,080.0
- After 3 years and not later than 4 years	<b>3,475.2</b>	3,095.0	<b>7,338.9</b>	6,872.3
- After 4 years and not later than 5 years	<b>3,349.7</b>	2,956.5	<b>7,190.9</b>	6,715.5
- After 5 years	<b>26,793.3</b>	22,619.8	<b>76,195.0</b>	75,792.0
	<b>41,466.6</b>	35,882.2	<b>106,004.8</b>	103,799.1
Total minimum lease payments	<b>46,223.7</b>	40,432.2	<b>115,101.7</b>	113,134.4
Future finance charges	<b>(12,945.3)</b>	(11,190.3)	<b>(41,296.6)</b>	(41,943.9)
	<b>33,278.4</b>	29,241.9	<b>73,805.1</b>	71,190.5
<b>Amount payable under lease liabilities:</b>				
- Within 1 year	<b>3,140.5</b>	3,098.9	<b>5,054.2</b>	5,393.5
- After 1 year and not later than 2 years	<b>2,386.9</b>	2,351.0	<b>3,950.1</b>	3,604.6
- After 2 years and not later than 3 years	<b>2,599.6</b>	2,329.1	<b>3,855.7</b>	3,535.1
- After 3 years and not later than 4 years	<b>2,218.6</b>	1,990.7	<b>3,911.4</b>	3,514.8
- After 4 years and not later than 5 years	<b>2,210.0</b>	1,956.8	<b>3,978.4</b>	3,550.3
- After 5 years	<b>20,722.8</b>	17,515.4	<b>53,055.3</b>	51,592.2
	<b>30,137.9</b>	26,143.0	<b>68,750.9</b>	65,797.0
	<b>33,278.4</b>	29,241.9	<b>73,805.1</b>	71,190.5

The weighted average effective interest rate applicable to the lease liabilities as at the financial year end for the Group and the Company are 5.5% (2021: 5.3%) and 5.8% (2021: 5.8%) per annum respectively. The carrying amounts of the lease liabilities approximate to their fair values.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 15 LEASES (CONTINUED)

#### (b) Lease liabilities (continued)

Reconciliation of lease liabilities during the financial year is as follows:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
As at the beginning of the financial year	<b>29,241.9</b>	28,728.8	<b>71,190.5</b>	65,519.1
Cash flows	(3,772.8)	(4,160.0)	(7,689.3)	(7,871.8)
Non-cash changes				
- Additional lease*	<b>6,491.2</b>	3,268.2	<b>6,892.6</b>	10,016.3
- Acquisition of a subsidiary (Note 48)	<b>79.4</b>	0	<b>0</b>	0
- Capacity payment differences	(517.7)	(55.2)	(828.0)	(520.9)
- Finance charges (Note 37(b))	<b>1,756.4</b>	1,460.1	<b>4,239.3</b>	4,047.8
As at the end of the financial year	<b>33,278.4</b>	29,241.9	<b>73,805.1</b>	71,190.5

\* Inclusive of repowering Sungai Perak Power Stations of RM468.3 million in current financial year for the Company to improve green portfolio in power capacity mix, which is in line with the Group's sustainability pathway.

The statement of profit or loss includes the following amounts relating to leases:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Depreciation charge of ROU assets (Note 6)	<b>3,901.8</b>	3,498.1	<b>6,236.0</b>	5,898.5
Finance charges (Note 37(b))	<b>1,756.4</b>	1,460.1	<b>4,239.3</b>	4,047.8
Expense relating to leases of low-value assets (Note 33)	<b>37.8</b>	40.4	<b>37.5</b>	39.8
Expense relating to variable lease payments not included in lease liabilities	<b>443.2</b>	335.9	<b>644.8</b>	281.4

### 16 FINANCIAL ASSETS AT FVOCI

#### Accounting Policy

Financial assets at FVOCI are financial instruments and the accounting policy is disclosed in Note 45.

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Financial assets at FVOCI	<b>70.7</b>	62.8	<b>70.0</b>	62.1

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**16 FINANCIAL ASSETS AT FVOCI (CONTINUED)**

The Group and the Company have irrevocably elected non-trading equity securities above at initial recognition to present its fair value changes in OCI. The Group and the Company consider this classification to be more relevant as these instruments are strategic investments of the Group and of the Company and not held for trading purposes.

During the financial year, there were dividend income recognised and no investment was disposed. The details of the financial assets at FVOCI are as follows:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Labuan Reinsurance (L) Ltd.	<b>70.0</b>	62.1	<b>70.0</b>	62.1
Al-Imtiaz Operation and Maintenance Company Ltd.	<b>0.4</b>	0.4	<b>0</b>	0
Club Memberships				
- Sultan Salahuddin Abdul Aziz Shah Club	<b>0.1</b>	0.1	<b>0</b>	0
- Glenmarie Golf Country Club	<b>0.1</b>	0.1	<b>0</b>	0
- Leisure Holidays Bhd	<b>0.1</b>	0.1	<b>0</b>	0

**17 CONTRACT BALANCES****Accounting Policy**

## (a) Contract cost assets – Costs to fulfil a contract

The Group recognises a contract cost that relates directly to a contract or to an anticipated contract as an asset when the cost generates or enhances resources of the Group which will be used in satisfying performance obligations in the future and it is expected to be recovered.

These contract costs are initially measured at cost and amortised on a systematic basis that is consistent with the pattern of revenue recognition to which the asset relates. An impairment loss is recognised in the statement of profit or loss when the carrying amount of the contract cost exceeds the expected revenue less expected cost that will be incurred. Where the impairment condition no longer exists or has improved, the impairment loss is reversed to the extent that the carrying amount of the contract cost does not exceed the amount that would have been recognised had there been no impairment loss recognised previously.

## (b) Trade contract assets

A trade contract asset is recognised when the Group's and the Company's rights to consideration are conditional on something other than the passage of time. A contract asset is subject to impairment in accordance to MFRS 9 'Financial Instruments' (Note 45). Typically, the amount will be billed within 30 days of the supply of electricity for electricity customers and 60 to 180 days for satisfying the performance obligation for other revenue streams. An assessment of electricity supplied to customers between the date of the last meter reading and the financial year end of the Group and the Company (unread and unbilled) was made and it is recognised as trade contract assets. Payment is expected within 30 days from the billing date for all trade receivables.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 17 CONTRACT BALANCES (CONTINUED)

#### Accounting Policy (continued)

##### (c) Trade contract liabilities

A trade contract liability represents the obligation of the Group and of the Company to transfer goods or services to a customer for which consideration has been received (or the amount is due) from the customers.

Trade contract liabilities primarily relate to contributions paid by electricity customers for the construction of electricity network assets. The customers' contributions are expected to be recognised as revenue over a period of 20 years, being the estimated average useful life of the electricity network assets used to connect the customers to the electricity supply.

Other trade contract liabilities within the Group are relating to students fees. All other trade contract liabilities are expected to be recognised as revenue over the next 12 months.

##### (d) Non trade contract assets and liabilities

Non trade contract balances are pertaining to insurance and reinsurance contracts which are recognised in accordance to MFRS 4 'Insurance Contracts'.

Contracts under which the Group accepts significant insurance risk from ceding insurers by agreeing to compensate the ceding insurance if a specified uncertain future event (the insured event) adversely affects the ceding insurers are classified as insurance contracts.

Assets, liabilities and expenses arising from ceded reinsurance contracts are presented separately from the related assets, liabilities, income and expenses from the related insurance contracts because reinsurance arrangements do not relieve the Group from its direct obligations to its insured.

Reinsurers' share of insurance contract liabilities, written premiums ceded to reinsurers, reinsurers' share of change in the reserve for unearned premiums and outstanding claims are recognised in the same accounting period as the original policy to which the reinsurance relates and are presented on the statement of financial position on a gross basis.

Reinsurance assets include reinsurers' share of insurance contract liabilities and balances due from reinsurers. The amounts recognised as reinsurers' share of insurance contract liabilities are measured on a basis that is consistent with the measurement of the liabilities held in respect of the related insurance contracts.

Reinsurance assets are assessed for impairment at each date of the statement of financial position. Such assets are deemed impaired if there is objective evidence, as a result of an event that occurred after its initial recognition, that the Group may not recover all amounts due and that the event has a reliably measurable impact of the amount that the Group will receive from the reinsurer. The impairment loss is recognised in the statement of profit or loss.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**17 CONTRACT BALANCES (CONTINUED)**

The Group and the Company have recognised the following assets and liabilities related to contracts with customers:

Note	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Contract cost assets				
- Current	165.5	111.0	0	0
- Non-current	1.3	0.8	0	0
Contract assets				
- Trade	(a) 3,586.0	3,169.7	3,430.0	2,982.0
- Non trade	239.9	148.5	0	0
	3,825.9	3,318.2	3,430.0	2,982.0
Contract liabilities				
- Current trade	320.0	341.1	237.1	241.9
- Non-current trade	4,783.1	4,355.7	4,039.7	3,631.6
	(b) 5,103.1	4,696.8	4,276.8	3,873.5
- Current non trade	253.4	151.2	0	0
	5,356.5	4,848.0	4,276.8	3,873.5
(a) Trade contract assets	(i)			
As at the beginning of the financial year	3,169.7	3,197.8	2,982.0	3,084.5
Performance obligations completed	3,853.7	3,297.9	3,464.4	3,046.0
Transfer to receivables	(3,400.4)	(3,255.7)	(2,982.0)	(3,084.5)
Less: Loss allowances	(37.0)	(70.3)	(34.4)	(64.0)
<b>As at the end of the financial year</b>	<b>3,586.0</b>	<b>3,169.7</b>	<b>3,430.0</b>	<b>2,982.0</b>
(b) Trade contract liabilities	(i)(ii)			
As at the beginning of the financial year	4,696.8	4,174.2	3,873.5	3,280.2
Received during the financial year	828.7	1,038.7	632.6	817.8
Release to statement of profit or loss:				
- Customers' contribution	(276.3)	(269.1)	(229.3)	(224.5)
- Deferred income	(146.1)	(247.0)	0	0
<b>As at the end of the financial year</b>	<b>5,103.1</b>	<b>4,696.8</b>	<b>4,276.8</b>	<b>3,873.5</b>

## (i) Significant changes in trade contract assets and liabilities

Trade contract assets have increased as the Group and the Company have provided more services ahead of the agreed payment schedules for fixed-price contracts. The Group and the Company also recognised a loss allowance for trade contract assets.

Trade contract liabilities have increased for the Group and the Company due to larger prepayments or contributions received from customers.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 17 CONTRACT BALANCES (CONTINUED)

The Group and the Company have recognised the following assets and liabilities related to contracts with customers: (continued)

- (ii) Revenue recognised in relation to trade contract liabilities

The following table shows how much of the revenue recognised in the current financial year relates to carried-forward trade contract liabilities and how much relates to performance obligations that were satisfied in a prior financial year:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Revenue recognised, included in the trade contract liabilities balances in relation to preceding year	(219.1)	(233.3)	(218.3)	(183.8)
Revenue recognised, included in the trade contract liabilities balances in relation to current year	(202.6)	(282.8)	(10.9)	(40.7)
	(421.7)	(516.1)	(229.2)	(224.5)

- (iii) Unsatisfied performance obligations in long term contracts

The following table shows unsatisfied performance obligations resulting from long term contracts:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Aggregate amount of the transaction price allocated to contracts that are partially or fully unsatisfied	5,103.1	4,696.8	4,276.8	3,873.5

Management expects 5.5% (2021: 6.2%) of the transaction price allocated to the unsatisfied contracts will be recognised as revenue during the next financial year. The remaining 94.5% (2021: 93.8%) will be recognised from financial years 2023 to 2042.

In respect of the supply of electricity, the Group and the Company applied the practical expedient to not disclose information related to the transaction price allocated to the remaining performance obligations, on the basis that revenue is recognised from the satisfaction of the performance obligations upon the consumption of electricity by the customers.

All contracts for period of one year or less are billed based on services provided. The transaction price allocated to these unsatisfied contracts is not disclosed.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 18 FINANCIAL ASSETS AT FVTPL

**Accounting Policy**

Financial assets at FVTPL are financial instruments and the accounting policy is disclosed in Note 45.

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Financial assets at FVTPL	8,196.6	2,522.3	6,276.0	700.7
Current	8,141.0	2,452.3	6,222.9	631.8
Non-current	55.6	70.0	53.1	68.9
	8,196.6	2,522.3	6,276.0	700.7

Financial assets at FVTPL mainly represent investments in unit trusts and students' loans.

Credit risks relating to financial assets at FVTPL are disclosed in Note 45(b) to the financial statements.

## 19 DERIVATIVE FINANCIAL INSTRUMENTS

**Accounting Policy**

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured at their fair value at the end of each reporting period.

Fair value changes on derivatives that are not designated or do not qualify for hedge accounting are recognised in the statement of profit or loss when the changes arise.

Note	Notional amount RM'million	Assets RM'million	Liabilities RM'million
Non-hedge accounting qualified derivative financial instruments:			
<b>Group</b>			
<b>2022</b>			
<u>Current</u>			
Forward foreign currency contracts	(a) 106.3	0	(2.9)
Interest rate swap contracts	(b) 22.7	0.2	0
<u>Non-current</u>			
Interest rate swap contracts	(b) 744.2	64.0	(0.3)
Profit rate swap contracts	(c) 323.8	8.3	(2.0)
	<b>1,068.0</b>	<b>72.3</b>	<b>(2.3)</b>

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 19 DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

	Note	Notional amount RM'million	Assets RM'million	Liabilities RM'million
Non-hedge accounting qualified derivative financial instruments: (continued)				
<b>Group</b>				
2021				
<u>Current</u>				
Spot foreign currency contract	(d)	38.9	0	0
Forward foreign currency contracts	(a)	39.2	0	(0.4)
<u>Non-current</u>				
Interest rate swap contracts	(b)	1,703.5	0	(31.0)
Profit rate swap contracts	(c)	342.8	1.2	(7.7)
		2,046.3	1.2	(38.7)
<b>Company</b>				
2022				
<u>Current</u>				
Forward foreign currency contracts	(a)	106.3	0	(2.9)
2021				
<u>Current</u>				
Spot foreign currency contract	(d)	38.9	0	0
Forward foreign currency contracts	(a)	39.2	0	(0.4)

(a) The Group and the Company entered into forward foreign currency contracts with forward rates of RM4.4997 to RM4.5447 (2021: RM4.1865) for 1 US Dollar.

(b) The Group entered into two Interest Rate Swap ('IRS') contracts on 28 March 2018 that entitled Tenaga Wind Ventures ('TWV') to receive interest at floating rates and obliged to pay interest at fixed rates of 1.33% per annum and 1.67% per annum on aggregate notional principal of GBP30.7 million and GBP89.3 million respectively.

On 22 June 2017, Vortex Solar UK Limited entered into IRS contract at a fixed rate of 1.37% per annum on aggregate notional amount principal of GBP252.7 million. However, the IRS had been unwound in February 2022.

On 16 December 2022, the Group entered into new IRS contracts that entitled Vantage RE No. 1 Ltd. ('VRE1') to receive interest at floating rates and obliged to pay interest at fixed rates of 3.78% per annum on aggregate notional principal of GBP50.8 million.

(c) The Group entered into a Profit Rate Swap ('PRS') contract with effect from 29 March 2019 that entitled TNB Bukit Selambau Solar Sdn. Bhd. to receive profit at floating rates and obliged to pay profit at a fixed rate of 4.31% per annum on aggregate notional principal of RM134.7 million.

In addition, the Group entered into a PRS contract with effect from 13 February 2020 that entitled TNB Sepang Solar Sdn. Bhd. to receive profit at floating rates and obliged to pay profit at a fixed rate of 3.15% per annum on aggregate notional principal of RM236.2 million.

(d) There is no outstanding spot foreign currency contracts transaction for the year for the Group and the Company (2021: RM4.1700 for 1 US Dollar).

Credit risks relating to derivative financial instruments are disclosed in Note 45(b) to the financial statements.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 20 INVENTORIES

**Accounting Policy**

Inventories are stated at the lower of cost and net realisable value.

Cost of work-in-progress and finished goods comprise raw materials, direct labour and a proportion of the production overheads. Cost is determined on the weighted average basis and comprises all costs of purchase and other costs incurred in bringing the inventories to their present location and condition.

Net realisable value is the estimated selling price in the ordinary course of business, less the costs of completion and selling expenses.

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Fuel and consumables	3,274.9	1,955.2	331.0	167.5
Work-in-progress	10.3	12.1	0	0
Finished goods	5.6	9.8	0	0
	3,290.8	1,977.1	331.0	167.5

## 21 RECEIVABLES, DEPOSITS AND PREPAYMENTS

**Accounting Policy**

Trade receivables are amounts due from customers for goods sold or services performed in the ordinary course of business. Other receivables generally arise from transactions outside the usual operating activities of the Group and the Company. If collection is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets. If not, they are presented as non-current assets.

Trade and other receivables are recognised initially at fair value, which is the amount of consideration that is unconditional unless they contain significant financing components. The Group and the Company hold the trade receivables with the objective to collect the contractual cash flows and therefore measures them subsequently at amortised cost less accumulated impairment losses. The impairment is determined based on the ECL model and is further disclosed in Note 45.

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Trade receivables	6,970.3	6,817.0	5,320.9	5,570.8
Staff advances/loans	52.4	55.9	38.4	41.9
Deposits and prepayments	892.7	856.5	436.2	516.8
Other receivables*	17,652.9	5,527.6	16,854.8	4,786.1
Rechargeable job orders debtors	306.4	341.6	172.1	194.9
Partial payment to contractors	161.9	31.2	1.5	1.5
	26,036.6	13,629.8	22,823.9	11,112.0
Impairment losses on:				
- Trade receivables	(3,002.6)	(2,853.3)	(2,854.8)	(2,698.1)
- Others	(207.0)	(228.8)	(144.7)	(153.7)
	(3,209.6)	(3,082.1)	(2,999.5)	(2,851.8)
	22,827.0	10,547.7	19,824.4	8,260.2

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 21 RECEIVABLES, DEPOSITS AND PREPAYMENTS (CONTINUED)

The Group's and the Company's credit policies provide trade receivables with a range between 30 days to 90 days (2021: 30 days to 90 days) credit period.

Credit risks relating to receivables are disclosed in Note 45(b)(i) to the financial statements.

\* *Included in other receivables of the Group and of the Company are amounts due from the Government amounting to RM16,853.3 million (2021: RM4,783.0 million) under the ICPT mechanism.*

### 22 DEPOSITS, BANK AND CASH BALANCES

#### Accounting Policy

Cash and cash equivalents comprise cash in hand, deposits held at call with financial institutions, other short term investments with original maturity of 3 months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value, and bank overdrafts. In the statement of financial position, bank overdrafts are shown within borrowings in current liabilities. For the purpose of the consolidated statement of cash flows, cash equivalents are held for the purpose of meeting short term cash commitments rather than for investment or other purposes.

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Cash in hand and at bank	2,334.2	3,845.3	124.7	1,844.5
Deposits with licensed banks and financial institution	2,559.2	2,860.8	623.5	1,501.6
	4,893.4	6,706.1	748.2	3,346.1

The interest rates per annum of bank balances and deposits with licensed banks that were effective as at the end of the reporting date were as follows:

	Group		Company	
	2022 %	2021 %	2022 %	2021 %
Bank balances	0.1 - 2.7	0.1 - 1.7	0.1 - 2.7	0.1 - 1.7
Deposits with licensed banks and financial institution	0.1 - 4.3	0.1 - 2.1	0.1 - 4.3	0.1 - 0.3

Deposits with licensed banks have maturity periods ranging from 1 to 365 days (2021: 1 to 365 days) for the Group and 1 to 77 days (2021: 1 to 160 days) for the Company.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 22 DEPOSITS, BANK AND CASH BALANCES (CONTINUED)

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Cash and cash equivalents comprise:				
- Cash in hand and at bank	2,334.2	3,845.3	124.7	1,844.5
- Deposits with licensed banks and financial institution	2,559.2	2,860.8	623.5	1,501.6
Deposits, bank and cash balances	4,893.4	6,706.1	748.2	3,346.1
Debt reserve account*	(153.7)	(149.6)	0	0
Cash at bank held in trust**	(265.6)	(323.9)	0	0
Restricted cash	(8.5)	(1.3)	0	0
Deposits with maturity 90 days and more	(409.5)	(596.4)	0	0
Total cash and cash equivalents	4,056.1	5,634.9	748.2	3,346.1

\* Debt reserve account relates to deposits placed with licensed financial institution as part of security obligations for bond financing.

\*\* The cash at bank held in trust is in respect of grants received from the Government by a subsidiary for designated capital projects.

## 23 PAYABLES

## Accounting Policy

Trade and other payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Other payables generally arise from transactions outside the usual operating activities of the Group and the Company. Trade and other payables are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). If not, they are presented as non-current liabilities.

Trade and other payables are recognised initially at fair value and subsequently measured at amortised cost, which is the fair value of the consideration to be paid in the future for the goods and services received.

Provisions are recognised when the Group and the Company have a present legal or constructive obligations as a result of past events, it is probable that an outflow of resources will be required to settle the obligations and reliable estimates of the amounts can be made. Where the Group and the Company expect a provision to be reimbursed by another party, the reimbursement is recognised as a separate asset but only when the reimbursement is virtually certain. Provisions are not recognised for future operating losses. Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognised even if the likelihood of an outflow with respect to any one item included in the same class of obligations may be small.

Note	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Trade payables	(a) 7,753.7	5,025.2	4,452.6	2,519.7
Payroll liabilities	1,620.2	1,714.8	1,366.0	1,503.4
Deposits	26.5	27.3	9.5	10.4
Provisions	(b) 298.5	325.3	101.8	147.0
Financial guarantee contracts	310.6	291.1	312.2	293.4
Other payables and accruals	1,500.2	1,213.0	499.1	505.0
	11,509.7	8,596.7	6,741.2	4,978.9

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 23 PAYABLES (CONTINUED)

- (a) Included in trade payables of the Group and the Company are obligations amounting to RM550.5 million (2021: RM787.5 million) and RM507.0 million (2021: RM787.5 million) respectively, is relating to the Electricity Industry Fund under the IBR mechanism.

Credit terms of trade payables of the Group and of the Company vary from 30 to 60 days (2021: 30 to 60 days) depending on the terms of the contracts.

- (b) The movements in provision during the financial year are as follows:

	CESS Fund*	Legal/ Disputes RM'million	Capital/ Expenditure RM'million	Levy Tax RM'million	Others RM'million	Total RM'million
<b>Group</b>						
<b>2022</b>						
As at the beginning of the financial year	134.5	54.9	75.5	55.4	5.0	325.3
Provisions/(Reversal) during the financial year	70.7	4.8	(41.5)	(9.7)	21.6	45.9
Utilised during the financial year	(38.6)	(34.1)	0	0	0	(72.7)
As at the end of the financial year	166.6	25.6	34.0	45.7	26.6	298.5
2021						
As at the beginning of the financial year	101.5	17.4	9.2	55.4	102.1	285.6
Provisions/(Reversal) during the financial year	42.8	37.5	66.3	0	(97.1)	49.5
Utilised during the financial year	(9.8)	0	0	0	0	(9.8)
As at the end of the financial year	134.5	54.9	75.5	55.4	5.0	325.3

	CESS Fund*	Legal/ Disputes RM'million	Capital/ Expenditure RM'million	Others RM'million	Total RM'million
<b>Company</b>					
<b>2022</b>					
As at the beginning of the financial year	24.3	42.2	75.5	5.0	147.0
Provisions/(Reversal) during the financial year	4.7	4.1	(41.5)	21.6	(11.1)
Utilised during the financial year	0	(34.1)	0	0	(34.1)
As at the end of the financial year	29.0	12.2	34.0	26.6	101.8
2021					
As at the beginning of the financial year	22.6	5.1	9.2	102.1	139.0
Provisions/(Reversal) during the financial year	1.7	37.1	66.3	(97.1)	8.0
Utilised during the financial year	0	0	0	0	0
As at the end of the financial year	24.3	42.2	75.5	5.0	147.0

\* CESS Fund is relating to contribution for Electricity Supplies Industry Trust Account ('AAIBE').

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**24 EMPLOYEE BENEFITS****Accounting Policy**

The Group and the Company have various post-employment benefit schemes which are either defined contribution or defined benefit plans. A defined contribution plan is a pension plan under which the Group and the Company pay fixed contributions into a separate entity (a fund) on a mandatory, contractual or voluntary basis and the Group and the Company have no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees benefits relating to employee services in the current and prior periods.

Defined contribution plans

The Group's and the Company's contributions to the defined contribution plans are charged to the statement of profit or loss in the financial year to which they relate. Once the contributions have been paid, the Group and the Company have no further payment obligations.

Defined benefit plans

The Group and the Company make contributions to the Company's Retirement Benefit Plan, a defined benefit plan and an approved fund independent of the Company's finances. A book provision is also provided by the Group and the Company as the contribution rate required to fund the benefits under the said plan is in excess of the Inland Revenue maximum limit. The Group and the Company also provided for a Post-Retirement Medical Plan for certain employees, which is unfunded.

The liability in respect of a defined benefit plan is the present value of the defined benefit obligation at the statement of financial position date minus the fair value of plan assets. The Group and the Company determine the present value of the defined benefit obligation and the fair value of any plan assets with sufficient regularity such that the amounts recognised in the financial statements do not differ materially from the amounts that would be determined at the end of the reporting date.

The defined benefit obligation, calculated using the Projected Unit Credit Method, is determined by an independent actuarial firm, considering the estimated future cash outflows using market yields at the statement of financial position date of high-quality corporate bonds which have currency and terms to maturity approximating the terms of the related liability.

The current service cost of the defined benefit plan reflects the increase in the defined benefit obligation resulting from employee services in the current year. It is recognised in the statement of profit or loss as employee benefits expense.

The net interest cost is calculated by applying the discount rate to the net balance of the defined benefits obligation and the fair value of plan assets. This cost is included in employee benefit expense in the statement of profit or loss. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are recognised directly to the OCI in the period in which they arise. The actuarial gains and losses are not subsequently reclassified to the statement of profit or loss.

## (i) Retirement Benefit Trust Fund ('RBTF')

The Group and the Company operate a final salary defined benefit plan. The benefit is made as lump sum payment at retirement or earlier exits due to death and early retirement. The RBTF has been closed to new entrants since January 2008. Currently, there is no minimum funding requirement under the law.

The RBTF exposes the Group and the Company to risks from interest rates from defined benefit being greater than expected due to assumptions such as salary increment or turnover rates not being borne out. The RBTF is also exposed to investment risks in relation to the assets of the plan.

The funding of the RBTF is based on recommendation of the actuary and approved by the Group and the Company. The contributions by the Group and the Company are based on 6.0% (2021: 6.0%) of the annual basic salaries of the members. The employees are not required to contribute to the plan.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 24 EMPLOYEE BENEFITS (CONTINUED)

#### Accounting Policy (continued)

##### Defined benefit plans (continued)

###### (i) Retirement Benefit Trust Fund ('RBTF') (continued)

The Group and the Company expect to contribute 6.0% (2021: 6.0%) of the annual basic salaries of members to the plan in the next financial year.

###### (ii) Post-Retirement Medical Benefit Scheme ('PRMBS')

The Group and the Company operate a post-retirement medical benefits plan in Malaysia. The PRMBS is closed to new entrants. There is no minimum funding requirement under the current law. The PRMBS is unfunded.

The PRMBS exposes the Group and the Company to risks from interest rates and from defined benefits being greater than expected due to assumptions such as projection of medical benefit costs and mortality not being borne out.

There has not been any settlement or curtailment during the current financial year.

The movements in the financial statements are as follows:

	RBTF		PRMBS		Total
	Defined benefit obligation RM'million	Fair value of plan asset RM'million	Net defined benefit liability RM'million	RM'million	
<b>Group</b>					
<b>At 1 January 2022</b>	<b>2,231.9</b>	<b>(1,919.8)</b>	<b>312.1</b>	<b>12,122.4</b>	<b>12,434.5</b>
<u>Included in profit or loss</u>					
Current service costs	81.6	0	81.6	0	81.6
Interest cost/(income)	92.5	(84.0)	8.5	569.6	578.1
	<b>174.1</b>	<b>(84.0)</b>	<b>90.1</b>	<b>569.6</b>	<b>659.7</b>
<u>Included in OCI</u>					
Remeasurement of gain (Note 38):					
- Actuarial (gain)/loss arising from:					
- financial assumptions	(77.7)	0	(77.7)	(670.4)	(748.1)
- experience assumptions	(90.6)	0	(90.6)	42.3	(48.3)
- demographic assumptions	(0.3)	0	(0.3)	0	(0.3)
- Return on plan assets excluding interest income	0	69.6	69.6	0	69.6
	<b>(168.6)</b>	<b>69.6</b>	<b>(99.0)</b>	<b>(628.1)</b>	<b>(727.1)</b>
<u>Others</u>					
Contribution paid by the employer	0	(234.8)	(234.8)	0	(234.8)
Benefits paid	(317.3)	314.7	(2.6)	(571.5)	(574.1)
	<b>(485.9)</b>	<b>149.5</b>	<b>(336.4)</b>	<b>(1,199.6)</b>	<b>(1,536.0)</b>
<b>At 31 December 2022</b>	<b>1,920.1</b>	<b>(1,854.3)</b>	<b>65.8</b>	<b>11,492.4</b>	<b>11,558.2</b>
Current			0.6	591.9	592.5
Non-current			65.2	10,900.5	10,965.7
			<b>65.8</b>	<b>11,492.4</b>	<b>11,558.2</b>

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 24 EMPLOYEE BENEFITS (CONTINUED)

The movements in the financial statements are as follows: (continued)

	<b>Defined benefit obligation</b> RM'million	<b>RBTF</b>		<b>PRMBS</b> RM'million	<b>Total</b> RM'million
		<b>Fair value of plan asset</b> RM'million	<b>Net defined benefit liability</b> RM'million		
<b>Group</b>					
At 1 January 2021		2,536.4	(1,877.3)	659.1	13,193.6
<u>Included in profit or loss</u>					
Current service costs		95.3	0	95.3	95.3
Interest cost/(income)		88.1	(69.0)	19.1	531.3
		183.4	(69.0)	114.4	531.3
					645.7
<u>Included in OCI</u>					
Remeasurement of gain (Note 38):					
- Actuarial (gain)/loss arising from:					
- financial assumptions		(95.3)	0	(95.3)	(1,018.3)
- experience assumptions		(92.8)	0	(92.8)	(90.2)
- demographic assumptions		0	0	0	3.0
- Return on plan assets excluding interest income		0	11.2	11.2	0
		(188.1)	11.2	(176.9)	(1,105.5)
					(1,282.4)
<u>Others</u>					
Contribution paid by the employer		0	(281.5)	(281.5)	0
Benefits paid		(299.8)	296.8	(3.0)	(497.0)
		(487.9)	26.5	(461.4)	(1,602.5)
At 31 December 2021		2,231.9	(1,919.8)	312.1	12,122.4
Current				217.7	550.5
Non-current				94.4	11,571.9
				312.1	12,122.4
					12,434.5

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 24 EMPLOYEE BENEFITS (CONTINUED)

The movements in the financial statements are as follows: (continued)

	Defined benefit obligation RM'million	RBTF		PRMBS		Total RM'million
		Fair value of plan asset RM'million	Net defined benefit liability RM'million	RM'million	RM'million	
<b>Company</b>						
<b>At 1 January 2022</b>		2,202.2	(1,917.7)	284.5	11,426.3	11,710.8
<u>Included in profit or loss</u>						
Current service costs		61.5	0	61.5	0	61.5
Interest cost/(income)		91.5	(84.0)	7.5	535.9	543.4
		153.0	(84.0)	69.0	535.9	604.9
Charged to subsidiaries		18.5	0	18.5	0	18.5
		171.5	(84.0)	87.5	535.9	623.4
<u>Included in OCI</u>						
Remeasurement of gain (Note 38):						
- Actuarial (gain)/loss arising from:						
- financial assumptions		(76.7)	0	(76.7)	(602.4)	(679.1)
- experience assumptions		(87.0)	0	(87.0)	45.7	(41.3)
- Return on plan assets excluding interest income		0	69.9	69.9	0	69.9
		(163.7)	69.9	(93.8)	(556.7)	(650.5)
<u>Others</u>						
Contribution paid by the employer		0	(234.8)	(234.8)	0	(234.8)
Benefits paid		(314.7)	314.7	0	(544.8)	(544.8)
		(478.4)	149.8	(328.6)	(1,101.5)	(1,430.1)
<b>At 31 December 2022</b>		<b>1,895.3</b>	<b>(1,851.9)</b>	<b>43.4</b>	<b>10,860.7</b>	<b>10,904.1</b>
Current				0	569.6	569.6
Non-current				43.4	10,291.1	10,334.5
				43.4	10,860.7	10,904.1

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 24 EMPLOYEE BENEFITS (CONTINUED)

The movements in the financial statements are as follows: (continued)

	<b>Defined benefit obligation</b> RM'million	<b>RBTF</b>		<b>PRMBS</b> RM'million	<b>Total</b> RM'million
		<b>Fair value of plan asset</b> RM'million	<b>Net defined benefit liability</b> RM'million		
<b>Company</b>					
At 1 January 2021		2,506.9	(1,875.5)	631.4	12,447.7
<u>Included in profit or loss</u>					
Current service costs		69.0	0	69.0	69.0
Interest cost/(income)		87.3	(69.0)	18.3	500.3
		156.3	(69.0)	87.3	500.3
Charged to subsidiaries		23.9	0	23.9	0
		180.2	(69.0)	111.2	500.3
					611.5
Included in OCI					
Remeasurement of gain (Note 38):					
- Actuarial (gain)/loss arising from:					
- financial assumptions		(95.3)	0	(95.3)	(1,052.6)
- experience assumptions		(92.8)	0	(92.8)	(183.9)
- demographic assumptions		0	0	0	3.0
- Return on plan assets excluding interest income		0	11.5	11.5	0
		(188.1)	11.5	(176.6)	(1,045.4)
					(1,222.0)
<u>Others</u>					
Contribution paid by the employer		0	(281.5)	(281.5)	0
Benefits paid		(296.8)	296.8	0	(476.3)
		(484.9)	26.8	(458.1)	(1,521.7)
At 31 December 2021		2,202.2	(1,917.7)	284.5	11,426.3
Current				217.7	528.0
Non-current				66.8	10,898.3
				284.5	11,426.3
					11,710.8

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 24 EMPLOYEE BENEFITS (CONTINUED)

The latest actuarial revaluation for RBTF and PRMBS was carried out in February 2023. The principal actuarial assumptions used in respect of defined benefit plans are as follows:

	Group		Company	
	RBTF %	PRMBS %	RBTF %	PRMBS %
<b>2022</b>				
Discount rates	4.5 - 5.4	5.4 - 5.5	5.1	5.4
Salary increment rate	4.0 - 6.0	N/A	6.0	N/A
Medical cost inflation:				
- Inpatient	N/A	5.5	N/A	5.5
- Outpatient	N/A	4.5	N/A	4.5
Others:				
- Specialist	N/A	4.5	N/A	4.5
- Dialysis	N/A	5.5	N/A	5.5
<b>2021</b>				
Discount rates	4.4 - 4.5	4.8 - 4.9	4.4	4.8
Salary increment rate	5.0 - 6.0	N/A	6.0	N/A
Medical cost inflation:				
- Inpatient	N/A	5.5	N/A	5.5
- Outpatient	N/A	4.5	N/A	4.5
Others:				
- Specialist	N/A	4.5	N/A	4.5
- Dialysis	N/A	5.5	N/A	5.5

The effect of a 1.0% movement in the key assumptions to the defined benefit obligation balances are as follows:

Group	RBTF		PRMBS	
	Increase RM'million	Decrease RM'million	Increase RM'million	Decrease RM'million
<b>2022</b>				
Medical cost trend rate	N/A	N/A	1,367.4	(1,162.9)
Discount rate	(103.3)	113.9	(1,191.4)	1,430.0
Salary increment rate	129.1	(118.8)	N/A	N/A
<b>2021</b>				
Medical cost trend rate	N/A	N/A	1,558.0	(1,313.0)
Discount rate	(127.3)	141.1	(1,349.1)	1,635.9
Salary increment rate	156.1	(143.1)	N/A	N/A

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**24 EMPLOYEE BENEFITS (CONTINUED)**

The effect of a 1.0% movement in the key assumptions to the defined benefit obligation balances are as follows: (continued)

	RBTF		PRMBS	
	Increase RM'million	Decrease RM'million	Increase RM'million	Decrease RM'million
<b>Company</b>				
<b>2022</b>				
Medical cost trend rate	N/A	N/A	1,273.7	(1,085.7)
Discount rate	(100.9)	111.2	(1,112.9)	1,332.8
Salary increment rate	125.9	(115.9)	N/A	N/A
<b>2021</b>				
Medical cost trend rate	N/A	N/A	1,448.8	(1,223.7)
Discount rate	(124.9)	138.3	(1,258.0)	1,522.1
Salary increment rate	153.1	(140.4)	N/A	N/A

The sensitivity analysis have been provided based on membership data as at 31 December 2022 and considered a change of each principal assumption in isolation. The method and types of assumptions used in preparing the sensitivity analysis did not change compared to the previous period.

The weighted average duration of the Group's and of the Company's liabilities are estimated at approximately 6 and 14 years for RBTF and PRMBS respectively.

Plan assets for RBTF comprise:

	Group and Company	
	2022 %	2021 %
Equity instruments - quoted	47.5	53.7
Debt instruments - quoted	18.1	17.4
- unquoted	21.6	21.3
Others	12.8	7.6
	100.0	100.0

The plan assets for RBTF did not include any ordinary share of the Company.

The Group's and the Company's RBTF are conditional on future employment of the members of the plan. The Group's and the Company's PRMBS are not conditional on future employment and has been fully vested as at 31 December 2022.

**25 CONSUMER DEPOSITS**

Consumers (with the exception of employees and government departments/agencies) are required to deposit a sum sufficient to cover charges for two months supply of electricity as allowed under the regulation of the Licensee Supply (Amendment) Regulations 2002. In default of payment of the deposit within the time specified, the consumer's installation may not be provided, subject to certain conditions laid out in the regulations.

An interest of 2.5% per annum is credited to the consumer's cash deposit.

Consumer deposits are classified as current liabilities as the amounts shall be refunded within 30 days upon request for termination of electricity supply by the consumer.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 26 BORROWINGS

#### Accounting Policy

Borrowings are recognised initially at fair value, net of transaction costs incurred. In subsequent periods, borrowings are stated at amortised cost using the effective interest method, any differences between proceeds (net of transaction costs) and the redemption value are recognised in the statement of profit or loss over the period of the borrowings.

Borrowings are classified as current liabilities unless the Group and the Company have an unconditional right to defer settlement of the liability for at least 12 months after the statement of financial position date.

Where the terms of a financial liability are renegotiated and the Group issues equity instruments to a debt holder to extinguish all or part of the liability (debt for equity swap), a gain or loss is recognised in statement of comprehensive income, which is measured as the difference between the carrying amount of the financial liability and the fair value of the equity instruments issued, if any.

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facilities will be drawdown. The transaction costs are amortised over the tenure of the loan and recognised in the statement of profit or loss.

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets. All other borrowing costs are recognised in the statement of profit or loss in the period in which they are incurred.

Government loans, where the interest rate is below the market interest rate, the differential between the initial carrying value of the loan based on market rate and the Government rate is recognised as a deferred income and is credited to the statement of profit or loss over the period necessary to match the interest costs.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

Note	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<u>Current</u>				
Secured:				
- Short term loans	<b>394.2</b>	201.3	<b>0</b>	0
- Term loans	(a) <b>827.8</b>	864.0	<b>0</b>	0
- Bonds	(b) <b>486.0</b>	832.3	<b>0</b>	0
Unsecured:				
- Short term loans	<b>5,662.5</b>	1,650.8	<b>5,384.8</b>	1,403.2
- Bankers' acceptance	<b>687.6</b>	872.6	<b>595.6</b>	801.0
- Term loans	(a)(d) <b>3,708.0</b>	1,191.3	<b>3,641.9</b>	1,130.7
- Bonds	(b) <b>1,496.1</b>	769.1	<b>1,489.9</b>	769.1
- Redeemable Unsecured Loan Stocks	(c) <b>0</b>	611.1	<b>0</b>	0
Total short term borrowings	<b>13,262.2</b>	6,992.5	<b>11,112.2</b>	4,104.0

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 26 BORROWINGS (CONTINUED)

Note	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<u>Non-current</u>				
Secured:				
- Term loans	(a) <b>4,755.1</b>	4,051.9	<b>0</b>	0
- Bonds	(b) <b>17,987.3</b>	18,441.5	<b>0</b>	0
Unsecured:				
- Term loans	(a)(d) <b>1,969.5</b>	2,240.9	<b>1,701.6</b>	1,971.0
- Bonds	(b) <b>25,908.1</b>	19,951.4	<b>23,418.1</b>	18,961.3
Total long term borrowings	<b>50,620.0</b>	44,685.7	<b>25,119.7</b>	20,932.3
Total borrowings	<b>63,882.2</b>	51,678.2	<b>36,231.9</b>	25,036.3

The short term borrowings carry interest at rates ranging from 0.8% to 8.0% (2021: 0.8% to 8.0%) per annum for the Group and from 0.8% to 7.7% (2021: 0.8% to 7.7%) per annum for the Company.

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<u>Portion of borrowings due within 1 year:</u>				
- Short term loans	<b>6,056.7</b>	1,852.1	<b>5,384.8</b>	1,403.2
- Bankers' acceptances	<b>687.6</b>	872.6	<b>595.6</b>	801.0
- Term loans	<b>4,535.8</b>	2,055.3	<b>3,641.9</b>	1,130.7
- Bonds	<b>1,982.1</b>	1,601.4	<b>1,489.9</b>	769.1
- Redeemable Unsecured Loan Stocks	<b>0</b>	611.1	<b>0</b>	0
	<b>13,262.2</b>	6,992.5	<b>11,112.2</b>	4,104.0
<u>Borrowings repayable after 1 year:</u>				
- After 1 and up to 2 years	<b>1,157.7</b>	1,217.0	<b>106.3</b>	115.9
- After 2 and up to 5 years	<b>8,275.1</b>	3,853.1	<b>5,098.4</b>	1,742.0
- After 5 and up to 10 years	<b>13,663.9</b>	14,242.8	<b>7,104.9</b>	8,179.3
- After 10 and up to 20 years	<b>22,069.7</b>	21,636.8	<b>11,274.5</b>	10,577.6
- After 20 and up to 30 years	<b>5,006.8</b>	3,418.5	<b>1,200.0</b>	0
- After 30 years	<b>446.8</b>	317.5	<b>335.6</b>	317.5
	<b>50,620.0</b>	44,685.7	<b>25,119.7</b>	20,932.3
Total borrowings	<b>63,882.2</b>	51,678.2	<b>36,231.9</b>	25,036.3

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 26 BORROWINGS (CONTINUED)

	Group	
	2022 RM'million	2021 RM'million
Net book values of assets pledged as security for borrowings:		
Machinery, lines and equipment	<b>29,457.6</b>	30,665.8
Buildings	<b>3,240.4</b>	3,377.8
Land	<b>440.0</b>	503.5
	<b>33,138.0</b>	34,547.1

(a) Term loans

(i) Term Loan - SESB Federal Government Loans

The Federal Government provided RM2,028.1 million loans to SESB from 6 January 2003 to 11 April 2016 to finance the development project under the Malaysia Plan and electricity infrastructure development and upgrading projects in the state of Sabah. These loans have tenures ranging from 20 to 25 years, bearing applicable fixed interest rates of between 0% to 4.0% per annum.

The loans are secured by the following:

- A debenture creating:
  - a first fixed charge over all present and future freehold and leasehold properties including all buildings and fixtures; and
  - a first floating charge over all present and future assets of SESB not effectively charged by way of the fixed charge.
- A deed of assignment transferring all SESB's present and future rights and interests in all sales proceeds or revenue derived from the sale of electricity generated from the projects funded.
- A deed of assignment transferring all SESB's present and future rights and interests in the bank accounts in which the loan proceeds are credited.

(ii) Term Loan - TNB Engineering Corporation Sdn. Bhd. ('TNEC')

On 20 December 2010, TNEC obtained a 15-year RM73.3 million term loan to finance the subscription of the share capital of the special purpose vehicle (Airport Cooling Energy Supply Sdn. Bhd.). The loan has a fixed interest rate of 5.9% per annum and the maturity is on 24 December 2025.

The term loan is secured by a corporate guarantee from the Company.

(iii) Term Loan - Malaysia Transformer Manufacturing Sdn. Bhd. ('MTM')

On 2 May 2017, MTM obtained a RM25.0 million unsecured Commodity Murabahah Financing-i facility with a floating profit rate at the prevailing Kuala Lumpur Interbank Offered Rate ('KLIBOR') plus margin of 1.6% per annum and RM50.0 million Revolving Financing-i facility with floating profit rate at the prevailing KLIBOR plus margin of 0.8% per annum. The Commodity Murabahah Financing-i facility will mature on 29 May 2023.

In addition, on 28 August 2017, MTM obtained a RM35.0 million unsecured Commodity Murabahah Flexi Term Financing-i which will mature on 1 November 2023. Both financing facilities were used to partly finance the construction and development of a new plant at Kapar, Klang.

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**26 BORROWINGS (CONTINUED)**

## (a) Term loans (continued)

## (iv) Term Loan - TNB Sepang Solar Sdn. Bhd. ('TSS')

On 19 July 2017, TSS obtained a 20-year RM280.0 million Istisna' Term Financing-i at the prevailing KLIBOR plus margin of 1.2% per annum (for pre-commercial operation date ('COD')) and 1.3% per annum (for post-COD) to finance the construction of a 50MW solar power plant at Kuala Langat. The financing is secured over the cash flows generated from the power plant and has a maturity date of 30 June 2037.

## (v) Term Loan - TNB Bukit Selambau Solar Sdn. Bhd. ('TNBBSS')

On 13 December 2018, TNBBSS obtained a 20-year RM135.0 million Islamic Facility with a periodic distribution rate for pre-COD at the prevailing KLIBOR plus 1.0% per annum and post-COD at KLIBOR plus 0.75% per annum to finance the construction of a 30MW solar power plant. The financing is secured over the cash flows generated from the power plant and has a maturity date of 10 December 2038.

## (vi) Term Loan - Tenaga Wind Ventures UK Ltd. ('TWV')

On 28 March 2018, TWV obtained a secured debt facility of GBP120.0 million for the purpose of refinancing the senior debt facility held by GVO Wind Limited ('GVO') and Bluemerang Capital Limited ('BCL'). The debt facility is secured against TWV's assets, i.e. machinery, buildings and land. Following the London Interbank Offered Rate ('LIBOR') transition exercise, TWV entered into an addendum agreement in 2021 to reflect the new financing reference rate of Sterling Overnight Index Average (SONIA) which took effect from January 2022. The loan will mature on 30 September 2033.

## (vii) Term Loan - Vantage Solar UK Limited ('VSUK')

On 22 June 2017, VSUK, a wholly-owned subsidiary of VSI obtained a secured bank loan for the purpose of refinancing the senior debt facility held by Terraform UK3 Intermediate Holdings Ltd. VSUK entered into a loan agreement for an amount of GBP337.0 million, which will mature in March 2035. The facility is secured against VSUK's assets, i.e. machinery, buildings and land and attracted a yearly interest rate equal to LIBOR plus an applicable margin.

In February 2022, VSUK has refinanced this bank loan with a new external loan from non-banking institutions to replace the existing lenders. The new financing facility amounted to GBP274.9 million, with a fixed interest rate at 2.83% maturing on 31 March 2035.

## (viii) Term Loan - Vantage RE No. 1 Ltd. ('VRE1')

On 20 December 2022, VRE1 obtained an unsecured 15-year debt facility of GBP72.4 million for the purpose of refinancing the shareholder's loan provided by the Company for the acquisition of 49.0% shareholding in BODL in 2021. The facility bears interest at a rate per annum equal to SONIA plus an applicable margin and will mature on 30 September 2037.

## (ix) Term Loan - Norman 1985 Limited ('Norman')

The GBP63.5 million term loan is secured against Norman's tangible fixed assets to finance its portfolio of wind farm assets. The loan bears a fixed interest rate of 2.81% per annum and will mature on March 2037.

## (x) Term Loan - Clean Energy and Infrastructure UK Limited ('CEI UK')

The GBP73.1 million loan is secured against CEI UK's tangible fixed assets, to finance its portfolio of wind farm assets. The loan bears a combination of fixed interest rate of 2.2% per annum and variable interest rate based on Retail Price Index (RPI) and will mature in June 2032.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 26 BORROWINGS (CONTINUED)

(a) Term loans (continued)

(xi) Term Loan - Allo Technology Sdn. Bhd. ('ALLO')

On 1 December 2022, ALLO obtained a RM85.0 million Commodity Murabahah Financing backed by the Company's undertaking on cash deficiency support. The proceeds were used towards financing ALLO's capital expenditure, local investments, general corporate purposes and working capital requirements. The Effective Profit Rate ('EPR') on the financing is fixed at 4.93% per annum. The loan will mature in June 2033.

(b) Bonds or Sukuk

(i) Sukuk - TNB Janamanjung Sdn. Bhd. ('TNBJ')

On 25 November 2011, TNBJ through a special purpose entity, established a RM4.9 billion Islamic Securities Programme to finance the construction of 1,010MW coal-fired power plant. The tenure of the Islamic Securities Programme ranges from 5 to 20 years with a profit rate between 3.8% and 4.9% per annum.

The Islamic Securities were issued by Manjung Island Energy Berhad ('MIEB'), a special purpose vehicle company incorporated in Malaysia with a paid up capital of RM2.00 ordinary share. All of the issued shares of MIEB are held by Equity Trust (Malaysia) Berhad as share trustee for the benefit of certain specified charities, under the terms of a declaration of trust.

The sukuk issued from the Islamic Securities Programme consists of 2 series and the details of the series are as follows:

- (a) Series 1 consists of 15 tranches, with tenures ranging from 5 to 19 years.
- (b) Series 2 consists of 1 tranche, with tenure of 20 years.

The Islamic Securities Programme Series 1 is secured by the followings:

- (i) a first ranking assignment of all the TNBJ's rights, interest, titles and benefits under PPA 1 (Manjung 1, 2 & 3) and PPA 2 (Manjung 4), inclusive of the proceeds therefrom; and
- (ii) a first ranking assignment of all designated accounts and the related credit balances.

The Islamic Securities Programme Series 2 is unsecured and has the benefit of unconditional and irrevocable guarantee from the Company, to meet the payment obligations of the TNBJ.

(ii) Sukuk - TNB Northern Energy Berhad ('TNEB')

On 22 May 2013, TNEB entered into a RM1.6 billion sukuk facility agreement to finance the construction of a 1,071MW gas-fired power plant. The tenure of the sukuk is 23 years with profit rates between 3.6% and 4.8% per annum. The sukuk issuance were made in 39 tranches with tenures ranging from 4 to 23 years, with the final maturity date in March 2036. The sukuk facility agreement is secured over the cash flows generated from the power plant.

(iii) Sukuk - Kapar Energy Ventures Sdn. Bhd. ('KEV')

On 5 July 2013, KEV issued a sukuk based on the Shariah principles of Ijarah ('Sukuk Ijarah') of RM2.0 billion in nominal value. The tenure ranges from 1 to 13 years with profit rates of 3.8% to 5.0% per annum. The sukuk proceeds were utilised for Shariah-compliant purposes, which include refinancing the outstanding Bai' Bithaman Ajil Islamic Debt Securities ('BalDS'), payment of fees and expenses in relation to the Sukuk Ijarah facility and to meet the general working capital purposes of KEV. The sukuk facility agreement is secured over the cash flows generated from the power plant.

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**26 BORROWINGS (CONTINUED)**

## (b) Bonds or Sukuk (continued)

## (iv) Sukuk - TNB Western Energy Berhad ('TWEB')

On 24 January 2014, TWEB executed a RM3.7 billion sukuk facility agreement to finance the construction of a 1,000MW coal-fired power plant. The tenure of the Facility Agreement is 23 years with a periodic distribution rate between 5.1% to 5.8% per annum. The sukuk facility agreement is secured over cash flows generated from the power plant.

## (v) Sukuk - Jimah East Power Sdn. Bhd. ('JEP')

On 4 December 2015, JEP issued a Sukuk Murabahah of RM9.0 billion in nominal value. The proceeds from the Sukuk Murabahah were utilised by JEP for Shariah-compliant purposes in connection with the financing, design, engineering, procurement, construction, installation, testing, commissioning, ownership, operation and maintenance of a 2,000MW coal-fired power plant and associated facilities, including the transmission line and interconnection facilities. The tenure of the facility agreement is 23 years with profit rates between 5.0% and 6.8% per annum. The sukuk facility agreement consists of 36 tranches with tenures ranging from 6 to 23 years.

The Sukuk Murabahah is secured by the following securities:

- (a) a charge over the Power Plant Land, the sub-lease of the Power Plant Land, and the lease of the Jetty Lands;
- (b) fixed and floating charges over all present and future assets of JEP excluding the certain bank accounts and all credit balances therein and any rights, interest, titles and benefits under the Offset Agreement and Offset Management Services Agreement;
- (c) assignment of all the JEP's rights, titles, interest and benefits under the project documents and the proceeds therefrom (including the power purchase agree and revenues thereunder) but excluding the generation licence, Offset Agreement and Offset Management Services Agreement; and
- (d) a charge over certain designated bank accounts.

The carrying amounts of total assets pledged as security for current and non-current borrowings are as disclosed.

## (vi) Sukuk - Southern Power Generation Sdn. Bhd. ('SPG')

On 31 October 2017, SPG issued a Sukuk Wakalah of RM3.7 billion in nominal value to finance the construction of a 1,440MW gas-fired power plant and associated facilities, including the interconnection facilities.

The tenure of the facility agreement is 18 years with profit rates between 4.7% and 5.6% per annum. The sukuk facility agreement consists of 28 tranches with tenures ranging from 4.5 years to 18 years.

The Sukuk Wakalah is secured by the following securities:

- (a) all property, plant and equipment including the plant, machinery, motor vehicle, furniture, fittings and other equipment of the SPG.
- (b) all shares, bonds and securities whether marketable or otherwise and all other interests including but not limited loan capital.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 26 BORROWINGS (CONTINUED)

#### (b) Bonds or Sukuk (continued)

##### (vii) Multi-currency Sukuk - TNB Global Ventures Capital Berhad ('TGVC')

On 4 October 2016, TGVC established a USD2.5 billion Multi-Currency Medium Term Note Sukuk Programme ('Sukuk Programme') to provide flexibility to the Group's fund raising exercise for its future investments. The Sukuk Programme is unsecured and has the benefit of an unconditional and irrevocable guarantee from the Company, to meet the payment obligations to the Sukukholders.

On 19 October 2016, TGVC issued a USD750.0 million under this Sukuk Programme for a tenure of 10 years with profit rate of 3.2% per annum. Subsequently, on 1 November 2018, TGVC had a second issuance of USD750.0 million for a tenure of 10 years with a profit rate of 4.9%. Both issuances were listed and quoted on Bursa Malaysia Securities Trading (under the Exempt Regime) and on the Singapore Exchange Securities Trading Limited at its respective issuance date.

The proceeds from the issuances of the Sukuk Programme above were transferred by TGVC to the Company under the same terms as the Sukuk Programme. The finance cost on the Sukuk Programme during the year amounts to RM276.9 million (2021: RM252.3 million).

##### (viii) Sukuk - TNB Power Generation Sdn. Bhd. ('TPGSB')

On 2 June 2022, TPGSB issued Sustainability Sukuk Wakalah of RM1.5 billion under an Islamic Medium Term Notes Programme of up to RM10.0 billion in nominal value ('Sukuk Wakalah Programme') which comprised RM150.0 million with 10 years tenure, RM750.0 million with 15 years tenure and RM600.0 million with 20 years tenure, with profit rates of 4.7%, 5.1% and 5.2% per annum respectively.

The proceeds from these issuances of Sustainability Sukuk Wakalah under the Sukuk Wakalah Programme have been and shall be utilised by TPGSB to finance and/or refinance loans obtained to finance the development costs related to the planning, design, engineering, and construction of Nenggiri Hydroelectric Power Plant Project (Project Nenggiri) to be undertaken by TNBPG Hydro Nenggiri Sdn. Bhd. ('THNSB'), a special purpose vehicle set up to solely undertake Project Nenggiri.

The Sustainability Sukuk Wakalah proceeds will be channeled by TPGSB to THNSB through the provision of shareholders' loans and/or advances and/or through subscription of any equity instruments as may be agreed between the parties.

##### (ix) Sukuk - Islamic Medium Term Note Sukuk Wakalah (RM5.0 billion)

On 6 July 2017, the Company established a RM5.0 billion Islamic Medium Term Note Sukuk Wakalah to finance capital expenditure, investment, general corporate purpose, working capital requirements and/or refinance any existing financing facilities of the issuer and/or its subsidiaries and to defray any fees and expenses of the Sukuk Programme.

On 3 August 2017, the Company issued RM2.0 billion Sukuk Wakalah which comprised RM500.0 million with 15 years tenure and RM1.5 billion with 20 years tenure, with profit rates of 5.0% and 5.2% respectively.

On 29 August 2018, the Company issued RM3.0 billion Sukuk Wakalah which comprised RM1.0 billion with 15 years tenure and RM2.0 billion with 20 years tenure, with profit rates of 4.8% and 5.0% per annum respectively.

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**26 BORROWINGS (CONTINUED)**

## (b) Bonds or Sukuk (continued)

## (x) Sukuk - Islamic Medium Term Note Sukuk Wakalah (RM10.0 billion)

On 30 June 2020, the Company established a RM10.0 billion Islamic Medium Term Note Sukuk Wakalah to finance capital expenditure, investment, general corporate purposes, working capital requirement and/or refinance any existing financing facilities of the Company and/or subsidiaries and to defray any fees and expenses of Sukuk Wakalah Programme.

On 12 August 2020, the Company issued RM3.0 billion Sukuk Wakalah which comprised RM750.0 million with 10 years tenure, RM750.0 million with 15 years tenure and RM1.5 billion with 20 years tenure, with profit rates of 2.9%, 3.3% and 3.6% per annum respectively.

On 25 November 2021, the Company issued RM3.0 billion Sukuk Wakalah which comprised RM300.0 million with 7 years tenure, RM300.0 million with 10 years tenure, RM1.2 billion with 15 years tenure and RM1.2 billion with 20 years tenure, with profit rates of 3.9%, 4.1%, 4.5% and 4.7% per annum respectively.

On 30 June 2022, the Company issued RM4.0 billion Sukuk Wakalah which comprised RM1.12 billion with 7 years tenure, RM300.0 million with 10 years tenure, RM880.0 million with 15 years tenure, RM500.0 million with 20 years tenure and RM1.2 billion with 25 years tenure, with profit rates of 4.7%, 4.8%, 5.2%, 5.4% and 5.6% per annum respectively.

## (c) Redeemable Unsecured Loan Stock ('RULS') - KEV

On 29 June 2004, KEV issued RM957.6 million of RULS to the Company and Malakoff Corporation Berhad to finance the acquisition of Stesen Janaelektrik Sultan Salahuddin Abdul Aziz, Kapar. The RULS bears an interest of 8.0% per annum on the outstanding nominal value of the RULS. The interest is repayable semi-annually on the last day of the relevant six months period from the issue date of RULS. The RULS is repayable from the third year from the issue date of RULS as stipulated in the agreement dated 29 June 2004. The RULS has to be settled in full by the final maturity date of 8 July 2029. During the financial year 2020, the RULS has been novated to TPGSB under the internal reorganisation initiative.

Pursuant to debt restructuring exercise, KEV had successfully redeemed the outstanding RULS on 1 July 2022. The redemption on the outstanding RULS principal amounting to RM307.4 million was financed by the issuance of RPS. On the same date, the outstanding interest on RULS amounting to RM319.4 million has been settled by way of capital contribution from the issuance of ordinary shares.

The salient terms of the RPS are set out below:

- (i) Issued at Ringgit Malaysia RM100 each;
- (ii) 4,611,444 unit of RPS to be subscribed by TPGSB and 3,074,296 unit of RPS to be subscribed by Malakoff Corporation Berhad;
- (iii) The RPS shall have no fixed dividend;
- (iv) The dividend shall be non-cumulative;
- (v) There's no specific or fixed date for the payment of dividend;
- (vi) The redemption of the RPS either in whole or in parts, is at the absolute discretion of KEV and shall be out of:
  - (a) profits, or
  - (b) a fresh issuance of shares, or
  - (c) capital of KEV, in accordance with the provisions of the Companies Act, 2016.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 26 BORROWINGS (CONTINUED)

#### (d) Preferred Equity Certificates ('PEC')

On 22 December 2017, Kumpulan Wang Persaraan ('KWAP') had provided a shareholder loan of GBP46.2 million to VSI through the subscription of PEC. The financial instrument bears a fixed interest rate of 8.0% per annum and will mature in 2047.

Reconciliation of borrowings from financing activities during the financial year is as follows:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
As at the beginning of the financial year	<b>51,678.2</b>	49,452.6	<b>25,036.3</b>	22,091.3
Cash flows:				
- Drawdowns	<b>24,921.6</b>	7,266.1	<b>20,475.0</b>	6,750.0
- Repayments	<b>(12,860.5)</b>	(5,380.1)	<b>(9,595.5)</b>	(3,955.5)
- Finance cost paid	<b>(2,657.2)</b>	(2,280.3)	<b>(1,212.2)</b>	(982.0)
Non-cash changes:				
- Finance cost (Note 37(b))	<b>2,692.5</b>	2,452.7	<b>1,247.8</b>	1,005.0
- Translation loss - foreign term loans (Note 36)	<b>280.5</b>	127.5	<b>280.5</b>	127.5
- Changes in fair value	<b>(22.2)</b>	(29.3)	<b>0</b>	0
- Foreign currency translation differences	<b>(173.1)</b>	69.0	<b>0</b>	0
- Acquisition of a subsidiary (Note 48)	<b>649.2</b>	0	<b>0</b>	0
- Conversion to NCI equity (Note 7(b))	<b>(626.8)</b>	0	<b>0</b>	0
As at the end of the financial year	<b>63,882.2</b>	51,678.2	<b>36,231.9</b>	25,036.3

### 27 GOVERNMENT DEVELOPMENT GRANTS

#### Accounting Policy

Grants from the government are recognised at their fair values where there is a reasonable assurance that the grants will be received and the Group will comply with all its corresponding terms and conditions.

Government grants relating to costs are deferred and recognised in the statement of profit or loss over the period necessary to match them with the costs they are intended to compensate.

Government grants relating to construction of PPE are included in non-current liabilities as deferred income and are credited to the statement of profit or loss on the straight line method over the expected lives of the related assets.

A subsidiary of the Group obtained Government loans where the interest rate is below the market rate of interest. The differential between the initial carrying value of the loan based on market rate and the Government rate is recognised as a deferred income and is credited to the statement of profit or loss over the period necessary to match the interest costs.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**27 GOVERNMENT DEVELOPMENT GRANTS (CONTINUED)**

Reconciliation of government development grants from financing activities during the financial year is as follows:

	Group	
	2022 RM'million	2021 RM'million
As at the beginning of the financial year	948.4	961.2
Received during the financial year:		
- Cash	3.3	2.2
- Assets	31.2	73.2
Released to statement of profit or loss:		
- Other operating income (Note 35)	(63.4)	(62.8)
- Finance cost (Note 37(b))	(24.8)	(25.4)
- Gain on restructuring	(19.3)	0
As at the end of the financial year	875.4	948.4

The government development grants are provided by the Government mainly for the construction of PPE of RM715.4 million (2021: RM740.2 million) and the Government loan below market interest rate is RM142.4 million (2021: RM186.5 million).

**28 OTHER LIABILITIES**

Note	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Retention monies	(a) 687.1	651.3	711.2	681.0
Deferred consideration	(b) 22.2	0	0	0
Others	(c) 444.8	324.0	2.8	2.8
	1,154.1	975.3	714.0	683.8

- (a) Retention monies primarily relate to the vendor retention monies for projects with completion period of more than 12 months.
- (b) The deferred consideration is arising from the acquisition of intangible assets (rights to build) as disclosed in Note 10. The deferred amount is expected to be settled by December 2025 and is discounted at 4.71%.
- (c) Mainly relates to the provision for restoration cost for certain assets for which there is an obligation to dismantle, remove and restore the sites at the end of their useful lives amounting RM426.6 million (2021: RM301.8 million), discounted at the range of 3.97% to 4.08%. The addition recognised during the current financial year is in relation to acquisition of CEI UK as a subsidiary and additional obligations to restore one of the Group's land upon expiry of its lease term.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 29 SHARE CAPITAL

#### Accounting Policy

##### *Classification*

Ordinary shares and non-redeemable preference shares with dividends are classified as equity. Other shares are classified as equity and/or liability according to the economic substance of the particular instrument.

Distributions to holders of a financial instrument classified as an equity instrument are charged directly to equity.

##### *Share issue costs*

Incremental external costs directly attributable to the issuance of new shares or options are shown in equity as a deduction, net of tax, from the proceeds.

##### *Dividends to shareholders of the Company*

Dividends are recognised as liability in the period in which they are declared.

	Note	Group and Company	
		2022	2021
<u>Issued and fully paid:</u>			
Ordinary Shares		5,753,077,371	5,726,091,371
Special Rights Redeemable Preference Share	(a)	1	1
Total share capital issued and fully paid		5,753,077,372	5,726,091,372

	Note	Group and Company			
		Number of shares 2022 Million	Amount 2022 RM'million	Number of shares 2021 Million	Amount 2021 RM'million
<u>Issued and fully paid:</u>					
Ordinary Shares					
As at the beginning of the financial year		5,726.1	11,927.6	5,704.7	11,675.2
LTIP shares issued during the financial year	(b)	27.0	276.7	21.4	252.4
As at the end of the financial year		5,753.1	12,204.3	5,726.1	11,927.6

(a) Special Rights Redeemable Preference Share ('Special Share')

- (i) The Special Share would enable the Government through the Minister of Finance Incorporated ('MOF Incorporated') to ensure that certain major decisions affecting the operations of the Company are consistent with the Government's policies. The Special Shareholder, which may only be the Government or any representative or person acting on its behalf, is entitled to receive notices of meetings but not to vote at such meetings of the Company. However, the Special Shareholder is entitled to attend and speak at such meetings.

The Special Shareholder has the right to appoint any person, but not more than six at any time, to be a member of the Board of Directors of the Company.

- (ii) Certain matters, in particular the alteration of the Articles of Association of the Company relating to the rights of the Special Shareholder, creation and issue of additional shares which carry different voting rights, the dissolution of the Company, substantial disposal of assets, amalgamations, merger and takeover, require the prior consent of the Special Shareholder.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**29 SHARE CAPITAL (CONTINUED)**

- (a) Special Rights Redeemable Preference Share ('Special Share') (continued)
- (iii) The Special Shareholder does not have any right to participate in the capital or profits of the Company.
  - (iv) The Special Shareholder has the right to require the Company to redeem the Special Share, at par, at any time.
- (b) The Company issued and allotted ordinary shares of 26,982,600 on 18 July 2022 and 3,400 on 28 July 2022 to eligible employees, pursuant to the letter of offer dated 30 April 2019, 6 July 2020, 27 July 2020 and 25 May 2021 respectively in accordance with the by-laws of the LTIP scheme of the Company during the financial year ended 31 December 2022.

**30 OTHER RESERVES**

The Group's and the Company's other reserves comprise:

Nature	Description
LTIP reserve	Arising from the corresponding increase in equity from expenses recognised in the statement of profit or loss over the vesting period of the equity-settled shares based compensation plan for the Group's and the Company's employees as disclosed in Note 34.
Employee benefits reserve	Arising from the remeasurements of the net defined employee benefit liability.
Foreign currency translation reserve	Arising from the translation of the financial statements of foreign operations whose functional currencies are different from that of the Group's presentation currency.
FVOCI reserve	Arising from changes in fair value of financial assets at FVOCI.

The movements in each category of reserves are as follows:

	LTIP reserve RM'million	Employee benefits reserve RM'million	Foreign currency translation reserve RM'million		FVOCI reserve RM'million	Total RM'million				
			translation reserve RM'million	Total RM'million						
<b>Group</b>										
<b>2022</b>										
As at the beginning of the financial year	358.5	(6,740.0)	(456.6)	24.8	(6,813.3)					
Arising in the financial year	(14.1)	626.9	(270.7)	7.9	350.0					
As at the end of the financial year	344.4	(6,113.1)	(727.3)	32.7	(6,463.3)					
<b>2021</b>										
As at the beginning of the financial year	315.4	(7,718.7)	(859.0)	19.6	(8,242.7)					
Arising in the financial year	43.1	978.7	402.4	5.2	1,429.4					
As at the end of the financial year	358.5	(6,740.0)	(456.6)	24.8	(6,813.3)					

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 30 OTHER RESERVES (CONTINUED)

The movements in each category of reserves are as follows: (continued)

	LTIP reserve RM'million	Employee benefits reserve RM'million	FVOCI reserve RM'million	Total RM'million
<b>Company</b>				
<b>2022</b>				
As at the beginning of the financial year	358.5	(6,324.2)	24.1	(5,941.6)
Arising in the financial year	(14.1)	494.4	7.9	488.2
As at the end of the financial year	344.4	(5,829.8)	32.0	(5,453.4)
<b>2021</b>				
As at the beginning of the financial year	315.4	(7,252.9)	18.9	(6,918.6)
Arising in the financial year	43.1	928.7	5.2	977.0
As at the end of the financial year	358.5	(6,324.2)	24.1	(5,941.6)

### 31 REVENUE

#### Accounting Policy

Revenue which represents income arising in the course of the Group's and the Company's ordinary activities is recognised by reference to each distinct performance obligation promised in the contracts with customers. Revenue from contracts with customers is measured at its transaction price, being the amount of consideration which the Group and the Company expect to be entitled in exchange for transferring promised goods or services to a customer, net of goods and service tax, returns, rebates and discounts. Transaction price is allocated to each performance obligation on the basis of the relative stand-alone selling prices of each distinct good or services promised in the contract. Depending on the substance of the respective contract with the customer, revenue is recognised when the performance obligation is satisfied, which may be at a point in time or over time.

The Group and the Company do not expect any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Group and the Company do not adjust any of the transaction prices for the time value of money.

##### (a) Electricity revenue

Revenue from the supply of electricity in Peninsular Malaysia (since 2014), Sabah and Wilayah Persekutuan Labuan (since 2022) is regulated based on certain formulae and parameters as set out in the regulatory implementation guidance under the IBR framework and as agreed with the regulators. The allowed revenue in each year is calculated as the sum of actual revenue earned and any applicable adjustments, such as those related to the Annual Regulatory Adjustment ('ARA'), allowance or top-up by the Government and other income adjustment mechanisms as described in the Guidelines on Electricity Tariff Determination.

The contract with customers is for the supply of electricity based on tariff rates as set out in the provision of the Electricity Supply Act 1990. Collection of the contract consideration from customers is considered probable.

The promise to supply electricity represents a promise to transfer a series of distinct goods that are substantially the same and that have the same pattern of transfer to the customer. The performance obligation to deliver electricity is satisfied over time as the customers simultaneously received and consumed the benefits provided by the Group's and the Company's performance. Hence, electricity revenue is recognised over time by the Group and the Company when electricity is consumed by customers.

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**31 REVENUE (CONTINUED)****Accounting Policy (continued)**

## (a) Electricity revenue (continued)

Generally, customers are billed monthly. As the amount at which the Group and the Company have a right to invoice corresponds directly with the value to the customer, the revenue from electricity sales is also recognised monthly. Payment should be made by customers within 30 days from the date the bill is issued. An interest charge will be imposed if payment is made later than 30 days after the bill date.

Electricity revenue includes an estimated value of the electricity consumed by customers from the date of their last meter reading and the reporting period end. Accrued unbilled revenues recognised as contract assets are reversed in the following month when actual billings occur.

Other income which is earned from services not directly related to electricity supply but are provided using the assets and/or staff of a licensee is deducted from the revenues to be earned from regulated tariffs.

## (b) Goods and services

## (i) Sale of goods

Sale of goods is recognised when control of the products has transferred, being when the products are delivered to the customer and there is no unfulfilled obligation that could affect the customer's acceptance of the products. Delivery occurs when the products have been transported to the specific location, the risks of obsolescence and loss have been transferred to the customer, and either the customer has accepted the products in accordance with the sales contract, the acceptance provisions have lapsed, or the Group has objective evidence that all criteria for acceptance have been satisfied.

Revenue from these sales is recognised based on the price specified in the contract, net of the estimated discounts. Accumulated experience is used to estimate and provide for the discounts, using the expected value method, and revenue is only recognised to the extent that it is highly probable that a significant reversal will not occur. No element of financing is deemed present as the sales are made with a credit term of an average between 30 to 60 days, which is consistent with market practice. The Group's obligation to repair or replace faulty products under the standard warranty terms is recognised as a provision.

A receivable is recognised when the goods are delivered as this is the point in time that the consideration is unconditional because only the passage of time is required before the payment is due.

## (ii) Rendering of services

Revenue from providing services is recognised over the period in which the services are rendered. Revenue is recognised based on the actual service provided to the end of the reporting period as a proportion of the total services to be provided because the customer received and uses the benefits simultaneously.

In cases of fixed-price contracts, the customer pays the fixed amount based on a payment schedule. If the services rendered exceed the payments, a contract asset is recognised. If the payments exceed the services rendered, a contract liability is recognised.

If the contract includes hourly fees, revenue is recognised at the amount to which the Group has a right to invoice. The amounts are billed within 60 to 180 days from satisfying the performance obligations and payment is expected within 30 days from the billing date.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 31 REVENUE (CONTINUED)

#### Accounting Policy (continued)

##### (c) Construction contracts

Revenue from construction contracts is recognised over time or at a point in time in accordance with performance obligations being satisfied. Where revenue is recognised over time, the satisfaction of performance obligation is by reference to the stage of completion which is assessed by reference to the contract costs incurred over the total estimated costs for each contract as at the reporting date. Otherwise, revenue is recognised at a point in time when the customer obtains control of the assets. The related costs are recognised in the statement of profit or loss when they are incurred.

Where the contracts include multiple performance obligations, the transaction price will be allocated to each performance obligation based on the stand-alone selling prices. Where these are not directly observable, they are estimated based on expected cost plus margin. If contracts include sale of goods as a separate performance obligation, revenue from this sale is recognised at a point in time when the goods are delivered, the legal title has passed and the customer has accepted the goods.

When the consideration of a construction contract cannot be estimated reliably, contract revenue is recognised only to the extent of contract costs incurred that are likely to be recoverable. An expected loss on a contract is recognised immediately in the statement of profit or loss.

Estimates of revenues, costs or extent of progress toward completion are revised if circumstances change. Any resulting increases or decreases in estimated revenues or costs are reflected in the statement of profit or loss in the period in which the circumstances that give rise to the revision become known by management.

The amounts will be billed within 60 to 180 days from satisfying the performance obligations and payment is expected within 30 days from billing date. Advances received are included in contract liabilities.

##### (d) Customers' contributions

Contributions received from customers in the form of cash and/or PPE in respect of capital contributions for the construction of assets, used to connect the customers to a network or to provide them with the service, is included in the revenue.

The customers' contributions are viewed as indirectly related to the promise of providing supply of electricity to the customers. Supply of electricity and customers' contributions are not distinct because the customers cannot benefit from these two services on their own. The connection infrastructures are to fulfil the obligation to supply electricity to the customers. Both the supply of electricity and customers' contributions are substantially the same, and have the same pattern of transfer to the customers.

Therefore, connection and the supply of electricity are one performance obligation. It is considered as part of the transaction price for the overall service provided to the customers and is recognised over time. The customers' contributions are deferred and recognised over the period the constructed assets are used to provide electricity to the customers. The contributions are recognised as contract liabilities and amortised over 20 years, being the estimated average useful life of the assets.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**31 REVENUE (CONTINUED)**

Disaggregation of revenue from contracts with customers for the Group and the Company are categorised as follows:

	Group		Company	
	2022	2021	2022	2021
	RM'million	RM'million Restated	RM'million	RM'million Restated
Sales:				
- Electricity*	<b>49,702.3</b>	46,680.3	<b>46,650.4</b>	44,097.2
- Goods and services	<b>734.0</b>	708.9	<b>0</b>	0
Tariff support subsidy	<b>0</b>	368.2	<b>0</b>	0
Construction contracts	<b>155.1</b>	93.4	<b>0</b>	0
Customers' contributions	<b>276.3</b>	269.1	<b>229.3</b>	224.5
	<b>50,867.7</b>	48,119.9	<b>46,879.7</b>	44,321.7
Over time	<b>50,149.1</b>	47,145.4	<b>46,879.7</b>	44,321.7
At a point in time	<b>718.6</b>	974.5	<b>0</b>	0
	<b>50,867.7</b>	48,119.9	<b>46,879.7</b>	44,321.7

\* Included in the sales of electricity of the Group and the Company are other regulatory adjustments of RM778.1 million (2021: RM551.9 million) and RM790.6 million (2021: RM551.9 million) respectively.

The revenue of the Group and of the Company are predominantly derived in Malaysia.

**32 IMBALANCE COST PASS-THROUGH ('ICPT') UNDER RECOVERY****Accounting Policy**

ICPT, a mechanism established under the IBR framework allows the Group and the Company to pass through the volatility in fuel and other generation specific costs (termed as the 'Single Buyer Generation Cost') to the customers, such that the Group and the Company remain financially neutral. The Group's and the Company's claims and undertakings under the ICPT mechanism are such that any over or under recovery of these costs would be payable to or reimbursable from the Government. Upon approval by the Government, the agreed over or under recovery costs will be adjusted in the billing to customers, as ICPT rebate or surcharge. Actual base tariff billed to the customers remains unchanged.

The ICPT over or under recovery is recognised in the statement of profit or loss, presented separately from revenue.

	Group		Company	
	2022	2021	2022	2021
	RM'million	RM'million	RM'million	RM'million
ICPT under recovery	<b>22,315.3</b>	4,509.6	<b>21,942.2</b>	4,509.6

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 33 OPERATING EXPENSES

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Cost of sales:				
- Energy cost	<b>49,710.3</b>	29,868.0	<b>49,827.9</b>	30,649.5
- Transmission cost	<b>2,084.3</b>	1,945.6	<b>1,918.6</b>	1,805.4
- Distribution cost	<b>7,275.4</b>	6,694.0	<b>6,882.4</b>	6,379.2
	<b>59,070.0</b>	38,507.6	<b>58,628.9</b>	38,834.1
Administrative expenses	<b>3,038.4</b>	3,142.6	<b>1,774.3</b>	1,903.1
Other operating expenses	<b>2,503.7</b>	2,874.2	<b>789.9</b>	1,546.6
	<b>64,612.1</b>	44,524.4	<b>61,193.1</b>	42,283.8

Operating expenses include the following items:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Purchases from Independent Power Producers ('IPPs')	<b>17,999.5</b>	8,863.8	<b>36,101.1</b>	18,641.8
Fuel costs	<b>25,084.5</b>	15,225.4	<b>6,892.3</b>	5,213.9
Directors' remuneration:				
- Fees and allowances	<b>3.3</b>	3.4	<b>3.2</b>	3.3
- Other emoluments	<b>0.4</b>	1.0	<b>0.4</b>	1.0
Auditors' remuneration:				
- PricewaterhouseCoopers PLT, Malaysia				
- Statutory audit	<b>3.9</b>	3.4	<b>1.4</b>	1.2
- Audit related services	<b>1.9</b>	1.5	<b>1.4</b>	1.5
- Member firm of PricewaterhouseCoopers International Limited				
- Statutory audit	<b>4.6</b>	1.9	<b>0</b>	0
- Non-audit services				
- Tax related services	<b>0.2</b>	0.4	<b>0.1</b>	0
- Other non-audit services	<b>1.5</b>	1.6	<b>0.2</b>	0.2
Staff costs (Note 34)*	<b>3,798.1</b>	3,954.2	<b>2,591.0</b>	2,771.7
Property, plant and equipment:				
- Depreciation	<b>7,500.7</b>	7,193.4	<b>4,790.2</b>	4,640.8
- Written off	<b>61.8</b>	199.5	<b>33.5</b>	197.2

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 33 OPERATING EXPENSES (CONTINUED)

Operating expenses include the following items: (continued)

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Right-of-use assets:				
- Depreciation	<b>3,901.8</b>	3,498.1	<b>6,236.0</b>	5,898.5
Impairment losses on investments in:				
- Subsidiaries	<b>0</b>	0	<b>18.9</b>	719.4
- Associates	<b>68.6</b>	291.8	<b>0</b>	0
- Joint ventures	<b>2.3</b>	0	<b>0</b>	0
Inventories:				
- Provision for obsolescence	<b>83.6</b>	182.8	<b>65.2</b>	85.2
- Write back of obsolescence	<b>(90.7)</b>	(85.4)	<b>(85.5)</b>	(65.4)
- Written off	<b>119.1</b>	172.9	<b>111.1</b>	73.8
Telecommunication expenses	<b>52.2</b>	37.3	<b>50.5</b>	37.2
Expenses arising from leases:				
- Low-value assets (Note 15)	<b>37.8</b>	40.4	<b>37.5</b>	39.8
Research and development expenses	<b>76.4</b>	68.3	<b>69.5</b>	67.8
Receipt of Government subsidies <sup>#</sup>	<b>0</b>	(310.4)	<b>0</b>	0

\* The remuneration of the Executive Directors amounting to RM4.3 million (2021: RM5.0 million) for the Group and the Company.

# The subsidies that Sesiawang Selatan Berhad received for diesel and medium fuel oil from the Government. The total amount credited has been offset against energy cost.

The estimated monetary value of benefits received by the Directors was RM441,980 (2021: RM984,022) for the Group and the Company.

All non-audit services were procured competitively in accordance with TNB Procurement Policies and Procedures. Non-audit services can be offered by the external auditors of the Group if there are clear efficiencies and value added benefits to the Group.

## 34 STAFF COST

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Wages, salaries and bonuses	<b>2,131.7</b>	2,320.4	<b>1,249.3</b>	1,468.6
Defined contribution retirement plan	<b>409.3</b>	403.8	<b>307.0</b>	303.6
Long Term Incentive Plan	<b>262.6</b>	295.5	<b>180.3</b>	209.4
Retirement Benefit Plan	<b>90.1</b>	114.4	<b>69.0</b>	87.3
Post-Retirement Medical Plan	<b>569.6</b>	531.3	<b>535.9</b>	500.3
Other employee benefits	<b>334.8</b>	288.8	<b>249.5</b>	202.5
	<b>3,798.1</b>	3,954.2	<b>2,591.0</b>	2,771.7

Details of the retirement benefit and post-retirement medical plans of the Group and of the Company are set out in Note 24.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 34 STAFF COST (CONTINUED)

#### Long Term Incentive Plan ('LTIP')

The Group and the Company operate an equity-settled share-based compensation plan under which the entity receives services from employees as consideration for equity instruments of the Group.

The fair value of the employee services received in exchange for the grant of the Company's shares is recognised as an expense in the statement of profit or loss over the vesting period of the grant, with a corresponding increase in share-based payment reserve in equity.

The total amount to be expensed over the vesting period is determined by reference to the fair value of the shares granted.

Non-market vesting conditions are included in the assumptions to arrive at the number of shares that are expected to vest. At the end of the reporting period, the Company revises its estimates of the number of shares that are expected to be vested. The impact of the revision of original estimates, if any, is recognised in the statement of profit or loss, with a corresponding adjustment to share-based payment reserve in equity.

The fair value of shares granted to employees of subsidiaries is allocated to the subsidiaries.

The Company implemented a LTIP on 30 April 2015 for a period of 10 years. The LTIP is governed by the by-laws, which was approved by the shareholders at an Extraordinary General Meeting on 18 December 2014. LTIP is intended to allow the Company to award the grant of new shares to be vested to selected employees for the attainment of identified performance objectives.

(a) The main features of the LTIP

The LTIP comprises a Restricted Share Grant ('RS Grant') and a Performance Share Grant ('PS Grant'). The main difference in the features of the RS Grant and the PS Grant is the eligibility of the selected employees in terms of their job grades in the Group and the performance targets and/or performance conditions to be met prior to the offer and vesting of the grant to the selected employees.

The details of the grant are as follows:

(i) RS Grant

The RS Grant is a restricted share grant for all eligible employees selected on a basis designated by the LTIP Committee. The RS Grant will be awarded annually to the selected employees to be vested over a period of 3 years on a pro-rata basis and after fulfilment of individual performance targets based on the Group's performance management system (such as individual performance rating) and certain performance conditions (such as financial targets) as determined by the LTIP Committee from time to time at its discretion in accordance with the terms and conditions of the LTIP.

(ii) PS Grant

The PS Grant is a performance share grant for senior executives of the Group and the Executive Director as well as key employees of the Group selected on a basis designated by the LTIP Committee. The PS Grant will be awarded annually to the selected employees to be vested at the end of the 3-year period and after fulfilment of certain performance targets and/or conditions at the time of grant and vesting, which may include, among other factors, total shareholders' return and the long term financial performance targets/ratios of the Group as determined by the LTIP Committee from time to time at its discretion in accordance with the terms and conditions of the LTIP. At the point of vesting, the final award of the PS Grant is based on a multiple of the initial grant whereby the multiple is determined according to the performance targets and/or conditions. In the event the performance targets and/or conditions are not met by the selected employees, the grant will not be vested to them at the end of the performance period.

The new ordinary shares to be allotted and issued upon the vesting of the ordinary shares pursuant to the RS Grant and PS Grant will not be subjected to any retention period or restriction on transfer.

In implementing the LTIP, the grant will be satisfied by way of allotment and issuance of new ordinary shares to the respective RS and PS grantees upon vesting of the grant.

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**34 STAFF COST (CONTINUED)****Long Term Incentive Plan ('LTIP') (continued)**

## (a) The main features of the LTIP (continued)

## (ii) PS Grant (continued)

The LTIP Committee shall decide from time to time at its discretion to determine or vary the terms and conditions of the offer, such as the eligibility criteria and allocation in each grant, the timing and frequency of the award of the grant, the performance targets and/or performance conditions to be met prior to the offer and vesting of the grant and the vesting period.

## (b) Maximum number of new ordinary shares available under the LTIP

The maximum number of new ordinary shares which may be made available under the LTIP and/or allotted and issued upon vesting of the new ordinary shares under the LTIP shall not be more than 10.0% of the issued and paid-up ordinary share capital of the Company (excluding treasury shares) at any point in time during the duration of the LTIP.

## (c) Basis of allocation and maximum allowable allotment

The total number of new ordinary shares that may be offered to any one of the selected employees and/or to be vested in any one of the grantees under the LTIP at any time shall be at the discretion of the LTIP Committee (subject to the by-laws and any applicable law).

## (d) Eligibility

Employees of the Group and of the Company (including the Executive Director) who meet the following criteria as at the date of offer shall be eligible to be considered as an eligible employee to participate in the LTIP:

- (i) Has attained the age of 18 years;
- (ii) Has entered into a full-time or fixed-term contract of employment with, and is on the payroll of any company within the Group and has not served a notice of resignation or received a notice of termination;
- (iii) Whose service/employment has been confirmed in writing;
- (iv) Is not a non-executive or independent director of the Company; and
- (v) Has fulfilled any other eligibility criteria which has been determined by the LTIP Committee at its discretion from time to time, as the case may be.

The LTIP Committee may determine any other eligibility criteria for the purpose of selecting an eligible employee at any time and from time to time, at its discretion.

## (e) Ranking of the new ordinary shares

The new ordinary shares to be allotted and issued pursuant to the LTIP shall, upon allotment and issuance, rank equally in all respects with the then existing issued ordinary shares.

The new ordinary shares to be allotted and issued pursuant to the vesting of the grant under the LTIP shall not be entitled to any dividends, rights, allotments and/or any other distributions, for which the entitlement date is prior to the date on which the new ordinary shares are credited into the Central Depository System ('CDS') accounts of the respective grantees upon vesting of the grant under the LTIP.

## (f) Alteration of share capital and adjustment

If the LTIP Committee so decides (but not otherwise), in the event of any alteration in the capital structure of the Company during the duration of LTIP, which expires on 29 April 2025, such corresponding alterations (if any) may be made to the LTIP in:

- (i) The number of unvested new ordinary shares comprised in a grant; and/or
- (ii) The method and/or manner in the vesting of the new ordinary shares comprised in a grant.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 34 STAFF COST (CONTINUED)

#### Short Term Employee Benefits

Wages, salaries, paid annual leave, bonuses, and non-monetary benefits that are expected to be settled wholly within 12 months after the end of the period in which the employees render the related services are recognised in respect of employees' services up to the end of the reporting period and are measured at the amounts expected to be paid when the liabilities are settled.

#### Long Term Incentive Plan ('LTIP')

The movement in the total number of share grants during the financial year is as follows:

	At 1.1.2022 '000	Granted '000	Forfeited '000	Vested '000	At 31.12.2022 '000
<b>2022</b>					
<b>Group</b>					
<u>LTIP 5</u>					
RS Grant	6,249.8	0	(363.2)	(5,886.6)	0
PS Grant	1,883.1	0	(1,883.1)	0	0
<u>LTIP 5 Special Grant</u>					
RS Grant	12.2	0	0	(12.2)	0
PS Grant	83.4	0	(83.4)	0	0
<u>LTIP 6</u>					
RS Grant	17,526.5	0	(1,031.9)	(8,767.9)	7,726.7
PS Grant	2,627.6	0	(474.7)	0	2,152.9
<u>LTIP 7</u>					
RS Grant	36,488.3	0	(2,153.6)	(12,319.3)	22,015.4
PS Grant	3,461.8	0	(628.9)	0	2,832.9
<u>LTIP 8</u>					
RS Grant	0	48,363.7	(1,237.4)	0	47,126.3
PS Grant	0	4,763.9	(393.7)	0	4,370.2
<b>Company</b>					
<u>LTIP 5</u>					
RS Grant	4,170.3	0	(181.7)	(3,988.6)	0
PS Grant	1,348.2	0	(1,348.2)	0	0
<u>LTIP 5 Special Grant</u>					
RS Grant	12.2	0	0	(12.2)	0
PS Grant	83.4	0	(83.4)	0	0
<u>LTIP 6</u>					
RS Grant	11,971.0	0	(612.1)	(6,126.4)	5,232.5
PS Grant	1,971.1	0	(415.6)	0	1,555.5
<u>LTIP 7</u>					
RS Grant	25,159.1	0	(1,488.5)	(8,604.8)	15,065.8
PS Grant	2,530.4	0	(508.8)	0	2,021.6
<u>LTIP 8</u>					
RS Grant	0	32,882.8	(962.4)	0	31,920.4
PS Grant	0	3,386.7	(339.2)	0	3,047.5

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**34 STAFF COST (CONTINUED)***Long Term Incentive Plan ('LTIP') (continued)*

The movement in the total number of share grants during the financial year is as follows: (continued)

	At 1.1.2021 '000	Granted '000	Forfeited '000	Vested '000	At 31.12.2021 '000
<b>2021</b>					
<b>Group</b>					
<u>LTIP 4</u>					
RS Grant	4,269.4	0	(411.1)	(3,858.3)	0
PS Grant	1,384.0	0	(1,384.0)	0	0
<u>LTIP 5</u>					
RS Grant	14,773.2	0	(981.1)	(7,542.3)	6,249.8
PS Grant	2,259.0	0	(375.9)	0	1,883.1
<u>LTIP 5 Special Grant</u>					
RS Grant	24.4	0	0	(12.2)	12.2
PS Grant	83.4	0	0	0	83.4
<u>LTIP 6</u>					
RS Grant	29,192.0	0	(1,640.8)	(10,024.7)	17,526.5
PS Grant	3,130.4	0	(502.8)	0	2,627.6
<u>LTIP 7</u>					
RS Grant	0	37,633.7	(1,145.4)	0	36,488.3
PS Grant	0	3,734.4	(272.6)	0	3,461.8
<b>Company</b>					
<u>LTIP 4</u>					
RS Grant	2,659.3	0	(145.9)	(2,513.4)	0
PS Grant	944.9	0	(944.9)	0	0
<u>LTIP 5</u>					
RS Grant	9,992.4	0	(492.7)	(5,329.4)	4,170.3
PS Grant	1,607.4	0	(259.2)	0	1,348.2
<u>LTIP 5 Special Grant</u>					
RS Grant	24.4	0	0	(12.2)	12.2
PS Grant	83.4	0	0	0	83.4
<u>LTIP 6</u>					
RS Grant	19,895.3	0	(845.6)	(7,078.7)	11,971.0
PS Grant	2,321.4	0	(350.3)	0	1,971.1
<u>LTIP 7</u>					
RS Grant	0	25,930.5	(771.4)	0	25,159.1
PS Grant	0	2,737.7	(207.3)	0	2,530.4

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 34 STAFF COST (CONTINUED)

#### Long Term Incentive Plan ('LTIP') (continued)

The fair value of the share granted is estimated using the Monte Carlo Simulation Model with the following inputs:

	Group and Company					
	LTIP 4		LTIP 5		LTIP 5 (Special Grant)	
	RS Grant	PS Grant	RS Grant	PS Grant	RS Grant	PS Grant
Fair value at grant date	RM13.96 - RM15.21	RM12.60^	RM11.24 - RM12.18	RM10.20^	RM10.00 - RM11.62	RM9.49^
Share price at grant date	RM15.92	RM15.92	RM12.28	RM12.28	RM11.64	RM11.64
Expected volatility*	13.3%	13.3%	14.3%	14.3%	19.3%	19.3%
Expected dividend yield	4.4%	4.4%	4.1%	4.1%	8.6%	8.6%
Risk-free interest rate**	3.4%	3.5%	3.4%	3.4%	2.2%	2.4%
Grant date	18 April 2018	18 April 2018	30 April 2019	30 April 2019	6 July 2020	6 July 2020
Vesting date		30 April 2021		30 April 2022		30 April 2022
- Tranche 1	30 April 2019	N/A	5 June 2020	N/A	13 July 2020	N/A
- Tranche 2	5 June 2020	N/A	27 May 2021	N/A	27 May 2021	N/A
- Tranche 3	27 May 2021	N/A	18 July 2022	N/A	18 July 2022	N/A
Group and Company						
	LTIP 6		LTIP 7		LTIP 8	
	RS Grant	PS Grant	RS Grant	PS Grant	RS Grant	PS Grant
	RM10.08 - RM10.99	RM9.08^	RM8.78 - RM9.60	RM7.90^	RM6.88 - RM7.55	RM6.46^
Fair value at grant date						
Share price at grant date	RM11.34	RM11.34	RM9.93	RM9.93	RM7.93	RM7.93
Expected volatility*	19.5%	19.5%	22.5%	22.5%	21.0%	21.0%
Expected dividend yield	4.5%	4.5%	4.0%	4.0%	5.3%	5.3%
Risk-free interest rate**	1.7%	2.1%	2.1%	2.6%	3.2%	3.5%
Grant date	27 July 2020	27 July 2020	25 May 2021	25 May 2021	20 July 2022	20 July 2022
Vesting date		28 April 2023		25 June 2024		30 April 2025
- Tranche 1	27 May 2021	N/A	18 July 2022	N/A	30 June 2023	N/A
- Tranche 2	18 July 2022	N/A	28 April 2023	N/A	28 June 2024	N/A
- Tranche 3	28 April 2023	N/A	30 April 2024	N/A	30 April 2025	N/A

<sup>^</sup> Market considerations have been included in the consideration of fair value.

\* Expected volatility is based on TNB's 3-year average daily historical volatility.

\*\* Risk-free interest is based on Malaysian Government Securities yield.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 35 OTHER OPERATING INCOME

**Accounting Policy**

Other operating income are the non-core revenue received for sales of goods and services rendered by the Group and the Company. Leasing income is accrued, unless collectability is in doubt. Dividend income is recognised when the shareholders' rights to receive payment is established. Interest on late payments is the 1.0% late payment interest charge imposed if payment of electricity bill is made later than 30 days after the bill date in accordance with the Licensee Supply Regulations 1990. Accounting policy on gain on disposals of PPE are disclosed in Note 5. All others are recognised upon completion of the rendering of services or sales of goods not in the ordinary course of the Group's and of the Company's business.

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Dividend income from:				
- Quoted shares	1.7	1.8	1.6	1.7
- Unquoted shares	0.7	0.6	0.7	0.6
- Subsidiaries	0	0	102.1	2.4
- Associates	0	0	52.0	46.1
Leasing income	36.8	42.7	58.8	56.4
Release of Government development grants (Note 27)	63.4	62.8	0	0
Gain/(Loss) on disposals of PPE	35.6	(2.4)	8.3	(2.4)
Gain on disposals of ROU	7.5	4.1	7.5	4.1
Interest on late payments	302.1	230.0	292.3	207.8
Sundry receipts	74.0	70.2	117.9	135.5
Theft of electricity	168.2	113.0	168.2	107.6
Liquidated damages	31.4	57.1	6.5	23.5
Wheeling charges	20.2	0	20.2	0
Gain/(Loss) on disposals of subsidiaries	0	25.1	0	(29.3)
Insurance recoveries	28.4	74.2	9.4	1.6
Other income	170.0	238.9	209.3	208.3
	940.0	918.1	1,054.8	763.9

*Other income comprises primarily income from sales of scrap and rechargeable works.*

## 36 FOREIGN EXCHANGE LOSS

**Accounting Policy**

## (a) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the 'functional currency'). The financial statements are presented in Ringgit Malaysia ('RM'), which is the Company's functional and presentation currency.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 36 FOREIGN EXCHANGE LOSS (CONTINUED)

#### Accounting Policy (continued)

##### (b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are remeasured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the statement of profit or loss. However, exchange differences are deferred in OCI when they are attributable to items that form part of the net investment in a foreign operation.

##### (c) Group companies

The results and financial positions of the Group's entities that have functional currencies which are different from the presentation currency are translated into the presentation currency as follows:

- (i) Assets and liabilities for each statement of financial position presented are translated at the closing rate at the date of that statement of financial position;
- (ii) Income and expenses for each statement of profit or loss and OCI are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the rate on the dates of the transactions); and
- (iii) All resulting exchange differences are recognised as a separate component of equity.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate. Exchange differences arising on these items are recognised in OCI.

On consolidation, exchange differences arising from the translation of the net investment in foreign operations are taken to shareholders' equity.

On the disposal of a foreign operation (that is, a disposal of the Group's entire interest in a foreign operation, or a disposal involving loss of control over a subsidiary that includes a foreign operation, a disposal involving loss of joint control over a joint venture that includes a foreign operation, or a disposal involving loss of significant influence over an associate that includes a foreign operation), the cumulative amount of the exchange differences relating to that foreign operation recognised in OCI, and accumulated in the separate component of equity, are reclassified from equity to statement of profit or loss, as part of the gain or loss on disposal.

In the case of a partial disposal that does not result in the Group losing control over a subsidiary that includes a foreign operation, the proportionate share of accumulated exchange differences recognised in OCI are re-attributed to NCI in that foreign operation, and are not recognised in the statement of profit or loss. For all other partial disposals (that is, reductions in the Group's ownership interest in associates or joint ventures that do not result in the Group losing significant influence or joint control) the proportionate share of the accumulated exchange difference is reclassified to statement of profit or loss.

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Foreign exchange loss comprises:				
Translation loss – foreign term loans	(280.5)	(127.5)	(280.5)	(127.5)
Translation gain/(loss) – others	31.0	60.1	(46.3)	108.9
Total foreign exchange translation loss	(249.5)	(67.4)	(326.8)	(18.6)
Transaction loss – foreign term loans	(0.6)	(14.9)	(0.6)	(14.9)
Transaction gain/(loss) – others	26.6	(86.2)	(0.8)	(13.4)
	(223.5)	(168.5)	(328.2)	(46.9)

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 37 FINANCE INCOME/COST AND FAIR VALUE CHANGES OF FINANCIAL INSTRUMENTS

**Accounting Policy**

Finance income are interests received from investments or financial instruments.

Investment income earned on the temporary investment of specific borrowing pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

Finance income is calculated by applying the effective interest method to the gross carrying amount of a financial asset except for financial assets that subsequently become credit impaired. For credit impaired financial assets the effective interest rate is applied to the net carrying amount of the financial assets (after deduction of the loss allowances).

The accounting policy on fair value changes are as per disclosed in Note 45.

General and specific borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are capitalised during the period of time that is required to complete and prepare the asset for its intended use. Qualifying assets are assets that necessarily takes substantial period of time to get ready for their intended use. Other borrowing costs are expensed in the period in which they are incurred.

Accounting policy on finance charges for lease liabilities and government grants are disclosed in Notes 15 and Note 27, respectively.

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
(a) Finance income:				
Interest from subsidiaries	0	0	248.6	269.3
Interest from deposits, staff loans and associates	279.8	224.2	172.3	124.8
Less: Reduction of borrowing costs capitalised into PPE	(2.1)	(2.4)	0	0
	277.7	221.8	420.9	394.1
(b) Finance cost:				
Finance cost on:				
- Borrowings (Note 26)	2,692.5	2,452.7	1,247.8	1,005.0
- Lease liabilities (Note 15)	1,756.4	1,460.1	4,239.3	4,047.8
- Consumer deposits	183.8	170.3	175.1	161.8
- Others	24.1	12.4	52.8	14.8
Release of government grants (Note 27)	(24.8)	(25.4)	0	0
Less: Amount capitalised into PPE	(288.6)	(276.8)	(263.6)	(249.4)
	4,343.4	3,793.3	5,451.4	4,980.0
(c) Fair value changes of financial instruments:				
Gain/(Loss) on changes in fair value of financial assets	83.9	191.3	(12.6)	(3.5)
Gain/(Loss) on changes in fair value of financial liabilities	46.8	10.5	(2.6)	1.0
	130.7	201.8	(15.2)	(2.5)

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 38 TAXATION AND ZAKAT

#### Accounting Policy

##### (a) Income tax

Current tax expense is determined by the expected income taxes payable in respect of the taxable profit for the financial year and is measured using the applicable tax rates according to the tax laws enacted or substantively enacted at the end of the reporting period in the countries in which the Company and its subsidiaries operate and generate the taxable profits.

Management periodically evaluates the positions taken in its tax returns with respect to situations in which applicable tax regulations are subject to interpretation. Provisions are established where appropriate on the basis of amounts expected to be paid to the tax authorities.

Tax is recognised in the statement of profit or loss except to the extent that it relates to items recognised directly in OCI. In this case, the item is recognised in OCI, net of tax.

The Group and the Company recognise non-current tax recoverable on an undiscounted basis.

##### (b) Zakat

The Group and the Company recognise its obligation towards the payment of zakat on business income in the statement of profit or loss. Zakat payment is an obligation and is accrued based on 2.5% of profit before tax and determined according to the percentage of Muslim shareholding in the Company.

The taxation and zakat for the Group and the Company comprise:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Current tax:				
- Malaysian corporate income tax	<b>1,434.5</b>	1,011.2	<b>641.8</b>	433.3
Deferred tax (Note 12)	<b>322.2</b>	(162.5)	<b>218.9</b>	(102.4)
Tax expense	<b>1,756.7</b>	848.7	<b>860.7</b>	330.9
Zakat	<b>34.5</b>	24.9	<b>33.4</b>	17.8
	<b>1,791.2</b>	873.6	<b>894.1</b>	348.7
The analysis of the tax expense is as follows:				
Current tax:				
- Current financial year	<b>1,469.2</b>	1,040.8	<b>674.2</b>	502.8
- Over accrual in prior financial years	<b>(34.7)</b>	(29.6)	<b>(32.4)</b>	(69.5)
	<b>1,434.5</b>	1,011.2	<b>641.8</b>	433.3
Deferred tax:				
- Origination and reversal of temporary differences (Note 12)	<b>322.2</b>	(162.5)	<b>218.9</b>	(102.4)
	<b>1,756.7</b>	848.7	<b>860.7</b>	330.9

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 38 TAXATION AND ZAKAT (CONTINUED)

The explanation of the relationship between tax expense and profit before taxation and zakat is as follows:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Profit before taxation and zakat	5,348.6	4,738.3	3,319.9	2,334.0
Tax calculated at the Malaysian corporate income tax rate of 24% (2021: 24%)	1,283.7	1,137.2	796.8	560.2
Tax effects of:				
- Share of results of associates and joint ventures	(23.4)	(46.4)	0	0
- Income not subject to tax	(308.1)	(297.8)	(238.4)	(136.8)
- Expenses not deductible for tax purposes	1,185.7	1,047.9	784.3	536.5
- Expenses qualifying for double deduction	(15.2)	(14.3)	(14.8)	(9.3)
- Current financial year unrecognised temporary differences and unused tax losses	2.5	0	0	0
- Foreign jurisdictions	1.4	0	0	0
Over accrual of tax in prior financial years	(34.7)	(29.6)	(32.4)	(69.5)
Recognition and utilisation of previously unrecognised temporary differences	(63.8)	(377.9)	0	20.2
Zakat	34.5	24.9	33.4	17.8
Real Property Gains Tax	0	0.2	0	0.2
Utilisation of reinvestment allowance*	(612.2)	(570.6)	(612.2)	(570.6)
Prosperity Tax#	340.8	0	177.4	0
Tax and zakat charge	1,791.2	873.6	894.1	348.7
Average effective tax rate (%)	33.5	18.4	26.9	14.9

\* The reinvestment allowance incentive was enacted by the Government through the Finance Act 2020 for YA 2020 to YA 2022 and subsequently extended to YA 2024 under the Finance Act 2021.

# Prosperity Tax is a one-off tax imposed by the Government for Year Assessment 2022 pursuant to Finance Act 2021.

The tax charge relating to components of OCI is as follows:

	2022			2021		
	Before tax RM'million	Tax charged RM'million	After tax RM'million	Before tax RM'million	Tax charged RM'million	After tax RM'million
<b>Group</b>						
Defined benefit plan actuarial gain/(loss) (Note 24)	727.1	(73.7)	653.4	1,282.4	(293.3)	989.1
Foreign currency translation differences	(222.3)	0	(222.3)	384.9	0	384.9
Financial assets at FVOCI	7.9	0	7.9	5.2	0	5.2
Share of OCI of associates accounted for using the equity method	(55.2)	0	(55.2)	17.5	0	17.5
	457.5	(73.7)	383.8	1,690.0	(293.3)	1,396.7
<b>Company</b>						
Defined benefit plan actuarial gain/(loss) (Note 24)	650.5	(156.1)	494.4	1,222.0	(293.3)	928.7
Financial assets at FVOCI	7.9	0	7.9	5.2	0	5.2
	658.4	(156.1)	502.3	1,227.2	(293.3)	933.9

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 39 EARNINGS PER SHARE ('EPS')

#### (a) Basic earnings per share

Basic earnings per share is calculated by dividing the profit attributable to owners of the Company for the financial year by the weighted average number of ordinary shares issued during the financial year.

	Group	
	2022	2021
Profit attributable to owners of the Company (RM'million)	3,463.3	3,661.8
Weighted average number of ordinary shares in issue ('000)	5,738,438	5,717,516
Basic earnings per share (sen)	60.35	64.05

#### (b) Diluted earnings per share

For the purpose of calculating diluted earnings per share, the profit attributable to owners of the Company for the financial year and the weighted average number of ordinary shares issued during the financial year has been adjusted for the dilutive effects of all potential ordinary shares such as the LTIP granted to employees.

	Group	
	2022	2021
Profit attributable to owners of the Company (RM'million)	3,463.3	3,661.8
Weighted average number of ordinary shares in issue ('000)	5,738,438	5,717,516
Adjustment for LTIP ('000)	35,837	28,592
Weighted average number of ordinary shares for diluted earnings per share ('000)	5,774,275	5,746,108
Diluted earnings per share (sen)	59.98	63.73

### 40 DIVIDENDS

	Group and Company	
	2022 RM'million	2021 RM'million
Interim single tier dividend for the financial year 2022 of 20.0 sen per share on 5,753,077,371 ordinary shares (2021: interim single tier dividend of 22.0 sen per share on 5,726,091,371 ordinary shares)	1,150.6	1,259.7
Approved final single tier dividend for the financial year 2022 of 26.0 sen per share on 5,753,077,371 ordinary shares (2021: final single tier dividend of 18.0 sen per share on 5,726,091,371 ordinary shares)	1,495.8	1,030.7
	2,646.4	2,290.4

Interim dividends are paid and accounted for in shareholders' equity as an appropriation of retained profits in the financial year.

The Directors have approved a final single tier dividend of 26.0 sen per share on 5,753,077,371 ordinary shares in respect of the financial year ended 31 December 2022 amounting to a total of RM1,495.8 million. The dividends will be paid on 14 April 2023.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 41 COMMITMENTS

- (a) Capital commitments for 5 years

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Authorised capital expenditure not provided in the financial statements:				
Property, plant and equipment				
- Contracted	604.1	642.8	289.9	258.4
- Not contracted	57,417.0	53,628.5	40,273.6	40,618.2
	58,021.1	54,271.3	40,563.5	40,876.6

- (b) Operating lease commitments - as lessor

The Group and the Company lease out its PPE under non-cancellable operating leases. The lessees are required to pay absolute fixed lease payments during the lease period. Total future minimum lease receivables under non-cancellable operating leases contracted for at the reporting date but not recognised as receivables, are as follows:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Receivable not later than 1 year	23.6	23.5	63.6	61.2
Receivable later than 1 year and not later than 2 years	1.1	0.9	16.5	33.9
Receivable later than 2 years and not later than 3 years	0.4	0.7	15.0	21.1
Receivable later than 3 years and not later than 4 years	0.4	0.3	15.0	21.1
Receivable later than 4 years and not later than 5 years	0.4	0.3	14.9	21.1
Receivable more than 5 years	2.5	0.3	51.9	112.6
	28.4	26.0	176.9	271.0

## 42 CONTINGENT LIABILITIES

## Accounting Policy

The Group and the Company do not recognise contingent assets and liabilities other than those arising from business combinations, but disclose its existence in the financial statements. A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Group and of the Company or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in the extremely rare case where there is a liability that cannot be recognised because it cannot be measured reliably. However, contingent liabilities do not include financial guarantee contracts. A contingent asset is a possible asset that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Group and of the Company. The Group and the Company do not recognise contingent assets but disclose its existence where inflows of economic benefits are probable, but not certain.

Determination of the treatment of contingent liabilities is based on the Group's and the Company's view of the expected outcome of the contingencies after consulting legal counsel for litigation cases and internal and external experts to the Group and the Company for matters in the ordinary course of business.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 42 CONTINGENT LIABILITIES (CONTINUED)

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Claims by third parties:				
- Contractors	<b>154.7</b>	138.1	<b>154.7</b>	138.1
- Customers	<b>13.9</b>	13.9	<b>13.9</b>	13.9
- Others	<b>173.7</b>	271.8	<b>9.2</b>	107.3
	<b>342.3</b>	423.8	<b>177.8</b>	259.3
Trade guarantees and performance bonds	<b>51.0</b>	54.4	<b>0</b>	0
	<b>393.3</b>	478.2	<b>177.8</b>	259.3

All third party claims are being resolved and the Directors are of the opinion that their outcomes will not have a material adverse effect on the financial positions of both the Group and the Company.

Claims by third parties include claims by contractors, consumers and former employees. These claims are being addressed and the Directors are of the opinion that their ultimate resolution will not have a material effect on the financial position of the Group.

On 7 December 2016, the Company and the IRB entered into a consent judgement before the Kuala Lumpur High Court to substitute the judicial review proceedings with regard to the notices of additional assessment dated 23 November 2015 for the YAs 2013 and 2014 amounting to RM2,068.2 million ('Notices') arising from the disallowance of the Company's RIA claims by filing an appeal to the SCIT.

The consent judgement also provides that the IRB will not commence any proceedings relating to the Notices until this matter is determined by the SCIT and by the High Court, if there is a subsequent appeal by either party. On 15 December 2016, the Company filed notices of appeal against the Notices to the SCIT according to Section 99(1) of the Income Tax Act 1967. The appeals have since been registered before the SCIT.

Meanwhile, for the notices of additional assessment issued for the YAs 2015, 2016 and 2017, on 30 December 2020 amounting to RM3,977.9 million ('Notices'), both the Company and IRB have recorded a consent order. Pursuant to the consent order, the Court has granted a stay of proceedings against the enforcement of the IRB's notice of additional assessment until the disposal of the judicial review application. Subsequently, the High Court has fixed a new hearing date on 22 May 2023.

With regards to the notice of additional assessment for the YA 2018, on 21 January 2021 amounting to RM1,812.5 million, both the Company and IRB have recorded a consent order. Pursuant to the consent order, the High Court has granted a stay of proceedings against the enforcement of the IRB's notice of additional assessment. Subsequently on 13 January 2022, the High Court heard the Company's judicial review application and on 8 February 2022, the High Court had allowed with cost, the Company's judicial review application to set aside the IRB's notice of additional assessment dated 13 July 2020 for YA 2018. The High Court agreed with the Company's submission that the Company is in the business of manufacturing electricity and as such, the Company is entitled to claim RA on the capital expenditure which was incurred in YA 2018 in the course of expanding, modernising and automating the Company's business. Consequently, on 8 February 2022, the IRB had filed a notice of appeal before the Court of Appeal against the decision of the High Court. Subsequent to the case management on 7 March 2023, the Court of Appeal has vacated the hearing date which was initially fixed on 21 March 2023 and fixed a new hearing date on 19 September 2023.

The Company has obtained legal advice from its tax solicitors on the merits of the cases mentioned above and on this basis the Directors are of the opinion that no provision is required in the financial statements for the potential tax liability up to the reporting date.

On 29 October 2021, the IRB had disallowed the interest expenses incurred by Kapar Energy Ventures Sdn Bhd's ('KEV') in relation to the Redeemable Unsecured Loan Stock granted to KEV by the Company and Malakoff Corporation Berhad under Section 33(1)(a) of the Income Tax Act 1967 and KEV's revision of revenue for the YAs 2004 to 2009. As a result thereof, the IRB had issued notices of assessment ('Notices') for the YAs 2011, 2012 and 2014 and notices of additional assessment for the YAs 2013, 2015, 2016, 2017 and 2018 amounting in aggregate to RM595.9 million.

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**42 CONTINGENT LIABILITIES (CONTINUED)**

On 16 November 2021, KEV had commenced a judicial review against the Minister of Finance at the High Court to challenge the matters arising from the said Notices. The High Court fixed the hearing of the application for leave for judicial review on 10 February 2022. Due to the request of the Attorney General Chamber to vacate the hearing for leave for judicial review on 10 February 2022, the High Court proceeded to fix the hearing for leave for judicial review on 27 June 2022. The High Court has granted an extension of the interim stay on the enforcement of the Notices until 27 June 2022.

In view of the ongoing out-of-court settlement negotiations between IRB and KEV, the High Court had successively vacated the hearing for KEV's application of leave for judicial review scheduled on 27 June 2022, 18 August 2022, 13 September 2022, 24 November 2022, 3 January 2023 and 15 March 2023. The High Court has fixed a new date for the case management on 13 April 2023 for the parties to update the Court on the status of the settlement. Correspondingly, the High Court has granted an extension of the interim stay on the enforcement of the Notices until 13 April 2023.

Based on the legal advice obtained from its tax solicitors, KEV is of the view that it has a good basis in law to contend that the said Notices were incorrectly raised by the IRB and further taking into consideration that the matter is in the finalisation stage, no provision is required in the financial statements for the potential tax liability up to the reporting date.

Notwithstanding the two tax litigation matters above, the Company continued to claim the RIA for YAs 2020, 2021 and 2022 whilst KEV continued to claim tax deductions for YAs 2019, 2020, 2021 and 2022 as permitted by the law.

**43 SIGNIFICANT RELATED PARTY DISCLOSURES**

For the purposes of these financial statements, parties are considered to be related to the Group or the Company if the Group or the Company has the ability, directly or indirectly, to control the party or exercise significant influence over the party in making financial and operating decisions, or vice versa, or where the Group or the Company and the party are subject to common control or common significant influence.

The related parties of the Group and of the Company are:

- (a) Subsidiary companies

Details of the subsidiary companies are shown in Note 7.

- (b) Associate companies

Associate companies are those entities in which the Group has significant influence but not control as disclosed in Note 9.

- (c) Key Management Personnel ('KMP')

KMP are defined as those persons having authority and responsibility for planning, directing and controlling the activities of the Group and of the Company either directly or indirectly. The KMP of the Group or of the Company includes Executive Directors and Non-Executive Directors of the Company and certain members of senior management of the Company.

Whenever exist, related party transactions also include transactions with entities that are controlled, jointly controlled or significantly influenced directly or indirectly by any KMP or their close family members.

- (d) Government-related entities

Government-linked corporations are related to the Group and the Company by virtue of the substantial shareholdings of Khazanah Nasional Berhad ('KNB'), with 25.3% (2021: 25.4%) equity interest. KNB is a wholly-owned entity of MoF Incorporated which is in turn owned by the Ministry of Finance. KNB and entities directly controlled by the Government are collectively referred to as government-related entities to the Group and the Company.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 43 SIGNIFICANT RELATED PARTY DISCLOSURES (CONTINUED)

#### (d) Government-related entities (continued)

The Government and bodies controlled or jointly controlled by the Government of Malaysia are related parties of the Group and of the Company. The Group and the Company enter into transactions with many of these bodies, which include but are not limited to purchasing of goods, including use of public utilities and amenities, and the placing of bank deposits.

All the transactions entered into by the Group and the Company with the government-related entities are conducted in the ordinary course of the Group's and of the Company's businesses on negotiated terms or terms comparable to those with other entities that are not government-related, except otherwise disclosed elsewhere in the financial statements.

The Group and the Company are principally involved in the provision of electricity as part of their ordinary operations. These services are carried out generally on commercial terms that are consistently applied to all customers. These transactions have been established on terms and conditions that are not materially different from those obtainable in transactions with unrelated parties.

Apart from the individually significant transactions and balances as disclosed elsewhere in the financial statements, the Group and the Company have collectively, but not individually significant transactions with related parties.

In addition to the transactions detailed elsewhere in the financial statements, the Group and the Company had the following significant transactions with the following related parties based on agreed terms during the financial year:

	Associate companies		KMP	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<b>Group</b>				
<u>Income:</u>				
- Sales of electricity	1.3	1.2	0	0
- Interest income	51.2	35.2	0	0
- Dividend income	120.1	66.5	0	0
- Leasing income	19.1	25.6	0	0
<u>Expenses:</u>				
- Purchase of electricity	5,521.1	3,379.4	0	0
- Finance cost on lease liabilities	262.8	310.5	0	0
- Key management compensations:				
- Salaries, allowances and bonuses	0	0	25.4	22.6
- Benefits-in-kind	0	0	0.4	0.9
- Defined contribution retirement plan	0	0	3.6	2.9
- Other staff benefits	0	0	2.2	0.2
- LTIP expense	0	0	5.6	4.9
- Leasing expense	0.2	0.2	0	0
Amounts due from	659.1	342.7		
Amounts due to	(777.6)	(183.8)		
Investment in unquoted debt security	253.4	250.1		
Lease liabilities	(6,057.7)	(7,187.2)		

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**43 SIGNIFICANT RELATED PARTY DISCLOSURES (CONTINUED)**

In addition to the transactions detailed elsewhere in the financial statements, the Group and the Company had the following significant transactions with the following related parties based on agreed terms during the financial year: (continued)

	Subsidiary companies		Associate companies		KMP	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
<b>Company</b>						
<u>Income:</u>						
- Sales of electricity	<b>37.3</b>	30.1	<b>1.3</b>	1.2	<b>0</b>	0
- Interest income	<b>248.6</b>	269.3	<b>51.2</b>	35.2	<b>0</b>	0
- Dividend income	<b>102.1</b>	2.4	<b>52.0</b>	46.1	<b>0</b>	0
- Leasing income	<b>28.8</b>	19.1	<b>19.1</b>	25.6	<b>0</b>	0
<u>Expenses:</u>						
- Purchase of electricity	<b>23,478.2</b>	14,888.4	<b>5,521.1</b>	3,379.4	<b>0</b>	0
- Training fees	<b>9.4</b>	2.3	<b>0</b>	0	<b>0</b>	0
- Finance cost on lease liabilities	<b>2,377.7</b>	2,863.2	<b>262.8</b>	310.5	<b>0</b>	0
- Key management compensations:						
- Salaries, allowances and bonuses	<b>0</b>	0	<b>0</b>	0	<b>25.4</b>	22.5
- Benefits-in-kind	<b>0</b>	0	<b>0</b>	0	<b>0.4</b>	0.9
- Defined contribution retirement plan	<b>0</b>	0	<b>0</b>	0	<b>3.6</b>	2.9
- Other staff benefits	<b>0</b>	0	<b>0</b>	0	<b>2.2</b>	0.2
- LTIP expenses	<b>0</b>	0	<b>0</b>	0	<b>5.6</b>	4.9
- Leasing expenses	<b>0</b>	0	<b>0.2</b>	0.2	<b>0</b>	0
Amounts due from	<b>10,016.9</b>	8,001.0	<b>5.6</b>	10.5		
Amounts due to	<b>(6,709.1)</b>	(4,136.3)	<b>(765.9)</b>	(173.7)		
Investment in unquoted debt security	<b>0</b>	0	<b>253.4</b>	250.1		
Lease liabilities	<b>(72,913.6)</b>	(77,055.8)	<b>(6,057.7)</b>	(7,187.2)		

**44 SEGMENTAL REPORTING**

Segmental reporting is not presented as the Group is principally engaged in the generation, transmission, distribution and sales of electricity and the provision of other related services, which are substantially within a single business segment and this is consistent with the current practice of internal reporting. The Group operates primarily in Malaysia.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS

#### Accounting Policy

Financial instruments comprise financial assets and financial liabilities as below:

##### Financial assets

###### (a) Classification

The Group and the Company classify its financial assets in the following categories: at amortised cost ('AC'), at FVOCI or FVTPL. The classification depends on the entity's business model for managing the financial assets and the contractual terms of the cash flows.

###### (i) Financial assets at AC:

- The asset is held within a business model whose objective is to collect the contractual cash flows; and
- The contractual terms give rise to cash flows that are solely payments of principal and interest.

###### (ii) Financial assets at FVOCI:

- Equity securities which are not held for trading, and which the Group and the Company have irrevocably elected at initial recognition to recognise in this category. These are strategic investments and the Group and the Company consider this classification to be more relevant; and
- Debt securities where the contractual cash flows are solely principal and interest and the objective of the Group's and of the Company's business model is achieved both by collecting cash flows and selling financial assets.

###### (iii) Financial assets at FVTPL:

- Debt instruments that do not qualify for measurement at either AC or FVOCI;
- Equity instruments that are held for trading; and
- Equity instruments for which the Group and the Company have not elected to recognise fair value gains and losses through OCI.

The Group and the Company reclassify debt instruments when and only when its business model for managing those assets changes.

###### (b) Recognition and derecognition

Regular purchases and sales of financial assets are recognised on the trade-date, the date on which the Group and the Company commit to purchase or sell the assets. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group and the Company have transferred substantially all the risks and rewards of ownership.

###### (c) Measurement

###### (i) Initial recognition

On initial recognition, the Group and the Company measure a financial asset at its fair value plus, in the case of a financial asset not at FVTPL, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVTPL are expensed in the statement of profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest.

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**45 FINANCIAL INSTRUMENTS (CONTINUED)****Accounting Policy (continued)**

Financial instruments comprise financial assets and financial liabilities as below: (continued)

Financial assets (continued)

## (c) Measurement (continued)

## (ii) Subsequent measurement

- Debt instruments

Subsequent measurement of debt instruments depends on the Group's and the Company's business model for managing the asset and the cash flow characteristics of the asset. There are three measurement categories into which the Group and the Company classify its debt instruments:

- AC: Interest income from financial assets at AC is included in finance income using the effective interest rate method. Any gain or loss arising on derecognition is recognised directly in the statement of profit or loss. Impairment losses are presented as a separate line item in the statement of profit or loss.
- FVOCI: Movements in the carrying amount of debt instruments classified under FVOCI are taken through OCI. Upon derecognition of the assets, the cumulative gain or loss previously recognised in OCI is reclassified to the statement of profit or loss. The interest income from these financial assets is included in the finance income using the effective interest rate method. The foreign exchange gains and losses and impairment expenses are presented as a separate line item in the statement of profit or loss.
- FVTPL: Financial assets that do not meet the criteria for AC or FVOCI are measured at FVTPL. A gain or loss on debt instruments which are measured at FVTPL are recognised in the statement of profit or loss.

- Equity instruments

The Group and the Company have elected to present fair value gains and losses on equity instruments in OCI. The fair value gains and losses of these instruments will not be reclassified subsequently to the statement of profit or loss. Dividends from such investments are recognised in the statement of profit or loss as other income. Impairment losses (and reversal of impairment losses) on equity instruments measured at FVOCI are also reported as other changes in fair value.

## (d) Impairment

The Group and the Company assess on a forward looking basis the expected credit losses associated with its debt instruments carried at AC and FVOCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

The Group and the Company have the following financial instruments that are subject to the ECL model:

- (i) Trade receivables
- (ii) Trade contract assets
- (iii) Non trade receivables:
  - intercompany balances
  - amounts due from associates/joint ventures
  - rechargeable job orders ('RJO') debtors
  - sundry deposits for rental spaces
  - rental receivables
  - staff loans/advances
  - investment in unquoted debt securities
- (iv) Financial guarantee contracts issued

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

#### Accounting Policy (continued)

Financial instruments comprise financial assets and financial liabilities as below: (continued)

##### Financial assets (continued)

###### (d) Impairment (continued)

While cash and cash equivalents are also subject to the impairment requirements of MFRS 9, the identified impairment loss is immaterial.

ECL represents a probability-weighted estimate of the difference between the present value of the cash flows according to the contract and present value of the cash flows the Group and the Company are expected to receive, over the remaining life of the financial instruments. For financial guarantee contracts, the ECL is the difference between the expected payments to be reimbursed to the holder of the guaranteed debt instrument less any amounts that the Company expects to receive from the holder, the debtor or any other party.

The measurement of ECL reflects:

- (i) An unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes;
- (ii) The time value of money; and
- (iii) Reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions.

For trade receivables, trade contract assets and lease receivables, the Group and the Company apply the MFRS 9 simplified approach, which requires expected lifetime losses to be recognised from initial recognition of the receivables, except for those which are in default or credit impaired are assessed individually.

For non trade receivables, at each reporting date the Group and the Company measure ECL through a loss allowance at an amount equal to 12 months ECL if credit risk on a financial instrument or a group of financial instruments has not increased significantly since initial recognition.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 45 FINANCIAL INSTRUMENTS (CONTINUED)

**Accounting Policy (continued)**

Financial instruments comprise financial assets and financial liabilities as below: (continued)

Financial assets (continued)

## (d) Impairment (continued)

The Group and the Company use the three-stage approach for non trade receivables which reflect their credit risks and how the loss allowances are determined for each of those stages. Summary of the assumptions underpinning the Group's and the Company's ECL model for non trade receivables are as follows:

<b>Types of non trade receivables</b>	<b>Stage 1 Low credit risk (12 months ECL Model)</b>	<b>Stage 2 Significant increase in credit risk (Lifetime ECL Model)</b>	<b>Stage 3 Credit impaired (Lifetime ECL Model)</b>
• Intercompany balances	Positive operating cash flows/ Net assets (Total Assets - Total Liabilities)/Subsidiaries with assets under construction having guaranteed long term revenue contract and agents	Negative operating cash flows and net liabilities (Total Assets - Total Liabilities)/without defaulting on loan repayments	Dormant/History of default
• Amounts due from associates/joint ventures/investment in unquoted debt security	Positive operating cash flows/ Net assets (Total Assets - Total Liabilities)	Negative operating cash flows and net liabilities (Total Assets - Total Liabilities)/No current default	History of default and currently defaulted
• RJO debtors	Covered by indent/downpayment/Letter of Undertaking ('LOU')	No indent/downpayment/LOU	Accident cases
• Sundry deposits for rental spaces	Active contracts	Inactive contracts and amounts outstanding less or equal to 12 months	Inactive contracts and amounts outstanding more than 12 months
• Rental receivables (net deposits)	Active contracts and amounts outstanding less or equal to 3 months	Active contracts and amounts outstanding more than 3 months	Inactive contracts
• Staff loans/advances	Current employees	Ex-employees with no default in payment	Ex-employees with default in payment

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECL, the Group and the Company consider reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Group's and the Company's historical experience and informed credit assessment including forward looking information, where available.

The gross carrying amount of a financial asset is written off (either partially or fully) to the extent that there is no realistic prospect of recovery. This is generally the case when either the Group or the Company determine that the debtor does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subjected to the write off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Group's and the Company's procedures for recovery of amounts due.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

#### **Accounting Policy (continued)**

Financial instruments comprise financial assets and financial liabilities as below: (continued)

##### Financial liabilities

The Group and the Company classify its financial liabilities at AC or at FVTPL.

##### Offsetting financial instruments

Financial assets and liabilities are offsetted and the net amounts are presented in the statement of financial position ('SOFP') when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis, or realise the asset and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy.

##### Financial guarantee contracts

Financial guarantee contracts are contracts that require the Group or the Company to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payments when due, in accordance with the terms of a debt instrument.

Financial guarantee contracts are recognised as a financial liability at the time the guarantee is issued. The liability is initially measured at fair value and subsequently at the higher of;

- (i) The amount determined in accordance with the ECL model; and
- (ii) The amount initially recognised less, where appropriate, the cumulative amount of income recognised in accordance with the principles of MFRS 15.

The fair value of financial guarantees is determined as the present value of the difference in net cash flows between the contractual payments under the debt instrument and the payments that would be required without the guarantee, or the estimated amount that would be payable to a third party for assuming the obligations.

Where guarantees in relation to loans or other payables of associates are provided for no compensation, the fair values are accounted for as contributions and recognised as part of the cost of the investment.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 45 FINANCIAL INSTRUMENTS (CONTINUED)

## (a) Categories of financial instruments

The financial instruments are categorised as follows:

- (i) Financial assets and financial liabilities at AC;
- (ii) Financial assets and financial liabilities at FVTPL; and
- (iii) Financial assets at FVOCI.

	Carrying amount RM'million	AC RM'million	FVTPL RM'million	FVOCI RM'million
<b>Financial assets</b>				
<b>2022</b>				
<b>Group</b>				
Investment in unquoted debt security	253.4	253.4	0	0
Long term receivables	39.6	39.6	0	0
Finance lease receivables	8.6	8.6	0	0
Derivative financial instruments	72.5	0	72.5	0
Financial assets at FVOCI	70.7	0	0	70.7
Trade receivables	3,967.7	3,967.7	0	0
Non trade receivables	18,437.1	18,437.1	0	0
Amounts due from joint ventures	44.6	44.6	0	0
Amounts due from associates	659.1	659.1	0	0
Financial assets at FVTPL	8,196.6	0	8,196.6	0
Deposits, bank and cash balances	4,893.4	4,893.4	0	0
	36,643.3	28,303.5	8,269.1	70.7
<b>Company</b>				
Investment in unquoted debt security	253.4	253.4	0	0
Long term receivables	32.2	32.2	0	0
Financial assets at FVOCI	70.0	0	0	70.0
Trade receivables	2,466.1	2,466.1	0	0
Non trade receivables	16,936.1	16,936.1	0	0
Amounts due from subsidiaries	10,016.9	10,016.9	0	0
Amounts due from associates	5.6	5.6	0	0
Financial assets at FVTPL	6,276.0	0	6,276.0	0
Deposits, bank and cash balances	748.2	748.2	0	0
	36,804.5	30,458.5	6,276.0	70.0

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

#### (a) Categories of financial instruments (continued)

	Carrying amount RM'million	AC RM'million	FVTPL RM'million	FVOCI RM'million
<u>Financial assets</u>				
2021				
<b>Group</b>				
Investment in unquoted debt security	300.1	300.1	0	0
Long term receivables	65.1	65.1	0	0
Finance lease receivables	10.0	10.0	0	0
Derivative financial instruments	1.2	0	1.2	0
Financial assets at FVOCI	62.8	0	0	62.8
Trade receivables	3,963.7	3,963.7	0	0
Non trade receivables	6,788.1	6,788.1	0	0
Amounts due from joint ventures	43.5	43.5	0	0
Amounts due from associates	342.7	342.7	0	0
Financial assets at FVTPL	2,522.3	0	2,522.3	0
Deposits, bank and cash balances	6,706.1	6,706.1	0	0
	20,805.6	18,219.3	2,523.5	62.8
<b>Company</b>				
Investment in unquoted debt security	300.1	300.1	0	0
Long term receivables	41.6	41.6	0	0
Financial assets at FVOCI	62.1	0	0	62.1
Trade receivables	2,872.7	2,872.7	0	0
Non trade receivables	5,591.5	5,591.5	0	0
Amounts due from subsidiaries	8,001.0	8,001.0	0	0
Amounts due from associates	10.5	10.5	0	0
Financial assets at FVTPL	700.7	0	700.7	0
Deposits, bank and cash balances	3,346.1	3,346.1	0	0
	20,926.3	20,163.5	700.7	62.1

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 45 FINANCIAL INSTRUMENTS (CONTINUED)

## (a) Categories of financial instruments (continued)

	Carrying amount RM'million	AC RM'million	FVTPL RM'million
<u>Financial liabilities</u>			
<b>2022</b>			
<b>Group</b>			
Payables	10,691.2	10,691.2	0
Financial guarantee contracts	310.6	310.6	0
Lease liabilities	33,278.4	33,278.4	0
Amounts due to associates	777.6	777.6	0
Borrowings	63,882.2	63,882.2	0
Derivative financial instruments	5.2	0	5.2
Other liabilities	1,113.6	1,113.6	0
	<b>110,058.8</b>	<b>110,053.6</b>	<b>5.2</b>
<b>Company</b>			
Payables	5,921.1	5,921.1	0
Financial guarantee contracts	312.2	312.2	0
Lease liabilities	73,805.1	73,805.1	0
Amounts due to subsidiaries	6,709.1	6,709.1	0
Amounts due to associates	765.9	765.9	0
Borrowings	36,231.9	36,231.9	0
Derivative financial instruments	2.9	0	2.9
Other liabilities	711.2	711.2	0
	<b>124,459.4</b>	<b>124,456.5</b>	<b>2.9</b>

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

#### (a) Categories of financial instruments (continued)

	Carrying amount RM'million	AC RM'million	FVTPL RM'million
<u>Financial liabilities</u>			
2021			
<b>Group</b>			
Payables	7,001.5	7,001.5	0
Financial guarantee contracts	291.1	291.1	0
Lease liabilities	29,241.9	29,241.9	0
Amounts due to associates	183.8	183.8	0
Borrowings	51,678.2	51,678.2	0
Derivative financial instruments	39.1	0	39.1
Other liabilities	953.1	953.1	0
	89,388.7	89,349.6	39.1
<b>Company</b>			
Payables	3,381.4	3,381.4	0
Financial guarantee contracts	293.4	293.4	0
Lease liabilities	71,190.5	71,190.5	0
Amounts due to subsidiaries	4,136.3	4,136.3	0
Amounts due to associates	173.7	173.7	0
Borrowings	25,036.3	25,036.3	0
Derivative financial instruments	0.4	0	0.4
Other liabilities	681.0	681.0	0
	104,893.0	104,892.6	0.4

#### (b) Financial risk management

The Group and the Company have exposures to the following risks embedded in its financial instruments:

- Credit risk;
- Liquidity risk; and
- Market risk.

##### Credit risk

Credit risk is the risk of a financial loss to the Group and the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations. The Group's and the Company's exposures to credit risk arise principally from its receivables from customers, investment in unquoted debt securities, deposits, bank and cash balances and derivative financial instruments. In addition, the Company's exposure to credit risk arises principally from loans and advances to subsidiaries and financial guarantees given to banks in respect of banking facilities granted to certain subsidiaries and an associate.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 45 FINANCIAL INSTRUMENTS (CONTINUED)

## (b) Financial risk management (continued)

Credit risk (continued)

Net (losses)/gains on impairment of financial instruments are mainly from:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Net (losses)/gains on:				
Trade receivables				
- recognised in profit or loss	(163.2)	(961.4)	(156.7)	(764.5)
- reversed	13.9	78.7	0	77.4
Trade contract assets				
- recognised in profit or loss	(37.7)	(70.8)	(34.4)	(64.0)
- reversed	71.0	44.3	64.0	36.7
Investment in unquoted debt security				
- recognised in profit or loss	(3.1)	(102.1)	(3.1)	(102.1)
- reversed	5.4	112.3	5.4	112.3
Intercompany balances				
- recognised in profit or loss	0	0	(66.1)	(343.5)
- reversed	0	0	210.8	751.3
Other non trade receivables				
- recognised in profit or loss	(20.7)	(42.2)	(17.5)	(40.0)
- reversed	42.6	6.6	26.6	2.4
Amounts due from associates				
- recognised in profit or loss	(0.1)	(0.2)	(0.1)	(0.1)
- reversed	0.1	0.2	0.1	0.2
Amounts due from joint ventures				
- recognised in profit or loss	(3.8)	0	0	0
- reversed	13.7	2.6	0	0
Financial guarantee contracts				
- recognised in profit or loss	(37.6)	(8.2)	(37.6)	(8.2)
- reversed	18.1	0	18.8	0
	(101.4)	(940.2)	10.2	(342.1)

## (i) Trade receivables and trade contract assets

Risk management objectives, policies and processes for managing the risk

The Group and the Company have a credit policy in place and the exposures to credit risk are monitored on an ongoing basis. Normally, financial guarantees given by banks, shareholders or directors of customers are obtained, and credit evaluations are performed on customers requiring credit over a certain amount.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

#### (b) Financial risk management (continued)

##### Credit risk (continued)

###### (i) Trade receivables and trade contract assets (continued)

###### Exposure to credit risk, credit quality and collateral

The Group's and the Company's credit policy provide trade receivables with a 30 to 90 days (2021: 30 to 90 days) credit period. The Group and the Company have no major significant concentration of credit risk due to their diverse customer base. An impairment has been made for estimated unrecoverable amounts, determined by reference to past default experience of individual debtors and collection portfolios.

The total trade receivables and trade contract assets and the impairment provided are as follows:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Trade receivables	<b>6,970.3</b>	6,817.0	<b>5,320.9</b>	5,570.8
Less: Loss allowances	(3,002.6)	(2,853.3)	(2,854.8)	(2,698.1)
	<b>3,967.7</b>	3,963.7	<b>2,466.1</b>	2,872.7
Trade contract assets	<b>3,623.0</b>	3,388.5	<b>3,464.4</b>	3,046.0
Less: Loss allowances	(37.0)	(70.3)	(34.4)	(64.0)
	<b>3,586.0</b>	3,318.2	<b>3,430.0</b>	2,982.0

The Group and the Company have other financial assets which are lease receivables, investment in unquoted debt securities and others.

Given the varied nature of the Group's and of the Company's customer base, the following analysis of trade receivables by type of customer is considered the most appropriate disclosure of credit concentration.

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Industrial	<b>1,497.4</b>	1,438.2	<b>1,489.9</b>	1,430.0
Commercial	<b>2,043.7</b>	2,110.8	<b>1,977.2</b>	2,032.1
Domestic	<b>1,971.9</b>	2,190.6	<b>1,799.6</b>	2,043.4
Specific agriculture	<b>11.0</b>	13.8	<b>11.0</b>	13.8
Mining	<b>2.9</b>	3.3	<b>2.9</b>	3.3
Public lighting	<b>44.5</b>	54.8	<b>40.3</b>	48.2
Others	<b>1,398.9</b>	1,005.5	<b>0</b>	0
Trade receivables	<b>6,970.3</b>	6,817.0	<b>5,320.9</b>	5,570.8
Trade contract assets	<b>3,623.0</b>	3,388.5	<b>3,464.4</b>	3,046.0

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**45 FINANCIAL INSTRUMENTS (CONTINUED)**

## (b) Financial risk management (continued)

Credit risk (continued)

## (i) Trade receivables and trade contract assets (continued)

Impairment losses

The loss allowance for the trade receivables and the trade contract assets are as follows:

	Gross RM'million	Individual impairment RM'million	Expected loss rate %	Collective impairment RM'million	Net RM'million
<b>2022</b>					
<b>Group</b>					
Not past due	1,646.4	(22.1)	0.6	(9.2)	1,615.1
Past due 0-30 days	398.5	(1.1)	4.3	(16.9)	380.5
Past due 31-120 days	858.8	(69.9)	10.3	(81.4)	707.5
Past due 121-240 days	713.9	(102.7)	31.0	(189.5)	421.7
Past due 241-365 days	408.2	(93.8)	54.6	(171.8)	142.6
Past due more than 365 days	2,944.5	(1,615.4)	47.3	(628.8)	700.3
Trade receivables	6,970.3	(1,905.0)		(1,097.6)	3,967.7
Trade contract assets	3,623.0	(3.9)	0.9	(33.1)	3,586.0
<b>Company</b>					
Not past due	1,198.1	(21.0)	0.5	(5.6)	1,171.5
Past due 0-30 days	279.2	(1.1)	5.1	(14.1)	264.0
Past due 31-120 days	655.7	(69.8)	12.3	(72.1)	513.8
Past due 121-240 days	555.7	(102.7)	37.5	(169.9)	283.1
Past due 241-365 days	319.2	(93.8)	67.9	(153.0)	72.4
Past due more than 365 days	2,313.0	(1,609.6)	77.1	(542.1)	161.3
Trade receivables	5,320.9	(1,898.0)		(956.8)	2,466.1
Trade contract assets	3,464.4	(3.9)	0.9	(30.5)	3,430.0

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

#### (b) Financial risk management (continued)

##### Credit risk (continued)

###### (i) Trade receivables and trade contract assets (continued)

###### Impairment losses (continued)

The loss allowance for the trade receivables and the trade contract assets are as follows: (continued)

	Gross RM'million	Individual impairment RM'million	Expected loss rate %	Collective impairment RM'million	Net RM'million
<b>2021</b>					
<b>Group</b>					
Not past due	1,541.1	(34.6)	0.9	(12.9)	1,493.6
Past due 0-30 days	459.0	(2.4)	5.2	(23.7)	432.9
Past due 31-120 days	950.6	(53.5)	13.4	(119.9)	777.2
Past due 121-240 days	729.6	(93.8)	38.8	(246.6)	389.2
Past due 241-365 days	461.7	(82.0)	52.8	(200.6)	179.1
Past due more than 365 days	2,675.0	(1,388.3)	46.2	(595.0)	691.7
Trade receivables	6,817.0	(1,654.6)		(1,198.7)	3,963.7
Trade contract assets	3,388.5	(11.7)	1.7	(58.6)	3,318.2
<b>Company</b>					
Not past due	1,232.4	(34.3)	0.7	(8.7)	1,189.4
Past due 0-30 days	344.4	(2.2)	6.1	(20.9)	321.3
Past due 31-120 days	774.9	(53.4)	14.1	(101.6)	619.9
Past due 121-240 days	606.9	(93.8)	43.4	(222.5)	290.6
Past due 241-365 days	382.3	(81.9)	59.8	(179.6)	120.8
Past due more than 365 days	2,229.9	(1,382.4)	61.0	(516.8)	330.7
Trade receivables	5,570.8	(1,648.0)		(1,050.1)	2,872.7
Trade contract assets	3,046.0	(11.7)	1.7	(52.3)	2,982.0

The Group and the Company apply MFRS 9 simplified approach to measure expected credit losses which uses a lifetime expected loss allowance for all trade receivables and trade contract assets.

For certain large customers with high risk of default, the Group and the Company assessed the risk of loss for each customer individually based on their financial information, past trend of payments and external credit ratings, where applicable.

To measure the expected credit losses, trade receivables and trade contract assets are grouped based on shared credit risk characteristics and the days past due. The trade contract assets that relate to unbilled customers have substantial same risk characteristics as the trade receivables for the same types of contracts. The Group and the Company have therefore concluded that the expected loss rates for trade receivables are a reasonable approximation of the loss rates of the trade contract assets.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**45 FINANCIAL INSTRUMENTS (CONTINUED)**

## (b) Financial risk management (continued)

Credit risk (continued)

## (i) Trade receivables and trade contract assets (continued)

Impairment losses (continued)

The expected loss rates are based on the payment profiles of sales over a period of 14 months and the corresponding historical credit losses experienced within this period. The historical loss rates are adjusted to reflect current and forward looking information on macroeconomic factors affecting the ability of the customers to settle the receivables. The Group and the Company have identified growth rates of real Gross Domestic Product ('GDP') of Malaysia to be the most relevant factor, and accordingly, adjusts the historical loss rates based on the expected changes in this factor. As at 31 December 2022, for non-government customers, a combination of growth rates of real GDP and inflation rates were identified as the most relevant factors.

On that basis, the loss allowance was determined for both trade receivables and trade contract assets as reflected in the earlier tables.

The opening loss allowances for trade receivables and trade contract assets reconciled to the closing loss allowances are as follows:

## Trade receivables

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
As at the beginning of the financial year	(2,853.3)	(2,139.5)	(2,698.1)	(2,011.2)
Impairment loss recognised	(163.2)	(961.4)	(156.7)	(764.5)
Impairment loss reversed	13.9	78.7	0	77.4
Impairment written off	0	168.9	0	0.2
As at the end of the financial year (Note 21)	(3,002.6)	(2,853.3)	(2,854.8)	(2,698.1)

## Trade contract assets

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
As at the beginning of the financial year	(70.3)	(43.8)	(64.0)	(36.7)
Impairment loss recognised	(37.7)	(70.8)	(34.4)	(64.0)
Impairment loss reversed	71.0	44.3	64.0	36.7
As at the end of the financial year (Note 17(a))	(37.0)	(70.3)	(34.4)	(64.0)

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

- (b) Financial risk management (continued)

Credit risk (continued)

- (i) Trade receivables and trade contract assets (continued)

Impairment losses (continued)

Trade receivables are secured by deposits in the form of cash and bank guarantees. ECL is not provided on receivable balances fully secured by deposits. The deposit amounts are reviewed on an individual basis periodically.

Individual receivables which were known to be uncollectible were written off by reducing the carrying amount directly.

Impairment losses on trade receivables and trade contract assets are presented as net impairment losses within operating profit. Subsequent recoveries of amounts previously written off are credited against the same line item.

- (ii) Investment in unquoted debt securities, deposits, bank and cash balances, derivative financial instruments and financial assets at FVTPL

Risk management objectives, policies and processes for managing the risk

Investments, deposits, bank and cash balances, derivative financial instruments and financial assets measured at FVTPL are liquid securities and mainly with reputable financial institutions.

Investment in unquoted debt securities are investment in an associate's financial instruments. The credit risk of this associate is monitored on a quarterly basis and the loss allowances are provided for accordingly.

Exposure to credit risk, credit quality and collateral

The maximum exposure to credit risk is represented by the carrying amounts in the SOFP.

In view of the sound credit rating of counterparties, the Group and the Company do not expect any counterparty to fail to meet its obligations. The Group and the Company do not have overdue investments that have not been impaired.

The investments, deposits, cash and bank balances and derivative financial instruments are unsecured.

Bank and cash balances are held with banks and financial institutions which have lower credit risks. In addition, some of the bank balances are insured by Government agencies. Consequently, the Group and the Company are of the view that the loss allowance is not material and hence, it is not provided for.

The total investment in unquoted debt securities and the impairment provided are as follows:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Investment in unquoted debt securities	278.5	327.5	278.5	327.5
Less: Loss allowances	(25.1)	(27.4)	(25.1)	(27.4)
	253.4	300.1	253.4	300.1

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 45 FINANCIAL INSTRUMENTS (CONTINUED)

## (b) Financial risk management (continued)

Credit risk (continued)

## (ii) Investment in unquoted debt securities, deposits, bank and cash balances, derivative financial instruments and financial assets at FVTPL (continued)

Impairment losses

The impairment for the remaining investment in unquoted debt securities, deposits, bank and cash balances, derivative financial instruments and financial assets at FVTPL during the financial year and previous financial year was insignificant.

The loss allowances for investment in unquoted debt securities for the Group and the Company using the general 3-stage approach reconciled to the opening loss allowances for that provision are as follows:

	Stage 1 RM'million	Stage 2 RM'million	Stage 3 RM'million	Total RM'million
<b>2022</b>				
As at the beginning of the financial year	(27.4)	0	0	(27.4)
Impairment loss recognised	(3.1)	0	0	(3.1)
Impairment loss reversed	5.4	0	0	5.4
As at the end of the financial year	(25.1)	0	0	(25.1)
<b>2021</b>				
As at the beginning of the financial year	(37.6)	0	0	(37.6)
Impairment loss recognised	(102.1)	0	0	(102.1)
Impairment loss reversed	112.3	0	0	112.3
As at the end of the financial year	(27.4)	0	0	(27.4)

The impact on the carrying value of the investment in unquoted debt securities presented by the stages are as follows:

	Stage 1 RM'million	Stage 2 RM'million	Stage 3 RM'million	Total RM'million
<b>2022</b>				
Gross carrying amount	278.5	0	0	278.5
Less: Loss allowances	(25.1)	0	0	(25.1)
Net carrying amount	253.4	0	0	253.4
<b>2021</b>				
Gross carrying amount	327.5	0	0	327.5
Less: Loss allowances	(27.4)	0	0	(27.4)
Net carrying amount	300.1	0	0	300.1

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

(b) Financial risk management (continued)

Credit risk (continued)

(iii) Non trade receivables

- Intercompany balances

Risk management objectives, policies and processes for managing the risk

The Company provides unsecured loans and advances to subsidiaries. The Company monitors the results of the subsidiaries regularly.

Exposure to credit risk, credit quality and collateral

At the end of the financial year, the maximum exposure to credit risk is represented by their carrying amounts in the SOFP.

The total amounts due from subsidiaries and impairment provided are as follows:

	<b>Company</b>	
	<b>2022 RM'million</b>	<b>2021 RM'million</b>
Amounts due from subsidiaries	<b>10,590.8</b>	8,719.6
Less: Loss allowances	<b>(573.9)</b>	(718.6)
	<b>10,016.9</b>	8,001.0

Impairment losses

Generally, the Company considers loans and advances to subsidiaries having low credit risk. The Company assumes that there is a significant increase in credit risk when a subsidiary's financial position deteriorates significantly based on stages determined in the accounting policy part (d) of this note. As the Company is able to determine the timing of payments of the subsidiaries' balances when they are payable, the Company considers the amount payable to be in default when the subsidiaries are not able to pay when demanded. The Company considers a subsidiary's balances to be impaired when the subsidiary is:

- unlikely to repay its payables to the Company in full;
- having prolonged negative operating cash flows and is in net tangible liabilities position; or
- a dormant entity or has a history of default.

At the end of the financial year, there was no indication that the amounts due from the subsidiaries are not recoverable other than those which have already been impaired. The Company does not specifically monitor the ageing of advances to the subsidiaries.

During the financial year, there has been reversal of loss allowances due to repayments received from subsidiaries.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**45 FINANCIAL INSTRUMENTS (CONTINUED)**

## (b) Financial risk management (continued)

Credit risk (continued)

## (iii) Non trade receivables (continued)

- Intercompany balances (continued)

*Impairment losses* (continued)

The loss allowances for intercompany balances using the general 3-stage approach reconciled to the opening loss allowances for that provision are as follows:

	Stage 1 RM'million	Stage 2 RM'million	Stage 3 RM'million	Total RM'million
<b>2022</b>				
As at the beginning of the financial year	(471.9)	(128.2)	(118.5)	(718.6)
Impairment loss recognised	(54.9)	(1.6)	(9.6)	(66.1)
Impairment loss reversed	198.9	0	11.9	210.8
As at the end of the financial year	(327.9)	(129.8)	(116.2)	(573.9)
<b>2021</b>				
As at the beginning of the financial year	(308.2)	(413.6)	(920.6)	(1,642.4)
Impairment loss recognised	(248.3)	(0.3)	(94.9)	(343.5)
Impairment loss reversed	69.1	16.3	665.9	751.3
Impairment loss written off	15.5	269.4	231.1	516.0
As at the end of the financial year	(471.9)	(128.2)	(118.5)	(718.6)

The impact on the carrying value of the intercompany balances presented by the stages are as follows:

	Stage 1 RM'million	Stage 2 RM'million	Stage 3 RM'million	Total RM'million
<b>2022</b>				
Gross carrying amount	10,340.8	133.8	116.2	10,590.8
Less: Loss allowances	(327.9)	(129.8)	(116.2)	(573.9)
Net carrying amount	10,012.9	4.0	0	10,016.9
<b>2021</b>				
Gross carrying amount	8,469.1	132.0	118.5	8,719.6
Less: Loss allowances	(471.9)	(128.2)	(118.5)	(718.6)
Net carrying amount	7,997.2	3.8	0	8,001.0

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

#### (b) Financial risk management (continued)

##### Credit risk (continued)

###### (iii) Non trade receivables (continued)

- Other non trade receivables, amounts due from associates and joint ventures

##### Risk management objectives, policies and processes for managing the risk

Credit risk on other non trade receivables are mainly arising from RJO debtors which are receivables from specific works requested by customers.

Credit risk also arises from sundry deposits for rental of office spaces from third parties and rental receivables. The Company manages the credit risk together with the specific leasing arrangements.

Staff advances and staff loans have low credit risk as these are mostly provided to existing staff. These balances are managed on a monthly basis.

Amounts due from associates and joint ventures are mostly due to transactions within the Group and have a low credit risk. These balances are managed on a monthly basis.

##### Exposure to credit risk, credit quality and collateral

At the end of the financial year, the maximum exposure to credit risk is represented by their carrying amounts in the statement of financial position.

The Company receives down payments, LOUs or indents for RJO debtors where works are requested by customers. In cases of RJO debtors arising from accidental damages to the Company's assets whereby the third party is identifiable, these amounts are fully impaired as there is very low prospect of recovery.

The Company receives deposits from third parties for rental of office spaces.

For staff loans and staff advances, any repayment is done through monthly payroll deductions.

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**45 FINANCIAL INSTRUMENTS (CONTINUED)**

## (b) Financial risk management (continued)

Credit risk (continued)

## (iii) Non trade receivables (continued)

- Other non trade receivables, amounts due from associates and joint ventures (continued)

The total other non trade receivables, amounts due from associates and amounts due from joint ventures and impairments provided are as follows:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Other non trade receivables	<b>18,698.4</b>	7,096.8	<b>17,126.3</b>	5,800.8
Less: Loss allowances	(221.7)	(243.6)	(159.4)	(168.5)
	<b>18,476.7</b>	6,853.2	<b>16,966.9</b>	5,632.3
Amounts due from associates	<b>666.4</b>	350.0	<b>5.7</b>	10.6
Less: Loss allowances	(7.3)	(7.3)	(0.1)	(0.1)
	<b>659.1</b>	342.7	<b>5.6</b>	10.5
Amounts due from joint ventures	<b>56.9</b>	65.7	<b>0</b>	0
Less: Loss allowances	(12.3)	(22.2)	0	0
	<b>44.6</b>	43.5	<b>0</b>	0

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

#### (b) Financial risk management (continued)

##### Credit risk (continued)

###### (iii) Non trade receivables (continued)

- Other non trade receivables, amounts due from associates and joint ventures (continued)

##### Impairment losses

Generally, the Group and the Company consider other non trade receivables as having low credit risk. The Group and the Company assume that there is a significant increase in credit risk when there is a history of default in payments.

The loss allowances for other non trade receivables using the general 3-stage approach reconciled to the opening loss allowances for that provision are as follows:

	Stage 1 RM'million	Stage 2 RM'million	Stage 3 RM'million	Total RM'million
<b>Group</b>				
<b>2022</b>				
As at the beginning of the financial year	(31.0)	(1.3)	(211.3)	(243.6)
Impairment loss recognised	(2.6)	(0.1)	(18.0)	(20.7)
Impairment loss reversed	5.4	0.2	37.0	42.6
As at the end of the financial year	(28.2)	(1.2)	(192.3)	(221.7)
<b>2021</b>				
As at the beginning of the financial year	(26.4)	(1.1)	(180.3)	(207.8)
Impairment loss recognised	(5.4)	(0.2)	(36.6)	(42.2)
Impairment loss reversed	0.8	0	5.8	6.6
Impairment loss write back	0	0	(0.2)	(0.2)
As at the end of the financial year	(31.0)	(1.3)	(211.3)	(243.6)
<b>Company</b>				
<b>2022</b>				
As at the beginning of the financial year	(6.9)	(0.4)	(161.2)	(168.5)
Impairment loss recognised	0	(0.4)	(17.1)	(17.5)
Impairment loss reversed	(13.4)	0	40.0	26.6
As at the end of the financial year	(20.3)	(0.8)	(138.3)	(159.4)
<b>2021</b>				
As at the beginning of the financial year	(10.0)	(0.6)	(120.4)	(131.0)
Impairment loss recognised	0.7	0.2	(40.9)	(40.0)
Impairment loss reversed	2.4	0	0	2.4
Impairment loss written off	0	0	0.1	0.1
As at the end of the financial year	(6.9)	(0.4)	(161.2)	(168.5)

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**45 FINANCIAL INSTRUMENTS (CONTINUED)**

## (b) Financial risk management (continued)

Credit risk (continued)

## (iii) Non trade receivables (continued)

- Other non trade receivables, amounts due from associates and joint ventures (continued)

*Impairment losses* (continued)

The loss allowances for amounts due from associates using the general 3-stage approach reconciled to the opening loss allowances for that provision are as follows:

	Stage 1 RM'million	Stage 2 RM'million	Stage 3 RM'million	Total RM'million
<b>Group</b>				
<b>2022</b>				
As at the beginning of the financial year	(7.3)	0	0	(7.3)
Impairment loss recognised	(0.1)	0	0	(0.1)
Impairment loss reversed	0.1	0	0	0.1
As at the end of the financial year	(7.3)	0	0	(7.3)
<b>2021</b>				
As at the beginning of the financial year	(7.3)	0	0	(7.3)
Impairment loss recognised	(0.2)	0	0	(0.2)
Impairment loss reversed	0.2	0	0	0.2
As at the end of the financial year	(7.3)	0	0	(7.3)
<b>Company</b>				
<b>2022</b>				
As at the beginning of the financial year	(0.1)	0	0	(0.1)
Impairment loss recognised	(0.1)	0	0	(0.1)
Impairment loss reversed	0.1	0	0	0.1
As at the end of the financial year	(0.1)	0	0	(0.1)
<b>2021</b>				
As at the beginning of the financial year	(0.2)	0	0	(0.2)
Impairment loss recognised	(0.1)	0	0	(0.1)
Impairment loss reversed	0.2	0	0	0.2
As at the end of the financial year	(0.1)	0	0	(0.1)

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

#### (b) Financial risk management (continued)

##### Credit risk (continued)

###### (iii) Non trade receivables (continued)

- Other non trade receivables, amounts due from associates and joint ventures (continued)

##### Impairment losses (continued)

The loss allowances for amounts due from joint ventures using the general 3-stage approach reconciled to the opening loss allowances for that provision are as follows:

	Stage 1 RM'million	Stage 2 RM'million	Stage 3 RM'million	Total RM'million
<b>Group</b>				
<b>2022</b>				
As at the beginning of the financial year	(22.2)	0	0	(22.2)
Impairment loss recognised	(3.8)	0	0	(3.8)
Impairment loss reversed	13.7	0	0	13.7
As at the end of the financial year	(12.3)	0	0	(12.3)
<b>2021</b>				
As at the beginning of the financial year	(24.8)	0	0	(24.8)
Impairment loss reversed	2.6	0	0	2.6
As at the end of the financial year	(22.2)	0	0	(22.2)

The impact on the carrying value of other non trade receivables presented by the stages are as follows:

	Stage 1 RM'million	Stage 2 RM'million	Stage 3 RM'million	Total RM'million
<b>Group</b>				
<b>2022</b>				
Gross carrying amount	14,660.5	1,036.6	3,001.3	18,698.4
Less: Loss allowances	(28.2)	(1.2)	(192.3)	(221.7)
Net carrying amount	14,632.3	1,035.4	2,809.0	18,476.7
<b>2021</b>				
Gross carrying amount	5,564.3	393.4	1,139.1	7,096.8
Less: Loss allowances	(31.0)	(1.3)	(211.3)	(243.6)
Net carrying amount	5,533.3	392.1	927.8	6,853.2

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**45 FINANCIAL INSTRUMENTS (CONTINUED)**

## (b) Financial risk management (continued)

Credit risk (continued)

## (iii) Non trade receivables (continued)

- Other non trade receivables, amounts due from associates and joint ventures (continued)

*Impairment losses* (continued)

The impact on the carrying value of other non trade receivables presented by the stages are as follows: (continued)

	Stage 1 RM'million	Stage 2 RM'million	Stage 3 RM'million	Total RM'million
<b>Company</b>				
<b>2022</b>				
Gross carrying amount	16,861.0	106.8	158.5	17,126.3
Less: Loss allowances	(20.3)	(0.8)	(138.3)	(159.4)
Net carrying amount	16,840.7	106.0	20.2	16,966.9
<b>2021</b>				
Gross carrying amount	5,542.1	93.5	165.2	5,800.8
Less: Loss allowances	(6.9)	(0.4)	(161.2)	(168.5)
Net carrying amount	5,535.2	93.1	4.0	5,632.3

The impact on the carrying value of amounts due from associates presented by the stages are as follows:

	Stage 1 RM'million	Stage 2 RM'million	Stage 3 RM'million	Total RM'million
<b>Group</b>				
<b>2022</b>				
Gross carrying amount	666.4	0	0	666.4
Less: Loss allowances	(7.3)	0	0	(7.3)
Net carrying amount	659.1	0	0	659.1
<b>2021</b>				
Gross carrying amount	350.0	0	0	350.0
Less: Loss allowances	(7.3)	0	0	(7.3)
Net carrying amount	342.7	0	0	342.7

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

#### (b) Financial risk management (continued)

##### Credit risk (continued)

###### (iii) Non trade receivables (continued)

- Other non trade receivables, amounts due from associates and joint ventures (continued)

##### Impairment losses (continued)

The impact on the carrying value of amounts due from associates presented by the stages are as follows: (continued)

	Stage 1 RM'million	Stage 2 RM'million	Stage 3 RM'million	Total RM'million
<b>Company</b>				
<b>2022</b>				
Gross carrying amount	5.7	0	0	5.7
Less: Loss allowances	(0.1)	0	0	(0.1)
Net carrying amount	5.6	0	0	5.6
<b>2021</b>				
Gross carrying amount	10.6	0	0	10.6
Less: Loss allowances	(0.1)	0	0	(0.1)
Net carrying amount	10.5	0	0	10.5

The impact on the carrying value of amounts due from joint ventures presented by the stages are as follows:

	Stage 1 RM'million	Stage 2 RM'million	Stage 3 RM'million	Total RM'million
<b>Group</b>				
<b>2022</b>				
Gross carrying amount	56.9	0	0	56.9
Less: Loss allowances	(12.3)	0	0	(12.3)
Net carrying amount	44.6	0	0	44.6
<b>2021</b>				
Gross carrying amount	65.7	0	0	65.7
Less: Loss allowances	(22.2)	0	0	(22.2)
Net carrying amount	43.5	0	0	43.5

###### (iv) Financial guarantees

##### Risk management objectives, policies and processes for managing the risk

The Company provides financial guarantees to banks in respect of banking facilities granted to certain subsidiaries and an associate. The Company monitors the ability of the subsidiaries and the associate to service their loans on an individual basis annually.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**45 FINANCIAL INSTRUMENTS (CONTINUED)**

## (b) Financial risk management (continued)

Credit risk (continued)

## (iv) Financial guarantees (continued)

Exposure to credit risk, credit quality and collateral

The maximum exposure to the Group and the Company amounts to RM310.6 million (2021: RM291.1 million) and RM8,797.7 million (2021: RM8,799.2 million) respectively, representing banking facilities utilised by the subsidiaries and an associate as at the end of the financial year.

The financial guarantees are provided as credit enhancements to the subsidiaries' and associate's secured loans.

The total financial guarantees and loss allowances provided are as follows:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Financial guarantees	310.6	291.1	8,797.7	8,799.2
Less: Loss allowances	(310.6)	(291.1)	(312.2)	(293.4)
	0	0	8,485.5	8,505.8

Impairment losses

The Company assumes that there is a significant increase in credit risk when a subsidiary or associate has indication of defaulting on its banking facilities. The Company considers a financial guarantee to be credit impaired when the subsidiary or associate is unlikely to repay its credit obligation to the bank in full.

The Company determines the probability of default of the guaranteed loans individually using internal information available.

Loss allowance has been recognised mainly arising from the financial guarantee provided by the Group in 2016 to support the loan facility offered to İç Anadolu Doğalgaz Elektrik Üretim ve Ticaret A.Ş. ('ICAN'), a subsidiary of Gama Enerji. The ECL is determined based on an internal assessment of Gama Enerji's debt servicing ability taking into account of the current adverse macroeconomic conditions in Türkiye. The impairment loss for financial guarantees for the Group and the Company are in Stage 3.

The movement in the loss allowances of financial guarantees during the financial year was:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
As at the beginning of the financial year	(291.1)	(282.9)	(293.4)	(285.2)
Impairment loss recognised	(37.6)	(8.2)	(37.6)	(8.2)
Impairment loss reversed	18.1	0	18.8	0
As at the end of the financial year (Note 23)	(310.6)	(291.1)	(312.2)	(293.4)

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

- (b) Financial risk management (continued)

#### Liquidity risk

Liquidity risk is the risk that the Group and the Company will not be able to meet its financial obligations as they fall due. The Group's and the Company's exposures to liquidity risk arise principally from its various payables, loans and borrowings. The Group and the Company monitor rolling forecasts of the Group's and of the Company's liquidity requirements.

As of 31 December 2022, the Company's current liabilities exceeded their current assets by RM1,434.6 million (2021: RM6,950.5 million), mainly due to consumer deposits amounting to RM7,185.7 million (2021: RM6,685.1 million).

Based on the Company's cash flow forecast for the next 12 months which takes into account the expected revenue growth rates, customer collection trends, low rate of termination of electricity account that would crystallise the entire consumer deposits above and one-off transactions. The Company expects to be able to generate sufficient internal cash flows from operations for the next 12 months from the reporting date to meet operational and financing needs as and when they fall due.

In addition, as at 31 December 2022, the Company have undrawn borrowing facilities amounting to RM10,815.6 million (2021: RM9,911.0 million) to support any cash shortfall while maintaining sufficient headroom on its undrawn borrowing facilities at all times to ensure the Company have the financial flexibility.

Surplus cash of the Group and of the Company is invested in profit bearing current accounts, money market deposits and other instruments with appropriate maturities and sufficient liquidity level to provide sufficient headroom as determined by the cash flow forecasts and to enable the Group and the Company to discharge liabilities in the normal course of business.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 45 FINANCIAL INSTRUMENTS (CONTINUED)

## (b) Financial risk management (continued)

Liquidity risk (continued)

The table below summarises the maturity profiles of the Group's and of the Company's financial liabilities as at the end of the financial year based on the undiscounted contractual payments:

	Carrying amount RM'million	Contractual cash flows RM'million	Below 1 year RM'million	1-2 years RM'million	3-5 years RM'million	More than 5 years RM'million
<b>2022</b>						
<b>Group</b>						
<u>Non-derivative financial liabilities</u>						
Payables	10,691.2	10,691.2	10,691.2	0	0	0
Lease liabilities*	33,278.4	46,223.7	4,757.1	3,875.4	10,797.9	26,793.3
Amounts due to associates	777.6	777.6	777.6	0	0	0
Borrowings*	63,882.2	78,344.5	16,217.3	3,034.2	12,460.5	46,632.5
Financial guarantee contracts	310.6	310.6	310.6	0	0	0
Other financial liabilities at AC	1,113.6	1,134.5	324.4	344.6	35.9	429.6
	110,053.6	137,482.1	33,078.2	7,254.2	23,294.3	73,855.4
<u>Derivative financial liabilities</u>						
Interest rate swaps	0.3	744.2	0	474.5	269.7	0
Profit rate swap contracts	2.0	323.8	0	0	323.8	0
Forward exchange contracts (gross settled):						
- Outflows	2.9	106.3	106.3	0	0	0
	110,058.8	138,656.4	33,184.5	7,728.7	23,887.8	73,855.4
<b>Company</b>						
<u>Non-derivative financial liabilities</u>						
Payables	5,921.1	5,921.1	5,921.1	0	0	0
Lease liabilities*	73,805.1	115,101.7	9,096.9	7,788.4	22,021.4	76,195.0
Amounts due to subsidiaries	6,709.1	6,709.1	6,709.1	0	0	0
Amounts due to associates	765.9	765.9	765.9	0	0	0
Borrowings*	36,231.9	49,731.4	12,227.8	1,089.9	7,938.8	28,474.9
Financial guarantee contracts	312.2	8,797.7	8,797.7	0	0	0
Other financial liabilities at AC	711.2	732.0	335.5	356.4	37.1	3.0
	124,456.5	187,758.9	43,854.0	9,234.7	29,997.3	104,672.9
<u>Derivative financial liability</u>						
Forward exchange contracts (gross settled):						
- Outflows	2.9	106.3	106.3	0	0	0
	124,459.4	187,865.2	43,960.3	9,234.7	29,997.3	104,672.9

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

#### (b) Financial risk management (continued)

##### Liquidity risk (continued)

The table below summarises the maturity profiles of the Group's and of the Company's financial liabilities as at the end of the financial year based on the undiscounted contractual payments: (continued)

	Carrying amount RM'million	Contractual cash flows RM'million	Below 1 year RM'million	1-2 years RM'million	3-5 years RM'million	More than 5 years RM'million
<b>2021</b>						
<b>Group</b>						
<u>Non-derivative financial liabilities</u>						
Payables	7,001.5	7,001.5	7,001.5	0	0	0
Lease liabilities*	29,241.9	40,432.2	4,550.0	3,674.5	9,587.9	22,619.8
Amounts due to associates	183.8	183.8	183.8	0	0	0
Borrowings*	51,678.2	67,528.7	7,638.2	2,781.9	12,204.1	44,904.5
Financial guarantee contracts	291.1	291.1	291.1	0	0	0
Other financial liabilities at AC	953.1	975.3	313.5	319.3	40.6	301.9
	89,349.6	116,412.6	19,978.1	6,775.7	21,832.6	67,826.2
<u>Derivative financial liabilities</u>						
Interest rate swaps	31.0	1,703.5	0	565.6	1,137.9	0
Spot foreign currency contracts	0	38.9	38.9	0	0	0
Profit rate swap contracts	7.7	342.8	0	0	342.8	0
Forward exchange contracts (gross settled):						
- Outflows	0.4	39.2	39.2	0	0	0
	89,388.7	118,537.0	20,056.2	7,341.3	23,313.3	67,826.2
<b>Company</b>						
<u>Non-derivative financial liabilities</u>						
Payables	3,381.4	3,381.4	3,381.4	0	0	0
Lease liabilities*	71,190.5	113,134.4	9,335.3	7,339.3	20,667.8	75,792.0
Amounts due to subsidiaries	4,136.3	4,136.3	4,136.3	0	0	0
Amounts due to associates	173.7	173.7	173.7	0	0	0
Borrowings*	25,036.3	35,536.7	4,716.2	876.6	7,149.6	22,794.3
Financial guarantee contracts	293.4	8,799.2	8,799.2	0	0	0
Other financial liabilities at AC	681.0	703.2	327.3	333.4	42.4	0.1
	104,892.6	165,864.9	30,869.4	8,549.3	27,859.8	98,586.4
<u>Derivative financial liability</u>						
Spot foreign currency contracts	0	38.9	38.9	0	0	0
Forward exchange contracts (gross settled):						
- Outflows	0.4	39.2	39.2	0	0	0
	104,893.0	165,943.0	30,947.5	8,549.3	27,859.8	98,586.4

\* Refer to Note 15 and Note 26 for the average remaining period.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**45 FINANCIAL INSTRUMENTS (CONTINUED)**

## (b) Financial risk management (continued)

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and other prices will affect the Group's and the Company's financial positions or cash flows.

## (i) Foreign currency risk

The Group and the Company are exposed to foreign currency risk on sales, purchases and borrowings that are denominated in currencies other than the respective functional currencies of the Group and of the Company. The currencies giving rise to this risk are primarily USD, JPY and GBP.

Risk management objectives, policies and processes for managing the risk

The Group and the Company are required to hedge a minimum of 50.0% of TNB's known foreign currency exposure up to 12 months period. The Group and the Company use forward exchange contracts and maintain foreign currency floats to hedge its foreign currency risk.

Exposure to foreign currency risk

The currency exposure of financial assets and financial liabilities of the Group and of the Company at the end of the financial year, expressed in MYR (if not defined, Malaysian Ringgit) currency units, are as follows:

	USD RM'million	JPY RM'million	GBP RM'million	Others RM'million
<b>2022</b>				
<b>Group</b>				
<u>Financial assets</u>				
Financial assets at FVOCI	0	0	0	0.4
Receivables	7.3	0	0	0.7
Deposits, bank and cash balances	257.5	0	576.0	1.0
	264.8	0	576.0	2.1
<u>Financial liabilities</u>				
Payables	49.1	9.4	997.1	11.4
Borrowings	8,496.8	1,812.3	3,161.1	0
	8,545.9	1,821.7	4,158.2	11.4
<b>Company</b>				
<u>Financial assets</u>				
Amounts due from subsidiaries	9.7	0	0	0
Deposits, bank and cash balances	257.0	0	372.9	1.0
	266.7	0	372.9	1.0
<u>Financial liability</u>				
Borrowings	8,496.8	1,812.3	0	0

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

(b) Financial risk management (continued)

Market risk (continued)

(i) Foreign currency risk (continued)

*Exposure to foreign currency risk (continued)*

The currency exposure of financial assets and financial liabilities of the Group and of the Company at the end of the financial year, expressed in MYR (if not defined, Malaysian Ringgit) currency units, are as follows: (continued)

	USD RM'million	JPY RM'million	GBP RM'million	Others RM'million
<b>2021</b>				
<b>Group</b>				
<u>Financial assets</u>				
Financial assets at FVOCI	0	0	0	0.4
Receivables	2.8	0	0	0.4
Deposits, bank and cash balances	1,444.7	0	107.2	0
	1,447.5	0	107.2	0.8
<u>Financial liabilities</u>				
Payables	7.6	5.5	941.6	3.2
Borrowings	8,035.9	2,092.0	2,357.0	0
	8,043.5	2,097.5	3,298.6	3.2
<b>Company</b>				
<u>Financial assets</u>				
Amounts due from subsidiaries	9.7	0	0	0
Deposits, bank and cash balances	1,444.4	0	0	0
	1,454.1	0	0	0
<u>Financial liability</u>				
Borrowings	8,035.9	2,092.0	0	0

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

**45 FINANCIAL INSTRUMENTS (CONTINUED)**

- (b) Financial risk management (continued)

Market risk (continued)

- (i) Foreign currency risk (continued)

Currency risk sensitivity analysis

A 10.0% strengthening of the foreign currencies against RM at the end of the financial year would have decreased post-tax profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular interest rates, remained constant and ignores any impact of forecasted sales and purchases.

	Profit or loss/equity	
	2022 RM'million	2021 RM'million
<b>Group</b>		
USD	(625.5)	(655.7)
JPY	(138.1)	(209.2)
GBP	(276.9)	(333.2)
<b>Company</b>		
USD	(621.6)	(654.3)
JPY	(137.4)	(208.7)

A 10.0% weakening of the foreign currencies against RM at the end of the financial year would have had equal but opposite effect on the above currencies to the amounts shown above, on the basis that all other variables remained constant.

Foreign currency risk for the Group and the Company which have a functional currency other than USD, JPY and GBP are not material and hence, sensitivity analysis is not presented.

- (ii) Interest rate risk

The Group's and the Company's investments in fixed rate debt securities and its fixed rate borrowings are not exposed to a significant risk of change in their fair values due to changes in interest rates. The Group's and the Company's variable rate borrowings are exposed to a risk of change in cash flows due to changes in interest rates. Investment in equity securities and short term receivables and payables are not significantly exposed to interest rate risk.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

(b) Financial risk management (continued)

Market risk (continued)

(ii) Interest rate risk (continued)

Exposure to interest rate risk

The interest rate profile of the Group's and of the Company's significant interest-bearing financial instruments, based on carrying amounts as at the end of the financial year were:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Fixed rate instruments:				
Financial assets	2,890.0	3,268.5	923.6	1,884.7
Financial liabilities	95,678.8	78,477.5	110,037.0	96,226.8
Floating rate instrument:				
Financial liabilities	1,481.8	2,442.6	0	0

The financial assets are not sensitive to interest rate changes.

A 5.0% change in the interest rates of the financial liabilities with floating interest rates at the end of the financial year would have affected the Group's and the Company's profit or loss and equity by RM0.1 million (2021: RM0.1 million). This analysis assumes that all other variables, in particular foreign currency rates remained constant.

(iii) Other price risk

Other price risk arises from the Group's and the Company's investments in equity securities, debt securities and unit trust funds.

Risk management objectives, policies and processes for managing the risk

The Group and the Company are exposed to price risk because the investments held are classified on the statement of financial position as FVOCI and FVTPL. The Group and the Company mainly invest in unit trust funds, primarily in short term deposits as underlying instruments with minimal price risk.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

## 45 FINANCIAL INSTRUMENTS (CONTINUED)

## (b) Financial risk management (continued)

Fair value of financial instruments

The carrying amounts of deposits, bank and cash balances, short term receivables and payables, short term borrowings, short term amount due from/(to) subsidiaries and short term derivative financial instruments approximate their fair values and are equivalent to nominal values due to the relatively short term nature of these financial instruments.

The table below analyses financial instruments carried at fair value and those not carried at fair value for which fair value is disclosed, together with their fair values and carrying amounts shown in the statement of financial position.

The classifications in the fair value hierarchy of the Group's and of the Company's assets and liabilities measured at fair value are summarised in the table below:

	Fair value of financial instruments carried at fair value				Fair value of financial instruments not carried at fair value				Total fair value RM'million	Carrying amount RM'million
	Level 1 RM'million	Level 2 RM'million	Level 3 RM'million	Total RM'million	Level 1 RM'million	Level 2 RM'million	Level 3 RM'million	Total RM'million		
<b>2022</b>										
<b>Group</b>										
<u>Financial assets</u>										
Investment in unquoted debt security	0	0	0	0	0	253.4	0	253.4	253.4	253.4
Long term receivables	0	0	0	0	0	43.7	0	43.7	43.7	39.6
Derivative financial instruments	0	72.5	0	72.5	0	0	0	0	72.5	72.5
Financial assets at FVOCI	0	70.7	0	70.7	0	0	0	0	70.7	70.7
Financial assets at FVTPL	8,111.4	85.2	0	8,196.6	0	0	0	0	8,196.6	8,196.6
	8,111.4	228.4	0	8,339.8	0	297.1	0	297.1	8,636.9	8,632.8
<u>Financial liabilities</u>										
Borrowings	0	0	0	0	1,868.9	61,981.9	0	63,850.8	63,850.8	63,882.2
Other financial liabilities at AC	0	0	0	0	0	1,120.1	0	1,120.1	1,120.1	1,113.6
Derivative financial instruments	0	5.2	0	5.2	0	0	0	0	5.2	5.2
	0	5.2	0	5.2	1,868.9	63,102.0	0	64,970.9	64,976.1	65,001.0
<b>Company</b>										
<u>Financial assets</u>										
Investment in unquoted debt security	0	0	0	0	0	253.4	0	253.4	253.4	253.4
Long term receivables	0	0	0	0	0	43.7	0	43.7	43.7	32.2
Financial assets at FVOCI	0	70.0	0	70.0	0	0	0	0	70.0	70.0
Amounts due from subsidiaries	0	0	0	0	0	4,416.1	0	4,416.1	4,416.1	4,416.1
Financial assets at FVTPL	6,190.8	85.2	0	6,276.0	0	0	0	0	6,276.0	6,276.0
	6,190.8	155.2	0	6,346.0	0	4,713.2	0	4,713.2	11,059.2	11,047.7
<u>Financial liabilities</u>										
Borrowings	0	0	0	0	1,868.9	33,726.3	0	35,595.2	35,595.2	36,231.9
Other financial liabilities at AC	0	0	0	0	0	716.2	0	716.2	716.2	711.2
Derivative financial instruments	0	2.9	0	2.9	0	0	0	0	2.9	2.9
	0	2.9	0	2.9	1,868.9	34,442.5	0	36,311.4	36,314.3	36,946.0

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

#### (b) Financial risk management (continued)

##### Fair value of financial instruments (continued)

The classifications in the fair value hierarchy of the Group's and of the Company's assets and liabilities measured at fair value are summarised in the table below: (continued)

	Fair value of financial instruments carried at fair value				Fair value of financial instruments not carried at fair value				Total fair value RM'million	Carrying amount RM'million		
	Level 1 RM'million	Level 2 RM'million	Level 3 RM'million	Total RM'million	Level 1 RM'million	Level 2 RM'million	Level 3 RM'million	Total RM'million				
<b>2021</b>												
<b>Group</b>												
<u>Financial assets</u>												
Investment in unquoted debt												
securities	0	0	0	0	0	300.1	0	300.1	300.1	300.1		
Long term receivables	0	0	0	0	0	65.1	0	65.1	65.1	65.1		
Derivative financial instruments	0	1.2	0	1.2	0	0	0	0	1.2	1.2		
Financial assets at FVOCI	0	62.8	0	62.8	0	0	0	0	62.8	62.8		
Financial assets at FVTPL	2,422.3	100.0	0	2,522.3	0	0	0	0	2,522.3	2,522.3		
	2,422.3	164.0	0	2,586.3	0	365.2	0	365.2	2,951.5	2,951.5		
<u>Financial liabilities</u>												
Borrowings	0	0	0	0	2,087.8	48,022.4	0	50,110.2	50,110.2	51,678.2		
Other financial liabilities at AC	0	0	0	0	0	973.0	0	973.0	973.0	953.1		
Derivative financial instruments	0	39.1	0	39.1	0	0	0	0	39.1	39.1		
	0	39.1	0	39.1	2,087.8	48,995.4	0	51,083.2	51,122.3	52,670.4		
<b>Company</b>												
<u>Financial assets</u>												
Investment in unquoted debt												
securities	0	0	0	0	0	300.1	0	300.1	300.1	300.1		
Long term receivables	0	0	0	0	0	59.0	0	59.0	59.0	41.6		
Financial assets at FVOCI	0	62.1	0	62.1	0	0	0	0	62.1	62.1		
Amounts due from subsidiaries	0	0	0	0	0	5,010.4	0	5,010.4	5,010.4	5,010.4		
Financial assets at FVTPL	600.7	100.0	0	700.7	0	0	0	0	700.7	700.7		
	600.7	162.1	0	762.8	0	5,369.5	0	5,369.5	6,132.3	6,114.9		
<u>Financial liabilities</u>												
Borrowings	0	0	0	0	2,087.8	24,640.1	0	26,727.9	26,727.9	25,036.3		
Other financial liabilities at AC	0	0	0	0	0	687.6	0	687.6	687.6	681.0		
Derivative financial instruments	0	0.4	0	0.4	0	0	0	0	0.4	0.4		
	0	0.4	0	0.4	2,087.8	25,327.7	0	27,415.5	27,415.9	25,717.7		

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**45 FINANCIAL INSTRUMENTS (CONTINUED)**

- (b) Financial risk management (continued)

Fair value of financial instruments (continued)

- (i) Policy on transfer between levels

The fair value of an asset to be transferred between levels is determined as of the date of the event or change in circumstances that caused the transfer.

There were no transfers between levels during the financial year.

- (ii) Level 1 fair value

Level 1 fair value is derived from quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.

- (iii) Level 2 fair value

Level 2 fair value is estimated using inputs other than quoted prices included within Level 1 that are observable for the financial assets or liabilities, either directly or indirectly.

Derivative financial instruments

The fair value is estimated by the difference between the contractual forward price and the current forward price for the residual maturity of the contract.

Non-derivative financial instruments

Fair value, which is determined for disclosure purpose, is calculated based on the present value of future principal and interest cash flows, discounted at the market rate of interest at the end of the reporting period.

- (iv) Level 3 fair value

Level 3 fair values for the financial assets and liabilities are estimated using unobservable inputs.

- (v) Interest rates used to determine fair value

The interest rates used to discount estimated cash flows, when applicable, ranging between 0.1% to 8.0% (2021: 0.1% to 8.0%).

Although the Group and the Company believe that their estimates of fair value are appropriate, the use of different methodologies or assumptions could lead to different measurements of fair value.

The favourable and unfavourable effects of using reasonably possible alternative assumptions have been calculated by recalibrating the model values using expected cash flows and risk-adjusted discount rates based on the probability weighted average of the Group's and of the Company's ranges of possible outcomes.

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 45 FINANCIAL INSTRUMENTS (CONTINUED)

#### (c) Offsetting of financial assets and financial liabilities

The following financial assets and financial liabilities are subject to offsetting arrangements based on Group policies and procedures:

	Group			Company		
	Gross amounts recognised RM'million	Gross amounts set-off in the SOFP RM'million	Net amounts presented in the SOFP RM'million	Gross amounts recognised RM'million	Gross amounts set-off in the SOFP RM'million	Net amounts presented in the SOFP RM'million
<u>Financial assets</u>						
<b>2022</b>						
Amounts due from associates	659.1	0	659.1	5.6	0	5.6
Amounts due from subsidiaries	0	0	0	12,701.0	(2,684.1)	10,016.9
Amounts due from joint ventures	44.6	0	44.6	0	0	0
<b>2021</b>						
Amounts due from associates	342.7	0	342.7	10.5	0	10.5
Amounts due from subsidiaries	0	0	0	10,656.5	(2,655.5)	8,001.0
Amounts due from joint ventures	43.5	0	43.5	0	0	0
<u>Financial liabilities</u>						
<b>2022</b>						
Amounts due to associates	(777.6)	0	(777.6)	(765.9)	0	(765.9)
Amounts due to subsidiaries	0	0	0	(9,393.2)	2,684.1	(6,709.1)
<b>2021</b>						
Amounts due to associates	(183.8)	0	(183.8)	(173.7)	0	(173.7)
Amounts due to subsidiaries	0	0	0	(6,791.8)	2,655.5	(4,136.3)

### 46 CAPITAL RISK MANAGEMENT

The Group's and the Company's main objective of capital management is to safeguard the Group's and the Company's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders. The Group and the Company will also strive to maintain an optimal capital structure to reduce the cost of capital.

For the purpose of sustaining or changing the capital structure, the Group and the Company may adjust the amount of dividends paid to shareholders, issue new shares or return capital to shareholders.

In order to be consistent with industry norms, the Group and the Company monitor its capital structure on the basis of the gearing ratio. This ratio is calculated as total borrowings divided by capital employed. Total borrowings include non-current borrowings, current borrowings and hire purchase as shown in the consolidated statement of financial position. Capital employed is the summation of total equity and total borrowings.

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**46 CAPITAL RISK MANAGEMENT (CONTINUED)**

The gearing ratios are as follows:

	Group		Company	
	2022 RM'million	2021 RM'million	2022 RM'million	2021 RM'million
Total borrowings (Note 26)	<b>63,882.2</b>	51,678.2	<b>36,231.9</b>	25,036.3
Total equity	<b>60,966.2</b>	58,392.4	<b>46,410.7</b>	45,401.3
Total capital employed	<b>124,848.4</b>	110,070.6	<b>82,642.6</b>	70,437.6
Gearing ratios	<b>0.51</b>	0.47	<b>0.44</b>	0.36

The Group and the Company have met all externally imposed capital requirements.

**47 EFFECT OF CHANGE IN PRESENTATION**

During the year, the Group and the Company changed the presentation of the consolidated statement of profit or loss to provide a better reflection of the business performance in respect of the under or over recovery of ICPT mechanism. It is now presented separately from revenue in the consolidated statement of profit or loss.

The following table shows the adjustments for each individual line item. Line items that were not affected by the changes have not been included. The revised presentation has no impact on the Group's and the Company's operating profit, profit before finance cost, profit before taxation and zakat and profit for the financial year.

Reconciliation of consolidated statement of profit or loss

	For the financial year ended 31 December 2021		
	As previously reported RM'million	Effect of change RM'million	As restated RM'million
<b>Group</b>			
Revenue	52,629.5	(4,509.6)	48,119.9
ICPT under recovery	0	4,509.6	4,509.6
<b>Company</b>			
Revenue	48,831.3	(4,509.6)	44,321.7
ICPT under recovery	0	4,509.6	4,509.6

## NOTES TO THE FINANCIAL STATEMENTS

31 December 2022

### 48 SIGNIFICANT ACQUISITIONS DURING CURRENT AND PRECEDING FINANCIAL YEARS

- (a) (i) Subsidiary acquired by the Group during the financial year ended 31 December 2022 is as follows:

Name of subsidiary	Purchase consideration RM'million	Group's effective interest acquired	Effective acquisition date
Clean Energy and Infrastructure UK Limited Group ('CEI UK')	806.0	100.0%	1 April 2022

Vantage RE Ltd., a wholly owned subsidiary of TNB International Sdn. Bhd. ('TNBI') completed its acquisition of CEI UK for a purchase consideration of GBP145.9 million in cash, through two Share Purchase Agreements ('SPAs') with Capital Dynamics Clean Energy and Infrastructure Jersey Limited and CEI WSH Limited ('the Sellers') respectively. Refer to Note 7 for the principal activities of these companies.

The Group's profit after tax for the financial year ended 31 December 2022 would have been estimated at RM3,569.0 million if CEI UK had been consolidated from the beginning of the financial year. From the acquisition date up to 31 December 2022, CEI UK contributed a profit after tax of RM9.4 million.

- (ii) Details of the assets, liabilities and net cash outflow as at the date of the acquisition of this subsidiary by the Group during the financial year ended 31 December 2022 are as follows:

	CEI UK	
	Book value RM'million	Fair value RM'million
Recognised amounts of identifiable assets acquired and liabilities assumed:		
- Property, plant and equipment (Note 5)	1,047.1	1,584.4
- Right-of-use assets (Note 6)	71.7	79.4
- Intangible assets	120.2	0
- Receivables, deposits and prepayments	65.1	65.1
- Deposits, bank and cash balances	95.2	95.2
- Payables	(55.8)	(55.8)
- Lease liabilities (Note 15)	(71.7)	(79.4)
- Borrowings (Note 26)	(649.2)	(649.2)
- Other liabilities	(9.7)	(10.3)
- Deferred tax liabilities (Note 12)	(107.0)	(241.3)
Total identifiable net assets	505.9	788.1
Goodwill (Note 10)		17.9
<b>Total</b>	<b>806.0</b>	
Cash consideration paid		806.0
Cash and cash equivalents assumed		(95.2)
<b>Net cash outflow on acquisition</b>		<b>710.8</b>

**NOTES TO THE FINANCIAL STATEMENTS**

31 December 2022

**48 SIGNIFICANT ACQUISITIONS DURING CURRENT AND PRECEDING FINANCIAL YEARS (CONTINUED)**

- (b) Associate acquired by the Group during the financial year ended 31 December 2021 was as follows:

Name of associate	Purchase consideration RM'million	Group's effective interest acquired	Effective acquisition date
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Blyth Offshore Demonstrator Limited ('BODL')

674.7

49.0% 18 October 2021

On 18 October 2021, Vantage RE No. 1 Ltd., a wholly-owned subsidiary of Vantage RE Ltd. completed the subscription of 30,135,049 ordinary shares representing a 49.0% equity interest in BODL for a purchase consideration of GBP118.0 million and transaction cost of GBP1.2 million (amounting to RM674.7 million). The principal activity of BODL is as disclosed in Note 9.

# STATEMENT BY DIRECTORS

PURSUANT TO SECTION 251(2) OF THE COMPANIES ACT 2016

We, Ong Ai Lin and Dato' Indera Ir. Baharin bin Din, the Directors of Tenaga Nasional Berhad, do hereby state that, in the opinion of the Directors, the financial statements set out on pages 222 to 381 are drawn up so as to give a true and fair view of the financial position of the Group and of the Company as at 31 December 2022 and financial performance of the Group and of the Company for the financial year ended 31 December 2022 in accordance with Malaysian Financial Reporting Standards, International Financial Reporting Standards and the requirements of the Companies Act 2016 in Malaysia.

Signed on behalf of the Board of Directors, in accordance with a resolution dated 20 March 2023.

**ONG AI LIN**  
SENIOR INDEPENDENT  
NON-EXECUTIVE DIRECTOR

**DATO' INDERA IR. BAHARIN BIN DIN**  
PRESIDENT/CHIEF EXECUTIVE OFFICER

# STATUTORY DECLARATION

PURSUANT TO SECTION 251(1) OF THE COMPANIES ACT 2016

I, Nazmi bin Othman, the Officer primarily responsible for the financial management of Tenaga Nasional Berhad, do solemnly and sincerely declare that the financial statements set out on pages 222 to 381 are, in my opinion, correct and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Statutory Declarations Act, 1960.

**NAZMI BIN OTHMAN**  
MIA MEMBERSHIP NO. 6747

Subscribed and solemnly declared by the abovenamed Nazmi bin Othman at Kuala Lumpur, Malaysia on 20 March 2023, before me.



COMMISSIONER FOR OATHS

220, JALAN TUN SAMBANTHAN,  
50470 KUALA LUMPUR.

# INDEPENDENT AUDITORS' REPORT

TO THE MEMBERS OF TENAGA NASIONAL BERHAD (INCORPORATED IN MALAYSIA) (REGISTRATION NO. 199001009294 (200866-W))

## REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

### Our opinion

In our opinion, the financial statements of Tenaga Nasional Berhad ("the Company") and its subsidiaries ("the Group") give a true and fair view of the financial position of the Group and of the Company as at 31 December 2022, and of their financial performance and their cash flows for the financial year then ended in accordance with Malaysian Financial Reporting Standards, International Financial Reporting Standards and the requirements of the Companies Act 2016 in Malaysia.

### What we have audited

We have audited the financial statements of the Group and of the Company, which comprise the statements of financial position as at 31 December 2022 of the Group and of the Company, and the statements of profit or loss, statements of comprehensive income, statements of changes in equity and statements of cash flows of the Group and of the Company for the financial year then ended, and notes to the financial statements, including a summary of significant accounting policies, as set out on pages 222 to 381.

### Basis for opinion

We conducted our audit in accordance with approved standards on auditing in Malaysia and International Standards on Auditing. Our responsibilities under those standards are further described in the "Auditors' responsibilities for the audit of the financial statements" section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### *Independence and other ethical responsibilities*

We are independent of the Group and of the Company in accordance with the By-Laws (on Professional Ethics, Conduct and Practice) of the Malaysian Institute of Accountants ("By-Laws") and the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants (including International Independence Standards) ("IESBA Code"), and we have fulfilled our other ethical responsibilities in accordance with the By-Laws and the IESBA Code.

### Our audit approach

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements of the Group and of the Company. In particular, we considered where the Directors made subjective judgements; for example, in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain. As in all of our audits, we also addressed the risk of management override of internal controls, including among other matters, consideration of whether there was evidence of bias that represented a risk of material misstatement due to fraud.

We tailored the scope of our audit in order to perform sufficient work to enable us to provide an opinion on the financial statements as a whole, taking into account the structure of the Group and of the Company, the accounting processes and controls, and the industry in which the Group and the Company operate.

## INDEPENDENT AUDITORS' REPORT

TO THE MEMBERS OF TENAGA NASIONAL BERHAD (INCORPORATED IN MALAYSIA) (REGISTRATION NO. 199001009294 (200866-W))

### REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS (CONTINUED)

#### Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the Group and of the Company for the current financial year. These matters were addressed in the context of our audit of the financial statements of the Group and of the Company as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters	How our audit addressed the key audit matters
<b>Revenue recognition for sales of electricity</b> <p>Refer to Note 31 – Revenue</p> <p>Sales of electricity of RM49,702.3 million and RM46,650.4 million is the most significant component of the Group's and the Company's revenue, respectively, for the financial year ended 31 December 2022.</p> <p>Revenue from sales of electricity is based on the end customers' consumption and the related tariff rates, which are governed by the Incentive Based Regulations imposed by the Energy Commission.</p> <p>We focused on the revenue recognition for sales of electricity as it involves the use of complex billing and accounting systems to process large volumes of data with different tariffs based on respective customer categories and consumption.</p>	<p>We performed the following audit procedures:</p> <ul style="list-style-type: none"> <li>Tested the overall information technology general controls of the billing and accounting systems recording the revenue transactions;</li> <li>Tested the application controls within the billing systems over the following: <ul style="list-style-type: none"> <li>maintenance of tariff rates in the billing systems;</li> <li>accuracy of calculation of amounts billed to customers; and</li> <li>recording of revenue transactions.</li> </ul> </li> <li>Tested the billings and revenue adjustments on a sampling basis to assess whether the revenue recognised and revenue adjustments are valid and recorded accurately; and</li> <li>Examined the correspondence with the Energy Commission and assessed whether there were any material matters that would affect revenue recognition.</li> </ul> <p>Based on the above procedures performed, we did not find any material exceptions.</p>
<b>Reinvestment allowance ('RIA') claims</b> <p>Refer to Note 4 – Critical Accounting Estimates and Judgements and Note 42 – Contingent Liabilities</p> <p>The Inland Revenue Board ('IRB') had disallowed the Company's RIA claims for the Years of Assessment ('YAs') 2013, 2014, 2015, 2016, 2017 and 2018 and had issued notices of additional assessments ('Notices') to the Company, amounting in aggregate to RM7,858.6 million.</p> <p>As at 31 December 2022, the Group and Company recorded a tax recoverable of RM3,522.4 million and have not recorded the potential tax liabilities arising from the tax impact if the RIA claims are disallowed and the Company loses its appeal. Based on the legal advice obtained from its tax solicitors on the merits of the cases, the Directors are of the opinion that no provision is required in the financial statements for the potential tax liability up to the reporting date.</p> <p>We focused on this area due to the inherent uncertainties involved in the outcome of judgement on the RIA by the Special Commissioners of Income Tax and by the Kuala Lumpur High Court, including the subsequent notice of appeal filed by IRB before the Court of Appeal.</p>	<p>We performed the following audit procedures:</p> <ul style="list-style-type: none"> <li>Evaluated the Directors' assessment on the basis of recoverability of the tax recoverable of RM3,522.4 million in respect of RIA and the potential tax liabilities in respect of RIA by the IRB by assessing the independent legal confirmations obtained from management's external legal counsel; and</li> <li>Examined the correspondence between the Company and the tax authority and assessed the matters in dispute based on advice from our tax experts to review the basis of applying the relevant tax laws.</li> </ul> <p>Based on the procedures performed above, we did not find any material exceptions to the Directors' judgement in the treatment of the tax recoverable balance and the potential tax liabilities.</p>

**INDEPENDENT AUDITORS' REPORT**

TO THE MEMBERS OF TENAGA NASIONAL BERHAD (INCORPORATED IN MALAYSIA) (REGISTRATION NO. 199001009294 (200866-W))

**REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS (CONTINUED)**

## Key audit matters (continued)

Key audit matters	How our audit addressed the key audit matters
<p><b>Assessment on carrying value of post-employment benefits</b></p> <p>Refer to Note 4 – <i>Critical Accounting Estimates and Judgements and Note 24 – Employee Benefits</i></p> <p>As at 31 December 2022, the Group and Company recorded post-employment benefits of RM11,558.2 million and RM10,904.1 million, respectively.</p> <p>Management assessed the present value of post-employment benefit plans by relying on the actuarial valuation reports from an actuary. The actuarial valuation reports estimated the present value of post-employment benefit plans based on key assumptions that comprised expected rate of salary increases, medical cost inflation and discount rates.</p> <p>We focused on this area because of the significant estimates made by management in determining the present value of post-employment benefit plans.</p>	<p>We performed the following audit procedures:</p> <ul style="list-style-type: none"> <li>• Obtained an understanding of the terms and conditions of the post-employment benefit plans; and</li> <li>• Tested the present value of post-employment benefit plans based on the actuarial valuation reports by performing the following: <ul style="list-style-type: none"> <li>- Discussed with the actuary on the valuation method used and checked that the valuation method is acceptable in accordance with MFRS 119 'Employee Benefits';</li> <li>- Discussed with the actuary on the key assumptions used in the actuarial valuation and checked the reasonableness by comparing to historical data;</li> <li>- Checked the reasonableness of the discount rates with the assistance of our valuation experts by comparing to market yields of high quality government securities at the reporting date;</li> <li>- Checked the membership data used in the actuarial models through inspection of payroll personnel files and other supporting documents; and</li> <li>- Compared the fair value of plan assets based on the actuary report against the trustee's report.</li> </ul> </li> </ul> <p>Based on the procedures performed above, we did not find any material exceptions to the Directors' estimates of the post-employment benefits carrying value.</p>
<p><b>Assessment of funding requirements and ability to meet the short term obligations</b></p> <p>Refer to Note 45(b) – <i>Financial Instruments - Financial Risk Management - Liquidity risk</i></p> <p>As at 31 December 2022, the Company was in a net current liabilities ('NCL') position of RM1,434.6 million.</p> <p>The cash flow forecast has been prepared for the next 12 months for the Company, taking into account the expected revenue growth rates, customer collection trends, low rate of termination of electricity account that would crystallise the entire consumer deposit which amounts to RM7,185.7 million and any one-off transactions within the next 12 months. Based on the cash flow forecast, the Company is able to generate sufficient internal cash flows from operations for the next 12 months from the reporting date to meet operational and financing needs as and when they fall due. In addition, as at 31 December 2022, the Company also has undrawn borrowing facilities amounting to RM10,815.6 million.</p> <p>We focused on this area due to the inherent uncertainties and the judgement taken by management in forecasting future cash flows and determining the availability of financing to fund the operations of the Company for the next 12 months.</p>	<p>We performed the following audit procedures:</p> <ul style="list-style-type: none"> <li>• Assessed the reliability of management's cash flow forecast for the Company over the period of 12 months from the date of the financial statements against previous forecasted results;</li> <li>• Discussed with management on key assumptions used in the cash flow forecast, including the expected revenue growth rates, customer collection trends, low rate of termination of electricity account that would crystallise the entire consumer deposit and significant transactions that may occur within the next 12 months in developing the cash flow forecast for the Company;</li> <li>• Compared management's estimate of the Company's cash collection trend from customers and the Government against historical collection trends for monthly electricity sales and ICPT surcharges;</li> <li>• Assessed the reasonableness of coal and gas price assumed in management's cash flow for the next 12 months against third party industry reports;</li> <li>• Reviewed past trends of consumer deposits refunds to assess the likelihood of repayment;</li> </ul>

## INDEPENDENT AUDITORS' REPORT

TO THE MEMBERS OF TENAGA NASIONAL BERHAD (INCORPORATED IN MALAYSIA) (REGISTRATION NO. 199001009294 (200866-W))

### REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS (CONTINUED)

Key audit matters (continued)

Key audit matters	How our audit addressed the key audit matters
<b>Assessment of funding requirements and ability to meet the short term obligations (continued)</b>	<p>We performed the following audit procedures: (continued)</p> <ul style="list-style-type: none"> <li>• Checked the borrowing repayment profile of the Company against the loan agreements; and</li> <li>• Checked the extent of undrawn facilities available to the Company.</li> </ul> <p>Based on the procedures performed above, we did not find any material exceptions to the Directors' assessment that the Company will be able to meet its short term obligations.</p>

Information other than the financial statements and auditors' report thereon

The Directors of the Company are responsible for the other information. The other information comprises the Directors' Report, Statement on Risk Management and Internal Control and the Board Risk Committee Report, but does not include the financial statements of the Group and of the Company and our auditors' report thereon.

Our opinion on the financial statements of the Group and of the Company does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements of the Group and of the Company, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements of the Group and of the Company or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Directors for the financial statements

The Directors of the Company are responsible for the preparation of the financial statements of the Group and of the Company that give a true and fair view in accordance with Malaysian Financial Reporting Standards, International Financial Reporting Standards and the requirements of the Companies Act 2016 in Malaysia. The Directors are also responsible for such internal control as the Directors determine is necessary to enable the preparation of financial statements of the Group and of the Company that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements of the Group and of the Company, the Directors are responsible for assessing the Group's and the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or the Company or to cease operations, or have no realistic alternative but to do so.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements of the Group and of the Company as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with approved standards on auditing in Malaysia and International Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

**INDEPENDENT AUDITORS' REPORT**

TO THE MEMBERS OF TENAGA NASIONAL BERHAD (INCORPORATED IN MALAYSIA) (REGISTRATION NO. 199001009294 (200866-W))

**REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS (CONTINUED)**Auditors' responsibilities for the audit of the financial statements (continued)

As part of an audit in accordance with approved standards on auditing in Malaysia and International Standards on Auditing, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- (a) Identify and assess the risks of material misstatement of the financial statements of the Group and of the Company, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- (b) Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's and of the Company's internal control.
- (c) Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Directors.
- (d) Conclude on the appropriateness of the Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's or on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements of the Group and of the Company or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group or the Company to cease to continue as a going concern.
- (e) Evaluate the overall presentation, structure and content of the financial statements of the Group and of the Company, including the disclosures, and whether the financial statements of the Group and of the Company represent the underlying transactions and events in a manner that achieves fair presentation.
- (f) Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the financial statements of the Group. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Directors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with the Directors, we determine those matters that were of most significance in the audit of the financial statements of the Group and of the Company for the current financial year and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

## INDEPENDENT AUDITORS' REPORT

TO THE MEMBERS OF TENAGA NASIONAL BERHAD (INCORPORATED IN MALAYSIA) (REGISTRATION NO. 199001009294 (200866-W))

### REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

In accordance with the requirements of the Companies Act 2016 in Malaysia, we report that the subsidiaries of which we have not acted as auditors, are disclosed in Note 7 to the financial statements.

### OTHER MATTERS

This report is made solely to the member of the Company, as a body, in accordance with Section 266 of the Companies Act 2016 in Malaysia and for no other purpose. We do not assume responsibility to any other person for the content of this report.



PRICEWATERHOUSECOOPERS PLT  
LLP0014401-LCA & AF 1146  
Chartered Accountants

PAULINE HO  
02684/11/2023 J  
Chartered Accountant

Kuala Lumpur  
20 March 2023

# CORPORATE INFORMATION

## BOARD OF DIRECTORS

**DATO' ABDUL RAZAK BIN ABDUL MAJID**

Chairman  
Non-Independent Non-Executive Director  
(Appointed w.e.f. 27 March 2023)

**DATO' INDERA IR. BAHARIN BIN DIN**

President/Chief Executive Officer  
Non-Independent Executive Director

**DATIN RASHIDAH BINTI MOHD SIES**

Non-Independent Non-Executive Director  
(Appointed w.e.f. 10 April 2023)

**DATUK AMRAN HAFIZ BIN AFFIFUDIN**

Non-Independent Non-Executive Director

**ROHAYA BINTI MOHAMMAD YUSOF**

Non-Independent Non-Executive Director  
(Appointed w.e.f. 20 March 2023)

**ONG AI LIN**

Senior Independent Non-Executive Director  
(Redesignated w.e.f. 30 September 2022)

**JUNIWATI RAHMAT HUSSIN**

Independent Non-Executive Director

**GOPALA KRISHNAN K.SUNDARAM**

Independent Non-Executive Director

**DATO' ROSLINA BINTI ZAINAL**

Independent Non-Executive Director

**DATUK RAWISANDRAN A/L NARAYANAN**

Independent Non-Executive Director

**DATO' MERINA BINTI ABU TAHIR**

Independent Non-Executive Director

**ELAINE ONG YEE LYNN**

(Alternate Director to Datuk Amran Hafiz bin Affifudin)  
Non-Independent Non-Executive Director  
(Appointed w.e.f. 20 March 2023)

**DATO' IR. NAWAWI BIN AHMAD**

Independent Non-Executive Director  
(Demised on 28 November 2022)

**DATO' SRI HASAN BIN ARIFIN**

Chairman  
Non-Independent Non-Executive Director  
(Cessation of Office as Chairman w.e.f. 1 January 2023)

**DATUK SERI ASRI BIN HAMIDIN @ HAMIDON**

Non-Independent Non-Executive Director  
(Cessation of Office as Director w.e.f. 5 January 2023)

**FAISAL @ PISAL BIN ABDUL GHANI**

(Alternate Director to Datuk Seri Asri bin Hamidin @  
Hamidon)  
Non-Independent Non-Executive Director  
(Cessation of Office as Alternate Director w.e.f. 5 January 2023)

**DATUK LAU BENG WEI**

Independent Non-Executive Director  
(Resigned w.e.f. 6 March 2023)

**SENIOR INDEPENDENT  
NON-EXECUTIVE DIRECTOR**
**ONG AI LIN**

Email : ongailin.integrity@tnb.com.my

**COMPANY SECRETARY**

**Norazni binti Mohd Isa**  
(LS 0009635)

(SSM Practicing Certificate No. 201908000492)

**SHARE REGISTRAR**
**Boardroom Share Registrars Sdn. Bhd.**

199601006647 (378993-D)  
11<sup>th</sup> Floor, Menara Symphony  
No. 5, Jalan Prof. Khoo Kay Kim  
Seksyen 13  
46200 Petaling Jaya  
Selangor Darul Ehsan  
Malaysia

Telephone : +603-7890 4700  
Facsimile : +603-7890 4670  
Website : www.boardroomlimited.com.my  
Email : bsr.helpdesk@boardroomlimited.com

**DIVIDEND SERVICE PROVIDER**
**Bursa Malaysia Depository Sdn. Bhd.**

198701006854 (165570-W)  
9<sup>th</sup> Floor, Exchange Square  
Bukit Kewangan  
50200 Kuala Lumpur  
Malaysia

Telephone : +603-2034 7363  
Facsimile : +603-2732 6163

**PRINCIPAL BANKER**

**Malayan Banking Berhad**  
196001000142 (3813-K)

**EXTERNAL AUDITORS**
**Messrs PricewaterhouseCoopers PLT**

(LLP0014401-LCA & AF 1146)

Chartered Accountants

Level 10, Menara TH 1 Sentral

Jalan Rakyat

Kuala Lumpur Sentral

P.O. Box 10192

50706 Kuala Lumpur

Malaysia

Telephone : +603-2173 1188

Facsimile : +603-2173 1288

**REGISTERED OFFICE**
**Tenaga Nasional Berhad**

199001009294 (200866-W)

Pejabat Setiausaha Syarikat

Tingkat 16, Tower A, TNB Platinum

No. 3, Jalan Bukit Pantai, Bangsar

59100 Kuala Lumpur

Malaysia

(Change of Registered Office w.e.f. 1 January 2023)

**Official Communication Channels:**

Telephone : +603-2296 5566

Facsimile : +603-2283 3686

Website : www.tnb.com.my

TNB Careline : 15454

(for power outage or

TNB street light malfunction)

: 1-300-88-5454

(for billing and account enquiries)

Online Whistleblowing : wbis.tnb.com.my

Information System

Toll Free : 1-800-888-862

**INVESTOR RELATIONS**
**CoE Investor Relations**

Group Finance Division

Tenaga Nasional Berhad

Level 12, Tower A, TNB Platinum

No. 3, Jalan Bukit Pantai, Bangsar

59100 Kuala Lumpur

Malaysia

Telephone : +603-2108 2128

Facsimile : +603-2108 2034

Email : tenaga\_ird@tnb.com.my

**STOCK EXCHANGE LISTING**

Main Market of Bursa Malaysia Securities Berhad

(Listed since 28 May 1992)

Stock Code : 5347

Stock Name : TENAGA

**AMERICAN DEPOSITORY  
RECEIPTS PROGRAMME (ADR)**

ADR Level 1

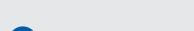
**ANNUAL GENERAL MEETING HELP DESK**

Telephone : +603-2107 4515/4517

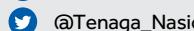
Share Administration Section

Company Secretary's Office

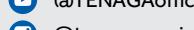
Tenaga Nasional Berhad



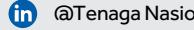
@TNB Careline



@Tenaga\_Nasional



@TENAGAofficial



@tenaga\_nasional



@Tenaga Nasional Berhad



@tenaga\_nasional

# STATISTICS OF SHAREHOLDINGS

AS AT 6 MARCH 2023

## SHARE CAPITAL

Issued Shares : 5,753,077,371 Ordinary Shares  
One (1) Special Rights Redeemable Preference Share

Voting Right : One (1) vote per ordinary share

## ANALYSIS BY SIZE OF SHAREHOLDINGS

Size of Shareholdings	No. of Shareholders		Total No. of Shareholders		No. of Issued Shares		Total No. of Issued Shares	
	Malaysian	Foreigner	No.	%	Malaysian	Foreigner	No.	%
1 - 99	2,055	32	2,087	1.78	61,855	902	62,757	0.00
100 - 1,000	49,512	370	49,882	42.52	29,946,071	221,278	30,167,349	0.52
1,001 - 10,000	55,050	556	55,606	47.40	187,522,760	2,213,175	189,735,935	3.30
10,001 - 100,000	8,272	380	8,652	7.37	202,271,807	13,990,207	216,262,014	3.76
100,001 - less than 5% of issued shares	665	425	1,090	0.93	1,355,830,829	725,659,027	2,081,489,856	36.18
5% and above of issued shares	4	0	4	0.00	3,235,359,460	0	3,235,359,460	56.24
<b>Total</b>	<b>115,558</b>	<b>1,763</b>	<b>117,321</b>	<b>100.00</b>	<b>5,010,992,782</b>	<b>742,084,589</b>	<b>5,753,077,371</b>	<b>100.00</b>

## ANALYSIS OF EQUITY STRUCTURE

No.	Category of Shareholders	No. of Shareholders		No. of Issued Shares		% of Issued Shares	
		Malaysian	Foreigner	Malaysian	Foreigner	Malaysian	Foreigner
1.	Individuals	90,978	694	363,040,701	8,067,500	6.31	0.14
2.	Body Corporate						
	a. Banks/Finance Companies	108	1	1,680,619,851	14,700	29.21	0.00
	b. Investment Trusts/Foundation/Charities	9	0	299,062	0	0.01	0.00
	c. Other Type of Companies	784	16	56,609,222	6,431,237	0.98	0.11
3.	Government Agencies/Institutions	19	0	1,475,836,511	0	25.65	0.00
4.	Nominees	23,658	1,052	1,434,584,308	727,571,152	24.94	12.65
5.	Others	2	0	3,127	0	0.00	0.00
<b>Total</b>		<b>115,558</b>	<b>1,763</b>	<b>5,010,992,782</b>	<b>742,084,589</b>	<b>87.10</b>	<b>12.90</b>

**STATISTICS OF SHAREHOLDINGS****DIRECTORS' SHAREHOLDINGS**

No.	Name of Directors	No. of Shares	
		Direct Interest	%
1.	Dato' Indera Ir. Baharin bin Din	116,700	0.00
2.	Datuk Amran Hafiz bin Affifudin	0	0.00
3.	Ong Ai Lin	0	0.00
4.	Juniwati Rahmat Hussin	0	0.00
5.	Gopala Krishnan K.Sundaram	0	0.00
6.	Dato' Roslina binti Zainal	18,400	0.00
7.	Datuk Rawisandran a/l Narayanan	0	0.00
8.	Dato' Merina binti Abu Tahir	0	0.00

**SUBSTANTIAL SHAREHOLDERS ACCORDING TO THE REGISTER OF SUBSTANTIAL SHAREHOLDERS**

No.	Name of Substantial Shareholders	No. of Shares	%
1.	Khazanah Nasional Berhad*	1,462,432,404	25.42
2.	Employees Provident Fund Board**	925,734,972	16.09
3.	Amanah Saham Bumiputera***	582,399,500	10.12
4.	Kumpulan Wang Persaraan (Diperbadankan)****	423,734,658	7.37
<b>Total</b>		<b>3,394,301,534</b>	<b>59.00</b>

## Notes:

\* Khazanah Nasional Berhad

- Registered with Citigroup Nominees (Tempatan) Sdn. Bhd. (4,911,590)

- Registered with CGS-CIMB Nominees (Tempatan) Sdn. Bhd. (1,911,590)

\*\* Registered with Citigroup Nominees (Tempatan) Sdn. Bhd.

\*\*\* Registered with AmanahRaya Trustees Berhad

\*\*\*\* Kumpulan Wang Persaraan (Diperbadankan)

- Registered with Citigroup Nominees (Tempatan) Sdn. Bhd. (30,476,100)

**TOP 30 SECURITIES ACCOUNT HOLDERS**

No.	Name of Shareholders	No. of Shares	%
1.	Khazanah Nasional Berhad	1,455,609,224	25.30
2.	Citigroup Nominees (Tempatan) Sdn. Bhd. Employees Provident Fund Board	804,092,178	13.98
3.	AmanahRaya Trustees Berhad Amanah Saham Bumiputera	582,399,500	10.12
4.	Kumpulan Wang Persaraan (Diperbadankan)	393,258,558	6.84
5.	Permodalan Nasional Berhad	130,611,800	2.27

## STATISTICS OF SHAREHOLDINGS

No.	Name of Shareholders	No. of Shares	%
6.	AmanahRaya Trustees Berhad <i>Amanah Saham Malaysia 2 - Wawasan</i>	101,714,800	1.77
7.	AmanahRaya Trustees Berhad <i>Amanah Saham Malaysia</i>	91,744,100	1.59
8.	Cartaban Nominees (Asing) Sdn. Bhd. <i>Exempt AN For State Street Bank &amp; Trust Company (West CLT OD67)</i>	53,755,462	0.93
9.	Lembaga Tabung Haji	47,985,400	0.83
10.	HSBC Nominees (Asing) Sdn. Bhd. <i>JPMCB NA For Vanguard Emerging Markets Stock Index Fund</i>	44,871,251	0.78
11.	AmanahRaya Trustees Berhad <i>Amanah Saham Bumiputera 2</i>	44,535,700	0.77
12.	Maybank Nominees (Tempatan) Sdn. Bhd. <i>Maybank Trustees Berhad For Public Ittikal Fund (N14011970240)</i>	43,000,000	0.75
13.	HSBC Nominees (Asing) Sdn. Bhd. <i>JPMCB NA For Vanguard Total International Stock Index Fund</i>	42,457,450	0.74
14.	AmanahRaya Trustees Berhad <i>Amanah Saham Malaysia 3</i>	38,532,600	0.67
15.	AmanahRaya Trustees Berhad <i>Amanah Saham Bumiputera 3 - Didik</i>	36,535,992	0.64
16.	Pertubuhan Keselamatan Sosial	35,472,720	0.62
17.	Citigroup Nominees (Tempatan) Sdn. Bhd. <i>Employees Provident Fund Board (Nomura)</i>	34,229,600	0.59
18.	AmanahRaya Trustees Berhad <i>Public Islamic Dividend Fund</i>	31,462,975	0.55
19.	Citigroup Nominees (Asing) Sdn. Bhd. <i>CB Spore GW For Government Of Singapore (GIC C)</i>	31,392,750	0.55
20.	Citigroup Nominees (Tempatan) Sdn. Bhd. <i>Great Eastern Life Assurance (Malaysia) Berhad (PAR 1)</i>	31,341,525	0.54
21.	Cartaban Nominees (Tempatan) Sdn. Bhd. <i>PAMB For Prulink Equity Fund</i>	24,033,950	0.42
22.	AmanahRaya Trustees Berhad <i>Public Ittikal Sequel Fund</i>	23,403,900	0.41
23.	HSCB Nominees (Asing) Sdn. Bhd. <i>JPMCB NA For Vanguard Fiduciary Trust Company Institutional Total International Stock Market Index Trust II</i>	19,238,200	0.33
24.	Citigroup Nominees (Tempatan) Sdn. Bhd. <i>Employees Provident Fund Board (CIMB PRIN)</i>	18,502,500	0.32
25.	Cartaban Nominees (Asing) Sdn. Bhd. <i>BNYM SA/NV For People's Bank Of China (SICL ASIA EM)</i>	18,441,400	0.32
26.	AmanahRaya Trustees Berhad <i>Public Islamic Equity Fund</i>	17,967,137	0.31
27.	HSBC Nominees (Asing) Sdn. Bhd. <i>JPMCB NA For Blackrock Institutional Trust Company, N.A. Investment Funds For Employee Benefit Trusts</i>	17,941,094	0.31
28.	Cartaban Nominees (Asing) Sdn. Bhd. <i>BBH Co Boston For Fidelity Salem Street Trust - Fidelity SAI Emerging Markets Low Volatility Index Fund</i>	17,721,800	0.31
29.	HSBC Nominees (Asing) Sdn. Bhd. <i>TNTC For General Organization For Social Insurance</i>	17,191,100	0.30
30.	Cartaban Nominees (Tempatan) Sdn. Bhd. <i>PBTB For Takafulink Dana Ekuiti</i>	16,469,250	0.29
<b>Total</b>		<b>4,265,913,916</b>	<b>74.15</b>

# NET BOOK VALUE OF LAND AND BUILDINGS

As at 31 December 2022

Property List Location	LAND						BUILDINGS					
	No. of Lots (1)	Leasehold Area (sq M) (2)	NBV (RM'000) (3)	No. of Lots (4)	Freehold Area (sq M) (5)	NBV (RM'000) (6)	No. of Lots (1+4)	Area (sq M) (2+5)	NBV (RM'000) (3+6)	No. (7)	Built-Up Area (sq M) (8)	Total NBV (RM'000) (9)
Perlis	51	156,976	1,626	417	98,183	10,608	468	255,159	12,234	64	6,433	17,507
Kedah	298	1,020,183	13,659	798	2,817,145	187,369	1,096	3,837,328	201,028	369	104,584	221,127
Pulau Pinang	195	693,528	82,973	716	985,356	103,833	911	1,678,884	186,806	383	160,491	749,651
Perak	780	6,164,128	317,827	1,342	10,169,352	410,925	2,122	16,333,480	728,752	1,026	679,063	2,373,306
Selangor	1,010	12,975,256	586,204	1,922	4,975,265	1,078,750	2,932	17,950,521	1,664,954	1,908	927,619	2,558,819
W.Persekutuan	383	288,394	58,909	543	637,261	210,138	926	925,655	269,047	924	358,916	1,605,166
Putrajaya/Cyberjaya	9	759,954	13,035	16	1,554	1,706	25	761,508	14,741	65	8,905	37,716
N.Sembilan	288	1,808,571	131,845	792	1,118,745	244,551	1,080	2,927,316	376,396	271	395,595	1,063,648
Melaka	365	640,502	22,407	1,094	233,320	321,048	1,459	873,822	343,455	101	163,146	227,960
Johor	960	3,485,668	420,220	1,442	1,166,750	323,998	2,402	4,652,418	744,218	583	232,787	1,534,370
Pahang	390	3,249,727	50,852	1,054	306,026	313,488	1,444	3,555,753	364,340	449	380,874	3,959,475
Terengganu	366	6,977,714	28,618	454	11,030,961	114,508	820	18,008,675	143,126	300	515,939	1,722,381
Kelantan	364	1,288,363	7,687	377	2,296,831	31,377	741	3,585,194	39,064	349	354,691	772,278
Sabah	356	6,264,600	79,235	60	4,501,754	35,523	416	10,766,354	114,758	2,769	652,827	422,800
Kuwait	0	0	0	0	0	0	0	0	0	3	1,000	52
United Kingdom	88	12,272,092	277,203	0	0	0	88	12,272,092	277,203	0	0	0
<b>Total</b>	<b>5,903</b>	<b>58,045,656</b>	<b>2,092,300</b>	<b>11,027</b>	<b>40,338,503</b>	<b>3,387,822</b>	<b>16,930</b>	<b>98,384,159</b>	<b>5,480,122</b>	<b>9,564</b>	<b>4,942,870</b>	<b>17,266,256</b>

The land and buildings comprise power stations, mini hydros, jetties, dams, substations, residential houses, apartments, holiday bungalows, office buildings, warehouses, stores and workshops.

# NOTICE OF THE 33<sup>RD</sup> ANNUAL GENERAL MEETING

**NOTICE IS HEREBY GIVEN THAT** the Thirty Third Annual General Meeting (33<sup>rd</sup> AGM) of Tenaga Nasional Berhad (TNB or the Company) will be held on **Thursday, 18 May 2023 at 10.00 a.m.**, virtually via Remote Participation and Voting (RPV) at **Pusat Konvensyen Leo Moggie, TNB Platinum, No. 3, Jalan Bukit Pantai, Bangsar, 59100 Kuala Lumpur, Malaysia (the Broadcast Venue)** to transact the following businesses:

## AGENDA

### AS ORDINARY BUSINESS:

1. To receive the Audited Financial Statements for the Financial Year ended 31 December 2022 together with the Reports of the Directors and Auditors thereon.  
*Please refer to Explanatory Note (a)*
  
2. To re-elect the following Directors who retire by rotation in accordance with Clause 64(1) of the Company's Constitution and being eligible offer themselves for re-election:
 

(i)    Juniwati Rahmat Hussin (ii)   Gopala Krishnan K.Sundaram (iii)   Datuk Rawisandran a/l Narayanan <i>Please refer to Explanatory Note (b)</i>	<b>Ordinary Resolution 1</b> <b>Ordinary Resolution 2</b> <b>Ordinary Resolution 3</b>
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3. To re-elect the following Directors who were appointed to the Board and retire in accordance with Clause 63(2) of the Company's Constitution and being eligible offer themselves for re-election:
 

(i)    Dato' Abdul Razak bin Abdul Majid (ii)   Datin Rashidah binti Mohd Sies (iii)   Rohaya binti Mohammad Yusof <i>Please refer to Explanatory Note (b)</i>	<b>Ordinary Resolution 4</b> <b>Ordinary Resolution 5</b> <b>Ordinary Resolution 6</b>
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4. To approve the payment of the following Non-Executive Directors' fees from the 33<sup>rd</sup> AGM until the next Annual General Meeting (AGM) of the Company:
 

(i)   Director's fee of RM30,000.00 per month to Dato' Abdul Razak bin Abdul Majid, Non-Executive Chairman  (ii)   Director's fee of RM7,000.00 and RM5,000.00 per month for TNB Subsidiaries Category II and III respectively to Dato' Abdul Razak bin Abdul Majid, Non-Executive Chairman  (iii)   Director's fee of RM20,000.00 per month for the following Non-Executive Directors: a.   Datin Rashidah binti Mohd Sies b.   Rohaya binti Mohammad Yusof c.   Ong Ai Lin d.   Juniwati Rahmat Hussin e.   Gopala Krishnan K.Sundaram f.   Dato' Roslina binti Zainal g.   Datuk Rawisandran a/l Narayanan h.   Dato' Merina binti Abu Tahir <i>Please refer to Explanatory Note (c)</i>	<b>Ordinary Resolution 7</b>  <b>Ordinary Resolution 8</b> <b>Ordinary Resolution 9</b> <b>Ordinary Resolution 10</b> <b>Ordinary Resolution 11</b> <b>Ordinary Resolution 12</b> <b>Ordinary Resolution 13</b> <b>Ordinary Resolution 14</b> <b>Ordinary Resolution 15</b>
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5. To approve the payment of benefits payable to the Non-Executive Directors (excluding Non-Executive Directors' fees) amounting to RM1,760,400.00 from the 33<sup>rd</sup> AGM until the next AGM of the Company.  
*Please refer to Explanatory Note (c)*
  
6. To re-appoint Messrs PricewaterhouseCoopers PLT, having consented to act, as Auditors of the Company, to hold office until the conclusion of the next AGM and to authorise the Directors to fix their remuneration.  
*Please refer to Explanatory Note (d)*

**NOTICE OF THE 33<sup>RD</sup> ANNUAL GENERAL MEETING****AS SPECIAL BUSINESS:**

To consider and if thought fit, to pass the following Resolutions:

7. Proposed Grant and Allotment of Shares to Abdul Latif bin Abdul Razak.

"THAT the Board (save for Dato' Abdul Razak bin Abdul Majid) be and is hereby authorised at any time and from time to time, to cause or procure the offering and allocation to Abdul Latif bin Abdul Razak, Senior Executive of the Company, being Person Connected to Dato' Abdul Razak bin Abdul Majid, of up to 15,600 ordinary shares in TNB (TNB Shares) under the Long Term Incentive Plan for the Eligible Employees of TNB and Its Subsidiaries and Executive Directors of TNB (LTIP) as they shall deem fit, which will be vested to him at a future date, subject to such terms and conditions of the LTIP By-Laws."

"AND THAT the Board be and is hereby authorised to allot and issue new TNB Shares pursuant to the LTIP to him from time to time in accordance with the vesting of his Grant."

*Please refer to Explanatory Note (e)*

**Ordinary Resolution 18**

8. Proposed Grant and Allotment of Shares to Noor 'Asyikin binti Mohamad Zin.

"THAT the Board (save for Dato' Abdul Razak bin Abdul Majid) be and is hereby authorised at any time and from time to time, to cause or procure the offering and allocation to Noor 'Asyikin binti Mohamad Zin, Executive of the Company, being Person Connected to Dato' Abdul Razak bin Abdul Majid, of up to 2,700 TNB Shares under the LTIP as they shall deem fit, which will be vested to her at a future date, subject to such terms and conditions of the LTIP By-Laws."

"AND THAT the Board be and is hereby authorised to allot and issue new TNB Shares pursuant to the LTIP to her from time to time in accordance with the vesting of her Grant."

*Please refer to Explanatory Note (e)*

**Ordinary Resolution 19**

9. Proposed Grant and Allotment of Shares to Mohd Mirza bin Abdul Gani.

"THAT the Board (save for Dato' Indera Ir. Baharin bin Din) be and is hereby authorised at any time and from time to time, to cause or procure the offering and allocation to Mohd Mirza bin Abdul Gani, Executive of the Company, being Person Connected to Dato' Indera Ir. Baharin bin Din, of up to 2,700 TNB Shares under the LTIP as they shall deem fit, which will be vested to him at a future date, subject to such terms and conditions of the LTIP By-Laws."

"AND THAT the Board be and is hereby authorised to allot and issue new TNB Shares pursuant to the LTIP to him from time to time in accordance with the vesting of his Grant."

*Please refer to Explanatory Note (e)*

**Ordinary Resolution 20**

10. Proposed Grant and Allotment of Shares to Nurdiana Munira binti Sa'id.

"THAT the Board (save for Dato' Roslina binti Zainal) be and is hereby authorised at any time and from time to time, to cause or procure the offering and allocation to Nurdiana Munira binti Sa'id, Executive of the Company, being Person Connected to Dato' Roslina binti Zainal, of up to 2,900 TNB Shares under the LTIP as they shall deem fit, which will be vested to her at a future date, subject to such terms and conditions of the LTIP By-Laws."

"AND THAT the Board be and is hereby authorised to allot and issue new TNB Shares pursuant to the LTIP to her from time to time in accordance with the vesting of her Grant."

*Please refer to Explanatory Note (e)*

**Ordinary Resolution 21**

## NOTICE OF THE 33<sup>RD</sup> ANNUAL GENERAL MEETING

11. Proposed Grant and Allotment of Shares to Farah Yasmin binti Sa'id.

"THAT the Board (save for Dato' Roslina binti Zainal) be and is hereby authorised at any time and from time to time, to cause or procure the offering and allocation to Farah Yasmin binti Sa'id, Executive of the Company, being Person Connected to Dato' Roslina binti Zainal, of up to 1,500 TNB Shares under the LTIP as they shall deem fit, which will be vested to her at a future date, subject to such terms and conditions of the LTIP By-Laws."

"AND THAT the Board be and is hereby authorised to allot and issue new TNB Shares pursuant to the LTIP to her from time to time in accordance with the vesting of her Grant."

*Please refer to Explanatory Note (e)*

**Ordinary Resolution 22**

12. To transact any other business of which due notice shall have been given in accordance with the Companies Act 2016 (Act).

**FURTHER NOTICE IS HEREBY GIVEN THAT** for the purpose of determining a member who shall be entitled to attend this 33<sup>rd</sup> AGM, the Company shall be requesting Bursa Malaysia Depository Sdn. Bhd. (Bursa Depository) in accordance with Clause 45(2) of the Company's Constitution and Section 34(1) of the Securities Industry (Central Depositories) Act 1991 (SICDA) to issue a General Meeting Record of Depositors (ROD) as at 10 May 2023. Only a depositor whose name appears on the ROD as at 10 May 2023 shall be entitled to attend the said Meeting or appoint proxy/proxies to attend and/or vote on his/her behalf.

### BY ORDER OF THE BOARD

**NORAZNI BINTI MOHD ISA**

(LS 0009635)

(SSM Practicing Certificate No. 201908000492)

Company Secretary

Kuala Lumpur

17 April 2023

### EXPLANATORY NOTES ON ORDINARY BUSINESSES:

- (a) **Agenda No. 1** is meant for discussion only as the provision of Section 340(1)(a) of the Act does not require shareholders' approval for the Audited Financial Statements. As such, it is not put forward for voting.
- (b) **Ordinary Resolutions 1 to 6 – Proposed Re-election of Directors in accordance with Clauses 64(1) and 63(2) of the Company's Constitution**

Clause 64(1) of the Company's Constitution provides among others, that one-third (1/3) of the Directors at the time being of whom have been longest in office shall retire by rotation at the AGM of the Company and shall be eligible for re-election.

Clause 63(2) of the Company's Constitution provides among others, that the Directors shall have power at any time and from time to time to appoint any other person to be a Director of the Company either to fill a casual vacancy or as an addition to the existing Directors. Any Director so appointed shall hold office only until the next following AGM of the Company and shall then be eligible for re-election.

The Board with the assistance of the Board Nomination and Remuneration Committee (BNRC) conducted an independence assessment of all Independent Directors including Juniwati Rahmat Hussin, Gopala Krishnan K.Sundaram and Datuk Rawisandran a/l Narayanan and are satisfied that they have complied with the independence criteria as required by the Main Market Listing Requirements of Bursa Malaysia Securities Berhad (MMLR) and continue to bring independent and objective judgment to the Board deliberations.

The BNRC and Board also considered the Board Evaluation Assessment including the Self and Peer Assessment results of Juniwati Rahmat Hussin, Gopala Krishnan K.Sundaram and Datuk Rawisandran a/l Narayanan and agreed that they have met the Board's expectation in terms of experience, expertise, integrity, competency, commitment and individual contribution by continuously performing their duties diligently as Company Directors.

Based on the Board Evaluation Assessment, the retiring Directors who are standing for re-election have fulfilled the fit and proper assessment that comprises character & integrity, experience & competence and time & commitment.

## NOTICE OF THE 33<sup>RD</sup> ANNUAL GENERAL MEETING

The Board on 23 March 2023 had approved, with the concurrence of Minister of Finance (Incorporated) (MoF Inc.), the Special Shareholder of TNB for the appointment of Dato' Abdul Razak bin Abdul Majid as Chairman, Non-Independent Non-Executive Director with effect from 27 March 2023. Prior to that the Board on 20 March 2023 approved the appointment of Rohaya binti Mohammad Yusof as Non-Independent Non-Executive Director, representing Employees Provident Fund with effect from 20 March 2023.

The Board on 10 April 2023 had approved on the appointment of Datin Rashidah binti Mohd Sies with the concurrence of MoF Inc. as Non-Independent Non-Executive Director of TNB.

The BNRC and Board hereby recommend for the re-election of each Director who is retiring at the 33<sup>rd</sup> AGM.

(c) **Ordinary Resolutions 7 to 16 – Non-Executive Directors’ Remuneration**

Section 230(1) of the Act stipulates among others that the fees and any benefits payable to the Directors of a listed company and its subsidiaries shall be approved at a general meeting. As agreed by the Board, the shareholders’ approval shall be sought at the 33<sup>rd</sup> AGM on the Non-Executive Directors’ remuneration of the Company and TNB Subsidiaries Category II and III through separate resolutions as follows:

- (i) **Ordinary Resolutions 7 to 15** on the payment of Non-Executive Directors’ fees for the Non-Executive Chairman and each Non-Executive Director separately from the 33<sup>rd</sup> AGM until the next AGM of the Company.
- (ii) **Ordinary Resolution 16** on the payment of benefits payable (excluding Non-Executive Directors’ fees) to the Non-Executive Directors from the 33<sup>rd</sup> AGM until the next AGM of the Company.

The last increment of the Non-Executive Directors remuneration/benefits payable was made in 2013. The Board in 2021 engaged Willis Towers Watson to undertake Non-Executive Directors’ Remuneration Benchmarking exercise. Based on the findings, the structure of Non-Executive Directors’ remuneration (including benefits) was generally aligned with the market practice and the existing remuneration is recommended to be retained and reviewed in three (3) years’ time.

The proposed Ordinary Resolutions 7 to 16 for the payment of Directors’ fees and benefits payable to the Non-Executive Directors of the Company from the 33<sup>rd</sup> AGM until the conclusion of the next AGM are tabled herewith in line with the provision of the Act and Guidance 7.2 of the Malaysian Code on Corporate Governance 2021 to ensure full disclosure.

No separate resolution for Khazanah Nasional Berhad (Khazanah) Nominee Director, Datuk Amran Hafiz bin Affifudin including his Alternate Director, in lieu of Khazanah’s waiver of Director’s fees and meeting allowances to its Nominee Directors who are Khazanah employees. The said waiver is applicable to all Khazanah’s investee companies.

The Non-Executive Directors remuneration policy of TNB and its subsidiaries is as follows:

Description	TNB Board		TNB Subsidiaries		
	Chairman	Non-Executive Directors	Chairman	Non-Executive Directors**	
Monthly fixed fees	RM30,000 per month	RM20,000 per month	Category I – RM20,000 Category II – RM7,000 Category III – RM5,000	Category I – RM15,000 Category II – RM5,000 Category III – RM3,000	
*Meeting Allowances (per meeting)					
(i) Board	RM2,500	RM2,000	Category I – RM2,000 Category II & III – RM1,500	Category I – RM1,500 Category II & III – RM1,000	
(ii) Board Committees	RM2,000	RM1,500	Category I – RM1,500 Category II & III – RM1,000	Category I – RM1,000 Category II & III – RM800	
Benefits	Medical, Business Peripherals, Utilities Bills, Travelling & Telecommunication and other claimable benefits				

\* subject to not more than three (3) payments in a month.

\*\* save for TNB Non-Executive Chairman, none of TNB Non-Executive Directors are currently on the board of TNB subsidiaries.

In determining the estimated total amount of benefits payable, the Board had considered various factors including the number of scheduled and special meetings for the Board, Board Committees and boards of subsidiaries along with the number of Non-Executive Directors involved.

Payment of Non-Executive Directors’ benefits will be made by the Company and its subsidiaries on a monthly basis and/or as and when incurred, provided that the proposed Ordinary Resolution 16 be passed at the 33<sup>rd</sup> AGM. The Board is of the view that it is fair and justifiable for the payment of benefits to the Non-Executive Directors be made as and when incurred, after the Non-Executive Directors have discharged their responsibilities and rendered their services to the Company.

Details of the Directors’ Remuneration for the Financial Year ended 31 December 2022 are enumerated on page 180 of the Corporate Governance Overview Statement of this Integrated Annual Report.

(d) **Ordinary Resolution 17 – Re-appointment of Auditors**

Based on the External Auditors Assessment Result for the Financial Year under review, the Board Audit Committee and Board are satisfied with the quality of service, adequacy of resources provided, communication, independence, objectivity and professionalism demonstrated by the External Auditors in carrying out their duties. Being satisfied with the External Auditors’ performance, the Board recommends their re-appointment for shareholders’ approval at the 33<sup>rd</sup> AGM.

## NOTICE OF THE 33<sup>RD</sup> ANNUAL GENERAL MEETING

### EXPLANATORY NOTES ON SPECIAL BUSINESSES:

(e) **Ordinary Resolutions 18 to 22 – Proposed Grant and Allotment of Shares**

Pursuant to Paragraph 6.06 of the MMLR, any offer and issuance of shares to the director, major shareholder or chief executive and persons connected with them must be approved by the shareholders at the general meeting stating the specific allotment.

The proposed Ordinary Resolutions 18 to 19, if passed, is to empower the Directors at any time and from time to time to cause or procure the offerings and the allocations to Abdul Latif bin Abdul Razak and Noor 'Asyikin binti Mohamad Zin, being Persons Connected to Dato' Abdul Razak bin Abdul Majid, such number of TNB Shares as they shall deem fit, which will be vested to them for the remaining LTIP period until 29 April 2025, subject to such terms and conditions of the LTIP By-Laws, which was approved at the Extraordinary General Meeting of the Company held on 18 December 2014.

Dato' Abdul Razak bin Abdul Majid and Persons Connected to him will abstain from voting on Ordinary Resolutions 18 to 19.

The proposed Ordinary Resolution 20, if passed, is to empower the Directors at any time and from time to time to cause or procure the offering and the allocation to Mohd Mirza bin Abdul Gani, being Person Connected to Dato' Indera Ir. Baharin bin Din, such number of TNB Shares as they shall deem fit, which will be vested to him for the remaining LTIP period until 29 April 2025, subject to such terms and conditions of the LTIP By-Laws, which was approved at the Extraordinary General Meeting of the Company held on 18 December 2014.

Dato' Indera Ir. Baharin bin Din and Person Connected to him will abstain from voting on Ordinary Resolution 20.

The proposed Ordinary Resolutions 21 to 22, if passed, is to empower the Directors at any time and from time to time to cause or procure the offerings and the allocations to Nurdiyana Munira binti Sa'id and Farah Yasmin binti Sa'id, being Persons Connected to Dato' Roslina binti Zainal, such number of TNB Shares as they shall deem fit, which will be vested to them for the remaining LTIP period until 29 April 2025, subject to such terms and conditions of the LTIP By-Laws, which was approved at the Extraordinary General Meeting of the Company held on 18 December 2014.

Dato' Roslina binti Zainal and Persons Connected to her will abstain from voting on Ordinary Resolutions 21 to 22.

### NOTES:

1. A member of a Company shall be entitled to appoint another person as his/her proxy to exercise all or any of his/her rights to attend, participate, speak and vote at a meeting of members of the Company, in accordance with Section 334(1) of the Act.
2. Where a member is an authorised nominee as defined in accordance with the provisions of the SICDA, it may appoint up to two (2) proxies in respect of each Securities Account it holds with ordinary shares in the Company standing to the credit of the said Securities Account.
3. A member entitled to participate and vote at the Meeting is entitled to appoint not more than two (2) proxies to participate and vote on his/her behalf. Where a member appoints two (2) proxies, the appointments shall be invalid unless the proportion of the shareholdings to be represented by each proxy is specified.
4. The instrument appointing a proxy/Proxy Form shall be in writing under the hand of the appointer or of his attorney duly appointed under a power of attorney. Where the instrument appointing a proxy/Proxy Form is executed by a corporation, it shall be executed either under its common seal or under the hand of any officer or attorney duly appointed under a power of attorney.
5. A corporation which is a member may by resolution of its Directors or other governing body authorise such person as it thinks fit to act as its representative at the Meeting in accordance with Clause 51 of the Company's Constitution.
6. The Proxy Form may be downloaded from the website at [www.tnb.com.my](http://www.tnb.com.my). Duly completed Proxy Form must be deposited at Boardroom Share Registrars Sdn. Bhd., 11<sup>th</sup> Floor, Menara Symphony, No. 5, Jalan Prof. Khoo Kay Kim, Seksyen 13, 46200 Petaling Jaya, Selangor Darul Ehsan, Malaysia not less than 48 hours before the time appointed for the taking of the poll or **no later than 16 May 2023 at 12.00 p.m.**
7. Alternatively, you may lodge the Proxy Form online via the Boardroom Smart Investor Portal at <https://investor.boardroomlimited.com> or by email to [bsr.helpdesk@boardroomlimited.com](mailto:bsr.helpdesk@boardroomlimited.com) before the abovementioned cut-off time. For further details on proxy lodgement, kindly refer to the Administrative Details of 33<sup>rd</sup> AGM.
8. Pursuant to Paragraph 8.29A of the MMLR, voting at the Meeting will be conducted by poll.

# STATEMENT ACCOMPANYING NOTICE OF THE 33<sup>RD</sup> ANNUAL GENERAL MEETING

(Pursuant to Paragraph 8.27(2) and Appendix 8A of the Main Market Listing Requirements of Bursa Malaysia Securities Berhad)

**The Directors who are retiring by rotation in accordance with Clause 64(1) of the Company's Constitution and seeking for re-election:**

- (i) Juniwati Rahmat Hussin
- (ii) Gopala Krishnan K.Sundaram
- (iii) Datuk Rawisandran a/l Narayanan

**The Directors who were appointed to the Board and are retiring in accordance with Clause 63(2) of the Company's Constitution and seeking for re-election:**

- (i) Dato' Abdul Razak bin Abdul Majid
- (ii) Datin Rashidah binti Mohd Sies
- (iii) Rohaya binti Mohammad Yusof

The profiles of the retiring Directors are set out in Board of Directors' Profile on pages 138 to 149 of this Integrated Annual Report.

Save for Dato' Abdul Razak bin Abdul Majid who holds 26,562 ordinary shares in the Company, none of the above Directors has any interest in the securities of the Company or its Subsidiaries.

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# PROXY FORM

33<sup>RD</sup> ANNUAL GENERAL MEETING

(Before completing the form, please refer to the notes overleaf)



199001009294 (200866-W)

NUMBER OF ORDINARY SHARE(S) HELD	CDS ACCOUNT NO.											
	-											

I/We, \_\_\_\_\_ (FULL NAME OF SHAREHOLDER AS PER NRIC/CERTIFICATE OF INCORPORATION IN CAPITAL LETTERS)

NRIC No./Passport No./Company No. \_\_\_\_\_ of \_\_\_\_\_ (FULL ADDRESS)

(FULL ADDRESS)

Telephone No. and Email Address \_\_\_\_\_ being a Member of Tenaga Nasional Berhad, hereby appoint:

	FULL NAME OF PROXY AS PER NRIC IN CAPITAL LETTERS	NO. OF SHARES	PERCENTAGE (%)	
Proxy 1	NRIC No./Passport No.:			or failing him/her
	Telephone No.:			
	Email Address:			
Proxy 2	NRIC No./Passport No.:			or failing him/her
	Telephone No.:			
	Email Address:			
<b>TOTAL</b>		<b>100%</b>		

\*the Chairman of the Meeting, as my/our proxy, to attend and vote for me/us and on my/our behalf at the **33<sup>RD</sup> ANNUAL GENERAL MEETING (33<sup>RD</sup> AGM)** of **TENAGA NASIONAL BERHAD ("TNB" or "the Company")** to be held virtually via Remote Participation and Voting (RPV) at Pusat Konvensyen Leo Moggie, TNB Platinum, No. 3, Jalan Bukit Pantai, Bangsar, 59100 Kuala Lumpur, Malaysia (the Broadcast Venue) on **THURSDAY, 18 MAY 2023 at 10.00 a.m.**, and/or at any adjournment thereof.

My/Our proxy is to vote as indicated below:

NO.	RESOLUTIONS	FOR	AGAINST
<b>ORDINARY BUSINESS</b>			
Re-election of the following Directors who retire in accordance with Clause 64(1) of the Company's Constitution:			
1.	Juniwati Rahmat Hussin	<b>ORDINARY RESOLUTION 1</b>	
2.	Gopala Krishnan K.Sundaram	<b>ORDINARY RESOLUTION 2</b>	
3.	Datuk Rawisandran a/l Narayanan	<b>ORDINARY RESOLUTION 3</b>	
Re-election of the following Directors who retire in accordance with Clause 63(2) of the Company's Constitution:			
4.	Dato' Abdul Razak bin Abdul Majid	<b>ORDINARY RESOLUTION 4</b>	
5.	Datin Rashidah binti Mohd Sies	<b>ORDINARY RESOLUTION 5</b>	
6.	Rohaya binti Mohammad Yusof	<b>ORDINARY RESOLUTION 6</b>	
Approval for payment of the following Non-Executive Directors' fees from the 33 <sup>rd</sup> AGM until the next Annual General Meeting (AGM) of the Company:			
7.	(i) Director's fee of RM30,000.00 per month to Dato' Abdul Razak bin Abdul Majid, Non-Executive Chairman (ii) Director's fee of RM7,000.00 and RM5,000.00 per month for TNB Subsidiaries Category II and III respectively to Dato' Abdul Razak bin Abdul Majid, Non-Executive Chairman	<b>ORDINARY RESOLUTION 7</b>	
8.	(iii) Director's fee of RM20,000.00 per month for the following Non-Executive Directors: a. Datin Rashidah binti Mohd Sies b. Rohaya binti Mohammad Yusof c. Ong Ai Lin d. Juniwati Rahmat Hussin e. Gopala Krishnan K.Sundaram f. Dato' Roslina binti Zainal g. Datuk Rawisandran a/l Narayanan h. Dato' Merina binti Abu Tahir	<b>ORDINARY RESOLUTION 8</b> <b>ORDINARY RESOLUTION 9</b> <b>ORDINARY RESOLUTION 10</b> <b>ORDINARY RESOLUTION 11</b> <b>ORDINARY RESOLUTION 12</b> <b>ORDINARY RESOLUTION 13</b> <b>ORDINARY RESOLUTION 14</b> <b>ORDINARY RESOLUTION 15</b>	
9.	Approval for payment of benefits payable to the Non-Executive Directors (excluding Non-Executive Directors' fees) from the 33 <sup>rd</sup> AGM until the next AGM of the Company	<b>ORDINARY RESOLUTION 16</b>	
10.	Re-appointment of Messrs PricewaterhouseCoopers PLT as Auditors of the Company and to authorise the Directors to fix their remuneration	<b>ORDINARY RESOLUTION 17</b>	
<b>SPECIAL BUSINESS</b>			
11.	Proposed Grant and Allotment of Shares to Abdul Latif bin Abdul Razak, Person Connected to Dato' Abdul Razak bin Abdul Majid	<b>ORDINARY RESOLUTION 18</b>	
12.	Proposed Grant and Allotment of Shares to Noor 'Asyikin binti Mohamad Zin, Person Connected to Dato' Abdul Razak bin Abdul Majid	<b>ORDINARY RESOLUTION 19</b>	
13.	Proposed Grant and Allotment of Shares to Mohd Mirza bin Abdul Gani, Person Connected to Dato' Indera Ir. Baharin bin Din	<b>ORDINARY RESOLUTION 20</b>	
14.	Proposed Grant and Allotment of Shares to Nurdiyana Munira binti Sa'id, Person Connected to Dato' Roslina binti Zainal	<b>ORDINARY RESOLUTION 21</b>	
15.	Proposed Grant and Allotment of Shares to Farah Yasmin binti Sa'id, Person Connected to Dato' Roslina binti Zainal	<b>ORDINARY RESOLUTION 22</b>	

Please indicate with an "X" in the box provided for each Resolution as how you wish your votes to be cast. If no voting instruction is given, the proxy(ies) is/are hereby authorised to vote or abstain from voting at his/her/their discretion.

\*If you do not wish to appoint the Chairman of the Meeting as your proxy/one (1) of your proxies, please strike out the word "the Chairman of the Meeting" and insert the name(s) of the proxy(ies) you wish to appoint in the blank spaces provided.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2023

\_\_\_\_\_  
Signature(s) or Common Seal of Member(s)

**NOTES:**

1. A member of a Company shall be entitled to appoint another person as his/her proxy to exercise all or any of his/her rights to attend, participate, speak and vote at a meeting of members of the Company, in accordance with Section 334(1) of the Companies Act 2016.
2. Only members whose names appear in the General Meeting Record of Depositors as at 10 May 2023 shall be entitled to attend the Meeting or appoint proxy(ies) to attend and/or vote on their behalf.
3. Where a member is an authorised nominee as defined in accordance with the provisions of the Securities Industry (Central Depositories) Act 1991, it may appoint up to two (2) proxies in respect of each Securities Account it holds with ordinary shares in the Company standing to the credit of the said Securities Account.
4. A member entitled to participate and vote at the Meeting is entitled to appoint not more than two (2) proxies to participate and vote on his/her behalf. Where a member appoints two (2) proxies, the appointments shall be invalid unless the proportion of the shareholdings to be represented by each proxy is specified.
5. The instrument appointing a proxy/Proxy Form shall be in writing under the hand of the appointer or of his attorney duly appointed under a power of attorney. Where the instrument appointing a proxy/Proxy Form is executed by a corporation, it shall be executed either under its common seal or under the hand of any officer or attorney duly appointed under a power of attorney.
6. A corporation which is a member may by resolution of its Directors or other governing body authorise such person as it thinks fit to act as its representative at the Meeting in accordance with Clause 51 of the Company's Constitution.
7. The Proxy Form may be downloaded from the website at [www.tnb.com.my](http://www.tnb.com.my). Duly completed Proxy Form must be deposited at Boardroom Share Registrars Sdn. Bhd., 11<sup>th</sup> Floor, Menara Symphony, No. 5, Jalan Prof. Khoo Kay Kim, Seksyen 13, 46200 Petaling Jaya, Selangor Darul Ehsan, Malaysia not less than 48 hours before the time appointed for the taking of the poll or **no later than 16 May 2023 at 12.00 p.m.**
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9. Pursuant to Paragraph 8.29A(1) of the Main Market Listing Requirements of Bursa Malaysia Securities Berhad, voting at the Meeting will be conducted by poll.

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AFFIX  
STAMP

**BOARDROOM SHARE REGISTRARS SDN. BHD.**

11<sup>th</sup> Floor, Menara Symphony  
No. 5, Jalan Prof. Khoo Kay Kim  
Seksyen 13, 46200 Petaling Jaya  
Selangor Darul Ehsan  
Malaysia

2. Fold Here To Seal





**TENAGA NASIONAL BERHAD**  
199001009294 (200866-W)

TNB Platinum  
No. 3, Jalan Bukit Pantai, Bangsar  
59100 Kuala Lumpur

Tel: +603 2107 4515/4517  
Fax No.: +603 2283 3686  
Email: cosec@tnb.com.my

[www.tnb.com.my](http://www.tnb.com.my)

